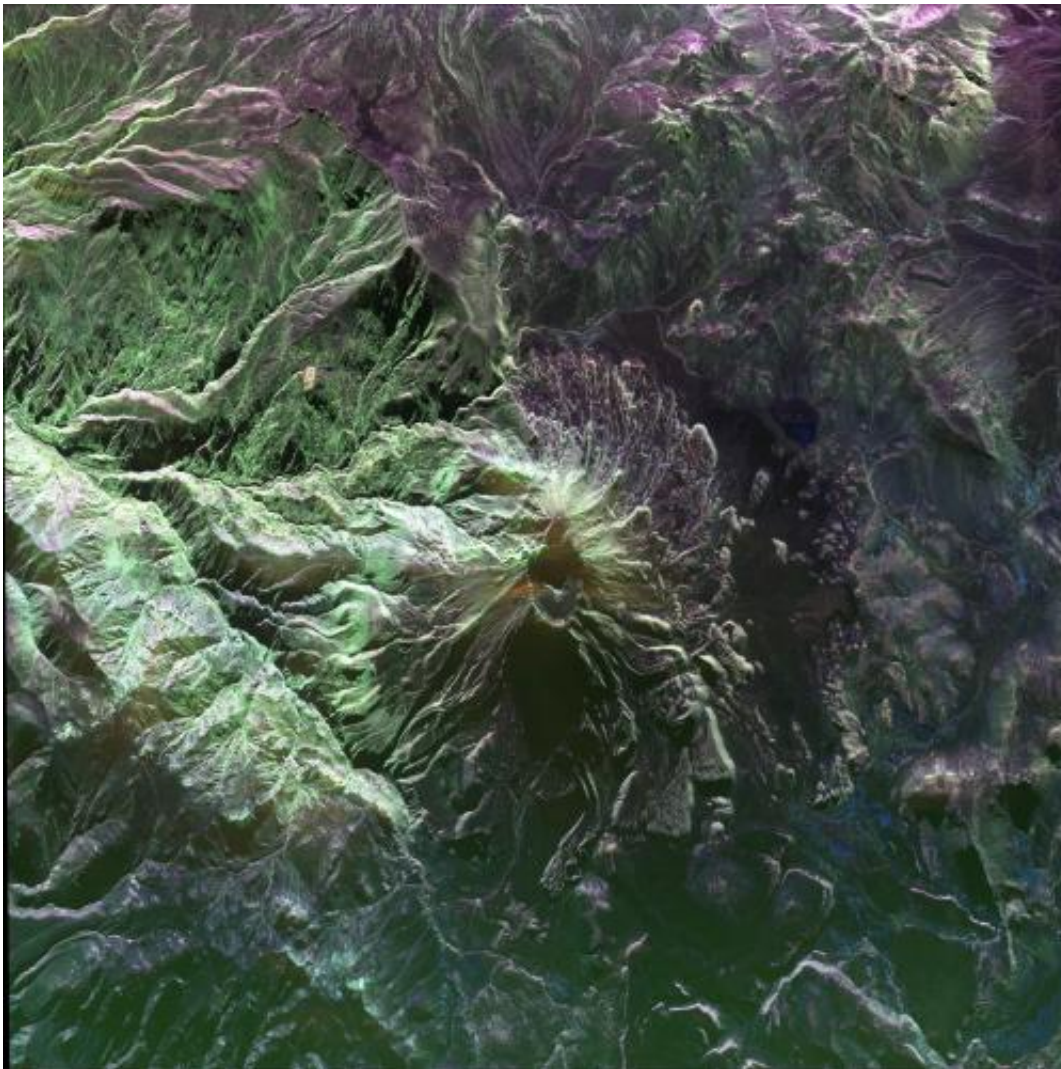


NASA airborne research focuses on Andean volcanoes

May 28 2014, by Alan Buis



This false-color image of Peru's Ubinas volcano was acquired on April 14, 2014, by NASA's Uninhabited Aerial Vehicle Synthetic Aperture Radar, or UAVSAR. Located about 100 miles (160 kilometers) from the city of Arequipa, Ubinas is Peru's most active volcano. UAVSAR flew exactly the same flight path over

Ubinas in 2013. By combining the images from the two years, researchers will produce detailed maps of surface motions that can improve models of volcanic deformation. Credit: NASA/JPL-Caltech

(Phys.org) —A NASA-developed airborne imager called a synthetic aperture radar took a detailed look at volcanoes in Central and South America during an Earth science study in late April and early May 2014.

The Uninhabited Aerial Vehicle Synthetic Aperture Radar, or UAVSAR, developed by NASA's Jet Propulsion Laboratory in Pasadena, California, was flown on NASA's C-20A. The 29-day deployment ended May 6 when the aircraft returned to its base in Palmdale, California, after 19 flights totaling 97 hours in the air.

This is the second consecutive year the UAVSAR team has conducted a campaign to study sites in Central and South America. Many of the flights imaged the Andean volcanic belt located in western South America.

"By combining images acquired in 2013 with the 2014 images, researchers will produce detailed surface motion measurements to improve volcanic deformation models," said Naiara Pinto, JPL's UAVSAR science coordinator.

NASA's C-20A features a high-precision autopilot designed and developed by engineers at NASA's Armstrong Flight Research Center, Edwards, California, allowing the aircraft to fly the same flight lines this spring as those flown in 2013 within 15 feet (4.5 meters) or closer. With the autopilot engaged, the [synthetic aperture radar](#) is able to acquire repeat-pass data that can measure land-surface changes within fractions of an inch (centimeters).



NASA's C-20A aircraft crew preparing for flight from Tocumen International Airport in Panama City, Panama. The aircraft was deployed to Central and South America for a research study using JPL's UAVSAR airborne radar, located in an underbelly pod (note red cover). Credit: NASA/Armstrong Flight Research Center

In coordination with the volcano studies, the agency's C-20A gathered data over Amazonian forests in Peru, agricultural sites in Chile and glaciers on the Chilean/Argentinian border. All of these research projects involve Latin American institutions, including universities and hazard monitoring agencies.

Provided by NASA

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