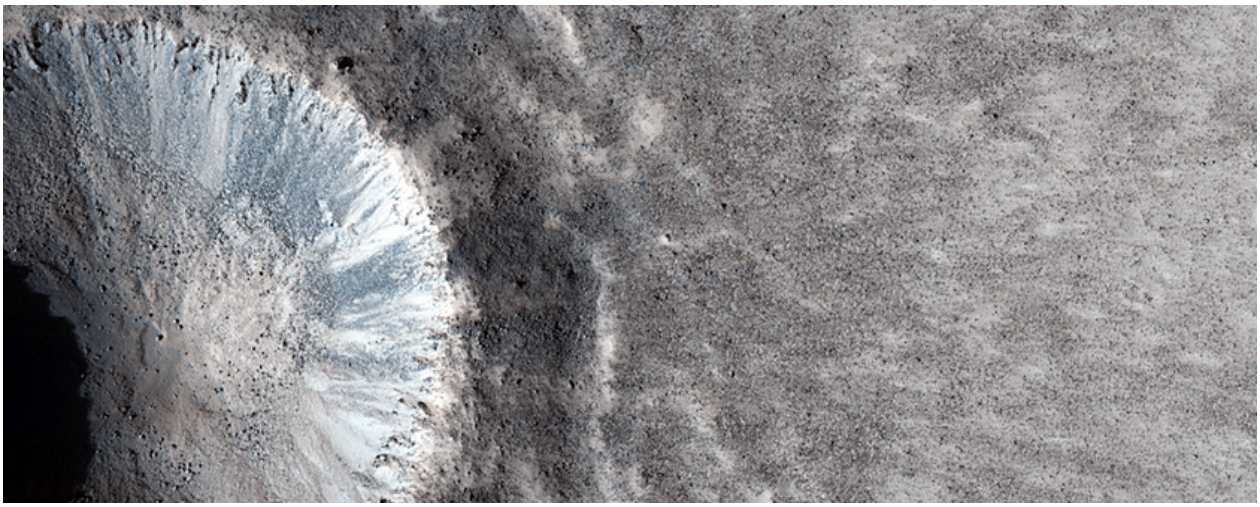

NASA/JPL-Caltech/UArizona

Fresh Crater North of Tharsis Region

ESP_019641_2310 Science Theme: Impact Processes

Greek Italian Portuguese Spanish

This impact crater is approximately one kilometer in diameter. The ejecta blanket (remnants of the material from the original impact) is still visible indicating that the crater may be very fresh.

But what do we mean by the word “fresh,” or even “recent,” as some craters are described? When talking about craters on Mars, both terms are relative: the impact that created the crater in this observation could have occurred millions of years ago! We can often differentiate between older and younger craters by looking at their rims. A crater rim that appears more defined or sharp, versus one that is clearly eroded, indicates the former is more recent, or “fresh.“

The Tharsis region on Mars is home to some of the largest shield volcanos on the Red Planet, including the largest, Olympus Mons.

AUDIO
MP3

WALLPAPER
1280
1920
2560

HIFLYER
PDF (11 x 17)

HISLIDES
PowerPoint
Keynote
PDF

Written by: HiRISE Science Team (29 November 2010)

This is a stereo pair with ESP_019140_2310.

Acquisition date
04 October 2010

Local Mars time
15:14

Latitude (centered)
50.819°

Longitude (East)
241.912°

Spacecraft altitude
302.3 km (187.9 miles)

Original image scale range
31.2 cm/pixel (with 1 x 1 binning) so objects ~94 cm across are resolved

Map projected scale
25 cm/pixel and North is up

Map projection
Equirectangular

Emission angle
14.6°

Phase angle
71.9°

Solar incidence angle
58°, with the Sun about 32° above the horizon

Solar longitude
158.9°, Northern Summer

For non-map projected images

JPEG
Black and white
map projected non-map

IRB color
map projected non-map

Merged IRB
map projected

Merged RGB
map projected

RGB color
non-map projected

JP2
Black and white
map-projected (542MB)

IRB color
map-projected (257MB)

JP2 EXTRAS
Black and white
map-projected (267MB)
non-map (233MB)

IRB color
map projected (79MB)
non-map (176MB)

Merged IRB
map projected (144MB)

Merged RGB
map-projected (139MB)

RGB color
non map (174MB)

ANAGLYPHS
Map-projected, reduced-resolution
Full resolution JP2 download
Anaglyph details page

ADDITIONAL INFORMATION
B&W label
Color label
Merged IRB label
Merged RGB label
EDR products
HiView

NB
IRB: infrared-red-blue
RGB: red-green-blue
About color products (PDF)

Black & white is 5 km across; enhanced color about 1 km
For scale, use JPEG/JP2 black & white map-projected images

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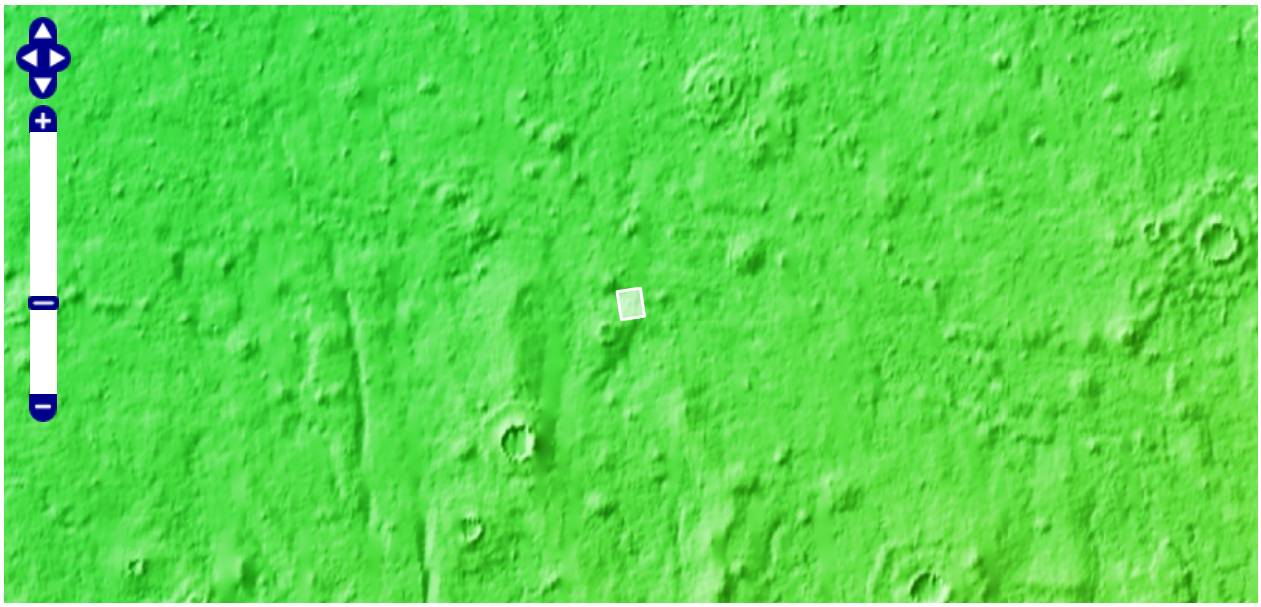
NASA/JPL-Caltech/UArizona

POSTSCRIPT
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

and Technology Corporation and is operated by the University of Arizona.



High Resolution Imaging Science Experiment
HiRISE Operations Center
1541 E. University Blvd
Tucson, Arizona 85721

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