NASA News

National Aeronautics and
Space Administration

Goddard Space Flight Center
Wallops Flight Facility
Wallops Island, VA 23337-5099

Betty Flowers
Telephone: 757-824-1584
Elizabeth.B.Flowers@nasa.gov

For Release:
September 20, 2004

RELEASE NO: 04 - 19

NASA Successfully Completes Launches for EQUIS II Sounding Rocket Campaign

The NASA Goddard Space Flight Center's Wallops Flight Facility, Wallops Island, Va., has announced the completion of the 2004 EQUIS II sounding rocket campaign on September 20, 2004, with the launch of 14 suborbital sounding rockets over the previous five weeks.

The EQUatorial Ionospheric Study (EQUIS II) mission was conducted from a launch complex located on the island of Roi-Namur, Kwajalein Atoll, Republic of the Marshall Islands. Located very near the equator, the site provided a unique set of atmospheric observations to better understand the Earth's ionosphere in the equatorial region. Experiments on the various rockets were designed to study disturbances in the ionosphere created by interactions between the Sun and the Earth's magnetic field.

Measurements made with the ALTAIR radar located on Roi-Namur, provided information needed to determine when ionospheric conditions were appropriate for launch. The radar also provided critical measurements that will be used in the analysis and interpretation of data obtained from the launches.

"All of the data needed to meet the main objectives of the campaign were collected, and I am excited," said Dr. Miguel Larsen, Campaign Scientist from Clemson University, S.C. "The in-depth analysis of measurements taken will occur over the next year by the scientists and organizations that participated in the campaign. The results will be published in various scientific journals upon completion of the analysis."

Preliminary results indicate that winds, wind shears and turbulence at high altitudes from 50 miles (80 kilometers) to 125 miles (200 kilometers) are critical in generating and

-more-

maintaining the naturally occurring layers that were studied in EQUIS II. Wind measurements in the range of interest are not possible with techniques other than the sounding rocket Trimethyl Aluminum, (TMA), luminous tracer technique that was used in the observations. The information provided by the launches is important to an understanding of the natural atmospheric phenomena that occur in the mid-latitude ionosphere.

“People tend to think that space is a quiet place with relatively little activity. Over the years, we have come to realize that this is not true,” said Larsen.

During the campaign, NASA Wallops Flight Facility personnel conducted classroom and educational activities in rocketry for the students at George Seitz Elementary school, Kwajalein High School and students on the island of Enniburr, Kwajalein Atoll. Approximately 700 students took part in 43 classroom programs as well as the building and launching of model rockets. Parents and U.S. Army Kwajalein Atoll personnel attended the model rocket launches.

The EQUIS II project was similar to studies conducted from Roi-Namur during the EQUIS project in 1990 under the Sounding Rocket Program, which is managed at Wallops for NASA’s Science Mission Directorate, Washington, D.C. Approximately 125 people from NASA Wallops Flight Facility and the scientific community were involved in the campaign.

Further information on the EQUIS II project is available at:
http://www.wff.nasa.gov/~code810/

-end-