

# NASA Mars orbiter examines dramatic new crater

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A dramatic, fresh impact crater dominates this image taken by the High Resolution Imaging Science Experiment (HiRISE) camera on NASA's Mars Reconnaissance Orbiter on Nov. 19, 2013. Researchers used HiRISE to examine this site because the orbiter's Context Camera had revealed a change in appearance here between observations in July 2010 and May 2012, bracketing the formation of the crater between those observations. The crater spans approximately 100 feet (30 meters) in diameter and is surrounded by a large, rayed blast zone. Because the terrain where the crater formed is dusty, the fresh crater appears blue in the enhanced color of the image, due to removal of the reddish dust in that area. Debris tossed outward during the formation of the

crater is called ejecta. In examining ejecta's distribution, scientists can learn more about the impact event. The explosion that excavated this crater threw ejecta as far as 9.3 miles (15 kilometers). The crater is at 3.7 degrees north latitude, 53.4 degrees east longitude on Mars. Before-and-after imaging that brackets appearance dates of fresh craters on Mars has indicated that impacts producing craters at least 12.8 feet (3.9 meters) in diameter occur at a rate exceeding 200 per year globally. Few of the scars are as dramatic in appearance as this one. Credit: NASA/JPL-Caltech/Univ. of Arizona

(Phys.org) —Space rocks hitting Mars excavate fresh craters at a pace of more than 200 per year, but few new Mars scars pack as much visual punch as one seen in a NASA image released today.

The image from the High Resolution Imaging Science Experiment (HiRISE) camera on NASA's Mars Reconnaissance Orbiter shows a crater about 100 feet (30 meters) in diameter at the center of a radial burst painting the surface with a pattern of bright and dark tones.

The scar appeared at some time between imaging of this location by the orbiter's Context Camera in July 2010 and again in May 2012. Based on apparent changes between those before-and-after images at lower resolution, researchers used HiRISE to acquire this new image on Nov. 19, 2013. The impact that excavated this crater threw some material as far as 9.3 miles (15 kilometers).

The Mars Reconnaissance Orbiter Project is managed by NASA's Jet Propulsion Laboratory, Pasadena, Calif., for NASA's Science Mission Directorate, Washington. JPL is a division of the California Institute of Technology in Pasadena. HiRISE is operated by the University of Arizona, Tucson. The instrument was built by Ball Aerospace & Technologies Corp., Boulder, Colo. Malin Space Science Systems, San Diego, built and operates the Context Camera.

Provided by NASA

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