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Scale model of the Space Shuttle Orbiter currently undergoing testing in the Ames 40X80-Foot Wind Tunnel.

Space Shuttle tunnel tests

A one-third scale model of the Space Shuttle orbiter is undergoing wind tunnel testing in the huge forty-by-eighty-foot wind tunnel at Ames.

Purpose of the test is to gather low speed flight data in support of approach and landing tests of the first full-scale Shuttle orbiter at NASA's Flight Research Center in 1977. Another purpose is to calibrate the vehicle's air data probes.

One of the largest wind tunnels in the world, the "40 by 80" (from the size of its test section, 40 by 80 feet, or 12 by 24 meters) covers an area of more than two city blocks and is capable of testing aircraft at speeds of from zero to 230 miles per hour. The tunnel is powered by six 6,000 horsepower electric motors (total 36,000 horsepower) driving 40-foot diameter wooden propellers. The tunnel was completed in 1944 and more than 100 major aircraft designs have been tested in its test section.

The Space Shuttle is a reusable space vehicle under development by NASA which will be operated as a transportation system for a wide variety of space missions in low Earth orbit. It will be operational in the early 1980's after orbital testing in 1979. The Space Shuttle system consists of a reusable orbiter, a delta-winged, airplane-like craft approximately the size of a DC-9, mounted piggy-back at launch on a large expendable liquid propellant tank and two recoverable and reusable solid propellant rocket boosters. It is a scale model of the orbiter portion which is being tested at Ames.

The Shuttle is being developed to substantially reduce the cost of space operations through providing a vehicle system that will have the capability to launch, repair, service, retrieve and replace many different types of payloads, as well as support manned space activities for up to 30 days. Payload of the Space Shuttle will be [illegible] kilograms (65,000 pounds). It will be launched vertically, like today's launch [illegible], but will land horizontally on an airport runway, like an airplane.

The overall length of the scale orbiter is 13.1 meters (43.9 feet) long, compared to 37.19 meters (122 feet) for the full scale vehicle. The one-third scale model weighs about 20,400 kilograms (45,000 pounds). It is equipped with remotely controlled elevons, body flap, and speed brake and rudder panels on which the control surface seals and gaps have been simulated.

The model was built by Rockwell International Corporation's Aircraft Division in Los Angeles. Rockwell's Space Division, in Downey, California, is developing the Space Shuttle orbiter and integrating the complete Space Shuttle system for NASA.

NASA's Johnson Space Center, Houston, Texas, manages the Space Shuttle orbiter development program.

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CDP nominees

Six Ames employees have been nominated to participate in the 1975/76 NASA Career Development Program (CDP) for a one-year work assignment at Headquarters. Forth-three host positions were announced. Of this number, 23 will be filled by participants selected from throughout the Agency. Three of those selected will be Ames candidates.

Nominees from Ames are: Charles A. Castellano, Advanced Vehicle Concepts Branch; Calvin J. Fenrick, Equal Opportunity Program Office; William P. Gilbreath, Materials Science Branch; Eugene R. Pucine, Scientific Applications Analysis Branch; Kenneth A. Souza, Biological Adaptations Branch; and Kenneth C. White, Guidance and Navigation Branch.

The CDP is an important element in NASA's overall people development program. It is open to all employees in grades GS-11, 12, and 13. All nominees are considered and the selection criteria is the same for each applicant.

At the present time there are five Ames employees on a one-year assignment at NASA Headquarters. Those selected for participation in the 1974/75 CDP are: Betty K. Berkstresser, Richard M. Brown, Demo J. Giulianetti, John W. Vorreiter and Roger A. Craig.

Viking emblem design

The emblem the Viking lander will carry when it is launched later this summer was designed by Peter P. Purol, a high school junior from Baltimore, Maryland. Purol is the national winner of the Viking Student Emblem Contest sponsored by NASA and the National Science Teachers Association. Along with Purol's emblem, the Viking lander will carry the American flag and the American Bicentennial design. The craft's television cameras are expected to photograph the student-designed emblem as panoramic views of the Martian surface are sent back to Earth.

The emblem, designed in red, white and blue, links the Vikings of old with the Viking to Mars.

The winning emblem was selected by NASA Administrator, Dr. James C. Fletcher on the recommendation of a specially formed Selection Committee.