

# NASA tracking and data relay satellite mission passes major review

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NASA's desire to provide outstanding communications support for the International Space Station, the Hubble Space Telescope, and other unmanned spacecraft moved closer to this goal in July when agency officials approved critical elements for the next generation of Tracking and Data Relay Satellites, TDRS K and TDRS L.

Christopher Scolese, NASA's Associate Administrator, Washington, chaired the Agency's Program Management Council meeting that reviewed program readiness. The TDRS project now has approval to proceed with the implementation phase of their mission.

"Achieving this key milestone means we can now focus on building the additional spacecraft needed to support NASA missions," said TDRS project manager Jeff Gramling at NASA Goddard [Space Flight Center](#) in Greenbelt, Md. "I am extremely proud of the hard work and dedication of this NASA/Boeing team."

NASA's TDRS comprise the communication satellite component of the Tracking and Data Relay Satellite System (TDRSS) which provides tracking and data acquisition services between low earth orbiting spacecraft and satellite control centers and data processing facilities. The system is capable of providing coverage to such user spacecraft for up to 100% of each orbit. The TDRSS space segment currently consists of nine TDRS located in geosynchronous orbits around the Earth.

The TDRSS ground segment, known as the White Sands Complex, is

located near Las Cruces, N.M. It is here where forward data are uplinked from the ground segment to the TDRS and then from the TDRS to various user spacecraft. Forward data stands for the direction in which the data is generated. The direction in which data path was initiated is the forward path, the data leaving this direction is known as forward data.

User [satellite](#) return data, consisting of spacecraft telemetry and high-rate mission data, is down linked from the spacecraft via the TDRS to the ground segment and then onto the designated control center or data collection point.

The next milestone is the mission critical design review scheduled for January 2010. This review will examine the detailed aspects of the TDRS spacecraft, system, and mission design and, if successful, provide the project team with approval to begin assembling the spacecraft and communications payload.

NASA's Goddard manages the TDRS mission on behalf of the Space Communications and Navigation (SCaN) Program Office at NASA Headquarters, Goddard manages the [spacecraft](#) acquisition which is valued at \$772.4 million, excluding launch costs. The overall effort managed by SCaN is a \$1.4B project, which includes among others, the launch vehicle procurement.

The TDRS in this series will launch from Cape Canaveral Air Station, Fla. aboard an Atlas V rocket. The first launch is scheduled for April 2012.

More information: For information about the TDRS, visit:

[scp.gsfc.nasa.gov/esc/esc\\_projects\\_454.htm](http://scp.gsfc.nasa.gov/esc/esc_projects_454.htm)

Source: [NASA](#)/Goddard Space Flight Center

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