

Goddard Space Flight Center (GSFC)

Highlights:

- Joint Polar Satellite System: New NASA-NOAA partnership to procure several of the nation's polar orbiting weather satellites.
- Decadal Survey Tier 1 Missions: The FY 2011 President's Budget enables all four of the Tier 1 missions recommended by the National Research Council. GSFC will lead ICESat-2, and participates in portions of both CLARREO and DESDynI. GSFC also manages the Earth Systematic Missions Program, which contains the Decadal Survey missions.

Center Assets: Located in Greenbelt, MD, GSFC employs over 3,250 civil servants, consisting mainly of scientists, engineers and technologists that build spacecraft, instruments and new technology to study the Earth, the sun, our solar system, and the universe. Center capabilities that will be tapped in the President's new program include satellite servicing; modeling, assessment and computing activities; and developing remote sensing instrumentation. Specific new activities include the following.

Joint Polar Satellite System (JPSS): This program is a restructuring of National Polar-orbiting Operational Environmental Satellite System (NPOESS) to ensure the successful completion of a satellite system that is of national importance to civil and military weather-forecasting, storm-tracking, and climate-monitoring. NOAA and NASA will develop the JPSS on the most rapid practicable schedule without reducing system capabilities. NASA's role in the restructured program will be modeled after the procurement structure of past successful programs such as POES, and GOES. NASA and NOAA have had a long and effective partnership and work is proceeding rapidly with NOAA to establish a JPSS program at GSFC.

Climate Initiative: The budget enables significant expansion of, and launch date acceleration for, a suite of NASA-developed Earth observing satellite missions, each of which are overseen by GSFC's Earth Systematic Missions Program Office. Their data advances science, underpins policy, and expands societal benefits through a wide variety of applications.

- ICESat-2 is a Tier-1 Decadal Survey mission being developed for a launch in late calendar year 2015. It will continue the time series of precision ice topography measurements initiated by ICESat. The science focus areas served by ICESat-2 include climate variability and change, Earth surface and interior, and water and energy cycles.
- CLARREO is a Tier-1 Decadal Survey mission, designed to make precision, stable measurements to enable detection of long-term changes in the climate system, and its radiation-related feedback mechanisms. The mission is led by LaRC, with GSFC participation, and is being developed with other partner organizations. The President's

FY 2011 budget provides for accelerated development and launch by CY 2017 of the first of two CLARREO spacecraft.

- DESDynI (Deformation, Ecosystem Structure and Dynamics of Ice) is a project jointly managed with JPL that will launch by 2017. The global observations of surface deformation have several scientific goals, including advances in earthquake science that benefits the health and safety of the public. There are two components, DESDynI Radar+Lidar (two spacecraft sharing a single launch). GSFC's responsibility for this mission is with development of the Lidar spacecraft.