

Langley Researcher

VOLUME 11, NUMBER 1

LANGLEY RESEARCH CENTER

JANUARY 7, 1972

LOCAL AIAA GROUP TO HEAR DR. EHRICKE ON JANUARY 20

Dr. Krafft Ehricke, North American-Rockwell Corporation, will speak to the Hampton Roads Section of the American Institute of Aeronautics and Astronautics on Thursday January 20 at the Ramada Inn.

Dr. Ehricke's presentation will be "Extra Terrestrial Imperative." He has an extensive background in rocket development and has been involved in numerous advanced aerospace studies. His presentation will consider the importance of space exploration for the future of mankind.

Dr. Ehricke was born March 24, 1917 in Berlin, Germany. He received his B.S. degree from the Berlin Technical University and completed some graduate courses in celestial mechanics and nuclear physics before being assigned to military duties.

After a short stint as a research engineer with the Army Ordnance Corps, Dr. Ehricke was selected in 1942 as a member of the power plant section crew at the Peenemuende Rocket Development Center. There he took part in the V-2 rocket development program.

Dr. Ehricke was among the German scientists who came to the United States in 1947; he was naturalized in 1955. From 1947 to 1950 he was employed by the U.S. Army on missile and rocket projects in Texas. While there and at the Army Ballistics Missile Center in Alabama, he worked on advanced V-2 systems and jet propulsion programs.

In 1954, Dr. Ehricke joined Convair General Dynamics in San Diego, California. As chief of the preliminary design and analysis branch and later as assistant to the technical director, he took part in the firing of many space shots, including the first Atlas on December 17, 1957.

He also taught astronautics at San Diego State College. He has written a four-volume work, Space Flight, and many articles and technical papers.

The meeting will be preceded by a social hour at 6:30 p.m. For reservations call Dewey Wornom, 723-7296, or Bill Woods, 851-5331.

COST REDUCTION REPORT

Four Langley cost reduction reports with a savings of \$2,018,280 were accepted by NASA Headquarters for the first quarter of F.Y. 1972. Although the savings reported was 45 percent of the Center's \$4,500,000 goal, the number of reports submitted was far below average. Center personnel are reminded that the success of the program is measured not only by the dollar savings achieved, but also by the active participation of all employees.

The Center's report for the second quarter is due on January 20. All staff members are urged to submit potential cost reduction ideas to their division monitors by January 12 so that they can be considered for the next report.



DEVICE TO HELD QUADRIPLÉGICS: George M. Dudley (center), Fabrication Division, explains the paper-handling device he designed to help quadriplegics to Ernest Harrison (left), a member of the Biomedical Applications Team stationed at the Research Triangle Institute, North Carolina, and John Samos, Langley TU Officer.

LANGLEY DESIGNED DEVICE MAY ASSIST QUADRIPLÉGICS

A paper-handling device designed and built by George M. Dudley, Fabrication Division, may provide quadriplegics with the capability of transferring sheets of paper (or punch cards) from one stack to another at the touch of a button.

This important contribution to an existing biomedical problem was made by Dudley in response to an article recently published in the Langley Researcher entitled "Can You Solve this Problem?"

According to Technology Utilization officials, Dudley showed much ingenuity and creative talent in the design of this device. In addition, many hours of "homework" went into its construction for which George's understanding wife and family deserve credit, too.

The Woodrow Wilson Rehabilitation Center is now trying the device with quadriplegic patients to permit them to pursue active vocations.

FGAA TO HEAR FERRARA

Thomas V. Ferrara, National Vice President of the Federal Government Accountants Association, will speak at the FGGA Peninsula Chapter meeting on January 19 at Frank's Harbour House.

The topic of Ferrara's speech will be "Independent Research and Development/Bid and Proposal Costs -- Current Rules on Treatment and Allowability."

A social period will begin at 6:30 p.m., followed by dinner and the program. For reservations call Eugene Fadely, extension 2558. Guests are invited to attend.

Happenings

SMALL ISSUE. . . The Researcher staff took a few days off during the holiday season to join in the festivities; therefore, this issue is reduced to four pages. We expect to be back full-size January 21 with many of your favorite features that had to be omitted in this issue.

NASA ACTIVITIES. . . Beginning with the January 15 issue, each employee will receive a copy of NASA Activities which is a monthly publication distributed by NASA Headquarters.

VIRGINIA SQUIRES-NASA NIGHT. . . The Activities Association is pleased to announce Virginia Squires-NASA Night on Monday, January 31. NASA Night brings Mel Daniels, Rick Mount, and the Indiana Pacers to the Coliseum to meet the Squires in what promises to be an exciting game. All seats are reserved and carry a one dollar discount - \$5, \$4, and \$3 seats cost you \$4, \$3, and \$2, respectively. Tickets may be ordered at the Activities Building and must be purchased when the order is placed. Please place your order now so that we may obtain for you the best seats possible.

CAMERA CLUB. . . The Langley Camera Club will hold its 1972 organizational meeting on January 18 at 7:30 p.m. in the Activities Building. All prospective members are invited to attend. All old members are also urged to attend.

COLLOQUIUM SERIES. . . Professor Hans Liepmann, California Institute of Technology, will speak on "Shock Waves" at the next colloquium series which will be held Jan. 10 at 3 p.m. at the Activities Building. A social will begin at 2:30.

NOTE OF THANKS. . . Wallace J. Dowling, Security Office, wishes to express his sincere thanks to everyone at Langley for honoring him at a dinner on the occasion of his retirement.

MEETING NOTICE. . . The LRC Historical and Archeological Society will have its next business meeting on Monday, January 17 at 7:30 p.m. at the Activities Building. Paul Hudson, Curator of the National Colonial Historical Park, Jamestown, will be the featured speaker.

CONGRATULATIONS. . . Congratulations to Frank S. Penland, son of Frank Penland of Personnel Division, for being named one of the Outstanding Young Men of America for 1971. Frank is principal of a Chesterfield County School and he has done extensive work with the blind and visually handicapped in Virginia. Frank, who is legally blind, will be included in the eighth annual volume of the Outstanding Young Men in America.

THANKS FOR BLOOD. . . Jeanne M. Forrest, former Langley staff member, wishes to express her thanks to NASA employees who donated blood during the recent Bloodmobile visit to cover that used during the recent heart surgery of her husband, Benjamin F. Forrest.

COURSE OFFERED. . . Applied Science 535, "Introduction to Mathematical Fluid Dynamics," will be offered at VARC

SWAP AND SHOP

WANTED

Ride from Wythe to W.A. on 8 shift. McKoy, 3395 or 244-3166.

FOR SALE

14-foot Norris travel trailer, sleeps 6, many extras - \$900 or best offer. Lawing, 877-4586.

1965 Volkswagen, engine has 23,000 miles - \$800. Freire, Virginia Beach 420-6757.

Scott amplifier Model 299; stereo; tires 8.55 x 15; snow tires 7.50 x 14. Riggan, 722-6087.

Lady Kenmore washer-dryer combination - \$200; set of two chairs and sofa - \$50. Farmer, 877-7181.

10-inch Dewalt Black and Decker radial saw, heavy duty - \$300. Leiss, 877-2939.

1968 Plymouth Sport Satellite, two-door hardtop with vinyl top. Hemstreet, 877-7394.

SCHEDULE OF TECHNICIAN CLASSES

The winter schedule of engineering technician classes is as follows:

Monday - Introduction to Electrical Circuits II, Technical Math 112, Introduction to Electrical Circuits - Lab, Technical Physics 112, General Electrical Circuits and Instrumentation, Introduction to Electronics.

Tuesday - Introduction to Electrical Circuits II, Environmental Testing, Fundamentals of Computers, General Electrical Circuits and Instrumentation - Lab, Introduction to Electronics.

Wednesday - Technical Math 112, Technical Physics 112.

Thursday - Introduction to Electrical Circuits II, Environmental Testing, Technical Physics - Lab, Introduction to Electronics - Lab, Technical Drafting 112, Fundamentals of Computers, Introduction to Electronics.

Friday - Introduction to Electrical Circuits II, Technical Math 112, Technical Physics 112, General Electrical Circuits and Instrumentation, Introduction to Electronics.



by William and Mary for the spring semester. This course is in addition to those listed in LRC Announcement 112-71 dated December 17, 1971, and should be added to the application form by those interested. Virginia Jordan will be the instructor and the time of class meetings will be announced later. For further information call Miss Jordan or Dr. Arden Sher, Director of Applied Science Program, College of William and Mary, 229-3000, extension 471.

Langley Researcher, an official publication of the Langley Research Center, National Aeronautics and Space Administration, Hampton, Virginia 23365, is published biweekly in the interest of its employees. Address contributions to the Editor, Mail Stop 154, telephone 3116.

Editor.....Ruth Angel Verell

Staff Photographer.....Bob Nye

Reporters.....Langley Employees

The privilege of advertising articles in this publication is restricted to employees of Langley Research Center. Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.

Personnel Profiles

By

Allan C. Hanrahan



Bye, Bye, Bruce

Hey, who is that slightly portly man who smokes big cigars and walks slowly around and about the Activities Building watching over the place?



Well, if you answered "A. Bruce Amole" you are correct because the Activities Coordinator (that's his title) of the Activities Building has been in that job for a long time - since May, 1945 - but he won't be around the Center much longer. Come January 11, the day before his sixty-sixth birthday, he goes into retirement and to the obvious question he answered, "Yes, I'm sure I'm going to miss it - the job - and I'm going to miss the people. All of its been fun."

He reminisced about such events as playing a half-dozen hands of bridge with the bandleader, Les Brown, on the two occasions when that band played the Activities Building.

"He wasn't the greatest bridge player," Bruce remembered, "but he was a heck of a nice 'fella' to know."

Bruce commented that he liked all card games and bridge in particular. "Somewhere on the Peninsula there is a bridge game every day so its possible to play bridge six days a week."

Travel is another interest and he and his wife, Alma, "plan to take a swing around the country by car," he said.

"Also, I'm looking forward to having free time to do whatever I want. I may even take up golf again; I played a little years ago," he added.

Bruce was born in Clifton Forge and raised in Lynchburg. He attended VPI Extension in Richmond and came to work at the Center on October 6, 1942, as a scientific aide. He applied for his present position when it was created and on the strength of having organized numerous parties and excursions for different groups of Center personnel he was given the job and ever since has worked in the Employees Services Branch of the Personnel Division. His only son, Ronald, also works at the Center in the Fabrication Division.

Enjoy your retirement, Bruce.

CAFETERIA MENU

The following menu will be served in the cafeterias during the week of January 10:

Monday - Cream of tomato soup, braised beef tips, chop suey, clam croquettes, franks and beans.

Tuesday - Chicken rice soup, chopped steak, fried chicken, corned beef and cabbage, fish cakes.

Wednesday - French onion soup, steamship round, ham steak, fried fish, chili con carne.

Thursday - Cream of potato soup, grilled delmonico, Salisbury steak, chicken chow mein, spaghetti with meat balls.

Friday - Minestrone soup, knockwurst and sauerkraut, pepper steak, barbequed pork sandwich, tuna noodle casserole.

Snack bar - Soup, jumbo burger, hot dogs, fish sandwich, French fries, apple turnovers. Variations - Pastrami and ham and cheese club (Mon.), corned beef and chicken salad (Tues.), hot roast beef and salami (Wed.), pastrami and ham and egg (Thurs.), barbequed pork and steak (Fri.).

The menu for the week of January 17 is as follows:

Monday - Cream of celery soup, pot roast, fried clams, chicken and dumplings, macaroni and wieners.

Tuesday - Turkey noodle soup, fiesta beef kabobs, fried chicken livers, applesauce meat loaf, salmon cakes.

Wednesday - Manhattan clam chowder, beef stew, shrimp Newburg, grilled pork chops.

Thursday - Chicken gumbo soup, grilled delmonico, chuckwagon steak, fish fry, grilled cheese sandwich.

Friday - Oyster stew, chopped steak, scallops, chicken cacciatore, creamed dried beef on toast.

Snack bar - Soup, jumbo burger, hot dogs, fish, French fries, apple turnovers. Variations - Corned beef and ham salad (Mon.), pastrami and tuna salad (Tues.), hot roast beef and ham and cheese club (Wed.), corned beef and grilled cheese (Thurs.), barbequed beef and chicken salad (Fri.).

MERIT PROMOTION NOTICES

The following Merit Promotion Announcements opened January 3 and applications will be accepted until Jan. 14:

Supervisory Electronics Technician, Fabrication Division, Machine Branch, Electronic Fabrication Development Section, GS-856-11 with promotional opportunity, Announcement No. 72-1. The area of consideration is restricted to the Fabrication Division.

Supervisory Electrical Engineering Technician, Operations Support Division, Facilities Operations Branch, Technical Support Electrical Section, GS-802-11, Announcement No. 72-2. The area of consideration is restricted to the Operations Support Division.

The following Merit Promotion Announcements will open January 10 and applications will be accepted until Jan. 21:

Engineering Technician, Office of the Director, Viking Project Office, GS-802-10, 11, or 12, Announcement No. 72-3. The area of consideration is the Langley Research Center.

Contract Assistant, Procurement Division, Research and Development Contract Branch, Contract Negotiation Section, GS-1102-5 with promotional opportunity, Announcement No. 72-4. The area of consideration is restricted to the Procurement Division.



THE ONLY safe and sure way to destroy an enemy is to make him your friend.

TWO STAFF MEMBERS DIE

Melville F. Kiefer, Supervisory Statistical Draftsman in the Technical Illustrating Section, Scientific and Technical Information Programs, died Dec. 28.

Kiefer was born February 3, 1908 in New York City. He studied drafting at Mechanics Institute and Cooper-Union in New York. He joined the Center staff on September 2, 1941.

He is survived by his wife, Mrs. Beatrice S. Kiefer, Personnel Division, a step-

son, Billy B. Dancy, Fabrication Division, and a step-daughter, Mrs. C. Wayne Williams of Newport News.

Walter L. Brooks, Experimental Machine Shop, Fabrication Division, died December 31 in a local hospital.

Brooks was born March 17, 1902 in Gloucester County. He served in the U.S. Navy from 1925 to 1929 and worked for the Newport News Shipbuilding and Dry Dock Company before joining the Center staff on December 28, 1948.

Surviving are his wife, Mrs. Elizabeth B. Brooks of Hampton; three daughters, Mrs. James P. McSherry of Newport News, Mrs. E. C. Oder and Mrs. George Vliet, both of Hampton; and a son, Russell Lee Brooks of Newport News.



Melville F. Kiefer

THE CHICKEN OR THE EGG?

The modern credit union version of this old gag as to "which came first" involves the importance of the saving member versus the borrowing member. . .even if they are both often the same. Faced, for the first time, with the necessity for some indication of their position on the matter, the decision of the LFCU Board outdid the famous judgment of Solomon: they gave a whole, healthy, bouncing baby to each claimant.

Of course, they had a little more to work with than Solomon but that takes away none of the credit or appreciation due them. In short, with the most prosperous year yet experienced behind them, they came up with the best for both worlds: a semi-annual dividend of 6% annual rate and a year-long interest refund of 10%. The annual rate of 6% is the legal maximum that can be paid. The resulting divi-

RETIREMENT PARTIES

A retirement party for Ted W. Schindler, Dynamic Model Shop, will be held at Eli's Restaurant January 14 at 6 p.m. Dinner and gift - \$5, guest - \$4, gift only \$1. Names and contributions should be sent by January 12:

TO: Byron Buntin, MS 346.

NAME _____ SECTION _____
WILL ATTEND _____ GIFT ONLY _____

A retirement party for Walter F. Lindsey, 8-Foot Tunnels Branch, will be held January 28 from 5 to 7 p.m. in the Activities Building. Cost of the party and gift will be \$4.50. Cost of gift only will be \$1. Names and contributions should be sent by January 24:

TO: Charles Ladson, MS 339

NAME _____ SECTION _____
WILL ATTEND _____ GIFT ONLY _____

Marion B. Seyffert, Chief of Fabrication Division, who will retire after more than 30 years of Federal service, will be honored at a buffet dinner on January 24 from 6 to 7:30 p.m. at the Activities Building. Cost of the dinner and gift is \$4 per person. Cost of the gift only is one dollar. Names and contributions should be sent by Jan. 17:

TO: James L. Miller, MS 219

NAME _____ SECTION _____
WILL ATTEND _____ GIFT ONLY _____

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IT IS as absurd to pretend that one cannot love the same woman always as to pretend that a good artist needs several violins to play a piece of music.

YES, it's pretty hard, the optimistic old woman admitted. I have to get along with only two teeth -- one upper, one lower -- but, thank goodness, they meet.

■■■■■■■

dends were credited to shares January 1, 1972, are part of 1972 income, and the tax thereon is due in 1973.

In the matter of an interest refund, the Board also came through with flying colors. Despite its being the first time for Langley and the fact that only a 5% refund had been earlier proposed, they doubled that figure and triumphantly announced 10%. This refund applies to interest paid the LFCU in either or both semi-annual periods provided the account was open at the end of said period. It was credited to share December 31, 1971, and will appear on year-end statements. One must admit that 1971 ended in a member-pleasing burst of glory. May 1972 do the same!

Langley Researcher

VOLUME 11, NUMBER 2

LANGLEY RESEARCH CENTER

JANUARY 21, 1972

LAUNCH DATE OF APOLLO 16 RESCHEDULED FOR APRIL 16

The Apollo 16 mission scheduled to be launched March 17 for a landing in the Descartes highlands of the Moon is being rescheduled for April 16.

NASA officials decided to delay the launch to allow additional time to thoroughly review and resolve anomalies that have arisen during checkout.

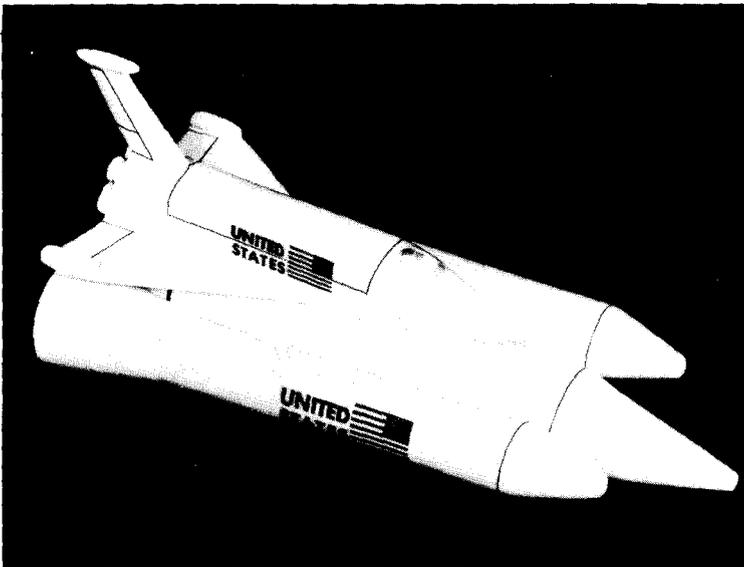
Involved are the space suit, the docking ring jettison device on the Command Module and the Lunar Module descent batteries.

The space suit adjustments involve the strengthening of the swage fitting of a suit restraint cable and the reinforcement of a taping layer of the space suit boot. New cable terminations are being designed. Testing will begin shortly and is scheduled to be completed in late February.

The cables in the space suit permit the astronauts to stoop and bend while the suit is pressurized. The changes are being made because of the differences in the ways the Apollo 16 astronauts bend to pick up lunar samples and the changes will permit more freedom of movement without undue stress on the suit.

A failure in the docking ring jettison device in a recent Skylab test resulted in investigative testing of the identical device on Apollo. Preliminary results of these tests in-

(Continued on page 3)



SPACE SHUTTLE: NASA's reusable Space Shuttle consists of two stages - a booster and an orbiter. It will take off like a rocket, fly in orbit like a spaceship and land like an airplane. Total shuttle dimensions are: overall length - 175 feet; orbiter length - 120 feet; wing span - 75 feet; and total weight is 4.7 million pounds.



Percy J. Crain



E. Barton Geer

CRAIN RETIRING AS ENGINEERING DIRECTOR; GEER NAMED SUCCESSOR

Percy J. Crain, Director for Systems Engineering and Operations, has announced plans for retirement at the end of March. He has been continuously associated with NASA and its predecessor, the National Advisory Committee for Aeronautics, since April 1, 1939, in engineering positions of increasing responsibility.

Effective April 1, he will be succeeded by E. Barton Geer, who is currently Spacecraft Manager in the Viking Project Office.

As Director for Systems Engineering and Operations, Crain manages the activities of four principal divisions: Fabrication, Systems Engineering, Facilities and Equipment Engineering, and Operations Support.

Through them, he has been responsible for the design, construction and subsequent operational support of many of Langley's major research facilities for work in aeronautics and space.

Other responsibilities of his directorate include the operations of shops required to develop and build the specialized wind tunnel models and other unusual items of equipment needed in a variety of research programs, and management of the electrical power requirements of the Center.

Under Crain's direction, the Systems Engineering Division provides advanced engineering and design services for a variety of research projects, both in space and aeronautics, supporting the diverse research requirements of the Center.

A native of Birmingham, Alabama, Crain was graduated from the Georgia Institute of Technology in 1935, joining the Langley staff four years later. In 1943 he became Chief

(Continued on page 3)

Happenings

MOON ATLAS. . . The Government Printing Office has published a book entitled "Lunar Orbiter Photographic Atlas of the Moon" (NASA SP 206). The book was prepared at Langley Research Center and edited by David E. Bowker, Space Technology Division, and J. Kenrick Hughes, Viking Project Office. The foreword is by Clifford H. Nelson, Director for Space, and Israel Taback, Viking Project Office. The price of the book is \$19.25 and it may be purchased from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

FILM FEATURED. . . The Visitor Center film, "A Man's Reach," will be featured on the "Conversation" program Sunday, January 23 at 1 p.m. on Channel 13. The program is narrated by Frank Donaldson and included on the show will be an interview with Harold Mehrens, Director of the Visitor Center.

ENGAGEMENT. . . Dan Cupid scored a victory when Sadie P. Livingstone, Analysis and Computation, announced her engagement to Dale B. Boyer, Hampton. No definite date has been announced for the wedding.

DISNEY ON PARADE. . . Arrangements are being made by your Activities Association to offer discount tickets to Disney on Parade which appears at the Hampton Coliseum February 8-13. The discount will be \$1 on tickets which normally sell for \$5.50, \$4.50, and \$3.50 and will be available for one of the week night performances (Tues., Wed., or Thurs., Feb. 8-10). Further details will be announced as soon as arrangements are finalized. Watch your bulletin board for further information on date of show and ticket purchase procedures.

NEW HEIRESS. . . Announcing the arrival of a daughter, Jean Randal, on December 19 is George Maddrea, Programs and Resources.

AFGE NOTICE. . . The NASA Lodge 2755 American Federation of Government Employees will meet on Wednesday, January 26 at 7:30 p.m. at the Central Labor Union Hall.

NEWLYWEDS. . . Wedding bells rang on December 30 when Richard Powell, Space Systems Division, took his final vows with Lynn Sesson in Richmond.

IAM MEETING. . . The NASA Lodge No. 892, International Association of Machinists, will meet February 1 at 7 p.m. at the Central Labor Union Hall.

NOTE OF THANKS. . . Wayne Martin wishes to express his sincere thanks to his fellow employees for their expressions of sympathy on the recent death of his father.

SQUIRES-NASA NIGHT. . . Monday, January 31 brings Mel Daniels, Rick Mount, and the Indiana Pacers to the Hampton Coliseum to meet the defending ABA Eastern Division Champion Virginia Squires on Squires-NASA Night. All seats are reserved and carry a \$1 discount - \$5, \$4, and \$3 seats cost you \$4, \$3, and \$2, respectively. Tickets may be ordered at the Activities Building - payment must ac-



COIN CLUB. . . In the top photo Bob Wright (right), outgoing president of the LRC Coin Club, congratulated Randy Stapilus for receiving the club's outstanding member award. In the lower photo John Cox (right), newly elected president, gives M. H. Granger a \$5 gold piece as winner of the club raffle.



company your order. Place your order now so that we may obtain the best seats possible.

FILM AVAILABLE. . . Copies of the Visitor Center film, "A Man's Reach", are now available for loan from the Langley Film Library. These films may be borrowed for showings to educational, civic, industrial, professional, youth and similar groups. Arrangements for borrowing the film may be made with Myrtle Yates, Photographic Branch, Mail Stop 171, extension 2994.

FOURIER OPTICS COURSE. . . An ODU graduate course, Fourier Optics (Physics 581 - selected topics in physics), will be taught by Dr. William P. Chu and is an addition to the ODU courses listed in LRC Announcement No. 112-71, dated December 17. Interested personnel, both degree and non-degree students, should call Training Office, 2517, and forward the green sheet application with Physics 581 added.

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Editor.....Ruth Angel Verell
Staff Photographer.....Bob Nye
Reporters.....Langley Employees
The privilege of advertising articles in this publication is restricted to employees of Langley Research Center. Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.



HAWAIIAN ESCAPE: About 75 Langley employees and members of their families took off from Patrick Henry Airport on Friday, January 7 for a vacation trip to Hawaii. The trip

included stops at San Francisco, Los Angeles, and the islands of Oahu, Kauai, Maui, and Hawaii. The vacationers will return to the Peninsula on Sunday, January 23.

ENGINEERING DIRECTOR RETIRING

(Continued from page 1)

of the Mechanical Service Division and in 1954, Chief of Engineering and Technical Services. He has held his present position since October 1970.

Geer, a native of Rockwell, Iowa, was graduated from Iowa State College in 1942 with a Bachelor of Science degree in Mechanical Engineering. He joined the Langley staff after graduation as a mechanical engineer, becoming head of the Systems Engineering Section in 1954. In 1960 he was named head of the Systems Engineering Branch and in 1962, Associate Chief of the Flight Vehicles and Systems Division. In 1968 he was named Chief of that Division, which has subsequently been named the Systems Engineering Division. He joined the Viking Project Office in November 1969.

APOLLO 16 FLIGHT RESCHEDULED

(Continued from page 1)

dicade that the cause of the failure was related to the fact that small empty spaces are in the potting compound used to retain two strands of pyrotechnic (similar to primer cord) in place. This caused a reduction in the explosive forces that are designed to cleanly sever the docking ring.

Preliminary tests have shown that a repotting will eliminate the problem. Extensive testing, including a number of tests on full-scale models, will be done to verify the new procedure and to assure that the change has no detrimental effects. These tests will take some time to complete.

Reverification tests of the Lunar Module descent bat-

ODU COURSES OFFERED

If sufficient interest is shown, the following Old Dominion University courses will be taught at the Center starting February 3:

Engineering 303 - Mechanics of Fluids. Lectures three hours; three credits. Prerequisites are Engineering 205 and 301. Fluid statics, kinematics, Bernoulli equation, momentum, free-surface flow, viscosity, pipe friction, dimensional analysis, and similitude are the major topics covered. Class will meet Monday and Wednesday from 1:30 to 2:45 p.m. and the instructor will be Dr. Donald F. Brink.

Engineering 221 - Electrical Circuits I. Lectures three hours; three credits. Corequisites are Physics 122 and Engineering 208. The course includes empirical foundations of basic circuit theory; concepts of impedance and admittance; applications of complex algebra; branch, loop, and node equations; network theorems; Fourier series; and elementary two-terminal-pair networks. Class will meet Monday and Wednesday from 3 to 4:15 p.m. John H. Lawless will be the instructor.

Contact the Training Office, extension 2611, for information and the necessary application form which must be returned to the Training Office by January 28.

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A TEACHER affects eternity; he can never tell where his influence stops.

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teries indicated variations in battery capacity. Design and process changes have been made to eliminate these variations. Indications are that the new batteries will perform satisfactorily but Apollo officials feel it is desirable to obtain more test data than would be possible if the Apollo 16 launch were held on the March date.



Theodore A. Talay



Henry S. Ogiba



C. Willis Cross



Stephen J. Katzberg



Dr. Deene J. Weidman

EMPLOYEES RECEIVE AWARD

Seven staff members have received Special Achievement Awards under the Incentive Awards Program.

The recipients and their citations are as follows:

Theodore A. Talay, Space Technology, "for his sustained superior performance in applying Matrix Displacement theory in the development of a complex two-body six-degree-of-freedom analytical model describing aerodynamic decelerator dynamics and for the formulation of a unique course of instruction in the fundamentals of aerodynamics."

Henry S. Ogiba, Management Information Systems, "for developing a system to report manpower utilization in the Systems Engineering and Operations Directorate within time and cost constraints."

C. Willis Cross, Management Support, "for his initiative and thoroughness in providing exceptionally effective administrative support both within the scope of his assigned duties and on special projects to which he was assigned."

Stephen J. Katzberg, Flight Instrumentation, "for the development of electro-optical techniques which have improved the angular resolution, depth of field and sensitivity in the design of facsimile cameras."

Dr. Deene J. Weidman, Structures, "for sustained superior performance in implementing procedures for the maintenance of the NASTRAN system during the period April 1 to October 1, 1971."

Andrew J. Hansbrough, Programs and Resources, "for sustained superior performance in providing integrated resource planning and program execution support in the Center's Research and Development Programs which included exceptional leadership in training new personnel in budget planning and implementation techniques."

Joseph P. DeGinder, Fabrication, "for sustained superior performance in translating broad conceptual designs and ideas into detailed and practical applications of integrated life support systems."



NASA 1972 EUROPEAN TRIP: People from all of the NASA Centers have expressed interest in the upcoming European Trip. The trip leaves from Dulles Airport, Washington, D.C., for London on May 28, returning from Paris on June 18. The flight alone, a "Grand Tour," or an "Iberian Tour" may be taken. For those interested, deposits should be made as soon as possible, preferably before March. Final payments have to be made by March 20. For further information, contact B. Maggin, NASA Headquarters, Code RG.



Andrew J. Hansbrough



Joseph P. DeGinder

TRAFFIC SAFETY REMINDER

Although the Center has had relatively few auto accidents during the past year, it is still appropriate for us to review our driving practices. Familiarity with our automobiles and the streets on which we drive each day tend to cause us to relax, often more than is in the best interest of safety.

Speed limits on Center streets, unless otherwise posted, are 25 mph. No parking signs and yellow curbs denoting no parking were designated as such for reasons of safety. Often streets are not wide enough to safely permit parking on both sides, or pedestrian crossing points need to be kept clear of cars. Also, access to an area by fire fighting and life saving equipment frequently demands that vehicles be kept clear.

Stop and yield signs are located at intersections to reduce hazardous conditions. The placement of these signs is made after careful study of the conditions contributing to hazards. To disregard them is an invitation to disaster.

Courtesy, a major part of traffic safety, includes consideration of the other driver, and observance of traffic regulations such as those cited here.



ONE of the best things a man can have up his sleeve is a funny-bone.

NEVER miss an opportunity to make others happy, even if you have to let them alone to do it.

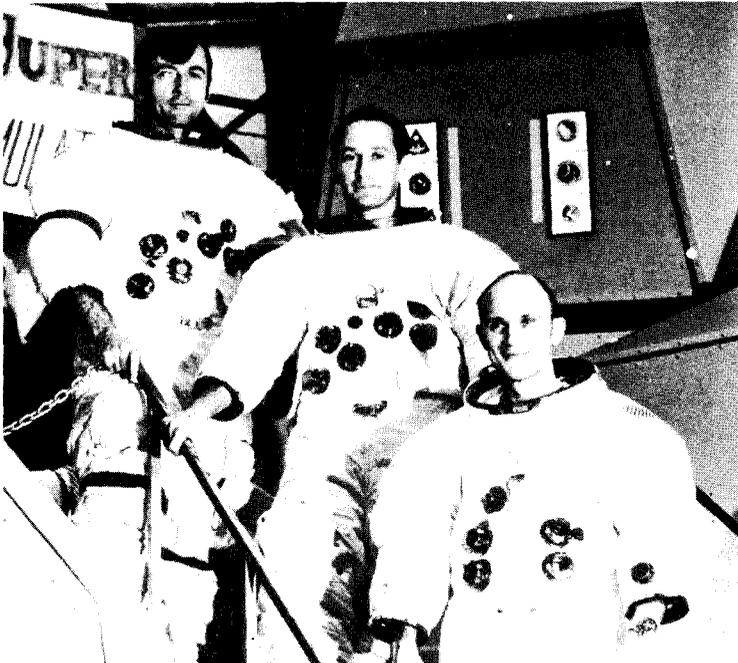
THE cost of a thing is that amount of life which must be exchanged for it.

HIGHLIGHTS OF 1972 FLIGHT SCHEDULE ANNOUNCED

Two manned Apollo missions to the Moon, the launch of a Pioneer two-year flight to Jupiter, and the first Earth Resources Technology Satellite will be among the highlights of the 1972 space flight program of the NASA.

In addition, the NASA schedule includes a broad range of scientific and applications satellites, aeronautical research and cooperative exploration with other countries.

The fifth and sixth Apollo lunar landings are scheduled during April and December. They will be the final missions in the manned lunar exploration program.



Astronauts Young, Duke, and Mattingly

Apollo 16 Astronauts John W. Young, Thomas K. Mattingly II and Charles M. Duke will be launched from the Kennedy Space Center April 16. Young and Duke will land in a mountainous highland region near the crater Descartes to explore the area for three days, making geological observations, collecting surface material and deploying the fourth geophysical station on the Moon. Mattingly will pilot the command module in lunar orbit and operate a complex array of scientific instruments and cameras.

Apollo 17 will be carried out by Astronauts Eugene A. Cernan, Ronald E. Evans and Harrison H. (Jack) Schmitt. Cernan and Schmitt will explore the lunar surface at a site to be selected. Schmitt, who holds a doctorate degree in geology, will be the first scientist to land on the Moon.

Final preparations for the Skylab experimental space station missions will be underway during 1972. Nine astronauts will be selected to comprise the three crews who will orbit the Earth in Skylab during three separate missions in 1973 -- one of four weeks duration and two lasting up to eight weeks.

The 550-pound Pioneer F will be launched in February from Cape Kennedy to make exploratory investigations of the interplanetary medium beyond the orbit of Mars, to probe the nature of the asteroid belt and the environmental and atmospheric characteristics of Jupiter.

During the trip to Jupiter, which will take about two years and cover more than half a billion miles, the 60 pounds of

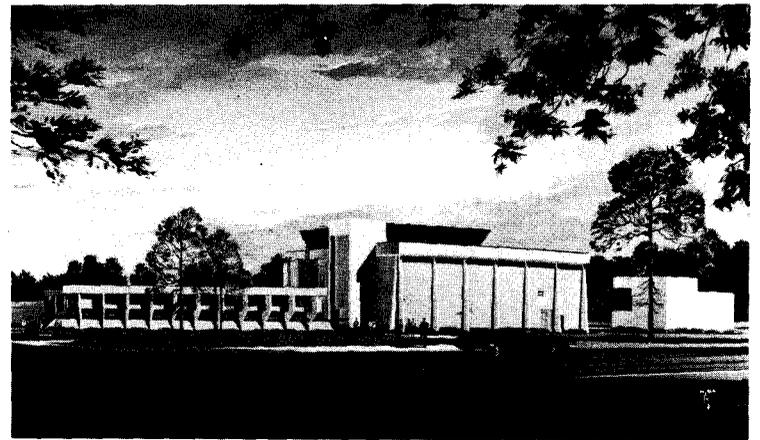
instruments will measure hydrogen atoms, electrons, nuclei of hydrogen, helium and other elements and the interplanetary magnetic field.

The Earth Resources Technology Satellite (ERTS) will be launched from the Western Test Range in the first half of 1972. ERTS will fly in a polar orbit at 575 miles altitude. This is the first in a series of spacecraft to obtain data for conducting a variety of experiments in Earth resources disciplines including agriculture, oceanography, forestry and cartography, and to develop a ground data handling system.

Aircraft noise abatement will be a high priority goal in aeronautical research during 1972.

Following the design phase of the QUESTOL (Quiet, experimental STOL) Program, one of three airframe companies will be chosen in the fall to build two experimental transport-type airplanes for a flight research program. Aim of the QUESTOL Program is to provide the propulsive-lift technology required for development of quiet, short-take-off-and-landing (STOL) transport aircraft. The use of turbofan engine systems to augment aerodynamic lift is a key to community noise reduction, airport congestion relief, and improvements in short-haul transportation and tactical airlift capability.

At Lewis Research Center an experimental, quieter jet engine will be mated to an acoustically treated engine nacelle for further testing. Goal of the Quiet Engine Program is to develop a 22,000-pound thrust engine that will be 15 to 20 decibels quieter than engines in current subsonic air transports such as the DC-8 and 707 jets.



Aircraft Noise Reduction Laboratory

Work will continue on construction of an Aircraft Noise Reduction Laboratory at the Langley Research Center. The new laboratory, planned for operation in 1973, will provide a tool for fundamental research necessary to solve the problems of noise.

The supercritical wing test aircraft, an extensively modified Navy F-8 jet, will be outfitted with side fairings for flight tests beginning in the summer of 1972. Side fairings improve the overall F-8 test aircraft with area ruling, an aerodynamic design feature that permits the aircraft to fly with greater efficiency. If full potential advantages are realized from flight tests at Flight Research Center, jet transports of the future may use the area rule and the supercritical wing, both of which are Langley concepts.

Walt Disney's MICKEY MOUSE



RETIREMENT PARTIES

A retirement party for J. Norwood Evans, Assistant Chief of Personnel Division, will be held February 10 from 5 to 7 p.m. at the Activities Building. Cost of the party and gift will be \$4; cost of gift only is \$1. Send names and contributions by February 4

TO: Jane Swartzwelder, MS 308

NAME _____ SECTION _____
 WILL ATTEND _____ GIFT ONLY _____

A retirement party for David M. Smith, Scout Project Office, will be held at the Activities Building on February 11 at 4:30 p.m. Cost of party and gift will be \$3.50; cost of gift only is \$1. Checks should be sent by February 1

TO: Eugene Hall, MS 358

NAME _____ SECTION _____
 WILL ATTEND _____ GIFT ONLY _____

Tom M. Palmer, Facilities and Equipment Engineering Division, who will retire after more than 31 years of Federal service, will be honored at a reception on Friday, February 11, from 6:30 to 8:30 p.m. at Eli's Restaurant. The cost of the party and gift will be \$4 per person. Persons who wish to contribute to the gift only may do so. Send the following information by February 7

TO: L. Conway Rogers, MS 254

WILL ATTEND _____
 WILL ATTEND WITH GUEST _____
 GIFT ONLY _____

A retirement party for Walter F. Lindsey, 8-Foot Tunnels Branch, will be held January 28 from 5 to 7 p.m. in the Activities Building. Cost of the party and gift will be \$4.50. Cost of gift only will be \$1. Names and contributions should be sent by January 24:

TO: Charles Ladson, MS 339

NAME _____ SECTION _____
 WILL ATTEND _____ GIFT ONLY _____

HOW IS YOUR SPACE PROGRAM IQ?

- Since introduction of communication space satellites, the cost of a three-minute telephone call between Washington, D.C., and London, England, has been reduced by approximately
 - One-fourth
 - One-third
 - One-half
- As compared with the total number of United States successful space launches, Russia in 1970 achieved
 - Less than half as many
 - About twice as many
 - Almost three times as many
- Hospitals or medical schools that have installed new surgical facilities employing space-related "clean room" technology now total
 - Seven
 - Eighteen
 - Twenty-four
- The Soviet Union is estimated to be spending about two per cent of its gross national product on space activities as compared with the comparable U.S. figure of
 - Less than half of one per cent
 - Three per cent
 - Five per cent
- The U.S. civilian space program this fiscal year will represent how much of the federal budget dollar?
 - 7.6 cents
 - 4.2 cents
 - 1.4 cents

ANSWERS: 1. c (from \$12 to \$5.40); 2. c (81 for the USSR to 28 for the U.S.); 3. c (and an equal number are under construction or planned); 4. a; 5. c.

SWAP AND SHOP

WANTED

Lady's bicycle. Housner, 247-0634.

FOUND

Lady's black leather lefthand glove near Building 1268. Staton, 3103.

FOR SALE

3-inch diameter refractor telescope with equatorial mount, accessories include a Barlow lens, 90 degree prism, and 3 different eyepieces; also large mesh playpen. Gentry, 595-3592.

1968 Dodge Charger, all powered accessories. King, 826-0619.

Autumn haze squirrel stole, size 14 - \$125. Schoonover, 723-8694.

1969 Yamaha 250 cc and Bell magnum helmet. Tomaine, 595-5425.

1962 Oldsmobile, 4-door sedan, \$250. Spears, 596-3703.

1969 Volkswagen deluxe sedan - \$1495; 1960 Pontiac Bonneville, 4-door hardtop, powered accessories, new tires. Current, 868-6922.



COLD WEATHER REMINDER: When putting antifreeze in your radiator, don't forget to add a little to the windshield wiper water.

THE really happy man is the one who can enjoy the scenery when he has to take a detour.

CAFETERIA MENU

The following menu will be served in the cafeterias during the week of January 24:

Monday - Chicken noodle soup, business man's lunch (chopped steak, choice of two vegetables, tea or coffee), broiled chicken, liver and onions, beef ravioli.

Tuesday - Split pea soup, steamship round, fried oysters, beef burgundy, baked lasagna.

Wednesday - Corn chowder, seafood platter, beef stroganoff, barbeque pork chunks, tuna rice casserole.

Thursday - Vegetable soup, broiled T-bone steak, fried fish, turkey, chicken pot pie supreme.

Friday - Tomato bisque, country style steak, chicken chow mein, fried shrimp, grilled cheese sandwich.

Snack bar - Soup, jumbo burger, hot dogs, fish, French fries, apple turnovers. Variations - NASA submarine, corned beef, ham and egg (Mon.); NASA submarine, pastrami on rye, chicken salad (Tues.); corned beef, ham salad, grilled cheese (Wed.); NASA submarine, tuna salad, salami (Thurs.); corned beef, barbeque beef (Fri.).

The menu for the week of January 31 is as follows:

Monday - Cream of mushroom soup, hot roast beef sandwich, broiled rib eye steak, fried chicken, spaghetti with meat sauce.

Tuesday - Chicken gumbo soup, rump roast of beef, glazed ham, Italian meat loaf with tomato sauce, macaroni and beef.

Wednesday - New England clam chowder, braised beef tips, Chinese egg rolls and fried rice, fried chicken livers, Austrian ravioli.

Thursday - Cream of potato soup, beef pan pie, fish fry-all you can eat (includes French fries, tartar sauce, hush puppy, and tea), cordon bleu, chicken and rice casserole.

Friday - Vegetable beef soup, business man's lunch (chopped steak, choice of two vegetables, coffee or tea), broiled flounder, barbequed short ribs, fried clams.

Snack bar - Soup, jumbo burger, hot dogs, fish, French fries, apple turnovers. Variations - Pastrami and chicken salad (Mon.); NASA submarine, corned beef, grilled cheese (Tues.); ham and cheese club, NASA submarine, pastrami (Wed.); steak, salami, grilled cheese (Thurs.); corned beef, barbequed beef, ham and egg (Fri.).

can you solve this problem?

Law enforcement investigators require a method for the qualitative and quantitative analysis of soil in small samples. During a crime, the perpetrator often leaves or picks up soil which, if effectively analyzed, can lead to his capture. Refer to C-18. Contact the T. U. Office, extension 3281, for the problem statement or if you have a contribution.

CONGRATULATIONS

The following persons are to be congratulated for their contributions or suggestions to the Technology Utilization Office toward the solution of biomedical or public sector problems:

W. G. Witte, R. Hopko, A. C. Dibble, K. R. Czarnecki, J. B. Peterson, W. F. Staylor, R. K. Clark, J. M. Robeson, D. B. Chambliss, R. J. Moberg, J. D. Brooks, G. J. Birmingham, J. J. Singh, G. Dudley, O. V. Stephens, C. Husson, and C. Nichols.

Personnel Profiles

By

Allan C. Hanrahan



He's A Winner

May we suggest that you get in your car, drive to 10207 Warwick Boulevard in the Hilton Village section of Newport News, and view the Peninsula Arts Association showing of the work of the winners of its Ninth Annual Competition and Exhibit held during last April.

Now, what does this have to do with the person being



featured this issue? Well, it just so happens that our guest, Grayson V. Dixon, a sculptor of only three years duration, was the first place winner of the show; this in competition with some of the best-known artists in the area. He also won prizes in last year's PAA show and in a Methodist Church-sponsored show. His work, beautifully done, is primarily of figures modeled in clay or wax and then cast in metal from a sand or rubber mold. The metal is usually bronze although his

winning entry now on display was cast in aluminum.

It's always interesting to hear how, or why, someone becomes so successfully interested in a pastime. With Dixon the interest in art has been there for years. Wherever he and his wife, Helen, and their children (two grown daughters and a teenage son) would travel they would visit art museums. He painted in watercolor over the years and then about three years ago took instruction in sculpture at the Norfolk Chrysler Museum. Success followed.

Other interests? Well, aside from occasionally playing the trumpet, "just life's everyday activities," we were told.

Grayson, a forty-seven-year-old native of Hampton, received his B.S. and M.S. degrees in Mechanical Engineering from V.P.I. and has been employed at the Center continuously since June, 1948. An Aerospace Technologist, he now works in the Facilities Systems Section of the Facilities and Equipment Engineering Division.

Oh, one more thing. Dixon's work will be displayed through January 28, and the PAA Gallery hours are from noon until 5 p.m., Tuesdays through Sundays. The public is welcome to take in the show; it is well worth the trip.



WHAT counts is not the number of hours you put in, but how much you put in the hours.

CEREMONIES are different in every country, but true politeness is everywhere the same.

INTERESTING people are people who are interested. Bores are people who are bored.

Questions and Answers

Q. It has been rumored that a "sauna bath" and exercise room is planned for installation in Building 1244 and that the facilities will be available to NASA pilots and other NASA employees that have a GS-15 grade level or above. Would you please comment concerning the facts, including costs and justification?

A. According to Raymond G. Romatowski, Director for Administration, the rumor as stated in the question is not true. Currently, there is some preliminary thought being given to the problem of NASA employees - in all grades, occupations and skills - reaction to stressful situations and whether the Center should have an expanded medical research program to examine these questions in depth. Unfortunately, we have not as yet found resource support for such a program. However, we are going to continue seeking Headquarters sponsorship for such occupational medicine efforts at LRC and perhaps a program can be worked out. If this is done, any physical stress facility would be operated under professional supervision with research goals approved by Headquarters. Any participants in the program would be selected using other than grade level criteria.

Q. Must we charge our invited visitors to such official functions as the recent Civil Aviation Conference for their coffee? If our budget is so austere that coffee cannot be provided, I would cheerfully contribute to a visitor's coffee fund rather than project such a chintzy image of our organization.

A. According to officials in the Management Support Division, appropriated funds cannot be used for purchasing refreshments for Center visitors; therefore, it is necessary to charge for coffee served at official functions. During the year, there have been 3,782 visitors at special Center functions. Obviously, the cost of providing refreshments for this number of persons would be substantial.

As suggested in the question, sponsors of these functions may desire to contribute to the visitors' coffee fund and thereby avoid charging the visitors.

Q. High officials from other NASA Centers, military dignitaries (frequently Generals and Admirals), and civilians from leading industries who arrive at LRC by plane debark at Building 1244. Their first impression of LRC is certainly poor as the current reception room is a dingy area. Why doesn't LRC provide a nicely decorated room with comfortable furniture and drapes as a welcome to our visitors?

words in peoples' mouths



TECHNOLOGY PROPOSALS RECEIVED

More than 250 proposals have been received by NASA from groups with plans for using space-related technology in solving domestic problems.

The proposals pertain to approaches to problems in four categories: air pollution, water pollution, solid waste management and clinical medicine.

NASA is seeking the most promising ideas which will demonstrate possible applications of NASA-developed technology to public problems.

The proposals were submitted to the Ames, Langley, and Manned Spacecraft Centers. They will be reviewed by a team of experts in the four categories, and one or more projects in each subject may be selected for negotiations and award of a contract not to exceed \$75,000.



A. An interior designer developed a scheme to decorate and refurbish this reception room in September 1971, stated Glen Ford, Management Support Division. The job has been included in the total refurbishment program. However, due to present fund limitations, all work on this and other similar jobs is being deferred. The work will proceed as soon as adequate alteration and modification (RPM) funds become available.

Langley Researcher

VOLUME 11, NUMBER 3

LANGLEY RESEARCH CENTER

FEBRUARY 4, 1972

ACTIVITIES ASSOCIATION PLANS DANCE SERIES STARTING FEB. 12

The first in a series of monthly dances sponsored by your Activities Association will be held Saturday, February 12, from 9 p.m. to 1 a.m. at the Activities Building. Music will be furnished by the American Renaissance, a rock band from Portsmouth.

Tickets are two dollars per couple (set-ups not included this time) and can be purchased at the Activities Building.

No reservations necessary. Bring your friends; it's going to be a great party!

In order that the Association can bring you the type dances you want, we ask that you mail suggestions to either Linda Sutherland, MS 307, or Kim Hafley, MS 401B. Linda and Kim would also like to have your comments on the bands sponsored and any bands you know that you would like to have play here.

COOPERATIVE TRAINEES JOIN STAFF

The Langley Research Center plans to employ a second group of 40 technical cooperative education trainees during the month of June. The trainees will attend Thomas Nelson Community College (TNCC) and will major in electronics and mechanical technology.

Langley's cooperative training program with Thomas Nelson Community College began in June 1971, when the Center employed the first group of 40 cooperative education trainees.

Two recruiting plans are being used to staff the program.

In order to ensure that minority groups are proportionally represented, the Newport News Office of Economic Opportunity and the Hampton Action Agency conducted a joint recruiting program to locate out-of-school students who possess a high school diploma, or the equivalent, and who display an interest in the program, but do not meet the minimum mathematics and English requirements established by TNCC.

Eight applicants were recruited by the Newport News Office of Economic Opportunity and seven by the Hampton Community Action Agency. The 15 participants entered on duty at the Langley Center on January 25 as temporary employees.

Since these applicants fail to meet the TNCC academic entrance requirements, they will be given the required course work during duty hours by NASA instructor personnel selected from volunteers recommended by TNCC. As TNCC's regular text and course content will be used, recognition for these preparatory courses will be granted toward fulfillment of entrance requirements.

The program was implemented in January so that participants can be placed in the regular co-op program by

(Continued on page 4)



Conrad

Kerwin

Weitz

SKYLAB FLIGHT CREW NAMED

Flight crews for Skylab, the United States' first Earth-orbiting space station, has been announced by NASA.

The Skylab orbital workshop will be launched unmanned in the spring of 1973 and will be visited three times by three-man crews over an eight-month period.

Each Skylab crew will consist of a commander, a science pilot and a pilot.

The prime crews, listed in that order are:

First mission - Charles Conrad Jr., Dr. Joseph P. Kerwin and Paul J. Weitz.

Second mission - Alan L. Bean, Dr. Owen K. Garriott and Jack R. Lousma.

Third mission - Gerald P. Carr, Dr. Edward G. Gibson and William R. Pogue.

Backup crewmen for the first mission are Russell L. Schweickart, Dr. Story Musgrave and Bruce McCandless II. Serving as backup crew for both the second and third missions are Vance D. Brand, Dr. William E. Lenoir and Dr. Don L. Lind.

Astronauts Kerwin, Garriott, Gibson, Musgrave and Lenoir are scientist astronauts; the remaining Skylab crew members are pilot astronauts.

The first manned visit will last 28 days, while the second and third will last 56 days each.

The Skylab program will test Earth resources remote sensing equipment and techniques to gather information on Earth's ecology, oceanography, water management, agriculture, forestry, geology, and geography. Astronomy experiments will substantially increase knowledge of the Sun and its effects on man's existence on Earth. Habitability, biomedical, behavioral, and work effectiveness experiments will further evaluate man's capabilities in space flight.

Conrad, 41, has flown on Gemini 5 and 11 and Apollo 12, the second manned lunar landing, for a total of 506 hours of space flight.

Kerwin, 39, is a native of Oak Park, Illinois, and holds a doctor of medicine degree from Northwestern University

(Continued on page 3)

Happenings

FGAA MEETING. . . Taylor Darden, stockbroker with Paine, Webber, Jackson, and Curtis, Inc., will speak at the meeting of the peninsula chapter of the Federal Government Accountants Association on February 16, at Frank's Harbour House. A social period will begin at 6:30 p.m., followed by dinner and the program. For reservations call Eugene Fadely, extension 2558. Guests are welcome.

NOTE OF THANKS. . . Larry Harvey, Fabrication, and his family wish to express their appreciation to friends and other employees who donated blood and showed kind compassion to Paul C. Harvey Sr., who died January 26.

NEW OFFICERS. . . New officers of the LRC Coin Club are: John W. Cox, president; Warren Kelliher, vice president; David Reubush, secretary-treasurer; and Bill Fogle, sergeant-at-arms.

ENGAGED. . . Making plans to desert the bachelor ranks is William R. Wiley Jr., Operations Support. He is engaged to Myrna Christine Love, Hampton, and plans call for a June wedding.

SHIPYARD ALUMNI. . . All Center employees who are apprentice alumni of the Newport News Shipbuilding and Dry Dock Company are requested to send their names to Ray Goodman, MS 218. The alumni association has lost the list of alumni members. The group's annual banquet will be held March 10 at the Chamberlin Hotel.

SKI TRIPS. . . The NASA Ski Club is planning the following trips during February: Feb. 9 - Bryce Mountain; Feb. 17 - Homestead; and Feb. 24 - Bryce Mountain. The fee of \$19.50 includes transportation, lift ticket, and rental of equipment. The bus will leave Newmarket Shopping Center at 5 a.m., arrive at the mountain at 9 a.m., ski all day and leave at 5 p.m. to arrive home by 10 p.m. For further information call Richard Bennett, 595-7456.

WANTED!!! MEN WHO LOVE TO SING! . . The Hampton Roads Chapter of the Society for the Preservation and Encouragement of Barber Shop Quartet Singing in America, Inc. (SPEBSQSA) will hold an audition for admissions on Tuesday, February 8, at 7:30 p.m. in Bob Smith's Barber Shop, 10826 Warwick Boulevard (Warwick Shopping Center). Following the auditions, refreshments and chorus singing will be enjoyed in the Nachman's Community Room, also located in the shopping center. Anyone interested in singing barbershop harmony does NOT have to have a professional voice, just the urge and love to harmonize in the fashion of the 1920's. Roy Henley, 2543; Robert O. Schade, 2037; John Tripp, 3446; or Bill Tennis, 2232, will be glad to answer any questions pertaining to the chapter or its activities.

FREE WORKSHOPS. . . The Casemate Theater Guild at Fort Monroe has scheduled a series of free Winter Workshops for the education and enjoyment of all persons interested in the theater. Scheduled for February are: Feb. 8 - Use of Voice by Professor Dowling Bolton, Hampton Institute; Feb. 15 - Sound by James Hollinger; Feb. 17 - Dancing by Betty Church; Feb. 22 - Production by Ned

DOWNING HEADS SUBCOMMITTEE

Representative Thomas N. Downing has been named chairman of the Space Science and Applications Subcommittee of the House of Representatives Committee on Science and Astronautics. He had previously been the ranking majority member of the Space Science Subcommittee headed by Rep. Joseph E. Karth (D.-Minn.) during the past decade.

The Subcommittee he heads is a key group for House of Representatives action on NASA's unmanned space projects, including the Viking Project managed by Langley Research Center. Rep. Downing has been a strong supporter of NASA space applications programs which were recently emphasized by the establishment of a NASA Headquarters Office of Applications headed by an Associate Administrator.

RETIREMENT PARTIES

Andy Ahl, Flight Instrumentation, will be honored at a retirement party March 6, at 6 p.m. in the Activities Building. Cost - party and gift, \$4; gift only \$1. Send contributions to Dwayne Hinton, MS 494, by February 25.

J. Norwood Evans, Personnel Division, will be guest at a retirement party February 10, from 5 to 7 p.m. at the Activities Building. Cost - party and gift, \$4; gift only \$1. Send contributions to Jane Swartzwelder, M.S. 308, today.

William B. Mayo, Assistant to the Director, Systems Engineering and Operations, will be honored at a retirement buffet dinner March 3, from 6 to 7:30 p.m. at the Activities Building. Cost - dinner and gift, \$4 or \$7.50 per couple; cost of gift only \$1. Send contributions to James L. Miller, MS 219, by February 29.

Kenneth E. Singleton, Operations Support, will be honored at a retirement buffet dinner March 6, from 7 to 12 midnight at the Hampton Yacht Club. Cost - dinner and gift, \$6 per person, gift only, \$1. Send contributions to Joe Block, MS 355, by February 28.

Lloyd L. Wallace, IRD, will be honored at an informal get together on February 28, at 11:30 a.m. in Room 139B, Building 1230. Send contributions to George Topping, MS 236, by February 18.

■■■■■■■■

ALWAYS forgive your enemies; nothing annoys them so much.

■■■■■■■■

Wagner; and Feb. 24 - Costumes and Properties by Alberta Wagner. All sessions will start at 7:30 p.m. and will be held in the Jade Room of the Fort Monroe YMCA.

COURSE OFFERED. . . A short course in Finite Element Analysis will be held at the Center beginning February 14. The course will be conducted by Dr. Kenneth H. Murray, School of Engineering, Old Dominion University. Classes will be held Mondays and Thursdays from 8:30 to 11:30 a.m. through March 30, in Room 113, Building 1265. Persons interested should call the Training Office, 2517, and notify their division office. This will be basically a non-credit short course without examination. However, persons interested in degree credit may receive three hours credit upon successful completion of an examination at the end of the course. This course is being offered in response to a request for a specific training need. Additional short courses and seminars will be arranged if sufficient interest is shown.

ROMATOWSKI TO CHAIR PANEL

Raymond Romatowski, Director of Administration, will chair a panel of local planning experts at the meeting of the Engineers' Club of the Virginia Peninsula on Thursday, February 10 at 8 p.m. at the Ramada Inn.

The subject will be "Systems Analysis Applications to Urban Problems in the Local Peninsula Area." The objective of the meeting is to expose the local engineering community to problems on urban development and to stimulate their interest in suggesting systematic approaches and alternatives that can be used by local governments in shaping the growth of the Peninsula area.

Joining Romatowski in the discussion will be Thomas Miller, Head of the Planning Commission for the City of Hampton; Albert Stodghill, Director, Department of City Planning and Community Development, City of Newport News; and Robert Wilson, Director of Hampton Roads Development and Housing Authority.

Romatowski is chairman of the 15-man Management Study Group that is taking an in depth look into operations of city government in Hampton.

LFCU PLANS ANNUAL MEETING

The Langley Federal Credit Union will hold its 36th Annual Meeting on Monday, February 14, at the Warwick High School auditorium beginning promptly at 7:30 p.m. Tickets are not required.

Emphasis this year falls on the business portion of the meeting with highlights being a review of 1971 accomplishments by Bob Girouard and an election to fill existing vacancies on the Board and on the Credit Committee. Bob's "President's Report" should be a real crowd-pleaser.

Certainly, 1971 was a banner year with new records set in almost every area. Still, too much growth too fast can cause problems. An objective look through the eyes of one so qualified to comment should be of the greatest interest to those attending. The election, too, promises to be more exciting than usual with five nominees vying for four Director vacancies. All members age 16 and over are eligible to vote.

Guest speaker will be Ross V. Hershey, humorist, who wears the title "King of the Shaggy Dog Story." He is expected to add much to the enjoyment of the evening.

For the lucky, Bert Rockey, Chairman of the Annual Meeting Committee, has rounded up 36 country-cured hams and three 12-inch portable TV sets. So remember the date, February 14, and make plans to attend.

NEBA ENROLLMENT DRIVE

The annual enrollment drive for NASA Employees Benefit Association Group Life Insurance is being conducted between now and April 1.

All uninsured employees will receive brochures describing coverage, benefits and prices for this excellent low-cost protection.

The amount of coverage is based upon annual salary with a minimum amount of \$8,000. Cost to the employee is currently a low 10¢ per \$1,000 of insurance per week.

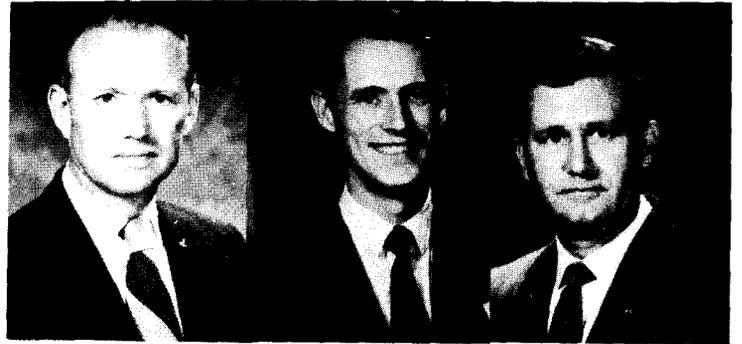
Optional coverage in the amount of \$5,000 or \$2,500 is available for spouses, again depending upon annual salary level, including insurance on each child from 14 days to 19 years of age. Children from 14 days to 6 months are insured for \$100; 6 months to 19 years \$1,000.



Bean

Garriott

Lousma



Carr

Gibson

Pogue

SKYLAB FLIGHT CREW NAMED

(Continued from page 1)

Medical School. This will be his first space flight.

Weitz, 39, holds a master's degree in aeronautical engineering from the U.S. Naval Postgraduate School. Born in Erie, Pennsylvania, he has not flown in space.

Bean, 39, was born in Wheeler, Texas, and was lunar module pilot on Apollo 12. He holds a bachelor's degree in aeronautical engineering from the University of Texas.

Garriot, 41, was born in Enid, Oklahoma, and holds a doctorate in electrical engineering from Stanford University. He has not flown in space.

Lousma, 35, is a native of Grand Rapids, Michigan. He holds aeronautical engineering degrees from the University of Michigan and from the U.S. Naval Postgraduate School. He has not flown in space.

Carr, 39, was born in Denver, Colorado. He has a master's degree in aeronautical engineering from Princeton University. He has not flown in space.

Gibson, 35, holds a doctorate in engineering with a minor in Physics from the California Institute of Technology. He was born in Buffalo, New York. He has not flown in space.

Pogue, 43, was born in Okemah, Oklahoma. He holds a master's degree in mathematics from Oklahoma State University. He has not flown in space.



HUMDRUM is not where you live; it's what you are.

LIBERTY is always dangerous, but it is the safest thing we have.



To enroll, an employee need only complete the form included in the brochure and return it to Mail Stop 305. He will then be furnished with a statement of health form to be completed and sent to the underwriter. Upon approval insurance will become effective April 1.

CAFETERIA MENU

The following menu will be served in the cafeterias during the week of February 7:

Monday - Split pea soup, country steak, grilled pork chops, shrimp creole, franks and beans.

Tuesday - French onion soup, steamship round, barbequed chicken, applesauce beef loaf, clam croquettes.

Wednesday - Cream of celery soup, corn beef and cabbage, busniness man's lunch, chicken and dumplings, chili con carne.

Thursday - Chicken rice soup, pepper steak, chicken cacciatore, fried flounder, smoked pigs-in-a-pone.

Friday - Bean and bacon soup, Salisbury steak, chop suey, fried oysters, macaroni and wieners.

Snack bar - Soup, jumbo burger, hot dogs, fish sandwich, French fries, apple turnovers. Variations - Corned beef and ham salad (Mon.), pastrami and ham and cheese club (Tues.), barbequed, NASA submarine, and salami (Wed.), corned beef, steak, ham and egg (Thurs.), pastrami, NASA submarine, and grilled cheese (Fri.).

The menu for the week of February 14 is as follows:

Monday - Cream of potato soup, pot roast, barbequed spare ribs, tuna noodle casserole, glazed baked ham.

Tuesday - Chicken noodle soup, rump roast, broiled liver and onions, French fried shrimp, chicken croquettes.

Wednesday - Manhattan clam chowder, beef stroganoff, veal parmesan, fried chicken, fried clams.

Thursday - Chicken gumbo soup, roast ribs of beef, chuckwagon steak, broiled fish, knockwurst and sauerkraut.

Friday - Vegetable beef soup, Swiss steak, fried chicken livers, ham steak supreme, grilled cheese sandwich.

Snack bar - Soup, jumbo burger, hot dogs, fish sandwich, French fries, apple turnovers. Variations - Corned beef, ham and egg, NASA submarine (Mon.), Pastrami, ham salad, NASA submarine (Tues.), ham and cheese club, salami (Wed.), NASA submarine, roast beef, chicken salad (Thurs.), pastrami, ham and cheese club, grilled cheese (Fri.).

COLLOQUIUM SERIES NEWS

Dr. David Buhl, National Radio Astronomy Observatory, will speak on using molecular line radio astronomy techniques to identify complex molecules in space at the next LRC Colloquium on February 14 at 3 p.m. in the Activities Building. The lecture will be preceded by a social at 2:30.

Radio Astronomy had its beginnings in 1932, but since that time large radio telescopes and very sensitive receivers have been built which allow radio astronomers to study many parts of our galaxy which are inaccessible to optical astronomers.

Recently molecular lines have become very important in studying the clouds of gas and dust which inhabit the region between the stars. These clouds are the material out of which stars and planets condense. In the past three years a number of complex molecules have been discovered in these clouds by means of their radio spectrum. Molecules identified so far include: hydroxyl, ammonia, water, formaldehyde, carbon monoxide, cyanogen, hydrogen cyanide, cyanoacetylene, methyl alcohol and formic acid.

Dr. Buhl received his Ph.D. from the University of California at Berkeley on the topic of radiation anomalies in lunar craters. In 1967 he joined the scientific staff of the National Radio Astronomy Observatory where he was placed

KESSLER TO SPEAK TO AIAA



Captain Charles L. Kessler

Captain Charles L. Kessler, US Navy (Retired), will speak at the meeting of the Hampton Roads Section of the American Institute of Aeronautics and Astronautics on February 17 at the Ramada Inn on Route 17. His subject will be "With Admiral Byrd in Artic and Antarctic."

Captain Kessler was born in Washington, D.C. He attended the University of Richmond and enlisted in the Marine Corps in 1922. He represented the Marine Corps with Rear Admiral

Richard E. Byrd on his North Pole expedition in 1926 and subsequently accompanied Admiral Byrd on his first expedition to the South Pole. He joined the Ford Motor Company in 1931 but on the outbreak of World War II he returned to service.

After the war he became the department adjutant of the State of Virginia for the American Legion. He returned to active duty in 1960 as Director of the Selective Service System for Virginia and retired August 1, 1971.

Kessler returned to Antarctic during the fall of 1962 and made his third visit in February 1965. Kessler Peak in Queen Alexandra Range, Antarctica, was named in honor of Captain Kessler in 1966.

The meeting will be preceded by a social hour at 6:30 p.m., followed by dinner at 7:30 and the meeting at 8:30. Reservations may be made by calling Bill Woods, 851-5331, or Dewey Wornom, 723-7296.

COOPERATIVE TRAINING PROGRAM

(Continued from page 1)

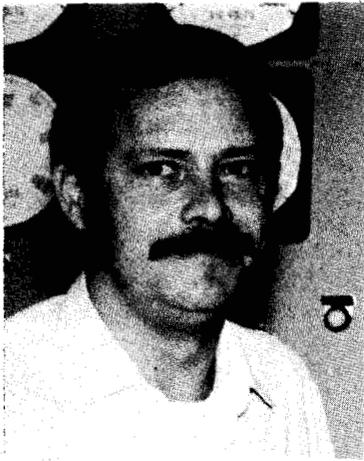
June or September. This will give them six to nine months to make up educational deficiencies.

The second phase of the recruiting program is a joint effort by representatives of TNCC and Langley. Last month representatives started visiting all high schools in the Peninsula area to discuss the Cooperative Educational Program with guidance counselors, vocational directors, department heads, and groups of interested students.

This phase of the recruiting program is flexible and, depending upon the results of the OEO Supplementary Educational Program, will result in identifying a sufficient number of candidates from which Langley can select 25 to 40 highly qualified applicants.

Coordinators for the program are John J. Cox, Langley, and Dr. John Lawrence, RNCC.

in charge of studies of the solar system. Over the past three years, he and Dr. Lewis E. Snyder have been actively pursuing radio observations of molecular lines in the interstellar medium, discovering formaldehyde, hydrogen cyanide and X-ogen. Since these molecules are important in the chemical evolution of life, Drs. Buhl and Snyder are continuing to look for other links in the evolutionary chain.



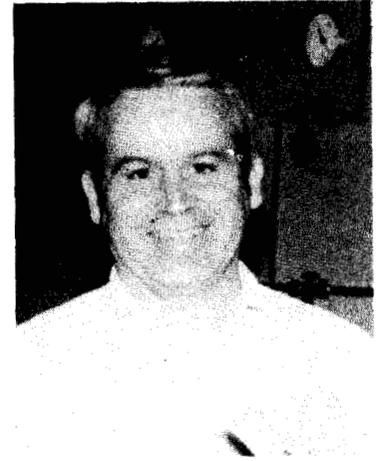
Billy G. Holliday



Charles W. Whitehead, Jr.



Fay S. Moore, Jr.



Robert K. Lenning



Frederick D. Jones



Clayton James



George T. King, Jr.



Victor E. Wilson

EMPLOYEES RECEIVE AWARD

Several staff members have received cash awards for suggestions under the Incentive Awards Program. The recipients and their suggestions are as follows:

Billy G. Holliday, Operations Support, \$205 for the design and installation of an automatic circuit to an Ignition Temperature Controller which had previously been used manually, thus effecting man-hour savings.

Charles W. Whitehead, Fabrication, \$280 for suggesting a method of making tests on hafnium-tantalum alloys for short durations at high temperature by use of air lock principle, thus enabling the Heat Shield Section to conduct tests in a short period of time and save man-hours.

Fay S. Moore Jr., Operations Support, \$100 for installing inserts into used compression blocks for light gas guns to make them reusable.

Robert K. Lenning, Operations Support, \$25 for the installation of an alarm which detects interruptions in the cooling water flow for balances used in the Continuous Flow Hypersonic Tunnel, thus protecting research equipment from possible damage.

Frederick D. Jones, Scientific and Technical Information Programs, \$30 for suggesting the use of a Paragon Time Switch for controlled charging of Strobe Flash IV batteries resulting in improved dependability of the equipment.

Clayton James, Operations Support, \$30 for the use of metal screens instead of cheesecloth screens to prevent dust and dirt from entering airstream during model testing.

George T. King Jr., Fabrication, \$25 for the design of a

BROTHERHOOD CITATION DINNER

As part of the national observance of Brotherhood Week, the local community will honor three of its citizens at a Brotherhood Citation Dinner to be held at the Hotel Chamberlain at 6:30 p.m. on Tuesday, February 22. The three persons to be honored are The Honorable Thomas N. Downing Jr., Mrs. Erwin B. Drucker, and W. R. Walker Jr. They have been chosen because of their personal efforts in behalf of the objectives of the National Conference of Christians and Jews; namely, giving to others the same rights, respects, and dignity that one wants for oneself.

The subscription price for the dinner is \$30 per person and the public is cordially invited to attend. The net proceeds of this Brotherhood Citation Dinner will be used to help carry on the year-round educational program of the National Conference of Christians and Jews in Virginia.

Edgar M. Cortright, Director, and T. Melvin Butler, Director for Center Development and External Affairs, are serving as members of the dinner committee.

Members of the Center staff interested in attending the dinner may make reservations through the office of the dinner chairman, Karl F. Lanier, P. O. Box 7207, Hampton.



Corona range safety protection system. The suggestion was submitted jointly with Hubert E. Powell, deceased.

Victor E. Wilson, Fabrication, \$65 for his suggestion relative to the reduction of maintenance and repair of the electronic punch tape reader by replacing sleeve bushings with sealed ball bearings.

SWAP AND SHOP

FOUND

Gold wedding band near Photo Lab. Miserentino, 3421.

LOST

Class ring near Activities Building - has initials RLC inside. Calloway, 2483.

Library book "Oxygen: Elementary Forms and Hydrogen Peroxide" by M. Ardon. Weaver, 2143.

WANTED

Lionel trains, any condition or size; also Mighty Casey railroad components. Shuster, 868-6575.

1970 Dodge Charger with automatic transmission and factory air conditioning. Miller, 595-0731.

To rent one or two-car garage with electricity. Meadors, 2661.

Fourth driver from Windsor Great Park to W.A. on 8 shift. Weaver, 2143.

FOR SALE

Tri-color Sheltie, female, 9-months old, good show potential - \$175. Schiess, 247-3097.

Sears portable console humidifier - \$35. Imig, 877-4915.

Two 13-inch diameter, 5-bolt hole, steel wheels with tires for 1960-1969 Valiant - \$4 each. Ezell, 838-3801.

1967 Opel sport coupe. Maiden, 229-3153.

Wurlitzer spinet piano, mahogany - \$35; also Underwood portable typewriter with case - \$25. Druen, 826-1371.

Snow chains for F78-14 (775-14) tires - \$8. Credeur, 838-3879.

Two American Flyer train cars. Nowak, 247-3750.

3.5 hp mini-bikes and 8-track stereo tape player. Bruce, 826-0783.

Two Uniroyal blackwall 6-ply 650-16 tires, new - \$20 each. Breen, 851-9446.

Airequipt slide projector, 500 w - \$25; Polaroid camera and accessories, Model 340 - \$50. Watson, 595-3121.

NASA BASKETBALL NEWS

Attention everyone! Look carefully at your co-workers. Do any of them look tired and drag around some mornings? Do you know what they do with their evenings and weekends? They huff and puff up and down the floor of Building 1222, the Activities Building. They "play?" basketball in the NASA Basketball League.

The league is enjoying immense popularity in 1972 with an unprecedented total of 19 teams and 228 players. There are even two women listed on the roster of one team.

The league is divided into three divisions - A, B, and C - supposedly by quality with the A Division being the best. But pre-season expectations are not always accurate. Play has been highlighted by one unbeaten team in each division and some outstanding individual players. Bob Lee, Gougiers, had a spectacular 32-point performance only to have his team lose by one point.

ACD leads the A Division with a 3-0 record followed by the KNADS with 3-1. The high individual scorers in the A Division are Steve Wills, KNADS, averaging 14 points per game, and Weldon Staton, ACD, averaging 13.5.

In the B Division the Beavers, with some outstanding team play, lead with a 4-0 record, followed by the Raiders and the Basketballs each at 4-1. Mike Luther, Beavers, leads the individual scoring race with a 21 point average with Bob Lee close behind with 19.6.

The Alchemists have turned their opponents into stone



STATE VISITORS: Officials of the State of Virginia visited the Center recently to discuss opportunities for further cooperation between both organizations on matters of mutual interest, in keeping with the objectives of the Intergovernmental Personnel Act of 1970. Visitors shown at the Visitor Center with Langley representatives are front row (from left): Axel T. Mattson, LRC; Edward T. Maher, LRC; Gilbert Monti, Chief of Training Program Section, Division of Planning; Millard Stith, State Management Intern; Dr. Al Stem, Director of Training and Development Staff in Office of Governor; and Dr. Richard Underhill, Director of Institute for Business and Community Development, University of Richmond. Back row - Spencer Elmore, Transportation Section, Division of Planning; Robert Griffis, Chief of State Planning Research Section; John Pignato, Coordinator of Programs under Intergovernmental Personnel Act of 1970; Dr. Benjamin S. Blanchard, Extension Division of VPISU; P. M. Lovell, LRC; and James Shultz, State Management Intern.

MERIT PROMOTION NOTICES

The following Merit Promotion Announcements opened January 24 and applications will be accepted until the close of business today.

Project Management Specialist, Low-Speed Aircraft Division, NASA/Army Rotor Test Vehicle Project Office, GS-301-9 or 11, Announcement No. 72-10. The area of consideration is the Aeronautics Directorate.

Aerospace Engineer (AST, Aerostructural Dynamics), Low-Speed Aircraft Division, NASA/Army Rotor Test Vehicle Project Office, GS-861-12 with promotional opportunity, Announcement No. 72-11. The area of consideration is the Aeronautics Directorate.

Merit Promotion Announcement No. 72-13 for Supervisory Engineering Technician, Fabrication Division, Structural Fabrication Branch, Fabrication Shop Section, GS-802-11, opened January 26 and applications will be accepted until February 8. The area of consideration is the Fabrication Division.

BE CHEERFUL. Of all the things you wear, your expression is the most important.

and lead the C Division with a 3-0 record. The Hoop Troop follows with a 2-1 record. Ron Weber, Ballers, is the individual scoring leader with a 14 point average followed closely by Stan Grimes, C & S, with 13.75.

Personnel Profiles

By

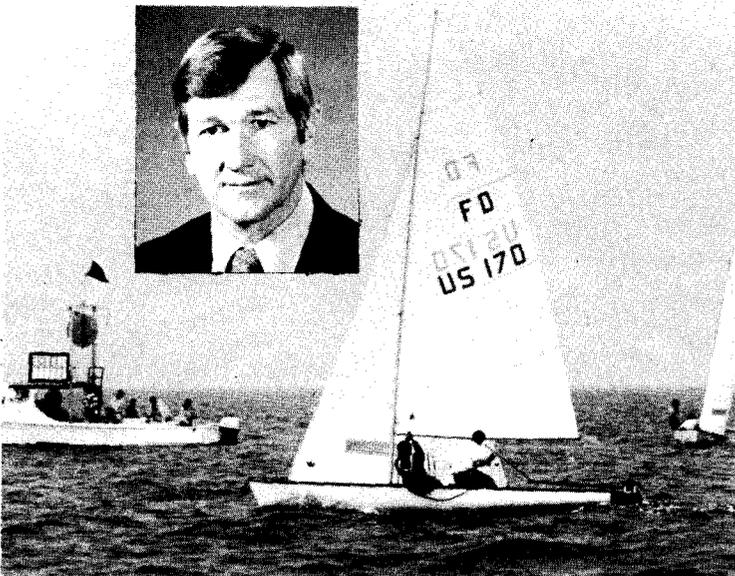
Allan C. Hanrahan



Victory At Sea

"I must go down to the seas again,
to the lonely sea and the sky,
And all I ask is a tall ship and a star to steer her by."
From "Sea-Fever" by John Masefield.

The late poet laureate of England who wrote the above lines harbored a special feeling for the sea and sailing, just as does Robert L. James Jr., the gentleman whom it is our pleasure to meet this issue.



Born in Mathews, he spent many hours sailing the waters of Mobjack Bay and then ten years ago, at the age of twenty-eight, he began sailing competitively -- a natural move because, as he stated, "I've always enjoyed competitive sports." Then in 1968 he capped a meteoric rise in proficiency by winning the honor of representing the U.S. in the Olympic sailing competition in the twenty-foot, or "Flying Dutchman" class -- one of six classes of boats in Olympic racing. In his class he captured tenth place out of a field (or should we say "fleet") of twenty-eight entries, or countries represented. This has gained him international recognition in sailing. Representing the U.S. in the Olympics had already established him as the best in his country in his class. He hopes to represent the U.S. again in Kiel, Germany, on the Baltic Sea.

"But first we (he and his younger brother who is his "crew") have to win the U.S. trials in Buffalo, N.Y., in June," he said. "I think we have a good chance this time," he continued. "We're four years older and so, more experienced; we've changed from a fiberglass boat to a wooden one -- wooden hulls are better for racing -- and we have better sails. The boats must be within certain specifications, of course, but there's a lot of freedom for testing and developing different materials, which we've been doing,

watch your step

During a recent five-year period, a study was made of 80,000 employed adults. Over 2,300 of the 80,000 had received disabling injuries from falls.

Some of the falls -- 20 percent -- occurred on stairways and on outside steps that were covered with ice or snow. The second largest source of falls -- 16 percent -- was due to slippery footing on surfaces covered with snow and ice.

Slippery sidewalks, streets, and front steps are the many enemies of people of all ages but especially of adults and older people. Icy and freezing weather is more prevalent in the northern states, but the southern states get their share, too -- and when it does hit in the South, it usually comes as a surprise, catching many people off guard, leading to more accidents than a similar situation in a northern city because people are less familiar with the condition.

While ice is slippery at all times, it becomes more hazardous when the temperature rises and the ice becomes covered with a thin coating of water, which can be particularly hazardous at entrances to buildings and houses.

THAT SLIPPERY SUBJECT

To avoid the falls that injure so many, follow these few simple rules:

1. Keep steps and sidewalks free of ice and snow.
2. Spread sand or salt at locations that become icy or where ice can form.
3. Make sure stairs and porches are well lighted, and remember that it becomes dark early in the winter.
4. Do not leave the snow shovel and other equipment on the steps or where they can become tripping hazards.
5. Wear shoes that are in good condition and overshoes with a good tread (a ribbed sole will provide better traction than a sole with fine cross hatching.)
6. When walking, take short steps (shuffle), and lean forward in a slight crouch; keep your weight off your heels.
7. Be alert to the possibility of ice where you least expect it.
8. Hold onto the railing when going up or down stairs.
9. Clean off the bottom of your shoes before entering a house or building.
10. If you start to fall, relax and "roll with the punch."



MONEY and time are the heaviest burdens of life, and the unhappiest of all mortals are those who have more of either than they know how to use.

KEEP on your toes and you won't run down at the heels.



so...we're hoping."

Sometime in the future he hopes to acquire a larger class boat, both for racing and for taking his wife, Mary Ann, and their three sons and a daughter sailing.

Other interests Bob tries to find time for are golf, hunting, and raising bird dogs.

A 1955 graduate of Georgia Tech with a degree in Aeronautical Engineering, he came to the Center in 1959 and is now Head of the Flight Projects Branch of the Space Technology Division.

We wish him luck in New York AND in Germany!

Questions and Answers

Q. I understand that a virus infection is now going around on the Peninsula and that this particular strain has quite severe effects on its victims. I know of several instances where LRC employees have contracted this virus and have continued to report to work. I do not feel that it is fair for me and my family to be unnecessarily exposed to this contamination. Is there any way that supervisors can force employees who are obviously ill and contagious to stay home on sick leave?

A. According to personnel officials, neither supervisors nor employees are qualified to diagnose the extent of illness of those who work for or with them. However, when a supervisor feels an employee is ill, the employee should be sent to one of the Center's dispensaries. The extent of illness will be evaluated by the nurses, and the employee may be sent home, to his family physician, or back to work as appropriate.

Q. Why is the color coding on 'O' rings being dropped?

A. Frank A. Lofurno, Property Officer, Management Support Division, pointed out that this Center no longer requires color coding on 'O' rings procured for stock purposes as they are purchased in accordance with the National Supply System concept through the Department of Defense Supply Agency. The items are identified by Federal Stock Numbers which are used by all government agencies. Its use permits everyone to identify a single item to a single stock number. It permits everyone to talk the same language in acquiring and disposing of property. It identifies the item, in this case, to an individual packaged 'O' ring which is manufactured in accordance with a Military Specification, which covers all of the pertinent details of the item.

Q. Why don't the LRC cafeterias buy food through the Air Force Exchange Service and pass this reduced cost on to its civilian and military patrons? The LAFB Officers and NCO clubs charge comparable prices and realize a net profit from food sales. Food service activities at other Government installations in the Tidewater area charge less for food of comparable quality. Are we not entitled to the best combination of food prices and quality reasonably available?

A. Only military organizations may purchase through exchange and commissary facilities, according to Jess Ross, NASA Exchange Treasurer. A check on this possible source of supply was made during the past six months.



AN OLD FAVORITE: While looking through old photographs for possible use in albums for a number of retirees, we ran across one of our favorite unpublished pictures. This photo was taken at a 30th anniversary party given in 1951 in honor of the late Dr. H. J. E. Reid, former director of the Center. It was included in a photo album given to Dr. Reid with this outline: "Money was lost and money was made, as Percy J. Crain shouted, 'Hey, it's a raid'." Shown in the photo are (from left): Crain, Charles Barnett, Kemble Johnson, Axel Mattson, and the late James Ferguson.

can you solve this problem?

A lightweight, durable material to be used in the fabrication of mail bags for transporting letters and packages is needed. Canvas bags are presently used for transporting letters and small packages and Resintex for air mail. Due to excessive wear and tear, there is considerable expenditure each year for repair and replacement. Refer to PS-5. Contact the T. U. Office, extension 3281, for the problem statement or if you have a contribution.

■■■■■■■■■■
MAN'S capacity for justice makes democracy possible; but man's inclination to injustice makes democracy necessary.

■■■■■■■■■■
Ross further stated that Center cafeteria patrons are provided the best quality food reasonably available and that prices are set to produce no profit.

Langley Researcher

VOLUME 11, NUMBER 4

LANGLEY RESEARCH CENTER Feb 10

FEBRUARY 18, 1972

HATHAWAY NAMED CENTER'S FIRST DISTINGUISHED RESEARCH ASSOCIATE

Melvin E. Hathaway, Aerospace Engineer in the Vibrations Section of the Loads Division, became the Center's first staff member to sign an agreement to join the Langley Distinguished Research Associate program.

Hathaway, who will retire from the Center on March 1 with almost 25 years of Federal service, will return to the Center the following day as a Distinguished Research Associate.

An experimental parametric investigation to determine water towing characteristics will be conducted by Hathaway with a 1/32.4 scale dynamic model of a potential ocean recoverable space shuttle booster configuration. It is expected that the results from the study will provide velocity, load, and sea state data for prototype design and prepare for Manned Spacecraft Center studies for larger models in open water.

The Distinguished Research Associate program is limited to former Center employees who have made distinguished contributions to scientific or technical programs and who wish to continue their research efforts on the basis of a formal agreement with the Langley Research Center.

The Distinguished Research Associate is not an employee of the Langley Research Center and will receive no compensation or remuneration from the Center for any research performed. He will be furnished research support on a nonexclusive, noninterference basis.



DISTINGUISHED RESEARCH ASSOCIATE: Melvin E. Hathaway (left), Loads Division, became the Center's first staff member to sign a memorandum of agreement to join the Center's Distinguished Research Associate program. Participating in the signing ceremony are Dr. John E. Duberg, Associate Director, and Richard R. Heldenfels (right), Assistant Director for Structures.

AUTOMATIC HELICOPTER LANDINGS ACCOMPLISHED BY LANGLEY TEAM

The first fully automatic approaches and descents to a vertical landing at a predetermined spot ever flown with a helicopter have been achieved by a team of research engineers and pilots of the Langley Research Center.

The accomplishment is considered a major milestone in a continuing research program aimed at permitting helicopters and future VTOL aircraft to fly routine missions under bad weather conditions. Development of a practical system for such operations has been a NASA goal for several years.

Langley's Low Speed Aircraft Division managed the research program and flight experiments were conducted at Wallops Station, using a CH-46 tandem rotor helicopter furnished and equipped by the Army's Air Mobility Research and Development Laboratories for joint NASA-Army research programs.

The automatic landings were performed with laboratory-type equipment in a research environment to study performance requirements for automatic VTOL aircraft operations in all-weather city-center to city-center air transportation service.

The landing approaches were fully automatic from a point 3.2 to 4.9 kilometers (2 to 3 miles) from the intended landing spot and all landings were made within a few feet of each other. The automatic system was engaged in level flight at 96.5 kilometers per hour (60 mph) and 244 meters (800 feet) above the ground.

When the research helicopter intercepted the landing guidance path, the system automatically locked on to start the landing approach. At a predetermined range from the touchdown point, the helicopter began an automatic deceleration to zero ground speed, coming to a hover 15.2 meters (50 feet) over the landing spot. It then descended vertically to a touchdown.

Five approaches were made: three at a 6-degree descent angle; one at 10 degrees; and one at 15 degrees.

Guidance for the approaches and landings was provided by a ground based GSN-5 tracking radar linked by telemetry to on-board equipment in the CH-46 helicopter. An analog computer in the helicopter and a special Langley-developed inertial signal-smoothing device provided control signals to a 4-axis electrical input servo control system.

The research team responsible for the automatic landing project includes: John F. Garren Jr., Project Manager; James R. Kelly, Project Engineer; Frank R. Niessen; Robert M. Peterson; Jack H. Dysart; Daniel J. DiCarlo; Jerry J. Thibodeaux; and Robert W. Sommer and Kenneth R. Yenni, Project Pilots.

Happenings

HAPPY HOUR. . .Happy Hour will be held today from 3:45 to 7 p.m. in the Activities Building. The Activities Association has been very fortunate in obtaining the Milestones for your dancing and listening pleasure. The Milestones, a group managed by Langley's Harry Hamilton, have been playing out of the Roanoke area. They have enjoyed great popularity on the college circuit from the Atlantic Coast Colleges to the Ivy League. They specialize in the top 40 type music and will play from 4 to 6:30 p.m. The Activities Association is very enthusiastic about the response to the Happy hours and will continue them on a biweekly basis, building scheduling permitting. Sandwiches and snacks will be available. The next Happy Hour will be held on March 10, from 3:45 to 7 p.m. at the Activities Building.

NEW HEIRESS. . .Announcing the birth of an eight-pound, four-ounce daughter, Heidi Leigh, on January 28, is Lemuel E. Mauldin, III, Instrument Research.

AMOLE HONORED. . .Bruce Amole, who recently retired from the Center, was named by the Peninsula Bridge Unit as the individual who made the most outstanding contributions to the group. This is the first year for the perpetual award which will carry Amole's name. The presentation was made by Colonel Louie T. Rawls at a meeting in the Activities Building. The Peninsula unit is a part of the Mid-Atlantic Conference of American Contract Bridge League.

TOUCH FOOTBALL. . .Bombers defeated FID in a postponed game to win the NASA Touch Football League Championship with a record of 6 wins, 1 loss, and 1 tie. Members of the winning team are: Mack Jackson, Sonny Wood, Erby Harris, John Hoppe, Bob Evans, Allen Whitehead, Billy Ashworth, John Merrill, Dave McDougal, Al Hall, Edward Phillips, Merrill Hawk, George Palko, and Floyd Howard.

MARCH SKI SCHEDULE. . .The NASA Ski Club is planning four trips this month to Bryce Mountain. The dates are March 1, 9, 16, and 23. Complete cost of these trips is \$19.50 for each trip. The group is planning a Vermont trip on March 6 and 7. Skiers leave Newport News on March 5 and arrive at the Worthy Inn in Manchester for a buffet supper. They ski Big Bromley on Monday and Killington on Tuesday and return to Newport News by 8 a.m. on Wednesday. The cost of \$78 includes 4 meals, lift tickets, and transportation. For further information call Richard Bennett, 595-7456.

LECTURE PLANNED. . .Don Cone will present a one hour lecture on the aerodynamics of flapping birdflight at 9 a.m. on Thursday, February 24, in Room 200, Building 1212. The talk will be illustrated with high-speed films of birds and insects in flapping flight. Technical reports on the aerodynamics of natural flapping and soaring flight will be distributed. All interested persons are invited to attend.

THANKS. . .Tom Palmer, who retired on January 21, wishes to thank his many friends at Langley and at other NASA Centers for their kindness, telegrams, and gifts which



SPECIAL AWARD: Lucy C. White, Low-Speed Aircraft, recently received a Special Achievement Award for Performance for "her sustained superior performance in providing exceptionally effective mathematical support of aeronautical research by special devotion to duty and by adapting and applying new data reduction techniques and training her associates in their use. Shown with Mrs. White are M. O. McKinney, Head of Dynamic Stability Branch, and John P. Campbell (right), Chief of Low-Speed Aircraft Division.



were presented to him at a recent reception held in his honor.

TUTORS NEEDED. . .The Peninsula Literacy Council is operating a program to help adults learn to read. Some of the students simply did not attend school, while others are foreign born and cannot read or write their new language. If you are interested in becoming a volunteer tutor, or if you know someone who is functionally illiterate, call Bill Lee, extension 2266.

PROFESSORS TO VISIT. . .Drs. Joseph A. Schetz, C. H. Lewis, F. H. Lutze, J. F. Marchman, and Yau Wu, Aerospace Engineering Department, VPI&SU, will visit the Center on February 22, to discuss programs with current and prospective graduate students. Interested persons should call the Training Office, 2517, for an appointment.

SKYWATCHERS. . .On Wednesday, February 23, Dr. G. A. Soffen, Project Scientist for Viking, will speak to the club on "Mars - 1972" in which he will discuss the status of information on Mars. The meeting will be held at 8 p.m. at the Peninsula Nature and Science Center on J. Clyde Morris Boulevard.

Langley Researcher, an official publication of the Langley Research Center, National Aeronautics and Space Administration, Hampton, Virginia 23365, is published biweekly in the interest of its employees. Address contributions to the Editor, Mail Stop 154, telephone 3116.

Editor.....Ruth Angel Verell
Staff Photographer.....Bob Nye
Reporters.....Langley Employees

The privilege of advertising articles in this publication is restricted to employees of Langley Research Center. Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.

STAFF URGED TO HAVE CHECK DEPOSITED TO BANK ACCOUNT

Until recently, individual checks covering employees' net pay have been forwarded by the Treasury Department to banks designated by employees. In order to expedite the issuing of checks and to reduce mailing and handling costs, the Treasury Department, in 1970, established procedures for entering into an agreement with banks to submit a composite check, instead of individual checks, to the banks covering the net pay of all employees having accounts with them. Many banks throughout the nation have entered into such agreements.

In October 1970, this Center converted to the composite check system. Each pay period the Payroll Section sends a listing to each participating bank, listing the employees' account numbers with the amount that should be credited to each account on pay day. If the bank does not receive the composite check on pay day, the bank advises the Treasury Department, who immediately wires the money to be credited to the accounts through the Federal Reserve System.

Because of the guarantee feature of deposits many banks, at the suggestion of the Treasury Department, are eliminating the practice of sending deposit slips to their depositors. While this is essentially a matter between the financial organization and the depositor, since the financial organization can assure that their accounts will be credited on the established pay days and each employee is supplied with a statement of earnings which indicates the net amount of pay that will be deposited, any special advice of the deposits credited under these procedures should be unnecessary.

Over 60 percent of Center personnel currently have their pay deposited to their bank accounts. Those who have not yet adopted this procedure are encouraged to do so, since it normally takes several weeks to issue a substitute check for one addressed to other than a bank if it is lost in the mails, or stolen from a private mail box.

The form necessary to have one's pay deposited to his bank account (SF-1189) is available from your Time and Attendance Clerk or from Stores Stock. SF-1189 requires acceptance by the bank before it can become effective.

NEW EDITION OF HEALTH BENEFITS BOOKLET TO BE DISTRIBUTED SOON

The most recent edition of the booklet "The Federal Employees Health Benefits Program," Standard Form 2809-A, is being distributed to all full-time permanent employees.

This is the basic booklet describing the nature and details of the program and is applicable to all plans and options. Since the brochure has been reprinted and revised several times, it was deemed advisable to furnish each eligible employee with an up-to-date copy.

This booklet should be retained for reference with the brochure of the health benefits plan in which you are enrolled.



THE MAN who understands one woman is qualified to understand pretty well everything.

DO YOU see difficulties in every opportunity or opportunities in every difficulty?



LRC RECEIVES AWARD: The Langley Research Center has received a Small Business Administration Achievement Award. Oran W. Nicks (center left), Langley Deputy Director, accepts the SBA award from Representative Thomas N. Downing. Looking on are Thomas F. Regan (left), SBA District Director, and L. Douglas Hogge, SBA Program Development Officer.

LRC RECEIVES SMALL BUSINESS AWARD

Early this month Langley Research Center received an achievement award from the Small Business Administration. The award, signed by the Honorable Thomas S. Kleppe, Administrator of the Small Business Administration, was presented to Oran W. Nicks, Langley Deputy Director, on behalf of the Small Business Administration by Representative Thomas N. Downing, First Congressional District.

The award was given for outstanding cooperation and assistance to SBA in implementing its program of minority business development. Langley last year offered 25 contracts totaling \$385,000 to the Virginia district of the SBA.

Langley Research Center was the first NASA facility to enter into an agreement with the SBA under the 8(a) Program. The contract between SBA and NASA was signed by Sherwood L. Butler, Procurement Officer, on June 19, 1970.

Langley's effort in the program is coordinated by John Munick, Associate Chief of Procurement Division, and Joseph F. Braig, Head of the Industry Assistance Office, Procurement Division.

GARRICK NAMED VON KARMAN LECTURER

I. E. Garrick, Center Scientist in the Office of the Director, has been chosen the Von Karman lecturer in Israel for 1972. He will present the Fifth Von Karman Memorial Lecture on March 1, at the annual meeting of the Israel Society for Aviation and Astronautics in Tel Aviv. Garrick's lecture entitled "Perspectives in Aeroelasticity" will be published in the Israel Journal of Technology.

The lecture is presented biennially as a memorial to the internationally famous Theodore Von Karman who died in 1963.

Garrick was selected by an international committee with representatives from the United States, Israel, England, France, and The Netherlands.

Garrick will spend about two weeks in Israel and will also give several lectures to the staff of the Aeronautical Engineering Department of the Technion - the Israel Institute of Technology in Haifa.

Questions and Answers

Q. How is the "area of consideration" determined on merit promotion vacancy announcements and is it possible to be considered if you are out of the "area of consideration?"

A. In answering this question, Personnel officials elected to run the following article on "Merit Promotion Plan Cited."

The NASA Merit Promotion Program carries out the basic Merit Promotion policies established by the Civil Service Commission instructions in Chapter 335 of the Federal Personnel Manual.

The purpose of this plan is to assure selection from among the best qualified persons available to fill vacancies on the basis of merit, fitness, and qualifications and without regard to race, color, religion, national origin, marital status, sex, age, physical handicap, employee organizational affiliation, personal favoritism or political affiliations. This plan does not guarantee promotion but rather is intended to assure that all qualified employees receive fair and equitable consideration for promotional opportunities.

At the option of the selecting official, a vacancy may be filled by promotion, demotion, reassignment, transfer, reinstatement, or appointment from a civil service register of eligibles. Announcing a vacancy as a promotional opportunity is only one method of locating candidates and it does not preclude concurrent consideration or ultimate selection of outsiders as best qualified. However, when outside candidates are current or former federal employees and the position to be filled involves promotion or has known promotion potential, the competitive provisions of this plan will be applied.

Regardless of the area of consideration which is used to locate candidates for a particular vacancy, all NASA employees who meet the minimum qualification standards established for that particular vacancy may apply for, and must be considered for, that vacancy. Employees outside the area of consideration may also file voluntary applications in advance of a vacancy occurring. Such applications must state the specific position or types of positions the applicant is interested in, and should contain all the experience that is applicable to that type of position. These voluntary applications will be retained for a period of 6 months and then returned to the applicant to update and resubmit if he desires continued consideration.

The Langley Center's Merit Promotion Plan applies to filling positions by means of internal transfer of employees, either where a reassignment results directly in a promotion, or the position possesses known promotional potential. The Merit Promotion Plan does not apply to promotion resulting from gradual change of duties and responsibilities. Neither does it apply to reassignments when it is determined that there is no known promotional potential in the new assignment.

Upon specific request to the Personnel Office, any employee considered for a vacancy will be furnished the name of the individual selected, and the following information:

Whether he was found to be qualified on the basis of the minimum standards; whether his name was on the list from which selection to fill the position was made; and in what areas, if any, he should improve himself in order to increase his chances for future selection for advancement.



SPECIAL AWARDS: A number of Public Service Career Trainees have received Special Achievement Awards for Performance. The recipients shown here with their supervisors are front row (from left): Shirley Stephenson, Lillian M. McKoy, Octavia Vann, Mary E. Hachey, Linda S. Summerford, and Tut Huffman, supervisor. Second row - Janice E. Vaughan, Sylvia Harris, Queenella M. Perrin, Cassandra G. Favor, and Margaret Lail, supervisor. The supervisors on the back row are: William F. Lawson, James C. Tingle, Lawrence R. Greenwood, Wilmer H. Reed, Ralph E. Waagner, John P. Raney, and Clarence D. Cone. Also receiving the award was Cerie W. Wood.

MERIT PROMOTION NOTICES

Merit Promotion Announcement No. 72-15 for AST, Technical Management, Programs and Resources Division, R and D Programs Group, GS-1301.1-11, 12, or 13, opened February 7 and applications will be accepted until the close of business today.

Merit Promotion Announcement No. 72-16 for Aerospace Engineer (AST, Aerostructural Dynamics), Low-Speed Aircraft Division, NASA/Army Rotor Test Vehicle Office, GS-861-12 with promotional opportunity, opened February 8 and applications will be accepted until the close of business today. The area of consideration is the Structures Directorate and the Aeronautics Directorate.



Employees are responsible for informing the Personnel Office, at least annually, of qualifications, special training, and educational achievements which are not already a matter of record in the Personnel Office.

If an employee has a question or complaint about the promotion program or a specific promotion action, he should contact the Staffing and Special Programs Branch. Mere failure to be selected for promotion when proper procedures were used, that is non-selection from among the group of properly ranked and certified candidates, is not a basis for formal complaint. Formal complaints will be processed through the Langley grievance procedures.

All staff members have been given copies of this plan and copies are also given to new employees when they enter on duty. Additional copies of Langley's Merit Promotion Plan are available in the Personnel Office. Vacancy announcements that list positions in many Federal agencies are available for review in the Staffing and Special Programs Branch. A special area has been set up for the display of these announcements in Building 587.

For further information, employees should consult their supervisors or James J. Fay, extension 2233.



Joseph T. Guy, Jr.



David L. Smith



Tom D. Finley



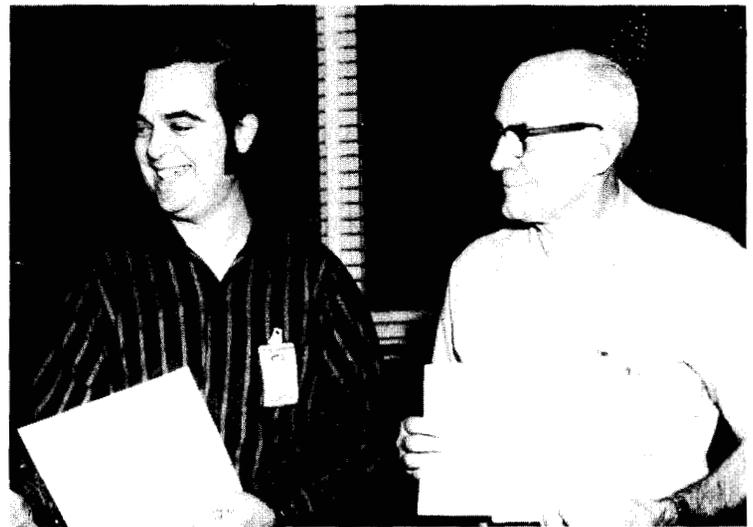
Harry V. Fuller



David F. Thomas, Jr.



Dwight G. McSmith



Douglas W. Whipple (left) and Earl R. Blymiller

DON'T STRETCH TIRE MILEAGE

Many a motorist has met a tragic end by trying to squeeze out a few extra miles on thin and bald tires -- tires that you can't give away or trade in. Thousands of motorists are traveling our high speed freeways on this type of tire.

Unexplained accidents they're called, where drivers have been killed outright while trying to stop, or a tire blew out and the vehicle lost control and struck another or a fixed object. It's shocking to see the thin or bald tires on the vehicles as one of the contributing factors to the accident.

Honestly now, we make an investment of \$500 to \$10,000 for a motor vehicle. Are we going to chance fate and place our family and friends in jeopardy by driving on questionable tires?

Think about it. . . a tire moving day in and day out against the pavement, stress, pulling, stretching, shrinking, overheating. When improperly inflated, it has a better chance of blowing out sooner. One to three tons go hurtling down the modern freeways at a high rate of speed. . . suddenly a screech of brakes. . . the crunch of metal. . . the breaking of glass. . . and then the stillness of death!

Have you ever tried to render aid to a small child whose head had been crushed? . . . or the mother who went through the windshield? . . . and the driver who has been jammed down below the steering column? Three lives lost in a

EMPLOYEES RECEIVE AWARDS

A number of staff members have received invention awards. The recipients and titles of their inventions are as follows:

Joseph T. Guy Jr., Fabrication, received \$50 for his invention entitled "Disk Pack Cleaning Table."

David L. Smith, Instrument Research, was awarded \$50 for his "Hall Effect Transducer."

Tom D. Finley, Instrument Research, received \$200 for his invention entitled "A Split Range Transducer."

Harry V. Fuller, Flight Instrumentation, was presented \$50 for his "Cable Restraint."

David F. Thomas Jr., Space Systems, and Paul R. Hill, retired, received \$100 each for their joint invention entitled "Kinesthetic Control Simulator."

Dwight G. McSmith, Operations Support, was awarded \$500 for his "Explosive Swage Device for Tubing."

Douglas W. Whipple and Earl R. Blymiller, Fabrication, received \$200 each for their joint invention entitled "Micro-circuit Negative Cutter."



matter of seconds, only because the driver was trying to stretch that mileage.

FROM: Industrial Supervisor



VISITS CENTER: Professor J. P. Den Hartog (center), Professor Emeritus of Massachusetts Institute of Technology and world recognized authority on mechanical vibrations, visited the Center recently for consultation and a lecture presentation. Professor Hartog's lecture on "Vibrations" was attended by over 100 staff members. Shown with him are I. E. Garrick (left), Office of the Director, and Dr. Clarence Young, Systems Engineering Division.

CAFETERIA MENU

The following menu will be served in the cafeterias during the week of February 21:

Monday - H O L I D A Y

Tuesday - Cream of tomato soup, business man's lunch, veal scallopini, Chinese egg rolls, chili mac.

Wednesday - Oyster stew, hot roast beef sandwich, stuffed peppers, chicken chow mein, wieners and sauerkraut.

Thursday - Corn chowder, braised beef tips, seafood platter, meat loaf, creamed dried beef on toast.

Friday - Chicken noodle soup, hot turkey with dressing, beef burgundy, chicken croquettes, macaroni and beef.

Snack bar - Soup, jumbo burger, hot dogs, fish, French fries, apple turnovers. Variations - Corned beef, ham salad, NASA submarine, chili (Tues.); pastrami, ham and cheese club, hot roast beef (Wed.); corned beef, NASA submarine, chicken salad, steak (Thurs.); barbeque beef, ham and egg, pastrami (Fri.).

The menu for the week of February 28 is as follows:

Monday - Cream of mushroom soup, business man's lunch, Maryland fried chicken, barbequed pork chunks, spaghetti with meat balls.

Tuesday - Vegetable beef soup, steamship round, fish fry, cordon bleu, franks and beans.

Wednesday - New England clam chowder, country style steak, fried scallops, boiled ham, chicken pot pie supreme.

Thursday - Cream of chicken soup, grilled T-bone steak, beef stew, clam croquettes, tuna rice casserole.

Friday - Vegetable soup, broiled rib eye steak, chicken and dumplings, baked lasagna, grilled cheese sandwich.

Snack bar - Soup, jumbo burger, hot dogs, fish, French fries, apple turnovers. Variations - Hot roast beef, ham and cheese club, NASA submarine (Mon.); corned beef, tuna salad, chili (Tues.); pastrami, NASA submarine, chicken salad (Wed.); barbequed pork, corned beef, ham and cheese club (Thurs.); barbequed beef, pastrami, ham salad (Fri.).

SWAP AND SHOP

FOUND

Pocket watch, wrist watch, lady's ring, 2 sets of keys, and 1 key. Security Office, 2297.

WANTED

Ride from Wheeler Ave. to W.A. on 8 shift. McKoy, 3395.

FOR SALE

Pair of 14-inch tires, like new, will swap for VW tires size 6.50 x 15. Storaasli, 851-4936.

1964 Plymouth station wagon, standard transmission, best offer. Hypes, 826-5328.

17-foot Mobjack sailboat and trailer - \$995. Bavuso, 838-0606.

Sears attache portable typewriter - \$26. McKoy, 244-3166.

1964 Ford XL-500 convertible - \$495 or best offer. Woerner, 877-9657.

1956 Chevrolet, 4-door, automatic transmission, 98,000 miles. South, 851-2154.

1955 Chevrolet, 2-door sedan; 1970 Pontiac Judge, 4-speed transmission - \$600. Nayadley, 851-3192.

1962 Ford Falcon, 2-door, 6-cylinder, standard shift. Moore, 851-2223.

1967 Chrysler, 4-door hardtop, power accessories. Smith, 723-6488.

Sears plate-type humidifier - \$5; power humidifier - \$20. Witte, 877-7971.

Polaroid color-pack camera Model 215 - \$25; standard size rural mailbox - \$2; 9 x 6-foot oval braided rug - \$10; Magnus electric chord organ - \$10. Brooks, 244-3064.

Sears Screamer #1 spider bike, 5 speeds - \$30. Butler, 596-3394.

Betsy Ross Lester piano. Johnson, 826-4677.

1965 Buick Special, stick shift, new tires, battery and brakes - \$400 or best offer. Heyman, 877-7777.

Sofa, 90 inches long - \$150; coffee table and two step tables - \$50. Crews, 877-2656.

Baby crib, dishwasher, Lane cedar chest, 27-inch TV set (black and white), several pieces of antique furniture. Koch, 826-3348.

1964 Rambler 770, 2-door hardtop, good tires, AM/FM radio. Pearson, 838-1219.

1964 Mercedes 220. Moore, 596-3932.

USE MAIL CODES FOR NASA MAIL

A communication has been received from NASA Headquarters urging all Langley employees to use correct mail codes (or mail stops) for all mail addressed to NASA Headquarters and to all NASA Centers. These mail codes (or mail stops) can be obtained by consulting the telephone directory for the various installations.

A complete set of these directories has been issued to each directorate and division office. If you are in doubt as to whether the telephone directory you have is the most recently issued one, check with the Communications Section, extension 2016.

Langley employees are further urged to give their mail stop numbers to anyone from whom they expect to receive a communication. This will not only expedite delivery of mail but will also save labor costs involved in searching the Langley telephone directory for mail stops when mail is received at the Mail Desk without them.

Personnel Profiles

By

Allan C. Hanrahan



SHE GETS INVOLVED

Yes, indeed she does! We're talking about Marjorie F. Graham, a lady with an enthusiasm for life and helping people; not out of any sense of duty or whatever, but simply because she wants to -- because she enjoys helping others.

Take for instance the fifteen-year-old boy who was a Cuban refugee -- back in the early days of the migration from Castro's commune when there was no organization in this country for the influx of refugees. She sponsored him into this country and then his three sisters and his mother and a niece and a nephew and two friends -- all of whom lived with her until permanent arrangements could be made.

"Luckily I have a big, old house," she laughingly answered when asked if conditions became a wee bit crowded.

There were other Cuban refugees she helped get settled in this country and not too many years ago she sponsored and had living with her two Hungarian women (one of whom, Maria, a waitress, is photographed with her) and their respective twelve-year-old sons: refugees from their native country.



"They're both living to themselves now and really doing quite well," Marjorie proudly told us.

Another example of Marjorie's hospitality and regard for people was the fact that during a five-year period she furnished a foster home for a total of thirteen children. "But I've sort of given that up," she told us with just a little sadness in her voice. "After eleven or twelve years as a foster parent on emergency call, the emotional strain starts to get to you," she continued. "You know, some of those kids have really had it rough!"

Let's not forget Marjorie's four children -- all adopted. She still has one son at home with her: Joseph, an eleventh-grader at Warwick High School. Marjorie herself was an only child, born in Chester, Pennsylvania, and raised in

HASSELL TO ADDRESS ISA

The February meeting of the Tidewater Chapter of the Instrument Society of America will feature a presentation by James L. Hassell Jr., Langley's Externally Blown Flap Transport Project Office.

Hassell's presentation will be "A Review of Powered Lift STOL Research at LRC" and will cover the powered lift concept, current activity at Langley, instrument applications and problem areas.

The meeting will be held at the Longhorn Steak House in Hampton on February 23. A social period will be held at 6:30 p.m., followed by dinner at 7. Persons interested in attending should call F. A. Kern, 898-6598, for reservations.

SKYLAB STUDENT PROGRAM

More than 80,000 sets of entry materials and applications have been requested for participation by U.S. secondary school students in the Skylab Student Project, sponsored by the National Science Teachers Association and NASA.

A limited number of experiments proposed by students will be selected for performance by astronauts aboard the 1973 Skylab Earth orbital space laboratory.

Announcement of regional and national selectees will be made in April. Selection of the flight experiments from the 25 national selectees will be made by NASA.

Skylab is a manned Earth orbital space laboratory scheduled to be launched in the spring of 1973 for scientific, technological and biomedical research from the vantage point of space. First manned mission is scheduled for up to 28 days with second and third missions up to 56 days.

can you solve this problem?

A method of measuring the damage to blood caused by blood gas exchange devices such as a heart-lung machine is needed. The use of such machines is limited to two hours due to blood damage. If a technique could be developed for lengthening this period of time, these machines may be used for the treatment of hyaline membrane disease which kills approximately 25,000 newborns annually. Refer to TU-25. Contact the T.U. Office, extension 3281, for the problem statement or if you have a contribution.



ALWAYS speak the truth and you'll never be concerned with your memory.



Philadelphia. She graduated from West Catholic Girls High, was one of two women sheetmetal mechanics at the Philadelphia Navy Yard and has been an optician and a Bell Telephone Company supervisor. Since 1955 she has been at the Center and is currently a Mathematics Technician in the Aircraft Landing Dynamics Section of the Loads Division.

After work? Well, she likes swimming at the "Y"; she's President of the Peninsula Consumer's League, involved with other civic endeavors and she attends school four nights a week!

There are many adjectives to describe Marjorie Graham but we sort of like these three: entertaining, exuberant, and enthusiastic.

RETIREMENT PARTIES

Anshal I. (Red) Neihouse, Office of the Director for Administration, will be honored at a retirement party Friday, February 25, at 4:45 p.m. in the Private Dining Room of the Cafeteria Building (1213). Cost will be \$4 per person or \$7 per couple, including gift. Participation in gift only will be one dollar. Send contributions to Sandra T. Anspach, M.S. 154, by February 22.

H. Vernon Forrest, Operations Support Division, will be honored at an informal retirement party on February 28, at 4:30 p.m. in the lounge of the Activities Building. If you plan to attend or would like to contribute to a gift, call Jack Locke, extension 2926, M.S. 498-A.

Lois H. "Grandma" Smith, Materials Division, will be the honored guest at a retirement party on Saturday, Feb. 26, at 7:30 p.m. in the Activities Building. Cost of the party and gift will be \$4; cost of gift only is \$1. Send names and contributions by February 22 to Sandy Humble, M.S. 188A.

A retirement party honoring Howard Ferrall, Bob Davis, Howard Miller, Linwood Outlaw, Austin Pereira, Lee Segall, and Leonard Wells will be held at Eli's Restaurant at 6 p.m. on March 1. Price will be \$6.50 per person or \$12 per couple. Cost of gift only will be \$1. Send names and contributions by February 23 to Lewis Horsley, M.S. 205.

James A. Watson, 7 x 10-Foot Wind Tunnels, will be honored at an informal retirement get together at 12:45 p.m. on March 3, in Room 107, Building 1212. Send contributions by February 25 to Dan Bridges, M.S. 4040A.

"Oily" Andy Ahl, Flight Instrumentation, will be honored on the occasion of his retirement at a steak dinner on March 6, at 6 p.m. in the Private Dining Room of the Cafeteria Building (1213). Cost will be \$4.50 per person or \$8 per couple, including gift. Participation in gift only will be one dollar. Send contributions to Dwayne Hinton, M.S. 494, by February 25.

John P. Morgan, Fabrication Division, will be honored at a retirement party on March 11, at 6 p.m. in the Activities Building. Cost including gift is \$4 per person or \$7.50 per couple. Cost of gift only is \$1. Send names and contributions to W. Cecil Burtner, M.S. 224, by March 6.

R. Wilson Hogg, Space Technology Division, will be honored at an informal retirement party on March 3, from 5 to 7 p.m. in the Private Dining Room of the Cafeteria Building (1213). Cost of the party and gift will be \$4; cost of gift

words in peoples' mouths



only is \$1. Send contributions to Jan Grow, M.S. 215, by February 28.

Ada Hadden and Iris R. Martens, Financial Management Division, will be honored at a retirement buffet dinner on March 1, at 4:30 p.m. in the West Cafeteria. Cost will be \$4.50 per person or \$7 per couple. Cost of the gifts only will be \$2. Cocktails will be available at a minimum cost. Dinner will be served at 6 p.m. Names and contributions should be sent to Jeanette George, M.S. 142, by Feb. 25.

Ellis Davis, Instrument Research Division, will retire from the Center at the end of this month. Persons wishing to contribute to a retirement gift should send their contributions to Elsie Eason, M.S. 233.

Langley Researcher

VOLUME 11, NUMBER 5

LANGLEY RESEARCH CENTER

MARCH 3, 1972

100,000TH GUEST REGISTERS AT LANGLEY VISITOR CENTER

Although open only eight months, the Langley Visitor Center recently welcomed its 100,000th guest. The occasion coincided with a tour of the Center by a group of children and adults from the Peninsula Cerebral Palsy Training Center of Hampton, headed by Clifton Pleasants, Director.

Cited as the 100,000th visitor was a teenage youth, Geronimo Austin, and in recognition of the special event, he was presented a copy of the book "This Island Earth" and a replica of the plaque left on the surface of the Moon by the Apollo 11 astronauts. Dr. John E. Duberg, Associate Director of Langley, was



Dr. John E. Duberg, Geronimo Austin, and Harold Mehrens.

on hand to welcome the special visitor and make the presentations.

A look at the guest book at the Visitor Center shows that the visitors have come from all 50 states of the Union and from 17 foreign countries. Many of the visitors take the time to make individual comments on the different aspects of the Visitor Center and the vast majority of them have been very favorable. The displays and the orientation film are usually cited for special recognition.

An attempt has been made to provide special displays designed to encourage repeat visits from people in the local communities and many of the visitors have been back several times. For examples, special displays of NASA art, the lunar rover vehicle, and the present display of biosatellite have served to maintain interest, in addition to the showing of a wide assortment of NASA and industrial films in the theater.

Harold Mehrens, Manager of the Visitor Center, is currently working on special educational enrichment programs which will be conducted at the Center for elementary and high school level students, in cooperation with the local school systems. Every day a number of school busses can be seen outside the Center, having brought a group of students for a tour. The program which Mehrens is working on will be an extension of the school visit, wherein NASA Spacemobile lecturers will subsequently visit the schools and put on special science programs of longer duration than would be possible at the Center.

Mehrens also indicated that he and the staff of the Visitor Center are looking forward to the upcoming tourist season and to the large influx of visitors.

PIONEER F TO VIEW JUPITER; LANGLEY TO CONDUCT EXPERIMENT

Man will reach out beyond Mars to take the first close look at the planet Jupiter on the mission of the unmanned Pioneer F spacecraft, to be launched by NASA from Cape Kennedy, before March 13. The trip to Jupiter will last less than two years.

Jupiter is a spectacular planet. It appears to have its own internal energy source and is so massive that it is almost a small star. It may have the necessary ingredients to produce life. Its volume is 1,000 times that of Earth, and it has more than twice the mass of all other planets combined. Striped in glowing yellow-orange and blue-gray, it floats in space like a bright-colored rubber ball. It has a huge red "eye" in its southern hemisphere and spins more than twice as fast as Earth.

The mission includes a number of other firsts. Pioneer F is expected to make the first reconnaissance of the Asteroid Belt between the orbits of Mars and Jupiter. It is planned to be the first man-made object to escape the solar system, and the first to use the orbital velocity and powerful gravity of Jupiter for this escape. It is also the first NASA spacecraft to draw its electrical power entirely from nuclear generators, four radioisotope thermoelectric gen-

(Continued on page 6)



METEOROID DETECTION: Looking at a model of the Meteoroid Detection Experiment which is being used on the Pioneer F mission to Jupiter are members of the Langley investigation team. They are (from left): Jose M. Alvarez, William H. Kinard, Principal Investigator, Robert L. O'Neal, and Donald H. Humes. The Meteoroid Detection Experiment will be used to detect the distribution in space of tiny particles (masses of greater than one-millionth of a gram).

Happenings

NOTICE. . . Anyone having information on the person who hit a blue 1967 Chevy II in the parking lot beside W.A. Fire Station between 1 p.m. February 16 and 8 a.m. February 17, please call Donald Dugo, 838-2254 or 827-3120.

ARCHERY CLUB. . . Newly elected officers of the NASA Bowmen are David C. Davis, president; Emory Caldwell, vice president; David L. Smith, secretary; Robert C. Redman, treasurer; and George W. Ivey, member-at-large. The club meets bimonthly in the Activities Building. Persons interested are invited to join. Contact Davis, 3446, or Smith, 3483.

ON SICK LIST. . . Personnel Profiles is missing from this issue because Allan Hanrahan is on the sick list but he expects to be back in time for the next issue. If you have a candidate you would like to see featured in this column, call Hanrahan, extension 3824, or Langley Researcher, 3116.

HAPPY HOUR. . . The next Happy Hour will be held on Friday, March 10 from 4 to 7 p.m. The Activities Association is changing the starting time from 3:45 to 4 due to lack of response of the 3:30 shift. Entertainment will feature Rubin's Train.

GOLF ASSOCIATION. The NASA Golf Association will hold its annual meeting on March 22 at 7:30 p.m. at the Activities Building. All NASA employees, active or retired, are eligible to join and are encouraged to attend.

WINS RACE. . . Barbara Newton, the Center's top female motorcycle racer, has done it again. She won first place last week in a cross country and endurance race at Green's Raceway. She was the only woman racer in a field of about 100.

SME OFFICER. . . H. W. Ayres, Fabrication, was elected 2nd vice president of the Hampton Roads Chapter of the Society of Manufacturing Engineers which was chartered February 8. SME is a professional society conceived to advance the manufacturing sciences through the continuing education of manufacturing engineers and managers.

FGAA TO HEAR CHARLES DART

Charles E. Dart, Vice President of the Newport News Shipbuilding and Dry Dock Company, will be guest speaker at a meeting of the Peninsula Chapter of the Federal Government Accountants Association on March 15 at Frank's Harbour House.

A social period will begin at 6:30 p.m., followed by dinner and the program. For reservations call Eugene Fadely, extension 2558. Guests are welcome.

MERIT PROMOTION NOTICES

Merit Promotion Announcement No. 72-18 for Engineering Technician, Operations Support Division, Facilities Operations Branch, Technical Support Section B, GS-802-9 or 10, opened March 1 and applications will be accepted through March 14. The area of consideration is the Operations Support Division.

Merit Promotion Announcement No. 72-19 for Aerospace



TRAINING SESSION: At the invitation of Center officials, representatives of the City of Hampton have been attending sessions of a special training program along with Center supervisors on Human Relations. This is the second such program conducted by Professor Alvin Anderson, Hampton Institute, as part of the supervisory equal employment opportunity training program. Participants are (from left): Douglas Watson, Assistant Director of Parks; Paul Mingee, Assistant Director of Public Works; Professor Anderson; Betty Minkins, Hampton Personnel Office; Col. Pat Minetti, Chief of Police; and Charles F. Barnett, LRC Personnel Officer.

DANCE PLANNED MARCH 25

The next dance, in the monthly series sponsored by the Activities Association, will be held Saturday, March 25, from 9 p.m. to 1 a.m. at the Activities Building. Music will be furnished by The Newport News, a local rock band.

Tickets are three dollars per couple (not including set-ups) and are on sale now at the Activities Building. Reservations are necessary this time and they may be made when purchasing tickets.

Plan to go and be sure to tell your friends.

Volunteers are needed to help set up chairs and tables Saturday afternoon. Please call Jim Post, extension 2311, if you can help.

RETIREMENT PARTIES

Robert E. Laird, Flight Instrumentation Division, will be honored at a retirement dinner and social hour Friday, March 17 at 6:30 p.m. at Athan's Virginian Restaurant. Cost of dinner and gift will be \$6 per person; cost of gift only will be \$1. Send names and contributions by March 10 to Gail Lanning, Mail Stop 474.

R. Wilson Hogg will be honored at an informal buffet on March 8 at noon in Room 205, Building 1232. Cost will be \$3 for the buffet and gift and \$1 for gift only. Contributions should be sent to Jan Grow, MS 215, by March 6.

Maurice Sisson, Systems Engineering, will be honored at a retirement party on March 16 at 5 p.m. in the West Cafeteria. Cost for party and gift will be \$4 per person or \$7 per couple. Cost of gift only will be \$1. Send contributions to Virginia Vohringer, MS 314, by March 13.



Engineer (AST, Aerostructural Dynamics) Low-Speed Aircraft Division, NASA/Army Rotor Test Vehicle Project Office, GS-861-12 with promotional opportunity, opened March 2 and applications will be accepted through March 15. The area of consideration is the Langley Research Center.

SWAP AND SHOP

LOST

Tan London Fog trench coat with liner, taken by mistake between noon and 1 p.m. Feb. 25 from West Cafeteria. J. P. Raney, 2388.

Silver link bracelet in E.A. Hollomond, 3881.

"Time Series Analysis Papers" by Parzen. If found, return to Davidson, MS 465, or to the Technical Library.

WANTED

Ride or driving combination from Holly Court to W.A. on 8 shift. Brady, 3836.

Passengers from East Ocean View (Oscar's Beach Area) to E.A. on 8 shift. Calogrides, 2546.

FOR SALE

Underwood Golden Touch portable typewriter with case - \$25. Druen, 826-1371.

Farmall Cub tractor with quick hitch, mower, plow, and cultivator. Roberts, 868-6317 after 3 p.m.

5-octave electric organ with tone pedal - \$75. Powell, 723-1250.

17-foot Mobjack sailboat and trailer - \$995; Newport main and jib sails - \$125; Spinnaker - \$60. Bavuso, 838-0606.

1964 Ford Galaxie, 8 cylinder, 4-door hardtop, power accessories - \$400. Fiorella, CH5-6833.

1966 Chrysler Newport, 4-door hardtop, air conditioning, \$800. McLemore, 838-0003.

1968 Ford Torino, air conditioning, power accessories - \$1500. Ferguson, 596-7347.

1971 Volkswagon camper without pop-top - \$2900. Spencer, 851-2435.

Recco guitar - \$15. Price, 898-6868.

1965 Chevrolet Impala SS, 2-door hardtop, 4-speed transmission. Dexter, 229-7011.

1967 Ford Fairlane station wagon, air conditioning, power steering, automatic transmission. Moore, 851-2223.

1967 Pontiac Sprint, bucket seats, floor shift, air conditioning - \$800. McKee, 898-7696.

1955 Chevrolet, 4-door, 8-cylinder, standard shift. Adams, 877-3923.

INDUSTRIAL GOLF LEAGUE NEWS

The Peninsula Industrial Golf League will hold a meeting of the board of directors and team captains on March 16. The purpose of the meeting will be to schedule matches and submit rosters for the coming year.

The dues for membership in the PIGL are \$5, which will be used to purchase prizes and defray league expenses. Anyone wishing to play on the NASA team must send the \$5 membership fee to Benson Dexter, MS 188A, by March 15. Make checks payable to Peninsula Industrial Golf League.

Handicaps for old team members will be based on scores posted in 1971 league play, provided the member played at least three times. In the event a member played less than three times, he must submit additional scores, posted outside of league play, to bring the total number of scores up to five. New members for 1972 must submit their five most recent scores for handicap purposes. These scores must be submitted by March 15.

The NASA team hopes to have between 25 and 30 members on its roster this year.

■■■■■■■■

THE LESS a man knows the longer it takes him to explain it.



SAFETY INSPECTION: Members of the Facilities and Operations Safety Board, the Safety Review Team, and the Safety Task Team inspected the Building 1247 Complex last week. Shown in the 4-Foot Hypersonic Arc Tunnel are T. A. Toll, chairman of the Safety Review Team, and Axel T. Mattson, a member of the Facilities and Operations Safety Board.

SAFETY GROUPS TOUR FACILITIES

Following the explosion in the 9- by 6-foot Structures Tunnel air supply last fall, Director E. M. Cortright appointed a Facilities and Operations Safety Board to conduct an intensive reassessment of all our facilities, operating and maintenance procedures.

Cortright stated, "While we have a strong safety program, continuing evolution and upgrading of codes, operating procedures, inspection criteria, and related factors demand a concurrent and continuing evaluation of our approaches to the assessment of risks which may be associated with our test techniques or test environments."

Oran W. Nicks, Deputy Director, is chairman of the Facilities and Operations Safety Board and he is being assisted by James H. Parks, vice chairman; Eugene H. Britt, executive secretary; Robert N. Conway, Richard R. Heldenfels, Axel T. Mattson, Thomas A. Toll, James B. Whitten, and Herbert A. Wilson Jr.

To assist in the review and to insure consideration for all facilities, the board appointed a Safety Review Team headed by T. A. Toll. Assisting him are D. D. Baals, M. C. Ellis, R. E. Kuhn, R. O. Schade, and J. W. Stickle.

The first review was conducted last week when Building 1247 Complex was inspected. This complex includes 24 facilities with varying degrees of risk. A Safety Task Team was appointed for Building 1247 Complex with M. C. Ellis as chairman and B. W. Cocke as deputy chairman. Other members are R. J. Moberg, R. S. Davey, R. L. Swain, Olin Jarrett Jr., and M. D. Williams.

The overall review of Center facilities will be progressive, and it is planned that specific results of the reviews will be acted on as soon as they are available and approved.

■■■■■■■■

EVERY man's work is a portrait of himself.

THE OFFICE of government is not to confer happiness, but to give men opportunity to work out happiness for themselves.

CAFETERIA MENU

The following menu will be served in the cafeterias during the week of March 6:

Monday - Split pea soup, rump roast of beef, glazed ham, creamed dried beef on toast, chili con carne.

Tuesday - French onion soup, corned beef and cabbage, grilled pork chops, fried shrimp, macaroni and wieners.

Wednesday - Fisherman's chowder, broiled liver and onions, fried flounder, chicken cacciatore, chuckwagon steak.

Thursday - Chicken noodle soup, beef stew, barbequed pork sandwich, chicken chow mein, fried clams.

Friday - Cream of celery soup, rib eye steak, meat loaf, barbequed chicken, tuna noodle casserole.

Snack bar - Soup, jumbo burger, hot dogs, fish sandwich, French fries, apple turnovers. Variations - Corned beef, ham salad, NASA submarine (Mon.); pastrami, hot roast beef, ham and cheese club (Tues.); corned beef, NASA submarine, chicken salad (Wed.); barbequed beef, pastrami, ham and egg (Thurs.); chili, NASA submarine, tuna salad (Fri.).

The menu for the week of March 13 is as follows:

Monday - Cream of potato soup, business man's lunch, fried chicken livers, ham steak, Austrian ravioli.

Tuesday - Chicken gumbo soup, country style steak, chicken and dumplings, fish fry, sloppy Joe.

Wednesday - Manhattan clam chowder, beef stroganoff, fried oysters, Salisbury steak, chicken croquettes.

Thursday - Cream of tomato soup, Swiss steak, chop suey, breaded veal cutlet, franks and beans.

Friday - Bean with bacon soup, corned and peppered round, stuffed green peppers, shrimp creole, grilled cheese.

Snack bar - Soup, jumbo burger, hot dogs, fish sandwich, French fries, apple turnovers. Variations - Salami, NASA submarine, ham and cheese club, chili (Mon.); barbequed pork, corned beef, chicken salad (Tues.); NASA submarine, pastrami, ham and egg (Wed.); steak, corned beef, ham and cheese club (Thurs.); hot roast beef, NASA submarine, grilled cheese. (Fri.).



GROUP AWARD: A Group Achievement Award has been presented to the Design, Organization, and Operation of Procurement Management Operations Group for "outstanding performance in the conception, design, and implementation of an automated procurement management report system which has contributed significantly to the procurement contracting function." Members of the group are (from left): John Munick, Marianne T. Russell, Margaret E. Smith, Leon W. Fitchett, and Robert B. Reynolds. Absent were James F. Eareckson and Bill D. Heriford.



SPECIAL RECOGNITION: Receiving special recognition at the completion ceremony of the Phase III OEO Clerical Training Program were Nita Langford (center) who was cited for the best over-all performance, and Louise Hollomond who had the best attendance record. Making the presentation is M. P. Clark, Head of Training Branch.

TRAINEES COMPLETE PROGRAM

A completion ceremony was held Monday for the Public Service Careers and Phase III OEO Clerical Training Programs. Ten Public Service Careers trainees and eleven OEO clerical trainees received certificates from M. P. Clark, Head of Training and Educational Services Branch, Personnel Division. He was assisted by Ruth Bates Harris, EEO Officer, NASA Headquarters.

Raymond G. Romatowski, Director for Administration, presided at the ceremonies and introduced the speakers. Remarks were made by Oran W. Nicks, Deputy Director; George Wallace, Deputy Director of the OEO Office, Newport News; and Mrs. Harris. Nita Langford was the speaker for both groups of trainees.

Cited for special recognition among the clerical trainees were Nita Langford for the best over-all performance and Louise Hollomond for best attendance.

Public Service Career trainees who received certificates were Mary A. Hackey, Cassandra A. Fabor, Sylvia C. Harris, Lillian M. McKoy, Quennella M. Perrin, Shirley R. Stephenson, Linda S. Summerford, Octavia C. Vann, Janice E. Vaughan, and Cerie W. Wood.

Receiving clerical trainee certificates were Angela D. Batts, Elizabeth Bowles, Marsha S. Brown, Alice E. Eley, Louise M. Hollomond, Blanche M. Johnson, Nita J. Langford, Shirley A. Lee, Gloria M. McEachern, Jacqueline Y. Pugh, and Paula J. Scippio.

The Clerical Training Program is in its third year of operation. Each program is for one year and a total of 35 trainees have completed the program.

The Phase I program consisted of 14 trainees and seven were employed by the Center upon completion of the program. Phase II consisted of 14 trainees and ten were employed by Langley as Public Service Careers Trainees. These trainees completed the program Monday and they will be incorporated into the regular work force. Phase III consists of 11 graduates and eight are expected to be employed as PSC trainees.

TENTH ANNIVERSARY OF JOHN GLENN'S SPACE FLIGHT OBSERVED

On February 20, 1962, John H. Glenn became the first American to orbit the Earth. With his flight, the United States had accumulated about five hours and 30 minutes of man-hours in space. Ten years later this figure has grown to nearly 46 weeks.

Glenn's Friendship 7 spacecraft circled the Earth three times and the trip lasted 4 hours, 55 minutes and 23 seconds. To date, NASA has flown 25 missions and 30 astronauts have totaled 7,704 hours and 51 minutes in space.

Frank Borman and James A. Lovell on Gemini 7 spent the most time in Earth orbit in December 1965 -- 13 days, 18 hours and 35 minutes.

The United States reached out toward the Moon when our natural satellite was orbited by Apollos 8 and 10.

Neil A. Armstrong became the first man to step on the Moon July 20, 1969, during the Apollo 11 mission. Since that historic day Apollos 12, 14, and 15 have accomplished successful lunar landings, and eight Americans have walked on the surface of the Moon.

Two more Apollo flights remain and will be performed this year. Skylab will be placed in orbit in 1973 for astronauts to conduct a wide range of experiments in solar astronomy, Earth resources, medical and other fields.

Following Skylab, the Space Shuttle will provide the means for routine, quick reaction, and economical access to space, not only for astronauts but for all other qualified persons needed for scientific, applications, and military uses of space in the 1980's and beyond.

The Apollo command modules weigh nearly 13,000 pounds. Friendship 7 weighed only about 3,000 pounds. The United States has made great progress in the exploration of space. A decade ago, alone and cramped in his tiny, bell-shaped capsule, John Glenn paved the way.

"Roger, the clock is operating, we're under way," were the first words of John Glenn over the Mercury Network three seconds after the Atlas lifted off from Cape Canaveral at 9:47:39 a.m. on February 20, 1962.

The powered flight was normal and five minutes later the voice from Friendship 7 reported to Mercury Control, "Roger, Zero-g and I feel fine. Capsule is turning around. Oh, that view is tremendous."

The first orbit proceeded like clockwork as he passed over the tracking stations at Bermuda, the Canary Islands, Kano, Nigeria, Zanzibar, the tracking ship in the Indian Ocean, Muchea and Woomera, Australia, and Canton Island in the Pacific.

He reported no ill effects of weightlessness and commented on seeing the Canaries and west coast of Africa, cloud cover over most of Africa and the lights of Perth, Australia. Over Canton, Glenn advised that eating in space was no trouble and very good. (He ate a tube of apple sauce).

From the next station, Guaymas, Mexico, he reported sighting the now famous "John Glenn fireflies," brilliant luminous particles swirling around the capsule which were later attributed to be particles of ice formed on the spacecraft by thrusters' fuel.

The first indication of a malfunctioning attitude control system appeared over the Mexico tracking station. This problem continued through the remainder of the mission, although the veteran test pilot manually operated the spacecraft, proving that man could fly a spacecraft in weightlessness.



FRIENDSHIP 7: Astronaut John Glenn, the first American to orbit the Earth, checks the Friendship 7 spacecraft after completing three orbits around the Earth on February 20, 1962. The spacecraft travelled at 17,500 mph.



Of greater concern to the ground controllers, was an indication that the spacecraft heat shield had become dislodged. This meant that the heat shield might possibly detach from the spacecraft after the retrorocket pack was jettisoned. It proved to be a faulty signal, but as a safety measure Mercury officials advised Glenn not to jettison the retrorocket pack after firing the rockets.

Except for the malfunctioning attitude control system, the second and third orbits continued as programmed. The astronaut gave status checks on the spacecraft systems, reported blood-pressure readings to the flight surgeons and assured them of no sensations of disorientation in weightlessness.

Reentry was normal, and 4 hours, 50 minutes and 10 seconds after liftoff the pilot reported, "Chute is out in reefed condition. . . beautiful chute."

RETURN BOTTLES TO RACKS

Once again it has been called to the attention of the Safety Office by the Area Safety Review Inspection teams that empty drink bottles are not being returned to the storage racks. In many instances they are left in locations that create a hazard to health and safety.

It is not the responsibility of janitorial personnel to pick up and place these empty bottles in the racks. This responsibility falls on the individual employee, whether NASA or contractor, who purchases the drink.

This is a problem throughout the Center and deserves your immediate attention.



WHEN a man has a 'pet peeve' it's remarkable how often ne pets it.

LANGLEY TO CONDUCT EXPERIMENT

(Continued from page 1)

erators (RTGs) developed by the Atomic Energy Commission.

A group in Langley's Space Technology Division is conducting one of the primary experiments on the Pioneer F mission to Jupiter. This group, led by William H. Kinard as Principal Investigator along with Robert L. O'Neal, Jose M. Alvarez, and Donald H. Humes as co-investigators, is conducting an experiment with the objective of measuring the population, or more specifically the spatial density, of small particles of matter known as meteoroids between Earth and Jupiter.

This experiment will be the first direct measure of the existence of these small particles of matter in interplanetary space beyond Mars. The data will be extremely valuable in furthering our understanding of the makeup and nature of the solar system and in indicating the possible impact damage hazard these particles may present to spacecraft travelling in interplanetary space.

In travelling to Jupiter, Pioneer F will traverse regions of space about which scientific knowledge is very limited. One such region of special interest to Langley experimenters is the Asteroid Belt. This is a region some 150 million miles wide located between the orbits of Mars and Jupiter in which bodies known as asteroids are in orbit about the Sun. Astronomers have identified, by observations from Earth, over 1700 asteroids which range in size from the limit of detection of about 1/2 mile in diameter to the largest which is several hundred miles in diameter. Scientists believe these bodies exist in increasing numbers down to very small size particles.

A specific objective of the Langley experiment is to measure the concentration of the very small particles of matter in the Asteroid Belt. It will require about five months for the spacecraft to reach the edge of the Asteroid Belt.

The Langley Experiment has 5 square feet of sensors mounted on the spacecraft and an electronics system to sense and count meteoroid penetrations in these sensors. The 5 square feet of sensors is made up of 13 panels with each panel consisting of 18 individually pressurized cells. When a meteoroid penetrates a pressurized cell the resulting loss in pressure is sensed and counted by the instrument as a meteoroid penetration. The experimenters expect the majority of the 234 pressurized cells which make-up the experiment to be penetrated by meteoroids by the time the spacecraft reaches Jupiter.

By combining the times at which penetrations occur with the known position of the spacecraft in space at the time of penetration, the experimenters will be able to compute the spatial density of meteoroids between Earth and Jupiter.

The Meteoroid Detection Experiment on Pioneer F was designed and built at Langley Research Center. The sensor-pressure monitoring concept used in the instrument was developed by Research Triangle Institute, Research Triangle Park, North Carolina, under contract to Langley.

Personnel at Langley responsible for developing the experiment system were Robert L. O'Neal, Project Manager; B. B. Brown, Technical Project Engineer and Mechanical Systems Engineer; John Thomson, Electronic System Engineer; and Leonard R. McMaster, Pressure Sensing System Engineer.



ACHIEVEMENT AWARD: Edward A. Howe, Chief of Financial Management Division, recently presented a Special Achievement Award for Performance to Helen B. Talbott "for your superior performance in the applications of skill and industry in promulgating and maintaining the Financial Management Operating Manual and for your outstanding effort in writing the instructions to implement improved systems of voucher processing.

SOFTBALL TEAM SEEKS PLAYERS

The NASA slow-pitch softball team, sponsored by the Activities Association, is being organized to participate in the 1972 Newport News Softball Association Recreation League, the toughest slow-pitch softball league on the Peninsula.

Last year this team, composed of NASA employees who represent NASA in local community competitive sports, won the local District Open Qualifying Tournament. By virtue of this victory, the team advanced to the Norfolk Metro Tournament, finishing seventh in a starting field of 18 teams from the Norfolk, Portsmouth, Virginia Beach and Peninsula areas.

NASA employees interested in playing on the team this year should contact Tom Moore, extension 2520, or Dave McDougal, extension 2576. Players will be selected on a competitive basis and each man will be given an opportunity to "try-out" for any position(s) he desires.

SIX NAMED ON HONOR ROLL

Six students in the Engineering Technician School completed the fall semester with an average of 96 or better. Members of the honor roll are:

Robert F. Berry, Materials Processing and Development; Hugh C. Gentry III, Research Aircraft Support; Carl E. Gray Jr., Facilities and Equipment Engineering; Howard C. Jones, Instrument Construction Shop; J. Russell McHatton, Full-Scale Tunnel; and John F. Rogers, Aerospace Equipment Engineering



IF WE fill our hours with regrets over the failures of yesterday, and with worries over the problems of tomorrow, we have no today in which to be thankful.



Dr. John S. Tripp



Wayne H. Bryant,



Kazimierz R. Czarnecki



Kenneth D. Hedgepeth



Leonard M. Weinstein



Sammie D. Joplin



Louis P. Tosti



David L. Smith

FLIGHT TESTS VERIFY NASA SUPERCRITICAL WING CONCEPT

Actual flight tests of the NASA Supercritical Wing have demonstrated that the new airfoil shape does permit jet aircraft to operate more efficiently at speeds near Mach 1, the speed of sound.

This conclusion and other results from the flight tests of the new aeronautical concept were described Tuesday at a one-day technical meeting at NASA's Flight Research Center, which conducted the flight tests of the new wing on a modified F-8 jet fighter.

The NASA Supercritical Wing was developed in wind tunnels under the direction of Dr. Richard T. Whitcomb, Head of Langley's 8-Foot Tunnels Branch. The top side of the new wing has been flattened and the rear portion of the underside is curved concavely.

The flight tests confirm the wind tunnel predictions that the aircraft would be able to fly at increased speeds before encountering a significant rise in aerodynamic drag, an adverse force on the aircraft. This means that the aircraft can fly faster without using more power.

Since its first flight on March 9, 1971, the F-8 with the Supercritical Wing has made a total of 27 flights reaching a top speed of Mach 1.2, about 1267 kilometers per hour (792 mph) and a peak altitude of 15 kilometers (51,000 feet.)

8 RECEIVE ADVANCED DEGREES

Eight staff members recently received advanced degrees through the Center's Graduate Study Program.

John S. Tripp, Digital Data Acquisition Section, IRD, received his Ph.D. in Computer and Communication Sciences from the University of Michigan on December 19. Dr. Tripp joined the Center staff in February 1962, having received his bachelor and master degrees in electrical engineering from Kansas State university.

The remaining seven received Master of Science degrees from the George Washington University on February 21.

Wayne H. Bryant, Control and Information Systems Section, F1D, received a M.S. in Electrical Engineering (Computer Science).

Receiving the Master of Science in Aeronautics were Kazimierz R. Czarnecki, Aero-Thermo Section, HSAD; Kenneth D. Hedgepeth, Mechanical Systems Section, SED; and Leonard M. Weinstein, Viscous Flow Section, HVD.

Sammie D. Joplin, Structural Systems Section, SED, and Louis P. Tosti, Flight Programs Branch, RAFD, received an M.S. in Administration (Management Engineering).

David L. Smith, Force Measurements Section, IRD, received his M.S. in Engineering Mechanics.

Each of these individuals completed their course requirements either at Langley Research Center (Engineering and Applied Science Courses) or at the local GWU Tidewater Center (Administrative Courses).

Questions and Answers

Q. In these times of reduced budget, reductions in force, etc., how can management justify having model shop personnel (usually GS-9, 10, 11) develop and fabricate elaborate plaques and gifts for retiring friends, using Government time, materials, and equipment while delaying work on high priority and pertinent research projects?

A. Retirement from a lifetime career is a milestone in a person's life, and when that service has been in behalf of the Government, it is a special occasion. Edward T. Maher, Executive Assistant, Office of Director for Center Development and External Affairs, pointed out it has become a general custom in this country to recognize that occasion in some special way, either with a gift from the organization or from friends and associates of the retiree. In the Federal Service, it is not the policy to provide a retirement gift and so any recognition is left to the discretion of the retiree's friends and associates.

Of the case in point, it is the intention of the well-meaning individuals who have made a few plaques to do special honor to a retiree, who, in their opinion, merits special recognition. This recognition is due to outstanding contributions he has made over the years, which contributions have helped the organization and the individuals within it. It is their way of expressing appreciation in behalf of all their fellow workers for a job well done. It has never been intended that fabricating such plaques will in any way interfere with normal shop work. To this point, there has not been any criticism of these infrequent presentations because the recipients have been selected with great discretion.

Q. There are several health insurance plans available at LRC, but comparison of these plans is difficult for most employees even after studying the company's pamphlets. I have heard that some of the plans available compare favorably with the two most popular plans (Blue Cross and Aetna), but after having finally gained a little understanding of these two plans, the thought of trying to decipher another is discouraging. Is it possible for the Employees Services Branch to develop a tabulated and comprehensive comparison of benefits for all of the plans available to aid employees in determining which plan is best suited for him?

A. According to Personnel officials, it is against the rules for the Center to make comparisons among the plans or to indicate a preference. The Federal Personnel Management Supplement 890-1, Subchapter S5, states, "Each employee must decide for himself which plan is best for him.

words in peoples' mouths



WOMEN'S COORDINATOR NAMED

Jean B. Elliott, Head of Special Collections Section, Technical Library Branch, Management Support Division, has been appointed by Director E. M. Cortright as the Center's Coordinator of the Federal Women's Program.

The function of Mrs. Elliott's position as Coordinator of the Federal Women's Program for Langley will be to advise management of methods that can be used to improve opportunities for women and to point out any special problems that need to be resolved in accomplishing these objectives.

Mrs. Elliott is a native of Poquoson. She received her B.A. degree from Mary Washington College and taught school for one year before joining the Center staff in 1950. She is presently serving as a member of the Newport News Library Board.

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The employing office should never make comparisons between benefits offered by various plans or indicate a preference for one plan or another, or in any other way attempt to influence an employee in his final selection of a plan. The employing office should, of course, answer questions an employee may have concerning the health benefits program or a particular plan." The Civil Service Commission's new pamphlet on hospital insurance was recently distributed to all employees and the answer to most general questions will be found in this pamphlet.

# Langley Researcher

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VOLUME 11, NUMBER 5

LANGLEY RESEARCH CENTER

MARCH 17, 1972

## LANGLEY AWARDS DEVELOPMENT CONTRACT TO MINORITY FIRM

Langley Research Center has awarded a \$50,000 development contract to a minority business firm to build three prototypes of a machine which has a potential commercial market value of nearly \$100 million.

The J. W. Micro-Electronics Corporation, Philadelphia, received the contract to redesign and build three complex coordinators, based on a Langley design.

It is the first development contract awarded by Langley under President Nixon's recent minority business enterprise program where government agencies have been asked to assist small business through contracting work when feasible.

The contract agreement was signed March 1 by J. J. Williams Jr., president of J. W. Micro-Electronics Corporation, and John Munich, Associate Chief of Procurement Division. Also present at the signing were John Samos, Technology Utilization Officer, and Joseph F. Braig, Head of Industry Assistance Office, Procurement.

The contract is a coordinated effort between NASA and the Small Business Administration.

Micro-electronics specialists in Flight Instrumentation Division will provide technical assistance in the development and building of the three complex coordinator prototypes.



**SMALL BUSINESS CONTRACT:** Signing a contract agreement to build an NASA developed machine for possible commercial use are John Munich (left), Associate Chief of Procurement Division, and J. J. Williams Jr. (center), president of J. W. Micro-Electronics Corporation. Looking on are John Samos (right), Technology Utilization Officer, and Joseph F. Braig (standing), Head of the Industry Assistance Office, Procurement Division.



**SCOUT BUILDING DEDICATED:** Edgar M. Cortright, Center Director, cuts the ribbon to open the new Scout Project Office Building. Participating in the program are (from left): Sam Levingston, LaSal Construction Company; L. M. Weeks, Vice President and General Manager of the Vought Missile and Space Corporation; Roland English, Scout Project Manager; and Milton Green, Vice President of Programs, Vought Missiles and Space Corporation.

## NEW FACILITY DEDICATED FOR SCOUT PROJECT OFFICE

The new Scout Project Office Building was officially opened last Friday when Director Edgar M. Cortright presided at an afternoon ribbon cutting ceremony.

In dedicating the new facility, Cortright said, "Project Scout has brought honor and pride to our Center and our country for 14 years. . . Scout has had a successful record from the start and the last 23 launchings have been successful."

Located in Building 1192E, the new 10,000 square foot addition to an existing office building, will house 44 persons who manage about 500 contractor personnel around the world.

Roland English is head of the Scout Project Office.

The addition, which cost about \$200,000, was designed by Rancorn, Wildman and Krause, architects, and built by La-Sal Construction Company. The interior is designed with movable, vinyl-covered walls.

The Scout is NASA's smallest four-stage, solid propellant rocket vehicle capable of putting a satellite payload into orbit.

There have been 78 Scout launches since the project started in 1958. Scouts are launched from three locations: Wallops Station, Vandenberg Air Force Base, California, and Kenya, Africa.

Five Scout launches are planned this year.

# Happenings

**NEWLYWEDS.** . .Wedding bells rang Saturday, March 11 when Ann Chambers, 8-foot Transonic Tunnels Branch, High-Speed Aircraft Division, took her final vows with Robert Charles Mennell II, Mechanicsville, Maryland, at St. John's Episcopal Church in Hampton.

**THANKS FRIENDS.** . .J. Norwood Evans, who retired this month as Assistant Personnel Officer, wishes to thank his many friends and co-workers for the gifts and party given him on the occasion of his retirement.

**GOLF ASSOCIATION.** . .The NASA Golf Association will hold its annual meeting Wednesday, March 22 at 7:30 p.m. in the Activities Building. All NASA employees are eligible and those interested in golf are encouraged to attend.

**HAPPY HOUR.** . .The next Happy Hour will be held Friday, March 24 from 3:45 p.m. to 7 p.m. in the Activities Building. Music will be furnished by Crystal. Sandwiches and snacks will be available.

**THANKS.** . .Ada Hadden and Iris Martens, who have retired, wish to thank their friends and co-workers for their generous kindness and gifts which were presented to them at the retirement party held in their honor. Both Mrs. Hadden and Mrs. Martens were members of Financial Management Division.

**ENGAGED.** . .Word has been received at the Center that Dr. Constantine A. Balanis, formerly of Flight Instrumentation Division and now a member of the faculty at West Virginia University, is engaged to Helen Jovaras, Williamsburg. Plans call for a spring wedding.

**AUTO TAGS.** . .Virginia State and Hampton City automobile license tags are being sold at the Phoebus Amoco Station, 201 E. Mellen St., through April 15. Hours of operation are 8 a.m. until 6 p.m. daily including Saturday. If you have not received your registration card by today, check with the subagency in Phoebus at once.

**EUROPEAN TOUR.** . .Some spaces are still available on this year's flight (\$179.80), Grand Tour (\$774.80), or Iberian Tour (\$869.80). The Grand Tour is almost full so early calls for reservations are recommended. The group leaves from Dulles Airport, Washington, D.C., for London on May 28 and returns to Dulles from Paris on June 18. For reservations and information contact Bernard Maggin, NASA Headquarters, Code RG.

**RETIREMENT.** . .Edward L. Clark, Flight Instrumentation, has retired from the Center after almost 24 years of Federal service. Anyone who wishes to contribute to a retirement gift for him is requested to send one dollar to Virginia Gibson, MS 488, by March 23.

**BOOKS NEEDED.** . .Anyone having books to donate for the annual used book sale of the Hampton Branch of the American Association of University Women is asked to call 245-5173 or 722-5450.



**SICK LEAVE RECORD:** Ellis M. Davis, Instrument Research Division, is retiring from the Center this month with a total of 2824 hours of sick leave to his credit. As well as he can remember, Davis has been fortunate enough not to have had to use any sick leave during his years of service. Davis expressed his thanks to his many friends at Langley for honoring him with a gift on the occasion of his retirement.



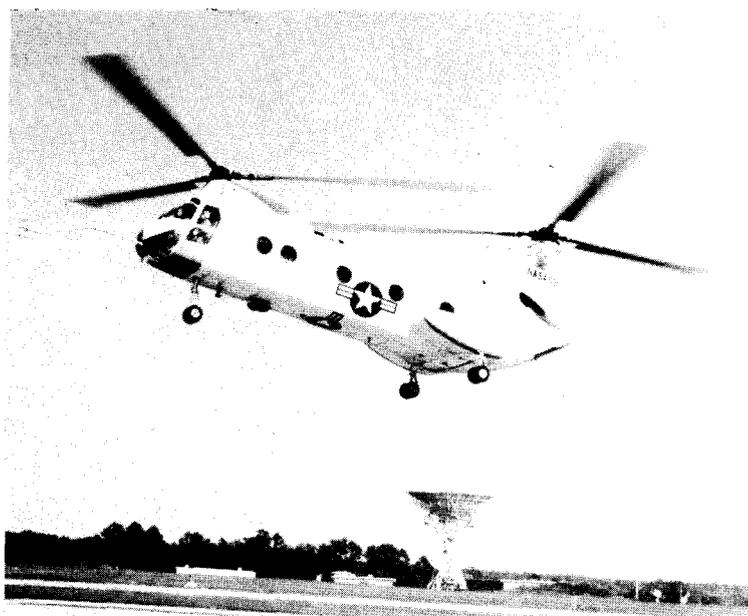
**CAMERA CLUB.** . .Bob Wright, Office of Director for Space, took first, third, and fourth places in the Langley Camera Club's color-slide contest. Second place went to Dominick Andrisani and fifth place was won by Abe Leiss. Mark Ritger, Newport News Shipbuilding and Dry Dock Company, served as judge. The next meeting will be held at 7:30 p.m. on March 21 at the Activities Building. An open category color-slide contest will be held. Nomination of officers will also take place. All persons interested in photography are invited to attend.

**NOTE OF APPRECIATION.** . .Lloyd L. Wallace, who retired as a member of Instrument Research Division, thanks his friends and co-workers for his retirement party and gifts.

Langley Researcher, an official publication of the Langley Research Center, National Aeronautics and Space Administration, Hampton, Virginia 23365, is published biweekly in the interest of its employees. Address contributions to the Editor, Mail Stop 154, telephone 3116.

Editor.....Ruth Angel Verell  
Staff Photographer.....Bob Nye  
Reporters.....Langley Employees

The privilege of advertising articles in this publication is restricted to employees of Langley Research Center. Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.



**AUTOMATIC HELICOPTER LANDINGS:** This photograph was taken when a team of Langley research scientists conducted the first fully automatic landings by a full-scale manned helicopter at a predetermined spot. The automatic landings were performed with laboratory-type equipment in a research environment to study performance requirements for automatic VTOL aircraft operations in all-weather, city-center to city-center service. When the research helicopter intercepted the landing guidance path, the system automatically locked on to start the landing approach. At a predetermined range from the touchdown point, the helicopter began an automatic deceleration to zero ground speed, coming to a hover 15.2 meters (50 feet) over the landing spot. It then descended vertically to a touchdown.

## DANCE PLANNED MARCH 25

The Newport News, a local rock band formerly known as Adrian and the Sensations, will be the special attraction for the Activities Association's monthly dance on Saturday, March 25 at the Activities Building.

Music will be furnished by the local favorite from 9 p.m. until 1 a.m.

Reservations are still available at the Activities Building. Tickets are three dollars per couple, not including set-ups.

## PARKER DIES AT AGE 45

John E. Parker, Engineering Technician in Technical Support Section C, Operations Support Division, died Monday, March 6.

Parker was born August 29, 1926 in Hampton. He attended Phoenix High School and served in the U.S. Army from April 1945 to December 1946. He joined the Center staff in April 1947.

Surviving are his wife, Mrs. Lillie Mae Parker; three daughters, Teresa L. Parker of Newport News, Barbara Ann Parker of Hampton and Mrs. Ruby Lee Street of Harbor Heights, Texas; six sons, Sgt. Billy R. Parker of Ft. Bragg, N.C., Danny R. Parker of Hampton, John Parker Jr., Floyd James Parker, Walter Lewis Parker and Andrew Neal Parker of Newport News.

## MERIT PROMOTION NOTICES

The following Merit Promotion announcements for Clerk-Stenographer, GS-312-4 with promotional opportunity, opened March 9 and applications will be accepted through March 22. The area of consideration is the Langley Research Center.

Announcement No. 72-21, High-Speed Aircraft Division, 8-Foot Tunnels Branch. Announcement No. 72-22, Hypersonic Vehicles Division, Advanced Entry Vehicles Branch. Announcement No. 72-23, Analysis and Computation Division, Data Systems Branch. Announcement No. 72-24, Viking Project Office, Operations.

The following Merit Promotion Announcements opened March 13 and applications will be accepted through March 17. The area of consideration is the Langley Research Center.

Biology Integration Engineer (AST, Technical Management), Viking Project Office, GS-1301.1-12 with promotional opportunity, Announcement No. 72-25.

Test and Training Engineer (AST, Technical Management), Viking Project Office, GS-1301.1-12 or 13 with promotional opportunity, Announcement No. 72-26.

Orbiter Electronics and Power Engineer (AST, Technical Management), Viking Project Office, GS-1301.1-12 with promotional opportunity, Announcement No. 72-27.

Orbiter Science Instruments and Data Handling Engineer (AST, Technical Management), Viking Project Office, GS-1301.1-12 with promotional opportunity, Announcement No. 72-28.

Merit Promotion Announcement No. 72-29 for Supervisory Electrical Engineering Technician, Operations Support Division, Electrical Support Branch, Facilities Electrical Systems Section, GS-802-11 with promotional opportunity, opened March 13 and applications will be accepted through March 24. The area of consideration is the Operations Support Division.

Merit Promotion Announcement No. 72-30 for Project Management Specialist, Low-Speed Aircraft Division, Rotor Test Vehicle Project Office, GS-301-9 or 11, opened March 14 and applications will be accepted through March 27. The area of consideration is the Langley Research Center.

## COMING EVENTS

The following events will be held at the Activities Building during March:

March 18 - Basketball from 9 a.m. until 6 p.m.

March 19 - Basketball from 9 a.m. until 6 p.m.

March 20 - Basketball starting at 5 p.m.

March 21 - Bridge Club and Camera Club

March 22 - Basketball at 5 p.m., Golf Association at 7:30.

March 23 - Basketball at 5 p.m. and Coin Club

March 24 - Happy Hour with Crystal

March 25 - Basketball 10 a.m. to noon

Dance featuring The Newport News

March 26 - Children's Easter Egg Hunt at 2 p.m.

March 27 - Chapel workers party

March 28 - Bridge Club

March 29 - Retirement Party

March 30 - Bingo at 8 p.m.

March 31 - Maintenance Party



THE LOUDEST boos always come from those in the free seats.

## SWAP AND SHOP

### LOST

"Radiosensitivity and Spatial Distribution of Dose," International Commission on Radiological Protection Pub. 14. If found, please return to Davidson, MS 465.

### FOUND

1971 Bethel High School class ring. Voucher Processing, 3307.

### WANTED

Driving combination from Williamsburg to E.A. on 8 shift. Witcofski, 229-2031 or 3861.

12 to 14-cubic-foot refrigerator with large freezing compartment, preferable frost free. Cox, 596-8560.

Ride from 20th St., near Stuart Gardens, to W.A. on 8 shift. Hollomond, 3881.

### FOR SALE

Two 10-foot garage doors, aluminum and glass - \$250 for both. Malley, 877-2994.

12-foot aluminum jon boat - \$78, Sears 5 hp outboard motor - \$108. Wells, 596-3707.

1966 Corvette, 38,000 actual miles, one owner. Livingston, 595-2779 after 5 p.m.

Lawn mower - Sears 18-inch Craftsman, self-propelled, reel-tyle, 2.5 hp, 4 cycle engine. Kopia, 877-7183.

Man's PGA Pro-set golf clubs with aluminum shaft, woods 1, 3, 4, 5; irons 2 through 9 and pitching wedge - \$90. Zavada, 826-0853.

1969 10-foot Cox Camper - sleeps six, has sink and ice box. Trailer hitch included - \$900. Rodgers, 877-9083.

3/4 acre wooded lot with city water in Marlbank. Long, 851-7658.

Modern walnut L-shaped desk, 2 matching credenzas, stained shelving with brackets and standards, Burroughs manual adding machine and other miscellaneous items. Kaplan, 877-0671 after 6 p.m.

1970 Cadillac Deville, 4-door sedan, 6-way split seat electrically controlled, air conditioning, and many extras - \$5300. Brooks, 877-9251 or 877-2660.

1969 Yamaha 250 cc and Bell magnum helmet - \$450 or best offer. Tomaine, 595-5425.

1965 Dodge A-100 1/2-ton pickup truck, standard shift - \$450. Sowers, 898-6927.

Mark X ignition system and 825 - 14 white wall Goodrich tire (new) - \$20 each. Nichols, 595-0023.

1955 3/4-ton Dodge truck; also 3.4 hp Mini-bike. Bruce, 826-0783.

Sand tires - 12-1/2 inches wide, 10-1/2-inch tread, mounted on 15 by 8-1/2-inch Corvette Rally wheels - \$75; also free kittens. Hachey, 723-0298.

1963 Ford Galaxie, 4-door - \$450. Mueller, 898-5406.

1968 Volkswagon sedan. Marlin, 826-2884.

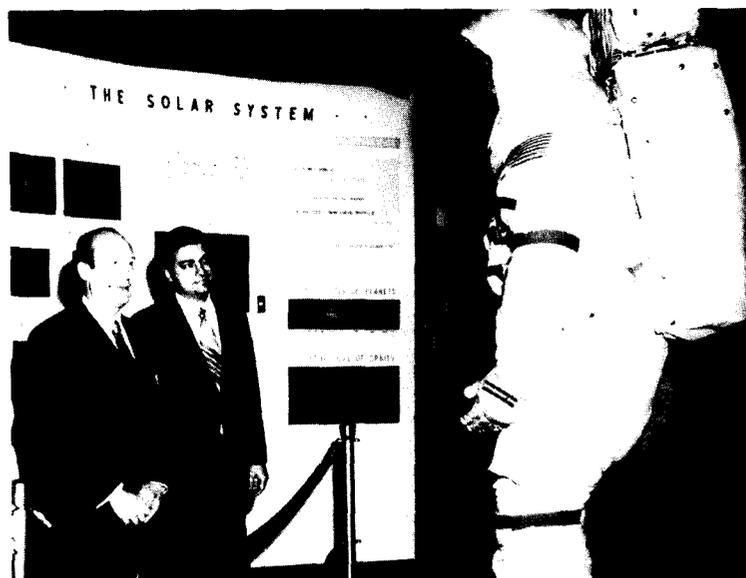
1964 Plymouth Fury, 4-door sedan - \$350. Spence, 723-1353 after 4 p.m.

Sama and Etani circular slide rules - \$2.50 each. Activities Building.

Go-Kart without engine; mini-bike; cornet, snare drum, Lucento, 877-6808.



IT'S DISCOURAGING to make a mistake, but it's downright humiliating to find out you're so unimportant nobody even noticed it.



**COLLOQUIUM SPEAKER:** Dr. Wolfgang Priester (left), University of Bonn, Bonn, West Germany, was guest speaker at the Colloquium Series held at the Center Monday. Dr. Priester spoke on "High Energy Sources in Space." Gerald Keating, Environmental and Space Sciences Division, and Dr. Priester are shown touring the Visitor Center.

## CAFETERIA MENU

The following menu will be served in the cafeterias during the week of March 20:

Monday - Vegetable beef soup, hot roast beef sandwich, Chinese egg roll, beef burgundy, chicken pot pie.

Tuesday - Cream of mushroom soup, steamboat round, broiled chicken, fried scallops, spaghetti with meat balls.

Wednesday - Corn chowder, char-broiled T-bone steak, barbequed pork chops, beef burgundy, fried shrimp, chili mac.

Thursday - Chicken rice soup, braised beef tips, broiled flounder, glazed ham, macaroni and beef.

Friday - Split pea soup, chuckwagon steak, seafood platter, chicken chow mein, grilled cheese sandwich.

Snack bar - Soup, jumbo burger, hot dogs, fish sandwich, French fries, apple turnovers. Variations - Hot roast beef, NASA submarine, ham and cheese club (Mon.); corned beef, tuna salad, chili (Tues.); pastrami, chicken salad, NASA submarine (Wed.); corned beef on rye, ham and cheese club (Thurs.); barbequed pork, pastrami, ham salad (Fri.).

The menu for the week of March 27 is as follows:

Monday - Vegetable soup, business man's lunch, veal scallopini, fried clams, beef stew.

Tuesday - Fisherman's chowder, rump roast, grilled pork chops, Italian meat loaf, franks and beans.

Wednesday - Chicken gumbo soup, country style steak, fish fry, chicken cacciatore, tuna noodle casserole.

Thursday - Manhattan clam chowder, beef stroganoff, hot turkey with dressing, shrimp creole, sloppy joe.

Friday - Oyster stew, Delmonico steak, barbequed chicken, boiled ham, chili con carne.

Snack bar - Soup, jumbo burger, hot dog, fish sandwich, French fries, apple turnovers. Variations - Salami, NASA submarine, chili (Mon.); corned beef, ham and cheese club, steak (Tues.); pastrami, NASA submarine, ham and egg (Wed.); corned beef, hot roast beef, ham salad (Thurs.); turkey salad, NASA submarine, salami (Fri.).

# Personnel Profiles

By

Allan C. Hanrahan



## HE COLLECTS TROPHIES. . .

Close by the shore of Mill Creek, in Phoebus, is located the Model Kennel. This kennel is operated by Robert L. Goodrich, a Scientific Photographer in the Photographic Branch since 1950. Goodrich breeds pedigree Pomeranians and out of his kennel have come no less than thirteen champion Pomeranian show dogs (one of these 'winners' is shown in the photo with Goodrich) and by the time this profile sees print that total may have reached fifteen because two of his dogs on the verge of attaining champion status are entered in shows.



Now, in case you're not familiar with this breed, Pomeranians are those diminutive canines that weight between three and seven pounds, are usually reddish orange in color (but can be almost any color from black to white) have a sharp-nosed, fox-like face, and have a soft, fluffy undercoat and a long, thick top coat.

But let's get to know Goodrich better -- a sixty-year old bachelor, he was born south of the James in Surry County but from the age of eight has called Hampton home and lived here except for two years spent in photographic school and the time spent in the service during World War II. It was back then when he first saw a Pomeranian and -- but let's let him tell it.

"Well, I've always been a dog nut. Anyway, right after the war I was in San Francisco, walking in Golden Gate Park, and I saw a lady walking one (a Pomeranian) and I said to myself, 'I've just got to get one of those dogs some day.' I finally bought one as a pet in 1950 and bought a show dog in 1952."

That was twenty years ago and in that time Goodrich has bred five generations of show dogs, produced the above

## AFA CONDUCTING MEMBERSHIP DRIVE

March 1 signalled the opening kick-off for Langley's Air Force Association membership drive, according to local chapter officials.

AFA, with a world-wide membership of more than 105,000 has as its prime objective to assure adequate aerospace power for national security and world peace. The Langley chapter is one of the largest in the nation with 645 active members. The current membership drive now in progress hopes to increase the rolls to over 1,000.

Membership is open to both private citizens and military who share a common interest in maintaining a strong, competent, modern Air Force capable of protecting and promoting the best interests of a free country.

Current AFA policy includes support for: humane treatment for prisoners of war; ending the war in Southeast Asia honorably and rapidly; a military posture capable of deterring the rapidly increasing Soviet nuclear and conventional threats; a national R&D effort, attuned to the long-term defense and socio-economic requirements of the country; and improving the life of the man in uniform and that of his family.

Benefits of AFA membership include: participation in national and local (chapter) programs and activities; eligibility for AFA-sponsored insurance programs; monthly copies of "Air Force" (the official publication of AFA) which is directed toward professional discussions of strategy, technology, and national and international affairs.

NASA personnel interested in further information regarding AFA membership should contact Hal Elder, membership chairman, 838-2400, or write to AFA, Box 7370, Riverdale Station, Hampton, VA 23366.

## GRADUATE COURSE OFFERED

The George Washington University will offer a graduate course at Langley Research Center this summer entitled "Digital Computer Programming Systems."

The course description and prerequisite are: Introduction to the design of computer software and software systems. Design of assemblers and monitor systems. Communication between components of systems. Design of loaders, input-output control systems, and utility systems. Prerequisite: EE 157 or permission of instructor.

Anyone interested in taking this course, please contact Dr. John Whitesides, extension 2219.

THE ONLY REASON most American families don't own an elephant is because they have never been offered one -- for a dollar down and a dollar a week.

mentioned number of champions, and had one dog rated the third best Pomeranian in the country! For this dog he was once offered seven thousand dollars! In addition, his dogs have won over two-hundred trophies (most of them for first place) and literally bundles of prize ribbons!

Planning to retire in a year or so Goodrich has his plans all made: to start doing for profit what he has always done for fun (even though he did sell one dog for three-thousand dollars!)

"Feeding and caring for eighteen to twenty dogs as well as paying a professional handler to show the dogs when I can't, can be pretty expensive," he said.

Even so, we know he felt it was worth it.



**GROUP AWARDS:** The Viking Aeroshell Design Team (top) recently received an NASA Group Achievement Award "for outstanding initiative and creative achievement in the development and verification of sophisticated design procedures for the Viking aeroshell." Members of the team are (from left): Robert K. Hedgepeth, James K. Anderson, Lawrence D. Guy, Melvin S. Anderson, and Walter L. Heard Jr. A Group Achievement Award was presented to Robert J. Hayduk, Vincent E. Miller, and Emilio Alfaro-Bou (right photo) for the development of a hailstone simulation facility. They were cited "for outstanding achievement in the timely development of a hail gun simulator and the use of this simulator for research on hail damage to high-speed aircraft."



## ICE CAPADES DISCOUNT TICKETS

The 1972 edition of the Ice Capades appears at the Hampton Roads Coliseum April 12-16. Your Activities Association is offering discount tickets for the following performances: Thursday, April 13, 8 p.m.; Saturday, April 15, 2 p.m.; and Sunday, April 16, 6 p.m.

Tickets which regularly cost \$4.50 are on sale at \$3.50 for adults and \$2.25 for youth (18 and under). Tickets may be purchased at the Activities Building through Wednesday, April 5.

## can you solve this problem?

A simple way of measuring total body heat loss from a laboratory animal is needed. An artificial skin for use on severely burned patients has been developed and it is desired to evaluate it on a pig. The pig's body heat loss will be measured and after the pig is skinned and the artificial skin surgically installed, the pig's body heat loss will be measured again. Refer to MUSC-11. Contact the T. U. Office, extension 3281, for the problem statement or if you have a contribution.

## RETIREMENT PARTIES

Percy J. Crain, Director for Systems Engineering and Operations, will be honored at a retirement party on April 5 at 6 p.m. in the Activities Building. Cost of dinner and a gift will be \$4 per person or \$7.50 per couple. Cost of gift only will be \$1. Send names and contributions to Louise Griggs, MS 219, by March 31.

Sidney C. Hall, Operations Support Division, will be honored at a retirement dinner, consisting of steak or seafood, on March 31 from 6 to 8 p.m. at the Langley NCO Club. Cost of dinner and gift will be \$4 per person or \$7.50 per couple. Send contributions to Quentin Ember, MS 164E, by March 24.

William E. Beddoes, Operations Support Division, will be honored at an informal retirement buffet on March 24 at 11:30 a.m. in Room 100, Building 1247-D. Cost will be \$2.50 per person for the buffet and gift and one dollar for gift only. Contributions should be sent to Doris Blanchard, MS 164, by March 21.

■■■■■■■■■■  
AN OPTIMIST is a man who marries his secretary thinking he'll continue to be able to dictate to her.

# Center Staff Members Retire After Long Service.



Mary W. Fetner  
Research Aircraft Flight



Theodore W. Schindler  
Fabrication



Wallace J. Dowling  
Personnel



Dewey Faulkner  
Instrument Research



Tom M. Palmer  
Facilities & Equip. Eng.



H. Vernon Forrest  
Operations Support



Ferdinand E. Hartman  
Operations Support



J. Norwood Evans  
Personnel



Maurice L. Sisson  
Systems Engineering



Vera Huckel  
Loads



John W. Paul, Jr.  
Operations Support



Lois H. Smith  
Structures



Walter F. Lindsey  
High-Speed Aircraft Div.



Earl R. Blymiller  
Fabrication



Ada Hadden  
Fiscal Management



Harold I. Maxwell  
Facilities & Equip. Eng.



Young V. Houston  
Research Aircraft

## words in peoples' mouths

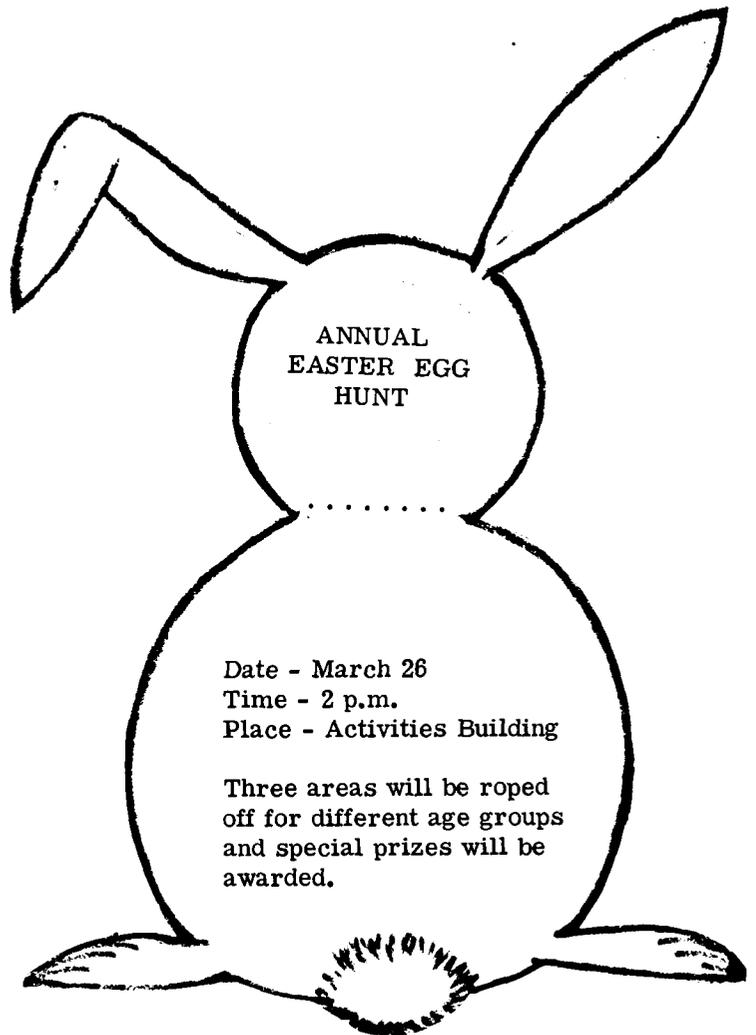


## Questions and Answers

**Q.** Why can't the quarterly premiums for Home Life Insurance be deducted from our paychecks on a bi-weekly basis?

**A.** Edward A. Howe, Chief of Financial Management Division, pointed out that this question was first answered in an article in the Langley Researcher of February 5, 1971, which stated: "The Association has made three attempts to obtain permission of the Civil Service Commission to allow payroll deduction of premium cost. The latest attempt was to the newly-appointed Chairman, Robert E. Hampton, in March 1969. All attempts have failed."

In view of the fact that we have a new Administrator and that the members of the Civil Service Commission have also changed, the Langley Chapter again requested on August 2, 1971, that NASA Headquarters again request permission of CSC for payroll deduction. This was looked upon favorably by Headquarters and a package including proposed NASA policy directive is being worked up at the present time. There is a lot of red tape to go through to



**WE ALWAYS** think the other man's job is easier than our own. And the better he does it, the easier it looks.

**THE TROUBLE** with getting good advice is that it gets in the way of our other plans.



prepare such a request. It will be several more weeks before it will reach the Administrator's desk for signature.

**Q.** If an NASA retiree is eligible for Social Security, does he collect both retirements? If not, how is the total amount determined?

**A.** Personnel officials stated that an individual may receive a civil service annuity and social security benefits at the same time, if he is qualified for both benefits.

# Langley Researcher

VOLUME 11, NUMBER 6

LANGLEY RESEARCH CENTER

MARCH 31, 1972



**HAPPY HOUR:** On April 21 the Activities Association will sponsor a nighttime Happy Hour. Music will be furnished by the Pink Champagne, an all girl band. No brown bagging will be permitted - drinks will be available at 50¢ each. The Happy Night will be from 9 p.m. to 1 a.m. Reservations and tickets are available for \$2.50 per couple at the Activities Building.

## INJUN SPACECRAFT CONTRACT

Langley Research Center has awarded a contract for an Injun F spacecraft to the University of Iowa, Iowa City, Iowa. The spacecraft mission is directed toward the study of the interaction of the solar winds with the geomagnetosphere at large radial distances over the Earth's north polar cap.

The spacecraft will be launched in 1974 from the Western Test Range by the Scout launch vehicle with a newly developed fifth stage motor. The planned orbit is a highly elliptical polar orbit with a perigee of 400 kilometers (248 miles) and an apogee of 102,000 kilometers (63,300 miles). The orbit will traverse an area of space that has not previously been surveyed.

The 31-month contract, valued at \$4,128,860, calls for the design, construction, integration, testing, and launch support for the spacecraft and the on-board experiments. Dr. James A. Van Allen of the University of Iowa, who discovered the Earth's natural radiation belts (Van Allen Belts) in 1958, is the principal investigator.

The three principal experiments on board will be: (1) a magnetometer to map the geomagnetic field high over the polar caps; (2) a Low Energy Proton Electron Differential Energy Analyzer (LEPEDEA) to provide information

(Continued on page 3)

## APOLLO 16 LAUNCH APRIL 16; MOON LANDING SET APRIL 20

Apollo 16, scheduled for launch at 12:54 p.m. EST, April 16 from Kennedy Space Center's Launch Complex 39, will devote its 12-day duration to gathering additional knowledge about the environment on and around the Moon and about our own planet Earth.

John W. Young is Apollo 16 mission commander, with Thomas K. Mattingly flying as command module pilot and Charles M. Duke, Jr., lunar module pilot.

The Descartes landing site is a grooved, hilly region which appears to have undergone some modification by volcanic processes during formation. The Descartes region is in the southeast quadrant of the visible face of the Moon and will offer an opportunity to examine several young, bright-rayed craters created by impacts in the volcanic terrain.

Lunar landing will take place on April 20 and the landing crew will remain at Descartes for 73 hours before returning to lunar orbit and for rendezvous with the orbiting command module on April 23.

Once on the lunar surface, Young and Duke will climb down from the lunar module for three seven-hour periods of exploration and experimentation. A major part of the first EVA will be devoted to establishing the nuclear powered, automatic scientific station -- Apollo Lunar Surface Experiment Package (ALSEP) -- which will return scientific data to Earth for many months for correlation with data still being returned by the Apollo 12, 14 and 15 ALSEPs.

The second and third EVAs will be devoted primarily to geological exploration and sample gathering in selected areas in the vicinity of the landing site. As in past missions, the crew's observations and comments will be supplemented by panoramic, stereo, and motion picture photographic coverage and also by television coverage. Crew mobility again will be aided by the use of the lunar roving vehicle.

In lunar orbit, Mattingly will operate experiments in the scientific instrument module (SIM) bay for measuring such things as the lunar surface chemical composition, and the composition of the lunar atmosphere. A high-resolution camera and a mapping camera in the SIM bay will add to the imagery and photogrammetry gathered by similar cameras flown on Apollo 15. Mattingly will perform an in-flight EVA during transearth coast to retrieve film cassettes from these cameras.

Earth splashdown will occur on April 28 at 3:30 p.m. EST at 5 degrees north latitude and 158.7 degrees west longitude in the central Pacific just north of Christmas Island. The prime recovery vessel, USS Ticonderoga, an aircraft carrier, will be located near the splashdown point to recover the crew and spacecraft.

# Happenings

**SOFTBALL TRYOUTS.** . . Tryouts for the NASA slow pitch softball team that will participate in the Newport News Softball Association this year are now in progress. Anyone interested in trying out for this team should attend the first practice session Monday, April 3, on the field behind the Activities Building.

**UNNECESSARY USE OF AIRMAIL.** . . In an effort to reduce NASA's mail costs, your attention is directed to the unnecessary use of Airmail. The use of Airmail does not necessarily help in speeding the delivery. Many times First Class is just as fast. Your cooperation in limiting the use of Airmail is needed if we are to reduce mail cost.

**NEWLYWEDS.** . . Wedding bells rang Saturday, March 25 when Dr. John A. Howell, Flight Instrumentation Division, took his final vows with Sandra Robinson, Hampton.

**GOLF TOURNAMENT.** . . Center golfers will have an opportunity to see how the Pros do it at the Eleventh Annual Old Dominion Golf Tournament which will be held at the Newport News Municipal Golf Course April 7-10. The tournament will open with a \$1,000 Pro-Am on April 7 with no admission charge. On Saturday and Sunday, April 8 and 9, there will be a 36-hole amateur tournament which will feature Flip Wilson as special guest and an exhibition match with Lee Elder and others to be announced. Admission is \$3 per day. On April 10 there will be an 18-hole professional tournament with a purse of \$7,500. Featured will be Gary Player and Lee Elder. Admission is \$5. Proceeds from the tournament will go to the United Negro College Fund.

**SAFETY BOOK AVAILABLE.** . . The Safety Office has available for loan to interested Center employees a new book entitled "Do It Yourself Home Protection." The author, Ralph Treves, covers step-by-step how to install modern locks; make a low cost burglar alarm; protect your home from fire; safeguard valuables; burglar-proof your car; prepare for nature's perils; train a watchdog; eliminate home hazards, and many other items of interest to the home owner. To borrow the book call the Safety Office, extensions 3310 or 3950.

**MEETING PLANNED.** . . The LRC Historical and Archeological Society will have its next business meeting on Monday, April 3, at 7:30 p.m. in the Activities Building. J. Paul Hudson, Museum Curator, National Park Service, Jamestown Museum, will give a presentation on historical research for archeological digs at Fort Raleigh, Roanoke Island, N.C.; Washington's Birthplace; Greenspring, James City County; and The Glass House, Jamestown. All interested NASA employees, their families, and friends are cordially invited.

**NEW ARRIVALS.** . . Announcing the birth of a seven-pound, seven-ounce son, John David, on March 13, are Lois, formerly of Employee Services Branch, and John T. Taylor, Facilities and Equipment Engineering Division. . . Weighing in at seven pounds, thirteen ounces on February 4, was Debra Lynn, new daughter of Stuart Flechner, High-Speed Aircraft Division.



**INVENTIONS AWARD:** David H. Butler (right) receives a certificate of appreciation and a check for \$250 from Vernon L. Alley, Chief of Systems Engineering Division, for his invention entitled "Radio Frequency Filter Device." The award was made by the NASA Inventions and Contributions Board.

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Tickets which regularly cost \$4.50 are on sale at \$3.50 for adults and \$2.25 for youth (18 and under). Tickets may be purchased at the Activities Building through Wednesday, April 5.



**IAM MEETING.** . . The NASA Lodge No. 892, International Association of Machinists, will meet April 4 at 7 p.m. at the Central Labor Union Hall.

**TENNIS CLUB.** . . The NASA Tennis Club has started its 1972 membership campaign. NASA personnel and contractors are invited to join and participate in the competitive and social activities of the tennis club. Dues are two dollars a year. Applications for membership may be obtained from Carl Horne, 3461; William Compton, 2308; or Tony Parrott, 3691. The first tournament of the year is scheduled for May 13 and 14 and will be used to determine ladder positions.

Langley Researcher, an official publication of the Langley Research Center, National Aeronautics and Space Administration, Hampton, Virginia 23365, is published biweekly in the interest of its employees. Address contributions to the Editor, Mail Stop 154, telephone 3116.

Editor.....Ruth Angel Verell  
 Staff Photographer.....Bob Nye  
 Reporters.....Langley Employees

The privilege of advertising articles in this publication is restricted to employees of Langley Research Center. Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.

## SWAP AND SHOP

### FOUND

Mickey Mouse watch in men's room in Building 1244. May claim at Reception Desk, Room 135, extension 2775.

### WANTED

Old-style front and rear bumpers with bars and guards for Volkswagon. Pierpont, 877-2141.

Alternate drivers from Hilton Village to W.A. on 7 shift. Cacioppo, 596-3594.

Ride or driving combination from Denbigh to W.A. on 7:30 shift. Burner, 3234.

### FOR SALE

Extra length Wilson irons. Paulson, 596-4986.

1970 Chrysler station wagon with air conditioning and all power accessories - \$3600; also hooked and nylon rugs with pads, buffer, lamps, manicure table, large round pedestal table, antique adding machine, stove for cookouts, hair dryer, console sewing machine, mahogany music cabinet, dolley, mahogany pie crust table, fireplace grate, and metal yard chair. Barricklow, 596-5108 or 877-2225.

Firestone deluxe champion tire, H-78 with 15-inch rim. \$5. Hall, 596-5398.

1950 Chevrolet coupe, best offer over \$50. Dicus, 595-4734 after 5:30 p.m.

Transmission cooler, 5000-pound capacity and heavy duty 6-blade fan for trailer towing - \$30. Carmines, 826-2894.

1969 8-foot Cox camper, sleeps 6. Parker, 245-1736.

1969 Pontiac Catalina, fully equipped. Hudson, 8 Shore Park Drive, Newport News.

15-foot aluminum camping trailer, sleeps 5 - \$800. Adams, 877-0438.

Honda 50 cc mini-bike - \$100. Ray, Gloucester 693-3583.

20-foot Nomad trailer, sleeps 6. Lou, 838-0323.

Triumph TR4A - \$800. Getch, 722-7646.

## INJUN SPACECRAFT CONTRACT

(Continued from page 1)

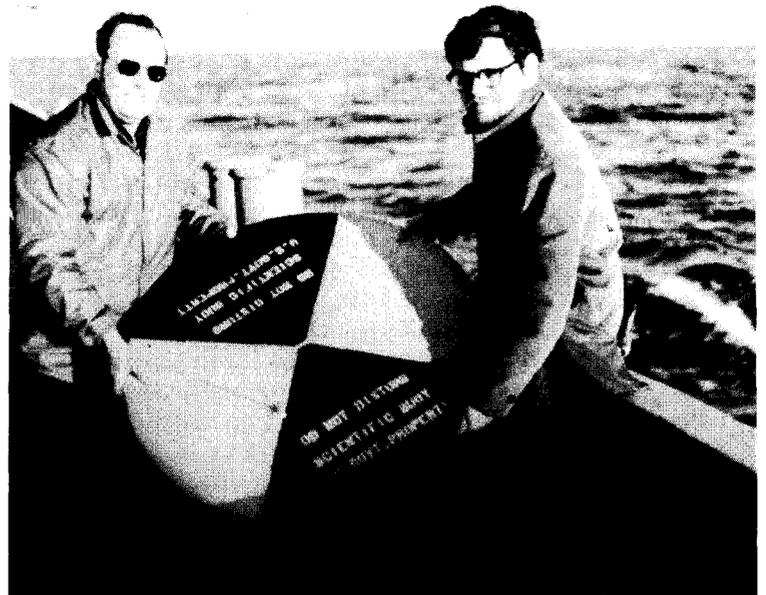
on the population density of charged particles; and (3) an Extremely Low Frequency-Very Low Frequency (ELF-VLF) experiment to determine the nature of the Earth's electrostatic and electromagnetic fields by study of ELF and VLF radio emissions.

The experiments may lead to an understanding of the way in which the natural radiation belts surrounding the Earth maintain their supply of charged particles. Scientists theorize that particles leave the belts in areas near the North and South poles causing the aurora effects visible in high altitudes. Yet earlier satellite studies show that the particle density in the belt regions remains relatively steady. Scientists now hope to learn how the fresh supply of charged particles enters the radiation belt regions to keep them constantly supplied.

Claude W. Coffee Jr., Space Technology Division, is project manager for the Injun F and Roland D. English, Head of the Scout Project Office, is project manager for the Scout launch vehicle.



**HAPPY HOUR:** The next Happy Hour will be held April 7 at the Activities Building. Back by popular demand will be The Asylum, an all girl rock group formerly known as the Feminism. Ham biscuits and cheese pots and crackers will be available for purchase.



NASA/VIMS BUOY: Leon Williams (left), Systems Engineering, and Jimmy Usry, Space Technology, hold a Langley fabricated buoy which was used in a joint experiment between Langley Research Center and the Virginia Institute of Marine Science to determine the circulation patterns of the near surface water off the coast of Virginia.

--Photograph by Fred Jones

## NASA-VIMS BUOY ENDS DRIFT

Applications of NASA technology to local agency needs have been initiated in cooperative plans between Langley Research Center and the Virginia Institute of Marine Science (VIMS).

One of these needs is for data on the circulation of the waters on the Virginia Atlantic Shelf to verify analytical modeling for forecasts of shelf events. To obtain these data, a number of drifting buoys have been defined and proposed. A surface drifting buoy has been designed and fabricated at Langley to determine the circulation patterns of the near surface waters.

A demonstration of this buoy has been made in the Atlantic Ocean off the coast of Virginia. The buoy was planted by Wallops and Langley personnel on February 18 and after drifting for three weeks, pick-up of the buoy was made from the U.S. Navy Ship USS Mosopelea (ATF 158).

## NEW HOURS ANNOUNCED

The Activities Building will be open on Saturdays from 9 a.m. until 4 p.m. and on week days from 3:30 p.m. until 10 p.m. when other events have not been scheduled. Basketball, badminton, and table tennis will be available. And for the hungry ones, food and drinks may be purchased.

## GOLF ASSOCIATION NOTICE

Membership in the NASA Golf Association is open to all NASA employees, both active and retired. Dues are \$5 per year and must be paid no later than April 10. Checks should be made payable to the NASA Golf Association and mailed to Bob Seals, MS 160.

NAME \_\_\_\_\_ MAIL STOP \_\_\_\_\_  
OFFICE & HOME PHONE NOS. \_\_\_\_\_

## CAFETERIA MENU

The following menu will be served in the cafeterias during the week of April 3:

Monday - Cream of tomato soup, Swiss steak, breaded veal cutlet, sauteed chicken livers, weiners and sauerkraut.

Tuesday - French onion soup, broiled Salisbury steak, southern fried chicken, fried oysters, creamed dried beef.

Wednesday - New England clam chowder, charbroiled T-bone steak, broiled liver and onions, ham steak, broiled flounder, franks and beans.

Thursday - Cream of celery soup, stuffed peppers, fried shrimp, chicken and dumplings, baked lasagna.

Friday - Bean with bacon soup, charbroiled delmonico, barbequed pork sandwich, glazed ham, macaroni and beef.

Snack Bar - Soup, jumbo burger, hot dogs, fish sandwich, French fries, apple turnovers. Variations - 3-D burger (double meat and cheese), NASA submarine, corned beef (Mon.); hot roast beef, ham and cheese club, chicken salad, 3-D burger (Tues.); NASA submarine, corned beef, ham and egg (Wed.); 3-D burger, pastrami, steak, tuna salad (Thurs.); chili, barbequed pork, NASA submarine, ham and cheese club (Fri.).

The menu for the week of April 10 is as follows:

Monday - Cream of potato soup, business man's lunch, Chinese egg rolls, chicken cacciatore, spaghetti with meat balls.

Tuesday - Vegetable beef soup, steamboat round, cordon bleu, shrimp creole, beef ravioli.

Wednesday - Chicken gumbo soup, corned beef and cabbage, charbroiled T-bone steak, chuckwagon steak, broiled chicken, fried clams.

Thursday - Corn chowder, beef stroganoff, meat loaf, chop suey, sloppy Joe.

Friday - Chicken noodle soup, beef burgundy, fish fry, tuna rice casserole, grilled pork chops.

Snack Bar - Soup, jumbo burger, hot dogs, fish sandwich, French fries, apple turnovers. Variations - 3-D burger, pastrami, NASA submarine, ham salad (Mon.); corned beef, chili, salami, chicken salad (Tues.); 3-D burger, hot roast beef, ham and cheese club, NASA submarine (Wed.); 3-D burger, pastrami, grilled cheese, ham and egg (Thurs.); 3-D burger, steak, salami, tuna salad (Fri.)

## COMING EVENTS

April 1 - Building open from 10 a.m. until 5 p.m.

April 2 - Closed for Easter

April 3 - LRC Historical Society Party  
Anderson Party

April 4 - Badminton from 4:30 to 6:30 p.m.  
Bridge Club - 7:30 p.m.

April 5 - Percy Crain retirement party

April 6 - Building open from 4 to 10 p.m.

Aerospace oyster roast on the grounds

April 7 - Happy Hour with the Asylum

April 8 - Building open from 10 a.m. to 6 p.m.

Fatigue Lab party at 5:30 p.m.

ACD picnic on the grounds

April 9 - Building open from 1 to 5 p.m.

April 10 - Building open from 4:30 to 10 p.m.

April 11 - Badminton from 4:30 to 6:30 p.m.

Bridge Club at 7:30

April 12 - FID party at 4 p.m.

## MEET YOUR EEO COUNSELORS

(This is the first of a series of articles introducing the Center's 12 Equal Employment Opportunity counselors. The function of the EEO counselors is to provide an open and sympathetic channel through which employees and applicants may raise questions, discuss grievances, and attempt to resolve, on an informal basis, discrimination complaints based upon race, color, religion, sex, or national origin.)



Horace E. C. Bellamy is a personnel staffing specialist in the Staffing and Special Programs Branch, Personnel Division.

Bellamy hails from Toronto, Ontario, Canada, where he attended grade school and graduated from the Harbord Collegiate Institute. He served in the Royal Canadian Air Force from 1943 to 1945.

Bellamy joined the Center staff on November 8, 1963 as an apprentice experimental facilities mechanic and graduated from the Apprentice School in 1966. He worked as an engineering technician in the Operations Support Division until his transfer this month to Personnel Division.

Bellamy is enrolled in courses at Hampton Institute and he hopes to eventually receive his degree in construction engineering. He has served as an instructor in the NASA Apprentice School teaching mathematics, blueprint reading, drafting, and algebra. He is also a recipient of the NASA Special Achievement Award for the training and guidance of the disadvantaged.

When asked why he wanted to become an EEO counselor Bellamy explained, "I felt that my heritage, background, and experience would help me to understand the problems of others and to give them helpful advice."

Bellamy enjoys photography, woodworking, cooking, and baking. He is married to the former Lillian R. Robinson and they are the parents of two sons -- Robert who is 12 years old and David who is 11.

## RETIREMENT PARTIES

Julian D. Maynard, Loads Division, will be honored at a retirement buffet on April 21 from 5 to 7 p.m. in the Activities Building. Cost of the buffet and gift will be \$4 per person or \$7.50 per couple. Cost of gift only will be \$1. Send names and contributions to Goldie Smith, MS 239, by April 5.

Dr. Stuart L. Seaton, Instrument Research Division, will be honored at a retirement party on Wednesday, April 26, at 4:45 p.m. in the Activities Building. Cost of the party and gift will be \$4 per person or \$7 per couple. Cost of gift only will be \$1. Send names and contributions to Miriam Hall, MS 235, by April 18.



April 13 - Bingo at 8 p.m.

April 14 - ATT group at 5 p.m.

April 15 - Building open from 10 a.m. to 6 p.m.

# Center Staff Members Retire After Long Service



ALLEN K. MURRAY  
FABRICATION

LELAND B. SALTERS  
HIGH-SPEED AIRCRAFT

KENNETH E. SINGLETON  
OPERATIONS SUPPORT

BERNARD SLONINA  
OPERATIONS SUPPORT

LLOYD L. WALLACE  
INSTRUMENT RESEARCH



JAMES A. WATSON  
OPERATIONS SUPPORT

RALPH L. WESTPHAL  
FACILITIES & EQUIP. ENG.

THELMA T. FOWLKES  
PERSONNEL

OVERTON C. FOWLKES  
FACILITIES & EQUIP. ENG.

EUGENE R. GURYANSKY  
HIGH-SPEED AIRCRAFT



ARTHUR W. CARTER  
LOW-SPEED AIRCRAFT

JOSEPH SHEMATEK  
FABRICATION

OLIVER T. JONES  
FABRICATION

JOSEPH SLEIGHTER  
OPERATIONS SUPPORT

HAROLD W. WOOD  
FLIGHT INSTRUMENTATION



ELVIN L. AHL  
FLIGHT INSTRUMENTATION

ANSHAL I. NEIHOUSE  
OFFICE OF DIRECTOR FOR ADM.

JOHN R. DAWSON  
ADVANCED TRANSPORT TECH.

CHARLES M. FEAMSTER  
INSTRUMENT RESEARCH

SIDNEY C. HALL  
OPERATIONS SUPPORT



CECIL S. HUDGENS  
MANAGEMENT SUPPORT

JOHN R. JOYCE  
INSTRUMENT RESEARCH

HENRY P. KYLE  
INSTRUMENT RESEARCH

FRANCIS X. MAHER  
MAINT. & REPAIR PLANNING

WILTON J. MILLER  
OPERATIONS SUPPORT

## COLLOQUIUM TO HEAR DR. GATES

Dr. David M. Gates, Professor of Botany and Director of the University of Michigan Biological Station, will speak on "Energy, Life and Climate" at the Langley Colloquium on Monday, April 10 at 3 p.m. in the Activities Building.

He will discuss life on Earth's dependency upon the primary productivity by plants which is driven by the flux of radiation from the Sun. Radiation is necessary, not only for the photochemistry which occurs with photosynthesis but heat energy is necessary in order to maintain plants at a proper thermodynamic level.

The flow of energy into a plant or animal must be balanced by the flow outward; if too much energy is retained, we die of overheating, or if too little, of cold. To survive, living things must be adapted to their particular environment and must also be able to adjust to the temporary extremes of their immediate surroundings. Humans can do this by perspiring in the summer's heat or adding more clothing as the winter gets colder.

Dr. Gates has found that plants can stabilize their temperatures by "perspiring," or by adaptive arrangements or shapes of their leaves to release excess heat through radiation or convection. Primary productivity is the foundation for all life, and he will describe how this works. Animals also must be in energy balance. Dr. Gates will describe the methods he has used for analyzing the energy budgets of animals which has enabled him to predict the specific climate in which any particular species of animal must live.

Dr. Gates is Chairman of the Environmental Studies Board of the National Academy of Sciences and holds a presidential appointment as a member of the National Science Board, the governing board of the National Science Foundation. He serves as a member of the panel on Science and Technology and is a member-at-large of the Governing Board of the American Institute of Biological Sciences.

Dr. Gates received his B.S., M.S. and Ph.D. degrees in physics from the University of Michigan. His research for many years related to atmospheric physics, infrared spectroscopy and problems of the upper atmosphere. At present his research interests are in the area of a discipline he has established which is termed biophysical ecology. He studies the energy budget of plants and animals, temperature effects, transpiration, gas exchange, metabolic processes and the basic mechanics driving the components of the ecosystem.

In 1971 Dr. Gates received the Gold Seal Award of the National Council of State Garden Clubs and the American Meteorological Society Award for Outstanding Contributions to Bioclimatology.

## GLEN BRAGG DIES AT AGE 54

Glen B. Bragg, a Construction Inspector in the Facilities and Equipment Engineering Division, died Sunday after a long illness.

Bragg was born July 28, 1917 in Mount Hope, West Virginia. He joined the Center staff on November 8, 1945.

Surviving are a daughter, Mrs. Anna Marie Privigy of Newport News; three sons, Glen B. Bragg Jr. and Joseph Bragg of Hampton and John Bragg of San Francisco; his mother, Mrs. Reba Catron of Norfolk; and five sisters.



**ACHIEVEMENT AWARD:** Doris W. Bryan receives a Special Achievement Award for Performance from Arthur R. Friend, Assistant Chief of Programs and Resources Division, "for sustained superior performance in providing secretarial support to the Programs and Resources Division and, in particular, for her direction and training of young people assigned to the division through Langley's special training programs.

## can you solve this problem?

An improved urethral valve for nonsurgical implantation is needed. The valve will be positioned at the entrance to the urinary bladder replacing the body's nonfunctional urinary sphincter muscle. One possible approach is the use of a magnetic ring which attracts a sphere sealing off the flow of urine. Refer to UTM-38. Contact the T. U. Office, extension 3281, for additional information or if you have a solution.

### CONGRATULATIONS

The following persons are to be congratulated for their contributions or suggestions to the Technology Utilization and Applications Programs Office toward the solution of biomedical and public sector problems:

Robert V. Garletts, Russell N. Hopko, Dwight McSmith, Norman J. Johnston, L. Robert Jackson, Don. R. Rummler, Jag J. Singh, Harold D. Orr, Stuart L. Seaton, Bruce Warburton, Leslie W. Ball, George T. Carson, Joseph Boyle, W. Frank Staylor, and Harry V. Fuller.

**ODU OPEN HOUSE:** The Town-N-Gown organization of Old Dominion University is sponsoring an open house on campus in Norfolk on Wednesday, April 5. This event will include a bus tour of the campus, special lectures, classroom visits, lunch and a student panel. For additional information call the Training Office, 2517, or ODU, 489-800.

**THE ART** of taxation consists in so plucking the goose as to obtain the largest amount of feathers with the least possible amount of hissing.

--J. B. Colbert

# Personnel Profiles

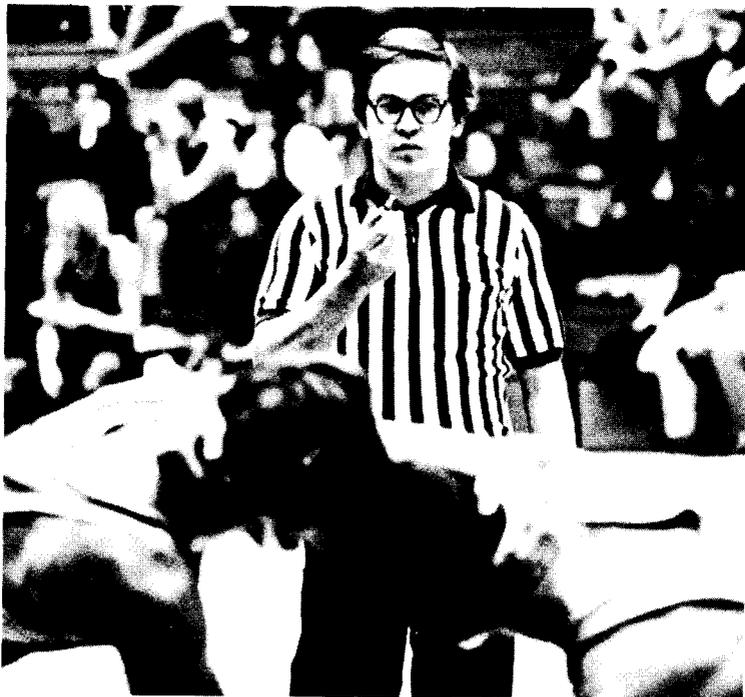
By

Allan C. Hanrahan



## WIDE WORLD OF SPORTS. . .

Say, how would you like to watch some wrestling on television? No, not the "professional" kind where the participants are overweight, under-talented actors, but real wrestling -- amateur if you will -- when the winner is the best (collegiately) in the country in his weight class. If the idea appeals to you then make a note to watch -- in about two weeks -- the Wide World of Sports Saturday afternoon program on the ABC television network. And if you look real close you'll probably see, gracing the screen, the likeness of M. Patrick McCormick, the Head of the Photo-Electronic Instrumentation Section of the Instrument Research Division. You see, he was one of the officials chosen for the National Collegiate Wrestling Championships held at the University of Maryland March 9-11. When the final matches were held there were 12,300 people watching (paid attendance) which represented the largest turnout to see an amateur wrestling match in U.S. history. The telecast is tentatively scheduled for April 15.



McCormick officiated for the 167-pound-class championship match but has officiated in all the weight classes. He came by this interest honestly, having wrestled in high school in Canonsburg, Pa., where he was born thirty-one years ago. At Washington and Jefferson College (in Pennsylvania) where he received his B.A. degree in physics, he was wrestling team captain for four years, four times conference champion and undefeated in 54 matches!

"It's a very individual sport," he says. "I guess that is why I dig it so much; I think it's really great."

And therein lies his reason for officiating. He added, "After college -- because I couldn't wrestle anymore and

## EEO AFFIRMATIVE ACTION PLAN SENT TO SUPERVISORS

Each supervisor at Langley received this week a copy of the Center's revised Affirmative Action Plan for the Equal Employment Opportunity Program.

The basic plan is not new to Langley, but it has been revised to reflect new opportunities for affirmative action which can be taken by Center management, all supervisors, and even staff members in support of the Equal Employment Opportunity Program.

The Center will be evaluated by NASA Headquarters and the Civil Service Commission at a later date to determine how well it met the objectives of the plan.

Some additional copies of the Affirmative Action Plan are available for distribution to interested staff members. A copy can be obtained by calling Virginia Lazenby, extension 2932.

## CAMERA CLUB REORGANIZING

Included on the agenda of the March 21 meeting of the Langley Camera Club were the nomination of offices for the coming year and an open category slide contest.

Since the club is reorganizing, the election of officers will be held at the meeting on April 18 at 7:30 p.m. in the Activities Building. Nominations will also be accepted from the floor.

The following candidates have been nominated: President - Dominick Andrisani, Research Aircraft Flight, and Robert L. Wright, Office of the Director for Space; Vice President - James J. Buglia, Environmental and Space Sciences, and Stan Rau, Procurement; Secretary - Barbara Newton, Management Support; and Treasurer - Abraham Leiss, Scout Project Office.

Winners in the slide contest were as follows: first place - "Sunrise over Ekalumiet" by Robert L. Wright; second - "Carla" by Dominick Andrisani; third - "Wheeler" by Barbara Newton; fourth - "Solitude" by Wright; fifth - "Sunrise" by Carolyn Grantham; sixth - "Peru" by Wright.

An open category slide contest and the election of officers will highlight the April 18 meeting. All interested shutterbugs are invited to attend and may call Bob Wright, 2893, for additional information.

■■■■■■■■

MOST OF US don't know exactly what we want, but we're certain we don't have it.

■■■■■■■■

loved the sport -- I started officiating. That's how I stayed close to it."

He has been officiating for the last eight or nine years in high school matches and college matches in the Southern and Atlantic Coast Conferences.

However, since the season only runs from December to March he has time for his main interests which are his wife, Judy, his eight-year-old daughter, Lynn, and his five-year-old son, Michael.

In addition to "puttering around the house" he enjoys photography and playing in the NASA touch football league. He and his wife sing in the choir and also lead a high school youth group at the Chapel of the Centurion at Fort Monroe.

Pat came to the Center in August 1967, after earning his M.A. and Ph.D. degrees at William and Mary.

We'll see you on TeeVee, Doctor!

## Questions and Answers

Q. When a suggestion has been accepted and put into an operating procedure, how long is it before the person submitting the suggestion is awarded his money for the idea?

A. After a suggestion has been evaluated and approved (by the Incentive Awards Committee for awards of over \$50 and by division chiefs for those \$50 and under) approximately three weeks are required for processing the check and certificate, according to Rupert E. Bullard Jr., Head of the Awards Program Office.

Q. When a suggestion is submitted and forwarded for evaluation what is the time period allowed for evaluation? Isn't a year too long for clerical matters? Should the Awards Office advise the person who submitted the suggestion of long delays and try to get the evaluation office to process suggestions promptly so that an employee feels that at least his idea is in process -- not just sitting on someone's desk or filed away?

A. Yes, some evaluators sit on suggestions, but the Awards Program Office attempts to minimize these problems by following up with evaluators. Normally, two weeks are allowed for each evaluation of a suggestion, but many of Langley's suggestions are of a nature that requires a longer period of time to fully evaluate. Examples are suggestions of a technical nature or suggestions that affect large segments of the Center's operations. Delays also result when a suggestion can only be implemented during periodic maintenance shutdowns of research facilities. Generally speaking, however, if a suggestion is narrow in scope and uncomplicated, 60 days is the normal time for getting a final answer. If the suggestion is broad in scope and complicated, it will take longer to obtain a final answer. Rupert Bullard stated, "The Awards Program Office realizes that other program responsibilities have at times interfered with our practice of keeping employees up to date on their suggestions and we will strive to do better in the future. If any employee feels his suggestion has been pigeonholed someplace, he is urged to call the Awards Office at extension 2214."

Q. Is there any information available concerning the Nixon Administration's plan to remove certain classifications (i.e. Engineering Technicians, Clerical, etc.) from the GS pay schedule and placing them in a pay schedule similar to the Wage Board which is paid according to local wages?

A. A Job Evaluation and Pay Review Task Group, es-

## words in peoples' mouths



tablished under Public Law 91-216, has been studying the various position classification systems used in the Federal Service. A draft report of its findings and recommendations, which contains many proposals and recommendations dealing with job evaluation and pay determination, has been submitted to the Civil Service Commission. One of the recommendations contains a new job evaluation system for clerical, office machine, and technical positions whose pay would be established by locality pay scales derived from area wage surveys. The Civil Service Commission was expected to have completed their review and prepared a final report to the Congress by March 17.

According to Patrick J. Croall, Head of the Classification and Organizational Branch, Personnel, there is no information at this time as to the Commission's reaction to the recommendations or what their final report will contain. Any reform to the present classification systems will require legislative action. The legislative process undoubtedly will be lengthy. Therefore, it may be many months before there is positive information regarding proposed changes to present job evaluation and pay determination systems.

# Langley Researcher

VOLUME 11, NUMBER 7

LANGLEY RESEARCH CENTER

APRIL 14, 1972

## APOLLO 16 LAUNCH SUNDAY; MOON LANDING THURSDAY

Apollo 16, the United States' fifth moon landing mission, is scheduled to be launched Sunday at 12:54 p.m. from Kennedy Space Center's Launch Complex 39.

Crew members for the 12-day mission are John W. Young, mission commander; Thomas K. Mattingly, command module pilot; and Charles M. Duke, lunar module pilot.

Lunar landing will take place at 3:41 p.m. on Thursday. The crew will remain at Descartes for 73 hours. Young and Duke will climb down from the lunar module for the first of their three moon walks at 7:19 p.m. on Thursday. The second EVA will start at 5:44 p.m. on Friday and the third one is scheduled for 5:19 p.m. on Saturday. Each EVA will last for about seven hours.

Lunar liftoff is scheduled for 4:39 p.m. on Sunday, April 23 and Earth splashdown will occur at 3:30 p.m. on April 28 in the central Pacific.

Communications call signs to be used during Apollo 16 are "Casper" for the command module and "Orion" for the lunar module.



**FLYING-CRANE HELICOPTER:** This CH-54B Flying-Crane Helicopter recently arrived at Langley for use in a joint Army/NASA flight research program.

### FLYING-CRANE HELICOPTER AT LANGLEY

A CH-54B Flying-Crane Helicopter, one of the Army's largest, recently arrived at Langley where it will be used in a joint Army/NASA flight research program. The aircraft was delivered from the Sikorsky Aircraft Plant, located in Stratford, Connecticut, following installation of research instrumentation under an Army/NASA contract.

A twelve-month, fifty-flight-hour test program is scheduled to begin in June. Objectives include establishing handling quality requirements for large, single-rotor helicopters. This effort will extend Langley's ongoing helicopter research studies and reflects the Army's long-range requirements for increased air mobility as related to the Heavy Lift Helicopter (HLH) program.

During the next several weeks, Flight Instrumentation Division will install and checkout data recording equipment designed to interface with the sensors installed at Sikorsky. NASA's data package, called PADS (Piloted Aircraft Data System) has been under development for several years and its use in the CH-54B represents the first application of the complete system in a research aircraft.

The team responsible for conducting this research program will be comprised of Army and NASA personnel, and include: Henry Kelley, Program Manager, AAMRDL; Daniel DiCarlo, Flight Project Engineer, LSAD; Robert Sommer, RAJD, and Lt. Colonel Thomas West, AAMRDL, Project Pilots; Mitchel Thomas, FID, Instrumentation Engineer; and Earl MacDonald, PAJD, Maintenance.



**APOLLO 16 CREW:** Crew members of the Apollo 16 crew are (from left): Thomas K. Mattingly, command module pilot; John W. Young, mission commander; and Charles M. Duke Jr., lunar module pilot. Apollo 16 is scheduled to be launched April 16 at 12:54 p.m. EST.

# Happenings

**PARKING NOTICE.** ..Employees and contractor employees are reminded not to park illegally by blocking access and fire lanes to buildings. Vehicle operators are particularly guilty of violating this regulation around Buildings 1268, 1268A, and 1192A. Violators will be ticketed.

**NEW HEIRESS.** ..Celebrating the birth of a seven-pound, thirteen-ounce daughter, Catherine Helen, on April 2 are Carolyn, a former employee of General Electric with the Viking Support Service Group, and J. Earl Jones, Flight Instrumentation Division.

**THANKS FRIENDS.** . .William N. Gardner, who was recently transferred to Washington Headquarters, wishes to thank his many friends and co-workers for the transfer party given in his honor.

**BOOK SALE.** ..The annual used book sale of the Hampton Branch of the American Association of University Women will be held today from 9 a.m. to 6 p.m., tomorrow from 9 a.m. to 5 p.m., and Monday from 9 a.m. to noon at Brittingham's Warehouse, 56 West Queen St., Hampton.

**PAUL HARVEY.** . .Center staff members are invited to hear Paul Harvey at 8 p.m. on April 19 at the Hampton Roads Coliseum. All seats are two dollars each. The lecture is being sponsored by the Kiwanis Clubs of the Peninsula and all proceeds will go to the Proclaim Center, a drug rehabilitation center in Hampton.

**FREE IMMUNIZATIONS.** . .A community-wide immunizations program will be held Sunday from 1 p.m. to 4 p.m. for children ages 1 to 12. Vaccine will be available at no charge for measles-rubella-polio. The centers will be located at Poquoson Elementary School, Grafton Bethel Elementary School, Yorktown Elementary School, Magruder Elementary School, and Matthew Whaley Elementary School.

**SOFTBALL NOTICE.** ..The 1972 NASA Slow-Pitch Softball League is currently being organized. If you are interested in entering a team, or if you have no team affiliation but would like to participate in this activity, call Harvey Herrington, extension 2125, on or before April 21.

**FGAA MEETING.** . .Colonel James O. Syme, Comptroller will speak at the Peninsula Chapter meeting of the Federal Government Accountants Association on April 19 at the Fort Eustis Officers Open Mess. A social period will begin at 6:30 p.m., followed by dinner and the program. For reservations call Eugene Fadely, extension 2558.

**DO YOU SPEAK A FOREIGN LANGUAGE?.** ..The Civil Service Commission is requesting all government agencies to provide them with the names of employees who can fluently speak or write a foreign language. Employees who have this skill may be asked to act as interpreters or translate documents. Any employee having the capability to fluently speak or write a foreign language is requested to contact Marge Simonton, Personnel Records, 2624.

**RETIREMENT PARTY.** . .Staff members are reminded

**HOW MANY DO YOU RECOGNIZE?**

**YOUR NEW VIRGINIA HIGHWAY SIGNS**

**HIGHWAY SAFETY DIVISION OF VIRGINIA**

that Dr. Stuart L. Seaton, Instrument Research Division, will be honored at a retirement party on Wednesday, April 26 at 4:45 p.m. in the West Cafeteria. Cost will be \$4 per person or \$7 per couple. Cost of gift only will be \$1. Send names and contributions to Miriam Hall, MS 235, by Tuesday, April 18.

**OPEN HOUSE.** . .NASA Wallops Station will hold open house April 15 and 16 from 10 a.m. until 4:30 p.m. Visitors will be permitted to view facilities at the Wallops Main Base and the rocket launching sites on Wallops Island.

Langley Researcher, an official publication of the Langley Research Center, National Aeronautics and Space Administration, Hampton, Virginia 23365, is published biweekly in the interest of its employees. Address contributions to the Editor, Mail Stop 154, telephone 3116.

Editor.....Ruth Angel Verell  
 Staff Photographer.....Bob Nye  
 Reporters.....Langley Employees

The privilege of advertising articles in this publication is restricted to employees of Langley Research Center. Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.

## TRAVEL ACCIDENT INSURANCE NOTICE

Premium notices were distributed for Travel Accident Insurance on Monday, April 10. Participants are warned that there is no grace period for Travel Accident Insurance. The current period expires midnight April 30. If your annual premium, due by May 1 for next year, is not paid by that time you are no longer covered and protected by the insurance.

You may reinstate it at any time merely by making premium payment; however, the premium payment must be for the full year regardless of when it is paid during the month of May.

To get full value for your money and to maintain continuous coverage, be sure to send your premium payment to the Data Processing Branch, MS 142, by midnight Sunday, April 30.



## MERIT PROMOTION NOTICES

The Manned Spacecraft Center in Houston, Texas, has eight vacancies in the Flight Technology Branch of their Engineering Analysis Division. The position titles, grades, and a brief description of the duties involved are as follows:

AST, Aircraft Dynamics Analyst, GS-12 or 13. The incumbent in this position will serve as a specialist in aircraft dynamics and aircraft mode operations of the shuttle vehicle.

AST, Performance Analyst, GS-12 or 13. The incumbent in this position will serve as a specialist in aircraft performance analysis to determine the basic shuttle configuration and subsystem requirements. Aircraft performance trade studies will be conducted to support the design and development phases of the shuttle program.

AST, Unsteady Aerodynamics Analyst, GS-12 or 13, two positions. Incumbents in these positions will serve as specialists in unsteady aerodynamics. They will be responsible for the assessment of shuttle designs as related to potential unsteady aerodynamic problems.

AST, Entry Vehicle Dynamics Analyst, GS-12 or 13. The incumbent will serve as a dynamic specialist and will perform analyses of the shuttle vehicle when it is in the entry mode of operation.

AST, Entry Vehicle Trajectory and Performance Analyst, GS-12 or 13. Incumbent will serve as a trajectory and performance specialist, performing analysis to determine the basic shuttle entry subsystems and configuration requirements during the vehicle design phase.

AST, Launch Vehicle Dynamics Analyst, GS-12 or 13. Incumbent in this position will serve as a dynamics specialist and will perform the analysis necessary to determine shuttle subsystem and configuration requirement during the shuttle design.

AST, Gasdynamics Analyst, GS-12 or 13. Incumbent will serve as a senior methods specialist in gasdynamics responsible for conceiving, planning, controlling and applying experimental and theoretical physics to gasdynamics and system aerodynamics as related to shuttle vehicle design.

Employees who are interested in any of these positions and who wish to review a more detailed description of the duties involved should contact John J. Cox, Head of Staffing and Special Programs Branch, extension 2233, by April 21.



**BASE NURSERY:** Center staff members are eligible to use the Base Nursery facilities. The children are well supervised and this group of kindergarten students took time out from their "studies" to pose for staff photographer Bob Nye.

## NURSERY FACILITIES AVAILABLE

Center employees are reminded that NASA staff members are eligible to use the Base Nursery facilities. The Nursery is located in the Shellbank area near the Base Hospital.

The Nursery is open Monday through Thursday from 6:30 a.m. to 11:30 p.m.; on Friday from 6:30 a.m. to 12:30 a.m.; and on Saturday from 8 a.m. to 1:30 a.m.

The rates are as follows: Hourly - 1 child 50¢, 2 children 75¢, 3 children 90¢ and 10¢ for each additional child. Daily (10 hours and one meal) - 1 child \$3.75, 2 children \$6.25, 3 children \$8, and \$1.25 for each additional child. Monthly (10 hours daily and one meal) - 1 child \$50, 2 children \$75, 3 children \$90, and \$15 for each additional child. Breakfast is 25¢ and lunch or supper is 35¢.

The facility, which is capable of handling 330 children, has a staff of 25 members. The nursery is inspected twice each month by officials of the Base Hospital and the Base Fire Department.

For further information call 764-3449 or 764-3585.

## NEW HOURS ANNOUNCED

The Activities Association is instituting a program whereby the Activities Building will be open to employees, contractors, and their families when not in use for scheduled events.

Hours will be from 3:30 p.m. until 10 p.m. on weekdays; 10 a.m. until 6 p.m. on Saturdays; and 1 p.m. until 6 p.m. on Sundays. A bi-weekly schedule of activities will be published in the Researcher and will also be posted in the Activities Building.

All building facilities will be available for participation in basketball, badminton, table tennis, and exercising. Food and drink will be sold. Participation games will be on a time-sharing basis so that all will have equal time. The custodian on duty will have complete charge and will be the final answer on use of facilities.

It is requested that all children under 16 be accompanied by a parent or adult who will be responsible for them.

This program, offered as an attempt to encourage physical fitness, will be offered as long as participation warrants, and expanded when possible.

## MEET YOUR EEO COUNSELORS

Donald Brown is assigned to the Computer Management Branch, Analysis and Computation Division, as an Aerospace Technologist.

Brown is a native of New York City. He attended Newtown High School in New York and received his B.S. degree from Hofstra University. He served in the U.S. Navy from May 1945 to August 1946.

Since joining the Center staff on June 20, 1956, he has taken graduate courses at the University of Virginia Extension and VPI.



For two years, Brown has participated in a Priority Program through the Lutheran Church in America. This program is set up to give sensitivity training between blacks and whites to selected church leaders and he has himself received over 200 hours of such training. Brown serves as coordinator for the Williamsburg-Newport News-Hampton area to enlist team members to give encounter sessions.

In addition to the Priority Program, he works with two black churches in the Denbigh area in a teenage and adult discussion group. He is also a member of Social Concerned Church Groups of the Newport News area, one of the functions of which is to work with HUD as testers for housing discrimination complaints.

Brown's hobbies include woodworking, beekeeping, baking, surf fishing, tennis, adult Sunday school teaching, conducting black/white encounter sessions, and working on hi-fi kits.

He is married to the former Joan Wilma Lieke and they have four children - Joann Carol who is 14, Ellen Deirdre age 12, Donald Bruce age 10, and David Dean age 9.

## SWAP AND SHOP

### WANTED

Driving combination from Runnymede to W.A. on 8 shift. Hoad, 3611.

Sunflower sailboat. Carmines, 826-2894.

Ride from Beechwood to E.A. on 8 shift. Mansfield, 2711.

Alternate driver from Wythe to W.A. on 7:30 shift. Alston, 3735.

### FOR SALE

Baby crib - \$25. Whitehurst, 826-0876.

Air conditioner, 8,000 btu, 110 volts - \$30. Jones, 898-6476.

1970 Rupp Roadster mini-bike - \$240. Bradshaw, 898-5750.

AKC registered Dachshund pups - \$55. Veryzer, 722-6872.

C-Z Jawa motorcycle - \$200. Hanson, 851-1669.

Lady's ice skates, size 9. Fournier, 596-0758.

3-speed English bike - \$15. Brown, 838-2268.

Beagles, Bassetts and Beagle/Basset pups. Wood, 723-6671.

14-foot fiberglass boat with trailer, 2 motors, 3 life preservers - \$600. Sherwood, 877-9670 or 877-2897.

12-gauge shotgun (single) - \$20, 16-gauge shotgun (bolt action) - \$35. Cauchon, 722-5936.

## EMPLOYEES RECEIVE AWARDS

Several staff members (pictured at right) have received cash awards for suggestions under the Incentive Awards Program. The recipients and their suggestions are as follows:

Oneda M. Moore, Management Support Division, received \$125 for her suggestion relative to eliminating individual purchase requests for library material which costs less than \$250.

Floyd R. Ward, Fabrication, was awarded \$125 for suggesting a new improved method of making printed circuit transparencies.

Horace W. Jones, Operations Support, received \$200 for suggesting the incorporation of a slide rod into the Tire Response to Vibration Laboratory Test Apparatus to facilitate easier handling of heavy components and effect a man-hour savings.

Raymond D. Burris, Fabrication, earned \$75 for modifying the Upper Cover on the Cordax Precision Measuring Machine in order to facilitate maintenance and repair of the machine.

Arthur M. Crist, Fabrication, was awarded \$150 for his suggestion relative to having Stock Control purchase Eastman Cement in 0.2-gram capsules, the amount needed for individual applications, rather than in 1-ounce bottles.

Philip M. McElveen, Wayne A. Wright, and Wayne Gerdes, Fabrication, shared a \$225 award for their joint suggestion relative to a reliable method of repairing the underground optical tube between Buildings 1298 and 1299 which enables a facility to be quickly and effectively returned to usefulness.

George M. Jurscaga, Fabrication, received \$25 for suggesting increasing safety awareness by designing a safety label for identifying containers which are filled with hazardous materials.

John W. Simpson, Fabrication, earned \$160 for improving the Lower Load Assembly of the Three Parameter Test Facility.

Furman L. Geddings and Carl B. Smith, Instrument Research, shared a \$100 award for their joint suggestion relative to the establishment of a Scheduled Loan Program for instrument loans up to three months.

Clyde C. Lane, Fabrication, received \$25 for the application of a quartz shield to thermocouples for use in very high temperatures.



4 spaces in Parklawn Memorial Pk. - \$650. Doman, 898-6530.

8-foot Hydroplane with 5 hp engine - \$125. Miller, 595-0731.

Share in Windsor Great Park Recreation Association. Armstrong, 595-9273.

Fold-out tent camper built on utility trailer body, sleeps 4 - \$100. Rumsey, 898-7377.

1970 Karmann Ghia, automatic stick shift, radio and heater - \$1850. Taylor, 826-9019.

1964 Chevy II - \$425; sofa bed - \$30; dining table with 4 chairs - \$15, rug with mat - \$15. Chatterjee, 838-4666.

1968 MFG 15-foot Fiberglass runabout, 65 hp Mercury motor, 1964 trailer - \$1395. Clevenson, 596-8319.

Girl's clothing, sizes 4, 5, 6. Garell, 838-3362 after 5.

1961 Chevrolet 1/2-ton pickup truck. Covington, 595-3096.

Fiberglass sail boat with styrofoam flotation, nylon sail. Huffman, 722-8401 after 7 p.m.



Jane Hess (left) presents award to Oneda Moore



Floyd R. Ward



Horace W. Jones



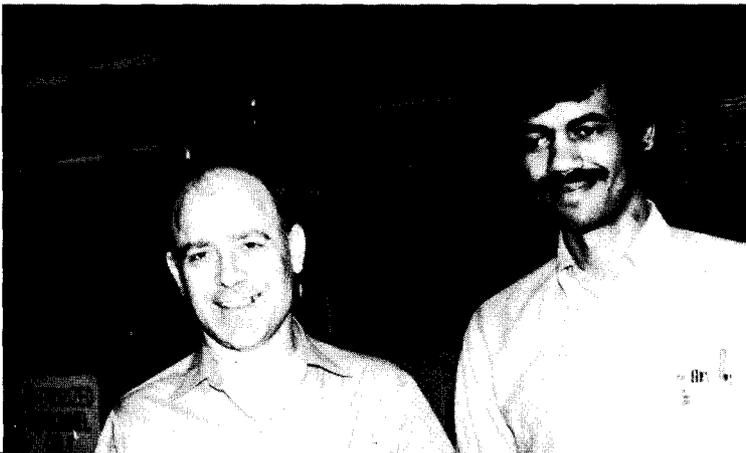
Raymond D. Burris



Arthur M. Grist



P. M. McElveen, G. M. Jurscaga, W. A. Wright, W. Gerdes



John W. Simpson and James R. Davis



Furman L. Geddings



Clyde C. Lane

I REGRET often that I have spoken; never that I have been silent. --Syrus

UNFAITHFULNESS in the keeping of an appointment is an act of clear dishonesty. You may as well borrow a person's money as his time. --Horace Mann

IT IS a woman's business to get married as soon as possible, and a man's to keep unmarried as long as he can. --George Bernard Shaw

A MAN who both spends and saves money is the happiest man, because he has both enjoyments. -Samuel Johnson

## can you solve this problem?

Highly efficient scalp electrodes to optimally record evoked cortical response potentials from human subjects are needed. The technique seeks to provide a clinical tool for diagnosing pathologies of the auditory system. Refer to GLM-41. Contact the T. U. Office, extension 3281, for additional information or if you have a solution.



ALL YOU need in this life is ignorance and confidence, and then Success is sure. --Mark Twain

## cafeteria menu

The following menu will be served in the cafeterias during the week of April 17:

Monday - Split green pea soup, business man's lunch, sauteed scallops, pork chunks over rice, smoked pigs-in-a-pono.

Tuesday - Chicken with rice soup, charbroiled delmonico, rump roast, veal scallopini, chicken chow mein, chili.

Wednesday - Mushroom soup, braised beef tips, meat loaf, seafood platter, chicken croquettes.

Thursday - Vegetable-beef soup, charbroiled T-bone, beef and mushroom egg rolls, enchiladas with Spanish rice, fried chicken.

Friday - Puree of bean soup, hot roast beef sandwich, fried chicken livers, broiled flounder, tuna casserole.

Snack bar - Soup, jumbo burger, hot dogs, fish sandwich, 3-D burger, French fries, apple turnovers. Variations - Corned beef, NASA submarine, chicken salad (Mon.); NASA submarine, pastrami, tuna salad (Tues.); chili, hot roast beef, ham and egg (Wed.); steak, NASA submarine, chicken salad (Thurs.); barbequed pork, corned beef, grilled cheese (Fri.).

The menu for the week of April 24 is as follows:

Monday - Cream of tomato soup, Spanish pot roast, fried clams, country style steak, barbequed chicken.

Tuesday - Chicken vegetable soup, chuckwagon steak, charbroiled strip steak, glazed ham, chicken and dumplings, fish cakes.

Wednesday - New England clam chowder, steamboat round, broiled chicken, fried shrimp, ham croquettes.

Thursday - Crab bisque, beef burgundy, chop suey, fish fry, franks and beans.

Friday - Chicken noodle soup, charbroiled T-bone, chicken cacciatore, pork chops, boiled ham, grilled cheese.

Snack bar - Soup, jumbo burger, hot dogs, fish sandwich, 3-D burger, French fries, apple turnovers. Variations - Pastrami, NASA submarine, ham salad (Mon.); corned beef, chili, salami (Tues.); NASA submarine, ham and cheese club, hot roast beef (Wed.); steak, pastrami, grilled cheese (Thurs.); NASA submarine, corned beef (Fri.).

## POLICY CHANGES ANNOUNCED

The Office of Federal Employees' Compensation (OFEC) has announced a major change in policy concerning the medical care program for injured Federal employees. A Federal worker who is injured on the job will now be permitted to make a free initial choice of physicians to render necessary medical care provided there is no United States hospital or clinic nearby.

The Federal Employees' Compensation Act (FECA) is a workmen's compensation law that provides benefits to civilian employees of the United States for disability or death due to personal injuries sustained while in the performance of duty.

Until recently, there was no free choice of physicians except in emergency situations. An injured employee was required to use Government medical facilities or private physicians who were designated or approved by the OFEC.

The policy change means, in effect, that an injured employee will be given the right to initial selection of a local qualified physician or hospital of his choice for medical examination and treatment subject to the limitations that



**BASKETBALL CHAMPS:** Members of the ACD Championship Basketball Team are (from left): kneeling - Dennis Cannon and Weldon Staton. Standing - James Harris, General Manager, Bill Wilkins, Jim Ward, Lane Kelly, Jim Dieudonne, Greg Condon, Ron Cheever, Titus Harrison, player-coach, and Steve Park.

## ACD WIN CHAMPIONSHIP

ACD won the NASA Basketball Championship with an A Division regular season record of 16 wins and only 1 loss. The league was divided into three divisions - A, B, and C.

In regular season play, ACD's only loss was at the hands of the B Division regular season winners, the Beavers. The C Division winners were the Alchemists.

A post season tournament was held in which the first and second place teams in each division were entered along with two remaining at large teams. The at large teams were entered based on the best overall records, excluding the top two teams in each division.

The teams entered into tournament play were ACD, A Division winners; Knads, A Division, second place; Beavers, B Division winners; Netnuts, B Division, second place; Alchemist, C Division winners; Ballers, C Division, second place; and the Basketballs and Charlie Brown's All Stars as the at large teams.

The three-day tournament ended when ACD defeated the Beavers in the championship game 77-70. Consolation honors went to the Knads as they were victors over the Netnuts.



(1) United States Medical Officers and hospitals must be used if available and practicable, and (2) the injury is sustained by accident.

The OFEC noted that the new medical care policy broadens the remedial nature of the Federal compensation law, and is in line with the present trend in workmen's compensation of providing a free choice of physicians and hospitals.

Thanks to the provisions of PL 92-187 approved December 15, 1971, the same benefits and requirements for benefits will apply to married men and women under the Federal Employees' Compensation Act (FECA).

Public Law 92-187 provides for equality of treatment for all Federal employees. Its effect on the FECA is to eliminate dependency requirements heretofore applied when benefits were claimed by or because of a husband. Therefore, an injured married female employee may claim additional, or augmented compensation, if her husband is living with her. Furthermore, the husband is entitled to compensation in the event of his wife's employment related death providing he was living with her at the time of her death.

# Personnel Profiles

By

Allan C. Hanrahan



## WATCH THAT FIRST STEP

You're in an airplane two miles above the earth; you step out into space and what does it feel like?

"It's peaceful up there, and awful quiet. You're in another world - all in your own world. There's no falling sensation - just a floating feeling or a feeling of flying."



That's how James Stanford "Stan" Hicks described sport parachuting, or skydiving as it's commonly called. Having made approximately 1620 jumps, Stan is certainly qualified to discuss the sport and when asked to explain his first jump he answered, "Back in July of '66 I went one Saturday to watch Charlie Bradshaw and Hugh Bergeron jump." (Both are Langley employees and Bergeron has previously been mentioned in the Researcher for his parachuting attainments). "That same weekend I made my first jump."

When asked what was the feeling he laughed, "I was too scared to notice how it felt." But when asked about the risk he answered, "It's really a safe sport. Of course, you rely on yourself - yourself and your equipment. Most deaths (there are about 15-20 each year) are caused by neglect or panic. Almost all are preventable. In about one out of 10,000 jumps the main chute doesn't open, but you have the reserve and that's ten times as reliable as your 'main!'"

## DANCE PLANNED FOR APRIL 21

Due to employee opposition to the Happy Hour type operation for a dance, the Activities Association is changing the format of the April 21 dance featuring the Pink Champagne.

The dance will be a traditional type dance with music being furnished by the all girl band from 9 p.m. until 1 a.m. Admission will be three dollars per couple, not including setups.

Tickets are now on sale and reservations are being accepted at the Activities Building.

The Happy Hour normally scheduled for this date will not be held because of the dance. The next Happy Hour will be held on May 5 and will feature Marshall Law.

## COMING EVENTS

The following events are scheduled to take place in the Activities Building during the next two weeks:

April 15 - Building open from 10 a.m. to 6 p.m. Basketball, ping-pong, badminton, and food and drinks available.

April 16 - Bridge Club 1 to 6 p.m.

April 17 - Building open from 3:30 to 10 p.m.

April 18 - Camera Club, Bridge Club, Badminton Club

April 19 - Building open from 3:30 to 10 p.m.

April 20 - ASNDT Dinner

April 21 - Dance from 9 p.m. to 1 a.m.

April 22 - Building open 10 a.m. to 4:30 p.m.  
ACD Party 5:30 p.m.

April 23 - Building open 1 to 6 p.m.

April 24 - Building open 3:30 p.m. to 10 p.m.

April 25 - Coin Club, Model Club, Badminton Club

April 26 - Official function (building closed)

April 27 - Bingo at 8 p.m.

April 28 - Official function (building closed)

April 29 - Building open 10 a.m. to 5 p.m.

April 30 - Building open 1 to 6 p.m.



Stan, an Engineering Technician in the Materials Processing and Development Section of the Fabrication Division, returned to the Center in February after almost four years in the Army. Most of that time was spent with the competition unit of the Golden Knights - the U.S. Army parachuting demonstration and competition group. Last year in competition he placed third in the National Championships and then went on to better that by placing second in the Pan American Championships held in Mexico.

We should add here that the competition consists of accuracy and style; the former from a jump of 2500 feet and the latter from 6600 feet.

Stan was born in Selma, North Carolina, twenty-eight years ago and lived on a farm near there until he was fifteen, when his family moved to Hampton. A graduate of Hampton High School and the NASA Apprentice School (Class of '66), he is unmarried, enjoys snow skiing, water skiing and flying. A commercial-rated flight instructor, he is working toward his multi-engine and instrument ratings. Another future goal is to win one of the five berths on the National Parachuting Team in late June and compete in the World Championship Competition in August in Oklahoma.

We wish him success.

## Questions and Answers

**Q.** The purchase of Savings Bonds is strongly encouraged at the Center but no provisions are made for the cashing of these bonds. The Post Office, Credit Union, Savings and Loan Associations and banks (unless you have an established account) will not cash Savings Bonds. Are they not legal tender fully supported by the U.S. Government? One advantage of buying bonds was to use them in traveling as emergency funds - but if you can't cash them, they are useless in traveling. What provisions are there at Langley for cashing Savings Bonds?

**A.** According to Edward A. Howe, Chief of Financial Management Division, there are three questions set forth here. In answer to the first, United States Savings Bonds are not legal tender - only money is legal tender.

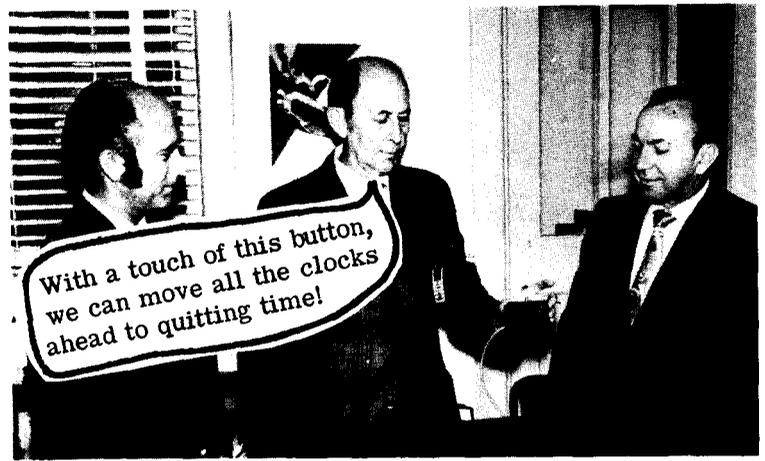
In regard to provisions for cashing Savings Bonds; they may be cashed at any Federal Reserve Bank or member bank. At Langley we are advised by the Langley banking facility (United Virginia Bank - Citizens and Marine) that they will be pleased to cash bonds for any of our employees, whether or not they have an account there, at any time upon presentation of proper identification (and signing them in their presence).

In answer to the last question, Savings Bonds should not be used while traveling in lieu of carrying money or travelers checks but it is wise to carry some in case of an "emergency." Issuing agents for United States Savings Bonds are also paying agents. Under the applicable status (3) U.S.C. 757c(i), a paying agent must bear the loss for cashing a bond for the wrong person unless the Secretary of the Treasury is able to determine, from affirmative evidence, that the loss was not due to fault or negligence on the part of the agent.

It is known that there are crime rings dealing in stolen and forged savings bonds. These criminals are experienced in the techniques of providing fraudulent identification. It is very important for the owner of the bond to remember that he is always protected. If his bonds are lost, stolen or destroyed the Treasury Department will replace them. The Treasury Department has provided a guide to Paying Agents for cashing United States Savings Bonds and Notes. If an agent follows this guide he will be able to show by affirmative evidence that the loss was not due to his fault or negligence.

In brief summary form, this guide sets forth three kinds of identification - as a customer, by known persons, and by documents. Not more than \$1,000 may be paid at any one

## words in peoples' mouths



time on documentary identification alone. In brief, the documents must contain both a physical description and a validated signature, i.e., NASA badges and Virginia State Motor Vehicle Operator's licenses meet these requirements and are acceptable identification. There are 10 different acceptable documents and 10 unacceptable documents. The 10 unacceptable documents are: Social Security cards; automobile registration certificates; birth and marriage certificates; credit cards or plates; health and other insurance policy holder identification cards; ID cards purchased from commercial ID businesses; organization, union, professional, etc., membership and identification cards; passbook such as from a bank; selective service classification cards; and voter registration cards.

**Q.** Under Instruction 1400.4 of the Langley Research Center Management Manual, the rate of dollar savings, under the Cost Reduction Program, is (1) Administrative - \$5 per hour, (2) Technical - \$6 per hour and (3) Professional - \$8 per hour. Has that figure been revised since the instruction was issued in December 1970, especially since there have been several raises for employees since then? Also, what is the rate for WG's?

**A.** According to Jess G. Ross, Chief of Management Support Division, the new rates based on average salary are as follows: Administrative - \$6, Technical - \$7, and Professional - \$9. These rates are based on average salary as of February 22, 1972, and will be recalculated after each pay raise. WG's are considered technical for the purposes of cost reduction. Instruction 1400.4 is being revised and the new rates will be included.

# Langley Researcher

VOLUME 11, NUMBER 8

LANGLEY RESEARCH CENTER

APRIL 28, 1972

## LANDING AND LAUNCH SITES FOR SHUTTLE SELECTED

James C. Fletcher, NASA Administrator, has announced the selection of the Kennedy Space Center in Florida and Vandenberg Air Force Base in California as the sites from which the Space Shuttle will be operated.

The initial launch and landing site will be at the Kennedy Space Center. This site will be used for research and development launches, expected to begin in 1978, and for all operational flights launched into easterly orbits. Facilities for all Shuttle users at KSC will be provided by NASA, largely through modifications of existing facilities built for the Apollo and other programs.

Toward the end of the decade it is planned that a second operational site will be phased in at Vandenberg Air Force Base for Shuttle flights requiring high inclination orbits. The basic Shuttle facilities required at Vandenberg are planned to be provided by the Department of Defense.

These decisions, which have been concurred in by the Department of Defense, were reached by the Administrator of NASA after nearly a year of study by a Site Review Board chaired by Dr. Floyd L. Thompson, former Director of Langley Research Center.

Dr. Fletcher stated that the Board's studies of all alternatives clearly showed that the Kennedy-Vandenberg combination has cost, operational, and safety advantages over any possible single site or any other pair of sites in the United States.

The Space Shuttle will be a manned reusable space vehicle which will carry out various space missions in Earth orbit. It will consist of a manned, reusable orbiter powered by three large liquid rocket engines mounted "piggy back" on a large expendable propellant tank plus two large recoverable solid propellant rockets. The orbiter, about the size of a DC-9 jet liner, will be piloted by two men in space who will fly it back to Earth and land it like an airplane.



## BOND DRIVE STARTS AT LANGLEY MAY 1

The annual U.S. Savings Bonds drive will be conducted at the Center May 1 through June 9. NASA Administrator James C. Fletcher has appointed Director Edgar M. Cortright chairman of the Center's drive. Cortright will be assisted in this annual effort by Helen B. Talbott, Head of Accounting Systems, Financial Management Division.

During the drive each staff member will be contacted by a representative of his division and given an opportunity to subscribe to bonds or to increase his present allotment.

At the end of the drive two drawings will be held - one for new subscribers and one for those who increased their allotments. The winner of each drawing will receive a \$25 Savings Bond from the Activities Association.

Mrs. Talbott stated that the Center's goal this year is 90 per cent participation or better. The Center's current percentage of participation is 83. If the staff reaches the 90 per cent mark, the Center will receive the Treasury Department's coveted Minuteman Flag.

Buying U.S. Savings Bonds is not only a patriotic act but there's something in it for you - Savings Bonds now pay 5-1/2% interest when held to maturity of 5 years, 10 months.



**BOND DRIVE LEADERS:** Director Edgar M. Cortright, Chairman of the Center's annual Savings Bonds drive, discusses drive plans with Helen B. Talbott, Vice Chairman of the drive.

## BOND MOVIE SCHEDULE

"The Winning Hand," a 10-minute bond movie featuring Jack Klugman and Tony Randall, stars of the "Odd Couple" TV show, will be shown during the bond drive.

East area employees may see the movie on May 12 from 11 a.m. to 1:30 p.m. in the Project Room, Building 587.

The movie will be shown to West Area employees on May 11 from 11 a.m. to 11:30 p.m. in the Private Dining Room.

# Happenings

**DAYLIGHT TIME.** . .Staff members are reminded that in accordance with the Daylight Saving Time Bill, all clocks in Virginia will be moved forward one hour at 2 a.m. on Sunday, April 30. Daylight Saving Time will be observed for a period of six months.

**NEW ARRIVAL.** . .Word has been received at the Center that Dianne Puckette, formerly of Office of Public Affairs, became the mother of a seven-pound, twelve-ounce son, Jeffrey Scott, on April 15.

**TENNIS CLUB.** . .The LRC Tennis Club's ladder tournaments, for both men and women, will be held the weekend of May 13 and 14. The tournaments are single elimination with matches being determined by the best two out of three standard sets. Entry fee is one can of championship quality tennis balls. Persons wishing to join the tennis club should contact Bill Compton, MS 189. Membership dues are \$2.

**NASA PHOTOS.** . .A number of Langley photographs are featured in the April issue of "Materials Research and Standards." The cover color photo shows a test of a Space Shuttle coated ceramic heat-shield specimen in the Entry Structures Facility.

**CORRECTION.** . .In the story in the last issue on suggestion awards, we neglected to point out the James R. Davis, Operations Support Division, shared a \$320 award with John W. Simpson, Fabrication, for a suggestion relative to improving the Lower Load Assembly of the Three Parameter Test Facility.

**ACHIEVEMENT AWARD.** . .Richard McCurdy, Associate Administrator for Organization and Management, recently accepted, on NASA's behalf, the Small Business Administration's Section 8(a) Achievement Award for fiscal year 1971. This award was established to provide due recognition to those government agencies which have diligently applied themselves to the Section 8(a) program for assisting minority business enterprise, and thereby contributing to



**SCIENCE PROGRAM:** A two-week "total impact science program" was recently conducted at Y. H. Thomas Junior High School by Robert Helton, Visitor Center, and George Pope and Ransom Ratter, Educational Specialists from NASA Headquarters. Over 300 students participated in the program. Shown looking at the Apollo Command Module and the Lunar Module are (from left): James A. A. Hill, Principal of Y. H. Thomas School; Pope, Ruby Holmes, teacher; and Patty Whitaker and Dena Manning, students.

## MEET YOUR EEO COUNSELORS



Dona L. Cauchon

Dona L. Cauchon is an Aerospace Engineer in the Earth Environments Section of the Space Technology Division.

A native of Dover, New Hampshire, Cauchon received his B.S. degree in Mechanical Engineering in 1958, graduating magna cum laude, from the University of New Hampshire and his M.S. degree in 1962 from Northeastern University. He served in the U.S. Army from 1952 to 1954.

Cauchon joined the Center staff in July 1962 and was assigned to the Project Fire Office. He transferred to the MORL Office in 1967 and was assigned to his present position in 1969.

Cauchon hopes to contribute to the structuring of a broader based EEO program at the Center through the development of expanded participation in community action programs. He teaches in the Newport News OEO Adult Education Program which enables individuals to achieve certification equivalent to a high school diploma.

When asked of his hobbies, he replied with a grin, "Eight kids, art, and guitar (not professional by a long shot)."

He is married to the former Adrienne Dostie and their eight children are: James 14, Barry 13, Thomas 12, Laurie 11, Alan 10, Kimberly 9, Christian 7, and Martin 4.



the successful accomplishment of established program goals.

**CHORAL SOCIETY.** . .Approximately 20 staff members will participate in the Peninsula Choral Society's presentation of Dave Brubeck's "The Light in the Wilderness," at Hampton High School at 8:15 p.m. on May 8. Donald E. Golden, organist, and a jazz ensemble with percussion will accompany the Choral Society. Charles H. Lowery will be guest baritone soloist and George W. Bayley will direct the performance. Tickets may be purchased at the door. Admission for adults will be \$2 and 50 cents for students or enlisted military personnel.

Langley Researcher, an official publication of the Langley Research Center, National Aeronautics and Space Administration, Hampton, Virginia 23365, is published biweekly in the interest of its employees. Address contributions to the Editor, Mail Stop 154, telephone 3116.

Editor.....Ruth Angel Verell  
Staff Photographer.....Bob Nye  
Reporters.....Langley Employees

The privilege of advertising articles in this publication is restricted to employees of Langley Research Center. Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.



**YOUTH SCIENCE CONGRESS:** Nineteen students representing a five-state area attended the National Science Youth Congress held at the Center this month. Shown with the students are Langley advisers, NASA Headquarters officials, and members of the National Science Teachers' Association.

## LANGLEY HOSTS SCIENCE GROUP

Langley Research Center and the National Science Teachers' Association hosted a three-day conference for 19 science-oriented high school students at the Center April 12-14.

In format, the congress followed the national technical societies with the young scientists presenting their individual research papers before a group of Center scientists and representatives of NSTA and NASA Headquarters. The purpose of the conference was to stimulate interest in science at the high school level. The participants came from the states of Virginia, West Virginia, North Carolina, South Carolina, and Kentucky.

A group of Langley scientists acted as consultants to the individual students during their stay at Langley, advising them on their research papers and providing an opportunity for each student to visit research laboratories at Langley in the area of their individual interests.

A dinner was held in the dining room of the cafeteria each evening. The first evening, the group heard a talk by Dr. John E. Duberg, Associate Director, and the second evening they heard Astronaut Donn Eisele. A "rap session" on science and technology followed Eisele's talk with students and adult advisers participating. Prizes were not awarded inasmuch as the trip to Langley was a reward each student had previously received for their respective papers. Each participant did receive a medallion at the end of the conference as a memento of the visit to Langley. The medallions were provided by NSTA.

Examples of the papers presented were: "Modulation Techniques Using a Grid Controlled Helium-Neon Laser", "The Cellular Computer", "Microbiology of Milk", and "Graphing a Complex Equation in Three Dimensions."

This was the eighth year Langley has played host to the National Youth Science Congress with the National Science Teachers' Associations. Harold Mehrens and Robert Helton of the Visitor Center staff were in charge of arrangements for the Center.

## EMPLOYEE ASSISTANCE SERVICE

As a result of the forthcoming reduction in force at Langley Research Center, the Personnel Division is establishing an Employee Assistance Service. This office will aid those employees affected by the reduction in force in locating other suitable employment. Priority will be given to those employees who will be separated or reduced by two or more grades.

The Employee Assistance Service will be located in the East Area in Building 584, Room 211. Operations will begin on May 1 and the office will be open from 8 a.m. to 4:30 p.m., Monday through Friday. Counselors will be available to assist employees with various outplacement services including the locating, identifying, contacting, and following up on potential job openings; setting up job interviews with Government and industry representatives; referrals; advising employees of their rights regarding outplacement, unemployment insurance, and reemployment with NASA and other Government agencies; and registration with various outplacement services. These services include the Civil Service Commission's Centralized Interagency Information Centers, the NASA Outplacement Program, and the Virginia Employment Service.

Center employees, who are not being affected by the reduction in force, can substantially help their fellow employees by advising the Employee Assistance Service of any prospective employment opportunities. Personal contacts with counterparts in both Government and industry can lead to potential jobs, as can contacts with professional societies, service clubs, civic groups, and the like. Employees should direct any pertinent information to the Employee Assistance Service by calling extension 3991. Any such job openings will be promptly investigated.

## AIAA TO HEAR WHITEHURST



G. William Whitehurst

Congressman G. William Whitehurst will be guest speaker at the meeting of the Hampton Roads Section of the American Institute of Aeronautics and Astronautics on May 12 at the Hispaniola Restaurant in Hampton.

A native of Norfolk, Congressman Whitehurst graduated from Washington and Lee University in 1950 with a B.A. degree in History. In 1951 he received his M.A. in History from the University of Virginia. He joined the Department of History

at Old Dominion University in 1950, taking a year's leave of absence in 1956-57 for further graduate study at West Virginia University. He received his Doctor of Philosophy degree in American Diplomatic History from West Virginia in 1962. In 1963 he was appointed Dean of Students at Old Dominion and held that position until he was elected to the 91st Congress in 1968.

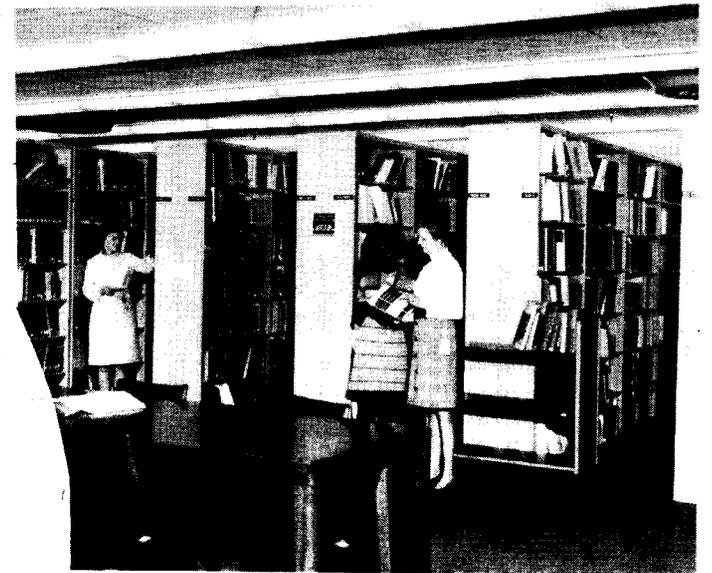
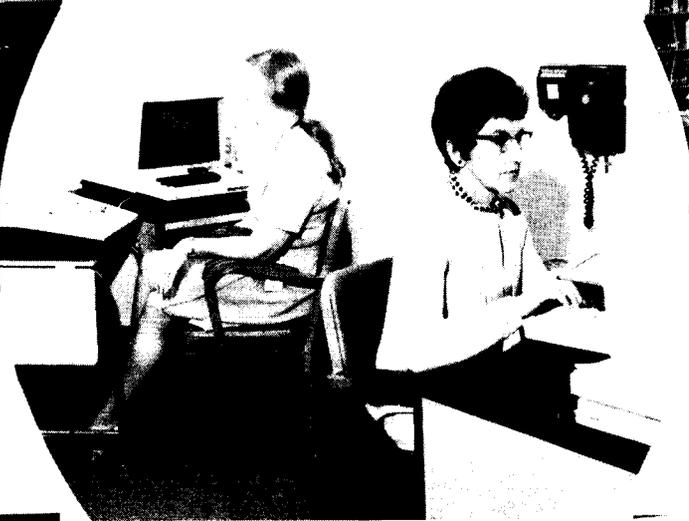
The meeting will be preceded by a social hour at 6:30 p.m., followed by dinner at 7:30 and the program at 8:30. For reservations call Bill Woods, 2483, or Dewey Wornom, 2846.

# PICTORIAL VIEW OF NEW LIBRARY FACILITIES; MAY DEDICATION PLANNED

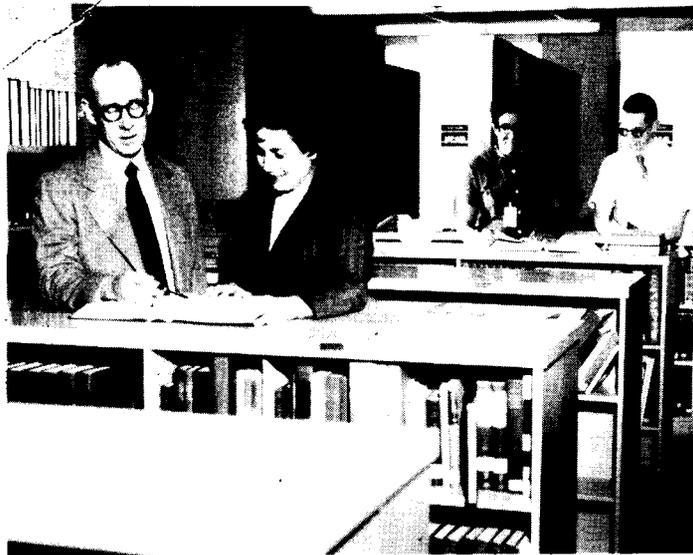


Nadine Batkins (above) helps Larry Brumfield identify a reference while Willie Curtis takes a request by phone.

Sue Seward and Betty Pope (below) using RECON (Remote Console) for reference searches.



Doris Crumpler, Edith McIntrye, and Jane Wagenfeld (above) fill requests from stacks in reading room.



In the reference section of the reading room are shown (above): Phil Weatherwax, discussing a problem with Oneda Moore and Sandra Blow assisting Bill Suit.

Dorothy Kemp and Jean Elliott (below) discuss report subject content.



Frances Brnham (photo below) writes



Marie Tuttle (above) discusses a subject request with Dr. C. S. R. Rao.



Library patrons (above) using the reading room are (from left): T. A. Byrdsong, Mike Ellis, and Harvey Melfi. Assisting them are Juanita Haskins and Nancy Johnson.

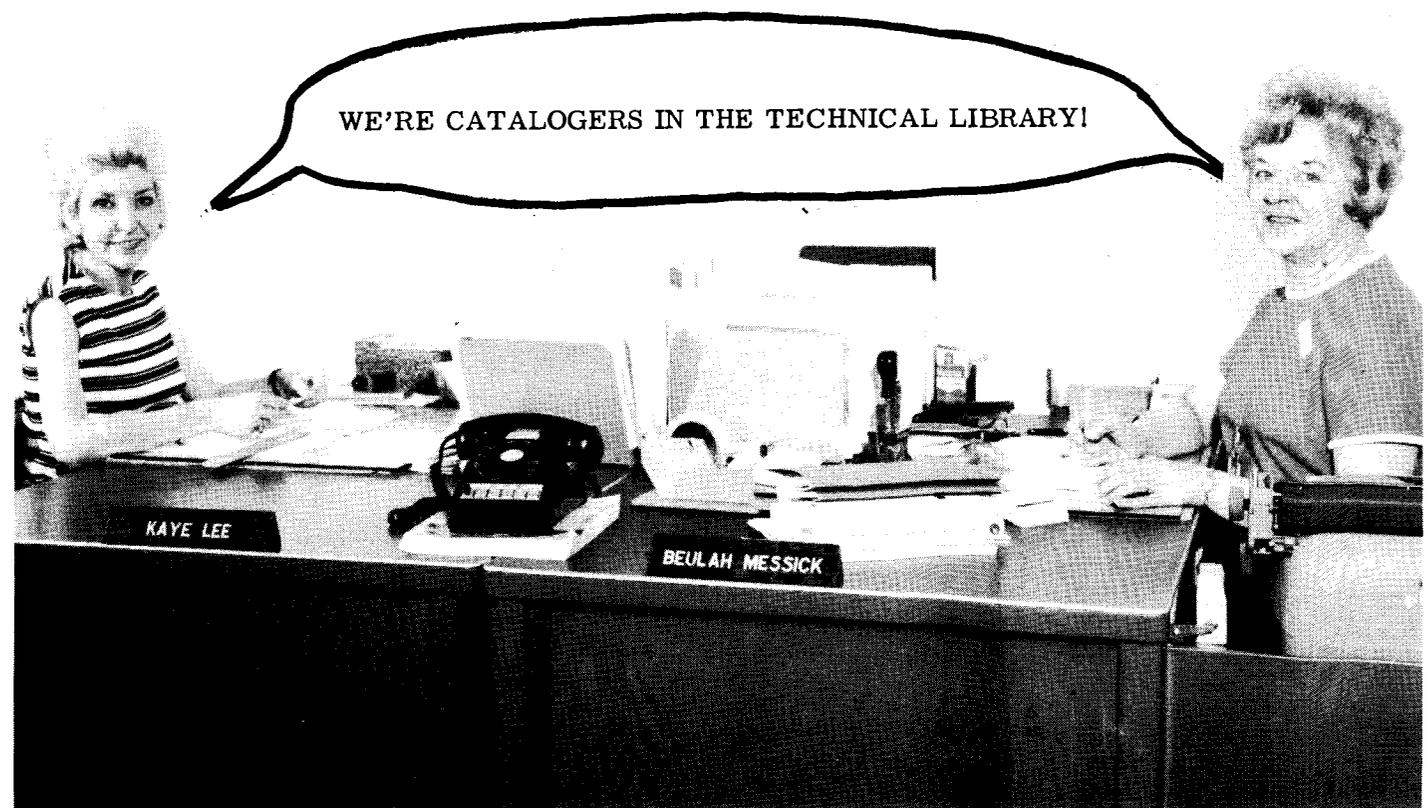
FRANCES BLANKMAN (below) waits to talk with Patricia McCausland, who is taking a customer telephone request.



Stanley Shields, Mary Jenkins, and Emmer Smith (above) pull engineering drawings and microfilm to fill user requests.



Jane Hess (above) reviews progress report with coop student Carolyn Floyd (left) of Bennett College.





**RADIO PROGRAM:** During the flight of Apollo 16, radio station WRVA in Richmond provided its listeners with an opportunity to learn more about that particular flight and about NASA's programs in general by having them call questions into this Center where responses were provided spontaneously on the air by Axel T. Mattson, Assistant Director for Center Development, and Astronaut Donn Eisele, Technical Assistant (Manned Flight) in Space Systems Division. Mattson and Eisele are shown as they participated in the program "Open for Opinion."

## SWAP AND SHOP

### LOST

Several books from personal library. Borrowers please contact M. M. Savedge, 2443.

### FOUND

Two pipes in Room 225, Building 1219. Suit, 3375.

### WANTED

Ride or driving combination from Denbigh High School area to W.A. on 7:30 shift. Burner, 3234.

Rentals for members of the Summer Faculty Fellowship Programs, June 10 - August 20 or 27. Witherspoon, 2517.

### FOR RENT

New 3-bedroom town house, 1 1/2 baths, eat-in kitchen, wall-to-wall carpeting, Denbigh area. Miller, 595-0731.

### FOR SALE

Girl's 24-inch bicycle with rear child-carrier - \$15. Teichman, 877-5815.

3.5 hp Chrysler, long-shaft outboard motor; Kawasaki 85 cc trail-bike; Hodaka 90 cc trail-bike. Shaughnessy, 595-2024.

Two aquariums with heaters and extras - 10 gallon - \$20, 3-1/2 gallon - \$7.50; extra long double bookcase bed frame - \$15; step table - \$3; brown metal frame chair - \$4; 2-speed 20-inch floor fan - \$3; 3-speed 12-inch turntable - \$10; new 1970 Ford station wagon divider curtain - \$10; 1965-66 Mustang trailer hitch - \$10; car top carrier - \$2.50. Pendergraft, 596-0538 after 5 p.m.

Walnut living room suite including couch, chair, 2 tables, and coffee table. Armstrong, 595-9273.

Mobjack sailboat and trailer. Dick, 898-5575.

1969 Pontiac Catalina, 4-door vinyl hardtop with air conditioning and power accessories - \$2000; 1967 Pontiac Catalina, 4-door sedan, air conditioning and power brakes and steering - \$1000. Hudson, 874-2317 after 5 p.m.

Motion picture 8mm Revere reel-type camera; Kodak projector, light meter and lights - \$35. Butler, PA2-8454.

## BOWEN ASSIGNED TO HEADQUARTERS

Frederick W. Bowen, Jr., Technical Assistant in the Viking Project Office, is being assigned to NASA Headquarters where he will assume the position of Executive Assistant to the Associate Administrator for Aeronautics and Space Technology. He will work directly for Roy Jackson, Associate Administrator of OAST, and will assist him in the implementation of plans and programs for the advancement of aeronautics and space technology. The appointment will be effective May 1.



Frederick W. Bowen, Jr.

The appointment will be effective May 1.

Bowen is a native of Newport News. He graduated from Newport News High School and received his B.S. degree in Physics from the College of William and Mary in 1964. He joined the Center staff in June 1964 and was assigned to the Plasma Physics Section, Aerophysics Division. In 1967 he transferred to the Research Staff Office and in 1969 he was assigned to the Viking Project Office.

## COMING EVENTS

The following events are scheduled to take place in the Activities Building during the next two weeks:

April 29 - Building open 12 - 5 p.m. ACD picnic 1 p.m.

April 30 - Building open 1 p.m. - 6 p.m.

May 2 - Club Night - badminton and bridge

May 3 - FID Party

May 4 - Mechanical Systems Dinner

May 5 - Happy Hour featuring Marshall Law

May 6 - Building open 10-6 p.m., ASB picnic 12 noon

May 7 - NASA Bridge Group

May 8 - Building open 6 - 10 p.m.

May 9 - Club Night, Badminton, Model, and Bridge

May 10 - 8-Foot Tunnel Party

May 11 - Bingo

## NASA GOLF ASSOCIATION

The NASA Golf Association held its first tournament of the season and Fred Eubank won low gross with 83 and low net. Other winners in the first flight were D. Bridges with 88-73, Ray Goodman with 89-74, and S. Gula with 88-74. Winners in the second flight were Tom Carpini with 90-72; B. Keller 91-72, J. Weilmuenster 96-73, and J. Haas 94-73. Third flight winners were W. Miller with 97-68, Doc Gammage 97-70, T. Steele 101-71, and C. Diacont 109-76.

The association will play a match with the Navy Yard on May 12 at the Langley course. Entries should be sent to Bob Seals, M3 160, by May 4.

21-inch G.E. black and white TV console - \$45. McDaniel, 838-2314.

Sofa, walnut coffee table, TV. LaPrade, 595-0624.

Light oak bedroom suite including vanity, dresser, bed, springs, orthopedic mattress, vanity stool, chair - \$100; cast iron wood/coal cooking stove with one ton of coal - \$50; large Siegler space oil burner - \$150; mahogany Sylvania 18-inch black and white TV - \$50. Helsel, 868-6178.

# Personnel Profiles

By

Allan C. Hanrahan



## ONE MAN HELPING ANOTHER

In this issue, dear readers, Personnel Profiles is pleased to present two for the price of one: Solomon Williams, the man on the right in the picture, who proves the old adage, "you're never too old to learn," and Beryl R. Abicht who unpretentiously (maybe even unawaredly) believes, as did Ralph Waldo Emerson: "Knowledge exists to be imparted." Emerson also wrote, "The secret of education lies in respecting the pupil." Beryl Abicht exhibited that frame of mind when he discussed, very modestly, the fact that he had taught Solomon Williams how to read.



True, Williams has only progressed a little past the first grade level but for a man forty-nine years old (an age when many folks simply refuse to learn anything new) it's quite an accomplishment.

"I really appreciate what Mr. Abicht did - the time he's spent," said Williams.

"We were only able to spend minutes a day - with interruptions," said Abicht, "but now we're spending forty-five to sixty uninterrupted minutes a day so he'll make even more progress."

Abicht and Williams both work in the Fabrication Division; Abicht as an Engineering Technician in the Materials Processing and Development Section and Williams as a Sheet Metal Helper in the Fabrication Shop Section.

Williams, born and raised in Hampton where he resides with his wife, Clementine, came to work at the Center in July 1942, in the janitorial service. He takes life easy after work "simply working in and around the house," he told us. Of course, there are also the reading lessons.

Abicht, fifty-one, a native of Marietta, Ohio, where he graduated from high school, came to the Center in 1945 after serving five years in the Air Force. He and his wife, Helen, are the parents of a schoolteacher-daughter, Sandra (teaching must run in the family) and a college student-son, Jim.

Beryl admits to being a gem and mineral enthusiast and after further questioning divulged an interest in woodwork-

## cafeteria menu

The following menu will be served in the cafeterias during the week of May 1:

Monday - French onion soup, business man's lunch, corned beef and cabbage, Chinese egg rolls, spaghetti with meat balls.

Tuesday - Corn chowder, charbroiled T-bone, roast of beef, breaded veal cutlet, meat loaf, enchiladas.

Wednesday - Oyster stew, beef stroganoff, stuffed green peppers, broiled flounder, cornish hen, beef and macaroni.

Thursday - Chickengumbo soup, Salisbury steak, broiled liver and onions, fish fry, chicken croquettes.

Friday - Bean soup, baked pig Hawaiian, barbequed pork sandwich, charbroiled delmonico steak, fried oysters, chicken cacciatore, franks and beans.

Snack bar - Soup, jumbo burger, hot dogs, fish sandwich, 3-D burger, French fries, apple turnovers. Variations - Corned beef, NASA submarine, ham salad (Mon.); chili, pastrami, NASA submarine (Tues.); hot roast beef, ham and cheese club, salami (Wed.); corned beef, ham and egg, barbequed pork (Thurs.); NASA submarine, grilled cheese, chicken salad (Fri.)

The menu for the week of May 8 is as follows:

Monday - Cream of celery soup, Swiss steak, ham steak, chop suey, chili con carne.

Tuesday - Fisherman's chowder, steamboat round, beef and mushroom egg rolls, fried shrimp, baked lasagna.

Wednesday - Vegetable beef soup, broiled lobster tail, charbroiled ribeye, chicken and dumplings, tuna casserole.

Thursday - Chicken noodle soup, country steak, pork chops, hot turkey, boiled ham, macaroni and wieners.

Friday - Cream of potato soup, business man's lunch, fried chicken, cordon bleu, grilled cheese sandwich.

Snack bar - Soup, jumbo burger, hot dogs, fish sandwich, 3-D burger, French fries, apple turnovers. Variations - Pastrami, chili, NASA submarine (Mon.); salami, NASA submarine, tuna salad (Tues.); corned beef, ham and cheese club, chicken salad (Wed.); NASA submarine, pastrami, ham and egg (Thurs.); hot roast beef, ham salad, corned beef (Fri.).



A GENTLEMAN is a man who can disagree without being disagreeable.

WHAT we call progress is the exchange of one nuisance for another nuisance. --Havelock Ellis

A POLITICIAN is an animal who can sit on a fence and yet keep both ears to the ground.



ing as well as involvement in scouting and work in his church, Hilton Christian.

With these interests we wondered where he found time to become interested in the Peninsula Literacy Council wherefrom came the instruction in teaching others to read. He hastened to inform us that there are now eleven other men at the Center teaching (on a one-to-one basis) another person to read.

You know, it says something for this country that the same government that uses the knowledge of persons possessing advanced degrees in the most exotic of sciences also makes use of the qualities and abilities of men who have only rudimentary skills in reading.

## Questions and Answers

**Q.** In the April 14 issue of Langley Researcher, part of the answer to one of the questions mentioned 10 different acceptable documents for cashing Savings Bonds. What are these and are they required in addition to being a customer?

**A.** The 10 different acceptable documents for cashing Savings Bonds were not listed because in most cases they are not applicable to Center employees. The two documents most applicable to NASA employees were listed and they are: NASA identification badge, which has been issued to every employee, and the Virginia State Motor Vehicle operator's license. The other eight are: Craft or trade license issued by State or local government, e.g. to barber, cab driver, electrician, etc.; Selective Service registration certificate; Armed Forces identification card; Uniformed Services Identification and Privilege Card; Armed Forces discharge or separation document; United States passport; employer identification card, including those of state and local governmental agencies; and Federal Emergency Assignee Identification Card (Civil Defense). The customer identification is sufficient provided the customer's name has been on an account for at least 6 months and his signature on request for payment compares favorably with signature on file.

**Q.** Has the Hampton Police Department been requested to provide a traffic director for the intersection of Armistead Avenue, Wythe Creek Road and Semple Farm Road between 7 a.m. and 8:30 a.m. and between 3:15 p.m. and 5 p.m.? If so, what was their response? If not, why?

**A.** To specifically answer the question, Glen Ford, Management Support Division, says no, the City of Hampton Police Department has not been contacted to provide a traffic director at this point. Specifically because, according to the rules of traffic safety, traffic direction by a policeman should be performed only in emergencies. However, to provide the questioner with some background information, Center personnel have on numerous occasions met with city and state officials to discuss the traffic flow problem at this intersection. It has been concluded that the solution to the traffic flow here can be resolved only by redesigning the intersection. The Hampton Director of Public Works has included this in his long-range plan.

■■■■■■■■

MAN does not live by words alone, despite the fact that sometimes he has to eat them. --Adlai Stevenson



**SECRETARIES WEEK:** Enjoying cake and coffee at the Secretaries Week celebration are (from left): Edith Steele, Judy Neil, and Myrtle Yates.

## 27 PAY DAYS THIS YEAR

Now that you have filed your Federal income tax return, the Financial Management Division wishes to call to your attention that there will be 27 pay checks issued in this calendar tax year 1972. Therefore, your taxable income will be almost 4% higher than normal.

The pay due on January 1, 1973, will be paid on December 29, 1972. This is due to Center policy to pay on the Friday before a payday Monday which is a holiday. If we deviated from established policy and paid on the day after the holiday (Jan. 2, 1972), there would be 27 pay days in 1973. Center officials believe it will probably be more advantageous to have the 27 pay days in 1972 rather than 1973 when perhaps many will be receiving a higher income.

There will not be another 27 pay day year until 1983, providing we remain on the present biweekly Monday schedule.

■■■■■■■■

**GLEN MILLER DANCE:** The Activities Association has obtained Glen Miller's band for a dance at the Activities Building on May 24 from 9 p.m. until 1 a.m. Further details will be announced later.

**OPTIMISM:** A cheerful frame of mind that enables a tea kettle to sing though in hot water up to its nose.

# Langley Researcher

VOLUME 11, NUMBER 9

LANGLEY RESEARCH CENTER

MAY 12, 1972



**GLENN MILLER DANCE:** The world famous Glenn Miller Orchestra, under the direction of Buddy DeFranco (above), will play for a dance at the Activities Building from 8:30 p.m. to 12:30 a.m. on Wednesday, May 24. Reservations are necessary and can be made with purchase of ticket at the Activities Building. Tickets are on sale now for \$8 per couple, including set-ups. Only 160 tickets will be sold, so plan now to attend and get your tickets soon.

## SMALL BUSINESS WEEK

In keeping with tradition, the President has proclaimed the week of May 14 as Small Business Week. The annual National Small Business Conference will be held in Washington, D.C., at the Kennedy Center for the Performing Arts.

The purpose of Small Business Week is to recognize the more than five million small business firms in the United States who supply much of the goods and services to our communities and provide a variety of job opportunities to local citizens. Theme of the Small Business Week is "Small Business Opportunities under Today's National Priorities".

The Langley Research Center has a very active Small Business Program. Langley figures indicate that small business firms received awards of \$17,441,00 for the first three quarters of FY 72 versus \$13,407,000 for

(Continued on page 4)

## SHARE IN AMERICA



### BUY SAVINGS BONDS

## TRANSPO 72 STARTS MAY 27 AT DULLES

Transpo 72, the United States International Transportation Exposition, will be held May 27 through June 4 at Dulles International Airport near Washington, D.C.

Authorized by Congress and produced and managed by the Department of Transportation, the Exposition promises to be the biggest and best transportation show that has ever been held.

Langley Research Center staff members, in conjunction with NASA Headquarters and the Federal Aviation Administration, were responsible for building the complete NASA/FAA exhibit which will be housed in Building A at Dulles Airport.

The NASA theme is "Aviation Serves the Community and the Nation." Exhibits will include the following: Passenger Growth, Better Planning Means Better Airports, Congestion, Ecology with Technology, Quieter Neighborhoods Through Flight Procedures, Toward Quieter Skies, For Safer Landings, Toward Cleaner Skies, Long Haul Aircraft for the 1980's, New Vehicle Technology.

Also General Aviation and the Private Pilot, For Short Trips Too, Navigation and Communications, Service is Our

(Continued on page 4)



TRANSPO 72: Looking over one of the many NASA/FAA displays which will be shown at Transpo 72 are (from left): Sam Morello, Jean LaNeave, and Lee Person.

# Happenings

**NEW HEIR.** . . Weighing in at seven pounds, three ounces on March 27 was Christopher John, son of Peter Mumola, Environmental and Space Sciences Division.

**NOTES OF THANKS.** . . Dr. Stuart L. Seaton, who retired April 28, wishes to thank his co-workers in Instrument Research and his many friends for the gifts and party given him on the occasion of his retirement. . . Gordon Mercer, Environmental and Space Sciences, who is recuperating at his home following a heart attack, wishes to thank his many friends for their cards and expressions of concern. . . Fred Bowen, who was recently assigned to NASA Headquarters, wishes to thank all his friends, especially the Viking Project Team, for the gift and kind thoughts before he left for his new assignment.

**RETIREE HONORED.** . . J. Norwood Evans, who recently retired as Assistant Chief of the Personnel Division, has been awarded an honorary life membership in the Virginia College Placement Association in recognition of his contributions to the success of the organization. Evans, a charter member, helped establish the association of college and industry placement officials nine years ago and served on the board of directors for three years. The award was presented to Evans at the annual meeting of the association in Roanoke in April.

**NEW BANKING HOURS.** . . The Langley Branch of United Virginia Bank has announced the following new hours: Monday through Friday - 9 a.m. to 2 p.m.; Tuesday - 9 a.m. to 5:30 p.m.; military paydays - 9 a.m. to 2 p.m. and 3 p.m. to 5 p.m.

**RETIREMENT PARTY.** . . A retirement dinner and cocktail party for H. E. "Eddie" Davis, Flight Instrumentation, will be held May 22 at 4:30 p.m. in the Activities Building. Cost of the dinner will be \$3.75 per person plus the gift donation. Names and contributions should be sent no later than May 16 to Dr. W. Linwood Jones, MS 490.

**IAM MEETING.** . . The NASA Lodge No. 892, International Association of Machinists, will meet June 6 at 7 p.m. at the Central Labor Union Hall.

**ELECTED TO BOARD.** . . Harold Mehrens, Director of the Visitor Center, has been elected as a member-at-large of the Board of Directors of the National Aerospace Education Association, Washington, D.C. Founded in 1950, the non-profit association has been a major factor in supporting and guiding aviation and aerospace education programs in schools throughout the nation, from elementary schools to college. Membership, representing every state, is composed of U.S. government and state officials, educators, school systems administrators, and professionals in the aerospace and allied industries.

**WEDDING PLANNED.** . . Wedding bells will ring on June 17 when Kay S. Gabel, Structures Division, and Thomas T. Bales, Materials Division, take their final vows.

**DISCOUNT COUPONS.** . . Discount coupons for the Ringling

# MEET YOUR EEO COUNSELORS



Dr. Wilbur B. Fichter

Dr. Wilbur B. Fichter is an Aerospace Technologist in the Fracture Mechanics Section, Materials Division. A native of Kinston, North Carolina, he received his B.S. degree in Mathematics from Wake Forest College where he was named All-State in baseball. In 1966 he received his M.S. degree in Engineering Mechanics from VPI and in 1969 he earned his Ph.D. in Engineering Mechanics from North Carolina State University and was elected to

the Phi Kappa Phi graduate school honorary society.

Dr. Fichter joined the Center staff in 1957 as a Mathematician in the Structures Research Division. He was assigned to his present position in 1970. He is a Mathematics instructor in Christopher Newport College evening school.

Dr. Fichter confessed that he did not know much about being an EEO counselor but felt that "a lot of people are born and grow up with their hands on the short end of the stick. It shouldn't be this way. Everybody should have an equal chance."

His hobbies are softball, golf, basketball, bridge, music, and reading.

He is married to the former Ann Bowles and they have two children - Bryan who is 11 and Lee Ann who is 9.

## can you solve this problem?

A reliable, non-invasive method of determining blood pulse rate without arousing the awareness of the patient is needed for aiding rehabilitation of patients having suffered brain damage. Refer to VAM-12. Contact the T. U. Office, extension 3281, for additional information or if you have a solution.

★★★★★

Brothers and Barnum and Bailey Circus are available at the Activities Building. The coupon is good for one dollar discount on adult tickets on Thursday, June 1 for the 7:30 p.m. performance.

Langley Researcher, an official publication of the Langley Research Center, National Aeronautics and Space Administration, Hampton, Virginia 23365, is published biweekly in the interest of its employees. Address contributions to the Editor, Mail Stop 154, telephone 3116.

Editor.....Ruth Angel Verell  
Staff Photographer.....Bob Nye  
Reporters.....Langley Employees

The privilege of advertising articles in this publication is restricted to employees of Langley Research Center. Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.

# SIGN UP FOR BONDS NOW

Helen Talbott, Vice Chairman of the Center's annual Savings Bond drive, stated that to date 69 new subscribers have signed up to purchase bonds and four have increased their present allotment. This brings the Center's percentage of participation up to 85 percent. The total payroll allotment per pay period is \$73,548.53.

Charts showing the standings by divisions are posted in both cafeterias.

Many reasons are given for not buying bonds such as "can't afford to save. . .too many bills". . ."I can do better elsewhere". . ."why fool around with peanuts per payday - when I start saving I'll do it right."

There are more good reasons for buying bonds such as:  
 Bonds now pay 5-1/2% interest when held to maturity of 5 years and 10 months.

Bonds will be replaced if lost, stolen or destroyed and principal and interest is guaranteed.

Bonds may be cashed any time after two months.

Payroll Savings is not a deduction. It's deferred take-home pay that grows. It comes back when you need it most - with interest.

There are definite tax advantages when you buy bonds. Interest on bonds is exempt from taxation by any state or local taxing authority. In addition, for Federal income tax purposes, interest on Series E bonds may be deferred until the year in which the bonds are cashed or reach final maturity.

You get additional "tax breaks" when you buy E bonds for college education funds or for retirement or supplemental retirement purposes with or without converting to H bonds.

For the big things ahead - home ownership, college education, retirement - save the surest, easiest way - SIGN UP FOR THE PAYROLL SAVINGS PLAN. . .OR INCREASE YOUR PRESENT ALLOTMENT!

## BOND STANDINGS

The following organizational units have a percentage of 90 or better in the Savings Bond Drive:

|                                                   |     |
|---------------------------------------------------|-----|
| Office of Director                                | 100 |
| Office of Director for Electronics                | 100 |
| Office of Director for Structures                 | 100 |
| Office of Director for Aeronautics                | 100 |
| Office of Director for Administration             | 100 |
| Management Support Division                       | 100 |
| Personnel Division                                | 100 |
| Programs and Resources Division                   | 100 |
| Management Information Systems Division           | 100 |
| Office of Director for Space                      | 100 |
| Materials Division                                | 99  |
| Financial Management Division                     | 99  |
| Office, Director, Sys. Eng. and Operations        | 96  |
| Advanced Transport Technology Office              | 93  |
| Low-Speed Aircraft Division                       | 92  |
| Office, Scientific and Tech. Information Programs | 92  |
| Environmental and Space Sciences Division         | 91  |
| Space Technology Division                         | 91  |
| Procurement Division                              | 90  |
| Systems Engineering Division                      | 90  |

★★★★★

WISE MEN are not always silent, but know when to be.

FORTY is the old age of youth; fifty is the youth of old age.



MARCHING FOR BONDS: With everyone marching or demonstration for something these days, these three lovely maidens picked the Savings Bond Drive for their cause. Getting their points across are (from left): Deanna Taylor, Ruth Luper, and Linda Cannon. The Center's annual bond drive will continue through June 9.

## COMING EVENTS

The following events are scheduled to take place in the Activities Building during the next two weeks:

- May 13 - Building open 10 a.m. to 4 p.m.  
Bowling League Banquet 6:30 p.m.
- May 14 - Mother's Day - Building closed
- May 15 - Building open 3:30 to 10 p.m.
- May 16 - Club night; Coin Club picnic at 5:30
- May 17 - Building open 3:30 to 10 p.m.  
Model Shop picnic at 3:30 p.m.
- May 18 - 8-Foot Structures picnic at 4 p.m.
- May 19 - Happy Hour 3:45 to 7 p.m., featuring the Virginians
- May 20 - Building open 10 a.m. to 6 p.m.  
Radio Control Club picnic
- May 21 - Safety Section picnic at 12 o'clock
- May 22 - Davis retirement party 4:30 to 7:30 p.m.
- May 23 - Club Night
- May 24 - Glenn Miller Dance 8:30 to 12:30  
Composite Model Section picnic
- May 25 - Bingo at 8 p.m.
- May 26 - Dirty 30 Club at 4 p.m.
- May 27 - Fluid Systems Support Section dinner-dance
- May 28 - Building Open

★★★★★

WE NEED mental separators that take off the few ounces of cream which are fit to be spoken to others.

FOUR HOSTILE newspapers are more to be feared than a thousand bayonets. --Napoleon



**AWARDS CONTRACT:** During National Small Business Week, Langley awarded a contract to the Systems Management Associates, Inc., Norfolk. Signing the contract are John Munick (left) and Herman Valentine, contractor. Witnessing the signing are (standing): A. F. Waynick, Head of Data Processing Branch; Joseph F. Braig; and A. G. Swanson, Head, Business Data Project Office.

## swap and shop

(Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.)

### FOUND

Man's navy blue cotton jacket. Lockett, 2969.

### WANTED

Auto rack carrier. Miller 595-0731.

### FREE

Kittens. Russell, 877-7223.

### FOR SALE

Silver Toy Poodle pups, AKC registered. Roy, 877-4772.  
Fiberglass hardtop for MGB roadster - \$135. Deal, 838-0920.

1969 Yamaha 250 cc, best offer. Tomaine, 595-5425.

One place setting and teaspoon of International Sterling's Queen's Lace pattern. Sparks, 838-1036 after 5 p.m.

1954 Tralette house trailer, 8 x 31 ft., aluminum. Located on Gaston Lake. Hall, 851-1653 after 4:30 p.m.

Brown male Poodle puppy - \$55. Henry, 877-1941.

18-foot Simmon's Sea Skiff, 28 hp Johnson outboard, gator trailer - \$525. Stortz, 826-4578 after 4 p.m.

Sears edger-trimmer - \$50; 20-inch window fan, 4-speed automatic - \$25. Eldred, 898-7618.

Camel Caravan fold-out tent trailer - sleeps 4. Hoggard, 851-4024.

Sealpoint Siamese kittens - \$10. Lockett, 595-6262 after 5. Drums. Joyner, 826-4684.

14-foot fiberglass Skipjack sail boat with two sets of sails and spinnaker. Crane, 723-0861.

Mini bikes - 4 hp Indian, 4 hp Fox, 2-1/2 hp Rupp; also boy's 20 and 24-inch bicycles. Carmines, 826-2894.

100 x 200-foot wooded lot in Edgehill - located on Meadowfield Dr. Williams, 826-6067 after 5 p.m.

Super Sailfish - \$250. Adams, 898-6016.

## SMALL BUSINESS WEEK MAY 14

(Continued from page 1)

the same period of FY 71. The Small Business Set-Aside Program, which reserves contracts for awards to Small Business Firms is on the increase at the Center. Set-Asides indicate \$7,295,000 for the first three quarters of FY 72 versus \$6,651,000 for the same period of FY 71.

Another program that the Center is active in is the President's Small Business Administration's 8(a) Program. Under this program the Center makes awards directly to the Small Business Administration who in turn selects a Minority Business to perform the contract. Under this program, the Langley Research Center has set-aside procurements valued at \$887,710.00 for award under the 8(a) program. In February the Center received the 8(a) Achievement Award from the Small Business Administration.

Systems Management Association, Inc., Norfolk, a minority owned management consultant firm, has been awarded a second contract by the Center under the 8(a) Program for Digital System Design and Programming for the newly imposed "Federal Personnel Management Information System." Contract is for approximately \$35,000. The first award to this Small Business Firm was for design and programming a mechanized leave system.

Sherwood L. Butler, Chief of Procurement; John Munick, Associate Division Chief; and Joseph F. Braig, Small Business Specialist, have the responsibility for coordinating the Small Business Program for the Director of Administration.

## TRANSPO 72 STARTS MAY 27

(Continued from page 1)

Middle Name, Air Traffic Control, Where to Land Your Airport, Research-Foundation for the Future, Airport Community Air Transport System, Bringing People Together, Safety in the Skies, Above All, and Materials for Safety.

Transpo 72 will be an international exposition. Over 400 manufacturers, including representatives from 50 foreign countries, will exhibit their products and technology at this transportation market. Exhibits, demonstrations, and displays from all modes of transportation -- land, sea, air and space -- will be featured.

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FOR SALE: 1968 XKE Jaguar, 1968 Toronado, and 1970 Cadillac Eldorado. Kyle, 595-9200.

Model 70, 4-cylinder Grey Marine engine, needs some repair - \$75. Moore, 868-9709.

Turfmaster lawn edger - \$35. Pierpont, 877-2141.

16-foot boat, 50 hp motor, trailer - \$750, Jensen, 877-0777 after 5 p.m.

1970 Cox camper trailer, sleeps 6. Basta, 898-5033.

Kawai electric organ - \$60. Powell, 723-1250.

Conn Artist organ, 2 manuals, 32 pedals, 39 stops, for church or large residence - \$3200. Wood, 898-5257.

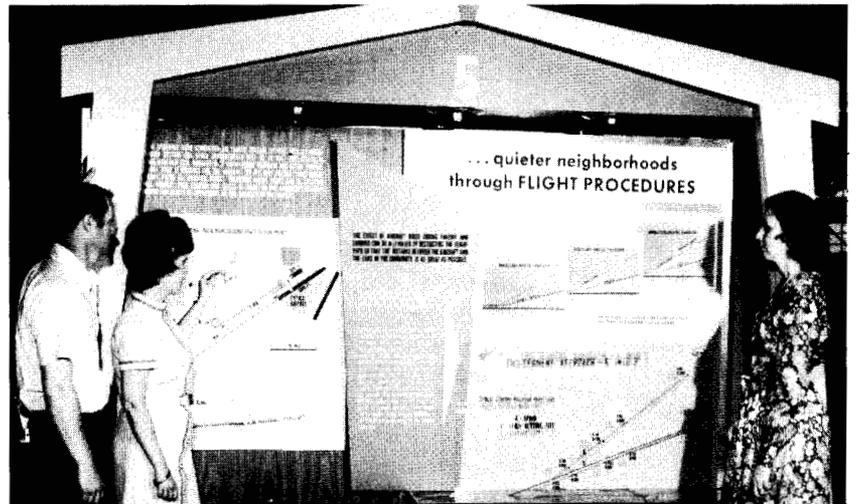
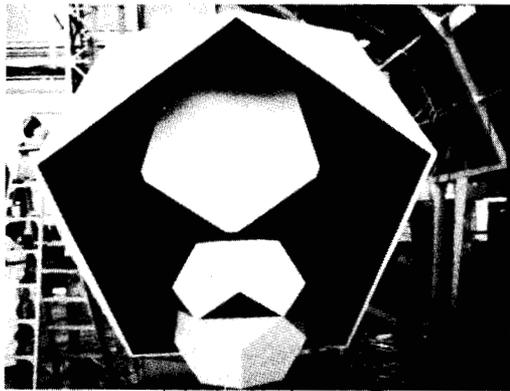
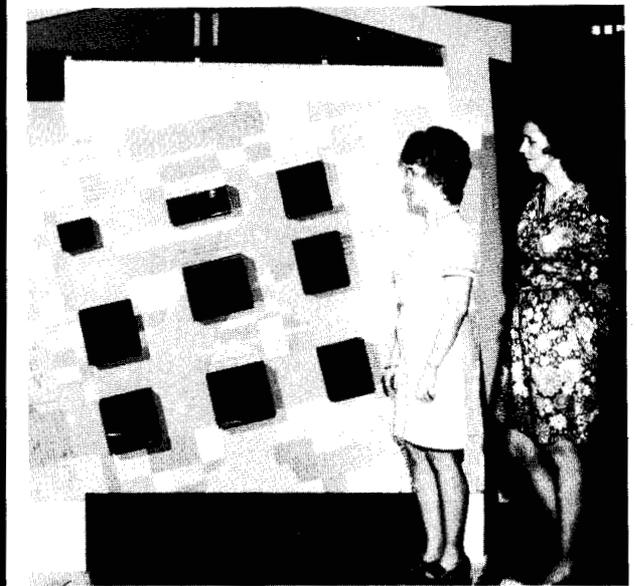
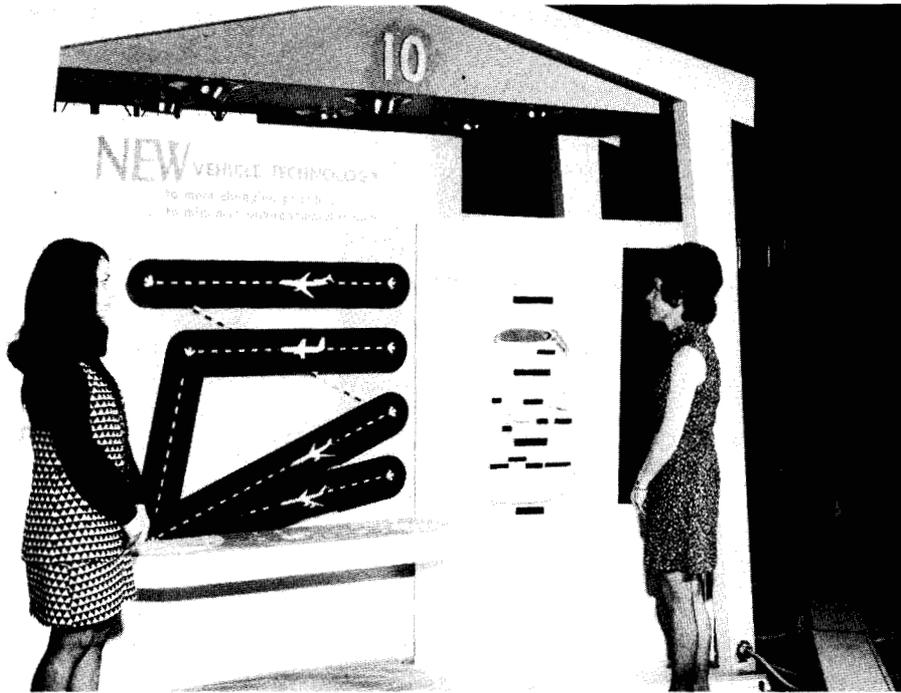
Kidney shaped mahogany desk with leather top. Anspach, 877-4281 after 5:30 p.m.

5000 btu air conditioner - \$75. Post, 595-4164.

Elephant hide brief case - \$50. Black, 826-3700.

Fedders air conditioner, 10,500 btu, 220 volts - \$60; boy's 20-inch bike - \$15; rose-sandalwood carpeting, 76 square yards - \$100. Alexander, 722-6448.

# NASA-FAA EXHIBITS FEATURED AT TRANSPO 72



## cafeteria menu

The following menu will be served in the cafeterias during the week of May 15:

Monday - Tomato rice soup, hot roast beef sandwich, breaded veal cutlet, sauteed chicken livers, fried clams.

Tuesday - Vegetable soup, rump roast, glazed ham, broiled red snapper, beef and macaroni.

Wednesday - Crab bisque, charbroiled T-bone, beef burbundy, seafood platter, meat loaf, chicken croquettes.

Thursday - Minestrone soup, braised beef tips, barbecued spare ribs, broiled fish, macaroni and wieners.

Friday - Split pea soup, charbroiled rib eye, chuckwagon steak, barbecued chicken, shrimp creole, ham croquettes.

Snack Bar - Soup, jumbo burger, hot dogs, fish, 3-D burger, French fries, apple turnovers. Variations - Corned beef, NASA submarine, tuna salad (Mon.); pastrami, ham and cheese club, NASA submarine (Tues.); salami, hot roast beef, chicken salad (Wed.); corned beef, ham and egg, steak (Thurs.); barbecued pork, NASA submarine, cheese and knockwurst (Fri.).

The menu for the week of May 22 is as follows:

Monday - Chicken rice soup, business man's lunch, beef and dumplings, stuffed flounder, sloppy Joe.

Tuesday - Vegetable beef soup, charbroiled T-bone, beef stew, chicken parisienne, fish cakes.

Wednesday - New England clam chowder, country steak, barbecued pork chops, boiled ham, enchiladas.

Thursday - Cheese chowder, beef stroganoff, sauteed scallops, chicken pot pie, Salisbury steak.

Friday - Cream of mushroom soup, charbroiled delmonico, barbecued pork sandwich, stuffed cornish hen, tuna noodle casserole.

Snack bar - Soup, jumbo burger, hot dogs, fish, 3-D burger, French fries, apple turnovers. Variations - Pastrami, ham and egg, NASA submarine (Mon.); corned beef, cheese and knockwurst, NASA submarine (Tuesday); ham and cheese club, steak, NASA submarine (Wed.); hot roast beef, grilled cheese, salami (Thurs.); corned beef, chicken salad, (Friday).

## PROFESSORS TO VISIT CENTER

Four professors from the Aerospace Engineering Department at VPI&SU will visit the Center on May 15 to discuss graduate programs with current and prospective students.

Persons wishing to talk with Dr. Joseph Schetz, Dr. George Inger, Dr. Clark Lewis, or Dr. Fred Lutze, should call the Training Office, 2517, for an appointment.

## CAMERA CLUB PLANS ELECTION

The Langley Camera Club will meet on Tuesday, May 16 at 7:30 p.m. in the Activities Building. Due to the small attendance at the April meeting, election of officers will be held at this meeting.

An open category slide contest will be held. All interested shutterbugs are invited to attend and bring four slide entries for the contest. Contact Bob Wright, 2893, for additional information.

The following candidates have been nominated for office: President - Dominick Andrisani and Robert L. Wright; Vice President - James J. Buglia and Stan Rau; Secretary -



EXPLORER SCOUTS: A group of NASA explorer scouts are shown in the electronic circuit construction class. Instructing the group are Carl Copeland (left background) and Samuel D. Johnson.

## STAFF ACTIVE WITH EXPLORERS

The NASA Explorer Scouts Post 36 have enjoyed one of their most successful years with approximately 70 scouts participating in the program. The members are of high school age and include representatives from the Peninsula, Norfolk, and Portsmouth.

A number of Center staff members have worked with the scouts and have instructed them in the following areas: Electronic circuit construction, electronic systems, aeronautics, life sciences, photography, and computers.

The NASA scouts will have a number of displays and exhibits at the annual Scout-O-Rama which will be held today and tomorrow in Gosnold Park in Hampton.

Staff members who assisted the scouts are as follows:

Dr. Randall M. Chambers led the program in life sciences and he was assisted by Charles W. McKee, Carmen E. Batten, Lenora B. Wells, Steve P. Willis, Vernon G. Collins, and David C. Grana.

Joseph Gera was in charge of the aeronautics group and he was assisted by Robert J. Mack, Carlton Carroll, James M. Patton, Roy V. Harris, Domenic Maglieri, and William H. Phillips.

Dr. Tom B. Ballard, electronic systems, was assisted by A. R. Sinclair, Dr. John Q. Howell, and James Osborn.

Assisting Bob Nye in photography were Alton T. Moore, Harris Pate, Hubert Lloyd, and Richard Shaw.

Fred Lallman was in charge of computers and he was assisted by James Schiess, Howard Hatch, Mickey Rowe, and Kathryn Smith.

Assisting Carl E. Copeland in electronic circuit construction were Samuel Johnson, William Willoughby, Timothy D. Bryant, W. M. Phillips, Robert Coultrip, Ronald L. Weber, Lyman A. Stille, Arthur M. Grist, Carson C. Rector, and Kenneth L. Quinn.

\*\*\*\*\*

Barbara Newton; and Treasurer - Abe Leiss. Nominations will also be accepted from the floor.

Winners in the April slide contest were: First place - "Apple Blossoms" by Robert L. Wright; second - "Messick II" by Boyd Perry; and third - "Poquoson Reeds" by Dominick Andrisani.

# Personnel Profiles

By

Allan C. Hanrahan



## Dribble, Drubble, Toil and Trouble

You may recall, sport fans, that in the issue before last of the Langley Researcher there was a news item about the completion of this year's basketball season.

Now, in this issue, we'd like you to meet the man who was responsible for the basketball season being the success it was -- Harvey W. Herring.



Herring was the coordinator for the NASA Basketball League, a job that one of the players described as "a lot of work, responsibility, and headaches."

Herring was modest about his part when asked about the job and the time that he had to spend: "Not that much time, really," he said. "I was able to delegate a lot of the responsibilities to others; then too, getting everybody involved makes them more enthusiastic, I think."

There were three divisions in the league (A, B, and C) and Herring was 'commissioner' of the "B" Division as well as player-coach on the "Basketballs" team. He has been playing in the NASA League for seven or eight years and played basketball, as well as football, at Poquoson High

## LANGLEY VISITOR CENTER FILM WINS RECOGNITION

The Center was recently advised by the Council on International Nontheatrical Events of Washington, D.C., that the motion picture "A Man's Reach Should Exceed His Grasp", which was produced for showing at the Langley Visitor Center, has been screened by CINE juries and has been selected to receive a CINE Golden Eagle Certificate as evidence of its suitability for international festival use.

CINE will hold its annual awards presentation ceremonies in Washington in November, at which time the producer and a representative of the Center will each receive a CINE certificate as a winner for the year 1972.

In addition to this particular recognition, it has been apparent to the Center for a long time that the film is a winner. Just reading or listening to the comments of those who have seen the film at the Visitor Center has been evidence that it is a film which is understood by all and one that pleases its audience in a number of ways - the excellent photography, the blending of scenes, the background music, the narration, etc. It is also a popular film among those available through NASA film library sources.

The film was produced by a professional firm in Washington, D.C. It was directed by Bastian Wimmer who has already won awards with other films. The technical advisor on the film for the Langley Research Center was Marvin Saunders of the Photographic Branch.

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PUBLIC opinion is a compound of folly, weakness, prejudice, wrong feeling, right feeling, obstinacy, and newspaper paragraphs.  
--Robert Peel

NO ONE is exempt from talking nonsense; the misfortune is to do it solemnly.  
--Montaigne

★★★★★

School (He is a born-and-bred 'Bull Islander').

He wrestled in college at VPI where he received, in 1962, his B.S. degree in Metallurgical Engineering. He also earned his Ph.D. degree from VPI in 1971 in Materials Engineering Science.

Dr. Herring will be playing first base on the NASA softball team in the Newport News City League as well as playing in the NASA Softball League. In regards to the NASA League, would you believe. . . he's also going to coordinate that activity?!

It can readily be seen that athletics is a major interest of Harvey's, ranking third behind his family and job. His family is his wife, Elaine, ten-year-old son, Gary, and seven-year-old daughter, Helen. His job is Materials Engineer in the Metals Section of the Materials Division.

Harvey's other interests are fishing and working on cars, e.g. removing the original engine from a Corvair and installing a Chevrolet V-8 engine where the backseat used to be!

"With all that weight in the middle it certainly is stable," he stated.

Luckily for the Center sports activists, there's always someone 'stable' like Dr. Herring they can depend on to organize things.

In closing may we quote from a note received from one of this year's basketball players: "From all those who enjoyed the sport comes a 'Thank You, Harvey'."

## Questions and Answers

**Q.** I have seen advertisements for Civil Service positions which require experience in GS-12 and GS-13 positions. Due to the promotion freeze there are many NASA engineers who are retained in the lower grades but who are as capable as many existing GS-12s and GS-13s. These younger engineers should be given the opportunity to compete for these advertised positions. Even if the newer engineer cannot have equal opportunity to present pay, why can't he have equal opportunity to advance into new positions?

**A.** According to Personnel officials, the requirement that a candidate must have served a specified amount of time at a certain grade level in order to be advanced to a higher grade is not just a Langley Research Center requirement. It is a requirement contained in an amendment to Section 1310 of Public Law 82-253. The purpose of the amendment, which is usually referred to as the Whitten Amendment, is to prevent excessively rapid promotions. The Whitten Amendment stipulates that candidates for advancement to positions GS-6 and above must have at least one year's experience at the next lower grade below the position to be filled. If the position is in a line of work that is classified at two grade intervals, then the candidate must have served one year in a position no more than two grades lower than the position to be filled. In addition to the requirements imposed by the Whitten Amendment, the Civil Service Commission Qualification Standards may require a certain amount of specialized experience at a specified grade level in order to qualify for a higher graded position. The amount of specialized experience required varies depending on the type of job and the grade level. The provisions of the Whitten Amendment are contained in Chapter 300 of the Federal Personnel Manual, and the Qualification Standards are listed in Civil Service Commission Handbook X-118. Both publications are available for review in the Staffing and Special Programs Branch.

In addition, whenever an employee is reassigned, a position description must be written and a grade level assigned to the position. The Center does not have authority to place an employee in a position which has been classified at a higher grade unless the employee is advanced to the higher grade.

**Q.** Is there any Langley regulation that specifies what graphical symbols should be used for electrical and electronic components on system drawings? There seems to be no established standard and for that reason a wide

## words in peoples' mouths



### PROPER USE OF OFFICE COPIERS

Office copiers are to be used for making a limited number of copies of official documents. It is this Center's policy that high volume requirements be referred to the Publications Branch, and that copies of pamphlets, booklets, or books be obtained from original sources.

Unofficial material, classified material, currency, bonds, passports, stamps, coupons, etc., are not to be reproduced on office copiers. Copyrighted material in which the Government has no property right is not to be copied except when permitted under the doctrine of "fair use."

LMI 1500.2 contains detailed information on the procurement and use of office copiers and should be referred to when there is a question concerning this equipment.

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variety of symbols may be seen for any component. This nonuniformity causes much confusion and should be rectified.

**A.** According to Mark Cole, Systems Engineering Division, there are no known Langley regulations. We require contractors to use symbols as recommended by the American Standards Association, but such is not the case in-house.

**Q.** In LRC Announcement No. 35-72 a mention is made of "noncritical positions." What is a noncritical position and what is a critical position?

**A.** According to the Personnel Officer, a critical position is any position which the Directorate determines must be filled. A good example of a critical position from a Center standpoint is the position of Payroll Clerk - we all want to be paid.

# Langley Researcher

VOLUME 11, NUMBER 10

LANGLEY RESEARCH CENTER

MAY 26, 1972

## ONLY 44 SUBSCRIBERS NEEDED IN BOND DRIVE

Helen Talbott, Vice Chairman of the Center's annual Savings Bond drive, stated that only 44 more new subscribers are needed for the Center to reach its goal of 90 percent participation. The current percentage of participation is 88.8 and only 1.2 percent more is needed.

If the Center reaches the 90 percent mark, we will receive the Treasury Department's coveted Minuteman Flag.

The drive runs through June and 189 new subscribers have signed up. The division standings are as follows:

|                                  |     |
|----------------------------------|-----|
| Office of Director               | 100 |
| Director for Electronics         | 100 |
| Director for Structures          | 100 |
| Director for Aeronautics         | 100 |
| Director for Administration      | 100 |
| Dir., Sys. Eng. & Operations     | 100 |
| Director for Space               | 100 |
| Management Support               | 100 |
| Personnel                        | 100 |
| Programs & Resources             | 100 |
| Management Information Sys.      | 100 |
| Low-Speed Aircraft               | 100 |
| Advanced Transport Tech.         | 100 |
| Materials                        | 99  |
| Financial Management             | 99  |
| Procurement                      | 96  |
| Dir., Center Dev. & External Af. | 96  |
| Flight Dynamics & Control        | 94  |
| Loads                            | 94  |
| ESSD                             | 93  |
| Viking Project Office            | 91  |
| Of., Scient. & Tech. Information | 91  |
| Space Technology                 | 91  |
| Systems Engineering              | 90  |
| Structures                       | 90  |
| FEED                             | 88  |
| Space Systems                    | 87  |
| Flight Instrumentation           | 87  |
| High-Speed Aircraft              | 86  |
| Analysis & Computation           | 85  |
| Scout Project Office             | 85  |
| Fabrication                      | 85  |
| Operations Support               | 82  |
| Instrument Research              | 81  |
| Research Aircraft Flight         | 78  |
| Hypersonic Vehicles              | 78  |

## SHARE IN AMERICA



Herbert F. Hardrath

## HARDRATH TO DELIVER 1972 GILLETT LECTURE

Herbert F. Hardrath, Assistant Chief of Materials Division, will present the 1972 Gillett Memorial Lecture on June 26 at the Los Angeles Hilton Hotel. He will speak on "Structural Integrity in Aircraft."

The lecture is one of the highlights of the 75th Annual Meeting of the American Society for Testing and Materials that will be held June 25-30 in Los Angeles.

Some 3500 engineers and scientists will attend the meeting that starts the year-long celebration of ASTM's 75th anniversary. The society is the world's largest source of voluntary consensus standards for materials, products, systems and services. It is headquartered in Philadelphia and has 22,000 members throughout the world.

Hardrath has been with NASA since 1947. He has conducted or supervised research on fatigue and fracture of aerospace structures and materials that has resulted in the development of unique equipment and techniques for fatigue and fracture tests under programmed loading, elevated temperatures, and outdoor environment.

**BUY SAVINGS BONDS**

## HAPPENINGS

**STOCK INVENTORY.** . . A complete physical inventory of stock is to be taken from June 21 through June 27. This will necessitate the closing of the following facilities for that period: Stockrooms in Buildings 1195 (Main) and 1230 (IRD); 1206 (Shipping and Receiving); 1155 (Chemical Storage); and 1240 (Warehouse). All staff members are encouraged to plan their work and draw stock for this period well in advance of the closing. Only bonafide emergency issues will be filled during this period and must be submitted in person on a Stock Requisition (Langley Form 55) to Ralph L. Hearn, Room 125B, Building 1195. Requests must be limited to one item per requisition.

**HOME FIRE ALARMS.** . . Due to some sales people working the area, the Safety Officer has received several calls regarding home fire alarms. There is some new information available. If you are one of those interested, call the Safety Office, extension 3950

**ESSAY CONTEST.** . . The National Space Club is sponsoring the Robert H. Goddard Historical Essay Award competition for 1972. This annual nationwide competition, open to any U.S. citizen, offers a \$500 prize and the Goddard Historical Essay Trophy. Essays may treat any significant aspects of the historical development of rocketry and astronautics and will be judged on their originality and scholarship. Entries should be submitted by November 1, 1972, to the Goddard Historical Essay Contest, c/o National Space Club, 1629 K Street, NW, Washington, D.C. 20006. Essays should not exceed 5000 words in length.

**AFGE NOTICE.** . . The NASA Lodge 2755 American Federation of Government Employees will meet on Wednesday, May 31 at 7:30 p.m. at the Central Labor Union Hall.

**NEW HEIRESS.** . . Weighing in at five pounds, three ounces on May 20 was Davetta Colleen, new daughter of Dave Woods, Instrument Research Division.

**IAM MEETING.** . . The NASA Lodge No. 892, International Association of Machinists, will meet June 6 at 7 p.m. at the Central Labor Union Hall.

**VISITING PROFESSOR.** . . Professor Robert H. Owens, Chairman of the Department of Applied Mathematics and Computer Science at the University of Virginia, is visiting the Center today. If you are interested in talking with him about their graduate or other programs, call 3466 for an appointment.

**NOTE OF THANKS.** . . Sandra C. Chaney, Technology Utilization and Applications Programs Office, and her family wish to express their appreciation to friends and coworkers for the lovely flowers, cards and thoughts following the sudden death of her father, Ralph B. Crews of Roanoke.

★★★★★

TO STUMBLE twice against the same stone is a proverbial disgrace. --Cicero

SOME circumstantial evidence is very strong, as when you find a trout in the milk. --Thoreau



**SUGGESTION AWARD:** Barbara G. Burbank, Structures Division, receives a check for \$25 from Dr. Edwin T. Kruszewski for her suggestion relative to increase recognition given to recipients of patent grant letters by routing the letters through officials channels.

## COMPUTER SCIENCE COURSE

In response to the interest shown by NASA personnel in computer science courses, George Washington University will give a course in Digital Computer Programming Systems during the summer at Langley.

The description of this course is as follows:

EE 257 - Digital Computer Program Systems. Bootstrapping, assemblies, link editors and loaders, input-output control systems, data management and file structures, and executive systems. Prerequisite - Machine and Assembly Language Programming. Text - "Systems Programming" by Donovan. Professor - Dr. Patrick J. Martin.

Persons interested in enrolling in this course should call the Training Office, extension 2517, for an application form.

Registration will be held on June 12 in Building 1218, Room 200, from 1 until 2 p.m. An initial introductory class will be held June 26 in Building 1149, Room 201, at 9 a.m. Classes will resume on a regular basis July 10 and run for three weeks (10 classes). The schedule will be determined June 26.

Langley Researcher, an official publication of the Langley Research Center, National Aeronautics and Space Administration, Hampton, Virginia 23365, is published biweekly in the interest of its employees. Address contributions to the Editor, Mail Stop 154, telephone 3116.

Editor.....Ruth Angel Verell  
Staff Photographer.....Bob Nye  
Reporters.....Langley Employees

The privilege of advertising articles in this publication is restricted to employees of Langley Research Center. Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.

## TWO STAFF MEMBERS DIE

John P. Dickson Jr., Aerospace Engineer in Systems Engineering Division, died May 10 and Marvin Quinn, Engineering Technician in Fabrication Division, died May 17.

Dickson was born August 15, 1936 in Nashville, Tenn. He received his B.S. degree in Mechanical Engineering from Vanderbilt University in 1958 and joined the Center staff July 1958.

Survivors include his widow, Mrs. Sue H. Dickson; two daughters, Lee A. Dickson and Paula A. Dickson, and his parents.

A native of Newport News, Quinn was born October 4, 1918. He was an alumnus of the Apprentice School of the Newport News Shipbuilding and Dry Dock Company. He served in the U.S. Navy from 1942 to 1944 and entered on duty at the Center in January 1951.

Survivors include his widow, Mrs. Marion Albee Quinn, and two sons, Douglas and Ronald Quinn.

### Swap and Shop

(Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.)

#### FREE

2 black and 1 calico kittens. Kelly, 898-5589.

#### WANTED

Summer rentals for ASEE faculty fellowship program members, June 12 - Aug. 25. Witherspoon, 2517.

Ride from Merrimac Shores to W.A. on 7:30 shift. Miller, 3251.

#### FOR SALE

6,000 btu air conditioner - \$75. Post, 595-4165.

1969 Volkswagon - \$1250; also parts for 1966 Volkswagon. Current, 868-6922.

Colonial wing back couch and companion chair, print design with tan and light brown - \$100. Gentry, 877-2458.

Four 6:00 x 13 tires - \$4 each; 8:75 x 15 tires for recapping - \$1.50 each; 1967 Chevrolet, 4-door sedan - \$525; exercise mat - \$5. Miller, 722-8993.

Twin size Simmons spring and mattress - \$20. Spirn, 596-3200.

AKC registered Scottish Terriers. Barnes, 868-7214.

Kenmore deluxe humidifier, vinyl woodgrain finish cabinet, 10-gallon capacity - \$40. Adamson, 247-5425.

Antique oak pedestal table and 4 chairs - \$95. Tynan, 898-7015.

AKC registered Irish Setter, female, 3 years old. Nolan, 877-1851.

1971 Fiat 850 Spyder - \$1925. Swindlehurst, 596-1081.

1954 Ford school bus, rebuilt engine, good for camper - \$600; GE air conditioner, 7000 btu, 115 volts - \$75. Shaughnessy, 595-2024.

Siamese kittens - \$10. Lockett, 595-6262 after 5 p.m.

10-gallon aquarium with fish and accessories - \$20; 3-1/2-gallon aquarium with 50 guppies and accessories - \$7.50; 3-speed, 12-inch turntable - \$10. Pendergraft, 596-0538.

Crocheted bed spreads, large crocheted rug, 9 x 18 wool fringed rug in light blue and gray, mahogany sewing cabinet, 2 yacht chairs, tennis racquet and press, size 18 tennis dresses, large Victorian what-not, Fostoria crystal in Cape Cod pattern. Gilman, 722-5847.



BOND APPEAL: Passing out literature in the cafeterias in support of the Center's annual Savings Bond Drive are Sandra Anspach (left) and Donna Sloan. Lamont Poole was the singing Uncle Sam.

### Cafeteria Menu

The following menu will be served in the cafeterias during the week of May 29:

Monday - H O L I D A Y

Tuesday - Corn Chowder, corned beef and cabbage, meat loaf, Chinese egg rolls, spaghetti with meat balls.

Wednesday - Chicken gumbo soup, steamboat round, chop suey, chicken and dumplings, creamed beef on toast.

Thursday - Fisherman's chowder, char-broiled rib eye, beef and mushroom rolls, red snapper, Maryland fried chicken, clam croquettes.

Friday - Bean with bacon soup, fiesta beef kabobs, chicken chow mein, ham steak, fried oysters, franks and beans.

Snack bar - Soup, jumbo burger, hot dogs, fish sandwich, 3-D burger, French fries, apple turnovers. Variations - Corned beef, NASA submarine, ham salad (Tues.); pastrami, NASA submarine, ham and cheese club (Wed.); steak, liverwurst and cheese, salami (Thurs.); corned beef, NASA submarine, ham and egg (Fri.).

The menu for the week of June 5 is as follows:

Monday - French onion soup, business man's lunch, chicken parisienne, broiled liver, wieners and sauerkraut.

Tuesday - Cream of celery soup, char-broiled T-bone, broiled lobster tails, glazed ham, breaded veal, tuna rice casserole.

Wednesday - Oyster stew, stuffed green peppers, rump roast, sauteed chicken livers, fried clams.

Thursday - Chicken noodle soup, beef teriyaki, fish fry, chicken cacciatore, beef and macaroni.

Friday - Vegetable beef soup, char-broiled rib eye, fried shrimp, barbequed beef sandwich, Italian meat loaf, grilled cheese sandwich.

Snack bar - Soup, jumbo burger, hot dogs, fish sandwich, 3-D burger, French fries, apple turnovers. Variations - Pastrami, hot roast beef, chicken salad (Mon.); corned beef, ham and cheese club, tuna salad (Tues.); pastrami, NASA submarine, liverwurst and cheese (Wed.); salami, barbequed pork, steak (Thurs.); corned beef, NASA submarine, chicken salad (Fri.).

## MEET YOUR EEO COUNSELORS



Brenda H. Gooch

Brenda H. Gooch is a Personnel Clerk in the Training and Educational Service Branch of Personnel Division.

A native of Greenville, North Carolina, Brenda graduated from George Washington Carver High School in Newport News. She entered on duty at the Center on May 8, 1969 as an OEO clerical trainee. Since November 1970, she has been the primary instructor of the NASA/OEO clerical training programs and the public service career program. Her duties

include instructing trainees in English, clerical office practices, vocabulary, typing, human relations, and Langley practices and procedures.

As a previous OEO clerical trainee, Brenda hopes that "by relating my own experiences I can benefit them in some way."

In 1970 she received a Sustained Superior Performance Award for contributing to the effectiveness of the NASA/OEO Clerical Training Program and in 1971 she received a Group Achievement Award for her devoted efforts in training and guiding the disadvantaged.

Brenda is presently furthering her education by attending Thomas Nelson Community College. She is a member of Phyllis Wheatley YWCA, a member of Electra Gospel Singers, and works jointly with her mother as coordinator for the Galilee Baptist Church Young Adult Choir. She enjoys working crossword puzzles, reading, dancing, bowling, and singing.

She is married to Sergeant Dock Z. Gooch, Jr., and they have three children - Dock Zabriskie age 6, Tracy Lamont age 5, and Bruce Edward who is 3.



RECEIVE AWARDS: Dr. John E. Duberg (left), Associate Director, presents cash awards for Tech Briefs to the following (from left): L. P. Kopia, C. W. Rowland, E. E. Burcher, T. R. Turner, E. C. White, F. R. Matthews, and W. C. Heier. Absent was A. R. Sinclair.

## STAFF MEMBERS RECEIVE T.U. AWARDS

Dr. John E. Duberg, Associate Director, recently presented cash awards to eight staff members for Tech Briefs.

NASA Tech Briefs are issued to encourage commercial application of new technology derived from the space program and are distributed nationwide. Tech Briefs are often printed in trade journals and magazines, thus triggering numerous inquiries to the Technology Utilization Office for "back-up" information. This process gets new ideas from the innovator to the market in the shortest possible time.

The Langley Tech Briefs for which the awards were presented are as follows:

71-10336 - "Strong, Easy-to-mold, Spiral Buttress Thread" by Wilbur C. Heier, Fabrication Division

71-10337 - "Improved Smoke Generator for Wind Tunnels" by T. R. Turner, Low-Speed Aircraft Division

71-10342 - "NASA Tricot: A Lightweight, Radar-Reflective Knitted Fabric" by F. R. Matthews, Fabrication Division, and E. C. White, Systems Engineering Division

71-10343 - "Laser Control Device" by L. P. Kopia, E. E. Burcher, C. W. Rowland, and A. R. Sinclair, Flight Instrumentation Division

## GOLF ASSOCIATION BEATS NAVY

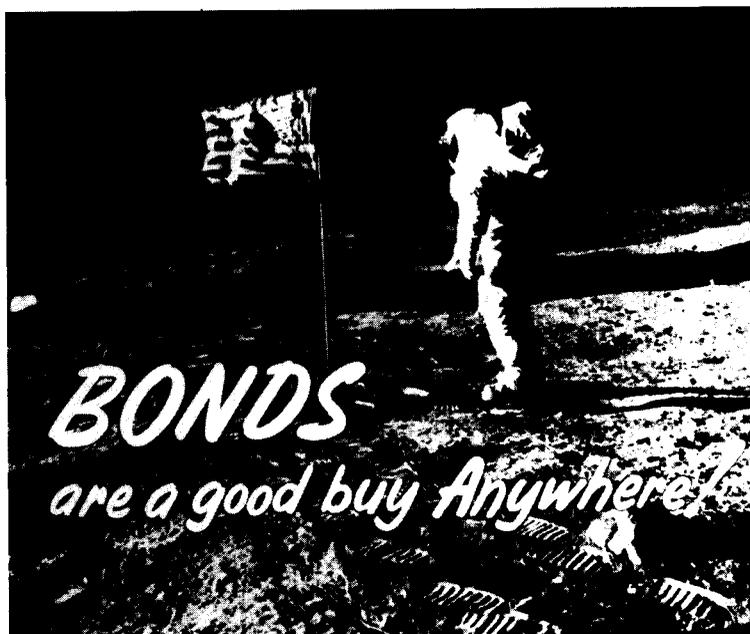
The NASA Golf Association defeated the Norfolk Naval Shipyard 29-21 in a match played May 12 at the Langley Golf Course.

Jim Jones came in with the low score of 80 and Bill McMillian was second with 81.

In the first flight McMillian and Fred Eubank scored low team net with 62. Tom Carpini and Bob Babcock were second with 63, Dan Bridges and Stan Gula took third place with 64, and Jim Jones and Walter Olstad came in fourth with 65.

George Palko and Bill Leftwich took first place in the second flight with a low team net score of 60. B. Randolph and Bob Hall were second with 66, Bill Miller and Tommy Steele took third place with 66 and B. Williams and Dale Dalin came in fourth with 66. A playoff was held to break the tie for second, third, and fourth places.

Membership in the Golf Association is open to all staff members, male and female, and to all retired employees. Persons interested in joining should contact a member of the association.



# Center Staff Members Retire After Long Service



Marion B. Seyffert  
Fabrication



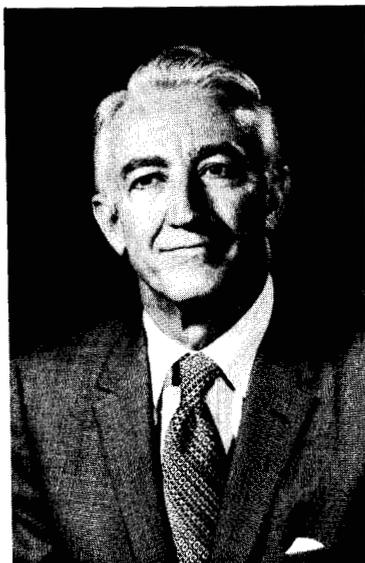
Percy S. Chandler  
Instrument Research



William B. Mayo  
Office, Sys. Eng. & Op.



Percy J. Crain  
Director, Sys. Eng. & Op.



Julian D. Maynard  
Loads Division



Fenley R. Cooper  
Operations Support Division



W. Henry Brown, Jr.  
Fabrication



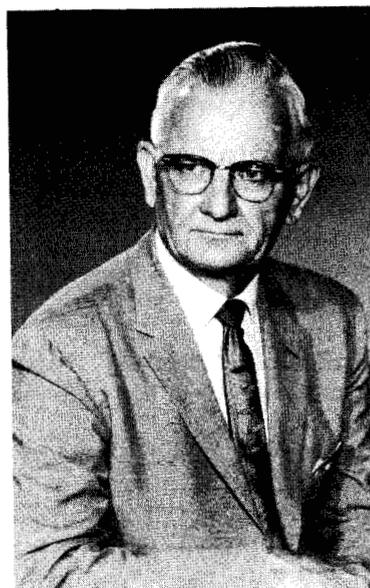
Charles B. Haight  
Operations Support Division



Howard Ferrall  
Fabrication Division



Robert E. Forrest  
Fabrication



Eric S. Eggleston  
Fabrication Division



Joseph S. Cross, Jr.  
Facilities & Equip. Eng.



Charles F. Barnett, Chief of Personnel Division, presents Special Achievement Award to Mary T. Lemke.



Daniel R. Hayes (left), Chief of Fabrication Division,, presents Achievement Award to Cecil W. Stephens.



Gay R. Gilbert was surrounded by supervisors when she received her award. With her are (from left): M. O. McKinney Jr., James S. Bowman Jr., and John P. Campbell.



Harper E. Van Ness (center) presented awards to (from left): Paul M. Siemers III, Robert C. Blanchard, Arlen F. Carter, and Leonard V. Clark.

## SPECIAL ACHIEVEMENT AWARDS

A number of staff members have received Special Achievement Awards. The recipients and their citations are as follows:

Mary T. Lemke, Training Branch, Personnel Division, was cited "for her sustained superior performance in providing exceptionally effective administrative support of LRC Training Programs."

Cecil W. Stephens, Fabrication Division, received his award "for sustained superior performance in providing electrical and mechanical subsystem design support to the Simulation and Human Factors Branch."

Gay R. Gilbert, Low-Speed Aircraft Division, was awarded for "sustained superior performance in the reduction and analysis of spin research data."

Robert C. Blanchard, Viking Project Office, was cited "for his outstanding contributions in developing for the Viking Project an integrated science, engineering, and operations approach to Martian atmospheric and entry trajectory reconstruction satisfying Project requirements and resulting in significant cost savings."

Arlen F. Carter, Viking Project Office, received his award "for his outstanding management of an overall pro-

## can you solve this problem?

A reliable method for determining the age of a blood stain is needed by criminalistic laboratories. Recent advances in enzyme determination and electrophoretic techniques may prove useful. Contact the T. U. Office, extension 3281, for additional information or if you have a potential solution.

★★★★★

gram involving NASA, contractor, and Viking Science Team personnel to solve problems resulting from Viking Lander rocket exhaust on Mars landing site."

Leonard V. Clark, Viking Project Office, received his award "for superior performance in directing tests specifically performed at Langley, within the overall site alteration program, and for supporting the management of contractual efforts to solve problems resulting from Viking Lander Rocket exhaust on the Mars landing site."

Paul M. Siemers III, Viking Project Office, was recognized "for outstanding technical contributions to various Viking decelerator wind-tunnel test programs resulting in solutions to potential instability problems of the Viking parachute and Balloon Launched Decelerator Test Vehicle."

# Personnel Profiles

By

Allan C. Hanrahan



"All the world's a stage  
And all the men and women merely players.  
They have their exits and their entrances;  
And one man in his time plays many parts."

"As You Like It," Act III, Scene 7

The above lines, written by the "Bard of Avon," apply to any one of the personalities previously presented in this space but for our guest this issue the lines are especially appropriate when it is realized one of his main interests is the Peninsula Community Theatre.



Clyde W. Winters, Head of Launch Operations in the Scout Project Office, has been involved in amateur theatre for over twenty years, beginning in 1951 as the stage manager for the Carlisle (Penn.) Sesquicentennial.

Winters graduated from high school in Carlisle, entered Shippensburg (Penn.) State Teachers College in 1952, had his education interrupted by three years of army life, and graduated in 1958 with a B.S. degree in Mathematics and Physics. Almost immediately he came to the Center and almost as quickly joined the Hampton Little Theatre, producing plays for that organization until it merged with the Newport News Little Theatre around 1961, thus forming the Peninsula Community Theatre.

Clyde's most recent production was the very successful "Fiddler On The Roof" presented last September.

Upon being asked what a producer did exactly, Clyde answered, "Well, first budget a show out and be in charge of everything technical from the curtain on back. That includes such things as booking, costumes, lighting, set design, etc."

Maybe we should interject here that Clyde excels in set design and put the theatre aside recently in order to help design and build the background sets in the antique car museum that opened last Sunday in Williamsburg. However, come autumn he'll be producing the musical drama, "1776,"

and that presentation of the Revolutionary War preliminaries sounds like a "biggie." Until then, Clyde, his wife, Joan, daughters, Sylvia and Sarah and sons, Mike and Richard, will be engaged in their other great interest, sailing. Clyde incidentally, "crews" on a thirty-foot craft and has his children enrolled in sailing classes.

## CENTER PLANS LECTURE SERIES

A series of guest lectures for the NASA-ASEE Summer Faculty Fellowship Research Program will begin June 13.

This series will include several distinguished lecturers and is open to all interested personnel. The guest lecturers are usually available for individual or group consultations. Arrangements may be made by calling John Witherspoon, 2517, or Dr. G. L. Golia, 3816, extension 237 (VARC).

Each lecture will begin at 10 a.m. in Room 200, Building 1212 (7x10 Conference Room). The dates, speakers, their institutions, and topics are as follows:

June 13 - Dr. Milton Van Dyke, Stanford University, Computer Extension and Improvement of Perturbation Series

June 15 - Dr. Stanley G. Rubin, Polytechnic Institute of Brooklyn, topic to be announced later

June 20 - Dr. Edwin Plueddermann, Dow Corning Corp., Adhesion to Mineral Surfaces Through Silane Coupling Agents

June 21 - Dr. D. B. Spalding, Imperial College of Science and Technology, Survey of Recent Progress with the Computation of Three-dimensional Flows

June 22 - Dr. J. J. Cornish, Lockheed-Georgia Co., Some Examples of Vortex Flows

June 27 - Dr. D. A. Thomas, Lehigh University, topic to be announced

July 5 - Dr. Sheila Widnall, MIT, topic to be announced

July 6 - I. E. Garrick, Langley Center, Unifying Insights into Steady and Unsteady Aerodynamics and Acoustics

July 11 - Dr. Tung Au, Carnegie-Mellon University, Systems Analysis and Design Processes

July 13 - Dr. R. Seebass, Cornell University, topic to be announced

July 18 - Dr. S. I. Pai, University of Maryland, Two Phase Flows with an Application to Lunar Ash Flow

July 20 - Dr. R. H. Gallagher, Cornell University, topic to be announced

July 25 - Dr. James Deardorff, National Center for Atmospheric Research, On Turbulence in the Planetary Boundary Layer and its Numerical Modeling

July 27 - Dr. Harlow Freitag, Thomas J. Watson Research Center, Computers of the 1980's

Aug. 1 - Dr. H. N. Abramson, Southwest Research Institute, topic to be announced

Aug. 3 - Dr. Bernard Budiansky, Harvard University, topic to be announced

Aug. 8 - Dr. J. Wyngaard, Air Force Research Lab, topic to be announced

Aug. 10 - Dr. George McAlpine, University of Virginia, topic to be announced

Two-week listings of the lectures will be published in subsequent issues of the Researcher. For further information call the Training Office, 2517.

★★★★★

STUDY until twenty-five, investigation until forty, profession until sixty, at which age I would have him retired on a double allowance.

--William Osler

★★★★★

One more scene before the final curtain: Clyde recommends the PCT offering, "Little Mary Sunshine", playing through tomorrow night at Denbigh High School. He describes it as "a light, very funny musical - fun for everyone."

Now, Clyde, step to the footlights and take a bow.

## RETIREMENT SOCIALS

Myrtle H. Wells, Flight Dynamics and Control Division, will be honored at a retirement dinner and social hour June 22 at 6:30 p.m. at Eli's Restaurant. Cost of dinner and gift will be \$5.50 per person; cost of gift only will be \$1. Send names and contributions by June 15 to Linda Branch, M.S. 152D.

Robert E. Hunt and Young V. Houston, Research Aircraft Flight Division, will be honored at a retirement party on Monday, June 26 at 6 p.m. at the Hampton Yacht Club. Cost will be \$3.50 per person plus \$1 for gift. Send names and contributions to Vernon Saunders, MS 255, by June 16.

## COMING EVENTS

The following events are scheduled to take place in the Activities Building during the next two weeks:

- May 27 - Building open 10 a.m. to 6 p.m.
- May 28 - Building open from 1 to 6 p.m.
- May 29 - Memorial Day - Building closed
- May 30 - Club Night
- May 31 - Bloodmobile 8 a.m. to 4 p.m.  
Building open from 4 to 10 p.m.
- June 1 - IRD-IAB dinner at 4 p.m.
- June 2 - Happy Hour with Jett Rollo Jazz Combo from 3:45 to 7 p.m.
- June 3 - Design Technology dinner at 6 p.m.  
Training Office picnic for Va. School for Deaf
- June 4 - LTV picnic at 2 p.m.  
Building open from 10 a.m. to 6 p.m.
- June 5 - Building open from 3 to 10 p.m.
- June 6 - Tech. Systems symposium from 3 to 4 p.m.
- June 7 - Building open
- June 8 - Bingo starting at 8 p.m.
- June 9 - Building open

## COLLOQUIUM SERIES NEWS

The Langley Colloquium Series will feature Frederik Pohl, one of the country's most successful science fiction writers, on June 12, with a presentation entitled "Einstein's Biggest Mistake - and How Not to Make It."

Pohl is the author of approximately 50 published books. These include science fiction anthologies, science fiction novels, science fiction short story collections, and miscellaneous fiction and non-fiction books, including the biographical "Tiberius" and several contemporary novels.

He has contributed to scores of periodicals, including "American Documentation Journal", "Playboy", "TV Age", "Library Journal", and "Rogue".

## HAMPTON BENEFITS FROM WILL

Pearl I. Young, who died June 16, 1968, left the City of Hampton approximately \$15,000 to be used for the construction of benches and shelters at bus stops throughout the city. Details of this bequest were recently revealed in the "Question Line" column of the Times-Herald.

According to the article, James D. Ashley, director of the Hampton Parks Department, stated that two such benches have been built at Hampton Institute, and one at John M. Willis Elementary School on which a plaque in commemoration of Miss Young will be installed. Other shelters and benches will be built at suitable locations in the city.

Miss Young was the first female employee at the Langley Center. She entered on duty as a physicist in 1922 and later became head of the Editorial Office. In this position she published the report "Style Manual for Engineering Authors" which is still frequently used at the Center.

Following her duty at Langley, Miss Young worked at the Lewis Research Center and later became a professor of physics at Penn State University.

After her retirement, she actively pursued her hobby of aeronautical history. She collected extensive data on the life of Octave Chanute, an early glider constructor who encouraged the Wright Brothers in their experiments. She published a comprehensive bibliography of Chanute works.

In the course of her research, which involved travel throughout the United States and Europe, she discovered many interesting records of other early aeronautical experimenters, including correspondence between the French pioneer Alphonse Penaud and T. J. Bennett of the Aeronautical Society of Great Britain. These letters were published after Miss Young's death as a memorial volume.

Miss Young, who in her later years did not drive a car, frequently used the city buses and waited at bus stops. Her generosity will be appreciated by other Hampton citizens who use these facilities.

## NASA TENNIS CLUB NEWS

The NASA Tennis Club has started its tennis season with its first tournament. Designed to establish the tennis ladder, Dick Pincus (FEED) earned the No. 1 ladder position by defeating Ed Riddle (ACD) 7-5, 6-4.

In the women's division of the tournament, Pat Murray took top honors by defeating Shirley Sargeant.

In the PTPA suburban league, NASA defeated Glendale 6-3 in match play at Glendale. NASA is the defending champion, having won the league series last year with a total of seven matches won out of eight played.

# Langley Researcher

VOLUME 11, NUMBER 11

LANGLEY RESEARCH CENTER

JUNE 9, 1972

## Viking Parachute Tests Scheduled

A series of three very high altitude flight tests of the parachute system which will help lower NASA's Viking Lander gently to the surface of Mars in 1976, will take place this spring and summer in New Mexico.

In two of them, test spacecraft simulating the Mars entry vehicle will be carried to approximately 36.6 kilometers (120,000 feet) by a large helium-filled balloon.

The spacecraft is then released from the balloon and rocketed to a high velocity and an altitude of 44.8 kilometers (147,000 feet).

In the third test -- at subsonic conditions -- a smaller balloon will be used to carry the test spacecraft to 28.1 kilometers (92,000 feet). From this position the spacecraft will be allowed to free-fall to the desired subsonic test conditions. In all three tests the parachute system will open on ground command.

Successful completion of three tests -- one at supersonic speed, one transonic, and one subsonic -- will qualify the Viking parachute system for use on the missions to Mars.

First flight in the series is planned for not earlier than Sunday, June 11, with balloon launch from Roswell, New Mexico. The parachute test will occur some 160 kilometers (100 miles) to the west, over the White Sands Missile Range.

## APOLLO-NASSAU ADVENTURE

The Activities Association is organizing an Apollo-Nassau Adventure from December 6 to December 11. A great NASA attraction will be the attendance at the Apollo 17 launch. The Apollo 17 is the last of the Moon missions and it will be an evening launch on December 6.

The second attraction will be a week-end cruise from Miami to Nassau and return, aboard the Norwegian-Caribbean liner M/S Sunward. This will include three nights and two days aboard the liner with two days in Nassau.

Also included will be jet airfare from Patrick Henry to Orlando, Orlando to Miami, and Miami to Patrick Henry; and two nights at the Sheraton-McCoy in Orlando.

Tentative package prices which are based on full charter and air rates subject to CAB approval are: \$315 with inside cabin and double occupancy on cruise, or \$345 with outside cabin and double occupancy on cruise.

A deposit of \$100 per person must be made by June 30. The check should be made payable to Westgate Travel and mailed to Westgate Travel, 19739 Center Ridge Road, Rocky River, Ohio 44116, or sent to Ernie Greene, Activities Association's travel coordinator, MS 157A, Building 1268A.

As soon as the complete details are firm, staff members will be notified.

## TECHNICIAN APPRENTICE EXAM OPEN

Employment opportunities for Technician Apprentices are being offered at Langley Research Center. The first group of approximately 20 apprentices is expected to enter on duty during October 1972, for the on-the-job and classroom training program.

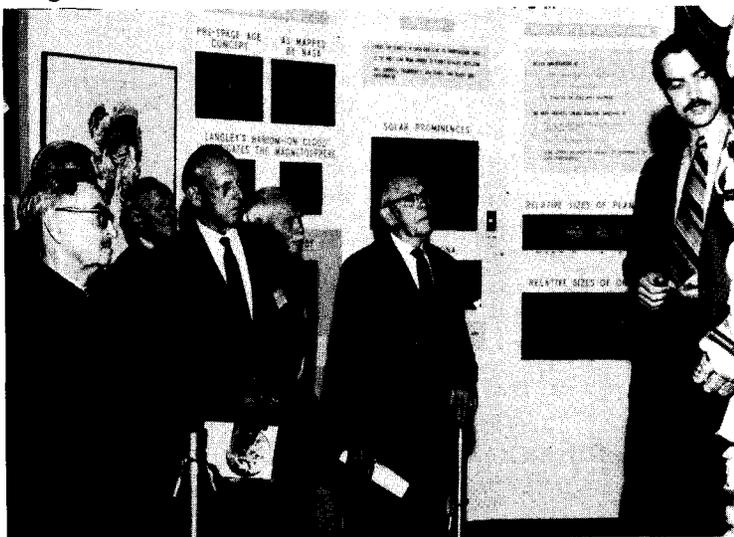
In order to establish a register of eligibles, a competitive examination will be given applicants. The examination, which requires about two hours, will be administered on Saturday, June 24, at 9 a.m. in the Activities Building (Building 1222). The examination will be rated on a scale of 100 with a minimum of 70 required for qualification.

The objective of the on-the-job and classroom training program is to prepare technicians to become potential leaders in the fields which have particular application to the research and development needs of the space agency.

Technician Apprentices will be appointed in the following trades, and applicants will have an opportunity to express trade preference at the time of appointment: aircraft mechanic, electrician, electronic instrument mechanic, machinist, sheetmetal worker, test facility mechanic, and wood modelmaker.

Application forms and additional information may be obtained by calling Horace Bellamy, Personnel Office, extension 2215, before June 16.

The Personnel Office will forward applications to the Civil Service Commission and will check applicants for the examination.



**GOLDEN EAGLES:** Recently 75 members of the Navy's Golden Eagles were guests of the Center for a tour of facilities as part of their annual reunion program which was held this year in Norfolk. The Golden Eagles is an organization formed from among the first 500 commissioned U. S. Navypilots and their current interest in the United States aerospace program remains very strong. A group of the Golden Eagles are shown as they are being briefed on the Apollo program by Ted Stohr, Educational Specialist at the Visitor Center.

## HAPPENINGS

**NEBA INSURANCE NOTICE.** . . Do you have your designated beneficiaries up-to-date on your NASA Group Life and Travel Accident Insurance policies? If there is any doubt, call Alice Pete, extension 3518.

**NEWLYWEDS.** . . Wedding bells rang when Suzanne M. Ackerman, formerly of Technical Editing Section, and James A. Bishop, Huntsville, Alabama, took their final vows on June 3 in Richmond.

**MEETING NOTICE.** . . The LRC Historical and Archeological Society will hold its summer quarterly business meeting on Monday, June 19 at 7:30 p.m. in the Activities Building. The meeting will include election of officers for the year beginning July 1. The program will consist of a documentary film "The Mystery of Stonehenge," narrated by Charles Collingwood. This film explains and tests the theory of Dr. Gerald Hawkins that Stonehenge was built as an astronomical computer.

**NEW HEIR.** . . Word has been received at the Center that Joy Helsel, formerly of Space Systems Division, became the mother of a five-pound son, Gordon Scott, on May 29.

**NONDIMENSIONAL NUMBERS.** . . A booklet entitled "A Compilation of Nondimensional Numbers," by Norman S. Land, NASA SP-274, has recently been published. The SP provides a ready means of identifying many nondimensional numbers used in various technical areas. Copies are available from the National Technical Information Service, Springfield, VA 22151. The cost is 70 cents.

**COLLOQUIUM.** . . Interested staff members are reminded that the Langley Colloquium Series will feature Frederik Pohl, science-fiction writer, at its meeting on June 12 at 3 p.m. in the Activities Building. His presentation will be entitled "Einstein's Biggest Mistake - and How Not to Make it." Pohl is the author of approximately 50 books. Since 1960 he has been the editor of "Galaxy" and "If", two lead-magazines.

**CREDIT UNION WINNERS.** . . The first NASA members to be eligible for prizes in the current Fly-the-Flag contest are identified by account numbers as follows: 4532, 13857, 34768, 30534, 41625, and 4686. The first five collect \$10 each in cash provided they qualify, i.e., have a CU decal affixed to the rear bumper of their automobile, while the sixth receives one month's payment on his car loan, if financed with the Credit Union. Please call or come by if you spot your account number. The contest will continue with a new list of winners announced in the next issue of the Researcher.

**INVENTORY.** . . Staff members are reminded that a complete physical inventory of stock will be taken from June 21 through 27. This will necessitate the closing of all stock facilities. Staff members are urged to plan their work and draw stock for this period well in advance of the closing. Only bonafide emergency issues will be filled during this period and must be submitted in person on a Stock Requisition to Ralph L. Hearn, Room 125B, Building 1195. Requests must be limited to one item per requisition.

## MEET YOUR EEO COUNSELORS



Ernard B. Graves

Ernard B. Graves is an Aerospace Engineer in the Applied Aerodynamics Section of High-Speed Aircraft Division. He is a native of Norfolk and graduated as salutatorian from Booker T. Washington High School in Norfolk in 1961. He attended the University of Pittsburgh and received his degree in Mechanical Engineering in 1967. He joined the Center staff in May 1967.

Graves has been very conscientious in volunteer civic and community endeavors representing minority group

interests. He serves as an EEO Board member for Langley Air Force Base. He is also on the Executive Committee of the NAACP which handles discrimination complaints and is a board member of the Hampton Community Action Agency.

Despite his many activities, Graves still finds time for a hobby -- swimming.

## COMING EVENTS

The following events are scheduled to take place in the Activities Building during the next two weeks:

June 10 - Building open from 10 a.m. to 6 p.m.

June 11 - Advanced Entry Analysis Branch picnic  
Building open from 1 to 6 p.m.

June 12 - Colloquium Series from 2:30 to 4 p.m.  
Building open 4 to 10 p.m.

June 13, 14, 15 - Viking Quarterly Review

June 16 - Happy Hour with Jonnie and Mary

June 17 - 8-foot High Temperature picnic  
Building open 10 a.m. to 6 p.m.

June 18 - ASEE picnic 3:30, Building open 1 to 6 p.m.

June 19 - Technical Symposium 4 p.m.  
Historical Society Meeting 7:30 p.m.

June 20 - Club Night

June 21 - Advanced Tech. and Appl. Dinner at 4:30 p.m.

June 22 - Bingo at 8 p.m.

June 23 - Garrick retirement party

Langley Researcher, an official publication of the Langley Research Center, National Aeronautics and Space Administration, Hampton, Virginia 23365, is published biweekly in the interest of its employees. Address contributions to the Editor, Mail Stop 154, telephone 3116.

Editor.....Ruth Angel Verell

Staff Photographer.....Bob Nye

Reporters.....Langley Employees

The privilege of advertising articles in this publication is restricted to employees of Langley Research Center. Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.



CO-DIRECTORS: Dr. G. L. Goglia (left) Assistant Dean of Engineering at Old Dominion University, and Dr. John E. Duberg, Associate Director, are co-directors of the ASEE Summer Programs and will greet faculty fellows upon their arrival at the Center Monday.

### *Cafeteria Menu*

The following menu will be served in the cafeterias during the week of June 12:

Monday - Cream of potato soup, Swiss steak, broiled flounder, taco dog and burrito, breaded veal cutlet.

Tuesday - Crab bisque, char-broiled rib steak, steamboat round, stuffed pork chops, stuffed cornish hen, fish cakes.

Wednesday - Vegetable beef soup, beef burgundy, broiled chuckwagon steak, fried oysters, chicken pie.

Thursday - Chicken noodle soup, char-broiled T-bone, seafood platter, meat loaf, chicken a la king, macaroni and wieners.

Friday - Cream of tomato soup, fiesta ka-bobs, shrimp creole, Salisbury steak, ham croquettes.

Snack bar - Soup, jumbo burger, hot dogs, fish sandwich, 3-D burger. Variations - Corned beef, NASA submarine, liverwurst and cheese (Mon.); pastrami, NASA submarine, ham and egg (Tues.); salami, ham and cheese club, NASA submarine (Wed.); hot roast beef, corned beef, bacon, lettuce and tomato (Thurs.); steak, pastrami, chicken salad (Fri.).

The menu for the week of June 19 is as follows:

Monday - Split pea soup, beef teriyaki, baked lasagna, sauteed chicken livers, glazed ham.

Tuesday - Cheese chowder, country steak, business man's lunch, chicken and dumplings, cordon bleu, tuna casserole.

Wednesday - New England clam chowder, char-broiled rib steak, beef stroganoff, fried shrimp, chili con carne.

Thursday - Cream of chicken soup, rump roast, fish fry, chicken croquettes, turkey with dressing.

Friday - Minestrone soup, char-broiled rib eye, barbecued spare ribs, veal scallopini, fried clams, grilled cheese sandwich.

Snack bar - Soup, jumbo burger, hot dog, fish sandwich, 3-D burger. Variations - Corned beef, NASA submarine, ham salad (Mon.); pastrami, NASA submarine, barbecued pork (Tues.); corned beef, NASA submarine, tuna salad (Wed.); hot roast beef, ham and cheese club, liverwurst and cheese (Thurs.); steak, salami, grilled cheese (Fri.).

## ASEE PROGRAMS BEGIN MONDAY

Forty-one college and university professors will arrive at the Center Monday to begin two Summer Faculty Fellowship Programs sponsored jointly by NASA and the American Society for Engineering Education. They will represent 31 different educational institutions located in 20 states.

Twenty-five professors will be Research Fellows assigned to various research divisions throughout the Center for a ten-week period. The remaining 16 will form an Engineering Systems Design Team which will apply a multidisciplinary design approach to achieving benefits from human factors engineering in current transportation systems.

Dr. Randall M. Chambers, Loads Division, will serve as technical advisor to the design team which will be located in Building 586 for an eleven week period.

The Research Fellows and their institutions are as follows:

Louis H. Bangert, Georgia Tech; Alden S. Bean, State University of New York; William J. Breedlove, Old Dominion; William B. Brooks, Oklahoma State University; Paul L. Coe, Hofstra University; Fred R. DeJarnette, North Carolina State University; Walter J. Gajda, University of Notre Dame; Carl T. Herakovich, VPI & SU; Charles E. Hunter, Hampton Institute; Paul R. Johansen, Iowa State University; John E. Kaiser, VPI & SU; James F. Kauffman, North Carolina State University; Howard Kaufman, Rensselaer Polytechnic Institute; Czeslaw P. Kentzer, Purdue University;

Also Chuan-Tau E. Lan, University of Kansas; William S. Mitchell, Tennessee Technical University; Allen L. Moen, Central College; Dean T. Mook, VPI & SU; Leonard K. Peters, Cleveland State University; Grayson H. Rayborn, University of Southern Mississippi; Thomas C. Reihman, VPI & SU; Ronald P. Rhoten, Oklahoma State University; Billy L. Stump, Virginia Commonwealth University; Joseph M. Verdon, University of Connecticut; and Lary P. Wasserman, Jersey City State College.

The Engineering Systems Design Fellows and institutions are as follows:

Dr. J. Darrell Gibson, Project Manager, University of Wyoming; Dr. Ralph G. Crum, Assistant Project Manager, Youngstown University; Dr. Samuel K. Adams, Oklahoma State University; Dr. Jewel B. Barlow, University of Maryland; Dr. Dietrich Gergman, Wayne State University; Dr. August L. Burgett, University of Southern Florida; Dr. Alan R. Chaikin, Old Dominion University; Dr. Gordon P. Fisher, Cornell University; Dr. Joseph C. Gree, Brigham Young University; Dr. Richard W. Griffin, Georgia Tech; Dr. LaVerne L. Hoag, University of Oklahoma; Dr. John P. McCrory, University of Montana; Dr. Richard L. Rosen, Drexel University; Dr. Douglas H. Rothenberg, Case Western Reserve University; Dr. George M. Swisher, Wright State University; and Dr. John C. Winfrey, Washington and Lee University.

For further information call John Witherspoon, Training and Educational Services Branch, extension 2517.

## MERIT PROMOTION NOTICE

Merit Promotion Announcement No. 72-34 for Secretary (Stenography), Office of the Director, Systems Engineering and Operations, GS-318-6 or 7 with promotional opportunity, opened May 30 and applications will be accepted through today. The area of consideration will be the Langley Research Center.

## Swap and Shop

(Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.)

### FOUND

1971 NASA Apprentice School ring. Dobbins, 826-8124.

### FREE

4 solid black kittens, 1956 Mercury with wrecked right front. Lawson, 635 Ridgeway Ave., Hampton.

### WANTED

Driving combination from vicinity of Warwick Village Shopping Center to E.A. on 7:30 shift. Williams, 2661.

Alternate driver from Gloucester Point to W.A. on 8 shift. Hudgins, 2326.

### FOR SALE

Kenmore deluxe humidifier, vinyl woodgrain finish cabinet, 10-gallon capacity - \$40. Adamson, 247-5426.

AKC registered Great Dane, female, two years old - \$75. Can be seen at 1205 Hampton Dr., Hampton.

1955 Chevrolet. Armistead, 898-7581 after 5 p.m.

1969 Pontiac Grand Prix - \$2,450. Foster, 722-2060.

1954 Studebaker Commander with 1957 Chrysler 341 Hemi engine, No. 850 Holley carburetor, rebuilt Chrysler Torque-flite transmission, etc. Meidinger, 244-2452.

12-1/2-foot fiberglass Minisail sailboat with dacron sail - \$325. Witherspoon, 851-0552.

1969 Mercury Monterey - \$1550. Lee, 722-6762 or 596-8417.

Frigidaire washer, G. E. dryer - \$45 each or \$85 for both. Price, 877-7912 or 877-7394 after 4:30 p.m.

16-foot Atlas fiberglass boat with fold down seats and carpet, 85 hp fully electric Evinrude with battery, 2 gas tanks, Long tilt trailer - \$1650. Messick, 34 Curle Rd., 2-6 p.m. except Thursday.

Large T-square, 6 Spode cups in Rosebud Chintz, 18-foot fiberglass sailboat with trailer, large fan on stand, invalid supplies, oak double dresser, Frigidaire air conditioner - 19,000 btu. Gilman, 722-5847.

Sears Lady Kenmore combination washer/dryer, two years old - \$200. Farmer, 877-7181.

18-foot G.E. avocado refrigerator, automatic ice - \$260; complete fireplace set - \$40. Kyle - 595-9200.

1963 Pontiac Catalina - \$325. Bennink, 722-3096.

## CENTER PLANS LECTURE SERIES

A series of guest lectures for the NASA-ASEE Summer Faculty Fellowship Research Program will begin Tuesday, June 13. Each lecture will begin at 10 a.m. in Room 200, Building 1212 (7 x 10 Conference Room). The schedule for the next two weeks is as follows:

June 13 - Dr. Milton Van Dyke, Stanford University, Computer Extension and Improvement of Perturbation Series

June 15 - Dr. Stanley G. Rubin, Polytechnic Institute of Brooklyn, topic to be announced later

June 20 - Dr. Edwin Plueddemann, Dow Corning Corp., Adhesion to Mineral Surfaces Through Silane Coupling Agents

June 21 - Dr. D. B. Spalding, Imperial College of Science and Technology, Survey of Recent Progress with the Computation of Three-dimensional Flows

June 22 - Dr. J. J. Cornish, Lockheed-Georgia Co., Some Examples of Vortex Flows



INVENTION AWARDS: Franklin H. Farmer (top photo - left), Space Systems Division, and Richard M. Hueschen, Flight Instrumentation Division, recently received \$50 each for their joint invention entitled "Dry Heat Sterilizable Glove Box." Walter P. Kabana (center photo - left), Fabrication and Charles B. King, Viking Project Office, received \$100 each for their joint invention entitled "Butt Welder for Fine-Gauge Tungsten/Rhenium Thermocouple Wire." Quinton C. Davis (lower left), Fabrication, was awarded \$200 for his invention on "Water Surface Depth Instrumentation." Laurence J. Bement (lower right), Space Technology, received \$100 for "Linear Explosive Comparison."

# Personnel Profiles

By

Allan C. Hanrahan



## Children, Career, Clubs, and Collecting

The above alliteration more or less summarizes the life of this issue's guest, and a native Hamptonian, Mrs. Bernice A. Barrack. A very pleasant lady, Mrs. Barrack is the proud mother of three grown children: a daughter, also named Bernice, and two sons, Gerald and Reggie. In addition there are seven grandchildren.

Next comes her career. Mrs. Barrack is a Clerk-Stenographer in the Airworthiness Branch of the Research Aircraft Flight Division, and has worked at the Center since January 1966, previously having worked at clerical and secretarial jobs with private businesses on the Peninsula.

In the beginning we indicated she was involved in clubs and whether or not this sets her apart from the Center's average female (if there does indeed exist



such a creature) we don't know. In any case Mrs. Barrack is a long-time member of the Wythe Woman's Club because she "likes being active in worthwhile projects."

She has held different offices in that organization as well as in another organization of which she also happens to be a charter member: NAGS; the acronym for National Association of Government Secretaries, a three-year-old organization for clerical workers both in government and in private industries heavily engaged in government contracts.

"It's a socio-educational group," she informed us. "I feel that there has been nothing like the NAGS," she continued enthusiastically. "It promotes friendship; you get to know who you're working with. It also promotes education; it encourages the members to continue their education to gain more knowledge for their job."

Bernice practices what the organization preaches because she herself is attending TNCC in the evenings with her ultimate goal an Associate of Arts degree in Business Management.

And lastly, collecting: Bernice is the proud owner of collections of such antique items as tools, keys, hinges, oil lamps, and furniture. She summed up her interest thusly: "The thrill of collecting lies in partly capturing a way of life now past." Most of the antiques are at her home in Hampton but some are at her "weekend retreat" in Matthews: three acres of land on which is standing a house built in 1860 by her great-grandfather, and a nursery (begun by her late husband) consisting of such flora as broad-



**GROUP AWARD:** Members of the NASTRAN Systems Management Office who received a Group Achievement Award "for outstanding performance and contributions in the timely development of an effective management capability for improving and maintaining the NASA Structural Analysis Computer Program" are (from left): Dr. John P. Raney, Sylvia Harris, Howard Adelman, and Dr. Deene Weidman.

## SHORT COURSE OFFERED

The Special Programs Office of the Virginia Associated Research Center is offering a short course on Errors in Computation to be held June 26-30.

A present day digital computer performs a very large number of arithmetic operations in a relatively short period of time. The fact that each individual operation can be in error has stimulated the study of the cumulative effects of round-off error.

The objectives of this course are three-fold: first, to better acquaint the computer user with the presence of errors of various types that occur in common methods for solving engineering, scientific, and mathematical problems; second, to suggest alternative methods of solution which are less sensitive to the presence of errors; and finally, to help the user to better understand the significance and correctness of the output of his programs.

The course is designed primarily for engineers, scientists, and mathematicians who use the digital computer for solving many of their problems.

The instructors will be James Bunch, Assistant Professor of Computer Science, Cornell University; William G. Poole, Assistant Professor of Mathematics, College of William and Mary; and Robert Stepleman, Assistant Professor of Applied Mathematics, University of Virginia.

Class will begin each day at 9 a.m. and end at 5 p.m. There will be three lectures and one workshop-discussion period each day. The reference will be "Rounding Errors in Algebraic Processes" by J. H. Wilkinson (Prentice-Hall, Inc.). Lecture notes will be handed out at the beginning of the course. Enrollment will be limited to 35 students.

Persons interested should call the Training Office, 2517.

★★★★★

leaf evergreens, particularly azaleas and Japanese holly.

Her other interests include -- purely for her own enjoyment -- painting in oil and acrylic mediums as well as decoupage, and recently, painting on glass.

It is a safe assumption that Bernice paints and tends the nursery stock as she does the major facets of her life: with a quiet, sure, competent hand.

## NASA-FAA TRANSP0 72 EXHIBIT TO BE VIEWED DURING OPEN HOUSE

Center staff members and their families will have an opportunity to see the NASA/FAA Transpo 72 exhibit during an open house on June 17 and 18 at Building 1244 (Hangar).

The exhibit, which was prepared by Center employees, is being returned to Langley and it will be reassembled in its entirety for display in the Hangar.

The NASA theme is "Aviation Serves the Community and the Nation." Exhibits include Passenger Growth, Better Planning Means Better Airports, Congestion, Ecology with Technology, Quieter Neighborhoods through Flight Procedures, Toward Quieter Skies, Toward Cleaner Skies, For Safer Landings, Long Haul Aircraft for the 1980's, New Vehicle Technology, General Aviation and the Private Pilot, Navigation and Communications, Service is Our Middle Name, Air Traffic Control, Where to Land Your Airport, Bringing People Together, Safety in the Skies and others.

Open house will be held on Saturday, June 17 from 10 a.m. to 4 p.m. and on Sunday, June 18 from 12 noon to 4 p.m. Staff members who will be unable to view the exhibit on the two weekend days are invited to visit the Hangar on Friday, June 16 from 2 to 4:30 p.m.

## WRIGHT HEADS CAMERA CLUB

At the May meeting of the Langley Camera Club Robert L. Wright, Office of Director for Space, was elected president. Other officers are: James J. Buglia, Environmental and Space Sciences, vice president; R. Clayton Rogers, Hypersonic Vehicles, secretary; and John K. Diamond, Flight Instrumentation, treasurer.

John D. Haigler, Research Aircraft Flight, was appointed chairman of the Contest Committee and Boyd Perry, Loads, was named Program Committee chairman.

Slide contest winners at the meeting were: First place - "Red's Pier," by Rogers; second - "Summer Flowers," by Stan Rau, Procurement, and third - "The Memorial," by Rogers.

The June meeting will be held June 20 at 7:30 p.m. at the Activities Building. The slide contest category is Pets.

All interested persons are invited to attend and submit four slide entires.



**CAMERA CLUB OFFICERS:** New officers of the Langley Camera Club are (from left): James J. Buglia, vice president; Robert L. Wright, president; John K. Diamond, treasurer; and John D. Haigler, Contest Committee Chairman. Absent are R. Clayton Rogers, secretary, and Boyd Perry, Program Committee Chairman.

## CONSERVATION OF UTILITIES URGED

With the advent of summer, a special message has been directed to all Federal employees by both the General Services Administration and the President's Office of Emergency Preparedness urging that attention be paid to the need for conservation of utilities, particularly electricity and water.

A survey of electric power problems for the summer of 1972 conducted by the Joint Board on Fuel Supply and Fuel Transport, under the direction of the Office of Emergency Preparedness, has indicated that inadequate electric generating capacity may threaten several areas of the country this summer.

This critical situation makes it imperative that all Federal employees, under the guidance provided by the heads of the various agencies, cooperate in the overall effort to conserve electric power and reduce the incidence of black-outs. NASA Headquarters has asked that all Centers work to conserve both electricity and water, the latter often being in critical supply in this area during periods of hot, dry weather.

This year, a special committee was appointed at Langley to assist in the conservation of utilities. Chaired by James H. Parks, the Utilities Conservation Executive Committee has been working with NASA Headquarters and other agencies to develop an overall program designed to insure the conservation of all utilities used at this Center. The committee plans to establish a long range plan of action, consisting of educational programs for those who have specific responsibility for utilities operations, distribution of posters to cite specific goals in which all Center employees might participate, and the publication of other articles relating to the conservation program as appropriate.

At a recent meeting of the committee, Parks pointed out that there are a number of measures which can be taken at Langley to reduce the electrical load and water consumption. Many of the objectives can only be met by the complete cooperation of each staff member. Very often each of us is aware of a specific situation, such as a leaky water outlet or a lighted but unused area where with a little cooperation, a small saving can be brought about by taking some corrective action, or calling it to the attention of the proper supervisors.

Examples of Center equipment which consume electrical power, but which are not always used efficiently are: copying machines, special purpose air conditioning equipment, hot plates, pumps, exhaust fans, and even coffee pots. Attention to efficient use of office lighting is another area where savings can be made.

The cooperation of all staff members to this program will assist this national effort. Ideas and suggestions from staff members will be appreciated and should be sent to James Parks, Mail Stop 114.

## JUNIOR AND ADULT SAILING CLASSES

Langley Yacht Club is sponsoring sailing classes this summer. Adult classes are open to military and civilian Federal employees and adult dependents on LAFB. Junior classes are open to their dependents above the age of 10. Junior classes start June 15 and July 20. Cost is \$50. Adult classes start June 19 and June 20 and they meet two nights per week. Cost is \$25. Adult registration will be at the Langley Yacht Club June 12 and 13 from 5-6 p.m. For additional information call Lt. Col. Bielstein, 764-5857/332.

## VISITOR CENTER ONE YEAR OLD

The Visitor Center has been open one year, having been dedicated on June 3, 1971, and opened to the general public on June 8. During its first year of operation, it has exceeded expectations, both in the number of people who have visited the Center and in the scope of the special educational programs which have been conducted there. More than 175,000 persons entered the doors of the Center during its first year.

The Visitor Center was originally conceived as a place to which the general public might come to know and understand more about NASA and its mission, with particular reference to some of the work in which Langley Research Center has a particular interest. The Center has served that function well, as indicated by the comments made by the many visitors. In addition, it has become the focal point of the Center's educational program, with many and varied programs being conducted at the Center or at educational facilities in the five-state area over which Langley has cognizance.

Visitors during this first year have come from all 50 states and more than 20 foreign countries. Three-hundred and sixty different schools have sent a total of 24,050 students to the Center and the schedule through the summer and for next year already is heavily booked.

Plans are well underway to insure the continued growth of the Center as an educational facility through the introduction of new types of programs. For example, during the summer months a program will be offered for local youth which will provide them an opportunity to examine different careers which they might wish to consider for their future. It will be a pilot program at Langley, during which those selected by the local school authorities will be brought to the Visitor Center to participate in workshops in such areas as general management, personnel management, etc.

Hal Mehrens, Manager of the Visitor Center, also indicated his desire to utilize the Center more in the evenings and suggests that it might be useful for organized clubs or groups looking for a different type of meeting, to come to the Center for a special program and tour. The programs can be tailored to the particular interests of any group.

Mehrens also suggests that there might be a number of Langley staff members who have not yet brought their families to the Center and they might consider doing so in the near future.

## COLLIER TROPHY WINNERS NAMED

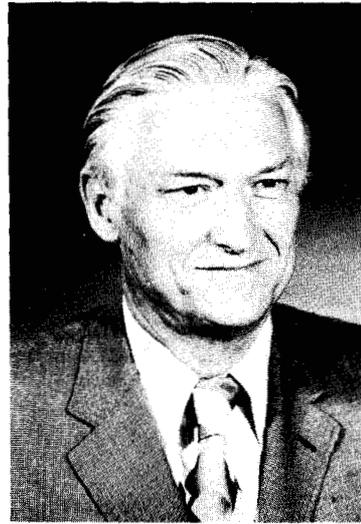
Dr. Robert R. Gilruth, Director of Key Personnel Development for NASA and former Director of the Manned Spacecraft Center, and Apollo 15 astronauts, David Scott, James Irwin, and Alfred Worden, were honored May 31 when they received the Robert J. Collier trophy. The presentation was made by Vice President Spiro Agnew.

Co-sponsored by the National Aviation Club and the National Aeronautic Association, the Collier Trophy was established in 1912 and is awarded annually for the greatest achievement in aeronautics and astronautics.

Dr. Gilruth began his distinguished career in flight research in 1937 at the Langley Research Center. He served as Director of the Manned Spacecraft Center from its inception in November 1961 until he received his appointment to his present position in January.

## HAVE YOU MET....?

Meet one of the Center's newest division chiefs -- Daniel R. Hayes, Chief of Fabrication Division. Hayes, who was



Assistant Chief of the Fabrication Division, moved up to his new position when Marion B. Seyffert, former division chief, retired in March.

A native of North Carolina, Hayes was born in Gatesville which is located near the Virginia State line. At the age of 13 he moved to Virginia with his family and graduated from Chuckatuck High School.

Hayes came up through the ranks and served his apprenticeship as a machinist (textile machinery

repair) from 1932-1937 at Stilwell Mills, Inc., in Hampton. In 1939 he joined the Newport News Shipbuilding and Dry Dock Company. In 1943, when this country was involved in World War II, there was a shortage of machinists and Langley Research Center was badly in need of help. While working full-time for the Shipyard, Hayes and a group of his fellow employees also worked 24 hours a week at Langley.

He was inducted into the U.S. Navy on April 28, 1944 and following his discharge he joined the Center staff on May 27, 1946 as a machinist in the Experimental Machine Shop.

Hayes became a first line supervisor in 1955 and on June 19, 1966 he was appointed Assistant Head of the Experimental Machine Shop Section. Six months later he was named Head of the section. On December 29, 1968 he became Head of the Machine Branch of the Fabrication Division and on February 12, 1971 he was named Assistant Chief of the Fabrication Division.

He is a member and past president of the Exchange Club of Hampton Roads, and a member of the American Legion, American Society of Manufacturing Engineers and St. Mark's United Methodist Church.

He is an amateur horticulturist specializing in azaleas, gardenias, camellias and boxwood.

## RETIREMENT SOCIALS

John G. Lowry and Eugene R. Guryansky, High-Speed Aircraft Division, will be entertained at a retirement social on June 29 at 4:30 p.m. in the Activities Building. Cost for the party will be \$4 and cost of gift only will be \$1. Contributions should be sent to Doris Vandever, MS 103, by June 23.

Gilbert F. VanZandt, Flight Instrumentation, will be honored at a retirement dinner at 6:30 p.m. on June 28 in the Activities Building. The party will be stag and cost will be \$4 for dinner and \$1 for gift. Send names and contributions to E. Thomas Freeman, MS 488, by June 21.

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NOTE OF THANKS. . . Joe Carter, Procurement Division, who was recently hospitalized for surgery, wishes to thank his friends for all the get well wishes he received.

## QUESTIONS AND ANSWERS

Q. Why, in the Question and Answer Column, does the "Questioner" remain anonymous while the person who answers has his name published for everyone to "ping on him?" Suggest that future questions have questioner's name published. With this system, I am sure the quality of your questions will improve.

A. On April 8, 1970, the Langley Researcher Advisory Committee recommended that a Question and Answer be adopted by the Langley Researcher to allow employees to ask questions concerning the activities and policies at Langley. Plans for the new feature were published in the Researcher on May 1, 1970. One of the rules established by the Advisory Committee states: "The names of persons submitting questions to the column will neither be published nor divulged; therefore, it is not necessary that the questions be signed." The results of the Researcher's opinion poll conducted in September 1970, indicated that a significant number of readers felt that the answers published were either evasive, misleading, or otherwise non-responsive. The Advisory Committee feels that a credibility gap concerning the answers greatly weakens the effectiveness of the column. The committee felt that the credibility gap might be reduced and high quality answers given if the name and title of the management official answering the question were published with his answer.

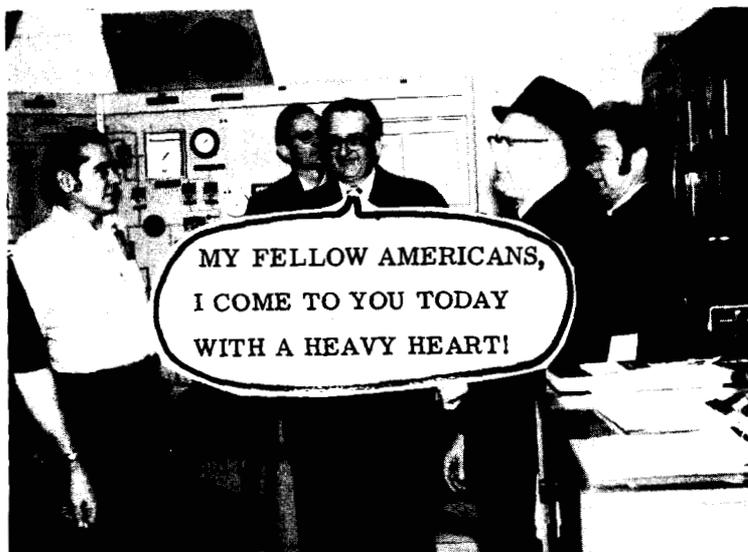
Q. Would it be possible to "reline" the back portion of the parking lot in front of Building 1244 so that it would be possible to maintain orderly parking? The way it is now, the lines are not visible enough to be used as a decent guide and, as a result, people are parking in such a manner as to block the area intended for driving.

A. Yes! The facility coordinator at Building 1244 has initiated a work request to have the front parking lot lines repainted.

Q. The day after the Apollo 16 launch, I took the guided tour of the Space Launching Center at Cape Kennedy. During the tour, praise and credit was given to Huntsville, Ala., Houston, Texas, the Jet Propulsion Lab of California and various contractors. Langley Research Center was never mentioned. The guide told me he had never heard of Langley Research Center. Is there any reason why we are not mentioned in this tour? Why can't we have a plaque or sign or something to give the public a brief history of our part in today's Space Program erected at the Kennedy Space Center's Park?

A. Edward T. Maher, Executive Assistant, Office of Di-

## WORDS IN PEOPLES' MOUTHS



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WHY NOT turn a few green dollars into some blue chip U.S. Savings Bonds? Join the Payroll Savings Plan.

★★★★★

rector for Center Development and External Affairs, stated that the guided public tour at the Kennedy Space Center is primarily related to the launch operations of NASA and is run for NASA by a contractor. The fact that only a few of the NASA Centers are mentioned during the tour is not meant to suggest that the others don't exist, but rather, it is because those mentioned are more closely associated with the launching of NASA spacecraft or scientific probes than is Langley, for example. We at Langley would, of course, like to think that Langley would be known to the tour guides and this will be taken up with an appropriate KSC official. In our own Visitor Center at Langley, there is a very good cross-section of NASA activities depicted, but only rarely is another Center mentioned by name. This is not an intentional slight to any Center, however.

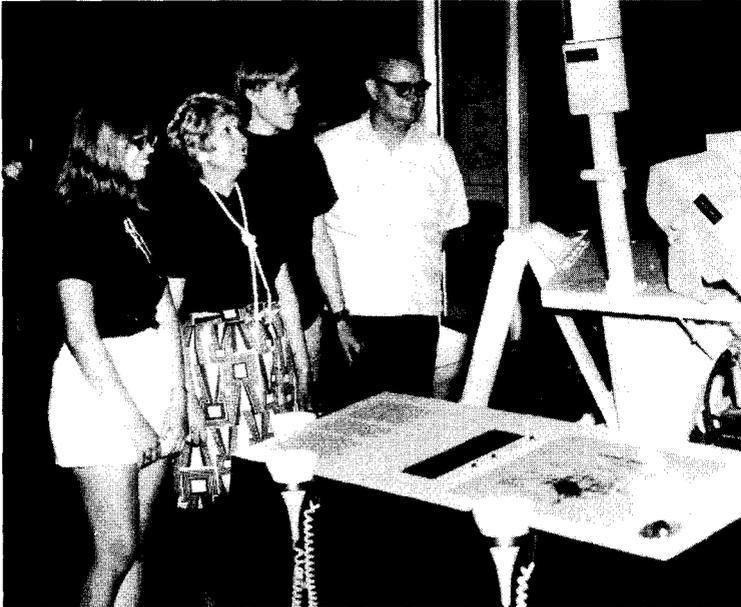
It would not seem appropriate to suggest that Langley be singled out for recognition at KSC with a plaque erected there, any more than it would be appropriate to have all other NASA Centers recognized with plaques at Langley. The success of NASA has been that all the Centers work together very closely for the good of the whole organization, without each seeking individual recognition. It is always good, though, to have pride in the work of the individual Centers to which we are assigned.

# Langley Researcher

VOLUME 11, NUMBER 12

LANGLEY RESEARCH CENTER

JUNE 23, 1972



**FIRST VISITORS:** First visitors to the Visitor Center on its first anniversary were members of the Ervan J. Holtmann family. Shown viewing an engineering model of the Viking Lander spacecraft are (from left): Pattie, Mrs. Holtmann, Jon, and Ervan J. Holtmann.

## Visitor Center National Attraction

During its first year of operation, the Visitor Center proved to be a national attraction with representatives from all 50 states and more than 20 foreign countries touring the facility.

The Center was dedicated on June 3, 1971, and opened to the general public on June 8. More than 175,000 persons entered the doors of the Center during its first year.

The Visitor Center was originally conceived as a place where the general public might come to learn and understand more about NASA and its mission, with particular reference to some of the work conducted at the Langley Research Center. The Center has served that function well, as indicated by the many favorable comments made by the many visitors.

The Visitor Center honored the Ervan J. Holtmann family of Terre Haute, Indiana, as the first family to enter the Center on its first anniversary. The Holtman family, which includes Mr. and Mrs. Holtmann, Pattie and Jon, is on a six-week tour of Northeastern United States. They feel that the Visitor Center is a must stop for citizens wanting to become more familiar and knowledgeable about NASA and its mission. Holtmann toured the facility in May and brought his family along for a return visit.

Highlights of the Visitor Center's first year of operation are featured in a photographic montage shown on Pages 4 and 5 of this issue of the Researcher.

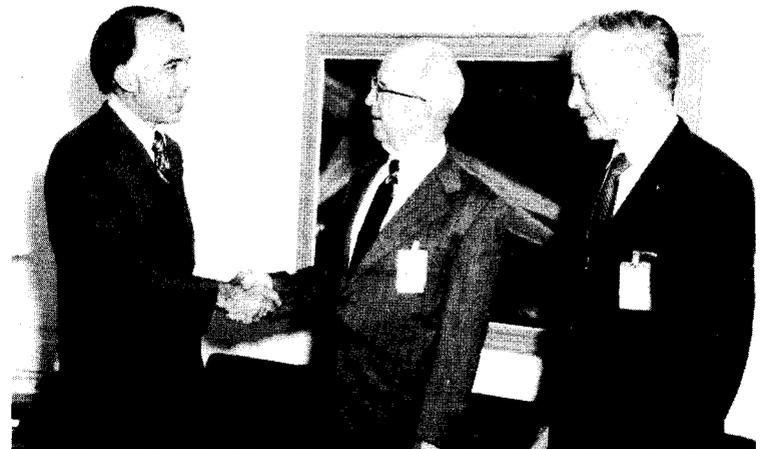
## WE MADE IT! MINUTE MAN FLAG TO FLY AT CENTER

**WE MADE IT!** The 1972 U.S. Savings Bond Campaign was successfully completed with staff members pushing the Center's bond standings to 90.2 percent participation. This entitles the Center to fly the coveted Minute Man Flag. In order to keep the flag flying, bond purchasers are reminded that we must maintain the 90 percent record.

Helen Talbott, Vice-Chairman of the effort, stated that 241 employees authorized new bond allotments totalling \$2,163.22 and 89 employees increased their allotments by \$2,022.51.

Mrs. Talbott expressed her thanks to all the directors, division chiefs, and supervisors for their support; the employees who participated in the publicity - Donna Sloan, Sandy Anspach, Lamont Poole, Ruth Luper, Deanna Taylor, and Linda Cannon; Researcher staff photographer Bob Nye; Cecil Burtner and Freddie Bragg for the bulletin boards and signs in the cafeterias; Duane McSmith for the use of the safety billboard; and the Activities Association for donating bonds to the winners in a drawing of new subscribers and those who increased their allotments.

The Minute Man Flag has been requested by NASA Headquarters from the Treasury Department and plans for a presentation ceremony will be announced as soon as possible.



**OLD TIMER:** Robert E. Hunt (center), the Center's oldest employee in point of service, will retire from the Center June 29 with over 43 years of service. Congratulating him on his long service record and wishing him a relaxing retirement are Edgar M. Cortright (left), Director, and John P. Reeder, Chief of Research Aircraft Flight Division. A native of Poquoson, Hunt joined the Center staff on Feb. 2, 1929 and he remembers that his first job was washing airplanes. He is presently employed as an Engineering Technician in the Quality Assurance Office, RAFD.

## HAPPENINGS

**CREDIT UNION WINNERS.** . .NASA members eligible for prizes in the current Fly-the-Flag contest are identified by their account numbers. The first five collect \$10 each in cash provided they qualify, while the sixth receives the \$10 plus one month's payment on his car if financed by the LFCU. The five numbers are 192, 6251, 13676, 10023, and 38561 while the bonus number is 24784. Please call or go by the Credit Union if you spot your number.

**NEWLYWEDS.** . .Wedding bells rang on June 10 at Hampton Baptist Church when Wesley R. Cofer, III, Space Technology Division, took his vows with Rachael West of Grafton.

**SKICLUB.** . .The Peninsula Ski Club is sponsoring a weekend cruising expedition up the Chesapeake Bay. Two sailing yachts will cast off at 6 p.m. tonight and return Sunday evening. Moonlight cruises are scheduled for Monday through Thursday, June 26-29, with departure at 7 p.m. For reservations call Sal Bavuso, 838-0606.

**COIN CLUB.** . .The Langley Coin Club will meet Tuesday, June 27 at 8 p.m. in the Activities Building.

**RETIREMENT BUFFET.** . .Edmond J. Zavada, Operations Support Division, will be honored at a retirement buffet in the West Cafeteria on Friday, June 30 at 4:30 p.m. Cost will be \$4 per person, \$7 per couple, and \$1 for gift only. Names and contributions should be sent to Dwight McSmith, MS 225, by June 26.

**YORK COUNTY FAIR.** . .Staff members are invited to attend the York County Fair which will run from July 3 to July 8 at the Grafton Fair Grounds on Route 17. The six-day event will be sponsored by the York Jaycees. Major attractions will be a carnival with rides for adults and children, game booths, commercial exhibits, skydiving, a horse show, an art show, and cash prizes nightly. Two gigantic fireworks shows have been scheduled for July 4 and July 8.

**NOTE OF THANKS.** . .Frank Penland, who retired June 13, wishes to thank his friends and co-workers in Personnel Division for the gifts presented him at a surprise farewell party. Penland was administrator of the Apprenticeship Training Program and Technician Training Program.

## CENTER PLANS LECTURE SERIES

The ASEE Guest Lecture Series for the next two weeks is listed below. This series is sponsored by the NASA-ASEE Summer Faculty Fellowship Program in Research and is open to all interested personnel. Each lecture will begin at 10 a.m. in the 7 by 10 Conference Room (Building 1212, Room 200).

June 27 - "Microstructure and Toughness of Polymers" by Dr. D. A. Thomas, Lehigh University.

July 5 - "Theoretical and Experimental Studies of V/STOL Noise Generation Mechanisms" by Dr. Sheila Widnall, Massachusetts Institute of Technology.

July 6 - "Unifying Insights into Steady and Unsteady Aerodynamics and Acoustics" by I. E. Garrick, former Chief Mathematical Scientist at the Center.

For further information call the Training Office, 2517.

## MEET YOUR EEO COUNSELORS



Mary W. Jackson

Mary W. Jackson is a Research Project Engineer in the Aero-Thermo Section, High-Speed Aircraft Division. She is presently engaged in the study of flow phenomena associated with roughness elements immersed in a turbulent boundary layer.

A native Hamptonian, Mary graduated from George P. Phenix Training School and was valedictorian, president of the National Honor Society, and Editor of the school paper. She received her B.S. degree in Physical Sciences from Hampton Institute and has done graduate work at Hampton Institute and the University of Virginia Extension.

Mrs. Jackson joined the Center staff in 1951 as a Mathematician and she became a Research Engineer in 1958. She is author or co-author of about ten technical reports.

In 1969 the Continental Society of Newport News, Inc., honored Mary with the "Continental of the Year" award which is presented to the member most nearly meeting the criteria of aims which are to foster, promote, and develop the welfare of disadvantaged and underprivileged children; to improve their recreational facilities; to advance their educational opportunities; and to sponsor a climate of security and well being in their environment.

In 1970 the National Council of Negro Women, Inc., presented her with their "Certificate of Recognition" for outstanding service to the community.

Her hobbies are working with disadvantaged youth and sewing - she makes 90 percent of her wearing apparel.

She is married to Levi Jackson and they have two children - Levi Jr. and Carolyn.

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**AFGE NOTICE.** . .The NASA Lodge 2755 American Federation of Government Employees will meet on Wednesday, June 28 at 7:30 p.m. at the Central Labor Union Hall.

**SOFTBALL.** . .Simulation leads the NASA Softball League with a 6-0 record. Misfits are second with 5-1.

Langley Researcher, an official publication of the Langley Research Center, National Aeronautics and Space Administration, Hampton, Virginia 23365, is published biweekly in the interest of its employees. Address contributions to the Editor, Mail Stop 154, telephone 3116.

Editor.....Ruth Angel Verell  
Staff Photographer.....Bob Nye  
Reporters.....Langley Employees

The privilege of advertising articles in this publication is restricted to employees of Langley Research Center. Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.

# JOHN STACK FATALLY INJURED



John Stack

John Stack, former Assistant Director, Langley Research Center, was fatally injured Sunday when he fell from a horse at his York County farm.

Stack retired in 1962 as Director of Aeronautical Research for NASA in Washington, a post he had held since 1961.

Upon his retirement he became Vice President of Engineering of the Republic Aircraft Corporation which later consolidated with what is now Fairchild Industries. He retired from Fairchild last year and since that time

he had been serving Fairchild as an engineering consultant.

Stack was internationally famous in his field. He joined the Center staff on July 16, 1928 as a junior aeronautical engineer. He worked on the design and development of NASA's first high speed wind tunnels, some of which yielded supersonic data in the early '30s. In 1939 he was placed in charge of all high speed wind tunnels and high velocity airflow research at Langley. In 1942 he became Chief of the newly-established Compressibility Research Division and in 1947 he was elevated to Assistant Director.

## Swap and Shop

(Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.)

### LOST

Instruction manual for Russian pronunciation dialog tapes. Lemke, 2517.

### FREE

Kittens. Schiess, 247-3097.

### WANTED

Instructor to teach Technical Russian or German. Wither- spoon, 2517.

1967 or 1968 station wagon with automatic transmission and power steering. Childs, 898-6719.

Driving combination from Seaford to W.A. on 8 shift. Childs, 2857.

Ride from Bethel Park to W.A. on 8 shift. Hett, 3041.

### FOR RENT

3-bedroom, 2-bath house with central air conditioning - located in Windsor Great Park - \$225 per month. Stein, 877-6087.

### FOUND

Tanpet rabbit near Mariners Museum. Raney, 595-3274.

### FOR SALE

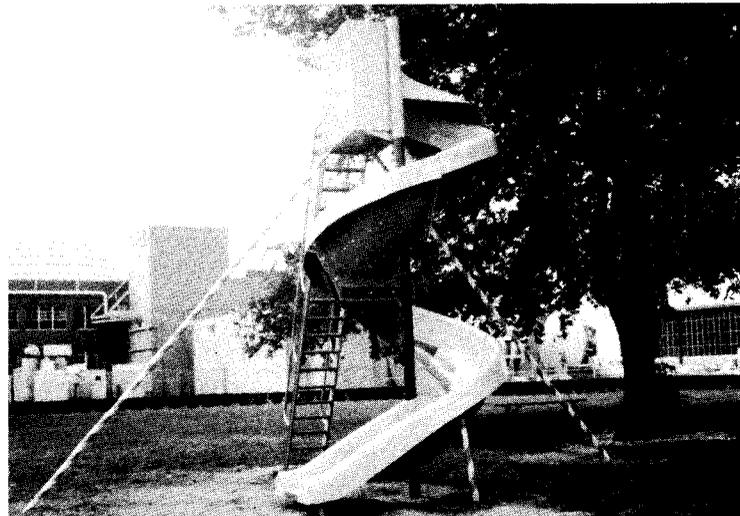
Early American sofa, 91 inches, 4 cushions, medium green - \$75. Lawing, 877-4586.

AKC registered Boston Terrier pups. Boyle, 723-3400.

1964 Buick Skylark, V-8 - \$575. Yarrington, 826-3284.

Philco radio-phonograph console - \$45; RCA stereo 4-speed portable record player - \$25. Rogers, 595-0832.

Miniature Poodle pups, female, AKC registered, shots,



**NEW EQUIPMENT:** The Activities Association has added new equipment throughout the recreation area adjacent to the Activities Building. One of the most popular attractions promises to be this 12-foot high spiral sliding board.

## Recreation Area Has New Equipment

Tangible results of employee suggestions for improved picnic and family outing facilities are readily visible throughout the recreation area adjacent to the Activities Building. Major expenditures by the Activities Association have resulted in replacement of the old wooden picnic tables with bright, colorful ones (both rectangular and circular) of aluminum and fiberglass. These are scattered throughout the area. New charcoal grills are also available for broiling that favorite T-bone or porterhouse.

A 12-foot high, 1-1/4 revolution spiral sliding board now ranks as the "funnest" attraction in the playground area. This prize addition to the recreation equipment is sure to bring much enjoyment to both the young and not-so-young. Also, for tired tennis buffs, new athletic benches (of construction similar to the picnic tables) now replace the old ones in the vicinity of the tennis courts.

An outdoor telephone has been installed beneath the picnic shelter on the activities grounds for use when the indoor facilities are unavailable. This phone is classified RESTRICTED (local calls only) and is intended for short duration and EMERGENCY incoming and outgoing calls. Note the number for future reference - 827-2142.

Your Activities Association encourages use of the picnic and recreational facilities. These facilities exist for your enjoyment and are always available for use by you and your family.

★★★★★

wormed - \$50. Seitz, 868-9468.

20,000 btu window air conditioner - \$60. Moore, 898-6770.

1963 Corvair mini bus - \$350; Argus C-3 35 mm camera - \$10. Scheiman, 851-2117.

1968 Chevrolet Biscayne, V-8 - \$695. Gibson, 826-2678.

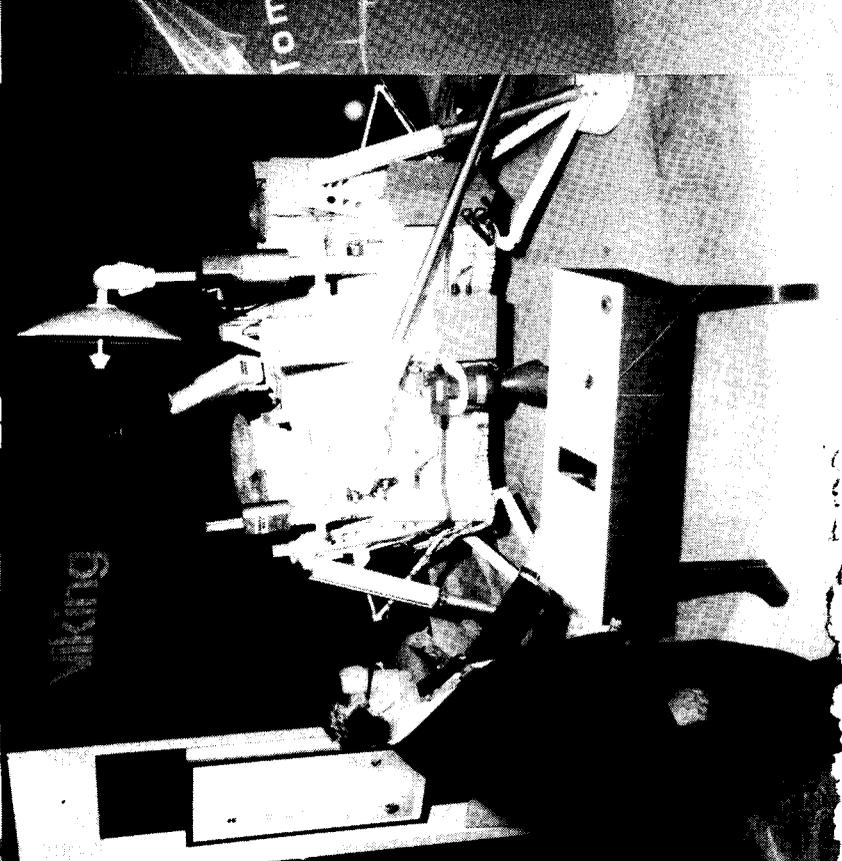
4-bedroom, 2-bath house with air conditioning, attached garage, carpeting and many extras. Johnson, 826-7908.

Kimball fiberglass concave-bottom Slalom water ski - \$15. Brown, 838-2268.

1965 Chrysler Newport, 4-door, air conditioning - \$500. Graves, 722-0041.

Alcort fiberglass Sunfish with car top carrier. Dillon, 838-3108.

PHOTOGRAPHIC HIGHLIGHTS OF VISITOR CENTER'S FIRST YEAR OF OPERATION





## TWO-PART COURSE OFFERED

The Center will sponsor a non-credit short course this summer in "Introduction to Numerical Fluid Dynamics."

This two-part course will be conducted by Dr. Joseph A. Schetz, Chairman of the Aerospace Engineering Department of Virginia Polytechnic Institute and State University, and Dr. Clark H. Lewis, also of VPI & SU. Part I will be held July 24-28 and Part II will be held August 7-11 (each student will take both parts). Class meetings will run from 9 a.m. to 12 noon each day and will be held in the Loads Division classroom (Bldg. 1229, Room 236).

Academic credit will not be given; however, a pass-fail grade will be assigned. Prerequisites are compressible fluid mechanics courses (e.g., Liepmann and Roshko or Shapiro Volume I or equivalent) and knowledge of basic FORTRAN programming (introductory course or equivalent).

Part I will consider the classification of partial differential equations describing compressible fluid mechanics into hyperbolic, parabolic and elliptic systems of equations. The two-dimensional and axisymmetric method of characteristics will be presented and discussed in detail for solution of hyperbolic equations of inviscid supersonic and hypersonic flows. Students will solve problems from given initial data for a cone-cylinder at zero lift in a supersonic stream. Students will also develop a computer program to compute supersonic inviscid flow fields including Prandtl-Meyer expansion corners and rotational flows caused by curved shock waves.

Part II will consider parabolic system of equations of the boundary layer type. Rigorous numerical analysis of the heat equation as a model parabolic equation. Explicit, implicit, Crank-Nicholson, Hartree-Wormersley methods. Stability analyses by various methods. Truncation error. Detailed development of the finite-difference treatment for a planar, steady, incompressible, laminar boundary-layer flow. Modelling of turbulent transport phenomena. Description of an available program for laminar and turbulent boundary-layer flows for perfect or equilibrium gases.

Interested persons should call the Training Office, 2517, and notify their division training coordinator.

### COMING EVENTS

The following events are scheduled to take place in the Activities Building during the next two weeks:

- June 24 - Civil Service Exam - 8 a.m. to 12 noon  
Model and Equipment Section picnic  
Cliff Nelson retirement party
- June 25 - Gas Dynamics Group picnic 1 to 6 p.m.
- June 26 - Thermo Materials Branch picnic 6 to 8:30 p.m.  
Samuel Gibbs retirement party
- June 27 - Coin Club 8 p.m.
- June 28 - Gilbert Vanzandt retirement party
- June 29 - John Lowry retirement party
- June 30 - Happy Hour
- July 1 - Dance 9 p.m. to 1 a.m., featuring Clyde Beavers
- July 2 - Building open
- July 3 - Building open
- July 4 - Building closed
- July 5 - Building open
- July 6 - Bingo 8 p.m.
- July 7 - Building closed

--Buy U. S. Savings Bonds--



**ACHIEVEMENT AWARDS:** Thomas H. Leffel Jr. (top photo-right) receives a Special Achievement Award from Daniel R. Hayes, Chief of Fabrication, for "his outstanding contribution in the preparation of fluid components on the pressure system of the Meteoroid Technology Satellite." In the bottom photo Vernon L. Alley (left), Chief of Systems Engineering, presents a Special Achievement Award to Milton L. Williams for "outstanding achievement in the engineering development of a prototype pilotless aircraft data system which is compatible with improved sensors and uses advanced data collection techniques to permit full application of computer methods for data reduction and analysis of aircraft performance."

### Can You Solve This Problem?

A technique for mapping out the visual field that is suitable for mass screening of selected occupational groups is needed by the National Institute of Occupational Safety and Health. Refer to MISC-20. Contact the T. U. Office, 3281, for additional information or if you have a potential solution.

# Personnel Profiles

By

Allan C. Hanrahan



## Play Ball, Boys

This time around, folks, we would like to have you make the acquaintance of a man who, although he has no children of his own nonetheless donates -- and this a conservative estimate -- about 1100 hours a year to the youth of the Peninsula.



We're talking about Leo O. Roach Jr., a Property Technician in the Property Management Branch of the Management Services Division. He also happens to be, extracurricularly speaking, a past recipient of the York-Jaycees physical fitness award, as well as the State Jaycees Leadership award. The Jaycees award honors men and women who have made significant contributions to the nation's fitness effort.

Now, as to just what "significant contributions to the nation's fitness effort" Roach has made, please allow us to recount the following: He has umpired baseball in the York Little League and Babe Ruth League since 1962. He started umpiring in the district all-star tournament in 1962 and in 1965 and 1966 he was umpire-in-chief of the tournament. In 1966 he umpired in the state all-star tournament and helped broadcast the games to York County when he wasn't umpiring. In basketball he has refereed in the York Junior League and the Newport News YMCA Church since 1964. In football, he started coaching in 1965 in the York County Football League. The team he coached that first year -- a 'junior' team -- won the league championship. The team he has been coaching since 1966 -- a 'mid-get' team -- has won the league championship every year but one and has amassed a record of 50 wins, 3 losses, and 3 ties!

When asked how he became involved with youth sports he first answered that he didn't know but thinking about it he recalled that he used to watch some games across the street from his house and then started helping umpire. He concluded by saying, "I guess I just sort of drifted into it."

Born forty-nine years ago in Morristown, Tenn., Leo has lived on the Peninsula since the age of six months and attended Hampton High School before beginning his Govern-

## NASA APOLLO-NASSAU TRIP

Ernie Greene, Activities Association's travel coordinator, announced that over 70 persons have made plans to take the Apollo-Nassau Adventure scheduled for December 6 through December 11.

The trip is being coordinated with Lewis, Goddard, and NASA Headquarters and the adventure is open to staff members, their families and friends.

Cost of the round trip to see the Apollo 17 launch and a week-end cruise to Nassau is \$315 for an inside cabin with double occupancy on the cruise and \$345 for an outside cabin with double occupancy on the cruise.

A deposit of \$100 per person must be made by June 30. The check should be made payable to Westgate Travel and mailed to Westgate Travel, 19739 Center Ridge Road, Rocky River, Ohio 44116, or sent to Ernie Green, MS 157A.

## Cafeteria Menu

The following menu will be served in the cafeterias during the week of June 26:

Monday - Cream of mushroom soup, char-broiled rib steak, broiled liver and onions, broiled red snapper, Maryland fried chicken, spaghetti with meat balls.

Tuesday - Vegetable beef soup, London broil, Chinese egg rolls, meat loaf, franks and beans.

Wednesday - Fisherman's chowder, steamboat round, chicken and dumplings, stuffed flounder, enchiladas.

Thursday - Scotch broth, char-broiled rib steak, stuffed peppers, breaded veal, sauteed scallops, ham croquettes.

Friday - Cream of celery, business man's lunch, simmered corned beef and cabbage, chicken cacciatore, shrimp Newburg, sloppy Joe.

The menu for the week of July 3 is as follows:

Monday - Chicken gumbo soup, T-bone steak, beef stew, stuffed pork chops, fried oysters, chili con carne.

Tuesday - H O L I D A Y

Wednesday - Corn chowder, rib steak, veal parmigiano, broiled lobster tail, chicken chow mein, fried clams.

Thursday - Cream of asparagus soup, fiesta ka-bobs, broiled liver and onions, barbequed beef, clam croquettes.

Friday - Bean with bacon soup, beef teriyaki, broiled fish, chicken a la king, grilled cheese sandwich.

## RETIREMENT SOCIAL

A retirement party honoring Raymond M. Hansen, Assistant Chief of Instrument Research Division, will be held on Thursday, July 13 from 4:30 to 6:30 p.m. in the Activities Building. Cost will be \$5 per person or \$9 per couple. The cost of gift only will be \$1. Names of persons planning to attend the party and contributions should be sent to Miriam Hall, MS 235, by July 7.

★★★★★

ment service in 1941 as a civilian with the Air Force. After serving a stint in the Army from 1943 to 1946 he came to the Center in December 1947.

His wife of twenty-six years, Frances, herself worked at the Center until 1951.

Before we conclude, permit us to list two other of Leo's interests not already mentioned, and these are reading and golf. It is hoped that these interests, along with those of coaching and umpiring, return to Leo a small measure of the pleasure he has enabled so many boys to receive.

## QUESTIONS AND ANSWERS

Q. I read recently where a decision to mail payroll checks to employees of a federal agency instead of hand delivering them was reversed because of protest by the employees concerned. The reason for protesting was delays in the mail and chance for loss in the mails. Is it possible to have your paycheck hand delivered here at LRC? Since the secretaries already deliver the statement portion, how much more effort is needed to deliver the paycheck?

A. Edward A. Howe, Chief of Financial Management Division, said he did not have any knowledge of the decision referenced by the questioner. There was an article in the February 18, 1972 Langley Researcher (Vol. 11, No. 4) entitled "Staff Urged to Have Check Deposited to Bank Account" which pointed out the many advantages to this procedure. Among the advantages is the fact that the Treasury Department, under the composite check procedure, guarantees the bank deposit on pay day even if the check is lost in the mails. This is accomplished by a transfer of funds through the Federal Reserve System.

Howe stated our mail distribution system is under support contract and has its heaviest work load on Mondays. We plan to cut back on this contract effective July 1, 1972. Should a check be lost in the system, we could not exert any special effort to locate it. The Statement of Earnings delivered by secretaries and T & A Clerks is not nearly as urgent as are pay checks, and can be handled more on a time-available basis. While the Payroll Section will direct the Treasury Department to mail pay checks to any address the employee designates, we encourage our employees to have their checks mailed to their respective banks because of the guarantee feature of the composite check system cited above.

Q. While the new Scout Office was under construction something kept bothering me. That general area already had one of the worst parking problems in the West Area. (The East Area is completely hopeless, of course.) And, yet, I saw no new parking areas being prepared. Now I see in the Researcher of April 14, 1972, that there is a great deal of illegal parking going on particularly in that area. My questions: (1) Wasn't it unwise to add the new Scout building without additional parking facilities? (2) Is anything being done to alleviate the inadequate parking facilities in that area? (3) Is there any plan to avoid similar goofs in the future? Or, is the West Area destined to become like the East Area in its parking problems?

A. In answer to the questions without comment on the

## DANCE FEATURES CLYDE BEAVERS

The Activities Association will present a show and dance featuring recording artist Clyde Beavers and the Eager Beavers on Saturday, July 1 from 9 p.m. until 1 a.m. in the Activities Building.

The Clyde Beavers group, straight from the Opry in Nashville, will put on a country western show in addition to furnishing country dancing music.

Beavers is the composer of such major hits as "My Mom and Santa Claus" for George Jones and "Crazy Little Things" for Paul and Paula; and the possessor of such record hits of his own as "I'd Rather Fight Than Switch," "That's You," "Still Loving You," and the original English language version of the famed Japanese hit, "Sukiyaki."

Admission will be three dollars per couple, including set-ups. Tickets are now on sale at the Activities Building. Reservations may be made with the purchase of tickets.

## NASA TALENT SHOW PLANNED

The Happy Hour on Friday, July 14 at the Activities Building has been designated NASA Talent Time.

The Activities Association is asking all NASA amateur performers to come show their talents. Prizes will be awarded for the first three places.

Contestants may register for this event by sending their name, mail stop, phone number, and a brief description of their talent to Herb Boulter, MS 236, by Tuesday, July 11.

★★★★★

THE more you know, the more you know you don't know.

★★★★★

assumptions, Glen Ford, Management Support Division, stated:

(1) The Scout Building was sited to link up with other large project offices (i.e. Viking) and to furnish the Center with a contiguous block of office space for future projects.

(2) There is a long range plan to improve both the parking and traffic flow of this area. Work will begin on this project about July of this year. Jim Ramsey, Facilities and Equipment Engineering Division, is the Technical Project Engineer.

(3) This was not a "goof," it was a well planned "strategic move" to provide better working space in the West Area and unload unsuitable working space in the East Area. Furthermore, there are more parking spaces than automobiles in the West Area; however, like office space the distribution is the problem. Everyone can find a parking space if he is willing to walk a block or so.

# Langley Researcher

VOLUME 11, NUMBER 13

LANGLEY RESEARCH CENTER

JULY 7, 1972

## ANDERSON NAMED CENTER'S EQUAL EMPLOYMENT OPPORTUNITY OFFICER



Alvin F. Anderson

Alvin F. Anderson, Associate Director of Afro-American Studies Program and Assistant Professor of the Graduate Division of Education at Hampton Institute, has been appointed the Center's Equal Employment Opportunity Officer. The appointment, which became effective July 3, was announced by Director E. M. Cortright.

In his new position, Anderson will serve as the Center's Equal Employment Opportunity Officer and Chairman of the Equal Employment Opportunity Com-

mittee with responsibility for carrying out the program and policies of the Center which will assure continuing and effective equal employment opportunity for all civilian employees and applicants for employment, including minority groups and women and contractor compliance with established EEO programs and policies. He will report directly to the Director for Administration.

An Affirmative Action Plan for Equal Employment Opportunity has been established at the Center for the purpose of maintaining an effective and aggressive equal employment opportunity program. All supervisors have been given copies of this program outlining their individual responsibilities in achieving its goals. The plan was developed to assure that all employees have an equal opportunity to develop and advance to the fullest extent of their skills and ability, free from prejudice and discrimination.

Anderson was born March 12, 1936, in Charleston, South Carolina. He graduated from Charleston's Burke High School and served in the U.S. Army from August 1958 to July 1960. He received his A.B. degree in Sociology from Seattle University, Seattle, Washington, in 1963 and his M.A. degree in Guidance and Counseling from John Carroll University, Cleveland, Ohio, in 1967. He has completed his study requirements for his doctorate at the University of Virginia.

Anderson has had considerable experience in working with race relations and ethnic groups. At Hampton Institute he developed the African-American studies program and taught social psychology, criminology, urban sociology, and population theories. Before joining the Hampton Institute faculty, he served from 1969 to 1970 as assistant

(Continued on page 3)

## LOVE APPOINTED NEW DIRECTOR FOR SPACE; NELSON RETIRES



Eugene S. Love

Eugene A. Love has been named the Center's Director for Space, succeeding Clifford H. Nelson who retired June 30. His appointment was announced by Director Edgar M. Cortright and became effective July 3.

Love has been serving since January 1970 as Chief of the Space Systems Division through which Langley has focused its intensive effort supporting the development of the Space Shuttle. He is an internationally recognized expert in the field of hypersonic aerodynamics and reentry from space flight.

As Director for Space, he will be responsible for the activities of the Environmental and Space Sciences Division, Space Systems Division, Space Technology Division, and Scout Project Office. Formal approval of the appointment by NASA Headquarters is expected shortly.

Love was born in Elizabeth City, N.C., on October 15, 1920, and began his college education at North Georgia College where he pursued a course of pre-medical studies, graduating in 1940. After a period of military service during World War II, he continued his education at Georgia Institute of Technology and received his B.S. degree in Aeronautical Engineering in 1947. This was followed by graduate studies with the University of Virginia Extension.

Love began his career at Langley on July 9, 1947. He was assigned to the 9-inch Supersonic Tunnel Section, Aero-Physics Division, to conduct basic and applied research on aerodynamic problems of supersonic aircraft. He became head of the section in September 1951.

He was placed in charge of all hypersonic research of the Aero-Physics Division in August 1956 and in April 1959 was appointed Assistant Chief of the Division. In August 1969 he was given the additional duties as Head of the Space Shuttle Technology Task Group and in October 1969 he was appointed Associate Chief of the Aero-Physics Division.

In 1960 the National Civil Service League honored him with the League's Career Service Award as one of the top ten Federal Government employees, exemplifying in outstanding manner the primary characteristics of the career service. Love was selected for his outstanding research

(Continued on page 3)

### HAPPENINGS

**APOLLO-NASSAU TRIP.** . .A total of 122 Langley staff members have made plans to take the Apollo-Nassau Adventure scheduled for December 6 through December 11, according to Ernie Greene, Activities Association's travel coordinator. Spaces are still available and reservations will be accepted until all spaces have been filled. Cost of the round trip to see the Apollo 17 launch and a week-end cruise to Nassau is \$315 for an inside cabin with double occupancy on the cruise and \$345 for an outside cabin with double occupancy on the cruise. A deposit of \$100 per person must be made by July 30. The check should be made payable to Westgate Travel and mailed to Westgate Travel, 19739 Center Ridge Road, Rocky River, Ohio 44116, or sent to Ernie Greene, MS 157A.

**RETIREMENT SOCIALS.** . .A retirement party honoring Dr. Samuel Katzoff, Chief Scientist, will be held Monday, July 24 from 4:45 p.m. to 6:30 p.m. in the Activities Building. Cost of the social and buffet will be \$4 per person or \$7 per couple. Send names and contributions to Priscilla Balanis, MS 102A, by July 20. . .A retirement party honoring Douglas H. Foland, Head of Structures Tunnel Section, Structures Division, will be held Thursday, July 27 from 4:30 to 6:30 p.m. in the Activities Building. Cost will be \$4 per person or \$7 per couple. Cost of gift only will be \$1. Send names and contributions to Renee Benton, MS 208, by July 21.

**NEW HEIRESS.** . .Celebrating the birth of a seven-pound, four-ounce daughter, Andrea Dawn, on May 24 is Tom D. Finley, Instrument Research.

**CAMERA CLUB.** . .The July meeting of the Langley Camera Club will be held at 7:30 p.m. on July 18 in the Activities Building. Business will include the presentation of the new constitution for the club. An open category slide contest will be held. All interested persons are invited to attend and enter four slides in the contest. For additional information call Bob Wright, 2893.

**FLYING CLUB.** . .The Flying Club has openings for pilots or students. Planes used include a Cessna 150, 172, and IFR 182. For further information call W. A. White, 3761, or C. D. Trescot, 3181.

**LOST.** . .A box of memo pads which was addressed to the Safety Office, MS 219, Building 1232A, Room 231, has apparently been delivered to an incorrect address. It will be appreciated if all facility coordinators will check to determine if such a shipment has been received in their facility. If found please call the Safety Office, 3310 or 3950.

**TRYOUTS.** . .The Casemate Theater Guild, Fort Monroe, announced that tryouts for the comedy farce "Three Bags Full" will be held at the Fort Monroe YMCA July 10 and 11 from 7 to 9 p.m. There are parts for six men and five women. Director is Tom Miller and production is scheduled for late August. All interested persons are invited.

\*\*\*\*\*

EVERY MAN I meet is in some way my superior; and in that I can learn from him.

### MEET YOUR EEO COUNSELORS



Benjamin O. Smith

Benjamin O. Smith is an Employee Development Specialist in the Training Office, Personnel Division. He is responsible for administering the Engineering Technician Training Program, TNCC co-op program, vocational teachers program, and in-house technical courses.

Smith is a native of Richmond, Virginia. He attended high school in Richmond and received his degree in Vocational Education from Hampton Institute in 1952.

Smith served in the U.S.

Army from 1952 to 1954 and in the reserves from 1954 to 1964. While in the Army he was a substitute teacher at Huntington High School. He joined the Center staff in 1956 and was assigned to the Fatigue Section, Structures Division. From 1967 to 1971 he worked in Flight Instrumentation Division and was assigned to his present position in late 1971.

He is a member of the NAACP and on the Board of Directors for the Citizens Boys Club.

Smith feels that through his counseling efforts he will make a contribution to promote harmony between minority employees and management.

He claims his hobbies are too many but he enjoys photography, auto racing, competitive pistol shooting, and stereo listening.

### GOLF WINNERS ANNOUNCED

The NASA Golf Association held its third tournament of the year at the Newport News Golf Course. Walter Olstad won low net and second low gross with a score of 82-13-69. Stan Gula took second low net with 82-13-69 and Fred Eubank came in third with 84-15-69. Joe Jones won low gross with 82-9-73.

Winners in the second flight were L. Forrest with low net score of 84-19-65; R. Hall came in second with 88-22-66, and Bob Keller was third with 87-17-70.

Glen Ford took first place in low net in the third flight with 97-30-67.

Langley Researcher, an official publication of the Langley Research Center, National Aeronautics and Space Administration, Hampton, Virginia 23365, is published biweekly in the interest of its employees. Address contributions to the Editor, Mail Stop 154, telephone 3116.

Editor.....Ruth Angel Verell  
Staff Photographer.....Bob Nye  
Reporters.....Langley Employees

The privilege of advertising articles in this publication is restricted to employees of Langley Research Center. Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.

## LOVE DIRECTOR FOR SPACE

(Continued from page 1)

contributions to the aerodynamics of supersonic and hypersonic flight vehicles. He was presented the Center's Special Service Award for Exceptional Scientific Achievement in 1966.

Nelson, who retired after 31 years of service, is a native of Montana. He attended Montana State College and was graduated with the degree of Bachelor of Science in Electrical Engineering from the University of Washington in 1938.

He has served as Director for Space since 1967.

In May 1963 he was appointed head of the Lunar Orbiter project. The first of five Lunar Orbiter spacecraft left the launch pad at Cape Kennedy on August 10, 1966, and the fifth was launched less than a year later on August 1, 1967. The five successful missions provided significant new information about the Moon's surface and acquired a wealth of photographic detail which will stand as a definitive source of lunar surface information for many years.

Prior to his appointment as head of Lunar Orbiter, Nelson was active in the development of flight research techniques and instrumentation used in aircraft and space vehicles in advanced scientific investigations.

The Center's Outstanding Leadership Award was presented to Nelson and he received the NASA Medal for Exceptional Service for his skillful and effective leadership of the Lunar Orbiter Project, both in 1967.

Also retiring after 35 years of service with NASA is Herbert A. Wilson Jr. Since October 1970 he has been associated with Nelson as Assistant Director for Space.

A native of Inverness, Mississippi, Wilson received his B.S. degree in Aeronautical Engineering at Georgia Institute of Technology in 1934. He joined the Center staff in 1937 as an Aeronautical Research Engineer in the Full-Scale Wind Tunnel Section.

In 1943 he was appointed Head of the Full-Scale Wind Tunnel and in 1948, when the Center pioneered in the design of large scale supersonic wind tunnels, he was selected to head the group responsible for the design, construction, and operation of the Langley Unitary Plan Wind Tunnel. In 1954 a division was established to operate the facility and Wilson was appointed its division chief.

In May 1961 Wilson was appointed Manager of the Flight Reentry Programs Office (Project FIRE). Project FIRE was a research project on flight reentry at very high speeds (about 25,000 miles per hour) to measure heating rates and radio signal "blackout" during actual atmosphere entries. He was appointed Chief of the Applied Materials and Physics Division in June 1964.

Wilson is a recipient of the Apollo Achievement Award presented in July 1969; he was presented Langley's Special Service Award for Outstanding Leadership in February 1966, and the NASA Exceptional Service Award in October 1966.

★★★★★

THERE are thousands who can see that a statement is nonsense and yet are quite unable to disprove it formally.  
--G. C. Lichtenberg

IT IS often surprising to find what heights may be attained merely by remaining on the level.



Clifford H. Nelson

Herbert A. Wilson, Jr.

## ANDERSON EEO OFFICER

(Continued from page 1)

principal at Rivers High School in Charleston, S.C., where he became the first black assistant principal to conduct sensitivity training sessions for mostly white teachers. From 1967 to 1969 he was Director of Counseling Services at Vorhees College, Denmark, S.C. He initiated and developed the first counseling program at Vorhees with objectives, aims and goals, specifically designed for Negro college students. For this work he received commendations from the Southern Association of Colleges and Schools.

From 1964 to 1966 Anderson served as Director of Guidance Services at Charles A. Brown High School in Charleston. He directed high school programs for Negro students and initiated the first social hygiene program for adolescent boys and girls. While attending Seattle University, he also worked as a counselor at the Luther Burbank School for Boys, Mercer Island, Washington. Here he conducted individual and group counseling for delinquent adolescent boys in an institutional setting.

As a consultant, Anderson conducted community relations on "Strategies in Black-White Relations: An Affirmative Action Program" at both the Langley and Lewis Research Centers.

Anderson has been active in the communities in which he has lived and his many volunteer services include: member of the scholarship committee for Omega Psi Phi Fraternity, Inc., member of the Free Eye Glasses Program Committee, a participant in the YMCA Foster Father's Program, active in the tutorial program for disadvantaged boys and girls, a consultant to the un-wed mother's program, and a consultant to the Hampton Boys Club.

Anderson has had several articles published in educational journals and he is the author of a handbook on "The Challenge to Black Counseling in a Black College."

★★★★★

ANNIVERSARY: Kennedy Space Center began its second decade of operation as a NASA Center, Saturday, July 1, following a first ten years highlighted by a series of operational successes and individual accomplishments. Established as the Launch Operations Center on July 1, 1962, the installation's name was changed to the John F. Kennedy Space Center by an Executive Order signed by President Lyndon B. Johnson on November 29, 1963, five days after the death of President Kennedy.

## LOCAL NCMA CHAPTER FORMED.

A group of 13 representatives from both industry and Government on the Peninsula has received approval from the National Board of Directors to form a local chapter of the National Contract Management Association (NCMA). The NCMA is an association of individuals from both industry and Government who deal in the field of government contracting and subcontracting. The NCMA currently has a membership of well over 3600 with 44 chapters located throughout the United States.

Of the 13 petitioning members, six are from the Langley Procurement Division. They are Sherwood L. Butler, Chief of Procurement; William R. Nixon, head of Pricing; John L. Cleary, head of R&D Contracts Branch; Frank V. Moore, head of Contract Administration Section; Robert R. Moore, head of Scout Contract Administration, and Richard R. Bright, Scout Contract Specialist.

The purpose of the NCMA is to increase the effectiveness of contract management by assisting members in improving their contract management skills through educational programs and contact with knowledgeable persons in the field as well as establishing a uniform code of ethics for those engaged in contract management and enabling members to share in the widest range of experience and knowledge represented by the membership as a whole.

Membership is open to those who have professional experience in contracting with Federal, state, counties, cities and other public forms of Government, including procurement, production, quality control, engineering, program management, management systems and like functions and the business management of commercial contracts.

The Hampton Roads Chapter recently elected its first slate of temporary officers. They are: Chairman Pro Tem - Richard T. Bright (NASA); Vice-Chairman Pro Tem - Frank V. Moore (NASA); and Recording Secretary Pro Tem - Terry H. White (navy).

Anyone interested in the NCMA may contact Ted Bright, Procurement Division, extension 3247.



**FREAK ACCIDENT:** John Garren views the deer that jumped through the rear window of his automobile. John was traveling southwest on Freeman Drive when the deer jumped through his window and apparently broke her neck.

## DEER JUMPS THROUGH CAR WINDOW

John Garren, Low-Speed Aircraft Division, had a very unusual experience recently. He was traveling southwest on Freeman Drive between Building 1202 and the Noise Facility when he noticed a beautiful deer coming across the vacant lot and heading for the street.

John continued on his journey - at least for a moment. A few seconds later he heard a noise and he looked into his rearview mirror to see if the deer had crossed the street. He didn't see the animal so he stopped his car, thinking that maybe the deer had accidentally hit the rear of his car.

He didn't discover any damage to his late model car. He opened the door to get back inside when he was suddenly startled. When the deer leaped, it did not clear John's car, but went through the rear window which was up. The deer apparently broke her neck and was lying in the floor of the car on her back as if she had been placed there.

This unfortunate animal, who was a prospective mother, completely severed the window from the side of the car, but not a scratch was made on the paint.

If the deer had been traveling one second faster or John one second slower, she would have gone through the open front window and her entire weight would have hit Garren.



**GROUP AWARD:** Members of the Externally Blown Jet Flap Development Team who recently received a Group Achievement Award are seated (from left): William L. Grantham, Marion O. McKinney, and Charles C. Smith. Standing - Delma C. Freeman, Joseph L. Johnson, and Lysle P. Parlett. The team was cited "for special achievement in the development of the externally blown jet flap in the critical areas of aerodynamics and handling qualities to the point where it is ready for application to research aircraft."



**ACHIEVEMENT AWARD:** A Group Achievement Award for development of advanced trajectory targeting and error analysis programs was recently presented to (from left): Richard M. Green, George R. Young, and Lawrence Hoffman.



**SUGGESTION AWARD:** Charles W. Knight, Instrument Research Division, recently won \$275 for his suggestion relative to the design of a solid state signal conditioner for use in low pressure scanning system.

## cafeteria menu

The following menu will be served in the cafeterias during the week of July 10:

Monday - Chicken rice soup, business man's lunch, meat loaf, glazed ham, baked lasagna, fish cakes.

Tuesday - Crab bisque, rump roast, Swiss steak, taco dog and burrito, barbequed chicken.

Wednesday - Vegetable beef soup, rib steak, braised beef tips, seafood platter, cordon bleu, beef and macaroni.

Thursday - Cream of mushroom soup, London broil, beef burgundy, chicken chow mein, ham croquettes.

Friday - Tomato bisque, T-bone steak, barbequed spare-ribs, sauteed chicken livers, broiled flounder, wieners and sauerkraut.

Snack bar - Soup, jumbo burger, hot dogs, fish sandwich, 3-D burger, French fries and apple turnovers. Variations - Roast beef, pastrami, chicken salad (Mon.); NASA submarine, corned beef, ham salad (Tues.); ham cheese club, NASA submarine, tuna salad (Wed.); steak, cheese and liver-wurst, pastrami (Thurs.); salami, hot roast beef, ham and egg (Fri.).

The menu for the week of July 17 is as follows:

Monday - Minestrone soup, sauerbraten, meat loaf, fried shrimp, stuffed cornish hen, tuna noodle casserole.

Tuesday - Cheese chowder, steamboat round, chuckwagon steak, Maryland fried chicken, fried clams.

Wednesday - Chicken vegetable soup, rib steak, fried steak, veal scallopini, ham steak, franks and beans.

Thursday - Cream of asparagus soup, beef and mushroom egg rolls, fish fry, chicken croquettes, spaghetti with meat balls.

Friday - Scotch broth, rib steak, beef teriyaki, creamed dried beef on toast, fried oysters, macaroni and wieners.

Snack bar - Soup, jumbo burger, hot dog, fish sandwich, 3-D burger, French fries, apple turnovers. Variations - Corned beef, ham and cheese club, NASA submarine (Mon.); pastrami, luncheon meat and cheese, NASA submarine

## CAREER EXPLORATION PROGRAM

The Langley Research Center and the local school systems of Hampton, Newport News, and York County will sponsor a four-week summer Career Exploration Program. The purpose of the program is to offer talented students (probably juniors and seniors) an opportunity to work with engineers, technicians, or administrative personnel.

A Langley person will serve as a sponsor and will enlist the student help in worthwhile work that will contribute to his understanding of a career in administrative or research technology. There is a possibility that the student will identify an area of interest that will challenge him and he will be encouraged to pursue this further during the next school year in the form of a science project or paper which could give him extra academic credit.

The student is to be recommended by the school officials or if a Langley employee knows of a student who will benefit from this program, he may recommend the student. The program will run from July 10 through August 4 and will consist of a seminar phase and a work assignment phase. A second session will start August 7. Each morning from 8 to 9 a.m. the students will assemble at the Visitor Center for a seminar which will include such subjects as the following:

Mission of the agency, mission of the Center, project approach such as Orbiter and Viking, management concepts, budgeting and finance, space applications, public affairs, and personnel development.

The student will then report to his sponsor for the on-the-job training part of the program where he will remain until noon. The participating students will receive no pay or benefits other than the educational experience of the program.

Persons wishing to recommend a student for the program should contact Hal Mehrens, extension 2855.

## CENTER PLANS LECTURE SERIES

The ASEE Guest Lecture Series for the next two weeks is given below. This series is sponsored by the NASA-ASEE Summer Faculty Fellowship Program in Research and is open to all interested personnel. Each lecture will begin at 10 a.m. in the 7 by 10 Conference Room (Building 1212, Room 200).

July 13 - Systems Analysis and Design Processes, by Dr. Tung Au, Carnegie-Mellon University.

July 18 - Two Phase Flows with an Application to Lunar Ash Flow by Dr. S. I. Pai, University of Maryland.

July 20 - Some Aspects of Finite Element Analysis by Dr. R. H. Gallagher, Cornell University.

For further information call the Training Office, 2517.

★★★★★

THERE is nothing wrong with making mistakes, but don't respond to encores.

MANY might have attained wisdom had they not thought that they had already attained it.

A CRIMINAL is nothing else but you and me at our weakest, found out.

★★★★★

(Tues.); steak, barbequed pork, NASA submarine (Wed.); hot roast beef, pastrami, chicken salad (Thurs.); corned beef, grilled cheese, ham and egg (Fri.).



**VOCATIONAL TEACHERS:** Each summer Old Dominion University and NASA jointly provide an opportunity for vocational education teachers to up-date or acquaint themselves with Modern Technology (Advance). This year the group will be at NASA through July 24. Each day consists of two hours of classroom instruction on the subject of education and curriculum, taught by Donald Buchanan, Old Dominion University. The remainder of the day is spent in a NASA laboratory or shop working with a

technician. Attending the training sessions are front row (from left): Lyndell L. Hockman, Lawrence M. Morris, F. M. Gayhart, Ted R. Slater, Burns D. McFall, Kenneth D. Meade, Nathaniel M. Moore, William C. Rice, and Donald Buchanan, instructor. Second row - Frank Penland and Ben Smith, Langley advisors; Robert H. Lacy, Francis D. Chestney, Hugh D. Little, William F. Dillon, J. P. Roudabush Jr., and McClelland Gray. The vocational education teachers started their tour of duty at the Center on June 4.

## SAFETY TIPS FOR FISHERMEN

That time is here again, so the American Red Cross is making its annual effort to keep the nation's 62 million sports fishermen from hooking themselves and others, or suffering even more tragic accidents, as they wade into the 1972 fishing season.

"Fishermen are exposed to a wide variety of accident hazards which can be avoided if the right safety precautions are taken," said Charles W. Russell, acting national director of Red Cross Safety Programs.

"Of the 7,300 persons who drowned last year, nearly two-thirds did not intend to be in the water but fell in accidentally. Many of these were fishermen who tumbled in from piers, shores, and boats."

To help prevent drownings and other accidents among the nation's amateur Izaak Waltons, Russell offered these safety suggestions:

To fish safely, you should know how to swim, know basic first aid, and include a first aid kit in your gear.

Listen to the weather forecast so you can dress comfortably and take necessary precautions in event of bad weather forecasts.

Take along some needlenose pliers, wire cutters, and a pocket knife, and stow these as well as all fishing tackle in a covered container when not in use.

Leave word with someone where you plan to fish and approximately when you will return. Take a friend or two along for good company and safety.

Avoid fishing in waters where there are swimmers, skin or scuba divers nearby.

Do not go barefoot. Fish fins, broken glass, nails or other debris can injury your feet. If you are fishing from a boat, do not wear fishing boots or waders.

## FLAG TO FLY AT CENTER

As was announced in the last issue of the Researcher, the Center successfully completed the 1972 U.S. Savings Bond Campaign with staff members pushing the Center's bond standings to 90.2 percent participation. This entitles the Center to fly the coveted Minute Man Flag. This is the first time the Center has been qualified to fly the flag since 1952.

Helen Talbott, Vice-Chairman of the campaign, stated that plans have been made for the flag to be presented to the Center in special ceremonies which will be held Thursday, July 27 at 9:30 a.m. in front of the Headquarters Building (Building 1219). The flag will be presented by O. M. Stevens Jr., State Director, U.S. Savings Bonds Division, U.S. Treasury Department.

Special music will be furnished by the Air Force Band. Divisions who attained a percentage participation of 90 or better during the drive will also receive special recognition at the ceremony.

Mrs. Talbott pointed out that 241 employees authorized new bond allotments totalling \$2,163.22 and 89 employees increased their allotments by \$2,022.51.

In order to keep the flag flying, bond purchasers are reminded that we must maintain the 90 percent record.

★★★★★

TOLERANCE comes with age. I see no fault committed that I myself could not have committed at some time or other.

A LIE has no legs. It requires other lies to support it. Tell one lie and you are forced to tell others to back it up.

## Swap and Shop

(Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.)

### LOST

Sterling silver pendant with rose-cut diamond in the center. Lynn Forehand, 2377.

### WANTED

Ride from Northampton Area to W.A. on 8 shift. Bowen, 2686.

Driving combination or alternate driver from vicinity of Warwick Plaza Shopping Center to E.A. on 7:30 shift. Gene Williams, 2661.

Ham transceiver, SSB. Wasserman, 3431.

### FREE

Kittens. Levine, 851-9144.

### FOR SALE

Red velvet love seat, chandelier, buffet. Hudgins, 722-7338. 120 x 150-foot lot on Piankatank Shores - \$1250. Mulqueen, 877-8263.

Fedders air conditioner, 8000 btu, 115 volts - \$65, power mower - reel type - \$25. Campbell, 868-9852 after 5 p.m.

Craftsman minibike, 3.5 hp - \$80. Bingham, 826-8949.

Two Riverside snow-grip tires, 4-ply, tubeless, nylon, 7.75-14/7.50-14, mounted on Chevrolet wheels - \$40. Rusin, 877-5067.

3-bedroom, 2-1/2-bath house with air conditioning in Glendale - \$35,000 Mascitti, 596-7967.

1966 Plymouth station wagon - \$575. Childs, 898-6719.

1960 Studebaker Lark, 6-cylinder - \$125; Whirlpool air conditioner, 6000 btu - \$65; 3-1/2 hp mini-bike - \$100; Eclipse self-propelled reel lawn mower - \$25. Young, 838-1632.

Window air conditioner, 6000 btu - \$124. Rowland, 851-0212.

Automatic instamatic camera, film, range finder, f2.8/500 - \$40. Kasson, 826-1645.

1969 Dodge Coronet, V-8, air conditioning. Weaver, 877-4255.

New lawn umbrella with white enamel table - \$35. Clark, 723-2897.

Toy Poodle pups, AKC registered - \$60. LaNeave, 838-2264.

AKC registered Scottish Terrier pups. Barnes, 868-7214.

1960 Volkswagon, rebuilt engine - \$275. Mumola, 874-0201.

## NASA TALENT SHOW PLANNED

The Happy Hour on Friday, July 14 at the Activities Building has been designated NASA Talent Time.

The Activities Association is asking all NASA amateur performers to come show their talents. Prizes will be awarded for the first three places.

Contestants may register for this event by sending their name, mail stop, phone number, and a brief description of their talent to Herb Boulter, MS 236, by Tuesday, July 11.

IT IS indeed a desirable thing to be well descended, but the glory belongs to our ancestors.

IT'S NOT that I spend more than I earn, it's just that I spend it quicker than I earn it.

## HOME LIFE INSURANCE COMPANY

New York, N.Y. 10007

### ONE YEAR BONUS PROTECTION

for members of the

## NASA EMPLOYEES BENEFIT ASSOCIATION

July 1, 1972 - June 30, 1973

Pursuant to action by the NEBA Board of Directors at its recent annual meeting, the Home Life Insurance Company is pleased to announce a "bonus protection" benefit for all insured members of the NASA Employees Benefit Association, under its Group Policies GL-661 and GD-661.

This "bonus protection" provides for a 10% increase - for the period from July 1, 1972 through June 30, 1973 - in the amount of Group Life and Accidental Death benefits in force on your life under the above Policies, provided that you are insured during that period under those Policies, and your insurance is not being continued under the total disability benefit provisions of the Life Insurance Policy.

This "bonus protection" is being provided for this period without any increase in your contributions, and will be reconsidered by the Board and the Company at the end of this period.



J. Ruggs  
President

**BONUS CERTIFICATE:** All employees who are members of the NASA Employees Benefit Association will receive a special one year bonus protection certificate with the extra 10 percent protection as stated above. It is hoped that this special benefit may be a continuing bonus.

## MERIT PROMOTION NOTICE

The following Merit Promotion Announcements opened June 26 and applications will be accepted through today:

AST, Technical Management, Office of Director, Structures, GS-1301.1 13 or 14, Announcement No. 72-36.

Supervisory Engineering Technician, Operations Support Division, Facilities Operations Branch, Technical Support Section D, GS-802-12 with promotional opportunity, Announcement No. 72-38.

Supervisory Aerospace Engineer, Space Systems Division, Aerothermal Branch, Performance Analysis Section, GS-861-12 or 13, Announcement No. 72-39.

Contract Specialist, Procurement Division, Viking Contracts Branch, GS-1102-9 with promotional opportunity, Announcement No. 72-40.

AST, Technical Management, Office of Director, Viking Project Office, GS-1301.1-9, 11, or 12, Announcement No. 72-41.

Supervisory Procurement Agent, Procurement Division, Purchasing and Construction Contracting Branch, GS-1102-12 with promotional opportunity, Announcement No. 72-42.

Merit Promotion Announcement No. 72-37, which listed a closing date of July 7, has been extended to July 14. The announcement is also amended to read: Electrical Engineering Technician, Operations Support Division, Electrical Support Branch, Facility Electrical System Section, GS-802-09, with promotional opportunity.

WISE MEN are not always silent, but know when to be.

## QUESTIONS AND ANSWERS

Q. Notice was published in the Researcher that 'each employee' type distribution would be discontinued for retirement parties. Why are a chosen few still sent through this channel? Who makes this decision and how does he justify the discrimination against lesser ranking employees? This is the type action which is killing morale.

A. Use of the Researcher to inform the staff of individual retirement parties is still the preferred method of making this information available, and it has worked as well as the distribution of individual invitations, according to Edward T. Maher, Executive Assistant, Office of the Director for Center Development and External Affairs. Occasionally, a party is set for a date which does not permit adequate time to include in the Researcher and exceptions have been made, but these should be the exception and not the rule.

Q. Since outgoing traffic through Gate #5 is one way, why not have two lanes of traffic starting at the exit road during the one-way period? This would permit traffic to Poquoson, etc., to stack up in the right lane for right turn only, straight ahead traffic would occupy the left lane. Traffic should move faster through the gate, hopefully reducing the stand-still period during hot days ahead. Also, how about getting something done about the bump at Gate #5 and Poquoson Road intersection?

A. The suggested system of traffic flow has been given consideration, stated Glen Ford, Management Support Division, but since there is an offset in the road from Magruder to Wythe Creek Road, the left lane of out-going NASA traffic will have to 'jog' to avoid a head-on from traffic coming from Magruder to Poquoson. The Safety Office has advised that until a 'feeder lane' can be built to spill the NASA Poquoson traffic into it, it would be unsafe to attempt double lane traffic dumping at this gate. At the same time, the city of Hampton, in their long range plan will redesign the entire traffic flow of this corner; therefore, any corrective action we suggest should mesh with these plans. A work order has been submitted to repair the bump.

Q. We have been asked not to use the messenger distribution service for personal mail. The only mailbox in the West Area is at the Credit Union, which is very inconvenient. Why can't we have a mailbox at the cafeteria?

A. Edward T. Maher, Executive Assistant, Office of the Director for Center Development and External Affairs, stated that several months ago, the Hampton Postmaster was contacted and asked to place a mailbox at Building 1202 to serve the large segment of the staff and also per-

## WORDS IN PEOPLES' MOUTHS



\*\*\*\*\*

He who is not liberal with what he has deceives himself when he thinks he would be liberal if he had more.

\*\*\*\*\*

sons coming to the Visitor Center. A box has been placed at that location, but we have been informed that we cannot expect other boxes at the Center in the near future because of the manpower and fund limitations under which the Postal Service is currently operating. The matter will be kept under review and additional boxes will be requested when conditions are more appropriate.

Q. I understand the Special Messenger Service is going to be cancelled. Is this true? It seems, with the reduction in personnel lately, that it would make more sense to keep this service in operation than to have the few people left kept busy delivering things rather than being able to stay at their desks and getting their work done.

A. According to Robert N. Conway, Assistant Director for Administration, special messenger service is being reduced, not cancelled, and will continue to be available for verified urgent needs. This is part of a general belt-tightening process, and reflects a finding that many items sent by special messenger could, with forethought in scheduling mailings, be sent through the regular mail service. Our regular mail service makes two trips daily, with deliveries on the next trip after pick up.

# Langley Researcher

VOLUME 11, NUMBER 14

LANGLEY RESEARCH CENTER

JULY 21, 1972

## SPECIAL PROCEDURES ESTABLISHED TO PROCESS RETIREMENT CLAIMS

With the first wave of an anticipated 40,000-plus retirement claims already being processed, the Civil Service Commission has set up special operating procedures and temporarily bolstered its staff to handle the caseload.

Federal employees who retired on or before June 30 are eligible to receive a 4.8 percent cost of living increase triggered by a rise in the Consumer Price Index. Normally, about 5,000 Federal employees retire each month and claims are fully processed in 30 to 60 days. Even with the huge bulge, Commission officials expect to beat that time frame in getting checks going to annuitants through the use of special payments. Final adjudication of many claims will take somewhat longer.

Andrew E. Ruddock, Director of the Commission's Bureau of Retirement, Insurance, and Occupational Health, outlined special steps being taken to handle the load and the procedures involved.

"We will make every effort to insure that claims are handled promptly and expeditiously," he promised. "One of the most important things in a situation like this," he pointed out, "is that each employee knows what to expect, how long it should take, and what to do in case something goes wrong."

Stressing that the time frames are approximate, Ruddock described steps and procedures that occur in the processing of a retirement claim.

Records of an employee's service, salary, and retirement deductions are maintained by his employing agency. They are forwarded to the Commission, with his retirement application, after the agency pays his final salary - usually 20 to 30 days after the date of retirement.

The first thing the Commission does when it receives a retirement claim is to notify the applicant of its receipt and of the claim number assigned to him. At the same time, the Commission notifies the health insurance carrier that the employee has shifted to the retirement rolls and coverage is maintained.

Next, the Commission obtains all records of prior Federal employment from its records center. The claim is then ready for special payment, which consists of issuing a check based on a conservative estimate of the annuity due. The first special payment is made in the vast majority of cases within 10 days after receipt of the appli-

(Continued on page 4)

## CARNIVAL BULLETIN

Activities Association Summer Carnival - Sept. 8 and 9  
Grand Prizes: Friday - 1972 Starcraft Trailstar Travel Trailer

Saturday - 1972 Toyota Corolla 1600, 2-door sedan

## STAFF INVITED TO MINUTEMAN FLAG PRESENTATION JULY 27

The U.S. Treasury Department's Minuteman Flag will be presented to the Center on Thursday, July 27 at 9:30 a.m. in front of the Headquarters Building (Building 1219). O. M. Stevenson Jr., State of Virginia Director, U.S. Savings Bonds Division of the Treasury Department, will present the flag to Center Director E. M. Cortright. Staff members are invited to attend the ceremonies.

In order to qualify for the Minuteman Flag, 90 percent participation in the purchase of bonds through the payroll savings plan was required.

Upon receipt of the flag, it will be raised on the flagpole in front of the Headquarters Building. Mistress of ceremonies will be Helen B. Talbott, who served as Vice Chairman of the successful Savings Bond campaign which was recently conducted at the Center.

Members of the color guard will be H. Benjamin Bland, Management Information and Systems Division; David Buchanan Jr., Procurement Division; and Leigh K. Lewis, Facilities and Equipment Engineering Division. These men performed the same role the last time the Minuteman Flag was presented to Langley in 1952.

Following receipt of the Minuteman Flag, Cortright will present Treasury Department Citation Certificates to each program director, division chief, or project manager whose organization had 90 percent or more employee participation at the end of the bond drive.

In the event of inclement weather, the ceremony will be held at the same time in the Activities Building.



**BOND WINNERS:** During the bond drive, the Activities Association presented a bond to a new subscriber and to a subscriber who increased his allotment. The winners were picked during a drawing. Robert E. Satterthwaite (right), president of the Activities Association, is shown here presenting the bonds to Alpheus W. Burner Jr. (left), a new subscriber from IRD, and Joseph M. Drozdowski, an employee in ACD who increased his allotment.

## HAPPENINGS

**NOTES OF THANKS.** . . Robert E. Hunt, who retired June 29, wishes to thank his friends and co-workers in Research Aircraft Flight Division for the gifts presented him at a party in his honor at the Hampton Yacht Club. Gene Guryansky wishes to thank his friends and co-workers for the gifts presented him at his retirement cocktail party. Guryansky was Executive Assistant of the High-Speed Aircraft Division. . . Joseph Carter thanks all his Procurement friends for their contributions to his retirement gift.

**AFGE NOTICE.** . . The NASA Lodge 2755 American Federation of Government Employees will meet on Wednesday, July 26 at 7:30 p.m. at the Central Labor Union Hall. The election of officers has been postponed until the August 23 meeting.

**BLOODMOBILE VISITS.** . . The Bloodmobile has scheduled visits to the Center on August 16, October 25, January 31, and April 25. Staff members who have not registered to participate in the blood program and wish to do so are requested to call East Dispensary, extension 2244.

**IAM MEETING.** . . The NASA Lodge No. 892, International Association of Machinists, will meet Tuesday, August 1 at 7 p.m. at the Central Labor Union Hall.

**THE VIRGINIANS.** . . The Virginians, an adult Drum and Bugle Corps, is looking for new members. If you're a brass player or drummer, or wish to be, don't let your talent go to waste. Join the group every Wednesday night at 7:30 at Yates Elementary School on Maxwell Lane. For additional information call 877-8960 or 595-2336.

**SOFTBALL STANDINGS.** . . SDC leads the NASA Softball League with a record of 10 wins and 3 losses. Simulation is in second place with 9-3 and Misfits are in third with a record of 8-3. Other team standings are as follows: CB's All Stars 8-6; ACD 4-3; Ballers 9-7; Pitch Links 5-9; Ballbusters 3-8; Unfits 3-11; and C & S 1-7.

**TENNIS NEWS.** . . NASA defeated Langley 6 to 3 in the Suburban Tennis League and they now have an overall record of 3 wins and only 1 loss. Results of the matches were as follows: Singles - Dick Pincus (N) defeated Dave Harnick 7-5, 7-5; Ted Jenson (L) defeated Billy Haigler 6-1, 6-1; Charlie Bryant (N) won over Dave Plummer 6-0, 6-0; Harry Cooley (L) defeated Frank Nicholson 6-1, 7-6; Leonard Credeur (N) won over John Castle 6-1, 3-6, 6-3; and Bob Smith (N) defeated Dave Langon 6-3, 6-1. Doubles - Harnick-Langon defeated Pincus-Haigler 6-4, 6-3; Bryant-Nicholson defeated Cooley-Castle 6-1, 1-0 (retired); and Credeur-Smith defeated Bremer-Myers 6-0, 6-1.

**ARCHERY CLUB SHOOT.** . . The NASA Bowmen will hold their meeting at the Archery Range at 2 p.m. on Sunday, July 23. There will be a brief business meeting followed by an informal shoot. Refreshments will be served. Visitors are welcome. The range is located behind the parking lot of Building 1244.

★★★★★

**THE HAND** that lifts 'the cup that cheers' should not be used to shift the gears.

## MEET YOUR EEO COUNSELORS



Coefield Silver

Coefield Silver is an automotive mechanic in the Support Service Section of the Operations Support Division. In his job he is responsible for the repairs and road worthiness of all NASA vehicles.

Silver was born in Nashville, North Carolina. He graduated from Carver High School in Newport News and joined the Center staff in 1955.

He is a deacon at Second Baptist Church, East End, Newport News, and is Director of the Intermediate

Department of the Church School. He served as chairman of the Boy Scout Advisory Committee for three years and is presently a member of the Baptist Allied Bodies of Virginia, Hampton Roads Boys' Club and the NAACP Hampton Chapter. He is also assistant secretary of Union Light Number 268, Masonic Lodge.

Silver is married to the former Joan Parsons, who is a teacher in the Hampton school system. They have two children - Paula Denise, age 10, and Wayne, age 21 months.

He likes to spend his spare time auto racing, bowling, and fishing.

## NEW PUBLICATIONS

Listed below are some Technology Utilization publications that have recently been received in the Technology Utilization and Applications Programs Office.

The last publication listed entitled '...for the Benefit of All Mankind' has been published by the General Electric Company and is a document describing the benefits derived from the space program. This document contains useful information that may be used in talks or discussions.

Copies of the following publications may be obtained from the T. U. Office, extension 3281;

SP-5059 (01) Solid Lubricants - Survey

SP-5096 Conference on Materials for Improved Fire Safety

SP-5097 Uses of Ceramics in Microelectronics - Survey

SP-5111 Sputtering and Ion Plating

GE publication - '...for the Benefit of All Mankind'

Langley Researcher, an official publication of the Langley Research Center, National Aeronautics and Space Administration, Hampton, Virginia 23365, is published biweekly in the interest of its employees. Address contributions to the Editor, Mail Stop 154, telephone 3116.

Editor.....Ruth Angel Verell

Staff Photographer.....Bob Nye

Reporters.....Langley Employees

The privilege of advertising articles in this publication is restricted to employees of Langley Research Center. Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.

## DR. DUBERG RECEIVES AWARD

Dr. John E. Duberg, Associate Director, was honored by the Manhattan College Alumni Society on June 30 when he was presented the 1972 Award for Accomplishment in Engineering. The ceremonies were held at the Hotel Plaza in New York.

In presenting the award, Patrick J. Callanan, President of the Alumni Association, made the following statements:

"In a career that has spanned 34 years, Dr. John E. Duberg has proven himself as a scientist, researcher, member and director of technical staffs, consultant to education, local and national government, promoter of the arts and committed citizen.

"At Manhattan, John Duberg was a member of the American Roadbuilders Association. In the days since, his paths have streaked both skyward and earthward as he pursued his profession of aeronautics and his hobby, growing five varieties of grass at his Virginia home. On graduation from Manhattan, John received a fellowship to Virginia Polytechnic Institute, where he studied from 1939 to 1940 before moving to join the staff of the Langley Research Center. He left Langley for the University of Illinois receiving a Ph.D. in 1948.

"Returning to Langley, he served as chief of the Structures Research Division, a post he held until 1956, when he became a Director of Aeromechanics, Aeronautics Systems, Inc., and a professor at the University of Illinois. In 1959 he returned again to Langley, this time as Assistant Director.

"An authority in structural analysis, John is author or co-author of a number of NASA and other publications and has served as a reviewer of publications for various organizations and publishers.

"A man of broad background and interest in education, he has served as chairman of the Graduate Education Committee at Langley, as a member of the advisory group on University Affairs, and advisor to the College of William and Mary, the University of Tennessee, and Old Dominion University. He was founder and first chairman of the Space Sciences Section of the Virginia Academy of Sciences, president of the Engineers Club of the Virginia Peninsula and in 1966 addressed the Manhattan Engineers at their annual communion breakfast.

"In the community, he serves as a director of the Peninsula Junior Nature Museum, the YMCA, as vice president of the Peninsula Council of the Boy Scouts of America, and is past chairman of a million dollar United Fund campaign. He is a trustee of United Community services, president of the Rotary Club of Warwick-Newport News, and he is president of the Huntington Club. He is junior warden of the vestry at St. Andrews Episcopal Church and is a delegate to the Diocesan convention.

"John Duberg left Manhattan with a modest listing of activities in the 1938 Manhattanite. Today his credits are contained in 'Who's Who, American Men of Science' and 'Who's Who in Government'.

"We honor him tonight for his interest in youth, his constancy in research and his attainments in engineering and science. It is our honor to present him with the 1972 Award for Accomplishment in Engineering."

★★★★★

THE ARCHER who overshoots his mark does no better than he who falls short of it.



DUBERG HONORED: Dr. John E. Duberg (left), Associate Director, was recently honored by the Manhattan College Alumni Society when he was presented the 1972 Award for Accomplishment in Engineering. Making the presentation are Patrick Callanan, President of the Alumni Association, and Gregory Nugent (right), President of Manhattan College.

## Dr. Saunders Dies Unexpectedly

Dr. Andrew R. Saunders, Aerospace Technologist in the Laser Physics and Applications Section, Environmental and Space Sciences Division, died unexpectedly July 6 in Riverside Hospital.

Dr. Saunders was born May 8, 1925 in Budapest, Hungary. He did undergraduate work and obtained his Master's Degree in Chemical Engineering at the University for Technical Sciences in Budapest where he taught for two years. He received his Ph.D. in Chemical Engineering from the University of Maryland in 1959.

He came to NASA from United Aircraft Corporation in Hartford and had been employed at Langley since March 1964. As a research scientist he conducted research in rocket propulsion and more recently he performed research on lasers and their application to environmental research, and computer studies of the atmosphere for long range weather predictions.

He was a member of the American Physical Society, American Chemical Society, and The American Institute of Aeronautics and Astronautics.

Survivors include his widow, Mrs. Virginia Saunders, and two sons, Lawrence Saunders and Thomas Saunders.

## Surplus Picnic Equipment

Wooden picnic tables from the Activities Association grounds are now available to individual facilities. Requests should be submitted by facility coordinators only to Burley Miller, MS 496, by Friday, July 29. Available tables will be awarded by drawing among those facilities which have submitted requests.

SOME folks just don't seem to realize when they're moaning about not getting prayers answered, that NO is the answer.

## MERIT PROMOTION NOTICE

The following Merit Promotion Announcements opened July 10 and applications will be accepted through July 21:

Secretary (Stenography), Office of the Director, Viking Project Office, GS-318-5 or 6, Announcement No. 72-45. The area of consideration is the Center.

Project Management Specialist, Low-Speed Aircraft Division, NASA/Army Rotor Test Vehicle Project Office, GS-301-9 or 11, Announcement No. 72-46. Area of consideration is the Center.

The following Merit Promotion Announcements opened July 19 and applications will be accepted through Aug. 2:

Supervisory Electrical Engineering Technician, Operations Support Division, Facilities Operations Branch, Technical Support Electrical Section, GS-802-10 or 11, Announcement No. 72-47. Area of consideration is Operations Support Division.

Engineering Technician, Operations Support Division, Facilities Operations Branch, Technical Support Section B, GS-802-9 or 10, Announcement No. 72-48. Area of consideration is Operations Support Division.

Engineering Technicians (two positions), Operations Support Division, Facilities Operations Branch, Technical Support Section B, GS-802-9 or 10, Announcement No. 72-49. Area of consideration is Operations Support Division.

## RETIREMENT CLAIMS

(Continued from page 1)

Additional special payments are made monthly until the exact amount of annuity has been computed. Any differences between special payments and the exact amount due are then adjusted.

Ruddock advises the newly retired to do the following in the event something goes wrong: If not informed by the Commission within 30 days after the last paycheck was received that the record has been obtained and a claim number assigned, the retiree should ask the personnel office of the agency in which he worked to check the agency payroll center to see if the claim has been forwarded to the Commission. If it has, he should request that the agency furnish him the number and date of the Register of Separations and Transfers used to transmit the claim to the Commission. This information will enable the Commission to locate the claim quickly.

Retirement queries can be made by writing the Commission at 1900 E St., NW., Washington, D.C. 20415, or by calling (AC 202) 632-5550. Help can also be obtained by contacting Commission regional and area offices.

## LECTURE SERIES CONTINUES

The ASEE Guest Lecture Series for the next two weeks is listed below. Each lecture will begin at 10 a.m. in the by 10 Conference Room (Building 1212, Room 200).

July 25 - "On Turbulence in the Planetary Boundary Layer and its Numerical Modeling," by Dr. James Dardorff, National Center for Atmospheric Research.

July 27 - "Computers of the 1980's," by Dr. Harlow Freitag, Thomas J. Watson Research Center.

Aug. 1 - "Buckling of Circular Cylindrical Shells Under Axial Compression," by Dr. Bernard Budiansky, Harvard University.

Aug. 3 - "The Effects of Contained Liquid on the Dynamics of Elastic Shells," by Dr. H. N. Abramson, Southwest Research Institute.



**KOREAN VISITOR:** During a recent official visit to the Peninsula, Mrs. Han Shin, wife of the Chairman of the Joint Chiefs of Staff of the Republic of Korea, was honored with a tea at the Langley Visitor Center. Shown above are (from left) Mrs. Evelyn Myers, Office of the Director for Center Development and External Affairs, Mrs. Han Shin, and Mrs. Ralph E. Haines Jr., wife of the Commanding Officer of the Continental Army Command. After the tea, the party received a briefing on the research work of the Center and was taken on a guided tour of the Visitor Center.

## Swap and Shop

(Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.)

### LOST

K & E Dorie 10-inch slide rule with black case. Smith, 2771.

### FOR RENT

3-bedroom, 2-1/2-bath townhouse in Denbigh, central air conditioning, completely furnished, available September 23 to July 1, 1973 - \$250 per month. Powell, 874-2248.

### FREE

Cute kittens, box trained. Levine, 851-9144.

### WANTED

Ride from North King St. to W.A. on 8 shift. Turner, 3725.

Boy's 10-speed bicycle. Baker, 3041.

Ride from Denbigh to E.A. on 8 shift or W.A. on 7:30 shift. Bement, 2546.

Ham transceiver, SSB; also separate transmitter or receiver. Wasserman, 3431.

To rent 3-bedroom furnished home. Call Mrs. Wright between 8:30 a.m. and 5 p.m. at 722-7481, extension 63.

### FOR SALE

Console piano - \$750. Powell, 874-2248.

1965 Fiat, 4-door station wagon - \$300. Priddy, 723-5148.

1964 Chevrolet Impala, V-8, two new tires - make offer; 1962 Dodge Lancer, 170 slant six, all new tires - make offer. Gleason, 898-6691.

1966 Plymouth station wagon - \$525; 1968 Honda 175 CL with two new tires - \$375; 1955 Jeep - \$40. Childs, 898-6719.

New Fieldcrest quilted king size spread, modern stripe - \$30; 23-inch color TV, cabinet model - \$175. Sabo, 723-5855.

# Center Staff Members Retire After Long Service



Joseph Burlock  
ESSD

James H. Dempsey  
Fabrication

Wilson G. Winfree, Jr.  
Operations Support

Herman E. Davis  
Flight Instrumentation

Alfred J. Jefferson  
Operations Support



Leonard J. Pepe, Jr.  
Fabrication

Edmond J. Zavada  
Operations Support

Alvin T. Verell  
Fabrication

Russell W. H. Noell  
FEED

George M. Dudley  
Fabrication



John Ferro  
Operations Support

Douglas H. Foland  
Structures

A. Wythe Sinclair, Jr.  
Operations Support

Derrill B. Chambliss  
FEED

Lewis C. Rilee  
Operations Support



Peter F. Flatley  
Operations Support

Kenneth W. Brown  
Procurement

Arnold L. Foster  
FEED

Lenwood A. Lovett  
Fabrication

James S. Repass  
Fabrication



**INVENTION AWARDS:** William L. Grantham (top left) recently received \$50 for his invention entitled "An Antenna Design for Surface Wave Suppression." Joseph W. Stickle was awarded \$50 for his "Direct Lift Control System." Shown in the top right photo are Richard N. Young (left), Systems Engineering, and Arthur L. Newcomb, Viking Project Office, who received \$50 each for their joint invention entitled "AC Power Amplifier." Shown at right are (from left): Thomas D. Carpini, Instrument Research; Donald L. Maiden, High-Speed Aircraft, and James H. Monteith, IRD, who received \$50 each for their joint invention entitled "A Flow Velocity and Direction Instrument." The awards were made by the NASA Inventions and Contributions Board.



## cafeteria menu

The following menu will be served in the cafeterias during the week of July 24:

Monday - French onion soup, prime rib of beef, breaded veal cutlet, Chinese egg rolls, Maryland fried chicken, sloppy Joe.

Tuesday - Cream of potato soup, rib steak, stuffed pork chops, broiled red snapper, beef stew, chicken pot pie.

Wednesday - Fisherman's chowder, rump roast, broiled liver and onions, hot turkey with dressing, enchiladas.

Thursday - Chicken noodle soup, fiesta beef kabobs, Salisbury steak, broiled lobster tails, chicken cacciatore, beef and macaroni.

Friday - Bean with bacon soup, rib steak, country steak, glazed ham, shrimp creole, grilled cheese sandwich.

Snack bar - Soup, jumbo burger, hot dogs, fish sandwich, 3-D burger, French fries, apple turnovers. Variations - Hot roast beef, pastrami, NASA submarine (Mon.); steak sandwich, corned beef, ham and cheese club (Tues.); hot roast beef, NASA submarine, pastrami (Wed.); corned beef, luncheon meat and cheese, barbequed pork (Thurs.); ham and cheese club, tuna salad, pastrami (Fri.).

The menu for the week of July 31 is as follows:

Monday - Chicken gumbo soup, sauerbraten, meat loaf, spaghetti and meat balls, fried clams.

Tuesday - Corn chowder, rib steak, stuffed peppers, baked lasagna, chicken and dumplings, macaroni and wieners.

Wednesday - New England clam chowder, steamboat round, chicken-fried steak, shrimp Newburg, ham croquettes, chili con carne.

Thursday - Cream of celery soup, rib steak, barbequed beef, fish fry, sauteed chicken livers.

Friday - Split pea soup, business man's lunch, beef

## Exchange Council Has New Members

The NASA-Langley Exchange Council has been reorganized and the membership on the Council effective July 1 is as follows: T. Melvin Butler, Chairman; Horace Bellamy, Secretary; Abe Leiss, Treasurer; Jean Elliott, Robert N. Conway, Earl Stahl, R. L. Swain, and Robert Satterthwaite.

The Cafeteria operation is currently directly under the Exchange Council. In order to provide more employee representation in the Cafeteria operation, a Cafeteria Committee under the Exchange Council has been selected from research, engineering, technician, and administrative staffs.

The duties of this Committee will be to supervise and monitor the Cafeteria operation. The Committee is composed of the following members: J. R. Dinkins, Chairman; R. B. (Buddy) Forrest, Joyce Gray, E. T. Maher, Robert Wright, and Ben Smith.

★★★★★

IF YOU don't make a living, live on what you make.

**TENNIS CLUB NOTICE:** Members of the LRC Tennis Club are reminded that the group's picnic will be held at noon on July 29 at the Activities Building. Payments for those planning to attend should be sent to Louise Williams, MS 125B, today.

★★★★★

teriyaki, barbequed chicken, meat loaf, fish cakes.

Snack bar - Soup, jumbo burger, hot dogs, fish sandwich, 3-D burger, French fries, apple turnovers. Variations - Corned beef, steak, NASA submarine (Mon.); pastrami, hot roast beef, NASA submarine (Tues.); ham and cheese club, corned beef, salami (Wed.); steak, ham and egg, pastrami (Thurs.); hot roast beef, NASA submarine, grilled cheese (Fri.).

# Personnel Profiles

By

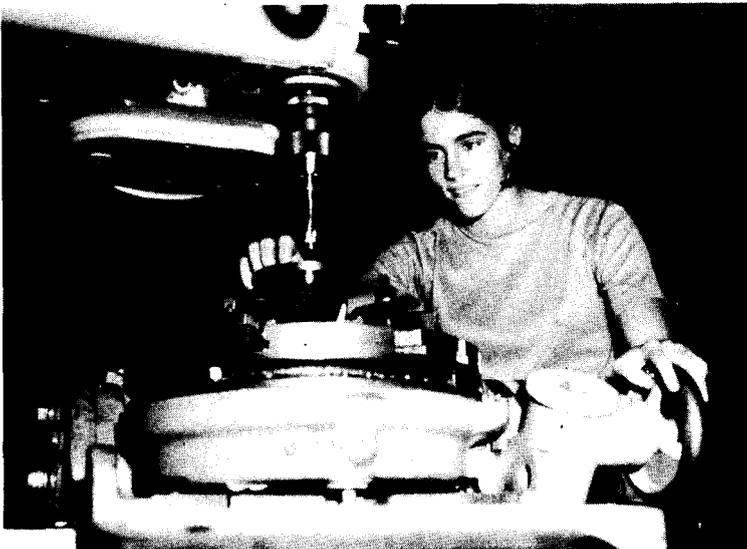
Allan C. Hanrahan



## Meet Miss Machinist

Occasionally — and this happens to be one of those occasions — it is our pleasant circumstance to meet a S.Y.T. (in case you've forgotten, S.Y.T. stands for 'Sweet Young Thing') such as our guest this issue.

Miss Pamela A. Lawrence, a personable, dark-haired, hazel-eyed young lady, graces the Instrument Construction Shop Section of the Fabrication Division in the slightly unusual capacity of machinist.



Beginning her second year as a co-op apprentice Engineering Aide, Miss Lawrence alternates quarters of study at TNCC — working toward an Associate Degree in Applied Science in Mechanical Technology — with quarters of work here at the Center. Her other work quarters were in the unlikely capacity of 'tunnel mechanic'.

It must be obvious by now that Miss Lawrence likes machinery and working with her hands. As she puts it: 'I like the work. . . I love the job! The places on the 'Field' I've worked in have been different and each job to be done is different, and there is such a feeling of accomplishment when you look at something you've actually made yourself.'

Pamela was in a work-study program her last year at Ferguson High School and originally planned on office work after graduation but, 'After the job was learned it became repetitious, and then boring,' she related.

Born in Selma, Alabama, eighteen and a half years ago, Pamela spent her growing-up years in something like seven states and the Philippines. The frequent moves were due to the Air Force career of her father, who retired with the rank of Major and is now, incidentally, the head of the Engineering Department at TNCC.

Pamela's primary after-work interest is judo, in which she has attained the rank of green belt. The next rank is brown belt and that is one of her future goals.

Another interest is her MGA sports car (one of a model of which only 400 were made, she informed us) that she restored to original condition — with her father's help.

## Happy Birthday 'Personnel Profile'

By

Electronic Fabrication Development Section Personnel

Happy Birthday Abie Babie, so goes the song of the Broadway hit 'Hair'.

This week's Personnel Profiles supplement will be a surprise to the one that occupies the space at the left and is done to show the versatility of our 'Personnel Profiles' man.

Allan C. Hanrahan, known by his friends as Abie, works at NASA in the Electronic Fabrication Development Section as an Electronic Technician. He and his wife, the former Rene Koskinas, and two sons Gary, age 13, and Greg, age 10, reside in Hilton Village in Newport News. Allan, as Vice President of the Hilton Civic and Garden Club, is quite active in the preservation of Hilton Village as an historic site, since this was one of the first Government sponsored housing projects in the U.S.

Allan has written numerous articles for the New Dominion Magazine, a supplement to the Sunday Daily Press. These articles usually include pen and ink sketches also drawn by him. He has, with his pen and ink sketches, captured a large number of buildings in the Newport News-Hampton area, which have been removed in the name of progress. In addition to pen and ink, Allan works in water colors and acrylics, having studied art under Barclay Sheaks and Ken Bowen.

Allan's wife, Rene, is also artistic. At the present time she is making Disney characters to adorn their Christmas tree this year. Even Allan marvels at the patience and perseverance which his wife exhibits to make sure that every minute detail is near perfection.

Allan is quite proud of his two sons who for the past two summers have occupied their spare time by participating in the Newport News Public Library Systems Reading Program. Both sons have won awards for their reading ability.

Allan is a member of the Liberty Baptist Church, where he and his wife work with the four-year old children in Sunday School. Allan also works in the Adult Department Training Program on Sunday nights and during the week helps coach the church's Royal Ambassador Baseball Team, on which his two sons are playing.

For the past year 'Personnel Profiles' has been a regular feature in the Researcher; informing its readers of the many talented, artistic, civic minded and interesting persons employed here at NASA. This issue dedicates this column to its regular by-liner, without his advice, knowledge or consent.

Happy Birthday 'Personnel Profiles'!!!

★★★★★

Work, judo, and the calculus she is taking in night school consume most of her time but she has begun water skiing and surfing this summer and hopes in the not-too-distant future to acquire a motorcycle and 'chop' it. (In motorcycle parlance 'chop' means to make certain modifications).

Add to the interests in the preceding paragraphs a love of animals and a budding interest in the occult, e.g. astrology, and you have a young lady who is not only vitally interested in life but interesting as well

## Questions and Answers

REFERENCE: NASA Activities 'Significant Policy Statements' by E. M. Cortright, May 1972: 'Lessons learned from RIF. . . The first lesson is that the Civil Service regulations governing reduction-in-force (RIF) proceedings are rigid and inefficient and should be modified. . . The second lesson is that the Lord helps those who help themselves.'

Q. What does the Director mean by these statements? Does he mean that if there is an employee whom management determines must be separated because of inadequacy, a time and money-saving method would be the RIF procedures; and if not, what does the Director mean by these statements?

A. Director Cortright stated, 'The first statement reflects my belief that RIF retention rights of employees should be based on merit as well as seniority. The second statement was meant to convey my doubts that the system will be changed in the near future. We have, of course, conducted our RIF in strict accordance with existing regulations.'

Q. At the corner of Gregg Road and Ames Road, the hedge blocks the view of the traffic on Ames Road. Any chance of correcting this situation so as to possibly prevent an accident?

A. Glen Ford, Management Support Division, said a work order was submitted June 26, 1972 to trim this hedge; however, it was later determined to remove the hedge. This will be accomplished by our ground maintenance (contract) crew.

Q. With two large parking lots on the same corner, why is parking allowed on Stratton Street in front of the Library, forcing any car travelling north to cross a double yellow line?

A. Glen Ford pointed out that the area of curb in question used to be a driveway to the Paint Shop. When the Library was completed the drive was removed and this curb installed. It does crowd if parking is allowed; therefore, with the concurrence of the Safety Office, the curb will be painted yellow.

★★★★★

FIRST do more than you are paid for before expecting to be paid for more than you do.

THERE is no greater obstacle in the way of success in life than trusting for something to turn up, instead of going to work and turning up something.



TECHNOLOGY AWARDS: Dr. John E. Duberg (left), Associate Director, presents cash awards for Tech Briefs to Charles W. Whitehead (second from left) and A. R. Sinclair. Looking on is John Samos (right), Technology Utilization Office. The Tech Briefs for which the awards were presented are as follows: 71-10232 'Remote Control Radioactive-Waste Removal System Uses Modulated Laser Transmitter' by Sinclair, E. E. Burcher, C. W. Rowland, and L. P. Kopia and 71-10493 'Air Lock Mechanism Speeds Specimen Testing in High Temperature Vacuum Furnaces' by Whitehead.

## RETIREMENT PARTIES

Herbert A. Wilson Jr., who recently retired as Assistant Director for Space, will be honored at a retirement social and buffet on Saturday, August 12 from 7 p.m. to 9 p.m. in the Activities Building. Cost will be \$5 per person and \$9 per couple. Contribution for gift only will be \$1. Make checks payable to Agnes W. Dunkley. Names and contributions should be sent by August 4 to:

AGNES DUNKLEY, MS 107

NAME \_\_\_\_\_ SECTION \_\_\_\_\_

WILL ATTEND \_\_\_\_\_ GIFT ONLY \_\_\_\_\_

P. M. Lovell, Office of Research Grants and University Affairs, will be honored at a retirement party on Wednesday, July 26 from 4:45 to 6:45 p.m. in the West Cafeteria. Cost will be \$5 per person, \$9 per couple, and \$1 for gift only. Names and contributions should be sent today to:

MERCEDES HOBBS, MS/102A

NAME \_\_\_\_\_ SECTION \_\_\_\_\_

WILL ATTEND \_\_\_\_\_ GIFT ONLY \_\_\_\_\_

# Langley Researcher

VOLUME 11, NUMBER 15

LANGLEY RESEARCH CENTER

AUGUST 4, 1972



**GRAND PRIZES:** Ruth Luper calls special attention to the two grandprizes which will be given away during the Activities Association's Summer Carnival. The Starcraft Travel Trailer will be the big prize on Friday night and the Toyota Corolla will be the big attraction on Saturday night.

## SUMMER CARNIVAL PLANNED

Summer Carnival '72 - The Activities Association's end-of-summer bash, is set for Friday and Saturday, September 8 and 9 at the Activities grounds. This year's Carnival caters to family fun for one and all, and promises to be the biggest and best such event since its inception. As an indication of things to come, take note of this year's two grand prizes:

Friday - 1972 Starcraft 16-foot Travel Trailer

Saturday - 1972 Toyota Corolla 1600 sedan

These tremendous prizes are presently on display at the Activities Building and will be shown regularly at various places about the Center up until Carnival day. Prize tickets for the drawings for these, and the 39 other prizes to be given away during the Carnival, are now available from your division representative or at the Activities Building. Cost is only one dollar.

The goal of Summer Carnival '72 is fun for the entire family. With this in mind, new, more enjoyable games for both young and old, with prizes of higher quality than in past years, are the order of the day. There will be pony rides for the kids, basketball for the old folks, and clown drownin' for everyone. Saturday afternoon brings such activities as sack and 3-legged races for youngsters, oldsters, and mixtures thereof. These are all in addition to bingo, casino, games and dances.

Make your plans now to be present on the weekend following Labor Day, and be sure to purchase your chances for the car and travel trailer soon.

## METEOROID TECHNOLOGY SATELLITE SCHEDULED FOR AUGUST LAUNCH

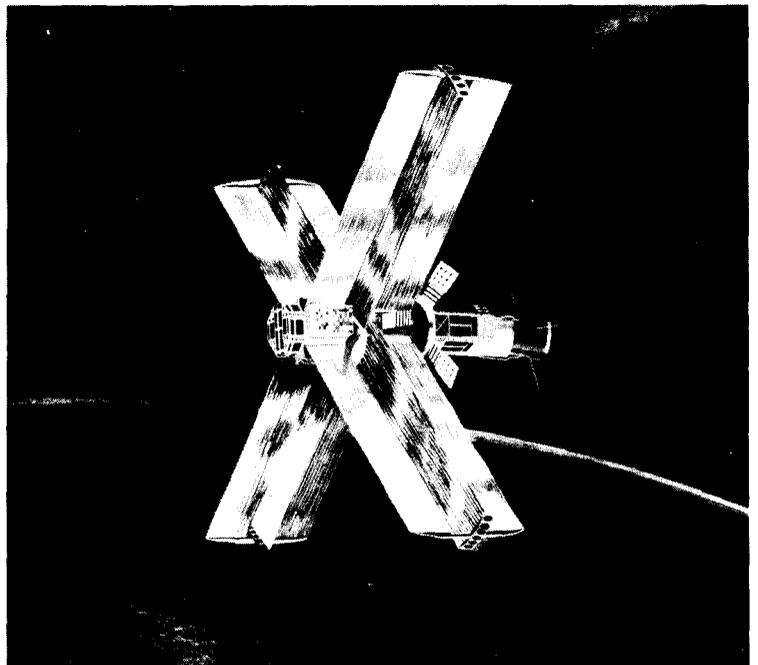
A satellite designed to gather information on the hazards spacecraft encounter from minute particles in space, will be launched no earlier than August 13 from NASA's Wallops Station.

The Meteoroid Technology Satellite is designed to gather engineering and scientific information on meteoroid penetration rates in a bumper-protected target and to obtain data on meteoroid speeds and quantities.

It will be launched by a scout rocket in a southeasterly direction from Wallops Island. The intended orbit will have an apogee of 815 kilometers (506 statute miles) and a perigee of 491 kilometers (305 statute miles). The satellite will circle the Earth every 98 minutes on a path inclined 37.7 degrees to the Equator.

When successfully in orbit, the Meteoroid Technology Satellite (MTS) will be named Explorer 46 (XLVI).

Langley Research Center manages the Meteoroid Technology Satellite project under the overall guidance of NASA's Office of Aeronautics and Space Technology. Langley is also responsible for the spacecraft, the scout launch vehicle, and for systems integration. Goddard Space Flight Center is responsible for tracking and data acquisition for the satellite. Launch support and related functions are furnished by Wallops Station.



**LAUNCH SCHEDULED:** Shown above is an artist drawing of the Meteoroid Technology Satellite which will be launched no earlier than Aug. 13 from Wallops Station. The Langley managed satellite will be launched by a scout rocket.

## HAPPENINGS

**CAMERA CLUB.** . . The August meeting of the Langley Camera Club will be held at the Activities Building on August 15 at 7:30 p.m. A color slide contest with the theme of 'On the Beach' will be held. The Camera Club is open to all persons interested in photography. Those interested are invited to attend and enter four color slides depicting the month's theme. At the July meeting, a new constitution was presented and adopted. Results of the open category color slide contest were as follows: First - 'Crabber' by Robert L. Wright; second - 'Gold and Blue' by Boyd Perry; third - 'Picadilly by Night' by Gautam Sen Gupto; and fourth - 'Coliseum' by William Conkling.

**PARACHUTING CHAMPIONSHIPS.** . . Stan Hicks, Materials Processing Section of the Fabrication Division, competed in the U.S. Parachute Association's annual National Sport Parachuting Championships held during the latter part of June. He finished in third place, overall. His performance resulted in his qualifying for competition in the World's Championships to be held at Tahlequah, Oklahoma, from August 5 to 20 as a member of the five-man U.S. team. There will also be a five-woman U.S. team. More than 50 countries will be represented and there are plans to tape and later televise the highlights of the competition.

**RETURNS FROM RUSSIA.** . . Dr. George F. Pezdirtz, Chief Chemist, has returned from Russia where he presented two special topic lectures in Moscow to the Academy of Sciences of the USSR. Professor Alfred Berlin, Institute of Chemical Physics, invited Pezdirtz to participate in the special lecture series. He spoke on 'General Concept for Thermally Stable Macromolecules' and 'Thermomechanical Behavior of Rigid Epoxies.' Following his trip to Russia, Pezdirtz was invited by Professor Fred Heath to discuss speculative concepts in artificial intelligence at the Harriot-Watt University and Edinburgh University in Edinburgh, Scotland.



**CAREER EXPLORATION PROGRAM:** The first group of high school students who worked at the Center under the four-week summer Career Exploration Program, will complete their tour of duty today. Members of the group are front row (from left): David Kemp, Ken Edmonds, Steven Hendricks, Janet Riddick, and Martee Coffee. Back row - David Brown, Scott Collins, Kevin Baughman, Skip Hancock, Thomas Warren, and Linda Pritchard. The purpose of the program is to offer talented students an opportunity to work with engineers, technicians, or administrative personnel. The students work four hours each day and they are in a non-pay status. The second group will enter on duty Aug. 7.



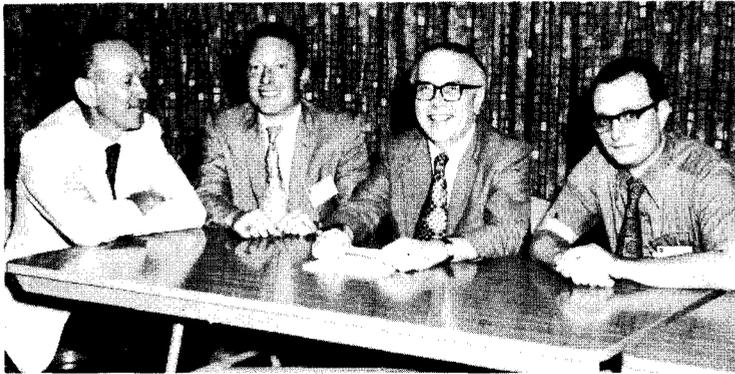
**OPEN FOR BUSINESS.** Alvin F. Anderson, the Center's new full-time Equal Employment Opportunity Officer, is now in his new quarters and he says the doors are always open. As a new member of the Langley team, Anderson says he hasn't had the pleasure of meeting many employees but he invites staff members to feel free to stop by for a chat and a cup of coffee. The new EEO Office is located in Building 1195, Rooms 102, 106, and 108, extensions 3087 and 2124. Anderson says the thrust of this office will center around the ideas of W.E.B. DuBois, 'Words are nice, but Action is better'.

★★★★★

**GOLF ASSOCIATION.** . . The NASA Golf Association held its fourth tournament on July 14 and low net winners were as follows: First Flight - S. Gula 81-13-68; T. Hall 84-13-71; F. Balmer 81-10-71. Second Flight - B. Forrest 87-17-70; R. Babcock 88-15-73; H. Crane 92-17-75. Third Flight - B. Seals 97-24-73; B. Williams 105-31-74; G. Ford 102-27-75.

**CHESTERVILLE VIRGINIA LANDMARK.** . . The Virginia Historic Landmarks Commission has placed Chesterville Plantation on the Virginia Landmarks Register. In a letter to the LRC Historical and Archeological Society, James W. Moody, Executive Director of the Virginia Historic Landmarks Commission stated, 'The Virginia Landmarks Register, established by an act of the General Assembly in 1966, is to include 'the building, structures, and sites which are of state-wide or national significance'. It is our feeling that the Chesterville Plantation richly deserves this recognition. The protection of these significant landmarks is of immediate concern to this Commission.'

**CREDIT UNION AUDIT.** . . As part of the annual audit of the Langley Federal Credit Union, the Supervisory Committee has mailed statements of share and loan accounts to all members. Those who have not received statements are requested to notify the Chairman, Supervisory Committee, Box 607, Langley Air Force Base, VA 23365. Members are requested to examine and compare these statements with their records and report any differences promptly to the Supervisory Committee. These statements include only transactions through June 30. The semi-annual dividends are posted on July 1 and dividends and transactions subsequent to June 30 will be reflected on the next quarterly statement.



**EVALUATION COMMITTEE:** Members of the Conference Evaluation Committee for the working conference on Free Turbulent Shear Flows held at the Center July 20 and 21 were (from left): Dr. Paul A. Libby, University of California; Dr. Raymond B. Edelman, General Applied Science Laboratories, Inc.; Dr. Mark V. Morkovin, Illinois Institute of Technology, who served as chairman; and Dennis M. Bushnell, Langley Research Center.

## Langley Host For Flow Conference

Langley Research Center organized and hosted a working conference on Free Turbulence Shear Flows which was held July 20 and 21. The 100 attendees listened to papers on mathematical turbulence models which attempted to predict the flows for a given set of test cases. The test cases chosen reflected a wide range of free turbulence flows which are of current interest.

The objectives of the conference were: To collect and process a set of reliable data for a variety of free mixing problems; to assess the present theoretical capability for predicting mean velocity, concentration and temperature distributions in free turbulent flows and to identify those methods which hold the most promise for further development; to identify and recommend future experimental studies which might significantly advance the knowledge of free shear flows and, if possible, to assign a priority to the experiments; and to increase the understanding to free shear flows.

M. V. Morkovin, Illinois Institute of Technology, was conference chairman. Members of the Langley Conference Committee were: D. M. Bushnell, HVD, chairman; S. F. Birch, HVD, coordinator; J. W. Keyes, J. M. Eggers, R. C. Rogers, HVD; W. L. Grose, J. J. Mathis, Space Systems; L. Maistrello and E. P. McDaid, Loads.

Papers presented by Langley staff members included: "Calculation of Turbulent Free Mixing - Status and Problems" by Bushnell; "Langley Research Center: Review and Selection of Experimental Data" by Birch and J. M. Eggers, HVD; and "The Use of Prandtl's Mixing Length Model in Free Turbulent Flow Calculations: A Rational Approach" by David H. Rudy, HVD, and Bushnell.

The proceedings of the conference will be published as a two-volume NASA SP.

★★★★

**SKYWATCHERS MAKE NEWS.** . . The July 1972 issue of the AIAA Journal, Astronautics and Aeronautics, featured a picture of the 1970 eclipse taken by the Langley Skywatchers Club. The instrument used for the photograph was a 90-inch-focal-length, f5.6 Newtonian telescope which is the club's main scope.

## SWAP AND SHOP

(Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.)

### WANTED

Driving combination, alternate drivers, or ride from vicinity of Bethel Park or Greenwood Farms to W.A. on 8 shift. Eva Hett, 3041.

Transceiver, ham bands, 80 or 40 preferred, 80-10m acceptable. Wasserman, 3431.

2 or 3 alternate drivers from Edgehill to W.A. on 7:30 shift.

### FOR SALE

1964 Valiant, 2-door, 6-cylinder - \$450. Williams, 596-3395.

Frames with bookcase headboards for 2 single beds. Clark, 838-0438.

Girl's 24-inch bicycle with banana seat and high rise handle bars - \$18. Fournier, 596-0758.

Window air conditioner, 18,000 btu - \$125. Bundick, 838-2052.

Complete ham station for reception and picture printout of signals from ESSA weather satellite. Ross, 596-0107.

Air conditioner, 110 volts, \$15. Hanrahan, 595-1575.

1968 Volkswagon sedan, sun roof, two mounted snow tires - \$1050. McNutt, 898-7716.

Registered poodle pups. LaNeave, 838-2264.

Garrard model 40B record changer with Shore magnetic stereo cartridge, diamond stylus, matching base and dust cover - \$15. Wright, 838-6175 after 5 p.m.

23-foot houseboat - ideal for boating and traveling, converts to travel trailer, sleeps 6, 90 hp engine, fully self-contained. McCracken, 898-5253 after 8 p.m.

FOR SALE: AMF touring bicycle, 3-speed, 5 months old - \$35. Butler, 596-3394.

Virginia Empire sofa with slipcover - \$75; Early American sofa-bed with slipcover - \$50; 21-inch GE console TV - \$25; console stereo record player - \$15; Jensen console speaker - \$20; synthetic deep pile silver fox full-size bedspread - \$25; drum table - \$10; book case - \$5. Sharpes, 596-3227.

18-foot fibreglas Corsaire cruising sloop, large cabin, positive floatation, keel/centerboard, 1972 6hp Evinrude, trailer, many extras - \$1800. Shaughnessy, 595-2024.

11-foot plywood Moth sailboat with dacron sail - \$120. Guy, 596-5909.

Pair of pecan wood end tables - \$50; gold studio couch - \$35. Benner, 838-7043.

## LECTURE SERIES CONTINUES

The ASEE Guest Lectures Series for the final two weeks is given below. Each lecture will begin at 10 a.m. in the 7 by 10 Conference Room (Building 1212, Room 200).

Aug. 8 - "Turbulence in the Atmospheric Surface Layer", by Dr. John C. Wyngaard, Air Force Cambridge Research Laboratories.

Aug. 10 - "Estimation and Detection of Stochastic Signal a la Emanuel Parzen", by Dr. George McAlpine, University of Virginia.

Aug. 14 - "Research Applied to National Needs", by Dr. Joel Snow, National Science Foundation.

Aug. 15 - "Sonic Boom Minimization", by Dr. R. Seebass, Cornell University.



**GROUP AWARD:** John R. Karns (left) and Eugene A. Brady, members of the 8-Foot High-Temperature Structures Tunnel Operations Group recently accepted a Group Achievement Award "for conduct of a concerted and sustained series of tests of the Hypersonic Research Engine-Structural Assembly Model which produced the first data on the performance of a complete hydrogen-cooled hypersonic engine structure and thermal protection system."

## 'OFFICE LANDSCAPING' AT LANGLEY

"Office landscaping," a term applied to the treatment of open office space, is being tried on an experimental basis at Langley Research Center as a part of a broad, long range plan to rehabilitate Center facilities. The concept is receiving growing acceptance in business and government because it enhances the appearance of an area, permits a wide range of choices to adapt to various physical configurations, and indications are that it will reduce the costs of maintenance.

An example of this treatment may be seen in Room 123, Building 1244. Carpeting, colorful movable partitions, and recently listed GSA schedule furniture which is light in color and pleasing in design, have been integrated in a manner to create a pleasant appearance and to provide a degree of privacy for the occupants without sacrificing functional efficiency. Walls have been treated with attractive low maintenance coverings, in marked contrast to the usual drab offices prevalent throughout government.

There is some experience to show that a space treated in this fashion actually costs less to maintain than a space furnished in the old manner. Movable partitions permit flexibility in space allotments and eliminate the cost of removing or relocating partitions as functions and personnel strength vary. Walls treated with wood paneling, cork or vinyl paper require much less upkeep and periodic painting is not necessary. Proponents of office landscaping believe it will increase efficiency as the result of working in an aesthetically appealing area.

★★★★★

THE STEAM that blows the whistle can't be used to turn the wheels.

WHAT A fool does in the end, the wise man does in the beginning.

## DEGREE RECIPIENTS NAMED

Thirty-two staff members earned advanced degrees during May and June, making a total of 21 Doctors and 24 Masters degrees received during Fiscal Year 1972. Photographs of previous recipients this Fiscal Year were published in Langley Researchers dated October 29, 1971, and March 3, 1972.

Eleven staff members (pictured at right) received Doctor of Philosophy degrees from Virginia Polytechnic Institute and State University. They include: Charles E. Byvik, STD, Ph.D. in Physics; James E. Carter, Loads, Ph.D. in Aerospace Engineering; Ronald K. Clark, Materials, Ph.D. in Aerospace Engineering; Gerald L. Gregory, STD, Ph.D. in Mechanical Engineering; Harvey W. Herring, Materials, Ph.D. in Materials Engineering Science; Earle K. Huckins, STD, Ph.D. in Aerospace Engineering; William W. Hunter, Jr., IRD, Ph.D. in Physics; John E. Lamar, HSAD, Ph.D. in Aerospace Engineering; James N. Moss, Materials, Ph.D. in Aerospace Engineering; Ronald A. Outlaw, IRD, Ph.D. in Materials Engineering Science; and James Scheiman, LSAD, Ph.D. in Engineering Mechanics.

Four received Ph.D.'s from North Carolina State University: Robert M. Bennett, Loads, Mechanical Engineering; L. Bernard Garrett, Viking, Aerospace Engineering; C. Michael Hudson, Materials, Materials Engineering; and James P. Howell (not pictured), formerly of Materials, Materials Engineering. In addition, Reginald J. Exton, IRD, received a Ph.D. in Physics from West Virginia University.

Those receiving Masters degrees included three each from Old Dominion University, University of Virginia, the College of William and Mary, and Virginia Polytechnic Institute and State University. Receiving the Master of Engineering (Electrical) from ODU were Luther R. Gartrell, IRD; Titus Harrison SED; and Bruce K. E. Outlaw, FID. From the University of Virginia were William M. Howle Jr., FID, who received a Master of Electrical Engineering; Robert B. Lee III, ESSD, was awarded a Master of Engineering Physics; and Edwin J. Prior, ESSD, who earned a Master of Astronomy.

Receiving MBA's from the College of William and Mary were Richard T. Bright III, Procurement, and Richard J. Bendura (not pictured), STD, while C. Andrew Powell Jr., Loads, received a M.S. in Physics.

Receiving degrees from VPI & SU were Thomas A. Shull, FID, with a Master of Science in Electrical Engineering; Robert G. Kyle (not pictured), formerly of FDCD, with a M.S. in Industrial Engineering and Operations Research; and Ragan B. Madden (not pictured), formerly of SED, with a Master of Statistics.

In addition, Joseph S. Heyman, IRD, received a Master of Arts in Physics from Washington University and James F. Meyers, IRD, received a Master of Engineering (Electrical) from the University of Louisville.

A. Thomas Young, Viking, received a Master of Management from MIT through the Sloan Fellowship Program, and Robert A. Golub, Loads, received a Master of Public Administration from Indiana University through the NIPA Career Education Award Program.

★★★★★

TO KNOW how to grow old is the master work of wisdom, and one of the most difficult chapters in the great art of living.

# STAFF MEMBERS RECEIVE ADVANCED DEGREES



DR. CHARLES E. BYVIK      DR. JAMES E. CARTER      DR. RONALD K. CLARK      DR. GERALD L. GREGORY      DR. HARVEY W. HERRING



DR. EARLE K. HUCKINS      DR. WILLIAM W. HUNTER, JR.      DR. JOHN E. LAMAR      DR. JAMES N. MOSS      DR. RONALD A. OUTLAW



DR. JAMES SCHEIMAN      DR. ROBERT M. BENNETT      DR. L. BERNARD GARRETT      DR. C. MICHAEL HUDSON      DR. REGINALD J. EXTON      LUTHER R. GARTRELL



TITUS HARRISON      BRUCE K. E. OUTLAW      WILLIAM M. HOWLE, JR.      ROBERT B. LEE, III      EDWIN J. PRIOR      RICHARD T. BRIGHT, III



C. ANDREW POWELL, JR.      THOMAS A. SHULL      JOSEPH S. HEYMAN      JAMES F. MEYERS      A. THOMAS YOUNG      ROBERT A. GOLUB



INVENTION AWARDS: Colossie N. Batts (top left), IRD, recently received \$150 for his invention entitled "Variable Time Base Integrator Circuit for Buffet Signal Measurements." Antony Jalink, FID, was awarded \$50 for his "Infrared Horizon Locator." Shown in the top right photo are Dr. Jerry G. Williams (left), Structures, and Joseph H. Judd, LSAD, who received \$50 each for their joint invention entitled "Light Regulator." Shown at right are Felix L. Pitts (left), and John L. Spencer, FID, who received \$75 each for their joint invention entitled "Electronic Strain-Level Counter." The awards were made by the NASA Inventions and Contributions Board.



## cafeteria menu

The following menu will be served in the cafeterias during the week of August 7:

Monday - Cream of mushroom soup, Swiss steak, broiled red snapper, barbequed short ribs, cordon blue, chicken croquettes.

Tuesday - Minestrone soup, London broil, cornish hen, chuckwagon steak, sauteed scallops, franks and beans.

Wednesday - Crab bisque, rib steak, braised beef tips, Maryland fried chicken, broiled flounder, chili mac.

Thursday - Vegetable beef soup, rump roast, seafood platter, taco dog and burrito, sauted chicken livers.

Friday - Cream of chicken soup, rib steak, breaded veal cutlet, boiled ham, Italian meat loaf, weiners and sauerkraut.

Snack bar - Soup, jumbo burger, hot dog, fish sandwich, 3-D burger, French fries, apple turnovers. Variations - Pastrami, steak, NASA submarine (Mon.); corned beef, hot roast beef, NASA submarine (Tues.); pastrami, ham and cheese club, NASA submarine (Wed.); corned beef, hot roast beef, chicken salad (Thurs.); ham and cheese club, steak, brilled cheese (Fri.).

The menu for the week of August 14 is as follows:

Monday - Cream of potato soup, business man's lunch, corned beef and cabbage, chicken chow mein, fried clams, ham croquettes.

Tuesday - Chicken and rice soup, steamboat round, beef ka-bobs, veal, fried chicken, fish cakes.

Wednesday - Cheese chowder, rib steak, fried steak, barbequed spare ribs, meat loaf, macaroni and weiners.

Thursday - Scotch broth, beef teriyaki, glazed ham, fish fry, baked lasagna.

Friday - Tomato bisque, rib steak, barbequed beef sandwich, broiled chicken, grilled cheese sandwich.

## COLLOQUIUM SERIES

Dr. Israel Goldiamond, Professor of Psychology and Director of the Behavior Research and Analysis Laboratory of the University of Chicago, will be the speaker at the Colloquium on August 14 at 3 p.m. in the Activities Building.

Dr. Goldiamond will discuss how the use of control procedures and the philosophical position expounded by Skinner in "Beyond Freedom and Dignity", can be used to increase freedom and dignity in people deficient in them at present.

Dr. Goldiamond, along with B. F. Skinner, is one of the foremost advocates of the environmental versus Freudian theory of human behavior. He has done pioneering work in the analyses of social behavior. The title of his colloquium presentation is "Science and Control of Social Behavior."

### *Can You Solve This Problem?*

Research has shown that carcinogenic agents are one cause of cancer. A method is needed for detecting and separating agricultural commodities such as cottonseed, peanuts, corn, or the like, on the basis of some physical characteristics such as density or color to remove those contaminated with carcinogens. Refer to USAID-1. Contact the T.U. Office, extension 3281, for the complete problem statement or if you have a potential solution.

★★★★★

Snack bar - Soup, jumbo burger, hot dog, fish sandwich, 3-D burger, French fries, apple turnovers. Variations - pastrami, ham and egg, steak (Mon.); salami, NASA submarine, chicken salad (Tues.); corned beef, ham and cheese club, hot roast beef (Wed.); barbequed pork, pastrami, steak (Thurs.); ham and cheese club, NASA submarine, tuna salad (Fri.).

# Personnel Profiles

By

Allan C. Hanrahan



## Portraits in Profile

If you were to visit, say, the Metropolitan Museum of Art in New York City you could see and appreciate a number of portraits done by that accomplished master, Rembrandt. Closer to home, if you were to visit the lounge of the Activities Building (Bldg. 1222) or the Conference Room of Headquarters Building (Bldg. 1219) you could view portraits done by that accomplished, albeit amateur portraitist, Robert L. Hunt.



To be more specific about the portraits (done in oil) there is the one Bob painted in 1952 of Dr. Samuel Pierpont Langley and it is over the fireplace in the lounge of the Activities Building. In the Conference Room of Headquarters there is a portrait of Dr. Henry J. E. Reid, who was Center Director from 1926 to 1960, and also a portrait of Dr. Floyd L. Thompson who was Center Director from 1960 to 1968.

Working at home, in his spare time, Bob did the portraits because, "I just wanted to do them," he said. "Painting is sort of a hobby with me and portraits are more challenging to do."

To the question of how his interest in painting began, he answered, "I sort of worked into it on my own. I studied a little bit in high school and later on a Hampton school teacher (of art) taught me some more basic techniques. I have done other things (besides portraits) and right now I'm working on some."

Another abiding interest Bob has is bowling. In the past he has traveled extensively, bowling in competition. One year he was State All-Events Champion, which automatically qualified him to bowl in the Masters Tournament.

"It was quite a thrill to bowl along with some of the top bowlers in the country," he said. That was a few years ago though, and Bob said about the present: "I bowl just for fun now."

Bob's best game has been 290 and his best set has been 741. As any bowler will tell you, they are terrific scores.

## MERIT PROMOTION NOTICE

The following Merit Promotion Announcements opened July 24 and applications will be accepted through today:

AST, Space Sciences, Environmental and Space Sciences Division, Atmospheres Branch, Meteorology Section, GS-1301.1-13 with promotional opportunity, Announcement No. 72-50. Area of consideration is the Space Directorate.

AST, Space Sciences, Environmental and Space Sciences Division, Laser and Molecular Physics Branch, Laser Physics and Applications Section, GS-1301.1-13 with promotional opportunity, Announcement No. 72-51. Area of consideration is the Space Directorate.

Secretary (Stenography), Office of the Chief, Flight Instrumentation Division, GS-318-7, Announcement No. 72-52, opened July 25, and applications will be accepted through August 7. The area of consideration is the Electronics Directorate.

Supervisory Aerospace Engineer, Office of the Chief, Space Systems Division, GS-861-15, Announcement No. 72-53, opened July 26, and applications will be accepted through August 7. The area of consideration is the Space Directorate.

Clerk-Typist, Equal Employment Opportunity Office, GS-322-2 with promotional opportunity, Announcement No. 72-54, opened July 27, and applications will be accepted through August 9. The area of consideration is the Langley Research Center.

Aerospace Engineer (AST, Fluid and Flight Mechanics), Office of the Chief, Flight Dynamics and Control Division, GS-861-9, 11, or 12 with promotional opportunity, Announcement No. 72-55, opened July 31, and applications will be accepted through August 11. The area of consideration is the Langley Research Center.

## RETIREMENT PARTY

A retirement party honoring J. William Atkins, Property Management Branch, will be held on Friday, September 1 from 7 to 9:30 p.m. in the Activities Building. Cost will be \$5 per person or \$9 per couple. The cost of gift only will be \$1. Names of persons planning to attend and contributions, should be sent no later than August 29 to:

Ruby Sherwood, MS 148, Building 1194

NAME \_\_\_\_\_ SECTION \_\_\_\_\_

WILL ATTEND \_\_\_\_\_ GIFT ONLY \_\_\_\_\_

\*\*\*\*\*

Bob Hunt is a Motion Picture Photographer in the Motion Picture Production Branch of the Office of Scientific and Technical Information, and he has worked at the Center since May of 1947. Previous to that he served in the U.S. Army in the Pacific during World War II, having been drafted soon after he finished Hampton High School. Bob is a native of Hampton and, strange but true, still lives in the same house in which he was born forty-six years ago.

Age notwithstanding, he suffered a mild coronary in June but all signs indicate no lasting effects so it is a thankful photographer, artist and bowler that we have the pleasure of meeting this issue.

(Special Note: Regarding the "Happy Birthday" article in the last issue, this writer was rendered a little self-conscious but was also flattered and appreciative. To all those responsible. . . Thank You. —A.C.H.

## Questions and Answers

Q. What is under consideration by the management of Langley Research Center to give relief to the non-smokers from the health hazards and dangers from the combustion products of tobacco smoke, in view of the recent finds of the Surgeon General on the adverse effects of tobacco smoke on non-smokers and the recent ruling by HEW on the same subject? Since the smokers (as a group) will not control themselves, will the management devise "work rules" that will not subject the non-smokers to the contamination from the cigars and assorted tobacco devices? If not, why not? What is necessary to get relief for the non-smoker?

A. In rejecting a smoking ban, Center officials have elected to go along with the decision of the Army's surgeon general. By way of explanation, the following is quoted from the Federal Employees' News Digest:

"The office of the Army's surgeon general, rejecting a proposal that it lead the way for a government-wide ban on on-the-job smoking by federal employees, said such a ban 'would create an untenable restriction' on the activities of civilian and military employees.

"Smoking must remain a matter of 'personal choice,' the surgeon general said.

"The suggestion that the surgeon general, Lt. Gen. Hal B. Jennings Jr., be the first to restrict smoking, was made by a non-smoking employee of Walter Reed Army Medical Center. It was reportedly given serious consideration before being rejected in the suggestion evaluation process.

"The employee cited the fact that the U.S. surgeon general, Dr. Jesse L. Steinfeld, has called for a ban on smoking in many public places such as restaurants, theaters, airplanes, trains and busses.

"The employee said that banning on-the-job cigarette smoking by federal employees would reduce the health danger to smokers as well as non-smokers who have to breathe in the cigarette smoke. It would also save the government close to a billion dollars a year in greater work productivity by eliminating lighting, puffing and cigarette disposal time, he said.

"In rejecting the suggestion, the office stated: 'The surgeon general does not concur in the estimated savings projected by prohibition of smoking in all government buildings.

"To prohibit smoking by persons who desire to smoke would create an untenable restriction that cannot at this time be measured monetarily. Prohibition in other than certain designated patient care areas in Army medical



MINUTEMAN FLAG FLIES AT CENTER. In ceremonies held Thursday, July 27, in front of Headquarters Building, staff members were presented the U.S. Treasury Department's Minuteman Flag for their purchase of U.S. Savings Bonds through the Center's payroll savings plan. O. M. Stevenson Jr. (right), State of Virginia Director, U.S. Savings Bonds Division of the Treasury Department, presented the flag to Center Director Edgar M. Cortright (left). Cortright, who served as chairman of the Center's recently completed bond drive, was assisted by Helen B. Talbott, vice chairman. In order to qualify for the Minuteman Flag, 90 percent participation by Center staff members was required.

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treatment facilities would not serve the best interests of the Army or the Army Medical Department.

"While it is agreed that smoking represents a health hazard, the subject must remain a matter of personal choice'."

"The Armed Forces Institute of Pathology has also rejected a proposal to ban smoking among employees. It said, 'Existing rules and regulations require employees' freedom from dictatorship.' It added that non-smokers have to make 'necessary and reasonable self-adjustment' to the conditions of their employment."

# Langley Researcher

VOLUME 11, NUMBER 16

LANGLEY RESEARCH CENTER

AUGUST 18, 1972

## Air Density Project Contract Awarded

Scientists at the University of Minnesota will build mass spectrometer measurement instruments for the Langley Research Center under terms of a \$455,669 contract.

The instruments will be flown into Earth orbit aboard two satellites that will measure the Earth's atmosphere at satellite altitudes for Langley's Dual Air Density (DAD) Explorer project.

The Minneapolis university's spectrometers will be part of the payload on the dual satellites, which are scheduled for a single launch in 1974 from the Western Test Range.

This newest Air Density Explorer experiment, a \$5.3 million project, will be the first direct measure of the vertical structure of the Earth's upper atmosphere on a global scale.

A mass spectrometer measures atmospheric particles that are separated according to their respective molecular weights. The two Dual Air Density spectrometers will measure the vertical and lateral distribution of atmospheric gases such as helium, atomic oxygen and molecular nitrogen.

Langley scientists formulated a unique satellite design that causes mass spectrometer and atmospheric drag measurements to be completely insensitive to orientation, yet highly sensitive to the atmospheric environment. The design also allows the instruments to be recalibrated in flight.

The mass spectrometer and drag measurements made by the two satellites will lead to a better understanding of the upper atmosphere's density, composition and temperature; how these are affected by changes in solar heat input; and how rapidly the atmosphere is escaping from the Earth. The measurements may also give insight into the relationships between the upper and lower atmosphere.

The two Explorer satellites, each containing one of the mass spectrometers, will be launched aboard a single, four-stage Scout launch vehicle. The first satellite, a 0.76 meter (30-inch) diameter sphere, will be placed in an orbit of 500 by 1,500 kilometers (248 by 932 statute miles). The second craft, a 3.6 meter (12-foot) diameter sphere, will then be kicked into an orbit with a higher perigee (closest distance from Earth) of 700 kilometers (435 statute miles), and the same 1,500-kilometer apogee (farthest distance from Earth).

The system of dual satellites is being used because a single satellite cannot directly measure vertical distribution of the atmosphere; whenever a satellite changes position vertically, it also changes position laterally.

The atmosphere's vertical structure will be obtained by comparing measurements from the two satellites as they pass over one of several ground stations at their different altitudes.

The two DAD satellites will be the fifth and sixth space-

(Continued on page 3)

## OVER 850 STAFF MEMBERS ATTEND WALLOPS LAUNCH

More than 850 Langley employees and their families made the journey to Wallops Island Sunday, August 13, to see the successful launch of a Scout vehicle and its Meteoroid Technology Satellite payload.

Despite a suspenseful ten-minute delay, the launch itself was flawless. Liftoff was at 11:10 a.m. to the applause and cheers of a total crowd estimated at more than 2,000 people.

Sunday began early for most Langley viewers and their families. Eleven buses left the Center at about 7:30 a.m. in a caravan that wound its way through Norfolk and up the Eastern Shore to the Wallops Mainland, viewing site for the launch. Another large group of Langley people drove about 100 cars to the site.

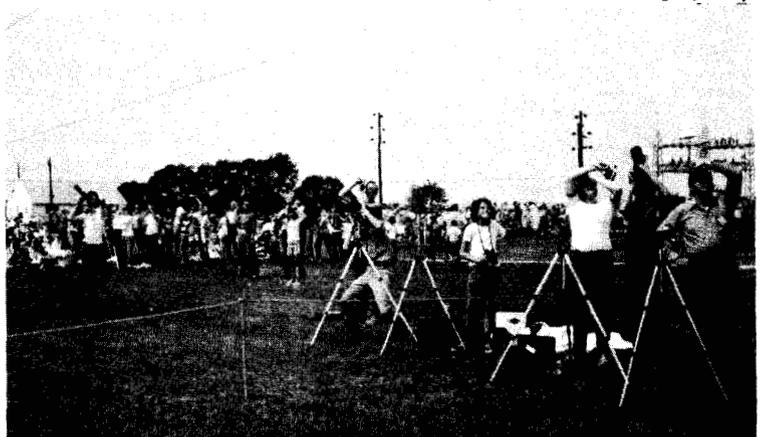
Arriving about an hour before launch, most of the spectators had time to settle themselves in bleachers and on the grass, enjoy the nearly perfect weather--slightly overclouded sun, pleasant breeze, comfortable shirtsleeve temperatures--slap at a few mosquitos, and await the dramatic moment.

The Langley visitors were welcomed to Wallops by Robert L. Krieger, Director of Wallops Station, and by Oran W. Nicks, Langley's Deputy Director, both of whom spoke via a public address system.

Launch countdown and commentary was relayed to spectators from the Range Control Center at Main Base by Abe Leiss, Scout Project Office, and Joyce Milliner, Wallops Public Affairs Office.

The launch countdown was halted at T minus seven seconds because a signal indicated that a relay on ground support

(Continued on page 8)



WALLOPS LAUNCH: More than 850 Langley employees and their families attended the successful launch of a Scout vehicle and its Meteoroid Technology Satellite payload from Wallops Island last Sunday. Some members of the group are shown watching the payload disappear into space.

## HAPPENINGS

**TAXI SERVICE.** . . One cause of delay in taxi service is that passengers are not always ready and waiting. Each delay is cumulative, so we should improve our own on-time performance. Following the Center's recently announced reduction in service, there has been an increase in the average time required for a taxi to respond to a call. It should be noted that the problem will be alleviated after departure of our summer employees, who have made good use of the cab service.

**NEWHEIRS.** . . Two members of the 8-Foot Tunnels Branch recently became new fathers. Claude Patterson's son, Blake Wingfield, arrived on May 21 and Theodore Ayers welcomed his new son, Andrew James, on July 13.

**AFGE NOTICE.** . . The NASA Lodge 2755 American Federation of Government Employees will meet on Wednesday, August 23 at 7:30 p.m. at the Central Labor Union Hall. Included on the agenda will be the election of officers.

**TOUCH FOOTBALL.** . . The NASA Touch Football League will hold an organizational meeting on Tuesday, August 22 at 4:45 p.m. in the Activities Building. All managers and interested players are requested to attend. A meeting will be held on Monday, August 21 at 4:45 p.m. in the Activities Building for players 35 years of age and older who wish to organize a B League. All persons interested should attend.

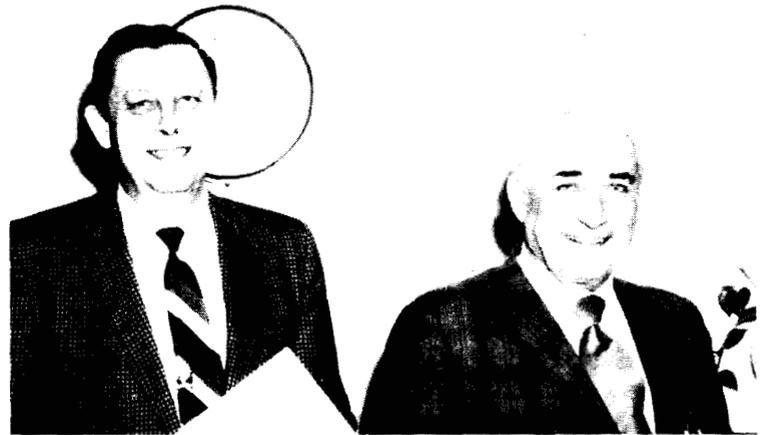
**MS AND PHONE NUMBER CHANGES.** . . Employees whose mail stop and telephone number change are requested to complete and mail the form provided in the back of the Center's telephone directory. This will help to avoid delays in mail delivery and will result in an accurate listing in the telephone directory.

**BOWLING LEAGUE.** . . An organizational meeting of the NASA Bowling League will be held Thursday, August 24 at 7 p.m. at the Newmarket Bowling Alley. Teams are requested to have a representative present. Included on the agenda will be the election of a new president due to the resignation of Tom Bonner. For further information call Ed Swanson, 838-1010, or Meg Lynch, 595-4282.

**GOING AWAY PARTY.** . . Lt. Col. T. C. West, Army Directorate, is being transferred to Germany. A party in his honor will be held on September 9 at the Langley Officers Club. A social hour will start at 7 p.m., followed by dinner at 8 p.m. Cost will be \$6 for prime rib or \$3.70 for breast of chicken. Dutch treat bar. Send reservations to Betty Fields, MS 124, by August 31 or call 2030. Make checks payable to Langley AFB Officers Open Mess.

### *Can you solve this problem?*

A method is needed for analyzing silica content in microgram quantities to be used in a study of accelerated silicosis. This disease can result in death after 2 years exposure. Between 30 and 300 microgram quantities of dust are contained on a 50 milligram filter used in the study. The filter is an 0.8 micron millipore type. A method of analysis with a precision of plus-minus 5% is desired. Refer to TU-33. Contact the T.U. Office, extension 3281, for the problem statement or if you have a potential solution.



**INVENTION AWARD:** Harold R. Long (left), Operations Support Division, and Joseph Getsug, Office of Director for Systems Engineering and Operations, recently received \$50 each for their joint invention entitled "Protection for Users of Multitester Type Instruments on High Capacity Low Impedance Power Systems." The awards were made by the NASA Inventions and Contributions Board.

## EEO HIGHLIGHTS

The staff of the Office of Equal Employment Opportunity takes this opportunity through this monthly column to keep LRC employees informed of the significant activities and on-going events related to our main goal -- success of the mission through improved employment options and continuous personal mobility.

We are happy to announce the reorganization of the EEO Committee through the appointment of the following members: Christine Darden, Jane S. Hess, Jean B. Elliott, Rosa C. Webster, John J. Cox, James L. Williams, Mary W. Jackson, Wilbur B. Fichter, Coefield Silver, Malcolm P. Clark, and Harold Mehrens. These members have agreed to serve as personal extensions of the EEO office by "assisting management, as part of the overall group assigned the task of developing or revising the Center's Affirmative Action Plan."

Individual members of the Committee are to "be available to counsel staff members with regard to problems which might be associated with objectives of the equal employment opportunity program."

We welcome all ideas and suggestions. You don't have to have a problem to stop by for a chat. We want to know all of our co-workers. The doors of opportunity are open. Come in!

Langley Researcher, an official publication of the Langley Research Center, National Aeronautics and Space Administration, Hampton, Virginia 23365, is published biweekly in the interest of its employees. Address contributions to the Editor, Mail Stop 154, telephone 3116.

Editor.....Ruth Angel Verell  
Staff Photographer.....Bob Nye  
Reporters.....Langley Employees

The privilege of advertising articles in this publication is restricted to employees of Langley Research Center. Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.



**SUMMER DESIGN TEAM:** Members of the NASA-ASEE Summer Faculty Fellowship Program in Engineering Systems Design conclude their study of human factors engineering as applied to current transportation systems on August 25 and will return to their home education institutions. Members of the team are front row (from left): Dr. George M. Swisher, Dr. Alan R. Chaikin, Dr. Albert E. Miller, Dr. J. Darrell Gibson, Project Manager, Dr. Ralph G. Crum, Dr. Richard L. Rosen, and Dr. Godron P. Fisher. Second row - Dr. Samuel K. Adams, Christopher M. Was, Dr. John C. Winfrey, and Dr. John P. McCrory. Back row - Dr. LaVerne L. Hoag, Dr. Joseph C. Free, Dr. August L. Burgett, Dr. Richard W. Griffin, Dr. Douglas H. Rothenberg, and Dr. Jewel B. Barlow.

## AIR DENSITY PROJECT

(Continued from page 1)

craft launched in Langley's continuing experimental program. Two other Air Density Explorer satellites are still in orbit, measuring atmospheric densities and helping to infer atmospheric composition at satellite altitudes.

Gerald M. Keating, head of the Aeronomy Section, Environmental and Space Sciences Division, is principal investigator for the DAD project. Working with him on the current experiment are Edwin J. Prior, also of the Aeronomy Section, project scientist and co-investigator; Alfred O. C. Nier and Konrad Mauersberger, both of the University of Minnesota, investigator and co-investigator, respectively. John E. Canady, Space Technology and Applications Division, is project manager for DAD.

Other Langley personnel associated with the project are W. F. Hinson, Space Technology, assistant project manager; L. T. Melfi, Environmental and Space Sciences, contract technical representative for prototype and flight mass spectrometers; J. W. Cheeley, Systems Engineering, technical project engineer; L. H. Hunt, Flight Instrumentation, manager of electronics and instrumentation; and R. D. English, head of the Scout Project Office, project manager for the Scout launch vehicle.

The project is being conducted under the overall direction of the Office of Space Science in NASA Headquarters.

**FOR SALE:** 23-inch Magnavox color TV, console with sliding doors - \$125. Ellison, 877-5512.

## DIRECTOR REAFFIRMS EEO POLICY

Each year, as Director of Langley Research Center, I am asked to reaffirm the policy of the Center regarding equal employment opportunity so that the policy will be clearly understood by all employees and all applicants for employment. Even if this were not an annual requirement, I think it is just good sense to do this, and I am pleased to restate the policy.

For many years, Langley Research Center has implemented a policy of equal opportunity in employment, training, and promotions for all qualified personnel or applicants, without regard to race, creed, color, sex, or national origin. This basic policy will continue to guide all personnel actions at this Center.

In accord with this policy, the Center has appointed a full-time Equal Opportunity Officer with adequate staff support to insure that the goals of the Center's Affirmative Action Plan are met and expanded as new opportunities become available. The Equal Opportunity Committee has also been restructured to serve as an extension of this office to help management fulfill its commitment.

The social problems facing the nation today, however, transcend just a reaffirmation of the equal employment opportunity policy. They require each of us, supervisors and staff members alike, to exercise imagination and initiative to resolve some of the problems which are associated with the unemployed and the underemployed. We have the responsibility and duty as citizens to help our co-workers reach their full capabilities at our Center.

So, while the Center has long endorsed the policy of equal employment opportunity and will continue to do so, there is an opportunity for each of us to actively engage in its implementation and expansion. This is a real challenge. I encourage you to join me in helping to make this Center's program second to none.

## VIKING CHUTE TESTS SUCCESSFUL

A supersonic test of a parachute designed to lower Langley's Project Viking spacecraft to Mars was successfully flown Sunday at White Sands Missile Range.

This test was the third balloon-launched simulated Viking entry vehicle test over WSMR this summer and was a repeat of supersonic test conditions planned for the first test.

Sunday's test was carried by a huge helium-filled balloon from Roswell, New Mexico, at 7:41 a.m. MDT to an altitude of about 120,000 feet. The test spacecraft was then separated from the balloon on radio command at 10:25 a.m. MDT. After separation, spacecraft rocket motors ignited boosting the test vehicle to an altitude of about 149,000 feet where the spacecraft velocity achieved test conditions in an atmospheric density simulating conditions expected over Mars. Here the parachute deployed to decelerate the simulated Viking spacecraft. The test terminated when the parachute system landed the test vehicle at 10:53 a.m.

Preliminary analysis of quick-look data by project technical personnel indicated that all test conditions were met and that all systems operated as planned. The parachute apparently inflated properly and physical inspection revealed no damage to the parachute.

## REHABILITATION AND MODIFICATION PROGRAM UNDERWAY AT CENTER

Langley Research Center's physical plant rehabilitation program, which is now underway and will continue for several years to come, will modernize and improve our immediate environment. Although buildings and building utility systems will consume the major portion of rehabilitation program funding, exterior utilities, roads, grounds, and parking areas will also be affected.

Master plan studies have been conducted in the past few years by Langley personnel, A-E firms, and landscape architects, as to how to improve utilization of land for access, parking, vehicular and pedestrian traffic, and also improve overall appearance.

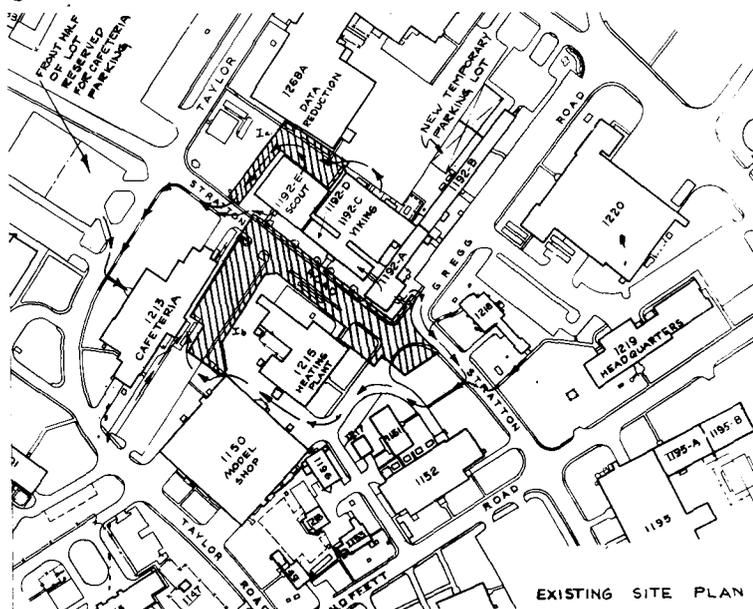
The location of existing buildings, extensive underground utilities, e.g. utility tunnels, storm and sanitary sewers, combined with traffic and parking requirements, demand that any revised layouts of the site areas must be a compromise at best, in order to maintain costs at a reasonable level and provide an orderly transition.

The master plan concept, in summary, is to develop a core unit in the area bounded by Ames, Taylor, and Durand Roads (loop road). Major automobile circulation would be confined to the loop road with parking and pedestrian circulation reserved for the interior. Cross automobile circulation within the area would be minimized as much as possible if not limited entirely.

It is planned that large areas of the core unit will be cleared by eliminating nonessential roads, to become pedestrian oriented open spaces to improve the overall environment and safety by restricting automobile traffic in these areas.

Landscaping will also be provided of a soft natural character, consisting primarily of canopy, shade trees and lawn. Walks will be informal, curvilinear in character, tying together major pedestrian routes. The overall aesthetics will also be improved by screening out unsightly facilities and services which must remain in the area. The screening will be done by both landscaping and by constructing a permanent decorative brick wall.

Additional parking will be provided on the periphery of the open spaces to replace the parking deleted by the site improvements and to relieve the parking problem in the general area.



Contracts have recently been awarded which will significantly affect the Center in the general vicinity of the Cafeteria, Viking and Scout Offices, and the Heating Plant. This work is shown as being under construction by the cross-hatched area on the existing site plan (Figure 1). Temporary walking routes around the construction area will be available as indicated by the arrows.

The construction area indicated as Phase 1a, will be completed first and the indicated route from the back of the Scout-Viking complex through this area should be available before the normal walking route in front of the building is closed. Your adherence to the routes shown will minimize interference with construction and provide safe access. Personnel are reminded that construction sites at the Center are normally "hard hat" areas and should not be visited by those not connected with the project.

Figure 2 shows the same site as it will look after this phase of construction is complete. The dark line around the Heating Plant, Building 1215, represents the decorative brick wall that will be constructed to screen this area from pedestrian view.

A portion of the existing parking lot behind the Cafeteria will become an open patio with trees planted in the dark squares. The entire area between the new brick wall and the Cafeteria-Scout-Viking complex will be landscaped.

The plan will improve the overall appearance and minimize vehicular and pedestrian congestion. This plan is also conducive to personnel walking to the Cafeteria area. Most of us, with our sedentary occupations, can well afford to walk on occasion. During periods of inclement weather, traffic congestion will not be significantly improved, although we do believe there will be less risk involved for pedestrians.

At first glance the plan may appear to reduce parking spaces available. This is actually not true. Even during construction of the first phase the total number of parking spaces in the area will remain the same. This is due to providing additional parking in the lot located behind the Data Reduction-Viking-Scout complex and by restriping several large nearby parking lots. The parking lot across from the Cafeteria, on the east of the 7 x 10 Tunnel, will have the front section reserved for Cafeteria patrons to replace the portion of the Cafeteria lot being demolished.





**BEFORE:** This is a view from the back side of the Cafeteria looking across the Cafeteria parking lot towards the Heating Plant, as it looks today.

\*\*\*\*\*

Management officials are aware that Langley personnel will be slightly inconvenienced during the construction phase of this project, but it is hoped that staff members will be understanding during this short period of time.

If the weather cooperates and the supplier of the brick meets the promised delivery data, temporary inconvenience to personnel will be short lived. The first group of construction contracts is due to be completed prior to Dec. 1972. While the plan shown here is immediate, follow-on work over the next several years, in this and other areas of the Center, will be a pleasant improvement of our work surroundings.

## UNDERGRADUATE COURSES

Two Old Dominion University undergraduate courses will be offered at the Center for the fall semester. These courses will begin September 20, pending sufficient enrollment.

Physics 205 - Modern Physics, lectures three hours, three credits. Prerequisite: Physics 112 or 122. Corequisite: Mathematics 202 or 208. The course is an introduction to atomic, molecular, solid state, and nuclear physics. The class will meet on Mondays and Wednesdays from 1:30 to 2:45 p.m. Instructor will be announced later.

Engineering 322 - Electrical Circuits and Electronics II. Lectures three hours, three credits. Prerequisite: Engineering 221. Class meetings will be held Monday and Wednesdays from 3 to 4:15 p.m. Instructor will be Dr. Jesse T. Hancock.

Interested persons should call the Training Office, 2517, for undergraduate application forms and further information. Application forms should be processed to reach the Training Office by September 8. Class times given above are subject to change depending on student interest.

**SOFTBALL NEWS.** . . Simulation continues to lead the league with 14 wins and 4 losses. SDC is in second place with a 13-5 record and ACD trails close behind with a 12-6 record. Misfits, Ballers and CB's All Stars are tied for fourth with 11 wins and 7 losses.



**AFTER:** This is an artist's drawing of the same view (at left) as it will look after phase 1 construction is complete, showing the patio area behind the Cafeteria.

## Cafeteria Menu

The following menu will be served in the cafeterias during the week of August 21:

Monday - Chickengumbo soup, prime rib of beef, stuffed pork chops, spaghetti and meat balls, Chinese egg rolls, chicken croquettes.

Tuesday - Cream of mushroom soup, delmonico steak, beef liver and onions, Maryland fried chicken, shrimp creole, taco dog and burrito.

Wednesday - New England clam chowder, country steak, meat loaf, sauteed chicken livers, clam croquettes.

Thursday - Vegetable-beef soup, delmonico steak, stuffed green peppers, chicken cacciatore, fried shrimp, beef and macaroni.

Friday - Corn chowder, rump roast, chuckwagon steak, hot turkey and dressing, enchiladas.

Snack bar - Soup, jumbo burger, hot dog, fish sandwich, 3-D burger. Variations - Pastrami, roast beef, liverwurst and cheese (Mon.); NASA submarine, corned beef, ham and egg (Tues.); NASA submarine, ham and cheese, salami (Wed.); pastrami, steak, chicken salad (Thurs.); roast beef, NASA submarine, ham and cheese (Fri.).

The menu for the week of August 28 is as follows:

Monday - French onion soup, business man's lunch, beef burgundy, barbecued chicken, ham croquettes, fried clams.

Tuesday - Chicken noodle soup, rib steak, hot roast beef sandwich, glazed ham, sauteed chicken livers, tuna noodle casserole.

Wednesday - Fisherman's chowder, beef teriyaki, meat loaf, chicken and dumplings, shrimp Newburg, sloppy Joe.

Thursday - Cream of asparagus soup, beef roast, breaded veal cutlet, broiled flounder, Salisbury steak.

Friday - Bean soup, delmonico steak, beef kabobs, fried chicken, fried oysters, chili con carne.

Snack bar - Soup, jumbo burger, hot dog, fish sandwich, 3-D burger. Variations - Barbecued pork, corned beef, tuna (Mon.); pastrami, steak, ham and cheese (Tues.); hot roast beef, NASA submarine, liverwurst and cheese (Wed.); corned beef, ham and cheese, chicken salad (Thurs.); ham and egg, NASA submarine, steak (Fri.).

## HOWE ELECTED TO FGAA OFFICE

Edward A. Howe (right), Chief of the Center's Financial Management Division, is congratulated on his recent election to the office of National Vice President of the Mid-Atlantic Region of the Federal Government Accountants Association (FGAA) by the Association's National President, Arthur Litke.



Howe was nominated to the national office by the Virginia Peninsula Chapter of the FGAA, of which he is a charter member and a past president. Behn C. Taylor, Management Audit Office, has been elected this year's chapter president.

Howe took office at the close of the association's 21st Annual Symposium in Los Angeles. He is responsible for the efficient operation of the chapters within his region. He also provides liaison between the chapters and the national association and performs specific functions as may be assigned by the President or the National Executive Board. His region consists of the states of Maryland, New Jersey, Pennsylvania, and Virginia.

The FGAA is a professional association dedicated to advancement of financial management in the government. In addition to the annual symposium sponsored by the national office, many of the local chapters also sponsor local meetings. They also sponsor a fellowship in accounting each year.

Some of their other notable accomplishments recently are the production of a complete bibliography of accounting, auditing, budgeting, and reporting; the underwriting of a textbook on Governmental Accounting; and sponsoring seminars for minority businessmen on financial management in social programs throughout the country in cooperation with the Office of Minority Business Enterprise, Department of Commerce.

The association, whose membership exceeds 7300, has 64 chapters throughout the world including the Canal Zone, Germany, Hawaii, Saigon, and Guam. It is a member of the prestigious Summit Council that is composed of the American Accounting Association, American Institute of CPA's, Federal Executive Institute, Institute of Internal Auditors, National Association of Accountants, and FGAA.

## GILLESPIE DIES AT AGE 60

John L. Gillespie, an Engineering Technician in the Composite Model Development Section, Fabrication Division, died Monday in a local hospital.

Gillespie was born February 17, 1912, in Philadelphia, Pennsylvania. He joined the Center staff in 1938 and resigned in 1942 to accept a job with the Philadelphia Navy Yard. He returned to the Center in 1945.

Survivors include his widow, Mrs. Elizabeth M. Gillespie; a daughter, Miss Lillian M. Gillespie of Arlington; and three sons, John J. Gillespie of Newport News, James D. Gillespie of Richmond, and William C. Gillespie of Crofton, Maryland.

★★★★★

FOR SALE: Sears Screamer bicycle, 5-speed, rear wheel 20 inches diameter, front wheel 16 inches diameter - \$30. Butler, 596-3394.



**200,000TH VISITOR:** Neil W. Cox (second from left) was the 200,000th visitor to the Visitor Center on August 4. He was greeted at the Center by O. Wendell White (left), Assistant City Manager of Hampton, and Axel T. Mattson (right), Assistant Director for Center Development and External Affairs and a board member of the Peninsula Chamber of Commerce. With Cox during his visit were his mother, Mrs. B. E. Cox of Asheville, N.C., and his two nephews, Kevin and Mark Giles.

## 200,000TH VISITOR TOURS FACILITY

Visitor number 200,000 arrived at the Visitor Center on Friday, August 4.

Since its opening in June 1971, the Visitor Center has had visitors from all 50 states, Canada, Mexico, and 22 foreign countries.

The milestone visitor turned out to be a Peninsula resident, however, from Tabb in York County.

Neil W. Cox was surprised to find himself greeted by City of Hampton and Langley officials as he arrived for a tour of the Visitor Center.

Accompanying Cox were his mother, Mrs. B. E. Cox of Asheville, North Carolina, and his two nephews, Kevin and Mark Giles.

The honored guests were greeted by O. Wendell White, Assistant City Manager of Hampton, and Axel T. Mattson, Assistant Director for Center Development and External Affairs and a board member of the Peninsula Chamber of Commerce.

Cox is a teacher of English and mechanical drawing at Jefferson Davis Jr. High School in Hampton. He is also minister of music at Langley Baptist Church.

He was presented a copy of "This Island Earth," a NASA publication edited by Deputy Director Oran W. Nicks.

## FOR WOMEN ONLY

Jean Elliott, Coordinator of the Federal Women's Program at the Center, is compiling information on each of the women employees at Langley. If you have not already done so, please send the following information to her at Mail Stop 113:

1. A complete record of your training and course studies unless you are enrolled in the graduate study program.
2. A list of your community affiliations (past and present).
3. A list of papers which have been published with your name listed as author or co-author.

# Personnel Profiles

By

Allan C. Hanrahan



## A Man Who Enjoys His Life and Work

Drawn up in a resolute stand, and with guidons snapping in the breeze, the grey line of skirmishers blazes away at the enemy. Confederate battle companies are once again on the firing line and there among them, loading and firing and occasionally emitting a rebel yell when he scores a hit, is Warren D. Hypes.

★★★★★



★★★★★

Well, we know now we're not back in the "Gone With the Wind" days of 1861-65 because Mr. Hypes happens to be a Project Engineer in the Water and Waste Management Section of the Space Technology Division. And the Confederate-garbed soldiers we are watching are some of the many Peninsula members -- included among which are five or six Center employees besides Hypes -- of the North-South Skirmish Association, an organization whose members are comprised of one or more eight-man "companies" and compete in "skirmishes" in which the event is won by shooting ability (at clay pigeons and planks) plus loading ability. Warren's company, the Old Dominion Dragoons, has participated in skirmishes as far away as Georgia and Michigan and will be in Winchester October 6-8.

"I got into it more by chance than anything else," Hypes said, explaining that he liked sports shooting. In fact, he was on the intercollegiate rifle team at West Virginia University, from which he received a B.S. degree in Forestry. (He later earned an M.S. degree in Wood Technology from Duke University.)

A lover of the outdoors, Warren likes to fish and in the November to March period, when the "skirmishing" is out of season, he likes to hunt also. He recounted some of the interesting adventures of a 21-day pack-horse hunting

## Swap and Shop

(Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.)

### FOUND

Black female kitten with white flea collar in parking lot of Building 1229. Christine Brown, 3858.

### LOST

Book entitled "Contemporary Problems in Perception" by A. T. Welford. Freire or Voageley, 2710 or 2920.

### WANTED

Alternate driver from Hidenwood to E.A. on 8 shift. Cunningham, 2661.

Ham transceiver, must have SSB. Wasserman, 3431.

### FOR SALE

Persian kittens - \$10. LeBel, 877-7423.

G. E. refrigerator - \$50. Borchers, 596-5924.

12-foot wooden row boat - \$35. McLellan, 596-1944.

175 cc Yamaha Enduro motorcycle. Shaughnessy, 595-2024.

1969 car shop manual for all Ford car lines, 5 volumes plus service specifications. Henry, 898-6105.

Boy's 20-inch Sting-Ray bike - \$20; 275-gallon fuel oil barrel with attached legs - \$15. Salake, 723-5525.

17-foot fiberglass tri-hull Glassmaster boat, 115 hp Evinrude motor. Lockett, 595-6262 after 5 p.m.

20-inch convertible bicycle - \$20; 22-inch rotary lawnmower with 3 hp engine - \$15; Hoover cannister vacuum cleaner - \$10; car top carrier - \$5; oil painting - \$5; custom made lined draperies 188 inches by 96 inches, with rod - \$75; lined draperies 120 inches by 84 inches with rod - \$25. Stein, 877-6087.

Westinghouse refrigerator. Riggin, 722-6087.

Hot air furnace, 70,000 btu, gas fired - \$40. Townsend, 826-6596.

1966 Ford Galaxie 500, 4-door sedan, air conditioning and power accessories. Hoggard, 838-2923.

Gold traditional sofa and chair, black Boston rocker and pad, cherrywood end table, wrought iron dining table and Sears foam mattress and box springs, table lamps. Good-  
yer, 851-3090.

★★★★★

trip he and his brother made (along with a guide and a cook) into British Columbia four years ago and he concluded, "There's something about the Canadian Rockies; it's another world. . . getting out in the wilderness away from cars and everything, it sort of washes you out, so to speak."

Warren hopes in not-too-many-years to return to British Columbia with his son, Joel (now fourteen), and spend a season as an assistant guide. Consequently, it came as no great surprise when we found out Warren has been the assistant scoutmaster of Hampton Troop 59 for the last three years.

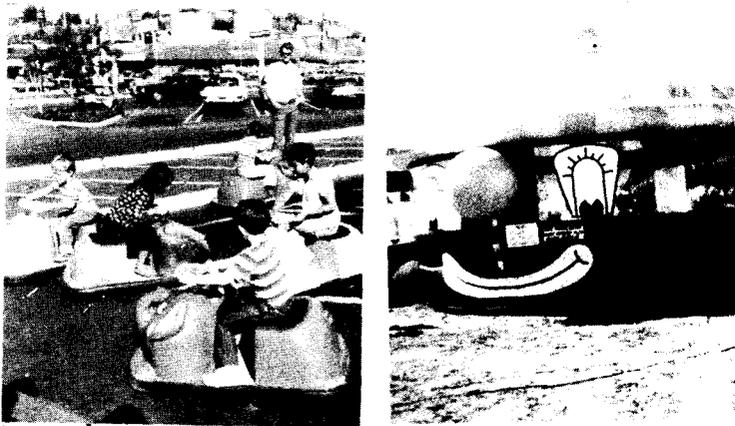
He and his wife, Charlotte, also have a twelve-year-old daughter, Kimberly.

Warren has worked here at Langley since 1963 and, interestingly enough, his work in the domestic application of space technology -- particularly in water recycling -- complements his affection for the natural environment.

He has a birthday coming up, having been born in Bluefield, West Virginia, on August 31, 1931, and of his life and work so far he says they've been interesting and he added, "I've had a good time."

## DANCE BANDS NAMED FOR CARNIVAL

The Activities Association has announced those bands which will provide the music at Summer Carnival '72 dances to be held Friday and Saturday nights, September 8 and 9. Hal Jackson and the Mariners will appear Friday from 9 p.m. to 1 a.m., with the Sound Set providing Saturday's entertainment, again from 9 p.m. to 1 a.m. These dances are the climax to each afternoon and evening of fun which the Summer Carnival provides for the entire family.



Summer Carnival '72 presents Groovy Cars and Clown Walk (pictured above), Ferris Wheel and Pony Rides for the youngsters.

Armchair or active athletes - young and old - will enjoy shooting basketball or Dunkin' the Clown. Games for children and adults will yield excitement and prizes; and for the adventuresome, bingo and the casino will always be open. Food galore will be available at reasonable prices, so bring the whole family and spend the day and evening.

Prize tickets for drawings for the two grand prizes - 1972 Starcraft Travel Trailer and 1972 Toyota Corolla 1600 Sedan -- as well as 39 other prizes to be given away by drawing are available from your division representative, the Activities Building, or the Credit Union for only one dollar.

Volunteer workers are needed by the Activities Association in order to successfully pull off its biggest event of the year, Summer Carnival '72 to be held September 8 and 9. Anyone wishing to volunteer a couple hours of their time to help make this event a success is requested to contact Kathi Warfel, MS 496, extension 2058.

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THE only way to settle a disagreement is on the basis of what's right -- not who's right.



**FIRST CARNIVAL TICKET:** Staff Photographer Bob Nye found himself on the other side of the camera and surrounded by six members of the fairer sex who were enticing him to purchase the first ticket for the Activities Association's Summer Carnival '72 which will be held September 8 and 9. Ticket sellers are (from left): Debbie Smith, Deanna Taylor, Kathi Warfel, Jeanette George, Sandy Satterthwaite, and Betty Baker.

## STAFF ATTENDS WALLOPS LAUNCH

(Continued from page 1)

equipment was incorrectly open. Quick analysis revealed that the relay was correctly positioned, and the count was recycled to the T minus two-minute mark. It ended with the successful launch.

All four stages of the Scout vehicle operated as planned, and the MTS payload, according to preliminary data, is in a 782.5 by 496.3 kilometer orbit (422.5 by 268 nautical miles). The satellite, now known as Explorer 46, will remain in orbit for about one year.

The Sunday Scout launch was the last scheduled from Wallops Island for two-and-a-half years. All other Scout launches will be made from the Western Test Range in California.

After the launch, hundreds of Langley visitors were fed at the Wallops cafeteria and then taken on a tour of the facility. They returned to Hampton late Sunday afternoon, just in time to crawl through the Hampton Roads tunnel with other weekend vacationers.

# Langley Researcher

VOLUME 11, NUMBER 17

LANGLEY RESEARCH CENTER

SEPTEMBER 1, 1972

## NASA AWARDS CEREMONY SCHEDULED OCTOBER 2

The Center's Annual Awards Ceremony will be held on Monday, October 2 at 1:30 p.m. in the NASA Hangar, Building 1244.

Each year a special day is designated for the recognition of individuals and groups at the Center for outstanding contributions and achievements toward the realization of the goals of the Center and NASA, and for the presentation of length of service awards.

In addition to these awardees, all supervisors and staff members having 25 or more years of service are invited to attend.

Employees who are to receive awards will be notified and will be given specific instructions as to rehearsal and other pertinent details.

Visitors attending the ceremony will find parking facilities available on Ames Road adjacent to the Hangar entrance. It is suggested that Center employees use the taxi service to alleviate traffic congestion.

Refreshments will be served at the conclusion of the ceremony.

## APOLLO 17 TRIP PLANNED

The Activities Association has made arrangements to sponsor a charter aircraft flight to the launch of Apollo 17 from the Kennedy Space Center on December 6.

The Apollo 17 mission is the last of the Apollo program and the nighttime launch is expected to be the most spectacular of the Moon missions.

The trip is open to all staff members and their families on a first come basis. The cost will be approximately \$80 per seat.

The itinerary is as follows:

Leave Patrick Henry Airport in the early afternoon on December 6. Upon arrival at Kennedy Space Center, the guests will be conducted on a tour of the NASA facilities. Following the viewing of the Apollo 17 launch, the group will return to Patrick Henry Airport in the early morning of December 7.

Reservations may be made by contacting Kathi Warfel, Activities Building, Mail Stop 496, by September 15. A deposit of \$20 will be required.

**SUMMER CARNIVAL '72**

**SEPTEMBER 8 AND 9**

## LEADERS NAMED FOR ANNUAL COMBINED FEDERAL EFFORT

D. William Conner, Low-Speed Aircraft Division, has been appointed Director of the Center's Annual Combined Federal Campaign and Margaret L. Strickland, Management Information Systems Division, has been named Co-Director of the drive. The appointments were announced by Center Director Edgar M. Cortright.

This will be the fifth Combined Federal Campaign conducted at the Center and it will include the Peninsula United Fund organizations, the national health agencies, and the international service agencies.

The Center's goal this year has been set at \$125,000. Last year staff members donated a total of \$141,031 to the combined effort.

Conner stated that plans are being made to conduct the one-day intensive drive during the later part of this month. Complete plans will be announced in the next issue of Langley Researcher.



CAMPAIGN HEADS: D. William Conner, Low-Speed Aircraft Division, has been named Director of the Center's Annual Combined Federal Campaign and Margaret L. Strickland, Management Information Systems Division, has been appointed Co-Director.

## HAPPENINGS

**BOWLING NOTICE.** . .The NASA Bowling League will start its season of play on September 5. A meeting will be held at 6 p.m. followed by bowling at 6:30. Team captains or a team representative must attend the meeting. For further information call Meg Lynch, 595-4282, or Jim Richardson, 2767.

**NOTE OF THANKS.** . .The family of M. P. McConnell wish to thank all staff members who donated blood during Mr. McConnell's recent illness.

**TO ESTABLISH REGISTER.** . .Former Government employees with reinstatement rights who are interested in having their names placed on the register for clerk-typists and stenographers are requested to call Jane Swartzwelder, extension 2272.

**TENNIS NEWS.** . .Len Credeur won the NASA Men's Singles Tournament by defeating Bob Murray 6-3, 6-2. Winners in the Men's Doubles were Ed Riddle and Jack Kaylor who defeated Ted Bright and Bill Haigler 3-6, 7-5, 6-3. The Women's Singles Tournament will be held September 9 and 10. Persons interested in entering the tournament are asked to call Earl Dunham, extension 3274.

**GOLF NEWS.** . .Results of the Fifth NASA Golf Association Tournament were as follows: First Flight - Low gross and low net, S. Gula with 78-12-66; second low net, H. Pritchard with 83-17-66; and third low net, T. Hall with 79-13-66. Second Flight - Low net, C. Watts with 86-22-64; second low net, R. Farmer with 85-20-65; low gross and third low net, G. Naumann with 83-18-65. Third Flight-Low gross and low net, D. Dalin with 91-27-64; second low net, M. Panz with 95-26-69; and third low net, B. Leftwich with 104-34-70.

**SILVER ANNIVERSARY.** . .NASA's Flight Research Center, Edwards, California, will celebrate its 25th anniversary



**PERFORMANCE AWARDS:** Glenna D. Martin (left) and Joy S. Rodgers, both of Space Systems Division, receive Sustained Superior Performance Awards from Eugene S. Love, former Chief of Space Systems Division and now Director for Space. Both recipients were cited "for exceptional performance, teamwork, and special efforts in support of the programs and responsibilities of the Space Systems Division."

## EEO HIGHLIGHTS

Twelve new EEO Counselors have been designated by Langley. Posters which will identify each counselor in his work situation are now being prepared. Look for: James L. Davis Donald Brown, Wilbur Fichter, Mary Jackson, Ernest Zoby Brenda Gooch, James L. Williams, Katherine Hennessy, Earnald Graves, Coefield Silver, James Hutchby and Horace Bellamy.

What is EEO? Who is involved? Where is it located? How does it operate? When does it happen? Why is it necessary? Answers to many questions such as these have been provided in an Employee's Guide to the EEO Program. Look for your copy in the mail.

One additional staff member was appointed on August 21. The new secretary is Blanche M. Johnson. Several applications for this position were received. It was a hard choice. Thanks to all other qualified persons who applied for the position.

Please return the Employee Profile Sheet to MS 127 as soon as possible.

Janet McKenzie, senior Business Administration major at Norfolk State College, is continuing to do an excellent job as Contract Compliance Specialist. Janet Cullen, summer clerk/typist, is on her way to the University of Virginia. Good luck!!

## SYMPOSIUM SEPTEMBER 12

An Administrative and Technical Services Support Symposium will be held Tuesday, September 12 from 3 to 4 p.m. in the Activities Building.

Three talks have been scheduled. Dr. George Pezdirtz will give a presentation on his recent trip to Europe. His talk will include some slides and will be entitled "Impressions of Technological Progress in European Countries Based on a Recent Trip." Jimmy Usry will discuss "Technology Applications to Oceanographic Buoys" and Warren Hypes will talk on "Application of Spacecraft Life Support System Technology to Domestic Water Re-use and Pollution Reduction."

Interested staff members are invited to attend.

★★★★★

on September 8 with ceremonies and an open house. A special ceremony with NASA Administrator Dr. James C. Fletcher will honor the Center and the original employees, most of whom were former Langley staff members, who went to Muroc Dry Lake to participate with the U.S. Air Force with flights of the X-1, the first aircraft to exceed the speed of sound in level flight.

Langley Researcher, an official publication of the Langley Research Center, National Aeronautics and Space Administration, Hampton, Virginia 23365, is published biweekly in the interest of its employees. Address contributions to the Editor, Mail Stop 154, telephone 3116.

Editor.....Ruth Angel Verell

Staff Photographer.....Bob Nye

Reporters.....Langley Employees

The privilege of advertising articles in this publication is restricted to employees of Langley Research Center. Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.



Forty-five Center employees attended the Symposium on the

LRC Research Environment held July 26-28 at Wallops.

## SYMPOSIUM HELD AT WALLOPS

The Symposium on the LRC Research Environment was held July 26-28 at NASA Wallops Station. A report showing the results of the symposium has been published and it is being studied of key staff members to determine what recommendations can be implemented at the Center. As soon as firm determinations have been made, staff members will be notified.

The Symposium was attended by 45 Langley Research Center employees involved in research at the Center. The attendees represented a broad cross-section of the research environment at LRC including all the research divisions, the Viking Project Office, the Programs and Resources Division, and the Office of the Director. Researchers, technicians, and first-line managers comprised the overwhelming majority of attendees.

The goals of the symposium, which was chaired by Dr. Terry Straeter, Analysis and Computation Division, were to identify and investigate those problems which degrade the research environment and impede the research effort at LRC. In addition, where possible, attendees were asked to propose workable solutions to these problems.

On the final day of the Symposium, Director Edgar M. Cortright and other top Center officials were presented the recommendations by a panel selected from the group.

## BOOKS FOR SALE

The Activities Association has the following extra books on hand. If you are interested in any of them, stop by the office, Building 1222, or call Kathi Warfel, extension 2058. Each listing includes book title, author, and publisher.

Schaum's Outline Series, "Advanced Mathematics"

Schaum's Outline Series, "Mechanical Vibrations"

"Partial Differential Equations of Mathematical Physics" by Webster, Dover publication (paper)

"Matrix Methods of Structural Analysis," by Livesley, Pergamon publication

"An Illustrated Flora of the Northern United States and Canada" - 3 vols., by Britton and Brown, Dover (paper)

"Airplane Aerodynamics" by Dommasch, Shelby, and Connolly, Pitman publication

"Elements of General and Biological Chemistry" by Holum, Wiley publication

"The Theory of Matrix Structural Analysis" by Przemieniecki, McGraw-Hill

"This Island Earth" edited by Oran Nicks, GPO

"Rounding Errors in Algebraic Processes" by Wilkinson,



Dr. Terry Straeter, ACD, chaired the Symposium

## TENNIS COURT CONSTRUCTION

Preliminary sub-surface work is presently underway in preparation for construction of two new tennis courts for use by Center employees and their families. The Activities Association has awarded a contract to Joseph Brown and Son of Williamsburg for construction of the courts to be completed in late October.

The new courts, located on the Activities grounds adjacent to Gregg Road and the playground area, will be of Laykold or Teniflex all weather composition construction with green playing surface and red borders. The courts meet all USLTA specifications and will prove a valuable addition to employee recreational facilities.

This project represents the most comprehensive in a series of major expenditures by the Activities Association in recent months to improve and expand its facilities. Purchases of new kitchen and playground equipment have preceded the tennis court construction.

Projects of this magnitude are largely financed by proceeds from the annual Summer Carnival, this year scheduled for September 8 and 9. See the article concerning the carnival elsewhere in this issue, and support this worthwhile event.

★★★★★

Prentice-Hall publication

"The Managerial Grid" by Blake and Mouton, Gulf

"Stability and Control of Airplanes and Helicopters" by Seckel, Academic

"Systems Programming" by Donovan, McGraw-Hill

"Kinetic Theory of Gases" by Present, McGraw-Hill

"Methods for Unconstrained Optimization Problems" by Kowalik and Osborne, American-Elsevier

"Statistical Mechanics" by Davidson, McGraw-Hill

"Physics of Solids" by Wert and Thomson, McGraw-Hill



**PERFORMANCE AWARDS:** Alphonsa Smith (left) and S. Franklin Edwards, both of Instrument Research Division recently received Special Achievement Awards for Performance. Smith was cited "for his outstanding personal performance in planning and carrying out ultrahigh vacuum calibrations of the Apollo 15, 16, and 17 orbital and lunar surface mass spectrometers." Edwards received his award "for his outstanding work in the successful establishment of several calibration facilities and the development of new testing techniques which significantly extended the LRC capabilities in the fields of temperature and humidity measurement."

## MERIT PROMOTION NOTICE

The following Merit Promotion Announcements are currently open:

72-60 Supervisory Operating Accountant, GS-510-12 or 13  
72-61 Clerk-Stenographer, GS-312-5

72-62 Engineering Technician, GS-802-9 or 10

72-63 - Engineering Technician, GS-802-10 with promotional opportunity

72-64 Head, Structural and Architectural Section, GS-801-13 or 14

72-65 Head, Electrical and Mechanical Systems Section, GS-801-13 or 14

72-66 Assistant Head, Plant Services Branch, GS-1601-13

72-67 Head, Plant Contracting Section, GS-1601-12 or 13

72-68 Assistant Chief, Fabrication Division, GS-1601-13 or 14

72-69 Supervisory Electronics Technician, GS-856-12 or 13 with promotional opportunity

72-70 Supervisory Electronics Technician, GS-856-11 or 12

72-71 Contract Assistant, GS-1102-5 with promotional opportunity

72-72 - Supervisory Engineering Technician, GS-802-10 or 11

72-73 Supervisory Engineering Technician, GS-802-10 or 11

72-74 - Supervisory Engineering Technician, GS-802-10 or 11

72-75 Electrical Engineering Technician, GS-802-8 with promotional opportunity

72-76 Supervisory Electrical Engineer, GS-850-13 or 14

72-77 Supervisory Aerospace Engineer, GS-861-13 or 14

## cafeteria menu

The following menu will be served in the cafeterias during the week of September 4:

Monday - H O L I D A Y

Tuesday - Cheese chowder, Swiss steak, beef liver and onions, baked lasagna, cordon bleu, knockwurst and sauerkraut.

Wednesday - Vegetable beef soup, delmonico steak, steamboat round, barbequed spare ribs, spaghetti with meat balls, fish cakes.

Thursday - Cream of potato soup, steak, beef stroganoff, fish fry, chicken pie, burrito and enchilada.

Friday - Minestrone soup, delmonico steak, Salisbury steak, fried chicken livers, ham steak, franks and beans.

Snack bar - Soup, jumbo burger, hot dog, fish sandwich, 3-D burger. Variations - Hoagie sandwich, pastrami, steak, (Tues.); NASA submarine, hot roast beef, ham and cheese (Wed.); chicken salad, pastrami, NASA submarine, BBQ beef (Thurs.); steak, ham and egg, corned beef (Fri.).

The menu for the week of September 11 is as follows:

Monday - Cream of chicken soup, pot roast, meat loaf, red snapper, chicken chow mein, beef and macaroni.

Tuesday - Vegetable soup, delmonico steak, corned beef and cabbage, scallops, fried chicken, creamed dried beef on toast.

Wednesday - Crab bisque, beef teriyaki, seafood platter, veal cutlet, chop suey, macaroni and wieners.

Thursday - Cream of onion soup, country steak, delmonico steak, chicken and dumplings, fried shrimp, chicken croquettes.

Friday - Chickengumbo soup, business man's lunch, beef kabobs, BBQ pork sandwich, glazed ham, grilled cheese.

Snack bar - Soup, jumbo burger, hot dog, fish sandwich, 3-D burger. Variations - Ham and cheese, NASA submarine, steak and egg (Mon.); pastrami, roast beef, tuna salad (Tues.); flounder dinner, NASA submarine, ham and egg (Wed.); NASA submarine, corned beef, liverwurst and onion (Thurs.); steak and egg, ham salad, BBQ roast beef (Fri.).

## OCEANOGRAPHY COURSE

An ODU graduate course in Physical Oceanography will be offered at the Center during the fall semester.

This course is an addition to those offered by ODU in the "green sheet" announcement dated August 4. Interested individuals should process the green sheet application, annotating OCEAN 504 to the listing of ODU courses, as soon as possible.

The time will be announced later. The textbook will be "An Introduction to Physical Oceanography," by von Arx and the instructor will be Dr. R. E. Johnson.

For further information call the Training Office, 2517.

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72-78 Supervisory Aerospace Engineer, GS-861-13 or 14

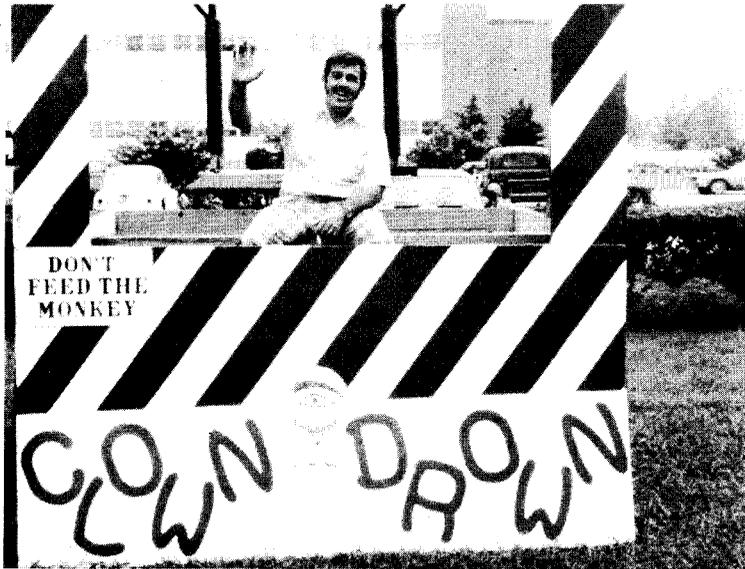
72-79 Head, Structural Engineering Section, GS-801-13 or 14

72-80 Head, Facilities Systems Section, GS-801-13 or 14

72-81 Supervisory Procurement Agent, GS-1102-11 with promotional opportunity

For information on position locations, closing dates, and areas of consideration contact the Staffing and Special Programs Branch, extension 2233.

# SUMMER CARNIVAL PROVIDES FUN FOR THE FAMILY



**CLOWN DROWN:** One of the new booths at the Summer Carnival will be the Clown Drown which will be manned by R & W Contractor employees. Getting ready to take a dip in the drink is Brady Owens, R & W Contractors.

## PRIZE DRAWING SCHEDULE

### SEPTEMBER 8

|            |                                     |
|------------|-------------------------------------|
| 5:00 p.m.  | Motorola Black and White Television |
| 5:20 p.m.  | Regina Electric Broom               |
| 5:40 p.m.  | Corning Super Cookware Set          |
| 6:00 p.m.  | Bell and Howell Movie Outfit        |
| 6:20 p.m.  | Waring Electric Can Opener          |
| 6:40 p.m.  | Waring Blender                      |
| 7:00 p.m.  | Black Angus Rotisserie-Broiler      |
| 7:20 p.m.  | Electric Ice Cream Freezer          |
| 7:40 p.m.  | General Electric Toaster-Oven       |
| 8:00 p.m.  | Seth Thomas 8-Day Clock             |
| 8:20 p.m.  | Midland AM Clock-Radio              |
| 8:40 p.m.  | Citation Spray/Steam/Dry Iron       |
| 9:00 p.m.  | Motorola Component Stereo System    |
| 9:20 p.m.  | Lifelong Percolater                 |
| 9:40 p.m.  | Sunbeam Hair Dryer                  |
| 10:00 p.m. | Starcraft 16-foot Camping Trailer   |

### SEPTEMBER 9

|           |                                     |
|-----------|-------------------------------------|
| 2:00 p.m. | Motorola Black and White Television |
| 2:20 p.m. | Max Hair Dryer                      |
| 2:40 p.m. | Sunbeam Fry Pan                     |
| 3:00 p.m. | His and Hers 3-speed Bicycles       |
| 3:20 p.m. | Midland AM Clock-Radio              |
| 3:40 p.m. | Presto Hair Curler Set              |
| 4:00 p.m. | Brother's Electric Sewing Machine   |
| 4:20 p.m. | General Electric Toaster Oven       |
| 4:40 p.m. | Wearever Cooking Set                |
| 5:00 p.m. | Cosco Table and Four Chairs Set     |
| 5:20 p.m. | Val-O-Seat                          |
| 5:40 p.m. | Rod, Reel, and Tackle Box           |
| 6:00 p.m. | Royal Electric Portable Typewriter  |
| 6:20 p.m. | Sunbeam Fry Pan                     |
| 6:40 p.m. | Citation Toaster                    |
| 7:00 p.m. | \$100 Gift Certificate              |
| 7:20 p.m. | Croquet Set                         |

Labor Day weekend is upon us and with it summer is almost gone; but, Summer Carnival '72 affords one last chance for family fun and entertainment.

Next Friday and Saturday, September 8 and 9, the Activities Association presents its annual Summer Carnival with prizes, food, rides, dances, and much, much more.

Entertainment for the kids includes pony rides, Groovy cars, Ferris wheel, and clown walk in addition to children's games and prizes. For adults, there are more games and prizes, bingo, casino, and the clown drown. Food galore will be available at reasonable prices, so bring the family and spend the day.

Appearing on the grounds Friday from 4 to 6 p.m. will be folksinger Bill Campbell, and capping the evening will be dancing with Hal Jackson and the Mariners from 9 to 1 a.m.

The winning ticket for the 1972 Starcraft Travel Trailer will be drawn at 10 p.m.

Saturday, from 2 to 4 p.m. Rhonda and P.J. provide entertainment on the grounds. Sack and 3-legged races for Mom, Dad and the kids begin at 3:30.

Saturday's Grand Prize - a 1972 Toyota Corolla sedan, will be awarded at 10 p.m. and Saturday's festivities will come to a climactic end with dancing from 9 to 1 a.m. to the music of the Sound Sett.

Also, for camping enthusiasts, an area will be set aside for tents and trailers. It promises to be a full weekend of fun and entertainment for the entire family, so bring them all. Spend not only the day, but the entire weekend.

## PRIZE TICKET POLICY

The following policy will be in effect in the awarding of all prizes by drawing at Summer Carnival '72. For the Grand Prizes of Friday and Saturday night, there is no requirement for the winner or the ticket stub to be on the grounds at the time of the drawing.

For all other drawings, the winning stub must be on the grounds and presented to the announcer at the time of the drawing.

All tickets will be returned to the tub after a given drawing whether the ticket was a winner or not. All ticket purchasers have an equal chance at all prizes.

## VOLUNTEERS NEEDED

Volunteer workers are needed by the Activities Association in order to successfully pull off its biggest event of the year, Summer Carnival '72. Anyone wishing to volunteer a couple hours of their time are requested to fill out the following blank and mail it to M.S. 496

NAME \_\_\_\_\_ PHONE NO. \_\_\_\_\_  
 DAY AND TIME WILL WORK \_\_\_\_\_

★★★★★

|            |                                          |
|------------|------------------------------------------|
| 7:40 p.m.  | 3/8-inch Black and Decker Variable Drill |
| 8:00 p.m.  | Polaroid Model 440 Camera                |
| 8:20 p.m.  | Midland AC/DC-AM/FM Portable Radio       |
| 8:40 p.m.  | General Electric Comb                    |
| 9:00 p.m.  | Midland AM/FM Cassette Recorder          |
| 9:20 p.m.  | Carvel Hall Steak Knife Set              |
| 9:40 p.m.  | Waring Blender                           |
| 10:00 p.m. | Toyota Corolla 1600 Sedan                |



AWARDS PRESENTED: A. Harper Gerringer (left), Systems Engineering, recently received a Special Achievement Award for Performance "for sustained superior performance in the theoretical analysis, evaluation, and documentation of the dynamic stability characteristics for the Forty-Two Inch Heat Shield Scout D. Launch Configuration." Frederick R. Matthews (center), Fabrication Division, and Erskine C. White, Systems Engineering, received \$50 each for their joint invention entitled "Lightweight, Variable Solidity Knitted Parachute Fabric."

## AIAA MAGAZINE AVAILABLE

The August issue of the magazine "Astronautics and Aeronautics," published by the American Institute of Aeronautics and Astronautics, contains a special section entitled "Advanced Subsonic Transport Technology Assessment."

In that section, members of Langley's ATT Program Office outline how aggressively developed technology could transform the next generation of airliners.

Because of the interest displayed in this particular issue, a number of additional copies have been obtained and will be made available to any staff member desiring one, on a first-come, first-served basis. A copy of the magazine may be picked up at the Reference Desk of the Langley Library, or may be obtained by calling the Reference Desk, extension 2786.

## COMING EVENTS

The following events will take place in the Activities Building during the next two weeks:

- Sept. 2 - Building open 10 a.m. to 6 p.m.
- Sept. 3 - Building open 1 p.m. to 6 p.m.
- Sept. 4 - Labor Day - Building Closed - restroom facilities open
- Sept. 5 - Technical symposium 5 p.m.  
Club night 7 p.m.
- Sept. 6 - Building open 4 to 10 p.m.
- Sept. 7 - Building closed
- Sept. 8 - Summer Carnival 5 to 10 p.m.  
Grand Prize - 16-foot Starcraft Camper  
Tennis - women's singles tournament
- Sept. 9 - Summer Carnival 2 to 10 p.m.  
Grand Prize - Toyota Corolla 1600  
Tennis - women's singles tournament

## SWAP AND SHOP

(Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.)

### FREE

Kittens. Russell, 877-7223.

### FOUND

Portable radio in East Cafeteria on August 7. Owner may claim by identifying at the Security Office, Building 587.

### WANTED

To trade 12 cubic-foot refrigerator for deep freeze. Miller, 722-8993.

To swap for tropical fish or sell cheap 15-gallon aquarium. Howe, 838-0254.

Ride from Buckroe to W.A. on 8 shift. Pam Murray, 3401.

Ride, passengers, or pool from Gloucester Court House to W.A. on 8 shift. McConnell, 2065.

### FOR SALE

Admiral refrigerator - \$55. Miller, 722-8993.

1972 Honda CB-350 - \$850. Hall, 877-6504.

110-pound weightlifting set - \$12; York weightlifting bench - \$13; four 20-pound plates - \$3 each; pair weighted boots - \$4; 5-foot barbell with polished chrome revolving sleeve - \$5; 1-1/4, 2-1/2, 5, and 10-pound plates - 16¢ per pound. Mathis, 722-7629.

1966 Plymouth station wagon - \$450; also 4 or 5-year-old quarterhorse in poor shape - \$70. Childs, 898-6719.

Flying Dutchman 20-foot fiberglass sailboat with sails, trailer, and racing gear - \$1200. Drewry - 722-4443.

1970 Apache tent-trailer, Mesa II. Shaw, 2350.

Model 3000 Garrard turntable - \$16; also water skis. Miller, 722-8993.

Shetland Sheep dogs (miniature Collies) AKC registered, 9-weeks old. Davis, 898-6834.

AKC registered Dachshund puppies - \$40. Smith, 595-0832.

1955 Chevrolet body and frame, bucket seats, 283 Chevy engine complete; 283 Chevy block, pistons, cranks and heads; 13 to 1 Jahn's pistons for 409 Chevy; 3-speed transmission for Chevy and 3-speed shifter; many more parts; also Conn trombone with case - \$100. Inge, 868-9456.

1968 Chevrolet Impala custom, 2-door sedan, V-8 307, air conditioning and power accessories - \$1300. Bielat, 722-6976.

Love seat style hide-away-bed; antique red velvet chase lounge, outside window blinds; antique love seat. Hudgins, 722-7338.

Two clothes line posts - \$8; anchor fence gate, 42 inches high - \$8. Klich, 877-2604.

GT-1 13-foot fiberglass sailboat - \$325. Brooks, 898-6517.

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IAM MEETING. . . The NASA Lodge No. 892, International Association of Machinists, will meet September 5 at 7 p.m. at the Central Labor Union Hall.

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Sept. 10 - Bridge Club, Building open 1 to 6 p.m.

Sept. 11 - NASTRAN Conference - Building closed

Sept. 12 - NASTRAN Conference - Building closed

Sept. 13 - NASTRAN Conference, AACB picnic at 5 p.m.

Sept. 14 - Bingo - 8 p.m.

Sept. 15 - Flight Projects Branch dinner 4:30 p.m.



Doris C. Eggleston  
Procurement



Clarence E. Snyder  
Loads Division



Phillippa F. Brown  
High-Speed Aircraft



Blake W. Corson, Jr.  
High-Speed Aircraft



Otto F. Trout, Jr.  
Facilities and Equip. Eng.



Benjamin S. Caum  
Fabrication



Samuel K. Gibbs  
Operations Support



Edward B. Boswell  
Personnel

## STAFF MEMBERS RETIRE

Staff members who retired recently and elected not to have photographs made are as follows:

Stanley W. Rau, Procurement Division

James R. Freeman, Management Information Systems

Dr. Trutz Foelsche, Environmental and Space Sciences

Dr. Samuel Katzoff, Chief Scientist

John G. Lowry, Office of Director for Aeronautics

Gilbert F. VanZandt, Flight Instrumentation

Erma T. Walker, Flight Dynamics and Control

Catherine J. Chamberlin, Office of Director for Systems Engineering and Operations

Harry H. Hamilton, Scientific and Technical Information Programs

Harry R. Paucker, Instrument Research

Fred L. Skates, Fabrication

Theodore E. Thornley, Operations Support

James E. Cooper, Fabrication

Julia M. Goodwin, Instrument Research

Jules M. Miller, Scientific and Technical Information Programs

Andrew Veryzer, Instrument Research

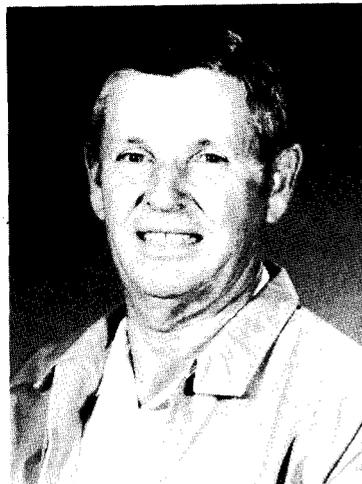
Charles E. Conner, Facilities and Equipment Engineering

Ruth W. Feick, High-Speed Aircraft

Luther O. Harcum, Fabrication

Frank Penland, Personnel

Myrtle H. Wells, Flight Dynamics and Control



Virgil M. Forrest  
Operations Support



I. Edward Garrick  
Chief Mathematical Scientist

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Horace V. Bunting, Operations Support

Thelma F. Bunting, Structures

Raymond M. Hansen, Instrument Research

Norma A. Hayes, Structures

Virgil S. Ritchie, High-Speed Aircraft

James C. Sinclair, Fabrication

Robert H. Wade, Structures

Theodore E. Wetterling, Instrument Research

## Questions and Answers

Q. Why was the position vacated by Frank Penland in Training Office not advertised under merit promotion?

A. During our recent reduction in force, according to Personnel Division officials, Frank Penland retired under discontinued service provisions, and his position was abolished. At this time the specific position that he held no longer exists in the Training and Educational Services Branch. The duties of Penland's position were divided among the four remaining Employment Development Specialists in the Branch.

Q. Has the drinking water at Langley been tested for mineral and bacteria content and been proven safe for human consumption?

A. Yes, Langley Air Force Base water is tested monthly for bacterial contamination and periodically for chemical content, according to James C. Tingle, Health Officer. These tests are performed by the Air Force Public Health Office. In addition, several tests have been made by Langley Research Center chemists of chemical content. All tests have indicated that water was within acceptable limits. Water consumed at Langley Research Center is from the same source as that used by the Air Force at Langley and Fort Monroe.

Q. Isn't it unethical (if not illegal) to transfer a person from one directorate to a position in another directorate without advertising the position?

A. According to Personnel officials, each Directorate is assigned a personnel complement ceiling, and it is the responsibility of the program director to manage his personnel resources within his allocated complement. The Merit Promotion provisions in Chapter 335 of the Federal Personnel Manual state that competitive promotion procedures apply to filling of positions with known promotion potential by reassignment, transfer, or reinstatement. If a position does not possess known promotion potential at the time of the reassignment, it is neither unethical nor illegal to transfer employees between directorates without first advertising the position.

(Editor's Note: A number of EEO type questions concerning minority groups and women have been received for the Questions and Answers column. The Langley Researcher Advisory Committee feels these questions should be referred to Alvin F. Anderson, the Center's Equal Employment Opportunity Officer, MS 127, extension 2124. Anderson is in a position to act on these questions, whereas, the Researcher can only air the gripes. This column will continue to answer questions of general interest that do not deal with personalities or individuals. Questions may be

## WORDS IN PEOPLES' MOUTHS



## EMPLOYEES DONATE BLOOD

The Red Cross Bloodmobile unit visited the Center on August 16 and staff members donated a total of 170 pints of blood.

John Denton completed his quota to reach the 11-gallon mark. Harold H. Youngblood was credited with eight gallons and Andrew Wineman reached the 7-gallon mark.

Credited with giving six gallons were Ronald Amole, John A. Moore, Kenneth Pierpont, Robert Mulac, and L. E. McDaniel. Madeline W. Johnson has donated 5 gallons and Arvo Luoma has given four gallons. Reaching the three-gallon mark were Harry Compton and Herbert Hardrath.

Two-gallon pins were presented to James Leiffer, John H. Soule, Ray D. Lowe, Robert Spruill, and Dewey Smith. Receiving one-gallon pins were James Buglia, William L. Derby, Vernon Marshall, Roy Duckett, and William D. Hunnings.

Assisting during the visit were Dr. Herbert Jackson and Dr. M. M. Bingol.

The next visit to the Center will be on October 25. Staff members who wish to participate in the blood program and have not registered to do so are requested to call the East Dispensary, extension 2243

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signed or unsigned; however, questions not of sufficient general interest to be published in the Researcher may still be answered and the information passed on to the sender if the question is signed.)

# Langley Researcher

VOLUME 11, NUMBER 18

LANGLEY RESEARCH CENTER

SEPTEMBER 15, 1972

## TIME CHANGE MADE IN DIRECTOR'S COFFEE AND BRIEFING PROGRAM

Edgar M. Cortright, Director, expressed pleasure this week at the excellent response received to his invitation extended to wives of Center staff members to attend a coffee and briefing program on Thursday, September 21. However, since the Activities Building can accommodate only 400 persons, Cortright has added a second briefing to the program so that each of the ladies attending may do so without overcrowding.

Accordingly, a group of the ladies who have already sent in their acceptances for the program originally scheduled for 10 a.m. will, within the next few days, receive a notice asking them to advance their arrival at Langley to 9:30 a.m. at which time the first briefing will be conducted by the Director in the Activities Building. This will be followed by a coffee social.

Some ladies who have sent in acceptances or who will do so over this week-end, will not receive a notice and they will be expected to arrive at the grounds of the Activities Building at 10 a.m. for a coffee social and then they will attend the second Director's briefing in the Activities Building at 10:45 a.m.

Some flexibility exists so that those who are asked to attend the 9:30 a.m. briefing may still elect to attend the coffee at 10 a.m. and then the second briefing, if that is more convenient for them.

In case of inclement weather on Thursday, September 21, both programs will be held in the Hangar Building (1244) at the times indicated above.

Hostesses for this special occasion will be ladies from the various Center organizations, headed by Jane S. Hess, Technical Library.

## CREDIT UNION TO BE CLOSED

The Credit Union Office will be closed from 1 p.m., Wednesday, September 27, through 3:30 p.m. Friday, September 29. This will permit balancing out all accounts as of month-end and the transfer of data so that the LFCU can open October 2 with the latest in accounting systems: an on-line, real-time electronic data processing one.

Benefits to the members will be impressive. Their accounts will be instantaneously updated as each transaction is electronically recorded, their receipts for deposits/payments will not only reflect the business at hand, but will show their new share and loan balances as well, their quarterly statements will reflect the full quarter's business, and their year-end statements will show all the information needed for tax purposes, i.e., dividends received and net interest paid the LFCU. All this by October 2, but in the meantime remember the Sept. 27-29 shutdown.

## ONE-DAY DRIVE FOR COMBINED FEDERAL CAMPAIGN SEPT. 28

D. William Conner, Director of the Center's Combined Federal Campaign, has announced that Thursday, September 28 has been designated for the intensive one-day drive. Serving as Co-Director of the drive is Margaret L. Strickland, Staff Assistant, Office of the Director for Structures.

This once-a-year effort enables staff members to lend their support to the community by contributing to the Peninsula United Fund agencies, International Service agencies, and the National Health agencies.

A kick-off meeting for division chairmen and campaign workers will be held at the Activities Building on Tuesday, September 26 at 9 a.m.

The Center's goal this year has been set at \$125,000. Last year staff members donated a total of \$141,031 to the combined effort.

Katherine W. Hennessy, Structures, will serve as financial chairman. She will be assisted by Helen Hudgins, Programs and Resources; Mary W. Jackson, High-Speed Aircraft; and James H. Ogiba, Management Audit Office.

This will be the fifth Combined Federal Campaign conducted at the Center. Each year staff members have set an example for the rest of the community to follow and it is anticipated that employees will again give their fair share.

A list of division chairmen and other key campaign workers will be published in the next issue of the Researcher.



CAMPAIGN WORKERS: Katherine W. Hennessy (second from left) will serve as financial chairman of the Center's Combined Federal Campaign. She will be assisted by (from left): James H. Ogiba, Helen Hudgins, and Mary Jackson. The Center's one-day drive will be held on Thursday, September 28, when a corps of over 300 workers will contact each staff member.

## HAPPENINGS

**EARLY PUBLICATION DATE.** . . The next issue of Langley Researcher will be published on Wednesday, September 27 in order to give maximum coverage to the Center's one-day drive in the Combined Federal Campaign. The one day effort is scheduled to be held at the Center on September 28. Anyone wishing to submit a contribution for publication in that issue of the Researcher should send it to the Langley Researcher Office, Mail Stop 154, by noon on Friday, September 22.

**AFGE NOTICE.** . . The NASA Lodge 2755 American Federation of Government Employees will meet on Wednesday, September 27 at 7:30p.m. at the Central Labor Union Hall.

**NEW HEIR.** . . Celebrating the arrival of a seven-pound, two-ounce son, Russell Noble, on September 6 is P. M. Jackson, Viking Project Office.

**ARCHERY NEWS.** . . The NASA Bowmen Archery Club will hold a shoot on Sunday, September 24 at 2 p.m. at the Newport News Park. The group will meet at the ranger station near the camp ground and proceed from there to shoot around the field range.

**NASA FILM CITED.** . . At the awards banquet held at the Sheraton Hotel last month, the Atlanta Film Festival selected as the best documentary NASA's film entitled "Man's Reach Should Exceed His Grasp."

**NEW CONSUMER PROTECTION.** . . The Cooperative Extension Service of Virginia Polytechnic Institute and State University reminds consumers that the following new consumer protection regulations and laws are now in effect: "The door-to-door solicitation act was amended in the 1972 Virginia Assembly. The law effective July 1972, allows a person three business days to cancel a sales contract signed in any residence. The bill does not include: (1) farm equipment, (2) cash sale of less than \$15, (3) a sale made at seller's permanent place of business, (4) a sale made in agreement with a preexisting revolving charge account or prior negotiations, (5) a sale when a buyer requested goods or services without delay, due to emergency, (6) the seller, in good faith, makes a substantial beginning of performance of the contract before buyer gives notice of cancellation. Written Agreement: The statement explaining 'Buyer's Right to Cancel' must appear on the front of the contract or immediately above the buyer's signature. It must include the name and mailing address of the seller. Until the seller has complied with this section, the buyer may cancel the sale by notifying the seller in any manner and by any means."

### On Criteria For Research Studies

**SOCRATES:** Shall we make astronomy the next study? What do you say?

**GLAUCON:** Certainly. A working knowledge of the seasons is beneficial to everyone, to commanders as well as to farmers and sailors.

**SOCRATES:** You make me smile, Glaucon. You are so afraid that the public will accuse you of recommending unprofitable studies.

Plato, Republic VII, CIRCA 370 B.C.



**ACHIEVEMENT AWARDS:** Bruce Fowler (top photo, center) recently received a Special Achievement Award for Performance "for superior performance in leading a task team in the identification of the Langley Research Center's business Automatic Data Processing equipment requirements and developing a plan for meeting these requirements which culminated in the purchase of a third-generation computing system in July 1972." Congratulating him are Andrew G. Swanson (left), Business Data Systems Project Office, and Robert N. Conway, Assistant Director for Administration. In the bottom photo William K. Goad (right) receives a Special Achievement Award from Earl F. Stahl, Chief of Operations Support Division. Goad was cited "for sustained superior performance and imagination in the technical support of instrumentation of test programs in the Pilot Model Expansion Tube."

Langley Researcher, an official publication of the Langley Research Center, National Aeronautics and Space Administration, Hampton, Virginia 23365, is published biweekly in the interest of its employees. Address contributions to the Editor, Mail Stop 154, telephone 3116.

Editor.....Ruth Angel Verell  
Staff Photographer.....Bob Nye  
Reporters.....Langley Employees

The privilege of advertising articles in this publication is restricted to employees of Langley Research Center. Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.



**SOFTBALL CHAMPS:** Simulation won the NASA Slow Pitch Softball Championship with a record of 16 wins and 4 losses. Members of the championship team are kneeling (from left): John Hallinger, Allen Hall, Dave Overton, Joe Weitz, Ed Phillips, and Ernie Anglin. Standing - Bob Spruill, Lem Meetze, Bill Ashworth, John Merrill, Dave McDougal, Leonard Credeur, and John Rollins. Absent were Dick Hueschen, Tom Wampler, Rod Duncan, Fred Moore, Aubrey Ferguson, and Steve Wills.

## NASA SOFTBALL NEWS

Simulation took first place during the regular season of play in the NASA Slow Pitch Softball League with a 14-4 record and also won the post season tournament.

SDC took second place with 13 wins and 5 losses and ACD came in third with a 12-6 record. Misfits, Ballers and Charlie Brown's All Stars tied for fourth place with an 11-7 record. A playoff for fourth place was won by Charlie Brown's All Stars.

Other final standings were as follows: Ballbusters 7-11, C & S 5-13, Pitch Links 5-13, and Unfits 1-17.

## Gordon Mercer Dies At Age 55

Gordon E. Mercer, Technical Assistant in the Environmental and Space Sciences Division, died Sunday, September 10 in a local hospital.

Mercer was born April 20, 1917 in Red Springs, North Carolina. He received his B.S. degree in General Science from Wake Forest College. From 1943 to 1944 he taught physics at North Carolina State University. He joined the Center staff in August 1944. He was former head of the Research Staff Office and was appointed technical assistant for ESSD in 1970.

Surviving are his wife, Mrs. Emily Ray Mercer; two sons, Dr. Gordon E. Mercer Jr. of Oxford, Mississippi; and James A. Mercer of Hampton; a daughter, Mrs. Nancy M. Dimit of Hampton; and two grandchildren.

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ALL THAT is necessary for the triumph of evil is that good men do nothing.

BEFORE you flare up at any one's faults, take time to count ten - ten of your own.

## EEO HIGHLIGHTS

Horace E. C. Bellamy has recently been designated Contract Compliance Officer in the Office of Equal Employment Opportunity. Bellamy will assume his new position on October 2. Welcome aboard!

The Office of Equal Employment Opportunity is actively engaged in a joint effort to relaunch the Upward Mobility Program with Eloise McGehee serving as the command pilot. Look for results.

Langley Support Contractors met with the EEO staff and other Langley officials during the first in a series of "Get Acquainted Coffee Hours." This activity is designed to improve relations between the EEO, Langley and the general public.

Representatives from area colleges have been meeting with University Affairs and EEO to generate more research proposals and activities from minority colleges.

Do you know about the Minority Business Enterprise Program? How many of your neighbors can you discuss this program with?

Women interested in their career-development at Langley should contact Jean Elliott, Federal Women's Program Coordinator. Remember, words are nice, but action is better!

EEO staff members are actively involved with the Peninsula Equal Opportunity Association.

★★★★★

MANY of us spend half our time wishing for things we could have if we didn't spend half our time wishing.



**SPECIAL DUTY:** Edward T. Maher (center), Executive Assistant, Office of Director for Center Development and External Affairs, and Axel T. Mattson, Assistant Director for Center Development and External Affairs, recently drew a tour of duty which put them in the enviable position of greeting candidates in the Miss World-USA contest who toured the Visitor Center. Posing with the happy hosts are (from left): Trenna Gulbransen, Miss Nevada-World; Lynda Carter, Miss Arizona-World; Pia Canzani, Miss Maryland-World; and Monika Metrinko, Miss District of Columbia-World. The Miss World-USA title was won by Miss Arizona.

## APOLLO 17 PRELIMINARY TIMELINE

Apollo 17 astronauts are scheduled to touch down on the Moon's surface at 2:55 p.m. EST, Dec. 11, where they will conduct the sixth and final scientific lunar expedition planned in the Apollo program.

Astronauts Eugene A. Cernan, Ronald E. Evans, and Harrison H. (Jack) Schmitt are set for liftoff from Kennedy Space Center at 9:53 p.m. EST, Dec. 6, with the objective of exploring the Taurus-Littrow area of the Moon deploying scientific experiments on the lunar surface, and conducting extensive experiments from lunar orbit.

Cernan is the spacecraft commander. Evans is the command module pilot and Schmitt is the lunar module pilot.

Taurus-Littrow, a combination mountainous highlands and lowlands valley region, is an important site in completing the scientific network on the Moon and will offer the opportunity to sample materials from large, steep-sided mountains and dark non-mare material filling the valleys.

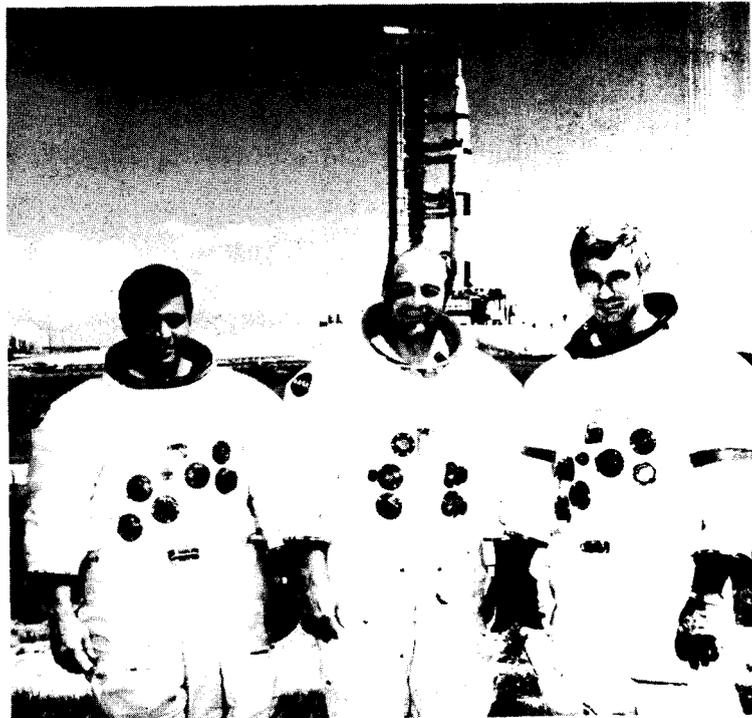
The first lunar surface expedition is planned to begin at about 6:33 p.m. EST on Dec. 11. The second and third are scheduled for 5:13 p.m. and 4:33 p.m. EST on Dec. 12 and 13, respectively. The lunar roving vehicle will be used by Cernan and Schmitt on all three of the seven-hour trips.

The lunar module is scheduled to liftoff the Moon at 5:56 p.m. EST, Dec. 14, and dock with Evans in the Command Service Module at 7:53 p.m.

During the return flight to Earth, Evans will maneuver outside the Apollo spacecraft to retrieve film from the service module experiment bay at about 2:33 p.m., Dec. 17.

Splashdown is planned for 2:24 p.m. on Dec. 19 in the Pacific Ocean.

Longest of any of the Apollo flights, total mission duration is planned for 304 hours and 31 minutes.



**APOLLO 17 ASTRONAUTS:** The last of the Apollo missions is scheduled for launch December 6. Astronauts for the mission are (from left); Harrison Schmitt, Ronald E. Evans, and Eugene A. Cernan.



**BIG BROTHER HONORED:** Marvin C. Waller (left), Flight Dynamics and Control Division, receives a plaque from Frederick J. Pawell Jr., Executive Director of Big Brothers of the Peninsula, in recognition of his services to the organization. Waller helped organize the program and served as its first president in 1969-70.

## Employees Active In Big Brothers

NASA, LRC, BB and LB. To some people the alphabet language is meaningful. To others it can be very confusing. However, the combination above is not confusing to those involved. They are the men employed by the National Aeronautics and Space Administration at the Langley Research Center who are Big Brothers and consequently have Little Brothers. See how simple it is?

It really is simple to share some of your time with a lonely boy. Lonely because he has no man who cares enough to spend a few hours a week with him. The center for a program which matches male applicants with such boys on a one-man-one-boy basis is known as Big Brothers of the Peninsula.

To show that this program appeals to NASA men, Marvin C. Waller, Flight Dynamics and Control Division, helped initiate the program and was the first president of the organization. He recently received a plaque in recognition of his services. If you need further proof see Clyde C. Lane, Fabrication Division, who recently received an award as an outstanding Big Brother of 1972. This among stiff competition from about 80 other Big Brothers who all do a first class job.

Then there are other NASA men who will testify to the value of the program not only to the boys but to the men themselves. In addition to Waller and Lane you can talk with James Patton, Research Aircraft Flight Division; David Brooks, Operations Support; Patrick A. Gainer, Flight Dynamics and Control; James L. Rogers, Structures; and H. Andrew Wallio and James M. Hoell, Environmental and Space Sciences Division.

But the best way to know "how good it is" to "do it yourself" is to call the Big Brothers Office, Hampton 722-1909. Big Brothers is a member of the Peninsula United Fund organization.

★★★★★

**LOST:** Man's black rain coat with orange hat in pocket. Left in Room 124 of Bldg. 1219. Witherspoon, 2517.



**SUGGESTION AWARDS:** Joseph P. Deginder (left) and Ellery N. Vandembree (right), supervisors in the Fabrication Division, pose with six Fabrication staff members who recently received a total of nine suggestion awards.

Receiving cash awards are (from left); Walter L. Jernigan, Richard K. Stoops, Jack G. Barbour, Waverly L. Whitley, Ashby G. Lawson, and Jack F. Gayle. Checks totalling \$375 were presented to the group.

## EMPLOYEES RECEIVE AWARDS

Six staff members of the Fabrication Division received a total of nine suggestion awards from the Incentive Awards Committee. The recipients and their suggestions are as follows:

Walter L. Jernigan - \$100 for the design of a double action rubber mounted stretch die which reduces the cost of die tooling used in stretching metal to a uniform thickness and shape.

Richard K. Stoops - \$25 for the redesign of the orifice parts for the Meteoroid Technology Satellite Bumper Detector panels which eliminated design failures due to equipment variables and gave quality assurance to the panels.

Jack G. Barbour (two awards) - \$25 for a new method of cutting the Meteoroid Technology Satellite Bumper Detector panels with a pneumatic high-speed drill which gave reliability and quality assurance to the panels; \$25 for the construction of a lifting jack for the Meteoroid Technology Satellite Bumper Detector panels which reduced the danger of injury to the operator and expedited the welding sequence.

Waverly L. Whitley - \$50 for design of a thermocouple attachment for use on spacecraft experiments requiring extreme temperature differential.

Ashby G. Lawson - \$25 for an improved method of welding Meteoroid Technology Satellite Bumper Detector panels which uses spring loaded fingers to position the panels thus freeing the operator to perform other functions.

Jack F. Gayle - \$25 for the installation of a new switch on the welding machine so the operator can start the welding of the Meteoroid Technology Satellite Bumper Detector panels with the foot switch and then turn on the new switch to maintain machine operation and free the operator for

## MATERIALS RECLAMATION PLAN

With greater attention being drawn to environmental control problems, all Center personnel are urged to take an active part in the conservation and recycling of reclaimable material.

Specific environmental problems, such as materials reclamation, have been fully recognized by the public only recently. However, for several years this Center has been turning in to the Consolidated Disposal Center, Cheatham Annex, scrap material with marketable potential, including all types of metals, punch cards, and reclaimed silver from photographic developing processes. Known Government and commercial users of recyclable material are consulted periodically to determine the economical and practical methods and feasibility of handling and processing such material. This is consistent with Government policy.

All Center employees are therefore urged to conserve paper and other solid waste products and users of punch cards and photographic film are requested to send this material to Building 1240 for processing. The reclamation of this material has and will continue to represent a sizeable monetary savings to the Government.

★★★★★

other functions.

Lawson and Gayle also received two joint awards. They received \$25 each for a new method of moving the Meteoroid Technology Satellite Bumper Detector panels on roller bearings during the welding process which improved the reliability and the flight design quality of the panels. They also received \$25 each for their joint suggestion relative to the installation of a microswitch on the machine used to weld Meteoroid Technology Satellite Bumper Detector panels which provided precision reliability.

## DITTENHOFER TO SPEAK TO FGAA

Mortimer A. Dittenhofer, Assistant Director of the U.S. General Accounting Office, will speak to the Federal Government Accountants Association on Wednesday, September 20, at the Colonial Restaurant, 10453 Jefferson Avenue, Newport News.

A social period will begin at 6:30 p.m., followed by dinner at 7:15 and the program at 8 o'clock. For reservations call Eugene Fadely, extension 2558, by noon Monday, September 18. Guests are welcome

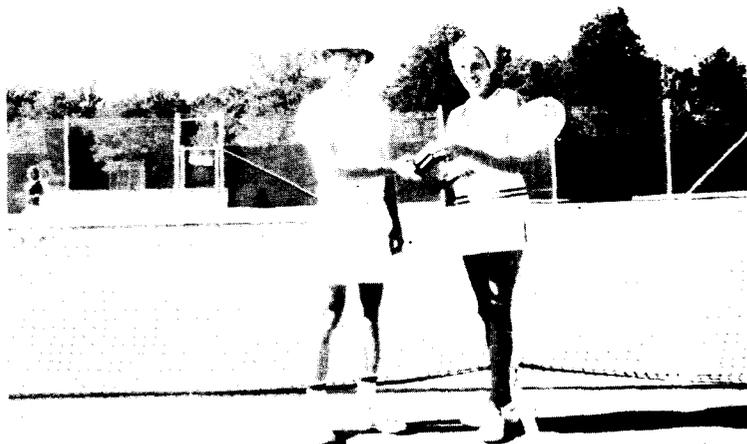


Mortimer A. Dittenhofer

## COMING EVENTS

The following events will take place in the Activities Building during the next two weeks:

- Sept. 16 - Building open 11 a.m. to 6 p.m.
- Sept. 17 - Bridge Club
- Sept. 18 - Colloquium - building closed
- Sept. 19 - ATS symposium 4 to 6 p.m.  
NASTRAN picnic 4:30
- Sept. 20 - AIAA meeting 4:30 to 7 p.m.
- Sept. 21 - NASA Wives - 9 a.m. to 1 p.m.  
Building open 4 to 10 p.m.
- Sept. 22 - Happy Hour featuring The Progressions
- Sept. 23 - Building open 11 a.m. to 6 p.m.  
Tennis - mixed doubles tournament
- Sept. 24 - Bridge Club  
Tennis - mixed doubles tournament
- Sept. 25 - ACD picnic 4 p.m.  
Building open
- Sept. 26 - Club night
- Sept. 27 - MSS party 4 p.m.
- Sept. 28 - Bingo 8 p.m.
- Sept. 29 - EFDS picnic
- Sept. 30 - Round and square dance.



TENNIS CHAMPION: Jo Ann Daus defeated Norma Schrader 6-0, 6-2 to win the Women's Single Tennis Tournament. Presenting the first place trophy to Jo Ann is Bill Compton.

## Swap and Shop

(Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.)

### FREE

Kittens. Miller, 596-5318.

### WANTED

Ride or driving combination from Quiet Village (off Robinson Rd.) to W.A. on 8 shift. Sleighter, 3518.

Driving combination from Williamsburg to W.A. on 8 shift. Condon, 3864.

Ride from Lakeshore Apts. or Todds Lane and Lakeshore Drive to W.A. on 8 shift. Torrence, 2150 or 826-9079.

Driving combination from Cambridge Apts. to W.A. on 7:30 shift. Rehder, 838-2633.

### FOR SALE

Two Michelin radials tires, size 215 x 15 - \$10 each. Hethcote, 596-7239.

Sears auto air conditioner to fit Vega - \$150. Scholz, 851-4055.

1969 Thunderbird Landau, 2-door, air conditioned, power seats, AM/FM stereo. Riffin, 722-6087.

Snare drum including case, stand, practice pad, sticks and brush. Miller, 595-5763.

1972 17-foot Windjammer fiberglass daysailer with sails and trailer; also 1972 14-foot Mermaid board boat with sails. Hunter, 596-2872.

1966 Bel Air Chevrolet - \$575. Spreen, 826-4404.

Panasonic 8-track stereo tape player, 2 speakers, model RS 810S - \$50. Sowers, 898-6927.

4-bedroom, 3-bath house in Riverdale, total electric, wall-to-wall carpet, 5-1/4% assumpton. Henry, 838-4968.

Large Pinto pony. Price, 838-4-21.

Girl's 20-inch Schwinn Hollywood bicycle - \$25; boy's 20-inch Schwinn 3-speed Stingray - \$50. Adams, 877-0438.

Sailfish sailboat - \$250; desk - \$5, small chest of drawers - \$5. Williams, 851-0675.

1964 Falcon station wagon - \$450; 8-track stereo home player - \$66, electric eye Instamatic camera - \$14. Leiss, 877-2939.

1968 Chevrolet Impala, 4-door sedan, air conditioning - \$1125. Rogers, 851-1953.

1968 Opel 1500 - \$400. Whitmore, 898-6188.

Refinished upright piano - \$125. Walton, 851-7781.

Dining room table with matching chairs, also bedroom suite - good condition required. Anderson, 838-5393.

## Jo Ann Daus Wins Tennis Title

Jo Ann Daus, wife of Jim Daus who is head of Technical Illustrators, won the Women's Single Tennis Tournament by defeating Norma Schrader 6-0, 6-2.

In the quarter finals Shirley Sargent defeated Louise Williams 7-6, 6-3; Jo Ann Daus won over Pat McDougal 6-2, 6-0; Betty Baker defeated Barbara Hitt 7-6, 6-3; and Norma Schrader defeated Pat Murray 6-2, 7-5.

In the semi-finals Jo Ann Daus defeated Shirley Sargent 6-4, 7-5, and Norma Schrader defeated Betty Baker 6-0, 6-3.

★★★★★

THE DIAMOND cannot be polished without friction, nor man perfected without trials.

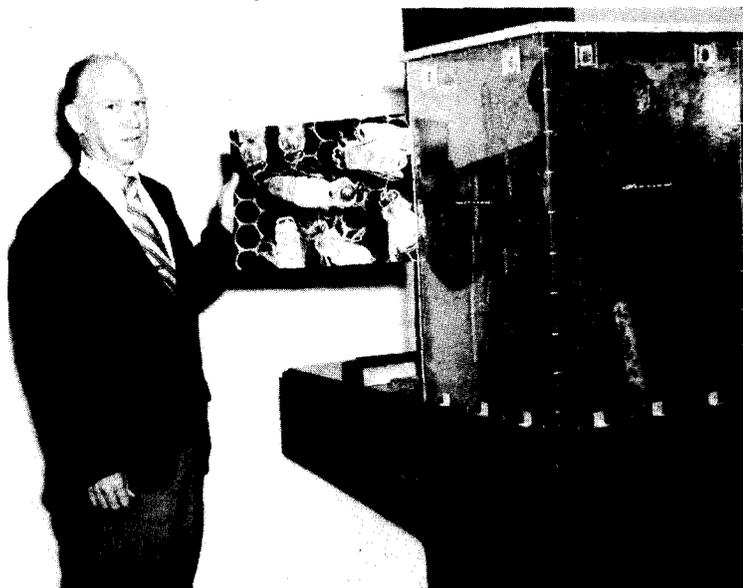
# Personnel Profiles

By  
Allan C. Hanrahan



## AHEAD OF HIS TIME

It goes without saying that almost everyone is concerned about the environment; it is the present bandwagon that carries the same stature as defending mom's apple pie and being against sin, but it wasn't always so. Back in the years before it became fashionable to express concern about the ecology, James E. (Bill) Yarrington was aware of the problems and trying to do something about it.



Yarrington, an Engineering Technician in the Spacecraft Power Systems Section of the Flight Instrumentation Division, is shown in the accompanying photograph with an experimental hive of bees, located at Bluebird Gap Farm in Hampton, because bees are such an important link in the scheme of nature, Bill indicated.

"Bees are such a good air pollution sampling device," Bill said. "And it's a real thrill working with bees." (Even a superficial introduction to the subject will cause you to agree with him.)

Some twenty-five years ago Bill became interested in pollution in general and air pollution in particular when the latter was "a real personal problem of mine," Bill said. "But that is what wakes people up - something that affects them personally." It seems Bill's oldest son, Jimmy, had an acute allergy problem and besides the natural things in nature that people are allergic to there are also the unnatural things. So, beginning with a primer on allergies, Bill's interest, like Topsy, "just grew."

"There's a lot of talk now but still not much action," he said.

Bill agreed that the talk is good but as one concerned, he, of course, wishes for more concrete action: "We're part of nature whether we like it or not," he stated, and he went on to express his opinion that there was a lot of "foot-dragging" going on.

Bill Yarrington was born in June of 1921 four miles north

## Cafeteria Menu

The following menu will be served in the cafeterias during the week of September 18:

Monday - Chicken rice soup, delmonico steak, spaghetti and meat sauce, Chinese egg rolls, meat loaf, ham croquettes.

Tuesday - Vegetable beef soup, rump roast of beef, chuckwagon steak, stuffed chicken, baked lasagna, fried clams.

Wednesday - Fisherman's chowder, hot roast beef sandwich, delmonico steak, shrimp creole, veal parmigiano, sloppy Joe.

Thursday - Splitpea soup, beef burgundy, hot turkey with dressing, glazed ham, stuffed pork chops, fish cakes.

Friday - Bean with bacon soup, delmonico, stuffed pepper, Maryland fried chicken, broiled red snapper, knockwurst and sauerkraut.

Snack bar - Soup, jumbo burger, hot dog, fish sandwich, 3-D burger. Variations - Pastrami, hoagie sandwich, hot roast beef (Mon.); NASA submarine, steak, salami (Tues.); ham and cheese club, corned beef, NASA submarine (Wed.); steak and egg, pastrami, chicken salad (Thurs.); smorgasbord \$1.75 (Fri.).

The menu for the week of September 25 is as follows:

Monday - Chicken noodle soup, business man's lunch, beef stroganoff, sauteed chicken livers, meat loaf, franks and beans.

Tuesday - Cream of mushroom soup, steamboat round, fried shrimp, barbequed pork chunks, beef liver and onions, macaroni and beef.

Wednesday - New England clam chowder, delmonico, stuffed flounder, chicken and dumplings, breaded veal, chili con carne.

Thursday - Corn chowder, beef teriyaki, boiled ham, fish fry, beef stew, clam croquettes.

Friday - French onion soup, barbequed spare ribs, shrimp creole, chopped steak, fried chicken.

Snack bar - Soup, jumbo burger, hot dogs, fish sandwich, 3-D sandwich. Variations - NASA submarine, hot roast beef, pastrami (Mon.); hoagie sandwich, steak, ham and cheese club (Tues.); corned beef, hot roast beef, chicken salad (Wed.); steak and egg, NASA submarine, pastrami (Thurs.); barbequed pork, ham and cheese club, liverwurst and onion (Fri.).

★★★★★

NO ONE can be so welcome a guest that he will not annoy his host after three days.

-Plautus

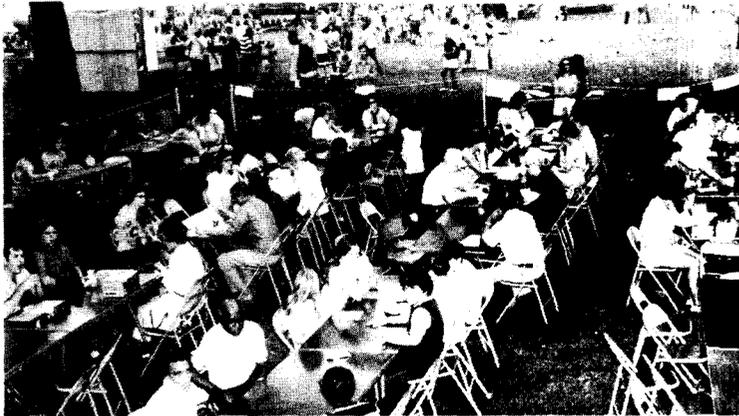
HABITS are first cobwebs, then cables.

★★★★★

of Saluda "in the middle of Route 17," he joked. It seems his birthplace was in the way some years later when a new portion of Route 17 was under construction. He grew up in Saluda and graduated from high school there. He has been working at the Center since September, 1949.

His oldest son was mentioned earlier and Bill and his wife, Lorena, have two other children: another son, "L. T.," age 15, and a daughter, Sandy, age 9.

Bill's other main interest in life is his church: he is now helping begin a new Baptist church in York County. Then he came full circle and Bill made a statement during the course of our conversation that tied his life together: "I put the Lord first and the environment is the Lord's work."



SUMMER CARNIVAL: One of the most popular games at the carnival was bingo (top left photo). Royce McCormick (top right photo), an AMPEX employee assigned to the Center, calls the bingo numbers. In the lower left photo Bill Campbell entertains the crowd while Bert Rockey manages the prize and information booth. Drawing the

luckyprize winning ticket (lower right photo) is none other than Bobby Nye, son of staff photographer Bob Nye. Witnessing the drawing is Gene Hicks. Winners of the two grand prizes were Edwin Lee, 16-Foot Transonic Tunnel, who won the camping trailer and B. F. Corbett, Fire Station, who won the Toyota Corolla 1600 sedan.

**LANGLEY CAMERA CLUB**

The Langley Camera Club will meet Tuesday, September 19 at 7:20 p.m. at the Activities Building. The theme for the color slide contest is Aviation.

The August theme was On the Beach and the following slides were selected as winners: First place - Meditation by Gautam Sen Gupta, second - A Girl and A Dog by Robert L. Wright, third - Shipwreck by Clay Rogers, fourth - Temple by the Sea by Sen Gupta, fifth - Joy of Living by Sen Gupta, and sixth - Hurricane Doria by Rogers.

★★★★★

FOUND: Lady's watch at carnival. Shirley Brown, 2181.

**BOOKS FOR SALE**

The Activities Association has the following extra books on hand. If you are interested in any of them, stop by the office, Building 1222, or call Kathi Warfel, extension 2058. Each listing includes book title, author, and publisher.

"Elements of Partial Differential Equations" by Sneddon, McGraw-Hill

"Systems Psychology" by deGreene, McGraw-Hill

"Tensor Analysis" by Sokolnikoff, Wiley

"Principles of Coherent Communications" by Viterbi, McGraw-Hill

"Fundamentals of Acoustics" by Kinsler and Grey, Wiley

# Langley Researcher

VOLUME 11, NUMBER 19

LANGLEY RESEARCH CENTER

SEPTEMBER 27, 1972

## FEDERAL EMPLOYEES SHOULD SET THE PACE

Sometimes I'm asked why I attach so much importance to Langley leadership in public service activities such as the Combined Federal Campaign and the Peninsula United Fund; or the U.S. Savings Bond Campaign. Does it really matter if we win the Minuteman Award, or if we set the pace on the Peninsula for CFC/PUF? I think it does-- it matters a lot.

These activities represent a collective effort of citizens to support their community and their country. It shows that they are willing to make personal sacrifices or adjustments to do so. It proves that they care.

Civil servants bear a special responsibility here. We are employed by the people of this country to serve the interests of the country. This is a trust--and in carrying it out we should set the highest possible standards of performance and citizenship, both on and off the job. In so doing, we can give the public every reason to be proud of its Federal establishments and employees. We can encourage others by our example to meet their civic responsibilities too. This should be particularly easy for us to do in the case of the CFC-PUF campaign.

The community leaders of this annual drive are under-

## NASA AWARDS CEREMONY

William A. Anders, Executive Secretary of the National Aeronautics and Space Council, will be the guest speaker for the Center's Annual Awards Ceremony which will be held Monday, October 2 at 1:30 p.m. in the NASA Hangar, Building 1244.

The Awards Ceremony is held annually for the recognition of individuals and groups at the Center for their outstanding contributions and achievements toward realizing the goals of the Center and NASA, and to present length of service awards to employees.

In addition to employees receiving awards, all supervisors and staff members having 25 or more years of service are invited to attend.

As Executive Secretary of the National Aeronautics and Space Council, Anders is responsible for advising the President, the Vice President, and the Council with respect to policies and performance throughout the entire aeronautics

(Continued on page 6)



William A. Anders

standably concerned this year. Cutbacks in Federal employment have jeopardized the CFC gift on which the success of PUF so critically depends. After studying this problem carefully, I have come to the conclusion that the Langley Research Center can probably maintain its total gift at the same level as last year, or about \$140,000. Although our total staff is reduced in size, pay increases have maintained our total payroll at about the same level as last year. This means that if we each give the same percentage of our incomes as last year, Langley's total gift will not decrease!

We are fortunate that cost of living adjustments for Federal employees have made this possible. It seems likely that we will benefit from a further increase in January. The additional cost of meeting our goal will average less than 15¢ per person per pay period, which most of us will not miss.

Let's make that extra effort again this year!



## Center's One-Day Drive Tomorrow

Tomorrow a corps of over 300 workers will contact each staff member in an effort to complete the Center's Combined Federal Campaign in an intensive one-day drive, according to D. William Conner, Director of the Center's effort. Serving as Co-Director of the drive is Margaret L. Strickland, Staff Assistant, Office of the Director for Structures.

This will be the fifth combined campaign conducted at the Center and it will include the Peninsula United Fund, National Health Agencies and International Service Agencies.

All division leaders are requested to turn in their reports to Katherine W. Hennessy, financial chairman, as soon as possible after the one-day drive. Assisting Katherine are Helen Hudgins, Mary Jackson and Jim Ogiba. The financial workers are located in Trailer 1220T which is located directly across the street from Building 1192 (Photo Lab). The extension is 2935.

A kick-off meeting for division chairmen and campaign workers was held yesterday.

Conner pointed out that an easy, painless way of giving to this one-drive campaign is through payroll deduction. Last year a majority of the staff elected to use the payroll payment plan.

Division leaders are as follows:

Alvin F. Anderson, Equal Employment Opportunity Office.

Roger A. Anderson, Structures Division.

(Continued on page 3)

## HAPPENINGS

**ENGAGED.** . . Making plans for a December wedding is Robert L. Phelps, Photographic Branch, Office of Scientific and Technical Information Programs. He is engaged to Della Elizabeth Carper of Newport News.

**BOOKLETS AVAILABLE.** . . The Safety Office has a limited number of booklets available on 'Motorcycling and You.' Anyone desiring a copy should call the Safety Office, extension 3310 or 3950.

**SWIMMING CLUB.** . . The NASA Swimming Club has resumed its weekly 'swim for fun' at the Chamberlain Hotel. The group swims each Wednesday from 7 to 8 p.m. and the cost is 75 cents per person. Anyone interested should contact Louise Lee, extension 3772.

**NEW HEIR.** . . Word has been received at the Center that Marcella F. Hogge, Management Support Division, became the mother of an eight-pound, five-ounce son, David Samuel, on September 19.

**IAM NOTICE.** . . The NASA Lodge No. 892, International Association of Machinists, will meet October 3 at 7 p.m. at the Central Labor Union Hall.

**CABARET PLANNED.** . . The Warwick Junior Woman's Club will present their sixth annual Cabaret at the Newport News Armory on November 10 and 11. Tickets are six dollars per couple and may be purchased from Carol Lockett, MS 206, extension 2969.



**VIKING:** Following a three-day preliminary design review in Denver, Colorado, last week, James S. Martin Jr., Manager of the Viking Project Office, briefed the press concerning the effort to land scientific instruments on Mars in 1976. Martin is shown above framed by a picture of a mockup of the Viking lander.

## Cafeteria Menu

The following menu will be served in the cafeterias during the week of October 2:

Monday - Chicken noodle soup, sauerbraten, baked lasagna, meat loaf, Swiss steak, chicken croquettes.

Tuesday - Cheese chowder, delmonico steak, corned beef and cabbage, fried oysters, chicken chow mein, macaroni and beef.

Wednesday - Oyster stew, country steak, glazed ham, shrimp Newburg, tuna noodle casserole.

Thursday - Cream of onion soup, rump roast, beef chop suey, stuffed chicken, veal parmisan, cheese ravioli.

Friday - Chicken jumbo soup, delmonico steak, beef burgandy, fried clams, barbequed pork chops, chicken pie.

Snack bar - Soup, jumbo burger, hot dogs, 3-D burger.

Variations - Pastrami, NASA submarine, hot roast beef (Mon.); steak, corned beef, ham and cheese club (Tues.); hoagie, barbequed beef, salami (Wed.); steak and egg, NASA submarine, chicken salad (Thurs.); barbequed pork, grilled cheese, pastrami (Fri.).

The menu for the week of October 9 is as follows:

Monday - H O L I D A Y

Tuesday - Minestrone soup, business man's lunch, pepper steak, seafood platter, beef enchiladas.

Wednesday - Vegetable beef soup, steak, cordon blue, spaghetti and meat sauce, chicken and dumplings, ham croquettes.

Thursday - Cream of tomato soup, delmonico steak, Italian meat loaf, fish fry, chicken cacciatore, chili.

Friday - Scotch broth, beef teriyaki, barbequed pork sandwich, fried shrimp, chopped steak, franks and beans.

## Credit Union Plans Contest

As has been shown time after time, the Credit Union is the best place for most of its members to borrow. To highlight the advantages of its loan services, the LFCU will - starting October 2 - award one 'giant step' to a member for every increment of \$250 by which his loan balance is increased. Just one step allows its holder to participate in the contest but the more steps, of course, the better the chance of winning a prize. Five lucky steps will be drawn on December 15. The first step leads to a 23-inch color television console now on display. The remaining four lead to \$25 cash prizes. Only one prize to a member.

So plan ahead. Get your new car loan at a place where contest prizes are just another plus.

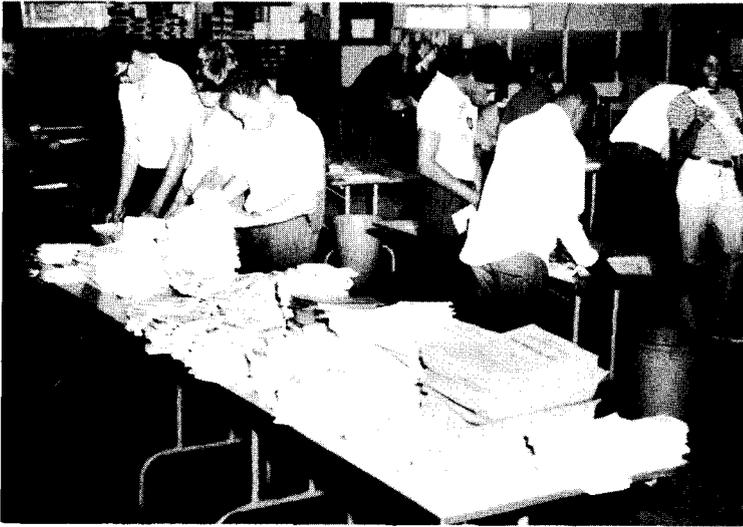
Langley Researcher, an official publication of the Langley Research Center, National Aeronautics and Space Administration, Hampton, Virginia 23365, is published biweekly in the interest of its employees. Address contributions to the Editor, Mail Stop 154, telephone 3116.

Editor.....Ruth Angel Verell

Staff Photographer.....Bob Nye

Reporters.....Langley Employees

The privilege of advertising articles in this publication is restricted to employees of Langley Research Center. Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.



**ASSEMBLING MATERIAL:** Students at Sarah Bonwell Hudgins Regional Center in Hampton are shown assembling material for campaign workers to use in the Langley Research Center's annual Combined Federal Campaign. The Hudgins Center is partially financed by the Peninsula United Fund. The Center has 126 students and they are trained to their highest level of productive potential. All are paid minimum wages during their training. During the past three and one-half years, the Center has trained and placed 112 students in competitive community jobs. The Center now operates on an all day program but future plans call for a residential programs with students living on the campus. Areas of training include automobile mechanics, furniture finishing, woodworking, print shop, silk screening, food preparations, ceramics, and other productive trades.

## COMBINED FEDERAL CAMPAIGN

(Continued from page 1)

Charles F. Barnett, Personnel Division.  
 William A. Brooks Jr., Materials Division.  
 Sherwood L. Butler, Procurement Division.  
 John P. Campbell, Low-Speed Aircraft Division.  
 Baxter C. Carr, Plant Engineering Division.  
 Aubrey M. Cary Jr., Hypersonic Vehicles Division.  
 Hubert K. Clark, Systems Engineering Division.  
 Robert N. Conway, Office of Director for Administration.  
 Don D. Davis, Space Applications and Technology Division.  
 Howard B. Edwards, Instrument Research Division.  
 Roland D. English, Scout Project Office.  
 Henry A. Fedziuk, Office of Scientific and Technical Information Programs.  
 Arthur R. Friend, Industry Relations Office.  
 Paul F. Fuhrmeister, Analysis and Computation Division.  
 E. Barton Geer, Office of Director for Systems Engineering and Operations.  
 Daniel R. Hayes, Fabrication Division.  
 Paul Holloway, Space Systems Division.  
 Edward A. Howe, Financial Management Division.  
 Robert H. Kirby, Program and Resources Division.  
 Peter F. Korycinski, Office of Director and Research Directorate Offices.  
 Dr. J. D. Lawrence, Environmental Quality Measurements Systems Office.  
 George T. Malley, Office of Chief Council  
 Harold Mehrens, Office of Director for Center Development and External Affairs.

## BERTRAM DIES AT AGE 47

Mitchell H. Bertram, head of the Hypersonic Aircraft Fluid Mechanics Branch of the Hypersonic Vehicle Division, died September 18 following a long illness.

Bertram was born Dec. 24, 1925 in New York City. He received his Bachelor of Science degree in Aeronautical Engineering from New York University in 1946 and joined the Center staff in 1947 as a member of the team doing research in the first regularly operating hypersonic tunnel in this country. This team pioneered much of the ground work which today forms the foundation of United States knowledge of very high speeds.

He had specialized in hypersonic aerodynamics and fluid mechanics. He was associate editor of the American Institute of Aeronautics and Astronautics Journal at the time of his death.

NASA awarded him its Medal of Exceptional Scientific Achievement last year "for his scientific leadership and his outstanding personal scientific contributions including original theories and definitive experimental researches in hypersonic boundary layers and hypersonic wing flow fields which are vital to the development of advanced winged vehicles such as the X-20, the Shuttle, and the Hypersonic Transport."

Survivors include his widow, Mrs. Nancy L. Bertram; three daughters, Ruth Lynn Bertram, Alice Belinda Bertram, and Connie Nora Bertram, at home; and a son, Eric Stephen Bertram of Williamsburg.

★★★★★

**HALLOWEENDANCE:** The Activities Association is planning to sponsor a Halloween costume ball on November 4. Complete details will be announced in the next Researcher.

★★★★★

William H. Michael, Environmental and Space Sciences.  
 Homer G. Morgan, Loads Division.  
 Mark R. Nichols, High-Speed Aircraft Division.  
 Howard J. Osborn, Office of Patent Council  
 William H. Phillips, Flight Dynamics and Control Div.  
 John P. Reeder, Research Aircraft Flight Division.  
 Jess G. Ross, Management Support Division.  
 Earl F. Stahl, Operations Support Division.  
 James E. Stitt, Flight Instrument Division.  
 Andrew G. Swanson, Business Data Systems Division.  
 Thomas A. Toll, Aeronautical Systems Office.  
 Harper E. VanNess, Viking Project Office.  
 Henry F. Weber, Research Facilities Engineering Div.  
 John Witherspoon, co-op and graduate students.  
 Thomas L. Coleman, Langley Directorate (USAAMRDL).  
 The presidents of the three unions represented at the Center - William L. Derby, Patternmakers League of North America; John Antinori, International Association of Machinists and Aerospace Workers; and H. Preston Watkins, American Federation of Government Employees, have endorsed the Center's annual Combined Federal Campaign.



Mitchell H. Bertram

## SCOUT MAY SET NEW RECORD

The November 4, 1966 Langley Researcher stated, "The 49th Scout was launched on Friday, October 28. The success of this launch made a total of 22 consecutive successful launches. The only United States research space vehicle to achieve 22 successful launches in a row previously was Delta." The article also refers to the 52nd launch from Africa.

On September 2, Scout launched the 80th Scout and the 25th consecutive successful launch. The only United States research space vehicle to achieve 25 successful launches in a row previously was Delta. The 81st Scout launch is planned from Africa on October 30.

A fourth stage nozzle failure prevented Scout launch No. 50 from achieving this record.

The 24th Scout launch began the current Scout program. The first 23 were development, prototype and prerecertification Scouts. Of the 57 standard Scouts, 54 have been successful. Classified as failures were Nos. 27, 50 and 55. A successful 81st launch will maintain the 95 percent success ratio and top Delta's record.

Scout currently is being launched from three operational sites: on the East Coast from Wallops Station; on the West Coast from Vandenberg Air Force Base, California; and from Italy's unique sea-based San Marco platform off the East Coast of Kenya, Africa.

In addition to launching United States payloads for NASA, DOD, and AEC, the Scout has successfully launched a variety of payloads for Italy, France, United Kingdom, West Germany, and European Research Organization (ESRO). Two additional launches scheduled for 1972 are the ESRO-IV and the German AEROS missions. The Netherlands has been scheduled for a Scout launch in 1974.

In 1973 the Italian launch crew will launch a United Kingdom payload on a United States Scout from Kenya.

The 81st Scout, which will achieve the 26th consecutive successful launch for Scout, will place in orbit a 556KM circular (SAS-B) small astronomy satellite. Its mission will be gamma ray astronomy. The satellite will perform a sky survey of high energy gamma radiation from the celestial spheres to determine the extent of primary galactic gamma radiation and to ascertain the presence of gamma ray point sources.

## NASA BOWLING NEWS

A meeting of the NASA Bowling League will be held on Tuesday, October 3 at 6 p.m. at Newmarket Bowl. The purpose of the meeting will be to select a bowling site for the 1973-74 year.

The standings in the two leagues after September 19 are as follows:

The three top teams in A League are Flyers with 9 wins and 3 losses, Flight Engineers with 8 wins and 4 losses, and Mets with 7-1/2 wins and 4-1/2 losses. Flight Engineers rolled the high set with 2956 and Question Marks rolled high game with 1052. Rodman leads the men with a 248 game and 656 set. Leading the women is M. Lynch with a 237 game and 647 set.

Tops in B League are Born Losers with 8-1/2 wins and 3-1/2 losses, Yanks with 8 wins and 4 losses, and Strike Outs with 7-1/2 wins and 4-1/2 losses. Hits and Misses rolled high set with 2873 and 5 Yanks rolled high game with 999. Leading the men are Viletourneau with a 251



GUEST SPEAKER: Speaker at the third annual convention of the National Association of Government Secretaries was Mrs. Annie S. Malone, CPS, Administrative Officer in the Office of Applications, NASA Headquarters.

## NAGS HOLD ANNUAL CONVENTION

Mrs. Annie S. Malone, CPS, Administrative Officer in the Office of Applications, NASA Headquarters, was the guest speaker at the third annual convention of the National Association of Government Secretaries (NAGS) held Sept. 22-24 at the Chamberlin Hotel.

Charles W. Mathews, NASA's Associate Administrator for Applications, stated in his letter to the organization, "Realizing the importance and personally appreciating the value of a secretary, I wish to encourage every effort to professionalize their status. Mrs. Malone has been encouraged to participate on behalf of NASA. Please accept my best wishes for a successful and meaningful convention."

Mrs. Malone spoke on the advantages of obtaining the Certified Professional Secretary (CPS) degree and the transition from a secretary to a more responsible administrative position within the U.S. Government.

Mrs. Malone received her B.A. degree in Social Science from Howard University and did additional work at Catholic University preparing for her CPS degree. She began her employment in 1952 as Registrar of Spingarn High School, Board of Education, Washington, D.C. In 1955 she was a secretary with International Cooperation Administration (now AID), in 1962 she became an Administrative Assistant in the Office of Space Science and Applications, in 1968 Administrative Officer in the Office of Space Science and Applications, and she assumed her present position in February 1972.

National President Cecile M. Wallo, Office of the Joint Chiefs of Staff, Pentagon, served as hostess. Other officers of the national organization in the Peninsula area include Gloria Alto, CPS, Loads Division, National Vice President and President of the local branch; Ellen White, CPS, Air Force, 3rd Vice President and Vice President of the local branch; and M. Eloise McGehee, CPS, Personnel Division, Educational Director for the National organization.

★★★★★

game and Powell with a 663 set. Taking top honors for the women were M. Schoonover with a 257 game and B. Hooks with a 686 set.



**APOLLO EMBLEM:** The Apollo XVII Mission Emblem was designed by Robert T. McCall in collaboration with the Apollo crew members Eugene A. Cernan, Ronald E. Evans, and Harrison H. Schmitt. The image of Apollo the Greek God of the Sun was chosen as the dominant design element of the emblem. The particular image selected was the famous Apollo of Belvedere sculpture now in the Vatican Gallery in Rome. Suspended in the space behind the head of Apollo is an American eagle of contemporary design. The red bars of the eagle's wing represent the bars in the American flag; the three white stars symbolize the three Astronauts. The background is deep blue space and within it are the Moon, the planet Saturn and a spiral galaxy of nebula. The Moon is partially overlaid by the eagle's wing suggesting that this is a celestial body that man has visited.

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## STOCK REQUISITIONS MAY NOT BE FILLED

Failure to properly complete Stores Stock Requisition Form (NASA-Langley Form 55) may result in the requisition being returned to the requester unfilled until an acceptable form is received.

Carelessness in completing the organization symbol block and job order number listings on the Stores-Stock Requisition Forms is causing problems in processing stores issue data through the accounting records. Delays in accounting for issues and charges to incorrect job orders result from incomplete or illegibly written requisition slips.

The first three letters of the requester's organization permanent job order should be printed plainly in the organization symbol block of the form. For proper charging, the job order number should be written legibly opposite each line item requisitioned. In those cases where more than one item is to be charged to the same job order number, dittos may be used instead of repeating the job order number, but the line should not be left blank in that column.

The cooperation of Center personnel is requested in exercising more care in completing the requisition forms.

## NASA SQUARE AND ROUND DANCE

One of the fastest growing sports in the nation comes to the Activities Building on Saturday, September 30 at 8 p.m. Sports you say? Yes! Sports Illustrated actually calls square dancing a sport, not a dance.

Although square dancing is a traditional American activity, it is modern as today and as fresh and challenging as tomorrow.

Thanks to electronic ingenuity and the modern public address system, one caller can be heard clearly and distinctly by hundreds of dancers. No longer are his calls difficult for the dancer to understand.

Where once the squeaky fiddle and tunes like "Turkey in the Straw" signified the typical barn dance, today more than 35 specialized recording companies turn out perfect accompaniment for the modern square dancer. Dancers move comfortably and effortlessly to the excellent beat of such tunes as "Summer Sounds", "Unicorn", "Country Road", "Help Me Make it Through the Night", and "Early Morning Rain".

The more than 15,000 active square dance callers look back with pride on their early counterparts who prompted or cued each new square dance call.

To a degree the modern square dance miss has patterned her costume to have just a hint of the nostalgic quality of the gowns worn by her great grandmother, and the gentleman has an opportunity to dress in clothing that takes on a bit of the western appearance.

To its credit, square dancing is a couple activity and in some areas involves the entire family and it is not unusual to see four generations represented in a single square. One thing that contributes to the wholesome character of square dancing is that one of its few taboos is alcoholic beverages. Those who enjoy a drink manage without it on the evening of a square dance.

You may be asking just what is square dancing? In a capsule, you dance in squares of eight dancers (four men and four ladies); space requirements for one square are approximately 144 square feet; you also dance in circles and lines but it's still part of square dancing; and as a rule you dance a round lasting 15 minutes then rest a bit.

You learn the basic language and then follow the calls or directions of the person at the front of the hall. He's the caller and a very important contribution to your square dancing pleasure. So take this little test and if you can answer yes to these three questions you will make a good square dancer!

1. Do you tap your toe or finger or sway just a bit when you hear good rhythmic music?
2. Do you enjoy being with nice friendly people?
3. Would you like a hobby that both husband and wife can enjoy together?

If you scored heavily in the yes column come out Saturday night and watch the fun. Admission for dancers is one dollar per person and admission for spectators is free. Tickets will be available at the door or may be purchased in advance at the Activities Building or from Dick Kurtz, extension 2701.

★★★★★

DEFEAT isn't bitter if you don't swallow it.

IF WE resist our passions, it is more through their weakness than our strength.



Charles M. Southall



Edgar B. Kastelberg



Melvin D. Kuhns



Thomas H. Leffel,



Donald L. Posey and Charles T. Schrum

## EMPLOYEES RECEIVE AWARDS

Six staff members recently received cash awards for suggestions from the Incentive Awards Committee. The recipients and their suggestions are as follows:

Charles M. Southall, Operations Support, \$165 for the design, development, and implementation of a new solid-state parabolic function generator which saves man-hours during noise-abatement studies.

Edgar B. Kastelberg, Fabrication, \$425 for the modification of the vacuum centrifuge casting technique which reduces the number of steps required to cast small stainless steel research models.

Melvin D. Kuhns, Fabrication, \$25 for the fabrication of a gun barrel for use in the Lithium Electrothermal Accelerator which can be refurbished rather than discarded after each shot.

Thomas H. Leffel, Fabrication, \$395 for the modification of a crimping tool so it can be used as a pressure sealing tube, thus eliminating the use of valves, reducing the chance of leakage, and reducing payload weights in research satellites.

Donald L. Posey, Operations Support, \$125 for the design and fabrication of a buffet suppression system for sting-mounted models in the Transonic Dynamics Tunnel which allows the sting to traverse its full range.

Charles T. Schrum, Operations Support, \$35 for the institution of a job-completion sign off system for facility repairs and maintenance so the Facility Coordinators will be able to check on the completion of the work performed.

## ANNUAL AWARDS CEREMONY

(Continued from page 1)

and space field. Before being appointed to his present position by President Nixon, he was assigned as the backup command pilot for Apollo 11.

Between 1963 and 1969, he served as backup pilot for Gemini 11, and lunar module pilot for Apollo 8, man's first voyage to the moon in December, 1968.

★★★★★

Citation toaster, Stanley Havenstein; \$100 gift certificate, W. L. Fox; croquet set, R. Hearn; 3/8-inch Black and Decker variable speed drill, C. E. Clark; Polaroid model 440 camera, Charles Hahn; Midland AC/DC-AM/FM portable radio, Warren Thomas; General Electric hot comb, Paul Hunt; Midland AM/FM cassette recorder, Wesley A. Martin; Carvel Hall steak knife set, R. E. Throckmorton; and Waring blender, Frank Dvorak.

## CARNIVAL WINNERS NAMED

As was announced in the last issue of the Researcher, winners of the two grand prizes at the Summer Carnival were Edwin Lee who won the Starcraft 16-foot camping trailer, and B. F. Corbett who won the Toyota Corolla 1600 sedan. Winners of the other ground prizes were as follows:

Motorola black and white TV, Al Bell; Regina electric broom, W. F. Lawson; Corning super cookware set, John Sain; Bell and Howell movie outfit, Laura Voight; Waring electric can opener, Edna Small; Waring blender, Joann Brown; Black Angus rotisserie-broiler, C. Nobles; electric ice cream freezer, Marshall Hughes; General Electric toaster-oven, D. Stone; Seth Thomas 8-day clock, Bob Tignor; Motorola AM clock-radio, F. Rose; Citation spray/steam/dry iron, Charles Bryant; Motorola component stereo system, Raymond Delozier; Sunbeam percolator, J. Delauder; Sunbeam hair dryer, F. O. Allamby.

Motorola black and white TV, R. E. Satterthwaite; Max hair dryer, Frank Dvorak; Sunbeam fry pan, J. Godwin; his and hers 3-speed bicycles, Merle Anderson; Motorola AM clock-radio, John Chess; Presto hair curler set, Sue Wilder; Brother's electric sewing machine, F. O. Allamby; General Electric toaster-oven, B. J. Neil; Wearever cooking set, Ash Bryant; Sampsonite table and four chairs set, George Wyatt; Val-o-seat, Albert Gribble; rod, reel, and tackle box, Kam Kersey; Royal electric portable typewriter, Ilene Herring; Sunbeam fry pan, Harris Hamilton;

# Personnel Profiles

By

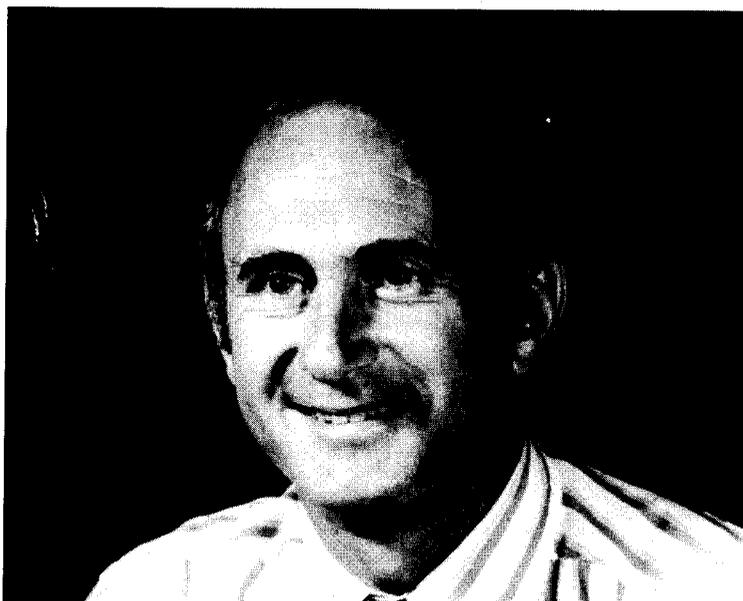
Allan C. Hanrahan



He rose at dawn and, fired with hope,  
Shot o'er the seething harbor-bar,  
And reach'd the ship and caught the rope,  
And whistled to the morning star.

- From the poem "Sailor Boy" by Alfred Lord Tennyson.

The above lines certainly apply to our guest this issue who, though no longer a boy, is certainly a sailor. Meet Mr. L. Edward Williams, an avid sailor for almost twenty years who just happens to be a three-time winner of the Nationals Championship in the Hampton One class of sailboats.



The Hampton One design, as its name indicates, was designed by a Hampton man -- Mr. Vincent Serio -- and is, of course, very popular hereabouts. It enjoys popularity predominantly on the East Coast and it is the largest class, in terms of numbers competing, in the Chesapeake Bay area which makes for very stiff competition.

Eddie Williams won the championship in 1968, 1969, and again in 1972, but not all by himself. His wife, the former Anne Mitchell of Hampton, "crews" for him and has since he began competing back in 1962. Lately, his fourteen-year-old daughter, Suzanne, has been performing as his crew when he goes pleasure sailing. She is enrolled in the junior sailing program at the Hampton Yacht Club.

Eddie was born in Norfolk in November, 1933, but has lived on the Peninsula from the age of four or five and became interested in sailing "just by living around the water," he said. Since the sailing season runs from mid-April to late October, Eddie was asked what his interests were during the off-season and he answered: "I'm pretty much just a sailing nut; I mostly just work on the boat during the winter." Later he admitted to being a member of that great American fraternity of professional football fans; specifically he is a Washington Redskins fan.

## COMING EVENTS

The following events will take place in the Activities Building during the next two weeks:

- Oct. 1 - Bridge Club
- Oct. 2 - IPAD Conference - building closed
- Oct. 3 - IPAD Conference - building closed
- Oct. 4 - IPAD Conference - building closed
- Oct. 5 - AIAA picnic at 4:30 - building open
- Oct. 6 - Happy Hour from 4:30 to 8 p.m.
- Oct. 7 - Building open from 11 a.m. to 6 p.m.  
Tennis - ACD doubles tournament
- Oct. 8 - Loads Division social
- Oct. 9 - Holiday - building closed
- Oct. 10 - Technical symposium
- Oct. 11 - Building open at 4 p.m.
- Oct. 12 - Bingo at 8 p.m.
- Oct. 13 - Building open at 4 p.m.

## Swap and Shop

(Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.)

### LOST

1971 Hampton High School ring with initials WEC - lost at Carnival. Call 838-2445.

### FOUND

Prescription glasses in brown leather case from Dr. Phil Salasky. Doris Baynes, 2661.

Pencil tie pin near front of Bldg. 1195A. Parker, 3966.

### FREE

Part Persian kittens. Miller, 851-13081.

Mixed Siamese-Persian kittens. Adams, 877-3923 after 5.

### FOR SALE

23-inch Magnavox color TV - \$100. Ellison, 877-5512.

3/4 acre wooded lot in Marlbank Farms - \$11,000. Long, 851-7658.

1969 Glassmaster 17-foot, 3-inch Tri-hull motor boat with 1970 Evinrude motor. Locker, 595-6262 after 5 p.m.

Siamese kittens. Blanchard, 851-3397.

B-flat clarinet - \$75. Dow, 595-1029.

16-foot Starcraft camping trailer - grand prize at carnival. E. E. Lee, 838-1319.

1963 Ford Galaxie, 4-door. Mueller, 898-5406.

1968 Oldsmobile Cutlass Supreme, 2-door hardtop - \$1400. Jones, 595-7837.

Dinette set, formica walnut table and 6 matching chairs. Lassiter, 874-1441.

1968 Camaro, Z-28, 302 - \$1100. Lawrence, 595-5912.

1969 Chevrolet Nova - \$1095. Ahearn, 596-0348.

1971 Ford F-250 truck and camper, fully equipped - 8-foot Wolverine cab-over camper - will sell camper separately - \$4300 for both. Jordan, 868-9655.

AKC registered miniature Collies. Davis, 898-6834.

Single maple bed with mattress and box springs - \$40; complete crib - \$20. Koch, 826-3348.

4-bedroom, 3-bath house in Tanglewood, 6% assumption. Boyer, 838-3748.

★★★★★

Williams is a graduate of Hampton High School as well as V.P.I. where he earned a B.S. degree in Mechanical Engineering. He has been at the Center since September, 1962, and is a Systems Integration Engineer in the Viking Project Office.

# PHOTOGRAPHIC HIGHLIGHTS OF SUMMER CARNIVAL



# Langley Researcher

VOLUME 11, NUMBER 20

LANGLEY RESEARCH CENTER

OCTOBER 13, 1972

## STAFF DONATES \$137,842 TO CFC

D. William Conner, Chairman of the Center's Combined Federal Campaign, announced that to date staff members have donated a total of \$137,842 to the Center's effort. Conner pointed out that this represents an increase of 10 percent of LRC's goal.

Contributions are still being accepted by the financial workers who are located in Trailer 1220T, extension 2935.

Conner expressed his thanks to all division workers for returning their reports promptly and he pointed out that organizations reaching the 100 percent participation mark will be published in a later issue of the Researcher.

## Halloween Costume Dance Nov. 4

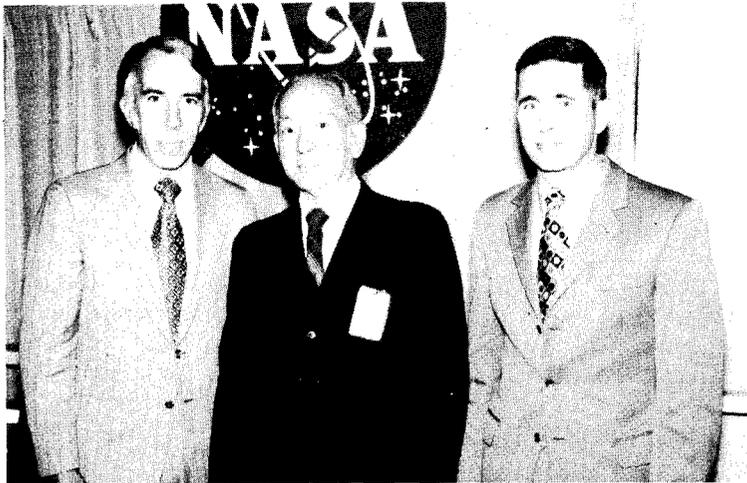
The Activities Association will sponsor a Halloween costume ball on Saturday, November 4 from 9 p.m. until 1 a.m. at the Activities Building.

Music for the young and not so young will be furnished by the Sound Sett.

Costumes are not mandatory but prizes will be awarded for best costumes in four categories - best male in costume, best female in costume, best couple in costume, and a grand prize for best costume at the ball. Prizes and judges will be announced later.

Admission will be \$3.50 per couple and tickets may be purchased at the Activities Building. Reservations may be made only with ticket purchase.

Employees, contractors, and guests are urged to plan their party and costumes early. Only a limited number of tickets will be sold on a first-come-basis.



**FORTY YEARS SERVICE:** John H. Haverstock, Head of Plant Electrical Section, Operations Support Division, receives congratulations for his 40 years of Federal service from Edgar M. Cortright (left), Center Director, and William A. Anders (right), lunar module pilot for the Apollo 8 mission and now Executive Secretary of the National Aeronautics and Space Council.

## LANGLEY EMPLOYEES HONORED AT ANNUAL AWARDS CEREMONY

William A. Anders, lunar module pilot for the Apollo 8 Moon mission and now Executive Secretary of the National Aeronautics and Space Council, was principal speaker at the Center's annual awards ceremony held October 2 in the NASA Hangar.

The awards ceremony is one of the highlights of the year. It is an occasion for honoring Center employees who have completed 40, 35, 30, and 25 years of service, and for recognizing individuals and groups of Langley personnel for particular achievements in advancing the mission of NASA.

John H. Haverstock, Head of Plant Electrical Section, Operations Support Division, received a diamond-studded pin in recognition of his 40 years of Federal service.

Amethyst-studded pins representing 35 years of Federal service were received by Elvin L. Ahl, Harry A. Barritt, Donald H. Carson, Earl L. Councill, Harry T. Davis, Charles A. T. Fuchs, William H. Guy, T. W. Edmund Hankinson, John G. Kenney, Charles N. Leeper, Kaleb Daws Osborn, I. G. Recant, Virgil S. Ritchie, Murray L. Segall, Clyde Thiele, Alfred J. Voitlein, Herbert A. Wilson, and Francis S. Wolak.

Fifteen Group Achievement Awards and 12 Special Achievement Awards were presented. Group Achievement Awards were presented to the following:

The Radio-Controlled Drop Model Team was cited "for outstanding performance in carrying out highly innovative research programs with radio-controlled flying models to provide critically needed information on spin-entry characteristics of the F-14 and F-15 aircraft." The award was accepted by Charles E. Libbey, Snowden C. Mills, and Felix L. Pitts.

The F-111 Aircraft Fleet was honored "for significant technical contributions to the U.S. Air Force's nationwide reliability and risk assessment program for the F-111 aircraft." Members of the team are John R. Davidson, E. J. Wolff, C. Michael Hudson, Herbert A. Leybold, and James C. Newman.

Receiving an award for development of dacron reinforced mylar material technology were Vernon L. Alley, Jackie A. Butler, G. Michael Jurscaga, James E. Justice, Moses J. Long, Austin D. McHatton, Thomas W. Preston, Richard L. Shearer, and Thomas P. Wright. They were cited "for the timely development of a uniquely reinforced plastic film and the application of this technology to an unprecedented balloon system which was successfully demonstrated in the Viking Parachute Flight Test Program."

The Langley Facility Rehabilitation Planning Group was honored "for the concept, direction, and development of Langley's long-range facilities rehabilitation program which

(Continued on page 4)

### HAPPENINGS

**CREDIT UNION OPEN HOUSE.** . . In celebration of International Credit Union Day the Credit Union will again host an open house from 10 a.m. to 3 p.m. on Thursday, Oct. 19. This annual event has grown in popularity over the years as shown by steadily increasing attendance. Some 1500 members and potential members are expected to take part in this year's festivities. So be sure to drop by and spend a few pleasant moments greeting old friends and enjoying the hospitality of the Credit Union. Officials and staff are dedicated to making the occasion a memorable one for you. Beginning at 10 a.m., there will be useful, worth-keeping favors and varied refreshments for all. The program ends at 3 p.m. with a drawing to determine the winners of the five big, mystery prizes. Something for everyone so be among those present.

**ENGAGED.** . . Linda Getch, Dynamic Stability Branch, is engaged to Craig Shaw, Aerodynamics Performance Branch. Plans call for a January wedding.

**TURKEY SHOOT.** . . The Activities Association's Annual Turkey Shoot will be held Saturday, November 11 at the Activities Building. Matches will begin at 9 a.m. and continue until dusk. In addition to those turkeys won by the sharpshooters, a large number will be given away by special drawing. Tickets are now available from your representatives for 25 cents each. Persons interested in working at the shoot are requested to call Dave Throckmorton, extension 3984.

**TENNIS NEWS.** . . Bob and Pat Murray won the NASA Mixed Doubles by defeating Ted Bright and Shirley Sargent 6-0, 6-4. Eighteen teams participated. In the semi-finals Bob and Pat defeat Flip and Joy Rogers 6-3, 6-3, and Ted and Shirley defeated Bob and Carol Smith 7-6, 6-4.

**CAMERA CLUB.** . . The Langley Camera Club will meet on October 17 at 7:30 p.m. in the Activities Building. Slides of the field trip to the Miss World-USA poolside photographic session will be shown. The theme for the color slide contest is 'Nature.' The theme for the September meeting was 'Aviation.' Winners were: First - Air Scoop by Larry Loftin; second - A Row of Cougars by Bob Wright; and third - Pilot's Office by Loftin.



**SWING YOUR PARTNER:** Over 150 persons attend the square dance held at the Activities Building September 30. In the left photo Wayne Loer and husband do the star pattern. At right are William C. Edwards and Mrs. Eldridge Martin.



**GREETING COUSIN:** Julie Wheary, Viking Project Office, greets her cousin, William A. Anders, when he visited the Center to speak at the annual awards ceremony on Oct. 2.

### EEO HIGHLIGHTS

We are happy to announce that a copy of the 'Employee's Guide to the Equal Employment Opportunity Program' was mailed to each LRC employee during the week. Read your copy carefully. If there are any questions still unanswered, please call us at extension 2124.

Look around for the new EEO Counselors on an attractive display poster. If a poster is not in your building, call us. We would be happy to furnish one.

Horace E. C. Bellamy, newly designated Contract Compliance Officer, has reported to duty. Welcome!

The EEO Officer participated in the Director's Division Review on September 28. The subject of the review was 'Status of Equal Employment Opportunity Plans and Programs.'

The 1973 Affirmative Action Plan has been submitted to the Director for his signature. We look forward to a productive year.

Have you seen the attractive EEO sign on Building 1195? It points the way. Come in and see us.

What is Upward Mobility? Are you in a dead-end job? Talk to your supervisor about your career plans.

The EEO Officer spoke at the Visitor Center on September 26 to a group of local high school guidance counselors and graduate students on the subject 'A Theoretical Model for Disseminating Educational and Occupational Information to Disadvantaged Students.' This was a joint public affairs effort.

The Second Affirmative Action Quarterly Report reflects steady growth. You may stop by for a brief review.

Alvin F. Anderson

Langley Researcher, an official publication of the Langley Research Center, National Aeronautics and Space Administration, Hampton, Virginia 23365, is published biweekly in the interest of its employees. Address contributions to the Editor, Mail Stop 154, telephone 3116.

Editor.....Ruth Angel Verell  
 Staff Photographer.....Bob Nye  
 Reporters.....Langley Employees

The privilege of advertising articles in this publication is restricted to employees of Langley Research Center. Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.

## NCMA FORMS LOCAL CHAPTER

Over 50 members attended the first meeting of the newly formed Hampton Roads Chapter of the National Contract Management Association (NCMA) held last week in the Lunar Room of the Holiday Inn.

The NCMA is the professional society for individuals from both industry and government who work in the field of government contracting and subcontracting. The Hampton Roads Chapter has a membership of 62 with over 75 expected to become members before the presentation of the charter this month.

Elected as the first slate of officers were: President - Richard T. Bright, NASA; Vice President - Frank V. Moore, NASA; Secretary - Thomas W. Shelhimer, LTV, Hampton Technical Center; Treasurer - Terry H. White - Navy Sup-ships Office; and Director - E. M. Russell, local representative of LTV Aerospace Corporation. These officers will be installed at the October 19 meeting by the National President.

Guest speakers for the charter presentation on October 19 will be George J. Vecchiatti, Director of Procurement for NASA, and Rear Admiral Rowland G. Freeman, Deputy Chief of Naval Material Command, with the charter presentation by the National President of the NCMA, Walter B. O'Neal, Washington Representative for the Hazeltine Corporation. The meeting will be held at the Ramada Inn on Route 17. A social period will be held at 6:30 p.m., followed by dinner and the meeting.

Information concerning the professional society may be obtained by contacting Robert R. Moore, 3247.

### Swap and Shop

(Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.)

#### LOST

Small gold earring with cultured pearl. Middleton, 2885.

#### FREE

Clothesline poles. Teichman, 877-5815.

#### WANTED

Ride from Lakeshore Apts. or Todds Lane and Lakeshore Dr. to W.A. on 7:30 or 8 shift. Torrence, 2150.

#### FOR SALE

Whirlpool washer and dryer - \$150; pool table - \$25; crib and mattress - \$20. Daus, 220-0902.

1959 Ford - \$65. Youngblood, 877-1224.

Large size pool table. Lockard, 595-6184.

1963 Ford convertible - \$400. Parker, 723-4110.

23-inch Airline console TV, black and white. Yarrington, 826-3284.

1969 Mercury Monterey - \$1350; Trotwood mobile home, 8 x 24 feet. Lee, 722-6762.

3-bedroom, 1-1/2 bath brick home with air conditioning - \$26,000. Lee, 596-3183.

Frigidaire refrigerator - \$40. Goble, 595-2066.

Scott amplifier model 299; 7.50 x 14 snow tires; 8.55 x 15 tires. Riggin, 722-6087.

Sear's Guardsman Dynaglass G78-14 tire - \$15; Dayton Thorobred 8.25 - 14 tire - \$15; Sear's portable humidifier - \$35; Hoover vacuum cleaner - \$15. Imig, 877-4915.

Child's table and two chairs - \$7; coffee table - \$2; desk - \$7; lamp - \$2; child's clothes hamper - \$6; recapped 6.00 x 13 tire - free; 36 x 55-inch aluminum window screens -



CLEANUP CAMPAIGN. Joanne Neal and Vernon Courtney are shown working in the Langley Records Storage area in preparation for the records cleanup campaign.

## CLEANUP DRIVE PLANNED

A records cleanup campaign will be conducted at the Center during the last two weeks of October. During the campaign, each office is requested to review its files and to keep on hand only those records necessary for current operation. Inactive records of value should be transferred to either the Langley Records Storage Area or the Washington National Records Center.

NHB1441.1A "NASA Records Disposition Handbook" sets forth the guidelines for the proper disposition of records. Inactive reference material that is of no value should be destroyed.

Questions regarding disposition of records should be directed to the Records Management Office, 3511.

## ICASE SEMINAR PROGRAM

A seminar program will be initiated by the newly formed Institute for Computer Applications in Science and Engineering (ICASE). The lectures and discussions in these seminars will be oriented to the areas of applied mathematics, computer science, and the application of advanced computational methods to the broad spectrum of science and engineering.

The initial lecture will be presented on October 30 by Dr. Cleve B. Moler, University of New Mexico, who will speak on "NATS Project for Mathematical Sub Routines." Beginning in January the series of lectures will be presented on the fourth Monday of each month. The meetings will be held in the Activities Building (1222) beginning at 3 p.m. and will be preceded by a half hour of refreshments and informal discussion with the speaker of the day.

Further information may be obtained from John Tredennick, Executive Assistant to the Director of ICASE, 2514.

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free. 14 x 10-foot rug pad - free. Williams 851-0675.

Carrier ice making machine, 250-pound capacity - can be seen at Activities Building. Will go to highest bidder and bids must be in by Oct. 31. Miller, 2183.

Modern living room suite, end tables, lamps, coffee table - \$75; G.E. washer - \$50. Burton, 838-8921.

12-foot surf rod - \$15. Graham, 868-6498.

3-bedroom, 1-1/2 bath Gold Medallion home. Williams, 826-0021.

#### FOR RENT

One bedroom furnished apartment - \$80 per month. Childs, 898-6719.

## STAFF MEMBERS HONORED

(Continued from page 1)

provides an orderly and economical solution to the growing problem of facility obsolescence." Members of the group are Baxter C. Carr, Craig H. Collins, James R. Dinkins, Robert W. Feldhousen, Glenwood C. Ford, William J. Leight, and Charles R. Schilling.

James L. Copeland, John E. Doyle, Max C. Kurbjun, and Richard Morris were honored for the Differential Maneuvering Simulator. They were cited "in recognition of the outstanding accomplishment and dedicated effort of the team responsible for the design, construction, and installation of the Differential Maneuvering Simulator, which has met or exceeded all of the original objectives for its use in research programs of the Langley Research Center."

Honored for the Langley Research Center Instrument Pool were Mary F. Briggs, Ellis M. Davis, Elsie P. Eason, Nan M. English, F. Leroy Geddings, Stanley E. Pearson, Richard B. Prince, Carl B. Smith, and Samuel Westbrook. The citation reads "in recognition of the continued improvements in the operation of the Centralized Instrument Pool, resulting in highly effective utilization of the Center's research instrumentation."

Receiving an award "for outstanding effort in the development of the Langley 48-Inch Laser Radar System as a new tool for the measurement of aerosols, air density, and structure in the Earth's atmosphere" were William H. Fuller, Raymond M. Hansen, Robert L. Krieger, James D. Lawrence, Michael P. McCormick, Samuel H. Melfi, Stewart L. Ocheltree, Sheldon T. Peterson, Bill R. Rouse, Courtney E. Russ, and Stuart L. Seaton.

The V/STOL Instrument Landing Research Team received an award "for outstanding performance in flight research on V/STOL instrument landings leading to the world's first helicopter automatic approach and vertical landing at a predetermined spot." Members of the team are Daniel J. DiCarlo, Jack H. Dysart, John F. Garren, James R. Kelly, Frank R. Niessen, Robert M. Peterson, Robert W. Sommer, Jerry J. Thibodeaux, Frank Whittaker, and Kenneth R. Yenni.

The Photographic Branch was honored "in recognition of the continuous outstanding support provided the Langley Research Center in the photographic documentation of its research programs and special events."

The Advanced Transport Technology Office received an award "for outstanding performance in the formulation and management of a comprehensive program, including systems studies, technology development, and flight experiments, oriented toward establishing readiness of advanced technologies for the next-generation subsonic transport."

William D. Brewer, Marvin B. Dow, George C. Olsen, Claude M. Pittman, Stephen S. Tompkins, and Louis F. Vosteen were cited "for outstanding accomplishment in the development and demonstration of materials and procedures for producing low-cost ablative thermal protection systems for lifting manned entry vehicles."

Ulysse J. Blanchard, Lloyd J. Fisher, John R. McGehee, Ralph J. Muraca, and Sandy M. Stubbs were honored "for creative research and imaginative leadership in devising and applying advanced analytical programs, dynamic modeling, and testing techniques in the development of the landing gear for the Viking spacecraft."



**COMPLETION CEREMONY:** A completion ceremony was held September 29 for the Phase IV OEO Clerical Train-Program. Ten OEO clerical trainees received certificates for completing a one-year program which includes classroom instructions and on the job training. The trainees are shown above with NASA and OEO officials. They are front row (from left): Brenda Gooch, instructor, Mable Scales, Reba Walker, Patricia Hodge, Glenda Shipman, Leona Rhoads, and Mrs. Norvleate Downing, Executive Director of the Office of Economic Opportunity in Newport News. Back row - Pattie Lomax, Bessie Rogers, Shirley Adams, Sheila Edwards, June Robinson, and John J. Cox, Head of Staffing and Special Programs Branch, Personnel Division. The NASA-OEO clerical training program was established in 1969 and 49 trainees have completed the program.



The Langley Transpo 72 Team was honored "in recognition of an outstanding team effort which resulted in the conception, development, and exhibition of a very excellent display in behalf of NASA and the Federal Aviation Administration at TRANSPO 72, depicting the theme 'Aviation Serves the Community and the Nation'." Members of the team are Wesley T. Berryman, Guy W. Boswick, John W. Clark, James H. Daus, Harry H. Hamilton, Donald L. Loving, Edward T. Maher, Axel T. Mattson, James M. Michael, Raymond T. Moore, Maurice A. Peter, James L. Puffenberger, John M. Sain, Henry P. Watkins, and Martin A. Weiner.

The Viking Parachute Development Team was cited "for the efficient and successful development of the Viking Parachute System in a ground and flight program which was accomplished during the period June 1969 - August 1972." Members of the team are Richard J. Bendura, James N. Chacamaty, Henry Elksnin, Larry B. Hall, Harold N. Morrow, and Jesse D. Timmons.

The Viking Analysis Team for Mariner Mars '71 Data was honored "for their outstanding contribution to the Viking mission in the analysis and correlation of Mars data during the Mariner 9 mission to support the Viking landing site selection effort, and to determine necessary changes in the Viking environmental design requirements."

## PERFORMANCE AWARD CITATIONS

Citations for the 12 staff members who received Special Achievement Awards at the annual awards ceremony were:

Robert M. Bennett "for his creative technical contribution to modification of the two-cable mount system used in wind-tunnel dynamic model tests."

David R. Brooks "for conceiving and demonstrating the feasibility of a multiple asteroid-comet flyby mission which has had a significant impact on the planning for small-body exploration."

Howard B. Edwards "for his outstanding dedicated leadership in the development of instrumentation which has led to a superior measurement capability at the Langley Research Center."

Harry M. Lawrence "for outstanding technical contributions and leadership in developing analytical techniques for research on advanced avionic systems, and effective participation in the development of new aeronautics research programs"

Robert E. Little "for his formulation of unique design and manufacturing procedures that enabled Langley Research Center to meet the schedule commitment for the Viking Project Lander Aeroshell Structure."

Linwood W. McKinney "for his contributions to the Advanced Transport Technology Program accomplished through technical leadership of an aerodynamic research program involving non-NASA facilities."

Frank R. Niessen "for the conception and development of a greatly improved inertial system for smoothing guidance signals used in V/STOL instrument landing research."

G. Burton Northam "for outstanding technical achievement in the quantitative evaluation of the effects of acceleration on the combustion of solid fuel rocket motors."

Robert N. Parker "for effective organization and management of the Advanced Applications Flight Experiments Program, which is developing advanced techniques for the practical application of space technology."

James L. Raper "for the effective management of the Balloon Launched Decelerator Test Program wherein the Viking Parachute Decelerator System was successfully qualified in Earth atmospheric flight tests."

Robert A. Schmitz "for his outstanding contribution to the Viking mission in successfully managing the Viking team that participated in the Mariner Mars '71 missions operations to assure that data necessary for Viking mission planning and environmental definition were obtained."

John F. Ward "for outstanding service in formulating and directing broad research programs on aerodynamics, dynamics, and aeroelastic characteristics of rotorcraft, including personal contributions, particularly the study of problems relating to rotor blade tip-vortex interactions."

## COLLOQUIUM NOTICE

To better represent the interest of Center staff members, the Colloquium Committee is soliciting suggestions from employees for possible speakers for future colloquium lectures. Persons wishing to nominate speakers are requested to send the following information to Sheila Long, MS 160T: **SPEAKER'S NAME** \_\_\_\_\_

**ADDRESS** \_\_\_\_\_

**SPEAKER'S TOPIC** \_\_\_\_\_

**EMPLOYEE'S NAME** \_\_\_\_\_ **EXTENSION** \_\_\_\_\_



**WHITE CANE SAFETY DAY:** James W. Sparrer, Photographic Branch, has been appointed Peninsula Chairman of White Cane Safety Day which will be observed Sunday, October 15. Sparrer is shown above stopping an automobile with his white cane as he prepares to cross the street.

## WHITE CANE SAFETY DAY SUNDAY

James W. Sparrer, Photographic Division, has been appointed Peninsula Chairman of White Cane Safety Day. President Nixon has proclaimed Sunday, October 15 as White Cane Safety Day.

In his proclamation the President said:

"For the more than one million Americans with severe visual disability, mobility is one of life's most basic and pressing problems. Even moving about in a familiar room is a complex task for someone who cannot see. How much greater is the job of navigating unfamiliar and hazardous city streets.

"Although there are a number of aids which sightless people can use to help them move about, none is so simple, yet so helpful, as the white cane. It enables a sightless person to move about easily, skillfully, and, most important, independently.

"The white cane user wants neither charity nor pity from the rest of us. He does expect a safe passage as he walks down and across the street. And he deserves understanding, cooperation, and courtesy, particularly from motor vehicle drivers and bicycle riders. Taking an extra moment to yield the right-of-way to a pedestrian with a white cane may cost the driver a second or two, but failing to do so could cost a sightless walker his life. We all must learn to recognize the white cane and take the necessary action to assure the safety of its user.

"I urge all Americans to mark this occasion by greater consideration for the special needs of the visually handicapped, and particularly by learning to heed the white cane in order that our traffic-filled streets may become safer for all, sighted and sightless alike."

The Hampton Lions Club will sponsor a TV panel in conjunction with White Cane Safety Day on October 16 at 9:30 a.m. on station WVEC. At this time Sparrer will receive a certificate of appreciation from Blair Blanton, past president of the Hampton Lions Club. Jackie Miller is in charge of the program for WVEC.

# Personnel Profiles

By

Allan C. Hanrahan



## THE AEROSPACE TROUBADOUR

If you readers will joggle your memory you may recall the occasion a while back when a U.S. Savings Bonds promotional was conducted in the cafeterias. There were young ladies attired in red, white and blue mini-skirted outfits (it's for sure you would remember them) and a young man, dressed as Uncle Sam, playing the guitar and singing. Well, make the acquaintance of that young man: Lamont R. Poole.



Young Mr. Poole is obviously an extrovert and in addition, according to friends, he is "a colorful character," talented musician, and "a good party thrower." Informed of the first two adjectives Lamont exhibited modesty but of the third he said, "Maybe that used to be, but -- not quite the same now."

You understand his answer and realize that his entertaining is somewhat more demure now when you learn that he embarked on matrimony about a year ago to the former Anne Powell of Newport News. Lamont himself was born in Spencer, North Carolina (Spencer is located between Greensboro and Charlotte) and just celebrated his twenty-fifth birthday this past Tuesday, October 10. He grew up in Spencer, graduated from high school there, and went on to N.C. State University where he earned a B.S. degree in Aerospace Engineering. At present he is working toward a M.S. degree in Engineering from George Washington University. Lamont began working at Langley as a co-op back in the summer of '66 and started work on a permanent basis in February, 1970. He is now an Aerospace Technologist in the Marine Analysis Section of the Space and Applications Technology Division.

Away from the job he has other interests such as, obviously, his guitar playing which he began about ten years ago, courtesy of an older brother's guitar. Of course, it wasn't long before he had his own. He credits his early interest in music to such performers as Bob Dylan and Peter, Paul

## Cafeteria Menu

The following menu will be served in the cafeterias during the week of October 16:

Monday - Scotch broth soup, Hungarian beef goulash, chuckwagon steak, broiled red snapper, club chicken casserole, ham croquettes.

Tuesday - Corn chowder, steamboat round, Chinese egg rolls, spaghetti with meat sauce, sauted chicken livers, fish cakes.

Wednesday - Crab bisque, stuffed cabbage rolls, delmonico steak, fried chicken, broiled flounder, clam croquettes.

Thursday - Turkey noodle soup, braised beef tips, meat loaf, turkey tetrazzini, veal parmigiano, macaroni and wieners.

Friday - Cream of chicken soup, delmonico steak, pot roast, chicken aloha, glazed ham, grilled cheese.

Snack bar - Variations: Steak and egg, NASA submarine, pastrami (Mon.); hot roast beef, ham and cheese club, hoagie sandwich (Tues.); corned beef, NASA submarine, steak (Wed.); ham and egg, salami, barbequed beef (Thurs.); chicken salad, turkey salad, steak and egg (Fri.).

The menu for the week of October 23 is as follows:

Monday - H O L I D A Y

Tuesday - Vegetable soup, beef, Italian meat loaf, jumbo shrimp, chicken and dumplings, macaroni and cheese.

Wednesday - New England clam chowder, skirt steak, beef liver and onions, stuffed peppers, baked lasagna.

Thursday - Split pea soup, delmonico, chicken fry, fried clams, chili con carne.

Friday - Vegetable beef soup, beef teriyaki, chi chow, fried fish, broiled Salisbury steak, breaded veal.

Snack Bar - Variations: Chili, hot roast beef, pastrami (Tues.); steak and egg, NASA submarine, corned beef on rye (Wed.); barbequed pork, ham and cheese club, NASA submarine (Thurs.); hot roast beef, pastrami, chicken salad (Fri.).

## Can You Solve This Problem?

A mixing bowl for highly purified diets is needed by the VA Hospital that will keep contaminants from metallic elements and silicon to an absolute minimum. A highly abrasive resistant plastic material, low in trace metal content is desired. Glass or fiberglass should be eliminated from consideration because of possible silicon contamination. Refer to problem VA-1. Contact the T. U. Office, extension 3281, for the problem statement or if you have a potential solution.

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and Mary, and to "folk music in general. I just enjoy it," he remarked.

Poole expressed his interest in "sports trivia," as he put it, and such sporting events as basketball and softball in which he participated in the NASA League. He also enjoys playing tennis, and darts, if you consider that a sport.

Lamont rounds out with card playing and reading. In fact, you could say that Lamont Poole is a well-rounded individual.

(This writer was tempted to conclude with: "Lamont is a veritable 'Poole' of interests" but was afraid the editor would beat said writer over the head with a typewriter for a pun like that).

# OVER 900 LRC WIVES ATTEND DIRECTOR'S COFFEE AND BRIEFING



LRC wives arrive at the Hangar for Director's briefing



Mrs. Robert McGehee waits her turn to get a name tag



Mrs. Daniel Hayes with Director Edgar M. Cortright.



S. L. Butler, Mrs. C. F. Barnett, Barnett, Mrs. W. E. Craig, Mrs. G. A. Wentland,



Mrs. John R. Myers is shown with Director Cortright.



Kenneth R. Yenni and Mrs. Yenni with the Director.



Mrs. E. T. Freeman and Mrs. Carl Christenbury with Axel T. Mattson.



Mrs. C. Willis Cross chats with the Director.



HOSTESSES: Serving as hostesses were (left photo, from left): Priscilla Balanis, Margaret Strickland, Ann Suit, Virginia Lazenby, Agnes Dunkley, and Nancy Holt. Right



photo - Jean Elliott, Anette Forrest, Nita Langford, Blanche Johnson, Jane Swartzwelder, Christine Darden, Juanita Haskins, Hazel Redding, and Jane Hess, head of the group.



**JOB COMPLETED:** Inspecting their work on a mockup of an Apollo spacecraft which is on display at the North Carolina State Fair in Raleigh are (from left); Cecil Burtner, Charles Lewis, Elmo Crowder, and Lewis Dunaway. The State Fair runs through October 21. The Apollo mockup is housed in a 90-foot Geodesic dome. Also on display are other exhibits from Langley, Goddard, Marshall, and Manned Spacecraft Center.

## TWO COURSES OFFERED

The Center is sponsoring two non-credit short courses which may be of interest to individual staff members. Enrollment for each of these courses will be limited. Those interested should discuss enrollment with their immediate supervisor, who should notify the division training coordinator. Nominees in a priority listing should then be forwarded to the Training and Educational Services Branch for selection and individual notification.

Fracture Mechanics will be conducted by Dr. Paul C. Paris of Del Research Corporation, beginning October 25. This course will meet for a full day on October 25, for half days on October 26 and 27, and for full days on November 1 and 2.

A non-credit course in Finite Element Analysis will begin on October 31. This course will be conducted by Dr. Kenneth H. Murray, Old Dominion University. Class meetings will be held each Tuesday and Friday from 8:30 a.m.

## Questions and Answers

The Director has issued the following statement which should answer the several questions from employees regarding the flooding on September 21:

“As you all know, flooding due to heavy rains on September 21 severely disrupted traffic and caused extensive damage in some areas of the Peninsula. Based on the limited information available to me early in the day and the clearing weather situation, I elected to keep LRC open for business, and to rely on the individual employee's own judgment as to when he could safely report to work. While a majority of LRC employees were able to report by noon, a considerable number, for one reason or another, were delayed beyond that time.

“The LRC situation was affected by radio announcements requesting motorists to stay off the streets and that Langley Air Force Base would be closed until noon. In addition, USAF Air Police turned cars away for a period during the morning hours. Telephone lines were out at the Center as well as in many areas of neighboring cities. Because of the general confusion during those morning hours, I adopted a liberal policy toward requests for additional excused leave to cover individual situations. Moreover, to help us better cope with situations developing during off-duty hours in the future, we have prepared new emergency procedures which include the broadcasting of authoritative information over local radio stations for the benefit of our employees.”

## HOWE TO ADDRESS FGAA

Edward A. Howe, Chief of the Financial Management Division who was recently elected National Vice President of the Federal Government Accountants Association, will speak to the Virginia Peninsula Chapter of FGAA on Thursday, October. His speech on “You and the FGAA” will be a humorous talk with a message.

The meeting has been designated as “ladies night” and will be held at the Colonial Restaurant, 10453 Jefferson Ave.

A social period will begin at 6:30 p.m., followed by dinner at 7:15 and the program at 8 o'clock. For reservations call Joe Haggerty, extension 3867, by noon on October 17.

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to 10:30 a.m., October 31 through December 15, in Room 126, Building 586.

For further information, contact the Training and Educational Svices Branch, extension 2517.

# Langley Researcher

VOLUME 11, NUMBER 21

LANGLEY RESEARCH CENTER

OCTOBER 27, 1972

## Record Total Contributed To CFC

With contributions to date of \$143,602, staff members not only have substantially exceeded the 1973 goal of \$125,000 but also have bettered last year's record of \$141,031.

William Conner and Margaret Strickland, Director and Co-Director of the Center's Combined Federal Campaign, are greatly pleased with this generous response especially since the total number of employees is less than last year.

The fine record set by the Center has spurred on other Federal organizations in the area with the Peninsula-wide CFC total now standing at 103 percent of the goal.

Center contributions reflect an increase both in percentage participation and in average contribution with a few returns still trickling in. A substantial number of divisions are nearing 100 percent participation. Twelve divisions have already reached that mark.

The special quarters used for housing the campaign staff are being closed down. Henceforth, any final returns should be directed to the financial chairman, Katherine Hennessy, MS 245, extension 3527

## Halloween Costume Dance Nov. 4

Party-goers are reminded that the Activities Association will sponsor a Halloween costume ball on Saturday, November 4 from 9 p.m. until 1 a.m. at the Activities Building.

Music for the young and not so young will be furnished by the Sound Sett.

Costumes are not mandatory but prizes will be awarded for best costumes in four categories - best male in costume, best female in costume, best couple in costume, and a grand prize for best costume at the ball. Prizes and judges will be announced later.

Admission will be \$3.50 per couple and tickets may be purchased at the Activities Building. Reservations may be made only with ticket purchase.

## AIAA TO HEAR WITTNER

The Hampton Roads Section of the American Institute of Aeronautics and Astronautics will meet Wednesday, Nov. 1 at the Ramada Inn on Route 17. Howard Wittner, Manager, General Electric Aerospace Group Strategic Planning, will speak on "Make Room in Your Mind for the Things of Tomorrow."

Wittner will discuss how the dramatic new applications of space technology are now impacting the daily lives of people throughout the world. In medicine, education, communications, transportation, and many other areas, the technology developed to help explore space is now being converted to improve the quality of life.

The meeting will be preceded by a social period at 6:30 p.m., followed by dinner at 7:30 and the meeting at 8:30.

For reservations call Bill Woods, 851-5331, or Irving Abel, 877-6020.

## Engineering Technicians Graduate Today; C. J. Donlan Guest Speaker



Charles J. Donlan

Charles J. Donlan, Deputy Associate Administrator, Technical, Office of Manned Space Flight, NASA Headquarters, will be the principal speaker at the completion exercises for 24 Engineering Technicians. The ceremony will be held today at 1:30 p.m. in the Activities Building.

Edgar M. Cortright, Langley Director, will introduce Donlan and preside at the ceremony. Bishop Samuel L. Green Jr., St. Johns Church of God in Christ, will give the invocation.

Musical selections will be provided by the Tactical Air Command Band under the direction of M/Sgt. Tom Pomeroy.

Presentation of journeyman certificates will be made by Malcolm P. Clark, Head of Training and Educational Services Branch, Personnel Division.

Robert H. Huffman Jr., who will receive a journeyman completion certificate as an experimental facilities mechanic, was selected by the graduates to represent them as the class speaker.

The graduates and their trades are as follows:

Aerospace Materials Processors - Samuel E. Harper, Jr. and Lewis A. Horsley.

Dynamic Modelmakers - George J. Link, Stephen L. Phillips and David F. Rollins.

Experimental Electronics Mechanics - Thaddeus Basta Jr., Alton C. Hall, George E. Hickman Jr., Thomas W. Hogge, Charles H. Hudgins, Robert H. Huffman Jr., Joseph D. McColskey, and Joseph R. Phillips.

Experimental Machinists - Donald R. Beasley, Howard C. Jones, Melvin L. Jones, and Michael E. Tall.

Before assuming his present position in 1968, Donlan was Deputy Director of the Langley Research Center.

During his career as an engineer, scientist, and administrator, Donlan has contributed significantly to the development of specialized facilities, research techniques, and the technical competence required to advance aeronautical and space flight in the United States. He has been active in the formulation, implementation, and direction of technology programs in support of major national projects concerned with the manned and unmanned exploration of space.

## HAPPENINGS

**LIBRARY NOTE.** . . While many Library customers voice approval of the library's night hours on Wednesday, the use of these night hours has declined to the point where it is difficult to justify remaining open even one night a week. So, library users, if you want night hours, start showing up on Wednesday nights. Wednesday hours are 7:30 a.m. to 8:30 p.m.

**TIME CHANGE.** . . Effective at 2 a.m. on Sunday, October 29, Daylight Saving Time will end in this area. Accordingly, at 2 a.m. on October 29, all clocks will be moved back one hour to conform to Eastern Standard Time.

**IAM MEETING.** . . The NASA Lodge No. 892, International Association of Machinists, will meet November 7 at 7 p.m. at the Central Labor Union Hall.

**BARBERSHOP CHORUS.** . . The Hampton Roads Barber-shop Chorus will present its Eighth Annual Festival of Harmony on Saturday, October 28, at 8 p.m. in the Bethel High School auditorium. This year's show will feature the Oriole Four from Dundalk, Maryland, the 1970 International Championship Quartet; the Regents from Wilmington, Delaware, who placed third in the 1972 International Championship Quartet Contest; the Forte Four Quartet from Hampton; and the Hampton Roads Chorus. Donation for general admission is \$2; reserved seats are \$3, and children under 12 will be admitted for half price. Tickets may be purchased at the door or from the following barbershoppers: Roy Henley, 2796; Frank Senft, 3461; Bob Schade, 2037; Bill Tennis, 2592, or John Tripp, 3446. Chorus members guarantee that this will be the best in family entertainment anywhere.

**OFFICE MOVES.** . . The GWU-NASA Office has moved to Building 1256. The Mail Stop is now 211A and the telephone numbers remain the same - 2219 and 3020.

**NOTE OF THANKS.** . . Linda Cannon, formerly of Procurement Division, wishes to thank her many Langley friends for their generous assistance when her home was severely damaged during the recent flash flood.

**APOLLO LAUNCH TRIP.** . . Seats are still available for the Activities Association's Apollo 17 charter flight. This trip is open to NASA employees and their families. Cost is \$88 per seat which includes the following: Round-trip air transportation via DC-8 with inflight food service both going and returning, bus transportation while in the vicinity of KSC, bus tour of Cape Kennedy and the Kennedy Space Center, and launch of Apollo 17. Reservations may be made at the Activities Building. Full payment is required. All reservations are on a first-come basis.

**TURKEY SHOOT.** . . The Activities Association's annual Turkey Shoot will be held Saturday, November 11 at the Activities Building. Matches will begin at 9 a.m. and continue until dusk. Cost is 50 cents a shot. Ammunition will be provided for 12, 16, and 20 gauge guns. Tickets of chance for the turkey drawing are now on sale from your representative for 25 cents each. Persons interested in working at the shoot are asked to call Dave Throckmorton, 3984.



**CREDIT UNION LEAGUE:** The Hampton Roads Chapter of the Virginia Credit Union League celebrated International Credit Union Day with a dinner at the Williamsburg Lodge on October 19. Some 450 officials, employees, and members of the 36 Credit Union organization attended. They enjoyed a mouth-watering plantation dinner appropriately climaxed by a hard-hitting, thought-provoking talk by guest speaker the Honorable Douglas M. Smith, Judge, Corporation Court of the City of Newport News. NASA's Robert L. Girouard (left) stepped down after two terms as Chapter President (a rare honor) with Huyke Urrutia (right) of the Shipyard taking over the reins for the coming year. Bob's departure does not mean that Langley is no longer represented in the Chapter hierarchy since Jean M. Yokum, LFCU's Assistant Manager, was installed as secretary.

### *Can You Solve This Problem?*

A system is being developed in which a catheter is used to position a small balloon in various locations in the cardiovascular system. The balloon is inflated by the injection of serum albumin through the catheter. A method for heating the serum albumin is required which will seal off the balloon so that the catheter can be withdrawn. Contact the T. U. Office, extension 3281, for the complete problem statement or if you have a potential solution.

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TAXES could be much worse - - suppose we had to pay on what we think we're worth.

Langley Researcher, an official publication of the Langley Research Center, National Aeronautics and Space Administration, Hampton, Virginia 23365, is published biweekly in the interest of its employees. Address contributions to the Editor, Mail Stop 154, telephone 3116.

Editor.....Ruth Angel Verell  
Staff Photographer.....Bob Nye  
Reporters.....Langley Employees

The privilege of advertising articles in this publication is restricted to employees of Langley Research Center. Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.



**STATUS OF WOMEN:** Helene Markoff (right), Head of the Federal Women's Program for the Civil Service Commission, visited the Center October 11 and talked to women staff members and key officials concerning the opportunities now available to women for advancement to top positions. Shown with Miss Markoff are Center Director Edgar M. Cortright and Jean B. Elliott, Langley's Federal Women's Coordinator. Mrs. Elliott announced that the second in a series of lectures on the status of women will be held at 10 a.m. on November 8 at the Activities Building. Guest speaker will be Mrs. Eleanor Schwartz, Associate Professor of Business Administration at Cleveland State University. Prior to joining the faculty at Cleveland State, she was an assistant professor at Georgia State University for four years. She also served as assistant dean of admissions at Georgia State for five years. In addition, she has work experience with the federal and state governments and private industry.

## *cafeteria menu*

The following menu will be served in the cafeterias during the week of October 30:

Monday - Bean with bacon soup, delmonico steak, corned beef and cabbage, veal parmesan, sauteed chicken livers, wieners and sauerkraut.

Tuesday - Cream of mushroom soup, Swiss steak, hot turkey and dressing, stuffed pork chops, broiled and fried fish, sloppy Joe.

Wednesday - Oyster stew, sauerbraten, fried oysters, barbequed spareribs, chicken teriyaki, Austrian ravioli.

Thursday - Chicken gumbo soup, beef stroganoff, meat loaf, shrimp creole, beef kabobs.

Friday - Fisherman's chowder, delmonico steak, fish fry, chuckwagon steak, chicken chow mein, beef enchiladas.

Snack Bar - Variations - Ham and cheese club, steak and egg, pastrami (Mon.); roast beef, NASA submarine, corned beef, chicken salad (Tues.); liverwurst and cheese, pastrami, turkey club, bacon, lettuce and tomato (Wed.); ham salad, corned beef, NASA submarine, steak (Thurs.); ham steak and egg, bologna with cheese, roast beef (Fri.).

The menu for the week of November 6 is as follows:

Monday - Cream of celery soup, business man's lunch, beef burgundy, stuffed chicken, fried scallops, franks and beans.

Tuesday - Vegetable beef soup, delmonico steak, rump roast, pork chop suey, ham steak, creamed dried beef on

## **AGE DISCRIMINATION POLICY CITED**

NASA Headquarters recently received a memorandum from President Nixon expressing concern about the problem of older citizens - - specifically, age discrimination. Each NASA facility was instructed to review its various programs to be sure there is no barrier to equal opportunity for older persons.

In his memorandum President Nixon made the following statements:

"For many years, the Federal Government has been fighting against discrimination in employment. On the basis of age, creed, ethnic origin, sex or skin color, discrimination is an intolerable wrong. As discrimination is an affront to our society, it cannot be countenanced in our government.

"In my message to the Congress earlier this year transmitting this Administration's recommendations for action on behalf of older Americans, I stressed the importance of giving serious attention to the problems of our older citizens. One such problem is age discrimination. As the largest employer in the Nation, the Government has a special responsibility to take the lead in eradicating age discrimination from the world of employment.

"It is appropriate, at this time, to reaffirm our commitment to the long-standing policy of the Federal Government that age, by itself, shall be no bar to a Federal job which an individual is otherwise qualified to perform. In doing so, I want to emphasize that our older Americans possess talents, experience, and skills which the Government needs and which our older citizens deserve the chance to contribute.

"I call upon each of you to review your agency's programs to make sure that the skills and experience of our older citizens are being effectively utilized. I also ask that you review your agency's employment practices and take immediate steps to eliminate any which may directly or indirectly stand as a barrier to equal opportunity for older persons. We must not tolerate any practice that denies older citizens fair and full consideration for employment and advancement in the Federal Service."

★★★★★

PAST experience should be a guide post, not a hitching post.

THE AIM of education is to enable man to continue his learning.

★★★★★

toast.

Wednesday - New England clam chowder, country style steak, Italian meat loaf, chicken cacciatore, broiled flounder, beef and macaroni.

Thursday - Chicken noodle soup, stuffed cabbage rolls, cordon bleu, shrimp Newburg, baked lasagna.

Friday - Cheese chowder, delmonico steak, hot roast beef sandwich, Maryland fried chicken, fried clams, grilled cheese.

Snack Bar - Variations - Chili, turkey club, corned beef, hoagie, chicken salad (Mon.); steak and egg, pastrami, ham and egg, NASA submarine (Tues.); hot roast beef, barbequed pork, salami (Wed.); ham and cheese club, steak, chicken salad (Thurs.); bacon, lettuce and tomato, barbequed roast beef, NASA submarine (Fri.).

## MOOSE LODGE HONORS YOUTH

Three teenagers from Hampton, Newport News and Dare were cited for outstanding citizenship and were honored Sunday as Warwick Moose Lodge 1711 held its 10th Annual Youth Honor Day.

Mary V. Dvorak, daughter of Francis Dvorak of Operations Support Division; Martin L. Cross, son of C. Willis Cross of Management Support Division; and Michael R. Kinzie of Hampton were presented their awards by First District Representative Thomas N. Downing.

Mary, a freshman at Christopher Newport College, was honored for her volunteer work as a candystriper at Riverside Hospital, specifically with the patients in Physical Therapy, a career she plans to pursue after college. She was also cited for helping organize the Recycle Our Trash program in York County.

Martin was honored for his work with the Boy Scouts, particularly his Eagle Scout project which involved the refurbishing and reclaiming of old pup tents for donation to inner-city scouts. A student at the University of Virginia and a graduate of Ferguson High School, he was also cited for academic activities. He represented Ferguson in the 1972 'Presidential Classroom for Young Americans' and was his scout troop's representative in the 1970 Philmont Expedition and the 13th World Jamboree in Japan.

## TWO STAFF MEMBERS DIE

Allen B. Henning, an Aerospace Technologist in Flight Projects Branch, Space Technology Division, died Sunday in Dixie Hospital after a short illness. He was 48 years of age.

Henning received his B.S. degree in Aeronautical Engineering from the University of Minnesota and he joined the Center staff in 1951.

He is survived by a son, Richard A. Henning of Hampton.

William E. Cox, an Engineering Technician in the Support Service Section, Operations Support Division, died last month while visiting in Martinsville.

A native of Aurora, North Carolina, he had been a Peninsula resident 26 years. He was a veteran of World War II.

Survivors include his widow, Mrs. Doris Gerard Cox; and a son, Sp. 4 William Duane Cox of Denver, Colorado.

## TECHNICAL PUBLICATIONS

The following technical papers have been published and distributed:

TM X-2624 - Subsonic Aerodynamic Characteristics of a Delta-Wing Fighter Model at Angles of Attack up to 40 Degrees by Jarrett K. Huffman, William P. Henderson.

TN D-6905 - Lateral Stability and Control Derivatives of a Jet Fighter Airplane Extracted from Flight Test Data by Utilizing Maximum Likelihood Estimation by Russell V. Parrish and George C. Steinmetz.

TM(u) X-2568 - Propagation of the Transverse Normal Stress in a Thick Plate Due to Distributed Lateral Impulsive Loadings by Larry Olin.

TN D-6883 - Experimental Investigation of the Visual Field Dependency in the Erect and Supine Positions by Jacob H. Lichtenstein and Rayford T. Saucer.

TN D-6823 - Sonic-Boom Pressure Measurements for SR-71 Aircraft Operating at Mach Numbers to 3.0 and Altitudes to 24,384 Meters by Domenic J. Maglieri, Vera Huckel, and Herbert R. Henderson.

Copies are available in the Technical Library.



## Swap and Shop

(Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.)

### LOST

Brown London Fog coat in West Cafeteria, car keys were in pocket. Similar coat left in same area. Roderick, 2715.

### WANTED

Ride from Hunt Club Terrace to W.A. on 7:30 or 8 shift. Swofford, 826-4472.

Set of weights or press bench. Walker, 595-6780 after 4.

### FOR SALE

Conn Director B flat trumpet with carrying case - \$150. Hall, 868-6957 after 4:30 p.m.

Sears boy's 20-inch bike - \$25. Maloney, 838-1634.

High chair - \$5, stroller - \$5, electric curler set - \$9. Teagle, 596-0258.

1964 Chevy II, 6 cylinder - \$225. Waller, 838-1172.

23-foot Formula, 160 hp I.O., depth finder, full canvas, other extras - \$4300. Craig, 596-2438.

## COMING EVENTS

Oct. 28 - Building open 11 a.m. to 4 p.m.

Viking Project Office Oyster roast 5 p.m.

Oct. 29 - Building open 1 to 6 p.m.

Oct. 30 - ICASE seminar series 2 to 4:30 p.m.

Building closed

Oct. 31 - Club Night - building closed

Nov. 1 - Building open 4:30 p.m.

Nov. 2 - IRD-FID Golf League dinner 4 p.m.

Nov. 3 - Happy Hour, music by J. Box, 3:45 to 7 p.m.

Nov. 4 - LMAA Halloween Dance

Nov. 5 - Loads Division 4 to 6:30 p.m.

Nov. 6 - Technical symposium 4 p.m.

Building closed

Nov. 7 - Club Night - building closed

Nov. 8 - Apollo 17-Nassau social 7:30 p.m.

Nov. 9 - Bingo 8 p.m.

## GOLF ASSOCIATION NEWS

The NASA Golf Association Championship Tournament was played October 11 at the Langley Golf Course and Tommy Steel won the championship with 92-29-63.

Stan Gula won first flight with 78-9-69; Bob Keller took tops in the second flight with 86-17-69; and Clay Rogers won the third flight with 94-23-71.

## ENGINEERING TECHNICIANS RECEIVE CERTIFICATES TODAY



John D. W. Barrick  
Experimental Facilities Mechanic  
Dynamic Research Laboratory

Thaddeus Basta, Jr.  
Experimental Electronics Mechanic  
IRD, Thermal Measurement

Gary B. Bayless  
Experimental Facilities Mechanic  
Full-Scale Tunnel

Donald R. Beasley  
Experimental Machinist  
Experimental Machine Shop

Robert F. Bryant, Jr.  
Experimental Facilities Mechanic  
Re-entry Physics

Alton C. Hall  
Experimental Electronics Mechanic  
ACD, Simulator Development



Samuel E. Harper, Jr.  
Aerospace Materials Processor  
Mat. Processing and Dev.

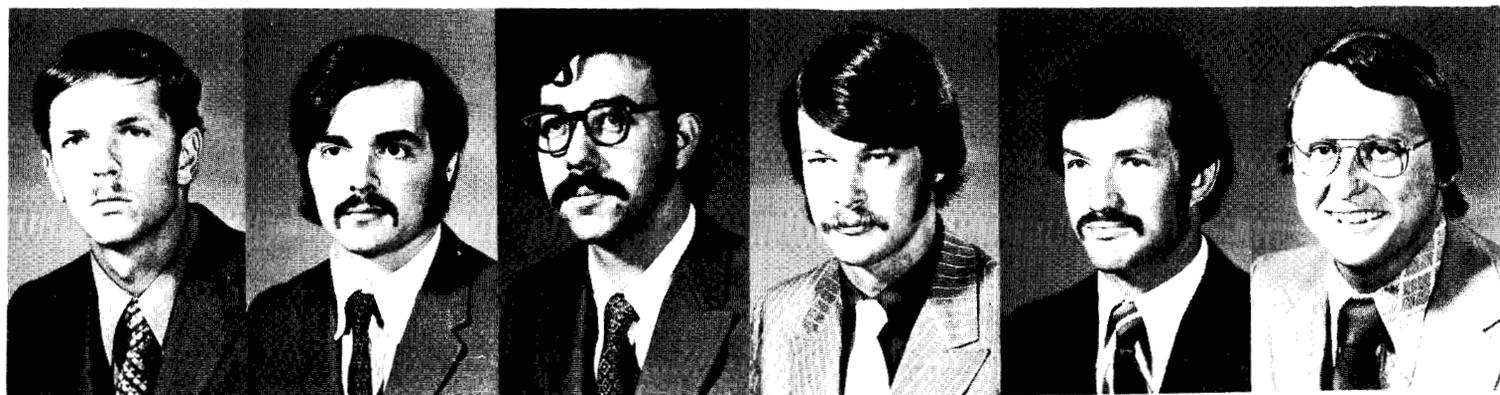
George E. Hickman, Jr.  
Experimental Electronics Mechanic  
IRD, Force Measurements

Barry N. Hogge  
Experimental Facilities Mechanic  
HPTA Arc Tunnel

Thomas W. Hogge  
Experimental Electronics Mechanic  
FID, Control and Info. Sys.

Lewis A. Horsley  
Aerospace Materials Processor  
Mat. Processing and Dev.

Charles H. Hudgins  
Experimental Facilities Mechanic  
Space Vacuum Laboratory



Robert H. Huffman, Jr.  
Experimental Facilities Mechanic  
Structures Laboratory

Howard C. Jones  
Experimental Machinist  
Instrument Construction Shop

Melvin L. Jones  
Experimental Machinist  
Experimental Machine Shop

George J. Link  
Dynamic Modelmaker  
Composite Model Shop

Joseph D. McColskey  
Experimental Facilities Mechanic  
Fatigue Laboratory

Barry D. Meredith  
Experimental Electronics Mechanic  
FID, Inst. Physics Res.



Joseph R. Phillips  
Experimental Facilities Mechanic  
Structures Laboratory

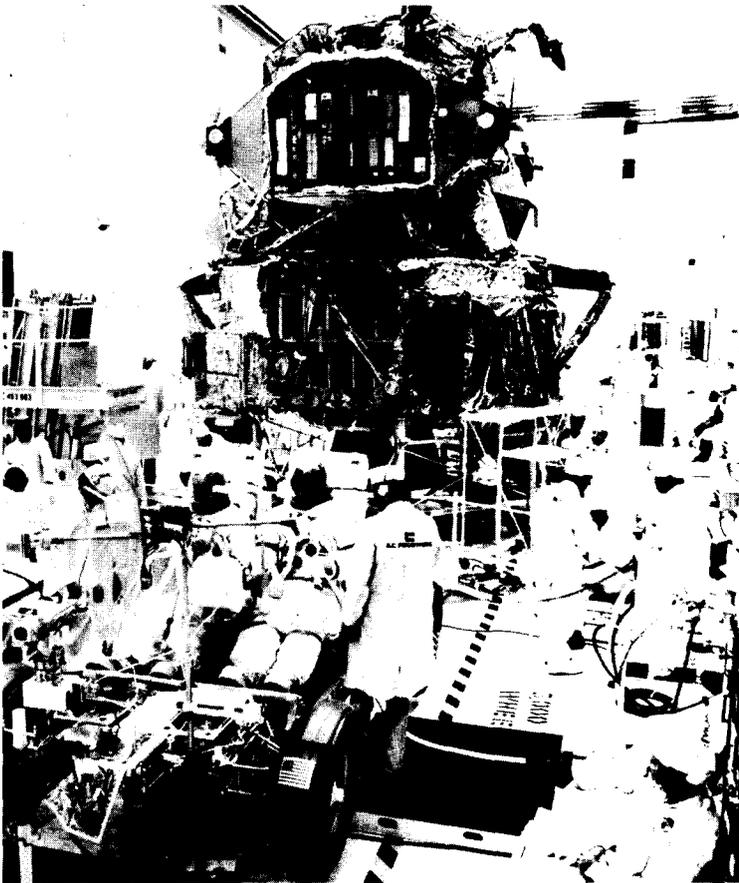
Stephen L. Phillips  
Dynamic Modelmaker  
Composite Model Shop

David F. Rollins  
Dynamic Modelmaker  
Composite Model Shop

Bruce W. South  
Experimental Electronics Mechanic  
IRD, Out. and Pres. Meas.

Michael E. Tall  
Experimental Machinist  
Experimental Machine Shop

Frank S. Vassey  
Experimental Electronics Mechanic  
FID, Aircraft Inst. Sys.



**LUNAR ROVER:** Astronauts Harrison H. Schmitt (left) and Eugene A. Cernan test the lunar rover in preparation for the final Apollo mission. Towering in the background is the lunar module, which will carry the two crew members to the surface of the Moon.

## COMPUTER INSTITUTE ESTABLISHED

An Institute for Computer Applications in Science and Engineering (ICASE) has been established at Langley Research Center.

The institute will be a focal point for work by the academic community and the Center in applied mathematics, computer science, and the use of computers in solving NASA-related scientific and engineering problems.

ICASE is being operated at Langley by the Universities Space Research Association (USRA), a national consortium of 51 universities headquartered at Charlottesville through an agreement with Langley.

Dr. A. R. Kuhlthau of the University of Virginia, president of the USRA, is serving as acting director of the institute until a permanent director is appointed. John C. Tredennick is executive assistant to the director.

The institute will have a small, permanent staff of scientists and engineers, augmented by visiting resident appointees from universities and industry. Appointments to ICASE will also include several members of Langley's research staff.

The purpose of ICASE is to establish a cooperative research effort to solve present and future aeronautical and space-related problems, find means for more efficient use of the newest generation of computers, and help universities take advantage of research opportunities, at the Langley Center, that require advanced computer facilities.

USRA is working with two other NASA centers in similar

## APOLLO 17 LUNAR ROVER VEHICLE

The Lunar Roving Vehicle (LRV) to be carried on the final Apollo mission in December will travel about 10 kilometers (6 statute miles) farther and will have a loaded weight of 27 kilograms (60 pounds) more than previous models.

Following the lunar landing scheduled for December 11, the vehicle will carry Apollo 17 Astronauts Eugene A. Cernan and Harrison H. Schmitt to various locations in the Taurus-Littrow area of the Moon.

Present plans call for the Apollo 17 lunar rover to cover about 37 kilometers (23 statute miles). Astronauts John Young and Charles Duke rode 27 kilometers (nearly 17 statute miles) in the Descartes region last March, while David Scott and James Irwin traveled just under 28 kilometers (just over 17 statute miles) in the Hadley-Apennine area when the first LRV was used in August 1971.

A significant addition to the Apollo 17 LRV is a traverse gravimeter which will measure variations in subsurface structure and furnish data on whether the Taurus mountains have deep roots or are merely deposits on a uniform subsurface. The gravimeter, a very sensitive instrument, will be carried on the rear deck of the LRV.

Also on the LRV will be a surface electrical properties experiment to measure physical properties of the lunar interior down to about a kilometer in depth. The experiment will also indicate subsurface electrical and mechanical properties, the extent of subsurface layering and the degree of energy scattering at the landing site. Underground water, if it exists, will also be detectable. The surface electrical properties experiment located on the rear deck will be connected to the LRV navigation system located on the forward chassis by a cable. This will allow scientists on Earth to correlate the LRV's specific location with experiment data picked up along the route and marks the first time that the LRV has been directly linked with an experiment.

Earth weight of the third LRV is about 725 kilograms (1,600 pounds) fully loaded, an increase of about 27 kilograms (60 pounds) over previous models.

## NASA BOWLING NEWS

Flyers lead in League A with 17-1/2 wins and 6-1/2 losses. Clean Ups are in second place with 16 wins and 8 losses and Mets are in third with 16-1/2 wins and 11-1/2 losses. High scores were rolled by Ed Swanson with a 254 game and 700 set and M. Lynch with a 237 game and 647 set. Clean Ups rolled high team game with 1060 and Flight Engineers rolled high team set with 2956.

Northrup Flyers and Audio Ventures are tied for first in League B with 20 wins and 8 losses each. Born Losers are in third place with 16-1/2 wins and 11-1/2 losses. High scores for the men were rolled by Walter Vahl with a 668 set and Al Bell with a 262 game. Tops for the women were Margaret Schoonover with a 257 game and B. Hooks with a 686 set. Northrup Flyers rolled high team scores with a 1033 game and 2992 set.

★★★★★

projects. It operates the Lunar Science Institute near the Manned Spacecraft Center and it provides assistance to a program of Materials Processing in Space at the Marshall Space Flight Center.

The ICASE offices are located in Building 1220, room 121; telephone 2514. Dr. Wayne D. Erickson, Senior Scientist at Langley, is NASA coordinator for the institute.

# Personnel Profiles

By

Allan C. Hanrahan



## THE BIRDMAN OF NASA

Certainly you've heard of homing pigeons! And in the accompanying picture is shown one - an unbeaten champion - with his owner, Ellery N. Vandebree, who also happens to be a prize-winning breeder and racer of homing pigeons. In the picture are just a few of the mementos won by Mr. Vandebree in the enjoyment and pursuit of his hobby - a sport that dates back to the days of pharaohs.



Basically and briefly, the sport of racing homing pigeons consists of transporting the birds by car or truck a distance of 100, 200, or 300 miles away to a definite location where they are released. After being released or "liberated," the pigeons "home in" on their loft and return home. Some of the birds can also race home from distances of 400, 500, or 600 miles but, ironically, they are shipped by airplane, in special containers, to those locations and released. There are two main courses: one to the southwest that reaches to Columbus, Georgia, and the other to the west-northwest that reaches Indianapolis. By way of a dated and coded band on the pigeon's leg that is recorded in a special time clock at the home loft, the birds' flight speed, in yards per minute, can be calculated. Of course, the bird with the highest yards per minute ratio wins. It is all very exact and scientific, Vandebree told us, and calls for the best of the pigeon's "love of home, stamina and breeding," he said.

It was an interesting conversation we had with Vandebree and the subject is quite extensive. For instance, homing pigeons are only one of fifty-two breeds of pigeons and any cross-breeding destroys the homing instinct. The racing of these birds is very extensive in England and Belgium and it is practically the national sport in the Low Countries. They have been used to carry messages in every war up to and including the Viet Nam War and there are numerous

## EEO HIGHLIGHTS

Alvin F. Anderson and Horace E. C. Bellamy attended the National Black Science Students Organization Conference in New York on October 20-23. With its headquarters at City College of New York, the purpose of this organization is to collect and disseminate information concerning medical, dental and health and non-health related science opportunities for black students. Valuable insights were obtained in the areas of engineering and architecture. Representatives from several NASA installations were on hand. The NASA-Headquarters exhibit added to the overall program.

Representatives of LRC-Support Contractors have met to form an EEO-Contract Compliance Council. This activity is designed to promote the full realization of Equal Employment Opportunity through a continuing affirmative program.

Mu Alpha Chapter of Omega Psi Phi Fraternity, Inc., has invited our EEO Officer, Alvin F. Anderson, to deliver the keynote address during its National Achievement Week Program in Charleston, South Carolina, November 12. This year's theme of the 40,000 member organization is "Better Community Relations Through the Three R's: Role, Respect and Responsibility." In his letter of authorization, the Director for Administration, R. G. Romatowski, said, "We feel that the National Achievement Week Program you have developed for this year is an extremely important event and we support it fully."

★★★★★

WHEN you're through changing, you're through.

IT IS not the ship in the water but the water in the ship that sinks it.

★★★★★

accounts of their war-time exploits.

Vandebree himself literally inherited the interest: his father was a devotee of homing pigeon breeding and racing as was Ellery's grandfather, as far back as 1896 - 76 years! And there are indications it could continue into the fourth generation but as Ellery said, "It's my interest and I enjoy it but I wouldn't try to influence any of my children to pursue it."

Ellery's children are his daughter, Bonnie Lee (Yeatts), age 25, now married and living in Richmond; a son, Arthur, age 21, now attending Christopher Newport College; and another daughter, Ellen, age 12.

"Ellen is a pigeon fancier at the moment," Ellery said, "and owns a pair of real pretty show birds."

And Ellery should know because he is also a judge and will be one of four to six judges at the National Pigeon Show to be held at White Plains, N.Y., November 19. Pigeon judging, as well as breeding and racing pigeons, keeps Ellery busy but he also enjoys fishing and hunting, particularly turkey, deer and bear, and he has won state big game contests. Admittedly, he doesn't do as much hunting as he used to, though.

Ellery was born and raised in Paterson, N.J., and after finishing high school there he joined the Navy and served until discharged in this area in 1946. In May of that same year he married the former Vivian Nelson of Newport News.

He has been at the Center since October, 1947, and is a first-line supervisor in the Metals Technology Section of the Fabrication Division.

## Questions and Answers

Q. In Questions and Answers in the Researcher dated Jan. 21, 1972, it was asked if a sauna bath and exercise room was being put in Building 1244. Today a sauna bath is being put in the pilots' locker room. To make room for this, they are removing two of three showers. There is not room for an exercise room. Can you explain the necessity of this? Also, why the automatic washer and dryer on the second floor of Building 1244?

Q. Regarding the response in the Jan. 21, 1972 issue of the Researcher indicating the desirability of providing a sauna bath for use by all employees if resource support for such a program could be found. Will, in fact, the sauna being installed in the pilots' locker room be so used?

A. According to J. M. Patton, head of Operations Branch, Research Aircraft Flight Division, the importance of physical fitness is receiving increased recognition these days. It is generally agreed that a person in good physical condition has more energy to devote to whatever task is at hand than one in poor shape. On this basis, it would be desirable to provide all employees with convenient means of keeping physically fit. Attempts have been made to encourage this to some degree by means of facilities available through the Activities Association.

Another order of need exists in the case of flight crews, especially those engaged in research or test flying, due to stringent and well-recognized requirements for mental alertness, good physical reflexes and a generally high state of health. The sauna bath presently being installed in the research pilots' personnel equipment and locker room area is part of an overall facility reconditioning effort and represents an early stage of a longer-range program designed to encourage and promote a high level of physical fitness among the NASA flight crews. No lack of precedent exists for such facilities; other NASA Centers and military flight activities have had much more elaborate physical conditioning facilities for some time. Use of these facilities by flight crews is strongly supported by flight surgeons and other experts in aviation medicine.

The washer and dryer in question were moved from the now defunct space suit maintenance facility and are to be used in the care of aircrew personnel equipment.

The sauna will not be available for use by non-flight crew personnel.

Q. Upon entering the main West Gate one encounters an objectionable hump in the road. What constructive purpose does this hump serve?

## WORDS IN PEOPLES' MOUTHS



## T. U. Publications Available

The following NASA Special Publications are available from the Technology Utilization Office, Room 127, Building 1195B:

NASA SP-5100 Shock and Vibration Technology with Applications to Electrical Systems

NASA SP-5106 Thermal and Mechanical Treatments for Nickel and Some Nickel-Base Alloys: Effects on Mechanical Properties

NASA SP-5110 55-Nitinol - - The Alloy with a Memory: Its Physical Properties, and Applications

NASA SP-5908 (04) Hand Tools (a compilation)

★★★★★

HE who has learned to disagree without being disagreeable has discovered the most valuable secret of a diplomat.

★★★★★

A. Glen Ford, Management Support Division, pointed out that the bump was caused by expansion due to hot weather. As a temporary fix, some black top filler was used and tapered to soften the bump. Our street maintenance crews have the job and the joint will be cut off and leveled.

Q. At the intersection of Stratton and Freeman Roads, what is the order of right of way for cars?

A. According to Glen Ford, the intersection of Stratton and Freeman Road is clearly marked with a yield sign on Freeman. Therefore, it is obvious that Stratton Road traffic has the right of way.

# Langley Researcher

VOLUME 11, NUMBER 22

LANGLEY RESEARCH CENTER

NOVEMBER 10, 1972

## CFC Contributions Total \$144,723

The 1973 Combined Federal Campaign at the Center drew to a close on November 2, with pledges and contributions from 3404 individuals totalling \$144,723. This amount represents 115.8 percent of the \$125,000 goal. Contributions were given by the USAAMRDL employees, university personnel stationed at the Center and Distinguished Research Associates as well as by regular NASA employees.

In a letter to the Center Director, the Chairman of the Peninsula Combined Federal Campaign expressed particular appreciation for the Center's immediate reaction in quickly reaching its goal. He considers this early achievement provided the impetus needed to get such a large campaign into high gear and helped stimulate the other federal installations, all of whom exceeded their individual goals.

With the Langley Research Center as the single largest contributor, the Peninsula-wide CFC total reached \$495,000. Of this amount, 82.5 percent is being allotted to the Peninsula United Fund and the remainder to the National Health Agencies and International Service Agencies.

Total gifts this year increased 26 percent over last year's amount, despite the fact there were 153 fewer contributors. This represents a 7.3 percent increase in the average contribution. Ninety-six percent of the Center staff gave to the campaign.

William Conner and Margaret Strickland, CFC Director and Co-Director respectively at the Center, extend a heartfelt thanks to all who participated and cooperated so generously in making this year's campaign the most successful one to date.

## LISSAMAN TO ADDRESS AIAA

'Blackboard to Bluewater' will be the subject of a talk by Dr. Peter Lissaman, AIAA Distinguished Lecturer, to the Hampton Roads Section of the American Institute of Aeronautics and Astronautics on Wednesday, November 29, at the Hispaniola Restaurant in Hampton.

Dr. Lissaman's presentation concerns the Aero Hydro-nautics of sailboats and will include a description of basic systems/hydro-nautics tradeoffs of the science and art of yacht design. The talk will conclude with a voyage into uncharted regions of fluid dynamics including descriptions and excellent movies of far-out concepts of wind/water propulsion.

While there will be philosophic and analytic digressions, the bulk of the talk is essentially nontechnical in character and should be enjoyable for all.

Meeting details concerning time, cost, and reservations will be issued shortly in a meeting notice which will be mailed to all AIAA members and will be posted on Center bulletin boards.

Wives and guests are cordially invited to attend this dinner-lecture.



A. Henderson

J. E. Stitt

V. L. Alley

## NASA HONORS STAFF MEMBERS IN ANNUAL AWARDS CEREMONY

Three Center staff members received special awards at NASA's 14th Annual Awards Ceremony held yesterday in Washington, D.C. The awards were presented by Dr. James C. Fletcher, NASA Administrator.

Arthur Henderson Jr., Associate Chief of Space Sciences Division, received a NASA Exceptional Service Medal "for his pioneering research and outstanding leadership in the fields of supersonic and hypersonic aerodynamics, his creative ability in conceiving unique facilities and test techniques, and his exceptional contributions to the design of advanced aircraft and spacecraft and to the space shuttle program." Henderson was also cited for his long history of pioneering research in the fields of supersonic and hypersonic aerodynamics and his ever-broadening responsibilities which have been marked by such exceptional leadership and creative ability as to reflect outstandingly upon himself and NASA.

James E. Stitt, Chief of Flight Instrumentation Division, received an Exceptional Service Medal "for his outstanding leadership in research on electronic devices and measurement techniques, and in the practical application of advanced instrumentation systems in a manner that has contributed to the success of many aeronautics and space flight research programs." Stitt was also cited for his pioneering research contributions in advanced instrumentation techniques and his outstanding leadership in the development and application of instrumentation systems for many successful research programs in areas such as microelectronics, communications, sensors, and data systems which have spearheaded advances in these technologies.

Vernon L. Alley Jr., Chief of Engineering and Analysis, Office of the Director for Systems Engineering and Operations, received an Exceptional Scientific Achievement Medal "for his outstanding analytical expertise and leadership in the definition and solution of critical structural and systems problems for NASA flight vehicles and facilities."

## HAPPENINGS

**CALENDAR NOTICE.** . . Officials of Stores Issue announced that requests for 1973 desk and wall calendars should be submitted to Stores Issue, MS 140, by Monday, December 18. In order to cut down on the supply of wall calendars, employees using wall boards are requested to use one calendar for this purpose instead of ordering three. General Services Administration has standardized all calendars, only the items listed below are available. When sending in orders, staff members are requested to use the following stock numbers: Calendar pads - folding pad, size 3 x 3-5/8 inches, No. 7510-689-3077; Executive folding pad, size 3-3/4 x 5-7/8 inches, No. 7510-405-9302; wall calendar, No. 7510-181-8365; wall calendar board, No. 7510-789-2455; and executive calendar stand, size 6-1/8 x 7-5/8 inches, No. 7520-162-6156.

**NOTE OF THANKS.** . . Gus Guastaferro, Viking Project Office, wishes to thank all his Langley friends who donated blood for his niece who is a patient in Henrietta Eggleston Hospital for Children in Atlanta, Georgia.

**NEW HEIRESS.** . . Celebrating the birth of a seven-pound, eight-ounce daughter, Shannon Nicole, on October 23 is S. R. Barringer, Research Facilities and Equipment.

**TURKEY SHOOT.** . . Sharpshooters are reminded that the Activities Association's annual Turkey Shoot will be held tomorrow at the Activities Building. Matches will begin at 9 a.m. and continue until dusk. Cost is 50 cents a shot. Ammunition will be provided for 12, 16, and 20 gauge guns.

**SPECIAL SALE.** . . The Activities Association will sell various items of excess property during the Turkey Shoot tomorrow. Items such as glassware and dishes will be sold on a first come basis. Items not sold during the Turkey Shoot will be available for sale in the Activities Building during the week of November 13.

**PROFESSORS TO VISIT.** . . Four professors from the Aerospace Engineering Department at VPI&SU will visit the Center on Tuesday, November 14, to discuss graduate programs with current and prospective students. Persons wishing to talk with Dr. Joseph Schetz, Dr. Fred Lutze, Dr. James Marchman, or Dr. Philip Yu, should call the Training Office, extension 2517, for an appointment.

**NEW OFFICERS.** . . New officers for the LRC Tennis Club for 1973 are: President, Bob Smith; vice president, Jack Campbell; secretary, Bill Compton; treasurer, Charlie Bryant; directors, Jack Kaylor and Carl Horne. Club members are reminded that the banquet will be held at the Colonial Restaurant at 6 p.m. on Tuesday, Nov. 14.

**SWIM CLUB.** . . The NASA Swim Club is swimming twice each week at the Chamberlin Hotel pool. All personnel are invited to join the group and bring the family. Hours are from 7 to 8 p.m. on Wednesdays and Fridays and the cost is 75 cents per person. For further information, call Louise Lee, 3772.

**TRY SOARING.** . . The Tidewater Soaring Society, Inc., made up of NASA employees and others, has a limited

## FGAA TO HEAR ARTHUR LITKE



Arthur L. Litke

Arthur L. Litke, Chief Accountant of the Federal Power Commission and National President of the Federal Government Accountants Association, will speak to the Virginia Peninsula Chapter of FGAA on Wednesday, November 15.

The meeting will be held at the Colonial Restaurant, 10453 Jefferson Avenue. A social period will begin at 6:30 p.m., followed by dinner at 7:15 p.m. and the

program at 8 o'clock. For reservations call Joe Haggerty, extension 3867, by noon on November 13.

## Report Required From Employees Formerly With Aerospace Firms

The Center has been informed by NASA Headquarters that Section 7, Public Law 91-303 (NASA Authorization Act, 1971) requires NASA personnel who were formerly employed by any of the aerospace companies listed in this Public Law to file a report on NASA Form 1480 by Nov. 15, if they also meet the following criteria:

Employment with the listed contractor terminated on or after July 1, 1968; salary rate during employment with the contractor was \$15,000 per year or more; and NASA salary rate during fiscal year 1972 was equal to or greater than a GS-13.

Lists of these aerospace companies are posted on all official bulletin boards.

For additional information and NASA Form 1480, contact the Staffing and Special Programs Branch, 2233.

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number of openings for membership. Those interested may arrange a demonstration flight in a training glider at the cost of the airplane tow. For further information call Tom Kelly, 851-1470, or Joe Gera, 877-4737.

**ARCHEOLOGICAL SOCIETY.** . . The LRC Historical and Archeological Society will meet at 7:30 p.m. on Monday, November 20 in the lounge of the Activities Building. The Reverend Francis W. Hayes will present an illustrated lecture on colonial churches in Tidewater.

Langley Researcher, an official publication of the Langley Research Center, National Aeronautics and Space Administration, Hampton, Virginia 23365, is published biweekly in the interest of its employees. Address contributions to the Editor, Mail Stop 154, telephone 3116.

Editor.....Ruth Angel Verell  
Staff Photographer.....Bob Nye  
Reporters.....Langley Employees

The privilege of advertising articles in this publication is restricted to employees of Langley Research Center. Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.

## Swap and Shop

(Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.)

### WANTED

Ride from Quash or Queen Streets to W.A. on 7 shift. Glinda, 3824.

### FOR RENT

4-bedroom, 2-1/2 bath house in Beachwood, available for one year starting Jan. 1. Yager, 877-4403.

2-bedroom, 2-bath furnished house on waterfront at Grandview - available from January to August - \$200 monthly plus use of 1966 Buick for \$50 monthly rental and maintenance. Reynolds, 851-2875.

### FOR SALE

Girl's Chicago shoe skates size 5 with carrying case - \$7.50; 22 x 40-inch portable pool table - \$12.50. Hoggard, 596-0449.

Aria hollow-body electric guitar. Olstad, 898-5330.

1967 Honda 160 motorcycle and two helmets - \$250. Boyden, 898-5833.

1966 Plymouth Satellite, 2-door hardtop, air conditioning - \$550; Blue Jay sailboat, 13-1/2-foot plywood hull, trailer, 2 sets of sails - \$350. Buchan, 877-8203 after 4:30 p.m.

Two Kelly-Springfield snow tires, size H78-15 (fits 8.55-15), only 200 miles - \$30 each. Loftin, 596-4224.

Shetland Pony, saddle and bridle. Roberts, 868-6317.

5-speed bike, needs repairs - \$20; rollaway bed with mattress - \$15. McQuire, 851-4287.

5 new RTR HO freight cars - \$1.25 each. Githens, 723-5324.

Boy's 3-speed 20-inch bike - \$20. Perry, 898-6169.

15-foot travel trailer, 1971 Kinney Caravan Cub, sleeps six, gas range and heater, 110v and 12v electric lights and toilet - \$1095. Moore, 851-2223.

AKC registered female Pekingese. Burton, 838-8921.

Whirlpool washer and dryer; complete crib, 3 unit pool table light - best offer. Davis, 220-0902.

1970 Ford F-100, 8-foot bed, 36-inch shell, overdrive, Eaz-Lift trailer hitch - \$2600. Davis, 826-4665.

23-inch black and white console TV - \$60. Heath, 826-1485.

Model railroad layout and rolling stock, HO gauge, Fredrick, 826-5835.

## TECHNICAL PUBLICATIONS

The following technical papers have been published and distributed:

TN D-6830 - A Program for Calculating Expansion-Tube Flow Quantities for Real-Gas Mixtures and Comparison with Experimental Results by Charles G. Miller.

TN D-6929 - Static Structures Tests of a 1.5 Meter-Diameter Fabric Attached Inflatable Decelerator by Conrad M. Willis and Martin M. Mikulas.

TN D-6820 - Flow Field Measurements Around a Mars Lander Model Using Hot-Film Anemometers Under Simulated Mars Surface Conditions by George C. Greene, Lloyd S. Keafer, Jerome T. Foughner.

TN D-6949 - Mars Gravitational Field Estimation Error by Harold R. Compton and Edward F. Daniels.

TN D-6909 - Dynamic Stability Derivatives at Angles of Attack from -5 Degrees to 90 Degrees for a Variable-Sweep Fighter Configuration with Twin Vertical Tails by Sue B. Grafton and Ernie L. Anglin.



**ACHIEVEMENT AWARDS:** Daniel Hayes, Chief of Fabrication Division, presents Special Achievement Awards to Sarah O'Keefe (left) and Annie Coleman. Sarah was cited "for sustained superior performance in providing exceptionally efficient support in administrative, specialized, clerical, and typist contributions to the Aerospace and Model Development Branch." Annie received her award "for maintaining a superior level of competence in the performance of her assigned duties and willingly cooperating with employees of other organizational units to furnish editing and transcribing services not consistent with her position."

## MERIT PROMOTION NOTICE

The following Merit Promotion Announcements are open:

72-110 Production Controller, GS-1152-9 with promotional opportunity (three positions)

72-111 Production Controller, GS-1152-8 or 9

72-112 Engineering Technician, GS-80208 or 9

72-113 Secretary (Stenography), GS-318-6 with promotional opportunity

72-114 Secretary (Stenography), GS-318-6 with promotional opportunity

72-115 Secretary (Typing), GS-318-4 or 5

72-116 Supervisory Property Utilization Specialist, GS-1104-11

72-117 Supervisory General Supply Specialist, GS-2110-9

72-118 Supervisory Inventory Management Specialist, GS-2010-7 or 9

72-119 Supervisory Distribution Facilities Specialist, GS-2030-11

72-120 AST, Technical Resources Management, GS-801-11 or 12

For information on position locations, closing dates, and areas of consideration, contact the Staffing and Special Programs Branch, extension 2233.

## TECHNICAL SYMPOSIUM NOV. 14

The next Technical Support Symposium will be held Nov. 14 from 3 to 4 p.m. in the Activities Building. The program, "Skylab," will be presented by the Systems Engineering and Operations Directorate and will feature two experiments (T-020 and T-013) for which Langley has had prime responsibility.

An invitation is extended to all technical and administrative support personnel to attend.



THERE are no uninteresting things, there are only uninteresting people.

## cafeteria menu

The following menu will be served in the cafeterias during the week of November 13:

Monday - Cream of tomato soup, Hungarian beef goulash, spaghetti with meat sauce, Chinese egg rolls, broiled chicken. Snack bar - Turkey club, NASA submarine, ham steak and egg, pastrami.

Tuesday - Vegetable beef soup, delmonico steak, beef, liver and onions, seafood platter, barbequed pork sandwich, ham croquettes. Snack bar - 3-D burger, hot roast beef, mini steak, hoagie, corned beef.

Wednesday - Cheese chowder, steamboat round, grilled ham steak, veal cutlet, beef ravioli. Snack bar - 3-D burger, steak and egg, barbequed pork, NASA submarine, bologna with cheese.

Thursday - Corn chowder, hot roast beef sandwich, crab-shrimp bake casserole, chicken cacciatore, meat loaf. Snack bar - Hot chili, pastrami, chicken club, NASA submarine, ham and cheese club.

Friday - Chicken and rice soup, beef teriyaki, broiled or fried fish, beef stew, broiled pork chops. Snack bar - 3-D burger, bacon, lettuce and tomato, hot roast beef, hoagie, ham steak and egg.

The menu for the week of November 20 is as follows:

Monday - Crab bisque, chopped steak, veal scallopini, chicken and dumplings, fried clams. Snack bar - Turkey club, corned beef, NASA submarine.

Tuesday - Thanksgiving Dinner including turkey, dressing, cranberry sauce, gravy, mashed potatoes, green beans, rolls and butter, mince or pumpkin pie, coffee or tea - \$1.20; clam chowder, delmonico steak, sauteed chicken livers. Snack bar - Thanksgiving Dinner.

Wednesday - Chicken noodle soup, rump roast, Salisbury steak, shrimp creole, Italian meat loaf. Snack bar - Steak and egg, ham and cheese club, pastrami.

Thursday - H O L I D A Y

Friday - Minestrone soup, beef kabobs, seafood Newburg, Maryland fried chicken, beef and macaroni. Snack bar - Ham steak and egg, NASA submarine, chicken salad, bacon lettuce and tomato.

## CARIBBEAN CRUISES PLANNED

The Activities Association, in conjunction with Cruise International, is handling reservations for the winter cruise to the Caribbean on the Greek Lines' ships TSS Olympia and TSS Queen Anna Maria.

A special 4-day cruise, scheduled for November 27, features a brief stop in Bermuda where shoppers can take advantage of the low prices of all imported luxuries. Special prices for this cruise start at \$99 per person, based on four occupants to a stateroom.

The December 11 and 16 cruises will go to Freeport-Nassau and Nassau-Freeport, respectively. Prices start at \$135 per person, also based on four occupants to a stateroom.

The special 10-day cruise, leaving December 1, includes stops in San Juan, Antigua, Barbados, French Martinique, and St. Thomas. This cruise encompasses two week-ends and only five business days. Special prices start at \$449.

Further price information and details of the sailings is available in the Activities Building or call Kathi Warfel, extension 2058.



NCMA LEADERS: New officers of the Hampton Roads Chapter of the National Contract Management Association are (from left): Ed Russell, Director; Tom Shelhimer, Secretary; Ted Bright, President; Terry White, Treasurer; and Frank Moore, Vice President.

## NCMA Chapter Receives Charter

The charter presentation meeting of the Hampton Roads Chapter of the National Contract Management Association was held last month and the highlight of the meeting was the presentation of the NCMA Charter to the local chapter by Walter B. O'Neil, NCMA National President.

O'Neil cited the local group for their efforts in establishing the chapter and pointed out that Hampton Roads is the 45th chapter of NCMA.

The installation of officers was also conducted by O'Neil. The new officers are: Ted Bright, NASA, president; Frank Moore, NASA, vice president; Tom Shelhimer, LTV-Hampton Industrial Center, secretary; Terry White, Navy-Supplies, treasurer; and Ed Russell, local representative for LTV Aerospace Corporation, director. Bright was presented the NCMA President's Award.

The next meeting of the local chapter will be held November 16 at 7:30 p.m. in the Williamsburg Room of the Holiday Inn on Mercury Boulevard. This will be a dinner meeting followed by a panel discussion on the subject of socio-economic clauses.

Included on the panel will be Hunter Creech, Secretary and Chief Counsel of the Newport News Shipbuilding and Dry Dock Company; Alvin Anderson, LRC's Equal Employment Opportunity Officer; George Malley, LRC's Chief Counsel; and Robert D. Witte, Attorney and NCMA Northeast Regional Vice President. Panel moderator will be Leonard J. Crosby, Contract Manager, Wyle Laboratories, Huntsville, Alabama, and NCMA Southeastern Regional Vice President.

## Can You Solve This Problem?

A data transmission system for transmitting gamma camera data from remote hospitals to the University's Medical Center is needed. Other medical information could probably be transmitted with the desired system. Refer to VAM-16. Contact the T. U. Office, extension 3281, for the complete problem statement or if you have a potential solution.

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THERE is a field for critics, no doubt, but we don't remember seeing statues of any of them in the Hall of Fame.



Dr. Nelson W. Jalufka



Dr. Harry D. Orr



Dr. John H. Painter



Robert E. Grandle

## NINE RECEIVE ADVANCED DEGREES

Nine staff members recently received advanced degrees through the Center's graduate study program.

Dr. Nelson W. Jalufka, Astrophysics Section of Environmental and Space Sciences Division, received a Ph.D. in Physics from the University of Colorado while Dr. Harry D. Orr, Radiation Physics Unit of ESSD, received a Ph.D. in Physics from the University of South Carolina. Dr. John H. Painter, Communications Research Section of Flight Instrumentation Division, received a Ph.D. in Electrical Engineering from Southern Methodist University.

Three staff members received Master's Degrees from the George Washington University in September. They are Robert E. Grandle, Acoustics Dynamics Section of Loads Division, M.S. in Engineering Mechanics; Andrew J. Hansbrough, Institutional Programs Group of Programs and Resources Division, M.S.A. in Management Engineering; and John B. Anders (not pictured), Advanced Facilities Research Section of Hypersonic Vehicles Division, M.S. in Aerospace Engineering.

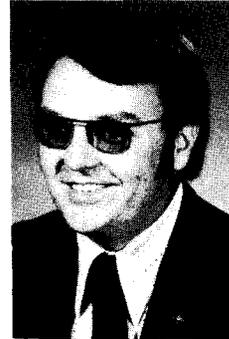
Eric C. Stewart, Flight Vehicles Research Branch of Flight Dynamics and Control Division, received a Master of Science in Engineering Physics from the University of Virginia, while Stephen D. Wall, Optical Systems Research Section of FID, received a M.S. in Optics from the University of Rochester. J. Marshall Hughes (not pictured), Technical Library Branch of Management Support Division, earned an Advanced Masters in Library Science from Florida State University.

## CAMERA CLUB MEETS NOV. 21

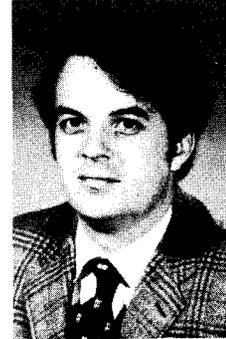
The Langley Camera Club will meet on November 21 at 7:30 p.m. in the Activities Building. Included on the program will be the showing of slides on "Say Something with Your Color Slides" and "Color Photography After Dark."

The theme of the color slide contest will be "The Seasons." This theme may include any aspect of spring, summer, fall, and winter, but the slide should create a mood which is easily recognizable with a season.

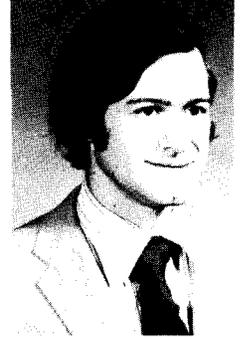
The October theme was "Nature" and 30 slides were entered. All entrants served as judges and selected the following winners: First - "Dragonfly" by Robert L. Wright; second - "Safari," by Abe Leiss; third - "Gull" by Wright; fourth - "Cactus Bloom," by Joe Hallissy; fifth - "Lift-off" by Bill Conkling.



A. J. Hansbrough



Eric C. Stewart



Stephen D. Wall

## NASA BOWLING NEWS

Flyers lead A League with 22-1/2 wins and 9-1/2 losses. Trailing in a close second are Clean Ups with 22 wins and 10 losses. Leading the league with high individual averages are Ed Swanson with 186 and Meg Lunch with 152. Jim Clayton received a triplicate patch from the ABC for three games of 159 bowled consecutively in one evening.

Audio Ventures took over first place in B League with 28 wins and 8 losses and Hits and Misses moved into second with 21 wins and 15 losses. High individual averages are held by Victor LeTourneau with 181 and Alma Duckett with 143.

Meredith Schoonover, Audio Ventures, received awards from the Virginia State Women's Bowling Association and the Hampton Women's Bowling Association for a 200 scratch game bowled with an average of 135 or less. Meredith's average was 131.

## WINE-TASTING PARTY DEC. 1

There will be a Wine-Tasting Party in the Activities Building on December 1 at 5 p.m. A fine selection of wines, complimenting cheeses, and other light hors d'oeuvres will be served.

All Center employees, contractors, and their guests, are invited to attend. Cost will be two dollars per person. Please send reservation to Kathi Warfel, MS 496, by Nov. 20.

\*\*\*\*\*

TO: Kathi Warfel, MS 496

NAME \_\_\_\_\_ TELEPHONE NO. \_\_\_\_\_

NUMBER IN PARTY \_\_\_\_\_ SECTION \_\_\_\_\_

## Crew Emblems Trace Apollo History

Apollo, the Greek god of the Sun, dominates the emblem designed for the final lunar landing mission which bears his name.

The Apollo 17 crew, in selecting their mission emblem, have chosen not to emphasize finality but rather the beginning of the golden age of space flight that their flight will usher in. In the emblem, Apollo gazes toward Saturn and a galaxy which symbolizes man's goals in space will someday include the planets and perhaps even the stars.

Like their predecessors in the Mercury and Gemini programs, each Apollo crew has selected an emblem that symbolically depicts some particular aspect of their flight.

The emblem for the first manned Apollo flight in October, 1968, shows the Apollo 7 command and service module passing over the Western Hemisphere in Earth orbit. The Roman numeral VII is superimposed on the Pacific Ocean with the surnames of Walter Schirra, Don Eisele, and Walt Cunningham circling the Earth. The Apollo 7 spacecraft performed flawlessly through more than 780 hours in orbit.

The Apollo 8 emblem symbolizes the major feature of the mission with the loops of a figure "8" encompassing both Earth and the Moon. On this flight, men first flew to another body in the solar system circling the Moon ten times. The crew of Frank Borman, James Lovell, and William Anders, whose names appear on the lower half of the "8", covered 800,000 kilometers (500,000 miles) in 147 hours.

Astronauts James McDivitt, David Scott, and Russell Schweickart chose an emblem for their March, 1969, flight which exemplified its major objectives -- the first manned flight of the complete Saturn V/Apollo complex. The emblem features a Saturn V rocket encircled by an orbiting command/service module station keeping with a lunar module. On this flight, the crew executed rendezvous and docking exercises in Earth orbit and the first Apollo walk-in-space was performed.

With Earth in the background, the Apollo 10 emblem shows the lunar module sweeping low over the lunar surface while the command/service module monitors from lunar orbit. This mission flown in May, 1969, by Tom Stafford, John Young and Eugene Cernan tested the lunar module in the Moon's environment for the first time and was a dress rehearsal for the lunar landing.

The first lunar landing mission emblem depicts an American eagle with wings spread and clutching an olive branch about to descend to the Moon's surface. Earth can be seen in the distance. Apollo 11 is the only lettering on the emblem selected by astronauts Neil Armstrong, Buzz Aldrin, and Michael Collins for their July 1969 mission.

The Apollo 12 emblem has a nautical theme appropriate to the mission's all-Navy crew - Astronauts Charles Conrad, Richard F. Gordon, and Alan L. Bean. The dominant figure of the emblem is a Yankee clipper ship approaching the Moon. In keeping with this theme for the second lunar landing in November 1969, the crew named their command/service module Yankee Clipper and the lunar module Intrepid.

The theme of the Apollo 13 emblem is the first to be based on the myth of Apollo. Three horses pull the Sun chariot from Earth to the Moon. The Latin phrase to the left of the horses, "Ex Luna, scientia," translates to "From the Moon, knowledge." Scheduled for a lunar landing in April

## APOLLO MANNED MISSION EMBLEMS



1970, a service module oxygen tank ruptured when the spacecraft was 320,000 kilometers (200,000 miles) on its outbound leg to the Moon which prevented the landing. Astronauts Jim Lovell, Jack Swigert, and Fred Haise used the lunar module (named Aquarius) as the command post and living quarters for the remainder of the flight around the Moon and back to Earth.

Astronauts Alan Shepard, Stuart Roosa, and Edgar Mitchell designed the Apollo 14 emblem which features the gold astronaut lapel pin approaching the Moon and leaving a cosmic trail from the Earth. Astronauts who have flown in space wear gold pins while those who have not wear silver ones. Launched in January 1971, Apollo 14 was the third manned lunar exploration mission.

The surnames of Astronauts David Scott, Alfred Worden, and James Irwin are centered in the white band at the bottom of the Apollo 15 mission emblem. The large disc in the center of the emblem has red, white and blue symbols of flight, superimposed over an artist's concept of the Hadley-Apennine landing site. The fourth lunar landing mission, Apollo 15 was launched in July 1971.

The Apollo 16 mission emblem is dominated by an eagle perched atop a red, white and blue shield superimposed on a lunar scene. The emblem is surrounded by a blue circle of 16 stars with the crew's surnames completing the bottom of the circle. Across the face of the shield is a gold symbol of flight, similar to that on the official NASA seal. Apollo 16, the fifth lunar landing mission, was conducted in April 1972 by Astronauts John Young, Charles Duke and Ken Mattingly.

Apollo 17, with Astronauts Eugene Cernan, Ron Evans and Harrison H. Schmitt aboard is scheduled for launch on December 6, 1972. Suspended behind the image of Apollo in the mission emblem is an American eagle of contemporary design. Four red bars on the eagle's wing represents the bars in the American flag and three white stars above the bars symbolize the three astronauts. The eagle's wing partially overlays the Moon suggesting that this is a celestial body that man has visited.

# Personnel Profiles

By

Allan C. Hanrahan



## A Personal Personnel Profile

Most of the persons featured in this space in past issues have been easy to talk with and easy to tell about because LRC people - many of them, anyway - possess a certain ease of manner, but the gentleman we would like you to meet this issue is particularly easy to introduce because he is a long-time and well-thought-of friend, Lyman A. Stillely. (Photo by Don Ward)



Lyman, an Electronic Technician in the Electronic Packaging and Development Section of the Fabrication Division, will probably always be known as Lonnie by those Langley employees who were reared, as he was, in the Todds Lane area of Hampton. Lyman was also born in Hampton, forty years ago, and the intervening years have been good to him: he graduated from Hampton High School, served in the U.S. Navy during the Korean conflict (fortunately, in the Mediterranean), attended Campbell College (in North Carolina) and V.P.I. He has been at the Center since 1957 and graduated from the Apprentice School in 1961.

Since 1956 he has been married to the former Marie Durham of Greensboro, N.C., and they have three children: Benny, age 15; Robin, age 13; and Brenda, age 11.

Lyman is a self-effacing individual, particularly where his church work is concerned, but this writer is an eyewitness to his hard work at Liberty Baptist Church in such positions as Assistant Chairman of Deacons, Assistant Superintendent of Sunday School, choir member, teacher, and member of different committees, all of which consume much time.

Because Lyman devotes so much of his time away from work to his family and church there naturally is not much time left over but any that is he expends on a very interesting hobby. You see, Lyman is an avid bottle collector and possesses an extraordinary collection of old bottles, some of which are shown in the photograph, and his extensive knowledge of the subject really makes for interesting listening.

## EEO HIGHLIGHTS

The first session of the Supervisory Training Course conducted by the LRC Training Branch entitled "Strategies in Black-White Relations" was held on November 3. The guest lecturer for this session was Alvin F. Anderson, the Center's Equal Employment Opportunity Officer.

Anderson's topic was "Psychological Consequences of Being a Black American." Expounding to his audience of supervisors, he discussed the effects of ascribed status versus achieved status on the development of the Black psyche. He further discussed how artificial barriers (i.e. sex, race, religion, etc.) affect the facilitation of equal employment opportunity. These barriers, Anderson contends, are promulgated by the socialization process, but can be eliminated through such courses as are now conducted at LRC, and by the development of a positive psychological and social habitat by all concerned. Much emphasis was placed on the team (cooperative) approach to the development of human relations efforts.

In an effort to assist, develop and implement equal opportunity in employment, a contractor EEO Council was established in late October. The first meeting proved to be successful because contractors experiencing problems now have another avenue to help remove barriers to equal opportunity.

Newly appointed EEO Counselors will attend the Civil Service EEO Counselor course in Norfolk on November 14. The purpose of this course is to better prepare LRC personnel in the required procedures in counseling other employees who have a need to discuss certain aspects of their personal, social and work situations.

The invitation to each employee to stop by the EEO Office for a chat and a cup of coffee is still open. P.S. We now offer tea, also. —Alvin F. Anderson

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ALL PEOPLE smile in the same language.

NO MAN ever injured his eyesight by looking on the bright side of things.

★★★★★

Some of the bottles date back to colonial times and many of them have a beauty that is only present in old glass. An interesting footnote to his hobby is the fact that almost all of his collection was garnered by the "sweat of his brow," i.e. he has purchased very few; they were found by digging at old abandoned homesites or other locations his experience told him they were likely to be.

Exploring for bottles led him into archaeological pursuits and for a while he was quite active in amateur archaeological activities in Hampton, particularly in the old downtown renewal area. Although not actively engaged in "archaeological digs" recently, he nevertheless maintains an interest in the subject.

Lyman and his family enjoy camping and he also enjoys fishing and hunting. He occasionally enjoys taking a whack (literally) at golf and not too long ago this writer observed him reacquainting himself with roller-skating. His very latest interest is a type of Early-American style painting called "tole painting."

What more can be said about this man? A lot, really, but we'll just add that it is a pleasure knowing Lyman Stillely: one of the finest examples of a Christian gentleman we have ever met.

## Questions and Answers

Q. Why is it that a GS-9-11 position (contract compliance officer) in the Equal Employment Opportunity Office has no educational requirements while a GS-9-11 position (personnel management specialist) in the Awards Program Office requires 3 years of college or the equivalent?

A. With regard to Merit Promotion Announcement 72-59, Personnel Management Specialist, GS-9-11, the statement on general experience required a bachelor's degree or 3 years of responsible experience or any combination, according to a Personnel Division official. Therefore, the announcement did not state that the position required 3 years of college or the equivalent.

The position of Contract Compliance Officer, GS-9 or 11, also requires 3 years of general experience. This Merit Promotion Announcement stated applicants should contact the Staffing and Special Programs Branch for information on substitution of education for experience. The Civil Service Commission provided that one year of academic study may be substituted for 9 months of experience. This is the same allowance that is given for the Personnel Management type positions.

In Civil Service Commission Qualification Standards, experience is the paramount requirement, but education may be substituted for general experience. This applies to all positions with the exception of Aerospace Technology positions which possess positive education requirements which cannot be waived by the agency.

The qualifications standards used on Merit Promotion Announcements are prepared by the United States Civil Service Commission and are contained in Civil Service Commission Handbook X-118 which is available for review in the Staffing and Special Programs Branch.

Q. Regarding Merit Promotion Announcement No. 72-56 for a Contract Compliance Officer. Item "f" under specialized experience requires a candidate for this position to have demonstrated "acceptance and recognition by civil rights, labor and business organizations." Is this not a strange and dubious requirement? Why should a Government employee have to be accepted by any of these organizations?

A. According to the Personnel Office, the above requirements as stated in the Merit Promotion Announcement were issued as supplemental qualification standards by the Civil Service Commission for the Contract Compliance Officer's position. The Civil Service Commission requires that applicants must have gained an in depth knowledge of

## words in peoples' mouths



### EMPLOYEES DONATE BLOOD

The Bloodmobile visited the Center on October 25 and staff members donated a total of 213 pints of blood.

Leading the donors was Leigh Lewis who completed his quota for nine gallons. Jack Ashe reached the five-gallon mark and Ward Schoonover was credited with four gallons. Three gallon donors included Thomas King, Bordie Poole, Daniel DiCarlo, Walter Gregory and Martin Leatherman.

Reaching the two gallon mark were Richard Morgason, Irvin Miller, Richard Weinstein, Joseph Powers, Prentiss Childs and George Kachadourian.

★★★★★

the complete range of minority employment problems and the employment systems of industrial, commercial, construction, or related concerns in which those qualities were demonstrated to successfully fulfill the duties of the Contract Compliance Officer. Since the focal point of the contract compliance activities is the external contact, it appears reasonable that full acceptance and confidence of the clientele can have a decided impact upon the overall performance of the duties of this position.

# Langley Researcher

VOLUME 11, NUMBER 23

LANGLEY RESEARCH CENTER

NOVEMBER 24, 1972

## CRUMBLY AWARDED FELLOWSHIP IN CONGRESSIONAL OPERATIONS

Kenneth H. Crumbly, Staff Assistant to the Director for Electronics, has been awarded a Fellowship in Congressional Operations. The fellowship for young Government executives is sponsored by the U.S. Civil Service Commission in cooperation with the American Political Science Association. The full-time orientation runs from mid-November until October 1973.

Young Federal executives selected for the Fellowship in Congressional Operations will have the opportunity to

study and learn how the Congress functions. They will meet with scholars who have studied Congress and written about its operations and with representatives from a variety of professions and interests who are in daily contact with the activities of the Congress. Most importantly, they will spend the major part of the Fellowship year in office assignments with members of both Houses and also the Committees of the Congress.

(Continued on page 3)



Kenneth H. Crumbly

## SCOUT MAY SET NEW RECORD

The Scout launch vehicle, pride of Langley Research Center, may have set a new record this week. At press time, its twenty-seventh consecutive successful launch was scheduled to place the ESRO-IV satellite into Earth orbit. Set for launch from NASA's Western Test Range in California, it was also the second of three Scout-D launches scheduled within a three-week period. The SAS-B satellite was launched from Italy's San Marco platform off the east coast of Africa November 15, and West Germany's AEROS satellite will be launched from California December 8.

This week's ESRO-IV spacecraft was scheduled to be launched by NASA for the European Space Research Organization (ESRO). The satellite carries six scientific and technological experiments that will investigate and measure several phenomena in the Polar ionosphere, a region of high ion density that begins in the upper atmosphere and extends to an indefinite height in space.

The December 8 launch will place four German and one U.S. experiments into a near-Polar orbit, aboard the AEROS spacecraft, to investigate the varied physical processes that take place in the upper layers of the Earth's atmosphere.

(Continued on page 3)

## LAST APOLLO MISSION SCHEDULED FOR NIGHT LAUNCH DECEMBER 6

What may be man's last journey to the Moon in this century is scheduled to begin with a night launch, the first in the manned space program, on Wednesday, December 6 at 9:53 p. m.

The final Apollo mission will be the longest in the series. The trip will last 12 days, 16 hours, and 31 minutes.

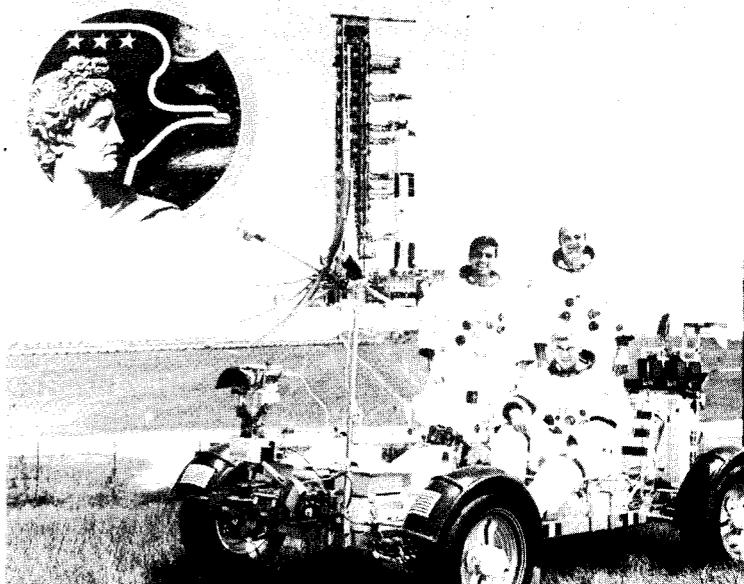
Following the return of Apollo 17, the United States will restrict its manned space exploration to orbits around the Earth.

One of the last two men to visit the Moon aboard an Apollo spacecraft will be a civilian scientist - the first to make the journey. Dr. Harrison H. "Jack" Schmitt, a specialist in lunar geology, will pilot the lunar module. Dr. Schmitt received 53 weeks of flight training at Williams Air Force Base, Arizona.

Before joining NASA as a scientist-astronaut in 1965, Dr. Schmitt worked for the U.S. Geological Survey. The 37-year-old bachelor instructed earlier Apollo crews in lunar geology, surface navigation, and feature recognition on the Moon.

Apollo 17 will be commanded by Eugene Cernan who piloted the lunar module in its initial flight test during Apollo 10. Aboard the command module orbiting the Moon will be Ronald E. Evans.

(Continued on page 3)



APOLLO 17: Lunar Module Pilot Harrison H. Schmitt (left), Command Module Pilot Ronald E. Evans, and Commander Eugene Cernan (seated) pose in their Moon rover during the rollout of the Apollo 17 rocket. The last of the Apollo/Saturn mission is scheduled for launching Dec. 6.

## HAPPENINGS

**DIAPER LINE.** . . Announcing the birth of a nine-pound, one-ounce son, Jonathan Warren, on November 10 are Virginia Kay, formerly of Technical Illustrating, and Richard W. Bennett, Material Processing and Development Section. . . Celebrating the arrival of a seven-pound, three-ounce daughter, Lisa Marie, on November 3 is Johnny E. Jordan, Instrument Research Division.

**SPECIAL NOTICE.** . . Langley Management Delegation 1200.3 "Redelegation of Authority to Sign Correspondence" has been revised. In addition to the distribution made to Langley Management Manual holders, a supplemental distribution will be made to all T & A clerks. This copy is to be placed in NBH 1450.10 "NASA Correspondence Handbook" as a reference for all employees who are handling correspondence. Additional copies are available from the Management Support Division, extension 3511, if correspondence handbook holders have not received their copy.

**RECEIVES CERTIFICATION.** . . Quinton C. Davis, Fabrication Division, has received certification as a general manufacturing engineer from the Society for Manufacturing Engineers. Davis is a member of the Hampton Roads Chapter 217.

**HELICOPTER SOCIETY.** . . The American Helicopter Society provides the medium of communication for technical and professional information within the helicopter industry. The Hampton Roads Section boasts a membership of nearly 100 representatives of Government and industry, who meet regularly with featured, informative speakers. For membership information, contact Bill Snyder, Membership Chairman, extension 3621.

**CHORAL SOCIETY.** . . A number of Center staff members will participate in the Peninsula Choral Society's presentation of Britten's "Ceremony of Carols" and Honegger's "Christmas Cantata" in the Hampton High School auditorium at 8:15 p.m. on December 4. The chorus, directed by George Bayley with Donald Golden as accompanist, will be joined by the St. Andrews Boys Choir in the "Christmas Cantata." Admission is two dollars for adults and 50 cents for students and enlisted personnel.

**ARCHERY CLUB.** . . The NASA Bowmen will meet on Tuesday, November 28 at 7:30 p.m. in Room 225, Building 1230. The nomination of candidates for office will be held. The program will include the showing of a film entitled "Record Hunting in Alaska." Visitors are welcome.

**TOASTMASTERS.** . . Do you have difficulty making yourself understood in a meeting? Does your tongue stick to the roof of your mouth when you are called upon to speak to a local gathering? Do your legs quiver and your hands shake when you appear before large audiences? These mental maladies, which we all experience at times, can be overcome. One of the best, and most enjoyable ways to improve your public speaking is through membership in a Toastmasters Club. Toastmasters International is a non-profit organization of more than 3,500 Toastmasters Clubs in 47 countries. The clubs are open to anyone interested in self-improvement. Further information may be obtained from Dr. Ronald K. Clark, extension 2314.



**RETIREES:** Margaret H. Lail, Head of Payroll Section, Financial Management Division, retired from Federal Service this month with over 20 years of service with NACA-NASA. In the left photo Margaret is shown talking to Sidney Parker, Assistant Chief of Financial Management Division. Shown standing to the left is Division Chief Edward A. Howe. Shown with the guest of honor in the right photo is Abe Leiss, Scout Office. With tongue in cheek, Abe told her that the Scout launch from Italy's San Marco platform was deliberately postponed to coincide with her retirement.

## TECHNICAL PUBLICATIONS

The following technical papers have been published and distributed.

TN D-6932 - Three-Track Runway and Taxiway Profiles Measured at International Airports I and J by Albert Hall.

TN D-6884 - Comparison of Exact and Approximate Evaluations of the Single-Scattering Integral in Nucleon-Deuteron Elastic Scattering by John W. Wilson.

TN D-6910 - Flight Test of an Erectable Spacecraft Used for Decelerator Testing at Simulated Mars Entry Conditions by Allen E. Henning and Reginald R. Lundstrom.

TM X-2602 - Initial Development of a Hypersonic Free Mixing Layer by William D. Harvey and Robert L. Bolton.

TM-SX-2623 - Low-Speed Aerodynamic Characteristics of NACA 6716 and NACA 4416 Airfoils with 35-Percent-Chord Single-Slotted Flaps by Gene J. Bingham and Kevin W. Noonam.

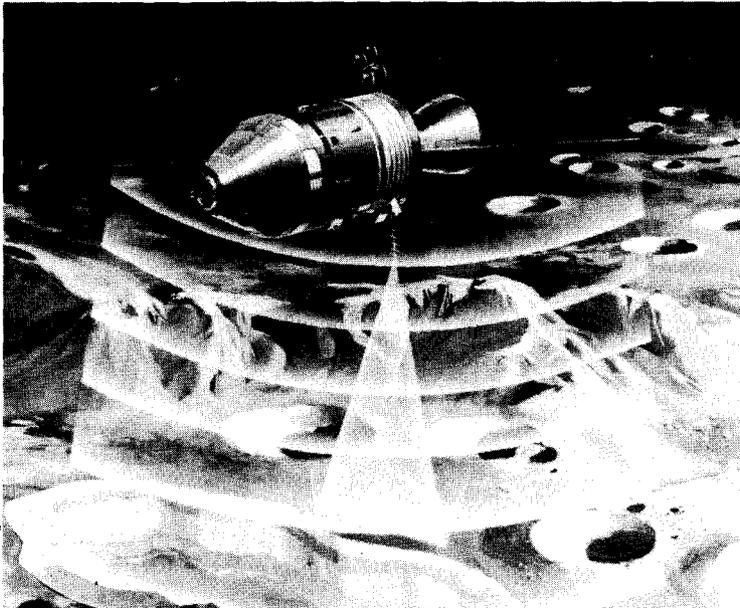
TN D-6942 - Isosinglet Approximation for Nonelastic Reactions by John W. Wilson.

TM X-2603 - Experimental Aerodynamic Characteristics of 120 Degrees-Included-Angle Cone with Attached and Separated 20 Degrees-Included-Angle Cone at Mach Numbers 2.36 and 2.70 by Clarence A. Brown, Charles D. Tresscot and Celia S. Richardson.

Langley Researcher, an official publication of the Langley Research Center, National Aeronautics and Space Administration, Hampton, Virginia 23365, is published biweekly in the interest of its employees. Address contributions to the Editor, Mail Stop 154, telephone 3116.

Editor.....Ruth Angel Verell  
Staff Photographer.....Bob Nye  
Reporters.....Langley Employees

The privilege of advertising articles in this publication is restricted to employees of Langley Research Center. Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.



**LUNAR DIVINING ROD:** This drawing illustrates how electronic beams of Apollo 17's lunar sounder system will probe the moon - down to a depth of almost one mile - from lunar orbit to aid in developing subsurface geologic maps to pinpoint such features as below-surface metallic deposits and water.

## CRUMBLY AWARDED FELLOWSHIP

(Continued from page 1)

A native of Rome, Georgia, Crumbly graduated from the General Electric Apprentice Program's Medium Transformer Division in Rome and received his B.A. degree from Shorter College in Rome. He attended Emory University in Atlanta as a graduate student and received his Master's degree in Administration from George Washington University.

He joined the Center staff in July 1969 and was assigned to the Instrument Research Division. He transferred to the Flight Instrumentation Division in 1964 and was assigned to the Research Staff Office in 1967. He was appointed to his present position in 1969.

## SCOUT MAY SET NEW RECORD

(Continued from page 1)

The Small Astronomy Satellite (SAS-B), launched Nov. 15 from San Marco, is being used for a detailed study of the sources of gamma rays. Better knowledge of these rays will help scientists understand the major energy transfer mechanisms that occur in the universe.

The three Scout-D launches have kept Langley managers and engineers busier than usual during the past several weeks, traveling not only across the United States, but halfway around the world to the Italian-operated San Marco launch site, located off the coast of the Republic of Kenya.

At the San Marco launch were Samuel J. Ailor, assistant head of Scout Project Office; Lee R. Foster, operations engineer; Willard L. Sullivan, fluid systems; Ralph P. Parks; electrical systems; and Larry R. Tant, Scout payload coordinator. On hand before the launch were Clyde W. Winters, head of launch operations, and Rodney L. Duncan, operations engineer.

Traveling to California's Western Test Range for the ESRO-IV launch were Roland D. English, head of the Scout

## LAST APOLLO LAUNCH DEC. 6

(Continued from page 1)

Cernan and Schmitt will spend three days exploring the Moon. Using the lunar roving vehicle for seven-hour trips on December 11, 12, and 13, the team will investigate the Tarus-Littrow region.

The valley in which the lunar module will land is covered with a dark material very different in appearance from most of the Moon's surface. Scientists believe it may be composed of volcanic ash.

Surrounding the valley are mountainous highlands. The Apollo team will collect samples from the steep sides of the mountains.

Geologist Schmitt explained at a recent interview that the last Apollo mission is expected to fill in gaps in our knowledge of the recent history of the Moon.

While the first five expeditions collected materials dating from 3 to 4.1 billion years ago, near the time of the Moon's creation 4.5 billion years ago, photographic and chemical evidence gathered during earlier missions indicate that the Taurus-Littrow region may contain rocks less than two billion years old.

By studying the untouched geological records on the Moon scientists also learn about the development of Earth.

"The first billion years of Earth's history have been eroded away," Dr. Schmitt said, so man must now depend on his knowledge of the Moon to reconstruct the lost history of Earth.

While Schmitt and Cernan explore below, Evans will conduct a series of experiments aboard the command module overhead. Among new investigations to be performed from orbit is a probe of the Moon's surface to a depth of one mile. The probe is capable of pinpointing sub-surface water, though it is believed that no quantity of water will be found on the Moon.

The first lunar surface expedition is planned to begin at about 6:33 p.m. EST on December 11. The second and third are scheduled for 5:13 p.m. and 4:33 p.m. EST on December 12 and 13, respectively.

The lunar module is scheduled to liftoff the Moon at 5:56 p.m. EST on December 14 and dock with Evans in the command service module at 7:53 p.m.

During the return flight to Earth, Evans will maneuver outside the Apollo spacecraft to retrieve film from the service module experiment bay at about 2:33 p.m., December 17.

Splashdown will be in the Pacific Ocean south of the Samoa Islands on December 19 at 2:24 p.m. EST.

★★★★

Office; S. J. Ailor; Joseph B. Talbot, Scout payload coordinator; R. L. Duncan; Patrick H. Shea, mechanical systems; Auzusa Yamamoto, electronics systems; Thomas L. Owens, fluid systems; and Phil Everhart, quality control.

The Scout launch vehicle was conceived at the Langley Research Center in 1958 to provide the U.S. with a reliable and economical vehicle for many space missions: orbital, probe and re-entry.

First launched in July 1960, Scout has been used for more than 80 missions for NASA and other U.S. agencies, plus several foreign countries, including France, Germany, Italy, the United Kingdom, and the ten-nation European Space Research Organization (ESRO).

## EEO HIGHLIGHTS

Alvin F. Anderson, EEO Officer, was awarded a "Scroll of Honor" for Outstanding Achievement in the Field of Education by the Mu Alpha Chapter of Omega Psi Phi Fraternity, Inc., during the National Achievement Week program held in Charleston, South Carolina, November 7-13. South Carolina State Representative Herbert V. Fielding, in responding to Anderson's speech on "Better Community Relations Through the Three R's-Role, Respect, Responsibility," stated that he intended to have the speech read into the SC House Records for its "valuable insights and specific alternatives." Anderson was given a stand-ovation.



### Do You Know These People?

Janet McKenzie and Horace Bellamy hard at work in the Office of EEO Contract Compliance during a recent Compliance Review.

The Office of EEO-Contract Compliance, headed by Horace Bellamy, has moved to Room 113, Building 1195, extension 2114.

Rosa Webster, James Davis, Brenda Gooch, and Alvin F. Anderson have completed the Civil Service EEO Counselor Course held in Norfolk November 14-16.

As a member of Langley's Speaker's Bureau, the EEO Officer spoke at the American Business Women's Association meeting on November 15. Anderson also participated in a lively panel discussion sponsored by the Hampton Roads Chapter of the National Contract Management Association. The discussions also shared by George Malley, Chief Counsel, centered around the socio-economic clauses in Government contracts.

The second session of the Supervisory Training Course conducted by the LRC Training Branch entitled "Strategies in Black-White Relations" was held on November 10. The guest lecturer for this session was Professor Henry Suggs who is a Ph.D. candidate in the area of Afro-American History at the University of Virginia.

Professor Suggs' topic was "Afro-American History in Perspective." Suggs gave the supervisors a perspective of Afro-American History from the first appearance of blacks in America to the middle 1960's.

Friday, November 17, Dr. Robert H. Pate Jr., Associate Professor, University of Virginia, conducted the third session on "Role of Counseling Skills in Personnel Management." Dr. Pate demonstrated the value and effectiveness of "active listening" on the part of supervisors and other employees. Dr. Pate and LRC's EEO Officer conducted life-like supervisor-employee counseling sessions for the benefit of the participants.

## cafeteria menu

The following menu will be served in the cafeterias during the week of November 27:

Monday - Cream of mushroom soup, business man's lunch, broiled flounder, pork chop suey, beef enchiladas. Snack bar - Turkey club, NASA submarine, ham steak and egg, pastrami.

Tuesday - Chicken gumbo soup, beef liver and onions, stuffed pepper, stuffed chicken, wieners and sauerkraut. Snackbar - 3-D burger, hot roast beef, mini steak, hoagie, corned beef.

Wednesday - Fisherman's chowder, country steak, chuck-wagon steak, stuffed pork chops, baked lasagna. Snack bar - 3-D burger, steak and egg, barbequed pork, NASA submarine, bologna and cheese.

Thursday - French onion soup, corned beef and cabbage, meat loaf, barbequed spare ribs, chili con carne. Snack bar - Hot chili, pastrami, chicken club, NASA submarine, ham and cheese club.

Friday - Cream of chicken soup, delmonico steak, beef and mushroom egg rolls, chicken teriyaki, Maryland fried chicken, fried shrimp, grilled cheese sandwich. Snack bar - 3-D burger, bacon, lettuce and tomato, hot roast beef, hoagie, ham steak and egg.

The menu for the week of December 4 is as follows:

Monday - Egg drop soup, beef burgundy, veal parmesan, spaghetti with meat balls, sauteed chicken livers. Snack bar - 3-D burger, ham and cheese club, steak and egg, NASA submarine, liverwurst and cheese.

Tuesday - Cheese chowder, skirt steak, barbequed pork chunks over rice, chicken and dumplings, fried clams. Snackbar - Turkey club, hot roast beef, hoagie, pastrami, chicken salad.

Wednesday - Vegetable-beef soup, delmonico steak, glazed ham, fried oysters, beef pot pie, franks and beans. Snack bar - 3-D burger, ham steak and egg, corned beef, NASA submarine, bologna and cheese.

Thursday - Crab bisque, stuffed cabbage rolls, shrimp Newburg, chicken cacciatore, fish cakes. Snack bar - Barbequed pork, pastrami, steak and egg, ham salad, NASA submarine.

Friday - Minestrone soup, beef kabobs, broiled or fried fish, Italian meat loaf, sloppy Joe. Snack bar - 3-D burger, hot chili, hot roast beef, ham and cheese club, corned beef.

## FABRICATION PLANS SOCIAL

The Fabrication Division is doing its part in behalf of the social life of its active and retired personnel by sponsoring a dinner-dance (couples only) on Friday, December 1, in the West Cafeteria.

There will be a social hour beginning at 6:45 p.m., followed by a buffet-style dinner at 7:30. The dance will start at 9 o'clock with music furnished by The Sportsmen. Setups will be furnished. The total cost per couple will be \$7.50 and tickets may be obtained from the following persons: Bob Macklin, Bob Faison, Ronnie Amole, Jack Clark, Al Vanesse, Larry Harvey, Cecil Burtner, and Harold Stalnaker.

★ ★ ★ ★

THE SECRET of contentment is knowing how to enjoy what you have and be able to lose all desire for things beyond your reach.



**CENTER VISITOR:** Shown with Dr. James C. Fletcher, NASA Administrator, during his visit to the Center last Friday are (from left): David C. E. Holmes, William P.

Gilbert; Dr. Peter B. Mumola, Janet Campbell, Dr. Harvey Melfi, Harvey W. Herring, Dr. Michael P. McCormick, Dr. William E. Zorumski, and Dr. W. Linwood Jones



**STALL SPIN RESEARCH:** William P. Gilbert (second from right) discusses stall spin research with Dr. Fletcher while Laut T. Nguyen and David Holmes look on.

## DR. FLETCHER VISITS HERE

Dr. James C. Fletcher, NASA Administrator, visited the Center on Friday, November 10. During his visit he toured a number of research facilities and was briefed by staff members on special research activities.

During the morning session selected research activities were outlined by Robert E. Bower, Director for Aeronautics; Eugene S. Love, Director for Space; Dr. George W. Brooks, Director for Structures; and G. Barry Graves, Director for Electronics.

The morning session closed with informal discussions with Langley Directors, Division Chiefs, and Project Managers.

During an afternoon tour of research facilities, selected research topics were presented by James S. Martin, Viking Project Office; Dr. William E. Zorumski, Loads; Harvey W. Herring, Materials; Dennis M. Bushnell, Hypersonic Vehicles; Janet W. Campbell, Space Systems; William P. Gilbert, Low-Speed Aircraft; Dr. W. Linwood Jones, Flight Instrumentation; Dr. M. Patrick McCormick, Instrument Research; Dr. S. Harvey Melfi and Dr. Peter B. Mumola, Environmental and Space Sciences.



**TOURS FACILITIES:** During a tour of research facilities, Dr. Fletcher hears a discussion by Harvey W. Herring (right) on fracture of boron-aluminum composites. Accompanying the visitor were (from left): Edgar M. Cortright, Center Director; Oran W. Nicks, Deputy Administrator; and Dr. Seymour C. Himmel, OAST Deputy Associate Administrator - Technology, NASA Headquarters.



**RESEARCH DISCUSSION:** Janet Campbell discusses a stochastic atmospheric model for Monte Carlo shuttle flight analysis with Dr. Fletcher and Paul F. Holloway, Chief of Space Systems Division.

## Swap and Shop

(Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.)

### WANTED

Alternate driver from Williamsburg to W.A. on 8 shift. Hudson, 3191.

Someone to share ride from Norfolk to W.A. on 7 shift. Midgette, 3824.

### FOR SALE

39 x 74-inch Hollywood frame bed - \$24. Morris, 596-2417.

Tyco electric train and track - two complete trains. Goodman, 838-1342.

Scott amplifier model 299, stereo, snow tires size 7.50 x 15, used 8.55 x 15 tires. Riggin, 722-6087.

23-inch black and white Zenith console TV, Early American cabinet - \$50. Nelson, 722-1705.

Slot car track, 4-lane, 42-foot road course on 8 x 8-foot table with folding legs. Power pack, 1/32-inch scale cars with spare parts, 115 V.A.C. hoist for garage or play room. Olive, 877-1008.

Exakta VX IIA outfit with case, 35, 50 and 100mm lenses, eye and waist level viewfinders, extension tubes, other accessories - \$85. Gowdey, 595-6520.

New ping pong table. R. W. Rainey, 596-9402.

1970 Wilson Staff golf clubs - three woods, ten irons - \$125. Ilg, 898-5003.

Mahogany cocktail table with glass top - \$10. Zaepfel, 826-9286.

Two Firestone snow tires, size G78-15 - \$20 each. Crowder, 826-9045.

Dark brown mouton coat, size 11 - \$35. Rivera, 1208 Jebbs Place, Newport News.

27-inch coppertone GE electric range with oven window - \$50. Allison, 851-6899 after 5 p.m.

Triple-track storm windows - eight size 36 x 54 inches, one 29 x 54 inches - \$70. Chandler, 827-2346.

### FOR RENT

4-bedroom, 2-1/2-bath house, partially furnished or unfurnished, available Jan. 1. Located in Mill Cove Estates in York County. Buchan, 877-8203.

## Can You Solve This Problem?

A rapid, inexpensive and accurate method of measuring the structural strength of concrete pavements in place is needed. Some desired features of the system are that it should be nondestructive, accurate to plus or minus 1%, capable of measuring strengths over a range of 1000-10,000 psi, and fast, requiring about 10-20 sec/test. Refer to T-20. Contact the T. U. Office, extension 3281, for the complete problem statement or if you have a potential solution.

### CONGRATULATIONS

The following persons are to be congratulated for their contributions or suggestions to the Technology Utilization and Applications Programs Office toward the solution of biomedical and public sector problems: James S. Hicks, Frank Staylor, William Boatright, Alexander P. Sabol, Charles E. Byvik, Tom Carpini, Jag J. Singh, Howard Edwards, Warren Kelliher, H. K. Holmes, George D. Sands, Cary R. Spitzer, and Roger Jolly (SREL).

## AIAA MEETS NOVEMBER 29



Dr. Peter Lissaman

Dr. Peter Lissaman, AIAA Distinguished Lecturer, will be guest speaker at a meeting of the Hampton Roads Section of the American Institute of Aeronautics and Astronautics on Wednesday, November 29, at the Hispaniola Restaurant in Hampton.

Dr. Lissaman will speak on "Blackboard to Bluewater." His presentation concerns the Aero-Hydro-nautics of sailboats and will include a description of basis systems/hydrodynamics tradeoffs of the science

and art of yacht design. The presentation will be illustrated with slides and movies showing some wierd and advanced wind machines.

Dr. Lissaman is Director of AeroSciences at AeroVironment, Inc., Pasadena. His corporation provides products, services, and research in the control and utilization of the biosphere. His own group is currently occupied in research and services in air pollution, noise, aircraft wake hazards and other ecology-related civil technologies.

He is deeply interested in communicating the ideas of technology to the non-scientific world and vice-versa, in the current pressures to humanize technology. In this spirit, he was host for three years on radio and TV series related to research and development. He originated and organized the AIAA Sailing Symposium and has recently published papers on bird flight and transportation, along with more prosaic contributions to wing and airfoil theory, jet flaps, and turbulence.

The meeting will be preceded by a social period at 6:30 p.m., followed by dinner at 7:30 and the meeting at 8:30. For reservations call Bill Woods, 851-5331, or Irvin Abel, 877-6020.

## SPITZER HEADS IEEE GROUP

The Institute of Electrical and Electronics Engineers has announced the election of Cary R. Spitzer, Viking Project Office, to the office of President of the Aerospace and Electronic Systems Group for 1973.

The group, one of 35 special interest organizations in the IEEE, has approximately 6500 members throughout the world and serves as an international forum for the exchange of information and ideas among persons concerned with all aspects of large, complex electronic systems.

In announcing the goals to be achieved during his tenure, Spitzer said that he plans to direct more of the activities of the group towards the solution of societal problems and instill in the members a greater sense of societal responsibility.

Spitzer has been employed at the Center since 1962. He is currently responsible for the physical and magnetic properties investigations on the Viking Project.

★★★★★

CHARITY is injurious unless it helps the recipient to become independent of it.

# Personnel Profiles

By

Allan C. Hanrahan



## Meet the Music Men

The stirring strains of "Dixie" die away and the smiling audience begins to disperse. A number of beaming adults, in twos and threes, tarry a bit and smilingly comment on the performance while young children dart toward the bandstand to collect autographs. The performers, comically and flamboyantly dressed in prison stripes, pack their instruments with a swiftness acquired through years of experience. The Hampton Lions Club Jug Band has ended another performance.

As we look closely at the departing musicians we realize that four of them are fellow employees and another is a former employee, now retired. They perform in the Jug Band because they enjoy it and because of the good it does. As most of us know the Lions Club is engaged in sight conservation and the band aids in this as well as performing for other charities from time-to-time to help them raise money. On its trips, which we'll mention later, the band publicizes not only Hampton but the state as well, thus promoting tourism.

In its eye-catching costumes and with some of its unlikely instruments (all of which contribute to the music) the band is reminiscent of Spike Jones and has been a guest on national television shows hosted by Don McNeil, Bert Parks, Mike Douglas, Merv Griffin, and Johnny Carson. It played at the World's Fairs in Montreal and Texas and at Lions Clubs' national conventions. In its approximately twenty-two years of existence the band has also traveled to such cities as Miami, Pittsburgh, Atlantic City, Chicago, Las Vegas, Los Angeles, and Mexico City. But, enough of the band - let's meet some of the members, alphabetically:

**JOSEPH F. BRAIG**, who is head of the Industry Assistance Office in the Procurement Division, was born in West Point, N.Y., in 1920 and was reared in Hampton. A graduate of Hampton High School, he has been employed at the Center for over 23 years.

He is married to the former Shirley Lawrence and they have one daughter, Barbara, married to Tim Rau, an engineer at LRC.

Joe has been with the Jug Band since its inception and when not playing the jug he pursues other interests which include golf, old clocks, and flying - since he holds a private pilot's license.

**DAVIS H. CRAWFORD**, a forty-seven-year-old native of Topeka, Kansas, earned a B.S. degree in Engineering Physics from the University of Kansas and a M.S. degree in Aeronautical Engineering from V.P.I. An Aerospace Technologist in the Thermal Analysis Section of the Space Systems Division, Davis has been at the Center since August, 1951.

He is married to the former Grace Katherine Hatley (who worked in IRD until 1957) and they have two sons: Duane Davis, age fifteen; and Alan Keith, age twelve.

Davis has been in the Jug Band since 1961 and plays trumpet. He also plays in the Peninsula Community Band and



PERSONNEL PROFILES: Members of the Jug Band are (from left): Davis Crawford, Bob MacLachlan, Joe Braig, and Jimmy Joyner. Not pictured is Frank Read.

★★★★★

sings in the choir of Grace Episcopal Church in Newport News. In addition, he enjoys dancing and is a member of the "Brainbusters" model airplane club.

**JAMES O. (JIMMY) JOYNER** is a Printing Assistant in the Printing Control Section of the Office of Scientific and Technical Information Programs. This Newport News native was born in 1927 and graduated from Newport News High School.

He has been at the Center since 1947 and his wife, Betty, is employed in the Hypersonic Research Engine Project Office of the Hypersonic Vehicle Division. They have a daughter, Gregg, age twenty-two, and a son, Jim Jr., age eighteen.

Jimmy plays the drums in the Jug Band and is also with the Jett Rollo Orchestra. Other interests are sports, particularly football and baseball.

**ROBERT MacLACHLAN** retired from NASA in June of 1970 and his last position was that of Program Analyst in the Control Analysis Section in Headquarters.

Born in 1919, in Calgary, Alberta, Canada, Bob grew up in Canada, Illinois, and Pennsylvania. He earned a B.S. degree in Physics from Carnegie Tech (now Carnegie-Mellon Tech) and began work at the Center in 1941.

Bob and his wife, Daryl, are the parents of four children: Ruth, age thirty; Ellen, age twenty-seven; Irene, age twenty-five; and Robert, age twelve.

He enjoys traveling - he has been all over the U.S. and Europe since his retirement. He also enjoys his music - he is choir director at the First Presbyterian Church in Hampton, plays in the Hal Jackson combo, and, of course, still plays in the Jug Band and has almost since its beginning. Versatile, he plays tuba, French horn, piano, and accordion - whichever is needed.

**FRANK G. READ** is an Aerospace Engineer in the Model Engineering Section of the Systems Engineering Division and has been at the Center since 1942.

Born in Louisville, Ky., Frank was reared in Louisville and Washington, D.C., where he graduated from McKinley Technical High School.

He and his wife, Nancy, have three children: Craig, age

(Continued on page 8)

## Questions and Answers

Q. Would appreciate a comment on the matter of membership eligibility at the Langley Federal Credit Union for dependent children of a NASA employee. It was my understanding that once eligibility was established, a membership could be retained even after such a person is no longer dependent on the NASA employee for support, but that does not seem to be correct. Also, what about retention of eligibility by a NASA employee who leaves the Federal service, but not through regular retirement channels?

A. According to Mike Pickens, Credit Union Manager, Section 5 of Article II, LFCU By-laws, reads: "A member who ceases to be within the field-of-membership of this Credit Union may retain his membership as long as he has shareholdings. This includes not only prime members but those with so called 'family' accounts who leave the immediate household of the sponsoring member." Dependent children "cease to be within the field-of-membership" when they leave the immediate household of their sponsor; a NASA employee ceases to be when he is no longer employed on Langley AFB unless terminated by retirement. Both groups, therefore, may - as spelled out above - continue their membership subject to the \$100 minimum-in-shares and the borrowing up-to-shares-held limitations.

Q. As strict as the Security Guards are at the Langley Research Center, it is a wonder how black badged, unclassified, no security contractors can come and go as they please through restricted areas. Government personnel all have a secret clearance. Can anything be done to keep contractors out of restricted areas and save some of the Langley Research Center's secrets?

A. According to Charles E. Jones, Security Officer, only NASA-LRC personnel having a requirement for access to classified information in the performance of their assigned duties are granted SECRET or CONFIDENTIAL clearances. A number of LRC employees possess a black badge, have no requirement for access to classified material and consequently are not granted a security clearance.

Each NASA-LRC employee has an individual responsibility for safeguarding classified information, as outlined in paragraph 203 of the NASA Physical Security Handbook, NHB-1620.3 dated July 1966. Each division was provided copies of this handbook. Compliance with the requirements of paragraph 203.2, by LRC employees, should prevent anyone from having access to classified information, unless they have a need-to-know and the proper degree of security clearance.

## words in peoples' mouths



## PERSONNEL PROFILE

(Continued from page 7)

twenty-three; Betty, age twenty-two; and Jack, age nineteen.

Frank has been in the Jug Band about ten years and he plays the cocktail drum as well as sings a little. Along the same lines, he has appeared in eight or nine musicals put on by the Peninsula Community Theatre and keeps busy in a number of other ways: youth activities, e.g. coaching football and baseball, and model airplanes, cars and trains. Carpentry and painting are other interests.

All of these gentlemen have a number of things in common and one is that they enjoy themselves in the Jug Band.

"We have as much fun as the audience," one told us.

And maybe that is one major reason for the Jug Band's popularity: the "fun" is contagious. May the Hampton Lions Club Jug Band go on playing and entertaining for many years to come.

★★★★★

Q. Reference - Langley Researcher, November 10, 1972, page 1, article on CFC contributions, paragraph 4. How can a 26 percent increase in total gifts represent a 7.3 percent increase in the average contribution?

A. We goofed again. We not only misplaced a decimal, we lost it completely (10 lashes with a used typing ribbon). The article should have read "total gifts this year increased 2.6 percent over last year's amount. . . this represents a 7.3 percent increase in the average contribution."

# Langley Researcher

VOLUME 11, NUMBER 24

LANGLEY RESEARCH CENTER

DECEMBER 8, 1972

## Equal Employment Opportunity Symposium Planned December 14

The Center will conduct its annual Equal Employment Opportunity Symposium on Tuesday, December 14, at 9 a.m. in the Activities Building. This year's theme is "Equal Employment Opportunity and Management."

Arthur John Howard Clement Jr., Director of Career Counseling and Placement, Voorhees College, Denmark, South Carolina, will be guest speaker. For 37 years Clement was an executive with the North Carolina Mutual Life Insurance Company, the largest black owned company in America.

Other participants will include Edgar M. Cortright, Center Director; Ruth Bates Harris, Director of NASA Equal Employment Opportunity, Washington, D.C.; Rabbi A. David Packman, Temple Sinai, Newport News; Donald Brown, EEO Counselor; and Alfred T. Dorsey, EEO Representative, Civil Service Commission, Philadelphia Region.



A. J. H. Clement

## STAFF MEMBERS ATTEND LAUNCH OF APOLLO 17 MOON MISSION

Patrick Henry Airport was a banner-flying, baggage-filled scene Wednesday when more than 300 Center employees, their families and friends departed for the nightlighted launch of Apollo 17.

Two separate groups, both leaving on jet planes, made the trip. One group of 149 people planned to see the launch and return to Newport News; the other group of 153 was scheduled to continue its trip to Nassau after the launch.

The Nassau group took off for Orlando at 9 a.m. aboard a National Airlines DC-8; there they joined other groups from NASA's Lewis and Goddard Centers and NASA Headquarters in Washington. Almost 330 strong, the combined contingent was bused to the Kennedy Space Center Wednesday afternoon for a tour, saw the Apollo launch, and returned to Orlando.

The next day the group visited Disney World near Orlando, then flew to Miami and boarded the Norwegian cruise ship SS Sunward, which took them to Nassau for the weekend. They'll return to Newport News late Monday, Dec. 11.

The second group of 149 people left Patrick Henry at 11 a.m. aboard a chartered United Air Lines DC-8. They, too, had a tour of KSC before watching the launch from a viewing site at the Center. They arrived home about 2 a.m. yesterday after a whirlwind 15-hour jaunt.

Both trips were arranged through the Activities Association at no cost to the Government.

## APOLLO 17 SCHEDULED TO LAND ON LUNAR SURFACE DECEMBER 11

As of press time Apollo 17, the final United States manned lunar landing mission, was scheduled for a night launch from Cape Kennedy at 9:53 p.m. on Wednesday. If the mission proceeds on schedule, the lunar module with Astronauts Eugene A. Cernan and Dr. Harrison H. "Jack" Schmitt aboard will touch down on the Moon at 2:54 p.m. on Monday, December 11.

Aboard the command module orbiting the Moon will be Ronald E. Evans.

Apollo 17 will be the most ambitious of the Moon-landing journeys. Cernan and Schmitt are to land their lunar ship in a narrow valley at a site named Taurus-Littrow in the northeast quadrant of the Moon on the rim of the Sea of Serenity.

"It's a flat valley between two major mountain fronts that rise up between 6,000 and 7,000 feet," Cernan explained. "We've also got mountains that we fly over just before landing that are upwards of 6,000 feet. Between

(Continued on page 3)



**NIGHT LAUNCH:** A total of 72 twenty kilowatt Xenon searchlights and 2 sixty kilowatt Xenon searchlight banks producing approximately 225-foot candles of light were scheduled to be used for the night launching of Apollo 17 from Complex 39. The final lunar landing mission in the Apollo program is the first mission to require a nighttime launch of the giant Saturn 5 launch vehicle.

# Happenings

**NEWLYWEDS.** . . Wedding bells rang on Saturday, November 25 when Julie Wheary, Viking Project Office, and Hubert Lloyd, Scientific and Technical Information Programs, took their final vows at the Wythe Presbyterian Church in Hampton.

**CALENDAR NOTICE.** . . Stock Issue and Stock Management Section have received a number of calls pertaining to the 5 x 8 tear-off calendar pad and its companion stand. These items are no longer available. Users are requested to return the 5 x 8 calendar stand to Stock Issue, MS 140, and order a substitute item as listed in the Langley Researcher of November 10, 1972.

**CHRISTMAS GIFTS.** . . If you are looking for something a little unusual as a Christmas gift, you will be glad to know that a large assortment of gifts may be purchased at the Langley Visitor Center, located in Building 1202. Included in the assortment are items of jewelry such as charm bracelets, charms, tie clips and tacs, cuff links, medallions related to space flight, Apollo patches, Apollo 17 and Viking ash trays, slides of Apollo flights, aircraft and space models, etc. The gift shop at the Visitor Center is open Monday through Saturday from 9 a.m. to 4 p.m. and from noon until 4 p.m. on Sunday.

**NEW HEIR.** . . Announcing the birth of a son, John Gregory, on November 19 is John L. Whitesides Jr. of the George Washington University at LRC.

**PAPERS AVAILABLE.** . . Dr. Elmer Green, who was guest speaker at the Colloquium Series last Monday, was received with great enthusiasm by those who attended and persons interested in hearing his lecture may borrow an audio cassette from the Technical Library. Dr. Green also left copies of some of his papers with Joe Mathis. Copies may be obtained by calling Mathis, extension 2372.

**TELEPHONE NOTICE.** . . In order to help cut down on the cost of communications, staff members are requested to report all unused telephones to the Management Support Division, extensions 3511 or 2016. There are no forms to fill out and the only information needed is the phone number and the station number.

**SKI CLUB.** . . The Peninsula Ski Club will meet Tuesday, December 12 at 7:30 p.m. at the Chamberlin Hotel. All guests are invited to attend.

**MOTORCYCLE ENTHUSIASTS.** . . The Safety Office has received a new supply of the booklet "Motorcycling and You." Copies may be obtained by calling the Safety Office, extensions 3310 or 3950.

**SKYWATCHERS.** . . The Langley Skywatchers Astronomy Club is holding public viewing sessions on Thursday nights, weather permitting, from 8 until 11 o'clock at the club's observatory located behind the Activities Building. The 16-inch reflecting telescope will be available for viewing a particular object or for making general astronomical observations. In addition to the regular Thursday night



**FABRICATION SOCIAL:** The Fabrication Division recently enjoyed a social get together. Posing for the camera in the photo at top left are Bob Faison, Stuart Rose, and Warren Nichols. Taking time out to rest in the upper right picture are (from left): Gerry Maynor, Curtis Shively, Woody Wilson, Dan Hayes, and Harold Stalnaker. Kneeling is Morris Phillips. Shown making a trip to the punch bowl are Linda Little and Bill Cutchins. Shown in the photo at lower right are Jack Clark and Clyde Hall.

## DANCE TICKETS AVAILABLE

The social event of the season will take place when the Activities Association sponsors its annual New Year's Eve on Sunday, December 31 at the Activities Building.

Dancing will be from 9:30 p.m. until 1:30 a.m. to the music of the Sound Sett.

Admission will be ten dollars per couple including set-ups, favors and coffee and Danish rolls after the dance.

Tickets are now on sale and they may be purchased at the Activities Building on a first come basis. Only a limited number of tickets will be sold.

Reservations may be made only with ticket purchase. There will be no refunds.

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schedule, special observing sessions may be arranged by contacting Robert Mack, Leonard Weinstein, or Vernon Helms.

Langley Researcher, an official publication of the Langley Research Center, National Aeronautics and Space Administration, Hampton, Virginia 23365, is published biweekly in the interest of its employees. Address contributions to the Editor, Mail Stop 154, telephone 3116.

Editor.....Ruth Angel Verell

Staff Photographer.....Bob Nye

Reporters.....Langley Employees

The privilege of advertising articles in this publication is restricted to employees of Langley Research Center. Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.

## Swap and Shop

(Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.)

### FREE

Collie pup, female, 4 months old, no shots, Anspach, 877-4281.

### LOST

Misdelivered - 6 audio cassettes and 17-inch reel audio tape with names Deer, Bradshaw, Minski and others on box. Soloman, 3373.

### WANTED

Ride or driving combination from Harwood Heights area to W.A. on 8 shift. Haggerty, 3867.

### FOR SALE

GE portable solid state stereo record player and 2 speakers - \$40. McLaughlin, 722-5447.

1964 Dodge station wagon, 9-passenger, 6 cylinder - \$250. Barritt, 877-9429 after 4:30 p.m.

New 8-track tape deck compact for automobile - \$25; 180 Yamaha motorcycle. Press, 826-0038.

1963 Ford Galaxie, 4-door. Mueller, 898-5406.

AKC registered Scottish Terrier pups. Weller, 874-0982.

1960 Chevrolet pickup, 1/2 ton - \$400. Winn, 851-2646.

1967 Lincoln Continental. Davis, 838-4467.

Two Dunlop studded snow tires size 855-14, 1 extra rim - \$40 for set. Sutton, 586-3722.

Complete oak fireplace front and mantle - \$35; refinished oak wash stand - \$40. Tynan, 898-7015.

Teac A-2070 tape deck (7-inch reel) - \$250; tapes - \$100; Sansui 20-watt bookshelf speaker - \$60 pr. Seipp, 838-8104.

12.5 cubic-foot Frigidaire - \$75. Wray, 722-7335.

1966 Dodge pickup truck, 1/2-ton, 318V8, air conditioning, cover - \$1150. Moore, 851-2223 after 3:30 p.m.

AKC registered Dachshund pups and mother dog. Dearing, 877-5429.

Two 13 x 650 snow tires and wheels - \$6 pair. Booth, 723-0004.

26-inch Schwinn, 3-speed bicycle with front and rear brakes - \$45. Hassell, 851-0303.

Boy's 24-inch bicycle - \$10. Ladson, 877-3632.

19-inch Sylvania black and white TV - \$60. Russell, 877-7223.

Mahogany Duncan Phyfe dining room suite with table, pad, 6 chairs, and buffet - \$200. Rollings, 826-4572 after 4.

## BOOZERS WIN CHAMPIONSHIP

The Washington Redskins of the NASA Football League - (Boozers - average age 35) won the league championship with a record of 7 wins, no losses, and 1 tie. Only 11 gallons of Geritol were consumed as they pursued the championship.

### FINAL STANDINGS

| TEAM           | W | L | T |
|----------------|---|---|---|
| Boozers        | 7 | 0 | 1 |
| FID            | 4 | 2 | 2 |
| ACD            | 4 | 2 | 2 |
| Charlie Browns | 4 | 3 | 0 |
| Bombers        | 2 | 5 | 1 |
| C & S          | 0 | 9 | 0 |

TWO tragedies in life: One is not to get your heart's desire. The other is to get it.



**TWIN OTTER:** DeHavilland Twin Otter airplanes, the only STOL-type craft now being used in scheduled U.S. airline service, are being used by the Research Aircraft Flight Division to conduct flight programs to investigate problems related to future Short Take-Off/Landing operations.

## LANGLEY CONDUCTING STOL FLIGHT TESTS ON TWIN OTTER AIRPLANES

Langley's Research Aircraft Flight Division is conducting two separate flight programs to investigate problems related to future Short Take-Off/Landing (STOL) aircraft operations.

Both programs are using DeHavilland Twin Otter airplanes, the only STOL-type craft now being used in scheduled U.S. airline service.

One aircraft is leased from DeHavilland Aircraft of Canada, Ltd., for a two-year research program to investigate crosswind landing problems and methods for extending crosswind limits for landings. The second aircraft has been loaned to Langley by the Federal Aviation Administration (FAA) for a four-month study of terminal area airspace requirements.

Future STOL airports are envisioned as single-strip runways within or near large cities; sometimes within the boundaries of existing major airports. Such single-strip runways will require a large percentage of crosswind operation, and their confined locations will limit available terminal area airspace.

Landing approach tests and terminal area flying required for both these research programs will be done by Langley engineers at NASA's Wallops Station airfield. Wallops will provide people and ground support during the programs.

The airfield at Wallops provides a choice of six runway directions, allowing a landing direction with the desired crosswind component for any particular test. Wallops radar facilities will simulate advanced terminal area instrument guidance systems, and will provide guidance and tracking information for studies of such advanced concepts as curved, steeply descending approach paths.

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A mistake is evidence that someone has tried to do something.

TIRED of buying presents that have a life span of one day? Buy a gift that will last - U.S. Savings Bonds.

## APOLLO 17 MOON MISSION

(Continued from page 1)

these mountains is the valley, only about three miles across - sort of a box canyon. It's going to be no piece of cake landing there, but we'll make it.''

Schmitt explained that they hope to find some of the youngest and also some of the oldest material on the Moon.

Cernan and Schmitt are to go to the Moon on December 11 for a record stay of 75 hours during which they will make three outside excursions, each lasting seven hours.

Most of the first expedition, set to start about four hours after touchdown, will be devoted to deploying and equipping their lunar rover and setting up a nuclear-powered science station.

The station has six experiments never flown before on Apollo missions. Included are devices to measure tidal deformations of the Moon, meteorite hits, composition of the thin lunar atmosphere and subsurface structure. The astronauts will implant eight explosive charges to be triggered after they leave in a seismic experiment.

It is hoped that an instrument to measure subsurface electrical and mechanical properties will answer the age-old question of whether there is water on the Moon, perhaps as ice or permafrost below the surface.

The experiment that excites scientists the most is called a tidal gravimeter. On the surface of the quiet Moon it may detect waves of gravity that may have traveled across eons of time from the birthplace of the universe.

After deploying the instruments, Cernan and Schmitt will collect samples of the dark mantle and then take their first Moon buggy ride, 1.5 miles to a 2,000-foot wide crater that has punched through the mantle. The purpose is to pick up sub-mantle material.

The next day they will strike out for the South Massif to photograph and gather samples at the avalanche area.

The third day they will drive two miles to another mountain front, the North Massif, where they hope to gather more rock samples. Then they will inspect an area called the Sculptured Hills, which from photographs appears to be a large region of rolling hills.

Back at the lunar ship, they will load aboard their treasure of about 200 pounds of rocks. The explorers will launch the lunar craft and fly to a rendezvous with Evans, who will have been orbiting the Moon alone for more than three days, operating instruments, snapping pictures and observing surface features.

One of his new instruments, a lunar sounder, will map rare deposits of sub-surface materials, determine geologic composition and locate underground hollows down to a depth of more than half a mile. It also will be able to detect if there is water below the surface.

After the command and lunar ships have hooked up, the astronauts will spend an extra two days in orbit, gathering additional data about the surface. They will make extensive observations on the backside, 30 per cent of which will be in sunlight, compared with only a small percentage on previous missions.

Then they will head for home and a splashdown at 2:24 p.m. on December 19 in the Pacific Ocean southeast of Samoa.

The first phase of Apollo will be over, but the rocks and data gathered by Apollo 17 and five other Moon-landing missions will keep scientists and geologists busy for years as



LANDING SITE. This drawing shows Apollo's Moon landing site and the numbers show the areas which will be covered during the three outside excursions.

### APOLLO 17 TIMETABLE

|                                 |         |         |
|---------------------------------|---------|---------|
| Lunar Orbit Insertion           | Dec. 10 | 2:48 pm |
| Descent Orbit Insertion #1      | 10      | 7:96 pm |
| Descent Orbit Insertion #2      | 11      | 1:53 pm |
| Lunar Landing                   | 11      | 2:54 pm |
| Start EVA 1 (7 hours)           | 11      | 6:33 pm |
| TV Camera on                    | 11      | 7:48 pm |
| Start EVA 2 (7 hours)           | 12      | 5:03 pm |
| TV Camera on                    | 12      | 5:31 pm |
| Start EVA 3 (7 hours)           | 13      | 4:33 pm |
| TV Camera on                    | 13      | 4:58 pm |
| Lunar Liftoff (TV on)           | 14      | 5:56 pm |
| TV-LM & CSM Rendezvous          | 14      | 7:31 pm |
| TV Docking                      | 14      | 7:54 pm |
| Transearth Injection            | 16      | 6:31 pm |
| TV - View of Moon               | 16      | 6:46 pm |
| Transearth Coast EVA (TV-1 hr.) | 17      | 3:18 pm |
| TV - Press Conference           | 18      | 6:00 pm |
| Splashdown                      | 19      | 2:24 pm |

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they seek to unravel the mystery of the evolution of the Moon, Earth and our solar system.

After Apollo, the United States will concentrate its man-in-space effort on Earth orbit flights intended to produce a bonanza of benefits for mankind.

The first step will be Skylab, a two-story laboratory that will be launched next April 30 and which will be visited by three different three-man crews over eight months. The first crew will stay aboard for 28 days and the other two for 56 days each.

The Skylab astronauts will conduct more than 50 different kinds of experiments aimed at developing techniques for surveying Earth's resources from space, determining man's ability to work in orbit for long periods, extending solar astronomy beyond Earth's obstructing atmosphere and studying space manufacturing methods.



John E. Nealy and Dr. William L. Grose



Paul R. Yeager and Gianni Gaetano



L. R. McMaster, S. R. Peterson, and F. M. Hughes



Bruce Flagge Antony Jalink Robert A. Bruce

## *cafeteria menu*

The following menu will be served in the cafeterias during the week of December 11:

Monday - Cream of tomato soup, chopped steak, beef stroganoff, seafood platter, franks and beans. Snack bar - 3-D burger, pastrami, steak and egg, NASA submarine.

Tuesday - Bean with bacon soup, steamboat round, cordon bleu, chicken, crab cakes. Snack bar - Ham and cheese club, turkey club, hot roast beef, chicken salad.

Wednesday - New England clam chowder, beef teriyaki, barbequed pork sandwich, shrimp creole, taco dogs and burrito. Snack bar - Corned beef, mini steak, barbequed pork, hoagie.

Thursday - Chicken gumbo soup, delmonico steak, meat loaf, broiled baby flounder, barbequed chicken, macaroni and wieners. Snack bar - Pastrami, ham steak and egg, bacon, lettuce and tomato, turkey club.

Friday - Split pea soup, Hungarian beef goulash, veal parmesan, Maryland fried chicken, ham steak. Snack bar - 3-D burger, ham and cheese club, hot roast beef, hoagie.

The menu for the week of December 18 is as follows:

Monday - Chicken rice soup, rump roast of beef, fried shrimp, chicken cacciatore, beef and macaroni. Snack bar - Hot chili, chicken club, hot roast beef, NASA submarine.

Tuesday - Corn chowder, delmonico steak, beef pot pie, sauteed chicken livers, fried clams. Snack bar - 3-D burger, steak, ham and cheese club, pastrami.

Wednesday - CHRISTMAS DINNER - choice of turkey or glazed ham, dressing, cranberry sauce, green beans, mash-

## EMPLOYEES RECEIVE AWARDS

A number of staff members recently received invention awards. The recipients and titles of their inventions are as follows:

Robert L. Trimpi, Hypersonic Vehicles, and John E. Nealy and Dr. William L. Grose, Space Systems, each received \$50 for their joint invention entitled "Combustion Detector."

Paul R. Yeager, Flight Instrumentation, and Gianni Gaetano, Instrument Research, received \$50 each for "Fast Scan Control for Deflection-Type Mass Spectrometers."

Leonard R. McMaster, Sheldon T. Peterson, and Frank M. Hughes, all of Instrument Research, were each awarded \$50 for "Meteoroid Detector."

Bruce Flagge, Instrument Research, received \$50 for "Electro-Mechanical Sine/Cosine Generator."

Antony Jalink, Flight Instrumentation, was awarded \$50 for "Improved Radiation Meter."

Robert A. Bruce, Systems Engineering, and Franklin W. Booth, retired, each received \$200 for "Centrifugal Hydrophobic Separator."

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ed potatoes or candied yams, rolls and butter, pumpkin pie, tea or coffee - \$1.35. Snack bar - Christmas dinner.

Thursday - Turkey noodle soup, braised beef tips, meat loaf, Chinese egg roll, broiled chicken. Snack bar - Barbequed pork, hoagie, steak and egg, tuna salad.

Friday - Cream of chicken soup, hot roast beef sandwich, beef kabobs, fried fish, veal scallopini. Snack bar - Bacon, lettuce, and tomato, ham salad, NASA submarine, turkey club.



**CHRISTMAS SPIRIT:** Members of the Fluid Electrical Unit of Technical Support Section, Fabrication Division, decided to try to make this Christmas a little happier for the patients at Patrick Henry Hospital for the elderly and chronically ill. Last week the group presented a check for \$55 to Nat Cooper, Administrator of Patrick Henry Hospital. Participating in the project are (from left): William R. Rash, Ernest W. Johnson, Brickey J. Hughes, Thomas N. Leffel, Ray Woodman, Administrator Nat Cooper, Philard Flansburg, Ruth Bray, Administrative Assistant at Patrick Henry, Frederick J. Hines, David F. Fromal, Robert Roth, and James A. McClammy. Absent were Thomas N. Kuss and Rodney A. Smith.

## TENPIN BOWLING NEWS

Clean Ups lead the A League with 34 wins and 14 losses and Chattahoochies are in second with 28 wins and 16 losses. High individual games were rolled by Billy Beasley with 262 and Aubrey Fitzgerald and Bill Talk with 254 each. Taking high set honors were Ed Swanson with 700 and Phil Hozlett with 663. Chattahoochies rolled high team game with 1068 and Clean Ups rolled high set with 3042.

Audio Ventures lead the B League with 37 wins and 15 losses and Northrup Flyers are in second place with 31-1/2 wins and 20-1/2 losses. Walt Vahle leads the men with a high individual set of 668 and Lloyd Keafer rolled high game with 272.

## CAMERA CLUB MEETS DEC. 19

The Langley Camera Club will meet on December 19 at 7:30 p.m. in the Activities Building. The subject of the program will be "Elements of Prize Winning Color Slides." The contest will be a color slide, open category.

The theme for the November contest was "The Seasons." Thirty slides were entered and Sid Hall, retired LRC employee, served as judge. The winners were as follows:

- First - "Winter in Wales" by Gautain Sen Gupta
- Second - "Summer" by Bill Conkling
- Third - "Summer in the Alps" by Gupta

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**FOLK CONCERT.** . . A number of staff members and their family will participate in the Songmakers of Virginia's second annual folk concert on Sunday, December 10 at 6 p.m. in the Christopher Newport College Men's Gym. Entertainers from the Peninsula and Norfolk will include such groups as Judy Ward and Co., Stillwater, Gail and Debbi, Lester Lude, and many others. Admission will be a one dollar donation to the club.

## LANGLEY PAPERS TO BE PRESENTED AT IEEE SYMPOSIUM DEC. 11-15

More than 600 scientists and engineers will gather in Williamsburg Dec. 11-15 for the IEEE Group Symposium on Antennas and Propagation. The symposium will be held in conjunction with the National Committee of the National Academy of Sciences and the International Scientific Radio Union.

Twenty participants from Langley will present papers at several technical sessions during the five-day meeting.

William F. Crosswell, FID, is chairman of the overall meeting and Calvin T. Swift, FID, is chairman of the technical programs.

Dr. Frank Hohl, ESSD, will be guest speaker at a banquet scheduled for 7:30 p.m. Tuesday, Dec. 12 in the Williamsburg Conference Center.

All technical sessions will be held at the Conference Center and at the College of William and Mary.

Almost 260 papers will be presented at 32 technical sessions during the meeting. Participants will represent several NASA centers, other government agencies, private industry, and universities throughout the United States, and several European science organizations.

Langley presenters and their organizations are:

Flight Instrumentation Division: Norman D. Akey, Marion C. Bailey, H. J. C. Blume, Thomas G. Campbell, C. R. Cockrell, William F. Crosswell, William L. Grantham, Dr. John C. Howell, J. Earl Jones, Dr. W. Linwood Jones, John H. Painter, Lawrence R. Schultz, and Calvin T. Swift.

Environmental and Space Sciences Division: Olin Jarrett, Dr. James D. Lawrence, Dr. S. H. Melfi, and Dr. Peter B. Mumola.

Instrument Research Division: William H. Fuller, Robert L. Krieger, and Dr. Michael P. McCormick.

Interested Langley employees are invited to attend all or parts of the meeting. A block registration has been made for the Center and no travel funds are involved in attendance.

A bus will leave LRC about 7:40 a.m. each day of the meeting; it will return to the Center at 12:15 p.m. Wednesday and Friday, and at 5:15 p.m. Monday, Tuesday, and Thursday.

## FGAA TO HEAR FAWSETT



John W. Fawsett

John W. Fawsett, Staff Manager of the U.S. Army Audit Agency, will speak at a meeting of the Virginia Peninsula Chapter of the Federal Government Accountants Association on Thursday, December 14.

The meeting will be held at the Colonial Restaurant, 10453 Jefferson Avenue. A social period will begin at 6:30 p.m., followed by dinner at 7:15 and the program at 8 o'clock. For reservations call Joe Haggerty, extension 3867, by noon on December 12.

# Personnel Profiles

By

Allan C. Hanrahan



Mr. Alvin J. Lunsford is intimately involved with life. You immediately realize this when you learn that he is a sixteen-year veteran with the York County Fire Department, particularly with the Rescue Squad. And in the course of that activity he has assisted with births, and seen life begin; he has saved some lives and helped save others, and thus seen life continue; and he has been there when all that could be done was done and still, life slipped away.



Most situations Lunsford takes in stride except where children are concerned and then it becomes a bit unsettling, he indicated. However, an accident involving a child - Lunsford's own eldest - is what drew him into that line of civic activity: it was necessary for him to call on the York County Rescue Squad ambulance and out of that introduction grew his interest. That plus the fact that the department was very young and needed men.

Lunsford joined, served, and eventually became the volunteer chief, for three years, and was the last volunteer fire chief York County had before it acquired a paid fire marshal, Wallace Robertson, who said of Lunsford - among other things: "...one of the most active volunteers...very cooperative in everything he does...high on the list of rescue calls made...far above average" (in time donated).

A fellow Langley employee said of Alvin: "What he does helps a lot of others. He uses his spare time and his annual leave for (this) civic service."

Alvin, in addition to taking the State Emergency Medical Training Course, is a Red Cross first aid instructor, state instructor in fire training, and an instructor in cardio-pulmonary (mouth-to-mouth) resuscitation.

At the age of fifty, he is now the oldest active volunteer in age as well as in length of service and he has "seen a lot of changes," he said.

"There are a lot of requirements, now" (that have to be met to serve on a rescue squad), "and regular training

## STAFF MEMBERS TO BE ON TV

Two Langley Research Center representatives will appear on WTAR Television, Channel 3, on Sunday evening, December 10, at 10:30 p.m., participating in a program entitled "Newsmakers."

They are Axel T. Mattson, Deputy Director for Center Development and External Affairs, and Edmund A. Brummer, Lander Manager for the Viking Project. The subject of their discussion will be "The Moon and Beyond."

## MERIT PROMOTION NOTICE

The following Merit Promotion Announcements are currently open:

72-133 Supervisory Safety Engineer, GS-803-9 or 11 with promotional opportunity

72-134 AST, Technical Resources Management, GS-801-11 or 12

72-135 Supervisory Aerospace Engineer, GS-861-14 with promotional opportunity

72-136 Supply Clerk, GS-2005-5 with promotional opportunity

72-137 AST, Technical Management, GS-801-12 or 13

For information on position locations, closing dates, and areas of consideration, contact the Staffing and Special Programs Branch, extension 2233.

Candidates should list the number and title of the position they are applying for and should list all experience that is applicable to the position.

## STAFF REQUIRED TO WEAR BADGE

NASA regulations require that personal identification badges be worn in plain view at all times by employees, contractors, and visitors while in Center facilities.

Center employees are reminded that they each have the responsibility not only for wearing their personal badge, but also for assuring that individuals in their work areas are wearing a badge.

Exceptions to this requirement include the Cafeterias, First Aid Stations, Credit Union, Activities Building, Employment office in Building 587, and the Visitor Center.

sessions," he added. ★★★★★

That son who indirectly got Alvin started with the volunteer fire department is named Stephen and is nineteen years of age now. Alvin and his wife, Jo, have two other sons: Michael, age fifteen, and Keith, age twelve.

Alvin was born and reared in Asheville, N.C., graduated from high school there, and later served an apprenticeship in refrigeration.

Beginning in early 1944, he served almost three years in the Marine Corps, and previous and subsequent to that worked in the Shipyard for a number of years. He has been at the Center since 1955 and is now an Engineering Technician in the Environmental Service Section of the Plant Engineering Division.

His family, job, and volunteer service takes most of his time but he does get in some vegetable gardening, and guess where he donates some of the harvest? That's right: the York County Volunteer Fire Department.

He also is interested in Citizens Band Radio. "I enjoy that," he said.

Yes, and any York County residents enjoy a sense of security simply because there are men such as Alvin Lunsford unselfishly giving of their time and talent.

## TECHNICAL PUBLICATIONS

The following technical papers have been published and distributed.

TM X-2601 - Effect of Nozzle Lateral Spacing on Afterbody Drag and Performance of Twin-Jet Afterbody Models with Convergent-Divergent Nozzles at Mach Numbers up to 2.2 by Odis C. Pendergraft and James W. Schmeer.

TN D-6894 - Drag Characteristics of a Disk-Gap-Band Parachute with a Nominal Diameter of 1.65 Meters at Mach Numbers from 2.0 to 3.0 by Robert J. Mayhue and Percy J. Bobbitt.

TN D-6951 - Meteoroid Impacts on Mars and the Secondary Particle Environment by Donald H. Humes and T. Dale Bess.

TN D-6953 - Experimental Investigation of an Accelerometer-Controlled Automatic Braking System by Robert C. Dreher, Robert K. Sleeper, and John R. Nayadley.

TN D-6955 - An Elastic Analysis of Stresses in an Uniaxially Loaded Sheet Containing an Interference-Fit Bolt by John H. Crews.

TN D-6924 - A Passive Balancer for a Class of Rotating Spacecraft by C. William Martz and Carolyn Grantham.

TN D-6897 - Effect of Jet Convergence Angle on the Performance of Annular Nozzles with Semitoroidal Concave Plugs at Mach Numbers up to 1.82 by Charles E. Mercer.

TN D-6898 - Fixed-Base Simulator Study of an Externally Blown Flap STOL Transport Airplane During Approach and Landing by William D. Grantham, Laut T. Nguyen, James M. Patton, Perry L. Deal, Robert A. Champine, and C. Robert Carter.

TN D-6992 - Study of Aircraft-Centered Navigation, Guidance, and Traffic Situation System Concept for Terminal-Area Operation by Willard W. Anderson and Ralph W. Will.

TN D-6956 - Flight and Ground Tests of a Very Low-Density Elastomeric Ablative Material by George C. Olsen and Andrew J. Chapman.

TN D-6994 - Application of the Leading-Edge-Suction Analogy to Prediction of Longitudinal Load Distribution and Pitching Moments for Sharp-Edged Delta Wings by Melvin H. Snyder and John E. Lamar.

### TALKS PRESENTED

Recent Advances in Optical Control for Large Space Telescopes by W. E. Howell - presented at the IX Congress International Commission for Optics.

Remote Sensing of the Environment by James D. Lawrence and Lloyd S. Keafer - presented to the Interagency Conference on the Environment.

Flight Control System Requirements for Advanced V/STOL



**CHRISTMAS PARTY:** The Activities Association's annual Children's Christmas Party will be held Sunday at the Activities Building. Two shows will be held. The 1 p.m. show will feature Bungles (insert) and the star of the 3 o'clock party will be Ronald McDonald (shown dancing with a young lady). Admission will be 50 cents per person and tickets are on sale at the Activities Building or from division representatives. A limited number of tickets will be sold for each show.

★★★★★

**THIS CHRISTMAS,** introduce your children to U.S. Savings Bonds. It can be the start of something big.

★★★★★

Aircraft by J. F. Creedon and W. R. Griffin; Long-Haul Transport Aircraft - Benefits, Problems, Prospects by Robert E. Bower; and The Challenge of the Advanced Supersonic Transport by Laurence K. Loftin - presented to the G-AES/IEEE Electronics and Aerospace Systems Convention.

Rotating-Blade Vortex Noise by James Scheiman, William Letko, James P. Shivers, and David A. Hilton - presented at the AHS Mideast Region Symposium.

Supersonic Mixing and Combustion of a Hydrogen Jet in a Coaxial High-Temperature Test Gas by H. Lee Beach - presented at the AIAA/SAE Eighth Propulsion Joint Specialist Conference.



THE GOSPEL ACCORDING TO  
SAINT LUKE

CHAPTER 1

FORASMUCH as many have taken  
liberty to add to these things,  
which were first written by the  
holy men, and many have  
added to them, I have determined  
to write an orderly account  
of all things, as they were  
fulfilled among us, that ye  
may know the certainty of  
the things which have been  
said unto you, and that ye  
may have confidence in the  
word of prophecy, which  
has been fulfilled among us,  
and that ye may know the  
certainty of the things which  
have been said unto you, and  
that ye may have confidence  
in the word of prophecy, which  
has been fulfilled among us.

4 That thou mightest  
know the certainty of the  
things which have been  
said unto you, and that  
ye may have confidence  
in the word of prophecy,  
which has been fulfilled  
among us, and that ye  
may know the certainty  
of the things which have  
been said unto you, and  
that ye may have  
confidence in the word  
of prophecy, which has  
been fulfilled among us.

23 And after those  
things were accomplished,  
they returned to Nazareth,  
and were subject unto  
Joseph, as the law of  
the Lord required.

# Season's Greetings

What better way to start the holidays than with the return of the Apollo 17 astronauts. This spectacular finale to man's first expeditions to the Moon was a Christmas present to all mankind -- one in which many of you were instrumental.

In some quarters Apollo 17 is being called the end of an area -- the close of the golden age of space exploration. Certainly it has been a golden age. And it would appear that the years just ahead may be a little less "golden." But what we have witnessed is just a beginning. The future is filled with even more opportunity, and will be marked by even more achievement than the past. Equally certain is that we will help make it happen.

1973 will continue to place great demands on us all, and it is important that we try to view coming events in their proper perspective. Christmas, of all the days of the year, is the best day to renew our sense of values.

HAVE A HAPPY ONE!



## NEW YEAR'S EVE DANCE PLANNED

The Langley Activities Association will present its annual New Year's Eve Ball on Sunday, Dec. 31 in the Activities Building. Dancing will begin at 9:30 p.m. and end at 1:30 a.m.

Music will be furnished by The Sound Sett, featuring the Center's own Bob Satterthwaite, one of the area's leading alto sax stylists. The group plays a pleasing blend of new and old, rock and popular music which will be enjoyable to all age groups.

Admission will be \$10 per couple. Favors and setups along with coffee and Danish pastries after the dance will be furnished free.

Tickets are on sale at the Activities Building. Reservations may be made only with ticket purchase - none will be held pending later purchase. Sales will be limited to 150 tickets and there will be no refunds.

## SWAP AND SHOP

(Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.)

### LOST

Rhinestone earring in Activities Building. Hixon, 722-4131.

Antique gold, clip-on earring, button shaped, lost in vicinity of Building 1152. Huffman, 3312.

### WANTED

Driving combination from Windsor Great Park to W.A. on 7:30 shift. Lambiotte, 2458.

### FOR SALE

Ultrablitz Rocket II strobe - \$5. Gowdey, 595-6520.

90-inch green sofa - \$25. Moore, 868-6990.

1962 Ford Falcon station wagon - \$150. Shea, 722-0187.

Boy's 20-inch bicycle; girl's 20-inch bicycle - \$15 each or both for \$25. Williams, 851-0675.

1972 Chevrolet El Camino truck, air conditioning and other extras - best offer. Diacont, 596-3292.

Fender Showman amplifier, Pre CBS - \$175; speaker cabinet with two 15-inch Electro-Voice SRO speakers - \$165; both for \$300. Queijo, 229-7012.

Two H78-15 fiberglass-polyester tires - \$15 each. Deal, 838-0920.

1971 Mobile home on double lot - 3 bedrooms, 2 full baths, completely furnished, central air conditioned, patio roof. Kelly, 877-1564.

Two G78-14 (8.25 x 14) Dunlop tires - one tire on spare rim - \$20. Saunders, 826-1123 after 5 p.m.

Sankyo Super 8 movie camera, F1.8 zoom lens, automatic light meter, fully automatic - \$110. Boyle, 723-3400.

## DIRECTOR TO BE ON RADIO

Director E. M. Cortright was recently interviewed by Grant Knowlton, a staff reporter for WVEC Radio, on future research programs and projects in which Langley will be involved. WVEC-AM, 1490, has scheduled a broadcast of the interview on December 28 at 7:10 p.m. A second broadcast is tentatively scheduled by WVEC-FM, 101.3, on Dec. 29 at 7:20 p.m.

\*\*\*\*\*

TRY a new approach this Christmas. Buy a gift that will be remembered for the joy it brings, long after the day it is given - U.S. Savings Bonds.



**EEO SYMPOSIUM:** The Center's second annual EEO Symposium was held December 14 and over 400 LRC supervisors and other officials attended. Ruth Bates Harris, Director, NASA Equal Employment Opportunity, Washington, D.C., and Arthur J. H. Clement Jr., keynote speaker, are shown being greeted by Center Director Edgar M. Cortright (left).

## ANNUAL EEO SYMPOSIUM HELD

Over 400 LRC supervisors and other officials attended the Center's second annual EEO Symposium which was held Thursday, December 14, at the Activities Building.

Center Director Edgar M. Cortright pointed out that reductions in force at Langley have somewhat hindered development of an equal opportunity program but he said the Center has managed to retain its minority employment percentages despite the large cuts in personnel.

Arthur J. H. Clement Jr., a former insurance company executive and now Director of Career Counseling and Placement, Voorhees College, Denmark, South Carolina, was the keynote speaker. He stated that progress is being made at Langley and across the country but there is still much to be done.

Clement stated that one of the major hurdles to overcome at Langley was a lack of education among minorities in the scientific and research fields. He said that minorities must be encouraged to pursue these vocations.

Clement further stated that he feared middle management personnel are creating a stop block in administering successful equal employment opportunities. "I've found," Clement said, "that often top management is 200 per cent for equal employment. But the enthusiasm gets less and less as you go down the management chain."

He pointed out that both management and members of the work force tend to become emotional about EEO when it should be looked at very rationally and honestly with all concerned trying to do the best to benefit the most.

Also participating in the program were Patricia Lattimore, Civil Service Commission, Philadelphia Region; Rabbi A. David Packman, Temple Sinai in Newport News; Ruth Bates Harris, Director, NASA Equal Employment Opportunity, Washington, D.C.; Donald Brown, EEO Counselor at the Center; and Alvin F. Anderson, the Center's EEO Officer.

# HAPPENINGS

**THE COVER.** . . Our thanks to Bob Nye, staff photographer, for designing and photographing the beautiful cover for this Christmas issue.

**LIBRARY NOTICE.** . . Because of insufficient night use, the Technical Library will be closed on Wednesday evenings effective January 1. The normal opening hours will continue to be from 7:30 a.m. to 4:30 p.m., Monday through Friday.

**KEY '73.** . . KEY '73, which is a national ecumenical effort by the churches of the nation to focus on some of the problems of our times, involves a number of Center staff members who are working on their own time to implement its objectives. They call attention to a two-week Noon Prayer Call - December 26 through January 6 - during which period a number of churches in the area will be open for those who can attend. The chapel at Langley Air Force Base will also be open for those who might wish to use their lunch period for that purpose or who might wish to participate while in a leave status.

**NEW TAX DEDUCTIONS.** . . Arriving at the James W. Ramsey household on December 6 was a six-pound, ten-ounce daughter named Leslie Dale. The proud father works in Facilities and Equipment Engineering Division. . . Celebrating the birth of a seven-pound, ten-ounce son, David Meredith, on December 7 is Gale Wilson, Flight Instrumentation Division.

**REPRODUCTION MOVES.** . . The Reproduction Section has moved from the end of Building 1152 to the Center of the building.

**AFGE NOTICE.** . . The NASA Lodge 2755, American Federation of Government Employees, will not meet this month. The next meeting will be held January 31.

**PROFESSOR TO VISIT.** . . Dr. James C. Wu, Professor in the Aerospace Engineering Department at Georgia Institute of Technology, will visit the Center on Friday, January 5 to discuss the extension of his nodal minimization technique for the Navier-Stokes equations to turbulent and compressible flow problems. Anyone interested in meeting with Dr. Wu should contact Randy Graves, 3031.

**GWU REGISTRATION.** . . A reminder that registration for George Washington University graduate courses will be held Wednesday, January 3, in Room 120, Building 586, from 9 a.m. to 12 noon.

**'MOTION COMMOTION'** . . Copies of the report published by the 1972 NASA-SEE Summer Faculty Design Team, 'The Motion Commotion: Human Factors in Transportation,' are available from the Technical Library, 2171.

**COLLOQUIUM VIDEOTAPE SHOWING.** . . A large number of requests have been made to see the videotape of Dr. Elmer Green's presentation 'Biofeedback for Mind-Body Self-Regulation.' To accommodate these requests the video recording of Dr. Green's presentation will be shown in the Activities Building at 3 p.m. on February 6. All are



**FABRICATION DANCE:** The Fabrication Division recently celebrated the beginning of the holiday season with a dance in the West Cafeteria. Taking a turn around the dance floor are Mary Ann Vanasse and E. M. Cortright (top left photo) and Dick Holt and Mrs. Oran Nicks (top right). Sitting out a number are (from left): Ron Amole, Ramona Amole, Edna Mae Barr, Gene Barr, Joe DeGinder, Beth Hogg, George Hogg, Jerry Miller, and Judy Miller.

★★★★★

invited who either missed or wish to review the talk. Dr. Green will also be on Channel 15, WHRO, at 7:30 p.m. on Monday, January 1. The subject of the program will be 'Who is Man?'

**MERIT PROMOTION.** . . The following Merit Promotion Announcement was opened Dec. 11 and will close today. Announcement No. 72-138, Accounts Maintenance Clerk, GS520-06. Area of consideration is Financial Management Division.

Langley Researcher, an official publication of the Langley Research Center, National Aeronautics and Space Administration, Hampton, Virginia 23365, is published biweekly in the interest of its employees. Address contributions to the Editor, Mail Stop 154, telephone 3116.

Editor.....Ruth Angel Verell  
Staff Photographer.....Bob Nye  
Reporters.....Langley Employees

The privilege of advertising articles in this publication is restricted to employees of Langley Research Center. Articles advertised here must be offered for sale or as otherwise advertised without regard to race, color, religion, sex, or national origin.

# Personnel Profiles

By  
Allan C. Hanrahan



## MEET THE FLYING LADY

"If God had wanted man to fly he would have made him with wings," proclaimed some early-day, scientific reactionaries and fundamentalist pulpit-pounders, regarding powered flight. However, the good Lord went one better and furnished man with the reason and imagination and -- in short, the wherewithal -- to give himself wings (enabling many of us to eat regularly by way of helping to build those "wings").

Of course, when we say man we mean man and woman and thus is introduced this issue's guest, Ruth I. Whitman, a woman who acts in partnership with her husband in the building -- perhaps rebuilding is a better work -- of their own airplane. A Howard DGA, it is a five-place, high-wing airplane that was originally built during the Thirties as a racer. Later, during World War II, this type aircraft was built as a Navy trainer.



Ruth is one of an ever-growing number of women pilots; an accomplishment that complements her marriage: "My husband flew and so I became interested in it," she said.

She started taking lessons about ten years ago and has had her pilot's license for about four. And now her sixteen-year-old son, Laurence, is taking lessons. Her other son, Jamie, is eleven years old and looking forward to taking lessons when he is old enough.

Ruth and her husband, James, an aeronautical engineer at Ft. Eustis, are members of the local Icarian Flying Club as well as the Experimental Aircraft Association.

"It is a very interesting group," she said. "It is an association of pilots that cuts across all segments of the population," she added, and includes people of modest means as well as those who can afford to fly planes that cost as much as one thousand dollars for every hour they are in the air.

## CHANGES IN FICA TAXES

Public Law 29-603, approved October 30, 1972, increased from 5.2% to 5.85% the required withholding of Social Security (FICA) taxes with respect to all salaries paid in calendar year 1973. Pay checks reflecting the increased withholding for those employees subject to the Federal Insurance Contributions Act will be distributed on January 15, 1973, which covers the pay period December 24, 1972 - January 6, 1973. At this time 45 employees of the Center are subject to withholding of FICA taxes.

Public Law 92-336, approved July 1, 1972, increased from \$9,000 to \$10,800 the annual maximum limitation with respect to salaries paid during the calendar year, beginning January 1973, to be counted for FICA tax deduction purposes.

### *Can You Solve This Problem?*

A noninvasive method for evaluating the functional competence of an implanted heart valve prosthesis is needed. Detection of failure mode could be accomplished by identifying changes produced by the failure mechanism, in one or more parameters such as cardiac output, valve motion, or valve sound. Refer to UNC-67. Contact the T. U. Office, extension 3281, for the complete problem statement or if you have a potential solution.

★★★★★

AS THE holiday season draws near, it is time once again to make those difficult gift-buying decisions. This year, buy the one gift that is not only convenient for you, but will be appreciated by everyone on your list - U.S. Savings Bonds.

★★★★★

The Whitman's plane is considered an antique and at the moment is not flyable because of work being done on it. Ruth hasn't had a chance to miss the flying, though, because of the new home they recently had built in the Kingspoint section of Williamsburg; a house that Ruth and her husband helped design so that it would fit their family's style of living. One important feature is the oversized garage built to accommodate the airplane (minus wings and tail section) that they hope to acquire someday -- a Stinson Reliant.

Ruth's life is not entirely up in the air, however. She and her family are active in St. Martin's Episcopal Church in Williamsburg and also occupied in scouting. As Ruth puts it, "We're just involved in the normal things that parents do."

Here at the Center, where she has toiled since 1957, Ruth is involved as an Aerospace Technologist in the Marine Analysis Section of the Space Applications Technology Division. She received her B.S. degree in Physics from William and Mary in 1957 and has done work toward a Master's degree.

Ruth was born in Albuquerque, New Mexico, in August of 1929 and spent her early years in various areas of the midwest, graduating from high school in Berryville, Arkansas.

She served in the Air Force (naturally) from 1949 to 1953 and she and her husband were married nineteen years ago this past Sunday, December 17, 1953; "...the fiftieth anniversary of powered flight," she related.

"But," she laughed, "it was a coincidence; we didn't pick that date for that reason."

Anyway, it is our wish that they had a very happy anniversary and enjoy the Holidays.

## cafeteria menu

The following menu will be served in the cafeterias during the week of December 25:

Monday - M E R R Y C H R I S T M A S!!

Tuesday - Mushroom barley soup, fried oysters, country steak, roast pork, chili con carne. Snack bar - Ham and cheese club, NASA submarine, hot roast beef, turkey club.

Wednesday - Fisherman's chowder, beef liver, Salisbury steak, chicken chow mein, clam croquettes. Snack bar - Chili, steak and egg, hoagie, bacon, lettuce and tomato.

Thursday - Minestrone soup, hot roast beef sandwich, chicken and dumplings, meat loaf, weiners and sauerkraut. Snack bar - Pastrami, barbequed pork, chicken salad, NASA submarine.

Friday - Cheese chowder, delmonico steak, broiled or fried fish, glazed ham, breaded veal. Snack bar - Corned beef, ham and egg, turkey club, grilled cheese.

The menu for the week of January 1 is as follows:

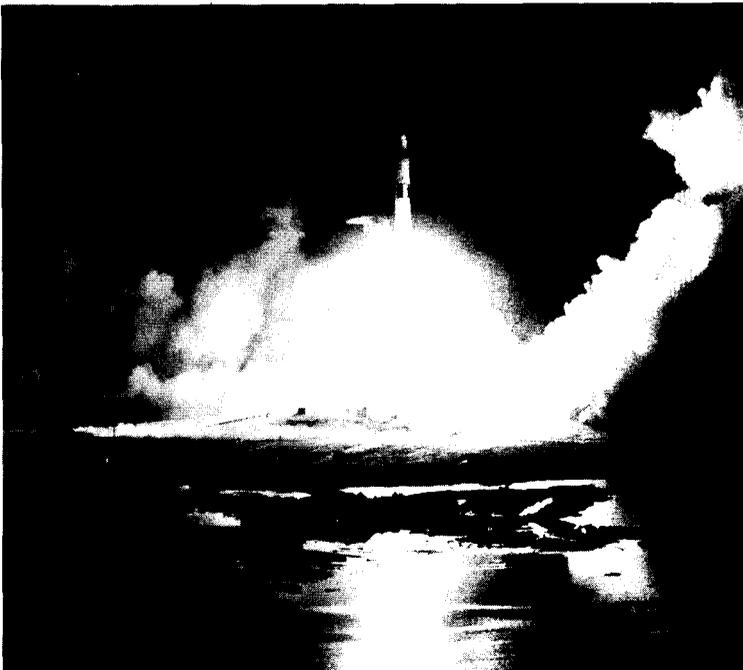
Monday - H A P P Y N E W Y E A R!!

Tuesday - Cream of potato soup, business man's lunch, beef stroganoff, grilled pork chops, beans and franks. Snack bar - 3-D burger, steak, hoagie, pastrami.

Wednesday - Crab bisque, corned beef and cabbage, beef teriyaki, spaghetti with meat balls, chicken ala king. Snack bar - NASA submarine, turkey club, chicken salad, ham and egg.

Thursday - Vegetable-beef soup, delmonico steak, baked lasagna, meat loaf, boiled ham. Snack bar - Corned beef, barbequed pork, ham and cheese, bacon, lettuce and tomato.

Friday - Bean soup, chuckwagon steak, hot turkey, shrimp Newburg, sauteed chicken livers. Snack bar - Chili, steak and egg, hot roast beef, turkey club.



APOLLO 17: The Apollo 17 space vehicle illuminated the Florida sky as it lifted off from the Kennedy Space Center at 12:33 a.m. EST December 7, sending Astronauts Eugene A. Cernan, Ronald E. Evans and Harrison H. Schmitt on their flight to the Moon. The 12-day mission, which ended with splashdown in the Pacific Tuesday, will be NASA's last manned lunar landing planned for this decade.



APOLLO-NASSAU ADVENTURE: Shown getting ready to board an airplane at Patrick Henry Airport are some of the 153 staff members who participated in the Apollo-Nassau Adventure. After watching the launch of Apollo 17 and touring Disney World, the group flew to Miami and boarded the Norwegian cruise ship SS Sunward, which took them to Nassau for the weekend. They returned to Newport News late on Monday, December 11.

## ANNUAL LEAVE REMINDER

As the 1972 leave year comes to a close, staff members are reminded that they have until January 6, 1973, to use any excess annual leave they have to their credit.

For those who started this year with more than 30 days of accumulated annual leave, all the annual leave they earned during 1972 must be used by January 6 or they will lose the unused portion. In other words, they may keep all the accumulated annual leave they had at the beginning of the year but cannot increase it.

Those who had less than 30 days of accumulated leave at the start of the year may end the leave year with 30 days leave, but no more. This means that they must use all of this year's earned leave in excess of 30 days. If the excess leave is not used, they will lose the unused portion.

Unused sick leave may be carried over from year to year with no restrictions and there is no limit on the amount of sick leave which may be accumulated.



CHRISTMAS PARTY: The Activities Association's Annual Children's Christmas Party was held December 10 at the Activities Building. Two shows were held. Shown with some of the wide-eyed tots is Bungles who was featured at the 1 o'clock show.

# Events That Made Headlines During 1972

As we approach the end of another eventful year, we pause from meeting deadlines to glance back over the headlines that will be recorded as NASA history for 1972.

January - Highlights of 1972 Flight Schedule Announced. . . Langley Designed Device May Help Quadriplegics. . . Percy J. Crain Retires as Engineering Director; E. Barton Geer Named Successor. . . Staff members Vacation in Hawaii.

February - Skylab Flight Crew Named. . . Cooperative Trainees Join Staff. . . Melvin E. Hathaway Named Center's First Distinguished Research Associate. . . Automatic Helicopter Landings Accomplished by Langley Team. . . LRC Receives Small Business Award. . . I. E. Garrick Chosen Von Karman Lecturer.

March - Pioneer Spacecraft Launched to Take Close Look at Jupiter. . . 100,000th Guest Registers at Visitor Center. . . Tenth Anniversary of John Glenn's Space Flight Observed. . . OEO Clerical Trainees Complete Program. . . Flight Tests Verify Supercritical Wing Concept. . . Jean Elliott Named Center's Coordinator of the Federal Women's Program. . . New Scout Project Office Dedicated.

April - Apollo 16 Makes Successful Trip to Moon. . . Flying-Crane Helicopter at Langley for Tests. . . Nursery Facilities Available to Staff. . . Landing and Launch Sites for Shuttle Selected. . . New Technical Library Facilities Dedicated.

May - Glen Miller Band Featured at Dance. . . Langley Prepares Transpo 72 Exhibits. . . Staff Active with Explorer Scouts. . . Visitor Center Film Wins Recognition. . . Herbert Hardrath Delivers Gillett Memorial Lecture.

June - Apollo-Nassau Adventure Planned. . . Viking Parachute Tests Scheduled. . . Summer Faculty Fellowship Program Starts. . . NASA-FAA Transpo 72 Exhibit Viewed During Open House. . . Visitor Center Celebrates First Anniversary. . . Center Receives Minute Man Flag. . . John Stack Fatally Injured. . . Recreation Area Has New Equipment.

July - Eugene S. Love Appointed Director for Space. . . Alvin F. Anderson Named Center's Equal Employment Opportunity Officer. . . Dr. John E. Duberg Receives Manhattan



College Alumni Society's Award for Accomplishment in Engineering. . . NASA Exchange Council Has New Members.

August - Thirty-two Staff Members Receive Advanced Degrees. . . Over 850 Staff Members Attend Launch of Meteoroid Technology Satellite at Wallops. . . Viking Chute Tests Successful. . . Rehabilitation and Modification Program Underway at Center. . . 200,000th Visitor Tours Visitor Center.

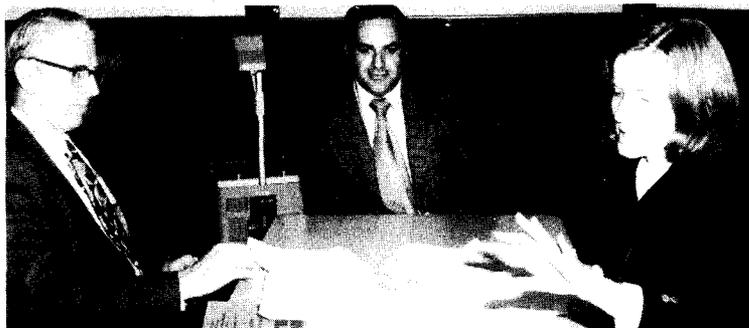
September - Two-Day Summer Carnival Held. . . Center Sets New Combined Federal Campaign Record. . . William A. Anders Speaks at Annual Awards Ceremony.



October - Over 900 LRC Wives Attend Director's Coffee and Briefing. . . Cleanup Drive Held. . . Twenty-four Engineering Technicians Graduate. . . Age Discrimination Policy Cited. . . Institute for Computer Applications in Science and Engineering Established.

November - NASA Honors Staff Members in Annual Awards Ceremony. . . Crew Emblems Trace Apollo History. . . Kenneth Crumbly Awarded Fellowship in Congressional Operations. . . Scout Vehicle Sets New Launch Record. . . Administrator James C. Fletcher Visits Center.

December - Apollo 17 Makes Successful Journey to Moon. . . Equal Employment Opportunity Symposium Held. . . Over 300 Staff Members Attend Apollo 17 Moon Launch. . . Langley Conducting STOL Flight Tests on Twin Otter Airplanes. . . Children's Christmas Party Held.



## words in peoples' mouths



## TECHNICAL PUBLICATIONS

The following technical papers have been published and distributed:

TN D-6893 - Effect of High-Temperature Creep and Oxidation on Residual Room-Temperature Properties for Several Thin-Sheet Superalloys by Dick M. Royster and W. Barry Lisagor.

TN D-7069 - Aerodynamic Characteristics of a Swept Wing Cruise Missile at Mach Numbers from 0.50 to 2.86 by M. Leroy Spearman and Ida K. Collins.

TN D-6927 - Measured and Calculated Mean-Flow Properties of a Two-Dimensional, Hypersonic, Turbulent Wake by Richard D. Wagner.

TN D-6952 - Effects of Orientation of the Acceleration Vector on Burning-Rate Augmentation by G. Burton Northam.

TN D-6926 - Analytic Prediction of Airplane Equilibrium Spin Characteristics by William M. Adams.

TN D-6962 - A Generalized Theory for the Design of Contraction Cones and Other Low-Speed Ducts by Raymond L. Barger and John T. Bowen.

TM X-2642 - Hypersonic Aerothermal Characteristics of a Manned Low-Fineness-Ratio Shuttle Booster by Peter T. Bernot and David A. Throckmorton.

TN D-6931 - Effects of Experimentally Measured Pressure Oscillations on the Vibration of a Solid Rocket Motor by James A. Schoenster and Harold B. Pierce.

TN D-6923 - Effects of Propellant Composition Variables

## Questions and Answers

Q. How do you arrive at the employee's number assigned by LRC?

A. Sidney Parker, Assistant Chief of Financial Management Division, said that a six-digit employee number is assigned to each new employee by the Payroll Section using the Dewey Decimal System. To expedite payroll operations, the numbers are so assigned that when sorting the numbers sequentially, the employees' names fall in alphabetical order. Serious consideration is being given to using the social security number in lieu of the employee number.

Q. Why is it that at 4:30 p.m. everyone is so gracious and takes turns letting the traffic flow evenly out the gate on Walcott Road, but no where else do you find this courtesy, specifically, at an intersection as close as Stratton Road and Walcott Road?

A. Not being clairvoyant or psychic and not knowing anyone on the LRC staff who is, it is impossible for us to give a clear answer to this question; however, we will hazard a guess. There seems to be an invisible cross mark at the intersection of Stratton and Walcott Roads and at quitting time all lines of traffic are racing to get there first. The traffic on Stratton Road by Building 1230 (IRD) has a yield sign, but these drag racers ignore the sign and try to forcibly take over the right-of-way on Walcott. The rudeness on the part of these drivers seems to have a similar affect on the drivers in the main flow of traffic, so the race ends up in a suicidal game called "chicken."

A little more consideration and courtesy on the part of drivers in both lines of traffic might help to relieve the situation to some degree. You might even arrive home in a better mood, too!



on Acceleration-Induced Burning-Rate Augmentation of Solid Propellants by Burton Northam.

TN D-6993 - Summary of Directional Divergence Characteristics of Several High-Performance Aircraft Configurations by H. Douglas Greer.

TM X-2612 - Thermal Performance of 625-kg/m<sup>3</sup> Elastomeric Ablative Materials on Spherically Blunted 0.44 Radian Cone by Andrew J. Chapman.

TR R-388 - An Implicit Finite-Difference Solution to the Viscous Shock Layer, Including the Effects of Radiation and Strong Blowing by L. Bernard Garrett, Louis Smith, and John N. Perkins.