San Marco Launch Slated For Early 1967

Beginning a new series of articles on international projects at Goddard.

Following two years of intensive preparations, the second San Marco satellite is being readied for launch in the first part of 1967 from the East Coast of Africa. The first launch, which took place December 1964 at Wallops Island, served primarily as a training exercise for the Italian launch crews, and secondarily to qualify the San Marco spacecraft for a later launch into an equatorial orbit from the sea platform in the Indian Ocean.

The upcoming launch should culminate in the attainment of the goals set up by an agreement signed by the representatives of Italy and the United States on September 5, 1962, to perform high altitude measurements of atmospheric and ionospheric characteristics in the equatorial region.

The payload, a 26-inch sphere weighing 285 lbs. and having a design lifetime of 5 months, will be launched by a 4-stage Scout rocket.

The orbital parameters sought for this launch are: inclination—3°, perigee—214 kilometers, apogee—800 kilometers.

Tracking and telemetry for the mission will be handled by our STADAN station in Quito, Ecuador, with Italy providing an additional telemetry station in Nairobi, Kenya.

“Considering the unique and rigorous conditions under which the project had to operate, the schedule of operations has proceeded surprisingly well,” notes Anthony J. Caporale, San Marco Project Manager (SI&SR).

Although the spacecraft was designed, built, and tested by Italian engineers, a large share of credit must be attributed to the San Marco staff here at Goddard for their unstinting and generous support in the technical guidance area.

GODDARD’S SAN MARCO TEAM: Seated are Charles T. Tackett (left), Anthony J. Caporale, Project Manager; Maurice D. Handegard (left), Technical Coordinator; Thomas J. Hennigan, Head of the International Programs Office (SSD); Thomas E. Ryan, and Milton Schach.

The Goddard team, working with the Italians in developing the payload, include: Maurice D. Handegard (SI&SR), Project Coordinator; Thomas E. Ryan (POSD), Tracking and Data Systems Manager; Donald M. Shipley (T&E), T&E Manager; Milton Schach (STD), Thermal Systems Consultant; Charles E. White, Mechanical Structures Engineer; David S. Hepler (STD), Payload R.F. Systems Engineer; John K. Steckel (STD), Payload Antenna Engineer; Justin C. Schaffert (STD), Payload Instrumentation Engineer; L. Henry Anderson (DSD), Orbital Computations Engineer; Thomas J. Hennigan (STD), Power Sources Engineer; Bruce R. Pincus and Charles T. Tackett (SI&SR), Payload Telemetry Consultants; and William R. Witt, Jr., from the International Programs Office.

San Marco’s Italian team includes: Professor Luigi Broglio of the Aerospace Research Center in Rome, who conceived the project; Professor Carlo Buongiorno, Technical Coordinator; Professor Nallo Carrara, an experimenter from the Italian National Institution of Mircrowaves in Florence; Professor Paolo Santini, trajectory computations; Dr. Giorgio Ravelli, Spacecraft Manager; Dr. Michele Sirinian, vehicle and operations; Dr. Ugo Ponzi, payload structure; Dr. Carlo Arduini, thermal systems and payload testing; Dr. Giuseppe Spampinato, vehicle assembly; Dr. Gennaro Orsi, platforms and power supply; and Giangrande Barresi, payload electronics.

ITALIAN TEAM MEMBERS: Professor Carlo Buongiorno, Technical Coordinator; Professor Luigi Broglio, Project Director; and Professor Michele Sirinian follow the first launch of a San Marco satellite from Wallops Island on December 15, 1964.

ARTIST’S CONCEPTION of the Indian Ocean platform that will be used to launch the second San Marco satellite early in 1967.