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SAN MARCO ATMOSPHERIC SATELLITE COMPLETES PRE-LAUNCH GROUND TESTS

The San Marco D/L spacecraft, an international satellite, designed to make studies of the lower atmosphere, has completed its fabrication and pre-launch ground tests and is now ready for shipment to its launch site in Kenya, Professor Luigi Broglio, Director of the Centro Ricerche Aerospaziali (CRA) of the University of Rome, announced today.

His announcement came during a press tour of the CRA facilities at the university, where the 237-kilogram (522-pound) spacecraft was on display.

The spherical spacecraft, one meter (three feet) in diameter, will carry five scientific instruments when it is launched by an Italian Air Force crew from the Italian San Marco Equatorial Range in Kenya no earlier than November 18, 1986. The launch vehicle will be a U.S.-built Scout rocket.

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The spacecraft was designed and fabricated by CRA personnel in Rome.

One of the five scientific instruments is from Italy, one from West Germany and three from the United States, Professor Broglio said.

The Italian instrument, for which Professor Broglio is the principal investigator, is the Neutral Atmosphere Density (Drag Balance) experiment. It is designed to measure drag forces on the satellite in orbit.

The West German instrument is the Airglow Solar Spectrometer, sponsored by the Institut fur Physikalische Weltraumforschung (IPW) in Freiburg. Principal investigator is G. Schmidtke. It is designed to measure equatorial day and night airglow, solar radiation from the Earth's surface and from clouds and the radiation of interplanetary and intergalactic origin reaching the satellite.

Two of the U.S. instruments are from the National Aeronautics and Space Administration's (NASA's) Goddard Space Flight Center in Greenbelt, Maryland. They are the Wind and Temperature Spectrometer to measure neutral winds, neutral particle temperatures and the concentration of selected gases in the atmosphere and the three-axis Electric Field Instrument, which will measure the electric field surrounding the spacecraft in orbit. Principal investigators are Norman W. Spencer and N.C. Maynard, respectively.

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The third U.S. instrument is the Ion Velocity Instrument from the University of Texas at Dallas. It is designed to measure the plasma concentration and the ion temperatures surrounding the spacecraft. Principal investigator is W. B. Hanson.

This launch will mark the fifth time a San Marco spacecraft has been sent into space. The first one, San Marco A, was launched from Goddard Space Flight Center's Wallops Flight Facility on the Eastern Shore of Virginia on December 15, 1964. The second, San Marco B, was launched from the San Marco Equatorial Range on April 26, 1967; the third, San Marco C1, on April 19, 1971, and the fourth, San Marco C2, on February 18, 1974.

The third and fourth launches also were made in Kenya, where the San Marco Range uses a pair of ocean platforms for its unique launch facility. The San Marco platform, named for the patron saint of navigators, and the sister platform, Santa Rita-named for the patron saint of things impossible--were refurbished in Italy, towed to Kenya and erected approximately three miles offshore in 1966.

The Santa Rita platform is located about 500 meters (one-third of a mile) from the San Marco platform. San Marco serves as the launch platform, while Santa Rita is used as a blockhouse.

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San Marco D/L (the L stands for low orbit) will be placed in an orbit of 277 by 685 kilometers (180 by 625 statute miles). Its inclination will be 2.9 degrees, and it will circle the Earth every 100 minutes.

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