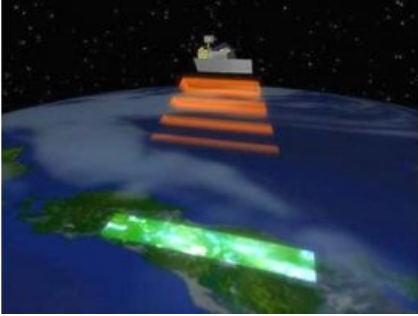


NASA-JAXA Partnership Improves Earth Monitoring



In a unique collaboration between national space agencies, the United States and Japan began combining elements of their satellite resources on Monday 12th April to increase a critical type of Earth observation data. The partnership will more than double the quantity of this data that is used to explore earthquake hazards, forest declines, and changing water resources in the Americas.

This new partnership between NASA and the Japan Aerospace Exploration Agency, known as JAXA, uses NASA's Tracking and Data Relay Satellite System to download observations over North and South America taken by instruments on JAXA's Advanced Land Observing Satellite, or ALOS. By combining NASA and JAXA data-relay satellite resources, coverage of North and South America nearly doubles. Observations will be

made about twice as often.

The Phased Array type L-band synthetic aperture radar, known as PALSAR, is one of the instruments aboard ALOS. It precisely measures the distance to Earth's surface under all weather conditions during day and night. Measurements from this instrument are used for detecting changes in the ground surface associated with earthquakes, volcanic eruptions, and landslides; mapping forest cover and flooding in the tropics that affect the carbon balance in land-based ecosystems; and determining the speed at which ice sheets and glaciers move, which contributes to sea-level rise.

NASA does not currently have this type of instrument in orbit, but a NASA synthetic aperture radar mission is planned to launch later this decade. NASA has been obtaining these data from JAXA and other international space agencies for use by US scientists.

Under the new agreement with JAXA, NASA will have access to all the ALOS data acquired over the Americas and can make it available to scientists affiliated with US government agencies for peaceful scientific purposes. The Alaska Satellite Facility, a NASA data center located at the University of Alaska Fairbanks, will process and distribute the PALSAR data.

"The expanded ALOS data flow will significantly improve our scientists' ability to monitor regions at risk to earthquake hazards, such as Haiti and Chile," said Craig Dobson, natural hazards program manager in the Earth Science Division at NASA Headquarters. "Now we will be able to see very small changes in surface elevation associated with the build-up and release of strain in seismic zones over virtually the entire area of the Americas, with measurements made as often as every 46 days. Scientists also will be able to monitor seasonal changes in groundwater resources."

NASA's Tracking and Data Relay Satellite System consists of eight communication satellites stationed in geosynchronous orbits. With ground stations at the White Sands Complex near Las Cruces, N.M., and at Guam, the system can provide complete coverage of user spacecraft. The system supports communications with the International Space Station, the Hubble Space Telescope, and many other NASA missions.

ALOS data began to be distributed to users by the Alaska Satellite Facility today under the new agreement. The partnership is the result of development and testing work accomplished by a joint NASA-JAXA team that was started three years ago.

This new NASA-JAXA agreement continues a long and productive partnership between the nations in satellite observation of Earth. Japanese instruments are flying on NASA's Terra and Aqua satellites, and NASA sensors have flown on previous Japanese Earth-observation missions. The NASA-JAXA Global Precipitation Mission, to be launched in 2013, will include both NASA- and JAXA-supplied sensors on a NASA satellite launched on a JAXA rocket. The mission will provide the first frequent, accurate measurements of rainfall over the entire globe for use by scientists and weather forecasters.