

Sol 2931: Mars Hand Lens Imager instrument acquires image

November 6 2020



Credit: NASA/JPL-Caltech/MSSS

NASA's Mars rover Curiosity acquired this image using its Mars Hand Lens Imager (MAHLI), located on the turret at the end of the rover's

robotic arm, on November 3, 2020, Sol 2931 of the Mars Science Laboratory Mission, at 15:21:13 UTC.

When this image was obtained, the focus motor count position was 13014. This number indicates the internal position of the MAHLI [lens](#) at the time the image was acquired. This count also tells whether the dust cover was open or closed. Values between 0 and 6000 mean the dust cover was closed; [values](#) between 12500 and 16000 occur when the cover is open. For close-up images, the motor count can in some cases be used to estimate the distance between the MAHLI lens and target. For example, in-focus images obtained with the [dust cover](#) open for which the lens was 2.5 cm from the target have a motor count near 15270. If the lens is 5 cm from the target, the [motor](#) count is near 14360; if 7 cm, 13980; 10 cm, 13635; 15 cm, 13325; 20 cm, 13155; 25 cm, 13050; 30 cm, 12970. These correspond to image scales, in micrometers per pixel, of about 16, 25, 32, 42, 60, 77, 95, and 113.

Most images acquired by MAHLI in daylight use the sun as an illumination source. However, in some cases, MAHLI's two groups of white light LEDs and one group of longwave ultraviolet (UV) LEDs might be used to illuminate targets. When Curiosity acquired this image, the group 1 white light LEDs were off, the group 2 white light LEDs were off, and the ultraviolet (UV) LEDs were off.

Provided by NASA

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