



2004-2019 › 20,000 ORBITS OF MARS EXPRESS

HRSC on Mars Express

The High Resolution Stereo Camera (HRSC) is one of six experiments on the European Space Agency (ESA) *Mars Express* orbiter. The 20-kilogram camera system was developed at the German Aerospace Center (Deutsches Zentrum für Luft- und Raumfahrt; DLR) and designed to image the surface of Mars at high resolution, in colour and in 3D.

Nine line sensors are arranged transversely to the flight direction – four colour and four stereo channels each oriented obliquely towards the surface, as well as a nadir channel directed perpendicularly towards Mars. These nine channels scan the planet's surface simultaneously during an imaging cycle. Digital terrain models generated from the stereo channel data visualise the topography of the planet.

The HRSC science team consists of 50 researchers from 35 institutions in 11 countries. The Principal Investigator for the camera experiment is Professor Ralf Jaumann from the DLR Institute of Planetary Research in Berlin Adlershof. This is also where the systematic processing of the image data takes place. Staff in the Department of Planetary Sciences and Remote Sensing at Freie Universität Berlin use the data to create the image products shown here.

Mars Express is ESA's first planetary mission. The spacecraft was launched on 2 June 2003 and reached Mars on 25 December of the same year. By 26 October 2019, it had orbited Mars 20,000 times. Originally planned to last for only two Earth years, the Mars Express mission has been extended several times – most recently until the end of 2022.

Information about the individual images and the mission:
www.dlr.de/mars



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