

Image: Layered deposits at the south pole of Mars

5 June 2018



Credit: ESA/Roscosmos/CaSSIS , CC BY-SA 3.0 IGO

The ExoMars Trace Gas Orbiter captured this view of part of the south polar ice cap on Mars on 13 May 2018.

The poles of Mars have huge ice caps that are similar to Earth's [polar caps](#) in Greenland and Antarctica. These caps are composed primarily of water ice and were deposited in layers that contain varying amounts of dust. They are referred to as the martian Polar Layered Deposits (PLD).

Thanks to massive canyons that dissect the layered deposits, orbiting spacecraft can view the layered internal structure. The ExoMars orbiter's Colour and Stereo Surface Imaging System, CaSSIS, viewed this 7 x 38 km segment of icy layered deposits near the margin of the South PLD, which extend as far north as 73°S.

Here, CaSSIS has imaged remnant deposits within a crater at this margin. The beautiful variations in colour and brightness of the layers are visible through the camera's [colour](#) filters. It highlights the bright ice and the redder sandy deposits toward the top of the image.

The ExoMars programme is a joint endeavour between ESA and Roscosmos.

Provided by European Space Agency

APA citation: Image: Layered deposits at the south pole of Mars (2018, June 5) retrieved 20 September 2019 from <https://phys.org/news/2018-06-image-layered-deposits-south-pole.html>

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