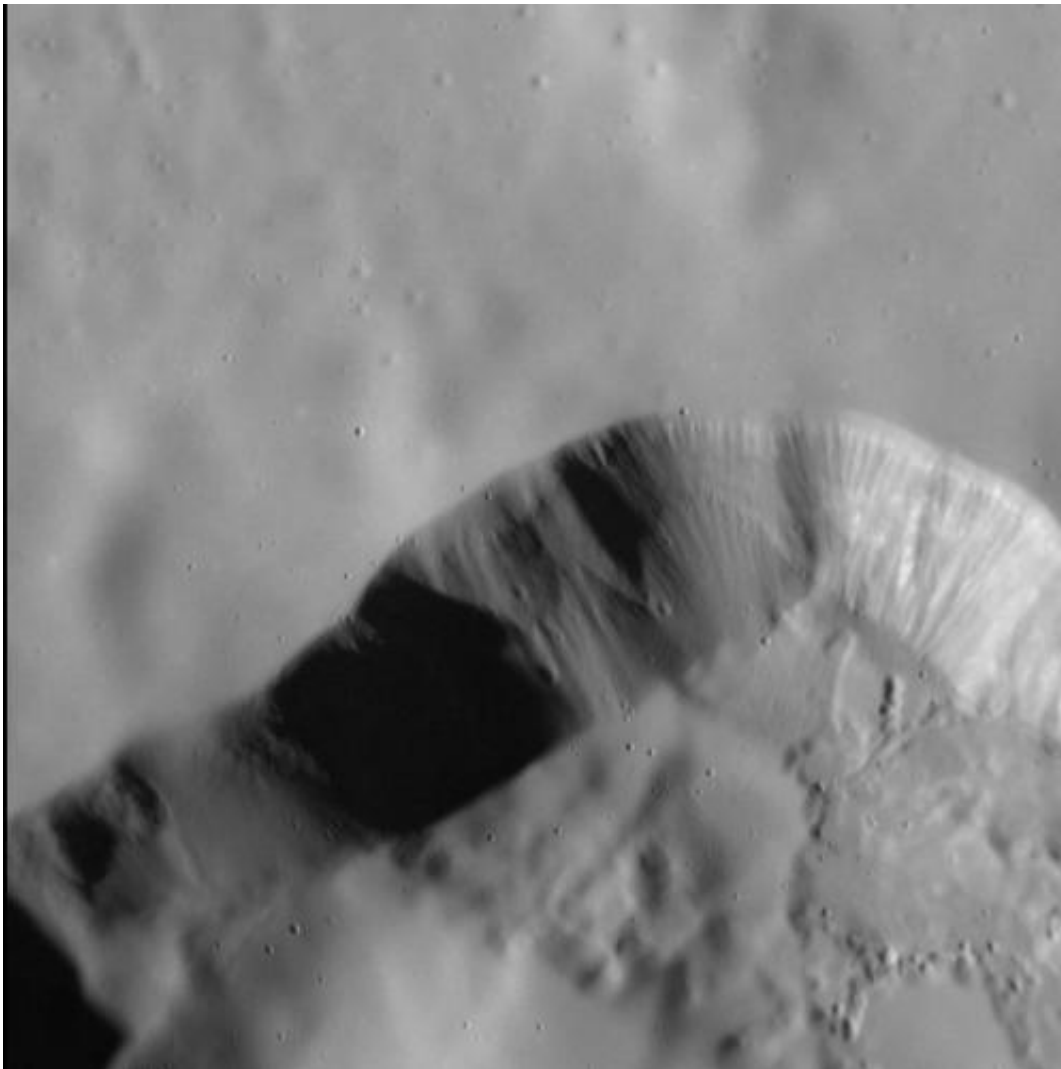


# MESSENGER sees a smoother side of Mercury

March 22 2013, by Jason Major

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A high-resolution view of a “silky” surface on Mercury.

During its two years in orbit around Mercury—as well as several more years performing flybys—the MESSENGER spacecraft has taken over 150,000 images of the innermost planet, giving us a look at its incredibly rugged, Sun-scoured surface like never before. But not all areas on Mercury appear so harsh—it has its softer sides too, as seen above in an image released earlier today.

Here we see the smooth walls, floor and upper surfaces around an irregular depression on Mercury in high definition. The velvety texture is the result of widespread layering of fine particles, because unlike many features on Mercury's ancient surface this rimless depression wasn't caused by an impact from above but rather explosively escaping lava from below—this is the rim of a [volcanic vent](#), not a crater!



A wide-angle view of the same depression, captured by MESSENGER in July

2012.

Previous images have been acquired of this irregularly-shaped depression but this is the highest resolution view MESSENGER has captured to date – about 26 meters per pixel.

The full depression, located northeast of the Rachmaninoff basin, is about 36 km (22 miles) across at its widest. It's surrounded by a smooth blanket of high-reflectance material—explosively ejected [volcanic particles](#) from a pyroclastic eruption that spread over the surface like snow.

Other similar vents have been found on Mercury, like this heart-shaped one in Caloris basin. The smooth, bright surface material is a telltale sign of a volcanic outburst, as are the rimless, irregular shapes of the vents.

The numerous small craters that are seen inside the vent and on the smooth surrounding surfaces would be from [meteorite impacts](#) that occurred well after the eruption.

Provided by [Universe Today](#)

Citation: MESSENGER sees a smoother side of Mercury (2013, March 22) retrieved 23 April 2024 from <https://phys.org/news/2013-03-messenger-smoother-side-mercury.html>

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