

February 12, 2004 — Northrop Grumman to Provide Antenna for Italy's Shallow Radar Experiment on NASA's Mission to Mars

CARPINTERIA, Calif., – Feb. 12, 2004 – Northrop Grumman Corporation (NYSE:NOC) has been awarded a contract by the Alenia Spazio, Rome, Italy, to provide a di-pole antenna for Alenia's SHARAD (SHALLOW RADAR) experiment to be flown on NASA's Mars Reconnaissance Orbiter in 2005.

Alenia is participating in the NASA mission with Italian funding from the Italian Space Agency (ASI, Agenzia Spaziale Italiana). This experiment will continue the search for subsurface water on Mars.

The SHARAD antenna, provided by Northrop Grumman's Astro Aerospace business unit, will be less than 3 kilograms and will be stowed in a small package on the spacecraft for launch and transit to Mars. Its patented FFTM structure will deploy to a length of 10 meters to provide the antenna geometry required after the spacecraft reaches its final orbit around Mars.

This antenna uses similar technology to the MARSIS antenna built by Astro Aerospace for the European Mars Express spacecraft currently on its way to Mars. The MARSIS antenna will deploy to 40 meters length after arriving at Mars early next year.

Astro Aerospace, based in Carpinteria, is a business unit of Northrop Grumman's Space Technology sector, a leader in the development of space, defense and electronics systems. For more than 40 years, Astro Aerospace has pioneered the technology of space deployable structures. It has a 100 percent success rate on hundreds of flight-specific deployable units.

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