

NASA/JPL-Caltech/UAronza

The Dark Spot on Mars

ESP_013951_1955 Science Theme: [Geologic Contacts/Stratigraphy](#)

[Italian](#) [Spanish](#)

On 13 October 1659, Dutch astronomer Christiaan Huygens turned one of his telescopes towards a bright orange spot in the sky and produced what Percival Lowell would later call “the first drawing of Mars worthy of the name ever made by man.” Huygens included a dark spot in his drawing that is thought to represent Syrtis Major, a small sliver of which is visible in this HiRISE image.

Syrtis Major is a shield volcano. Its dark color comes from the dark basaltic rock in the area, visible because it lacks the dust that paints the rest of the planet its distinct, rusty red color. Tracking this dark spot in repeated observations, Huygens concluded that Mars rotated every twenty-four hours: a time not too far off from its true rotation period of approximately 24 hours and 39.58 minutes.

WALLPAPER

[1280](#)

[1920](#)

[2560](#)

HIFLYER

[PDF \(11 x 17\)](#)

in diameter, or 30 miles) into this rock exposes layers along its wall. These layers may be made from several different geologic materials, such as lava flows, debris from nearby impact craters, or deposits of dust or sand. They may represent different periods of deposition and erosion. The layers are of varying thickness: some of the lighter, resistant units are less than 10 meters thick, while some of the darker layers are over 100 meters thick.

Written by: Andrea Philippoff Jones (23 December 2009)

This is a stereo pair with [ESP_020254_1955](#).

Acquisition date 18 July 2009	JPEG Black and white map projected non-map	ANAGLYPHS Map-projected, reduced-resolution Full resolution JP2 download Anaglyph details page
Local Mars time 14:22	IRB color map projected non-map	ADDITIONAL INFORMATION B&W label Color label Merged IRB label Merged RGB label EDR products HiView
Latitude (centered) 15.512°	Merged IRB map projected	
Longitude (East) 72.814°	Merged RGB map projected	
Spacecraft altitude 275.4 km (171.1 miles)	RGB color non-map projected	NB IRB: infrared-red-blue RGB: red-green-blue About color products (PDF)
Original image scale range 55.6 cm/pixel (with 2 x 2 binning) so objects ~167 cm across are resolved	JP2 Black and white map-projected (498MB)	Black & white is 5 km across; enhanced color about 1 km For scale, use JPEG/JP2 black & white map-projected images
Map projected scale 50 cm/pixel and North is up	IRB color map-projected (247MB)	
Map projection Equirectangular	JP2 EXTRAS Black and white map-projected (271MB) non-map (249MB)	USAGE POLICY All of the images produced by HiRISE and accessible on this site are within the public domain: there are no restrictions on their usage by anyone in the public, including news or science organizations. We do ask for a credit line where possible: NASA/JPL-Caltech/UArizona
Emission angle 8.5°	IRB color map projected (106MB) non-map (250MB)	
Phase angle 43.7°		
Solar incidence angle	Merged IRB	

Solar longitude

305.6°, Northern Winter

For non-map projected images

North azimuth: 97°

Sub-solar azimuth: 321.3°

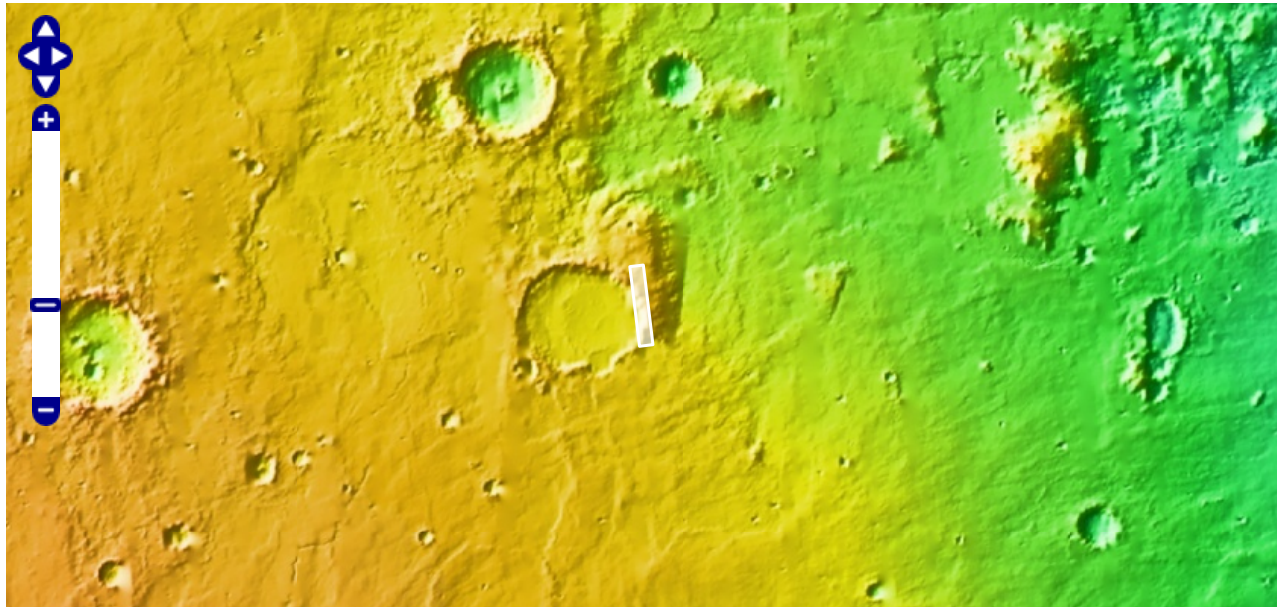
Merged RGB

[map-projected](#) (469MB)

RGB color

[non map](#) (232MB)

NASA's Jet Propulsion Laboratory, a division of the California Institute of Technology in Pasadena, Calif., manages the Mars Reconnaissance Orbiter for NASA's Science Mission Directorate, Washington. The HiRISE camera was built by Ball Aerospace and Technology Corporation and is operated by the University of Arizona.



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High Resolution Imaging Science Experiment
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