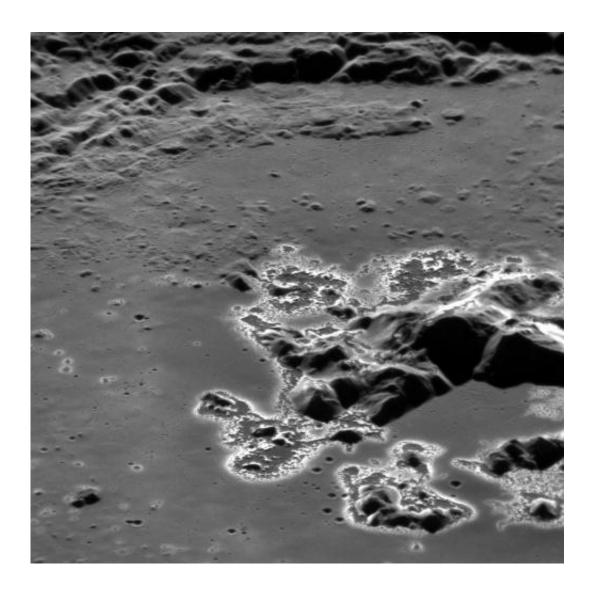


More 'hollowed ground' on Mercury

January 5 2012, by Jason Major



MESSENGER's latest NAC image of curious "hollows" surrounding a crater peak. The image shows an area approximately 41 miles (66 km) across. It has been rotated to enhance perspective. Credit: NASA/Johns Hopkins University Applied Physics Laboratory/Carnegie Institution of Washington



The latest featured image from NASA's MESSENGER spacecraft, soon to complete its first year in orbit around Mercury, shows the central peak of the 78-mile (138-km) – wide crater Eminescu surrounded by more of those brightly-colored surface features dubbed "hollows". Actually tinted a light blue color, hollows may be signs of an erosion process unique to Mercury because of its composition and close proximity to the Sun.

First noted in September of last year, hollows have now been identified in many areas across Mercury. They showed up in previous images as only bright spots, but once MESSENGER established orbit in March of 2011 and began high-resolution imaging of Mercury's surface it became clear that these features were something totally new.

The lack of craters within hollows seems to indicate that they are relatively young features. In fact, they may be part of a process that continues even now.

"Analysis of the images and estimates of the rate at which the hollows may be growing led to the conclusion that they could be actively forming today," said David Blewett of the Johns Hopkins University Applied Physics Laboratory (APL).

One hypothesis is that the hollows are formed by the sublimation of subsurface material exposed during the creation of craters, around which they are most commonly seen. Being so close to the Sun (29 million miles/46 million km at closest) and lacking a protective atmosphere like Earth's, Mercury is constantly being scoured by the powerful solar wind. This relentless stream of charged particles may literally be "sandblasting" exposed volatile materials off the planet's surface!

The image above shows an area approximately 41 miles (66 km) across. It has been rotated to enhance perspective; see the original image and caption here.



Source: <u>Universe Today</u>

Citation: More 'hollowed ground' on Mercury (2012, January 5) retrieved 10 April 2024 from https://phys.org/news/2012-01-hollowed-ground-mercury.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.