NASA Goddard Felt July 16 Quake

July 19 2010, by Rob Gutro

This is a visible image of Maryland as seen by the Moderate Resolution Imaging Spectroradiometer (MODIS) on the Terra satellite. The circle indicates the area of the earthquake's center. Credit: NASA/Sigma Space, Robert Simmon

(PhysOrg.com) -- A small earthquake, centered in Germantown, Md. occurred at 5:04 a.m. EDT today, July 16, and its vibrations were felt from West Virginia to Bridgeport, Conn. NASA's Goddard Space Flight Center located in Greenbelt, Md., lies about 25 miles east-southeast of today's small earthquake and reported no damages. In fact, there were no reports of damage throughout Maryland.

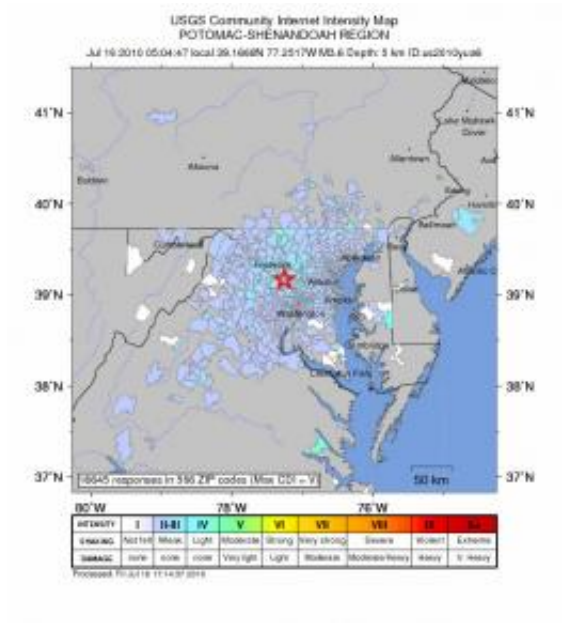
The earthquake registered 3.6 on the Richter scale, according to the U.S. Geological Survey (USGS), the agency that monitors quakes around the U.S. USGS reported that the quake occurred today, Friday, July 16, 2010 at 5:04:47 a.m. EDT. The quake originated 5 kilometers (3.1 miles) deep and it was centered at 39.167°North, 77.252°West, in

Germantown, Md. That latitude and longitude positions the quake's epicenter just west of Interstate 270 and south of Maryland state route 119.

The USGS noted that the epicenter was 15 km (10 miles) northwest of Rockville, Md., 30 km (15 miles) east-northeast of Leesburg, Va., 35 km (20 miles) northwest of Washington, D.C., and 70 km (45 miles) west-northwest of Annapolis, Md.

The USGS has a website where you can even report what you felt during earthquake events and view a map displaying accumulated data from your report and others. Go here.

Although earthquakes are monitored by the U.S. Geological Survey, NASA conducts research in various earthquake projects. That research is done in earthquake country, however, at NASA's Jet Propulsion Laboratory in Pasadena, Calif., just outside of Los Angeles. NASA measures, computes, and models crustal deformation using GPS and Interferometric Synthetic Aperture Radar (InSAR) from its airborne unmanned aerial vehicle (UAV) SAR platform and international satellites.



This is a USGS created map that shows earthquake intensity from the July 16 earthquake centered near (depicted by the star) Germantown, Md. Light blue areas indicate weak vibrations felt in various areas surrounding the quake. Credit: USGS

"Crustal deformation occurs both as a result of earthquakes and quietly," said Andrea Donnellan, a geophysicist at NASA's Jet Propulsion Laboratory, Pasadena, Calif. and a research professor at the University of Southern California and NASA's Applied Sciences Program Area Co-Lead for Natural Disasters. "The quiet or aseismic motions provide insight into the processes that produce earthquakes. GPS data provide daily precise positions of points or stations on the ground, which in turn provide a detailed time history of crustal deformation and changes. InSAR provides regional images of crustal deformation."

NASA funds several projects that integrate the GPS and InSAR data into models that provide insight into fault activity and earthquake potential, and Donnellan is the Principal Investigator of NASA's QuakeSim

project, as well as supercomputing, earthquake modeling, and UAVSAR projects.

Fortunately or unfortunately, depending on how you look at it, the quake was too small for NASA to detect. The last earthquake in the region occurred in May of 2008 and was even smaller, registering a magnitude of 2.0 on the Richter Scale.

Provided by JPL/NASA

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