Press Release
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NASA Salt-Seeking Spacefarer Leaves Brazil

(Sao Paulo) – After nine months of testing at Brazil's National Institute for Space Research (INPE) in Sao Jose dos Campos, an international spacecraft that will make NASA's first space-based measurements of ocean surface salinity departed for its rendezvous with history on March 29th via a U.S. Air Force transport plane. The *Aquarius/Satélite de Aplicaciones Científicas* (SAC-D) is expected to arrive at California's Vandenberg Air Force Base on March 30th after a stopover in Puerto Rico.

Following final tests, the satellite will be integrated onto a United Launch Alliance Delta II rocket for a planned June 2011 launch. The mission is a collaboration between NASA, INPE and Argentina's space agency, Comisión Nacional de Actividades Espaciales (CONAE), with participation by Brazil, Canada, France and Italy. In addition, INPE was the site where U.S. and Brazilian scientists subjected the satellite to stress and structural testing.

"The multi-national character of the project attests to how the United States is working closely with scientists from different countries to increase scientific knowledge and expand collaborative research," stated Consul General Thomas Kelly. During President Obama's visit to Brazil on March 19-20, one of the agreements signed aims to further develop U.S.- Brazil cooperation on space projects. "INPE's role in the SAC-D is just one example of our expanding bilateral cooperation with Brazil and is a significant step in working together on space-related matters," CG Kelly emphasized.

The NASA-built primary instrument, *Aquarius*, on CONAE's SAC-D spacecraft and will measure and map salinity levels on the ocean surface. Its precise salinity measurements will reveal changes in patterns of global precipitation and evaporation as well as the melting and freezing of ice, and show how these affect ocean circulation. This in turn is linked to variations in Earth's climate. The three-year mission will provide new insights into how variations in ocean surface salinity relate to these fundamental climate processes.

"Just as salt is essential to life as we know it, salinity is crucial to Earth's climate system," said *Aquarius* Principal Investigator Gary Lagerloef of Earth and Space Research, Seattle. "Very small changes in salinity can have large-scale effects on ocean circulation and the way the ocean moderates our climate."

Aquarius will greatly expand on the limited conventional measurements of ocean salinity scientists obtain from ships, buoys and floats, providing new perspectives on the links between the ocean and climate. "When combined with data from other sensors that measure sea level, ocean color, temperature, winds, rainfall and evaporation, *Aquarius*' continuous global salinity data will give scientists a much clearer picture of how the ocean works, how it is linked to climate and how it may respond to climate change," said Lagerloef.

Aquarius will also help improve predictions of future climate trends and short-term climate events such as *El Niño* and *La Niña*. Studies from *Aquarius* eventually will improve computer models used to forecast future climate conditions.

For more information on Aquarius, visit: http://aquarius.nasa.gov/ and
http://www.conae.gov.ar/satelites/sac-d.html