

MARS STUDENT IMAGING PROJECT ASU MARS EDUCATION PROGRAM

Additional Instruments in JMARS



NAME: SPACECRAFT: DATA TYPE: MAX RESOLUTION: OPERATED BY: THEMIS (TH____E___I___S___) Mars Odyssey Spacecraft

Visible = 18m/pixel, Infrared = 100m/pixel Arizona State University



NAME: SPACECRAFT: DATA TYPE: MAX RESOLUTION: OPERATED BY: HiRISE (Hi_-R___I__S___E__) Mars Reconnaissance Orbiter

Visible = 0.3m/pixel University of Arizona



NAME: SPACECRAFT: DATA TYPE: MAX RESOLUTION: OPERATED BY: CTX (C_____ Mars Reconnaissance Orbiter

Visible = 6m/pixel Malin Space Science Systems



NAME: SPACECRAFT: DATA TYPE: MAX RESOLUTION: OPERATED BY: TES (T_____E____S____) Mars Global Surveyor

3km/pixel Arizona State University



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Important Maps in JMARS



NAME:

What Does It Show:

The topographic data has been color-coded to make it easier to read. Warm colors (orange, red, etc) indicate high elevations and cool colors (blue, purple, etc) indicate low elevations.



The infrared data gives the temperature of the surface during the day. Dense material (ie: bedrock) will warm slowly and appear dark. Less dense material (ie: sand) will warm quickly and appear bright. Gaps in coverage are shown in black.



NAME:

What Does It Show:

The infrared data gives the temperature of the surface during the night. Dense material (ie: bedrock) will cool slowly and appear bright. Less dense material (ie: sand) will cool quickly and appear dark. Gaps in coverage, including the poles, are transparent.

NAME:

What Does It Show:

This map was generated using TES spectra and shows how much hematite is on the surface. Warm colors indicate a high amount; cool colors indicate a low amount. Gaps in coverage are transparent.



NAME:

What Does It Show:

Epithermal neutrons from space hit Mars and are reflected back to the detector on Mars Odyssey. Warm colors represent areas that reflect a lot of epithermal neutrons; the cool colors represent areas that absorb them. On Mars the best absorbers of epithermal neutrons are H_2O molecules, so the warm color areas have less H_2O and the cool color areas have more H_2O .