



## **EARTH OBSERVATIONS**

### **Research and Development Funding in the President's FY 2009 Budget**

The U.S. supports space-based, airborne and ground-based instruments to observe, monitor and measure a multitude of the Earth's characteristics around the globe. The President is committed to optimizing these scientific efforts by developing sustained and integrated Earth Observation systems for the Nation and by making these systems an integral part of a global system. The 2009 Budget includes:

- Funds to sustain the highest priority climate measurement capabilities that once were part of the tri-agency National Polar-Orbiting Operational Environmental Satellite System (NPOESS) program (but were removed or "de-manifested" during the 2006 restructuring of NPOESS in response to significant NPOESS cost over-runs). This operational climate sensor package will be supported with \$74 million in FY 2009 funds requested by the Department of Commerce's National Oceanic and Atmospheric Administration (NOAA).
- \$103 million in FY2009 (with a total of \$910 million over five years) for the National Aeronautics and Space Administration (NASA) to embark on a series of space-based Earth observing missions that the National Research Council's recent "decadal survey" ranked as the top priorities for Earth sciences, including: 1) SMAP (Soil Moisture Active/Passive), which will enable global soil moisture mapping with unprecedented resolution, sensitivity, area coverage, and revisit times; and, 2) ICESat (Ice, Cloud, and land Elevation Satellite), the benchmark Earth Observing System mission for measuring ice sheet mass balance, cloud and aerosol heights, and land topography and vegetation characteristics. NASA will also continue ongoing work to develop and launch seven new Earth observing missions in the next several years while operating fourteen missions presently on orbit.
- \$139 million for NASA to procure the LandSat Data Continuity Mission to continue the 35-year record of land imagery from space critical to Earth Observations data continuity.
- \$2 million for the U.S. Geological Survey (USGS) to establish a National Land Imaging Program office to ensure long-term continuity of multi-spectral imaging of the Earth's surface, consistent with the recommendation of the Interagency Working Group on the Future of Land Imaging.
- \$126 million for NASA to launch the Global Precipitation Measurement (GPM) mission core spacecraft no later than 2013.
- \$21 million to support the NOAA-led Integrated Ocean Observing System and a total of \$10.5 million for the National Science Foundation's (NSF) Ocean Observatories Initiative.
- Improvement of U.S. earthquake monitoring and prediction capabilities by NSF and USGS through EarthScope at \$26.3 million and the Advanced National Seismic System at \$8 million.