New Ceres images show bright craters

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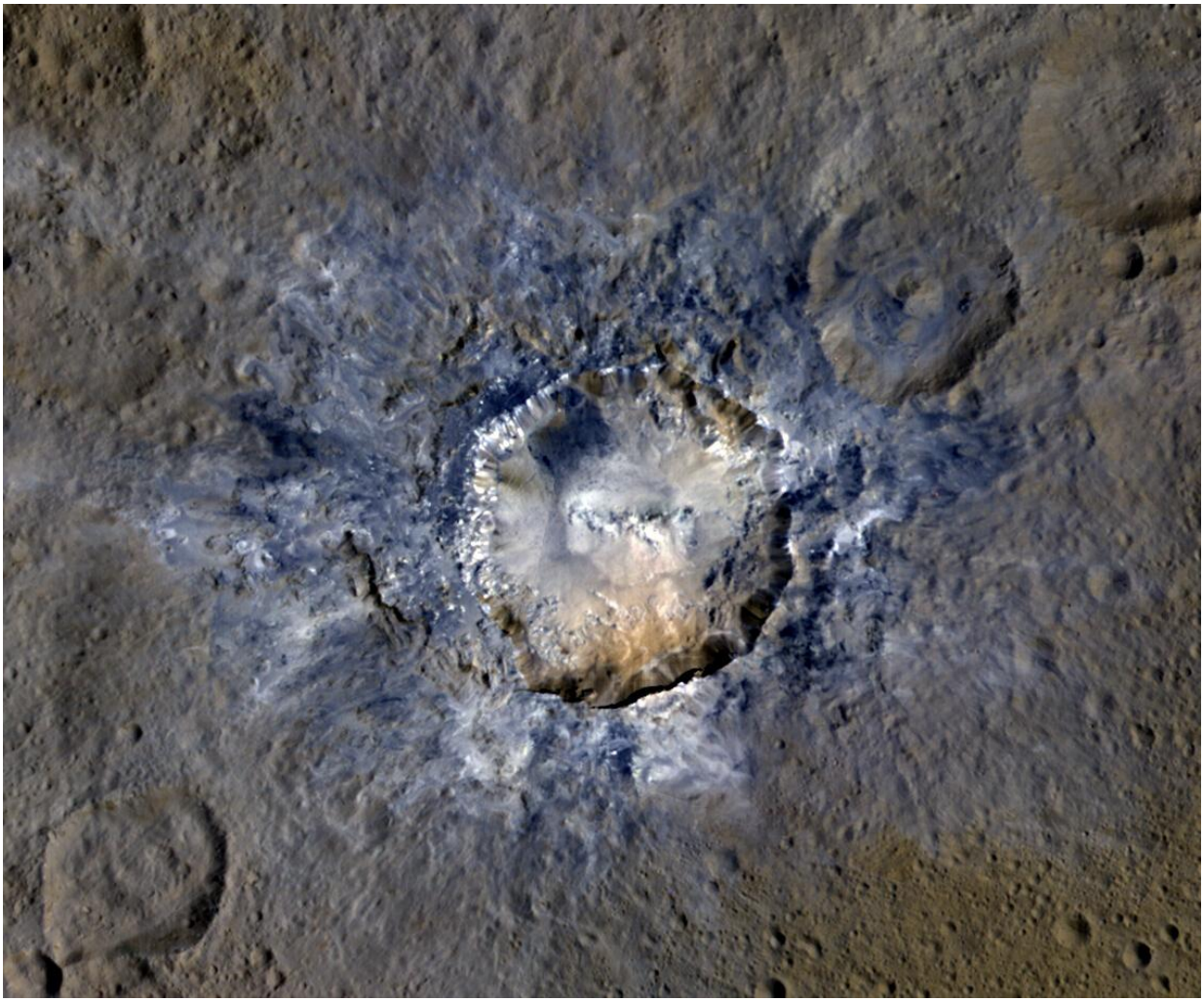


Ceres' Haulani Crater, with a diameter of 21 miles (34 kilometers), shows evidence of landslides from its crater rim. Smooth material and a central ridge stand out on its floor. This image was made using data from NASA's Dawn spacecraft when it was in its high-altitude mapping orbit, at a distance of 915 miles (1,470 kilometers) from Ceres. This enhanced color view allows scientists to gain insight into materials and how they relate to surface morphology. Rays of

bluish ejected material are prominent in this image. The color blue in such views has been associated with young features on Ceres. Credit: NASA/JPL-Caltech/UCLA/MPS/DLR/IDA

Craters with bright material on dwarf planet Ceres shine in new images from NASA's Dawn mission.

In its lowest-altitude mapping orbit, at a distance of 240 miles (385 kilometers) from Ceres, Dawn has provided scientists with spectacular views of the dwarf planet.

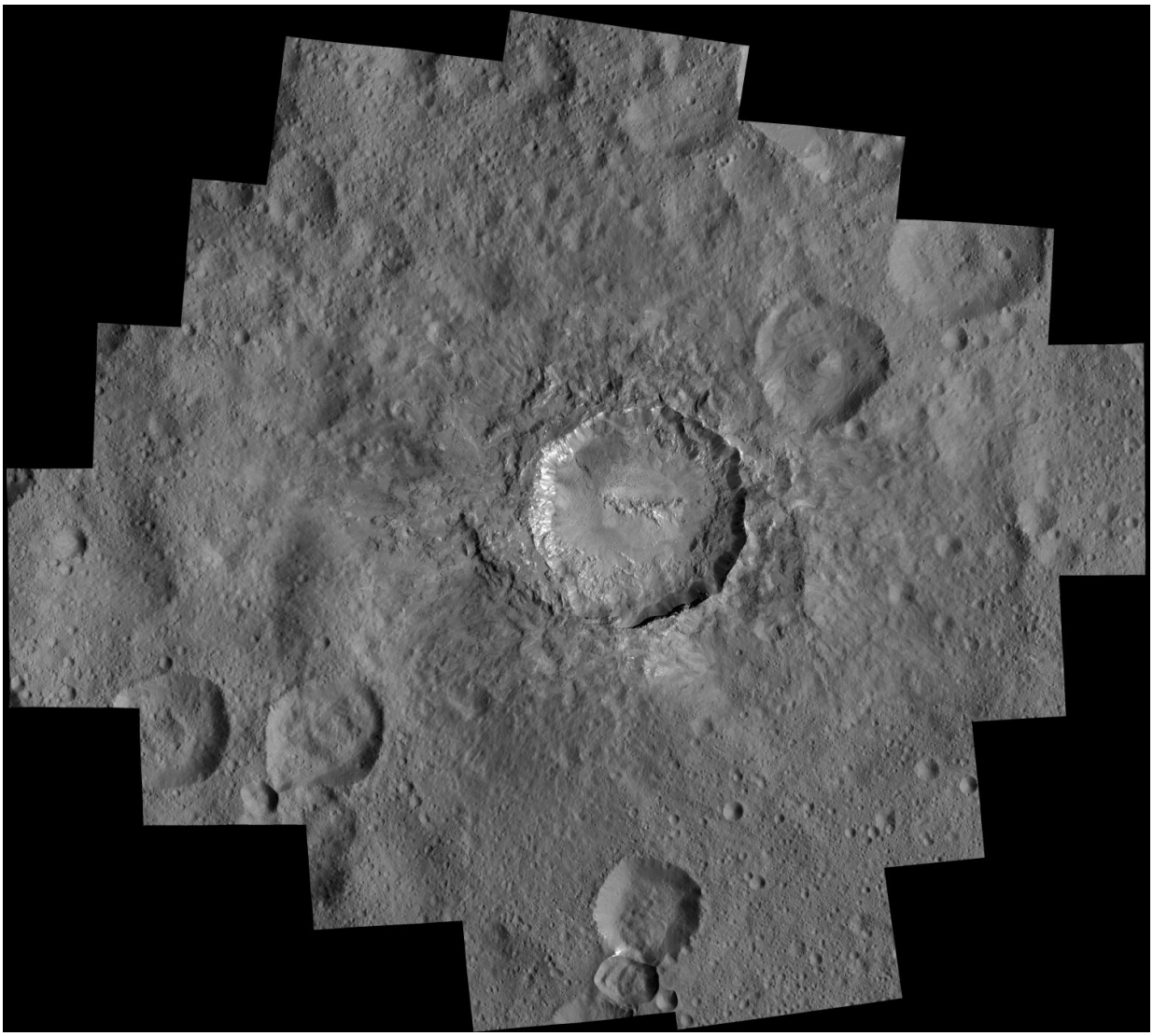
Haulani Crater, with a diameter of 21 miles (34 kilometers), shows evidence of landslides from its crater rim. Smooth material and a central ridge stand out on its floor. An enhanced false-color view allows scientists to gain insight into materials and how they relate to surface morphology. This image shows rays of bluish ejected material. The color blue in such views has been associated with young features on Ceres.

"Haulani perfectly displays the properties we would expect from a fresh impact into the surface of Ceres. The crater floor is largely free of impacts, and it contrasts sharply in color from older parts of the surface," said Martin Hoffmann, co-investigator on the Dawn framing camera team, based at the Max Planck Institute for Solar System Research, Göttingen, Germany.

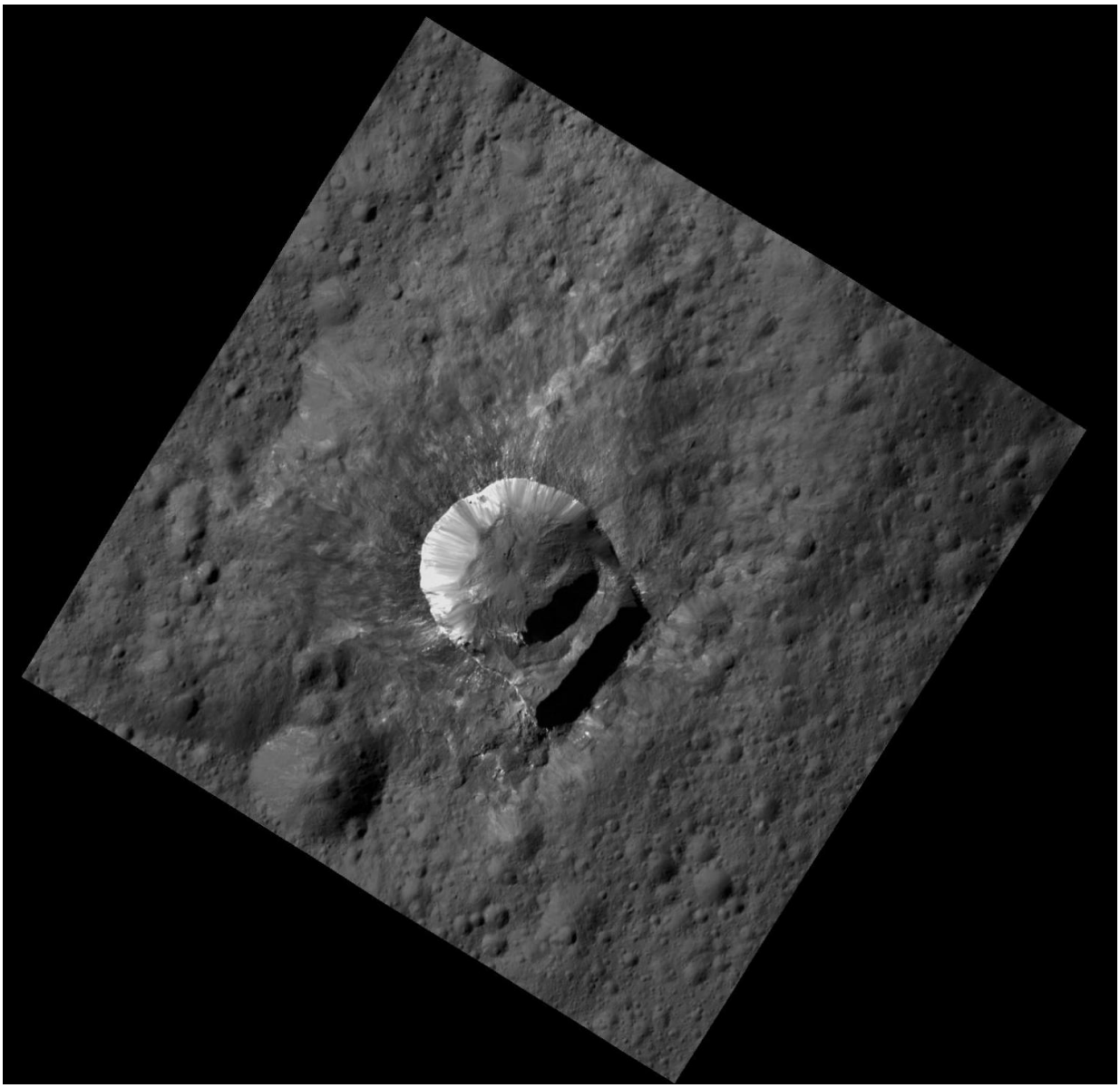
The crater's polygonal nature (meaning it resembles a shape made of straight lines) is noteworthy because most craters seen on other planetary bodies, including Earth, are nearly circular. The straight edges of some Cerean craters, including Haulani, result from pre-existing stress patterns and faults beneath the surface.

A hidden treasure on Ceres is the 6-mile-wide (10-kilometer-wide) Oxo Crater, which is the second-brightest feature on Ceres (only Occator's central area is brighter). Oxo lies near the 0 degree meridian that defines the edge of many Ceres maps, making this small feature easy to overlook. Oxo is also unique because of the relatively large "slump" in its crater rim, where a mass of material has dropped below the surface. Dawn science team members are also examining the signatures of minerals on the crater floor, which appear different than elsewhere on Ceres.

"Little Oxo may be poised to make a big contribution to understanding the upper crust of Ceres," said Chris Russell, principal investigator of the mission, based at the University of California, Los Angeles.



This image is a mosaic of views that NASA's Dawn spacecraft took in its low-altitude mapping orbit, at a distance of 240 miles (385 kilometers) from the surface of Ceres. In the center is Haulani Crater, which has a diameter of 21 miles (34 kilometers). Credit: NASA/JPL-Caltech/UCLA/MPS/DLR/IDA/PSI



The 6-mile-wide (10-kilometer-wide) crater named Oxo Crater is the second-brightest feature on Ceres. Only Occator's central area is brighter. Oxo lies near the 0 degree meridian that defines the edge of many Ceres maps, making this small feature easy to overlook. NASA Dawn spacecraft took this image in its low-altitude mapping orbit, at a distance of 240 miles (385 kilometers) from the surface of Ceres. Oxo is also unique because of the relatively large "slump" in its crater rim, where a mass of material has dropped below the surface. Dawn science team members are also examining the signatures of minerals on the crater floor, which appear different than elsewhere on Ceres. The image has

been rotated so that north on Ceres is up. Credit: NASA/JPL-Caltech/UCLA/MPS/DLR/IDA/PSI

Provided by NASA