

Lockheed Martin Team To Support Hubble Space Telescope Servicing Mission

PRNewswire
SUNNYVALE, Calif.

A team led by Lockheed Martin Corporation will provide support to the NASA Goddard Space Flight Center in the planning, training and implementation of Servicing Mission 4 (SM-4) to the Hubble Space Telescope (HST), scheduled for 2008.

"We have found that working on the Hubble Space Telescope is more than just a job. It is a passion. And we are enormously excited to be going back to Hubble again and providing it a new lease on life," said Dennis Connolly, Lockheed Martin program manager of HST Flight Systems and Servicing. "We've assembled much of the same team that performed so impressively on the first four servicing missions, and we're confident that this one will go just as well. We're very proud to work with our colleagues at NASA Goddard Space Flight Center (GSFC) to maintain this magnificent observatory, and extend its mission of discovery."

The SM-4 mission will involve five spacewalks by the astronaut crew of the space shuttle Discovery. Maintenance tasks will include replacement of all of Hubble's batteries and gyros, installation of a refurbished Fine Guidance Sensor, and the mounting of three insulation outer blankets on the outside of the telescope.

Two new instruments -- the Cosmic Origins Spectrograph and the Wide Field Camera 3 -- will be installed, significantly expanding Hubble's astronomical observing capability. The Space Telescope Imaging Spectrograph will also be returned to operation via the installation of a new circuit board. Finally, a soft-capture mechanism will be attached to the aft bulkhead of HST to facilitate de-orbit and safe re-entry into the Earth's atmosphere when the telescope reaches the end of its scientific usefulness.

The Lockheed Martin team includes individuals from Lockheed Martin Space Systems; Lockheed Martin Technical Operations; Lockheed Martin Integrated Systems & Solutions; Jackson and Tull; Orbital Sciences Corporation; Raytheon Optical Systems Inc.; Allied-Signal; Honeywell; Raytheon STX; and Computer Sciences Corporation. The team is responsible for:

- Spacecraft Systems Engineering and Design Integration
- Payload Integration and Test at GSFC and Kennedy Space Center
- Astronaut Training Support
- Replacement Satellite Hardware Design and Development
- Space Shuttle Support Equipment Design and Development
- Spacecraft Mission Operations and Control
- Ground Software
- Spacecraft Flight Software
- Servicing Mission Planning and Timeline Development.

The Hubble telescope, designed and built at Lockheed Martin Space Systems in Sunnyvale, Calif., was launched in 1990 and has revolutionized astronomy with its thousands of discoveries, while opening up the universe to the public through its beautiful and inspiring pictures. During its 16 years in orbit, HST has taken more than 700,000 snapshots of celestial objects -- such as galaxies, dying stars, and giant gas clouds, the birthplace of stars -- that have generated over 3,500 technical publications reporting Hubble results.

The NASA Goddard Space Flight Center in Greenbelt, Md. manages the HST program for the Science Mission Directorate, NASA Headquarters. Since the 1990 launch, under contract to NASA, Lockheed Martin Space Systems and Lockheed Martin Technical Operations personnel in Sunnyvale, Calif. and at GSFC have helped manage the day-to-day spacecraft operations of the telescope, and provided extensive preparation and training for the telescope servicing missions. The Space Telescope Science Institute in Baltimore, Md. selects observing programs from numerous proposals; and analyzes, archives and disseminates incoming astronomical data.

Lockheed Martin Space Systems Company, a major operating unit of Lockheed Martin Corporation,

designs, develops, tests, manufactures and operates a variety of advanced-technology systems for national security, civil and commercial customers. Chief products include human space flight systems; a full range of remote sensing, navigation, meteorological and communications satellites and instruments; space observatories and interplanetary spacecraft; launch vehicles, fleet ballistic missiles; and missile defense systems.

Headquartered in Bethesda, Md., Lockheed Martin employs about 140,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. The corporation reported 2005 sales of \$37.2 billion.

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