Lockheed Martin Awarded Contract For GOES-R Geostationary Lightning Mapper

The Lockheed Martin Space Systems Companyhas been awarded a $96.7 million contract by NASA Goddard Space Flight Center to provide the Geostationary Lightning Mapper (GLM) instrument that will fly on the National Oceanic and Atmospheric Administration (NOAA) GOES-R Series environmental satellites. GLM's ability to monitor lightning on a global scale will provide new insight into the formation, distribution, morphology and evolution of storms. Data from GLM will help protect communities by increasing severe storm and tornado warning times. GLM also enables investigations into the mechanisms at the core of the global water and energy cycle

"Along with our teammates from the University of Alabama - Huntsville (UAH), we are enormously gratified to be selected to design and build the Geostationary Lightning Mapper," said Joe Mobilia, Lockheed Martin GLM program manager at the Space Systems Advanced Technology Center (ATC) in Palo Alto.

"Our team has worked together since 1992 on successful lightning imaging missions, and this extensive spaceflight heritage is directly applicable to GLM," added Earl Aamodt, Lockheed Martin GLM deputy program manager. "The combination of this team's experience and knowledge of GLM requirements, and our proven systems engineering approach will move this instrument successfully from drawing board to orbit."

GLM's lightning observations will penetrate cloud tops and detect convective activity continuously over whole continents and adjacent oceans. This lightning characteristic of clouds is inadequately measured, both temporally and spatially, by current observing systems.

With improved insight into the dynamics and life cycles of storms and weather systems, GLM will greatly improve understanding of the fast time scale elements of atmospheric convection. This will lead to a better understanding of the Earth's climate system, which, combined with long term GLM observations, will lead to significant improvements in monitoring changes in storm climatology. In addition, since intense and increasing in-cloud flashes are known to precede severe weather by tens of minutes, the real-time transmission and distribution of GLM data will improve warning times for severe storms, particularly tornadoes.

The Geostationary Operational Environmental Satellite (GOES) mission is a critical element of the U.S. satellite constellation for environmental observations, along with the Polar Operational Environmental Satellite (POES) and Defense Meteorological Satellite Program (DMSP) polar orbiting satellites -- both built by Lockheed Martin. GOES is the environmental satellite most familiar to the American public, as its images and time-lapse sequences are the primary visual material of television weather forecasts.

The GOES system -- operational since 1975 -- plays a vital role in weather and environmental forecasting. In orbit high above the equator, GOES satellites are uniquely positioned to observe the development of hazardous weather, such as hurricanes and severe thunderstorms, and to track their intensity and movement so that loss of life and property can be reduced or avoided.

The GOES Program is managed by the National Oceanic and Atmospheric Administration (NOAA), which establishes requirements, provides funding and distributes environmental data for the United States. NASA's Goddard Space Flight Center, in Greenbelt, Md., manages the GLM instrument acquisition as a part of its support to NOAA's development of the GOES-R series of satellites.

GLM is one of the scientific instruments managed by Lockheed Martin's Sensing and Exploration line of business. The instrument is designed and built at Lockheed Martin's Advanced Technology Center (ATC) in Palo Alto, California. The ATC is the research and development organization of Lockheed Martin Space Systems Company (LMSSC). LMSSC, a major operating unit of Lockheed Martin Corporation, designs, develops, tests, manufactures and operates a full spectrum 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; laser radar; 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 2006 sales of $39.6 billion.

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