

Seeing Sierra Nevada Uplift from Space



SEPTEMBER 11, 2012

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Modern space geodesy has recently enabled the direct observation of slow geological processes that move and shape Earth's surface, including plate tectonics and crustal strain accumulation that leads to earthquakes. More elusive has been the direct observation of active mountain growth, because GPS measurements have larger uncertainties in the vertical direction and mountain growth is typically very slow.

The latest research using high-precision technologies indicates a relatively high vertical uplift rate for the Sierra Nevada, between 1 and 2 mm/yr. Thus the modern Sierra Nevada uplift is still very active and consistent with theories that call for a relatively young mountain range.

BILL HAMMOND

Bill Hammond is an Associate Professor at the University of Nevada, Reno, where he studies active deformation and dynamics of the Earth using space-based geodetic techniques. He works in the Nevada Geodetic Laboratory, which is a part of the Nevada Bureau of Mines and Geology in the University's College of Science. His previous employment includes 4 years at the U.S. Geological Survey in Menlo Park, CA. He earned his Bachelors degree in mathematics at U.C. Berkeley and his Ph.D. in geophysics at the University of Oregon, Eugene. He and his family enjoy the Sierra Nevada scenery while living in Truckee, CA. Find more information about Bill, links to publications, courses, at <http://geodesy.unr.edu/billhammond.php>



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