



Report on the Status of Future Geostationary Meteorological Satellite Systems

NOAA-WP-06 provides a status and an overview of the future GOES satellite system. The GOES-13 satellite was successfully launched May 24, 2006 and will be in post-launch testing at 105°W until December 2006. It is scheduled for an operational acceptance review and a NOAA science test in December. By the end of December it will be placed into long term storage mode and become the primary backup for the operational GOES satellites. The GOES-O satellite has completed system integration and testing and is in ground storage at the spacecraft contractor. The GOES-O planned launch date is April 2008. The contractual option for the GOES-P satellite was exercised in the spring of 2003. GOES-P completed integration and system testing. GOES-P will be placed in ground storage in late 2006 and is planned to be launched in April 2009. The new GOES-N series ground system was delivered to NASA and will be upgraded over the next two years for NOAA.

Planning for GOES-R continued to move forward in 2006. System Program Definition and Risk Reduction (PDRR) contracts were awarded in late 2005 to Boeing, Northrup Grumman and Lockheed Martin. These contracts support the definition of the end-to-end GOES-R system architecture and focus on risk reduction for identified high risk areas. The results of these PDRR contracts will also support preparations for the program implementation, or Acquisition and Operations (A&O), phase in 2007.

The new GOES-R instruments will advance operational environmental remote sensing technology by several decades. The technological advances will provide four-times the environmental information over a greater geographical location in less time, at higher resolutions, and with higher spectral content. The GOES-R program will meet NOAA's mission objectives for continuous observations of atmospheric, oceanic, climatic, solar, and space infrared and imaging data of the northern hemisphere surface and atmosphere; supporting all of NOAA's mission goals in ecosystems, climate, weather and water, and commerce and transportation.

The GOES-R Program schedule supports a GOES-R launch readiness date of late 2014.



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1. GOES-I Series

GOES-12, launched July 23, 2001, continues to provide data as GOES-East at 75 W. GOES-11, launched May 30, 2000, is operational as GOES-West at 135 W. GOES-10 is drifting toward 60 W and is scheduled to arrive in October, 2006 to provide coverage of South America. GOES-9 (launched May 23, 1998) is in backup mode at 160 E.

2. GOES-N Series

The GOES-13 satellite was successfully launched May 24, 2006 and will be in post-launch testing at 105 W until Dec. 2006. It is scheduled for an operational acceptance review and a NOAA science test in December. By the end of December it will be placed into long term storage mode and become the primary backup for the operational GOES satellites. The GOES-O satellite has completed system integration and testing and is in ground storage at the spacecraft contractor. The GOES-O planned launch date is April 2008. The contractual option for the GOES-P satellite was exercised in the spring of 2003. GOES-P completed integration and system testing. GOES-P will be placed in ground storage in late 2006 and is planned to be launched in April 2009. The new GOES-N series ground system was delivered to NASA and will be upgraded over the next two years for NOAA.

With minor modifications, the GOES-N series will utilize the Imager and Sounder payloads developed for the GOES-I series. Horizontal resolution of the Imager will be improved to 4 km in all IR channels, starting with GOES-O. At least two SXI instruments will fly on the GOES-N series.

The GOES-N series will upgrade the Weather Facsimile (WEFAX) service to a digital Low Rate Information Transmission (LRIT) system for distribution of data products. The GOES-N series will provide a dedicated Emergency Manager's Weather Information Network (EMWIN) for data products and warnings. An enhanced Data Collection System (DCS) will be provided allowing for the interrogation of more remote terminals.

In addition to these instrument and service upgrades, a number of GOES-N series spacecraft improvements are planned as well. Some of the most important changes include: the power subsystem has been upgraded to allow for continuous operations during eclipse; and the satellite attitude control system has been upgraded to utilize stellar inertial navigation allowing for improved Image Navigation and Registration (INR) performance.

3. GOES-R Series

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All of the five instrument contracts were active in 2006 as well; the Hyperspectral Environmental Suite (HES), Solar Imaging Suite (SIS), and the Geostationary Lightning Mapper are currently in the PDRR phase, while the Advanced Baseline Imager (ABI) and the Space Environment in-situ Suite were in the A&O phase.

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GOES-R Program/Instrument Schedule



As of: 9/28/2006

