NASA NAMES THREE FIRMS FOR RAMJET PROJECT FOR RELEASE: IMMEDIATE
BEING DIRECTED BY LANGLEY RESEARCH CENTER
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Hampton, Virginia - The National Aeronautics and Space Administration today selected three aerospace firms to develop a concept and prepare preliminary designs for a hypersonic ramjet research engine. The work is the opening phase of NASA's Hypersonic Ramjet Experiment Project announced last June.

Chosen to make the parallel studies were: The Garrett Corporation, Los Angeles, California; General Electric Company, Cincinnati, Ohio; and The Marquardt Corporation, Van Nuys, California. Negotiations to determine final contract terms and costs will begin immediately. Total value of this phase of the contract will be about $1.5 million.

Each company will conduct a detailed study of advanced ramjet engine technology to define the best possible ramjet research engine and to develop a preliminary design for a research flight engine.

During the nine-month course of the contracts, each company will prepare engine development plans for the second phase of the program, and these plans will be considered as technical proposals for further work on the project.

The Hypersonic Ramjet Experiment Project is one of the programs of the Aeronautics Division of NASA's Office of Advanced Research and Technology. The work will be carried out under the technical direction of the Langley Research Center, Hampton, Virginia, with the assistance of the Ames Research Center, Moffett Field, California; the Lewis Research Center, Cleveland, Ohio; and the Flight Research Center, Edwards, California.
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The project seeks eventual construction of a ramjet research engine as a means of advancing the technology of air-breathing propulsion which NASA has been developing for many years into the hypersonic regime of flight.

Until recently, the design and construction of such an engine would have been virtually impossible, because of important gaps in essential knowledge. Through continued research the gaps appear to have been narrowed sufficiently to make the construction of a research engine feasible.

Due to its relative fuel economy, the ramjet engine is considered a promising propulsion system for flight missions at hypersonic speeds -- those above 3,300 miles per hour or more than five times the speed of sound. The ramjet powerplant is expected to be useful for the hypersonic transport aircraft, for boosters, and for spacecraft flying within the atmosphere.

Because the Hypersonic Ramjet Experiment Project is intended ultimately to include flight research with the engine mounted on the X-15 No. 2 airplane, the contractors will use as guidelines for preliminary design a weight limitation of 800 pounds and dimensions compatible with mounting the research engine underneath the aft fuselage of the X-15. The airplane is capable of speeds up to about Mach 8.

Liquid hydrogen fuel is specified for the research engine, which must be capable of operating at flight speeds between Mach 3 (about 2,000 mph) and Mach 8 (about 5,300 mph).