

Are dust devils whirling around the Curiosity rover?

19 November 2012, by Nancy Atkinson



A Martian dust devil roughly 12 miles (20 kilometers) high was captured winding its way along the Amazonis Planitia region of Northern Mars on March 14, 2012 by the High Resolution Imaging Science Experiment (HiRISE) camera on NASA's Mars Reconnaissance Orbiter. Despite its height, the plume is little more than three-quarters of a football field wide (70 yards, or 70 meters). Credit: NASA/JPL-Caltech/UA

In this latest update from the MSL team, Ashwin Vasavada, the Deputy Project Scientist, explains how Curiosity has been monitoring the winds and radiation levels in Gale Crater. Curiosity has also been looking for dust devils—the small dust storms that have been seen by other spacecraft as they whirl around Mars. While Curiosity hasn't been able to 'see' them by taking images directly, other instruments indicate dust devils may be whirling right over the rover.

The team said that during the first 12 weeks after Curiosity landed in Gale Crater, they have analyzed data from more than 20 atmospheric events with at least one characteristic of a whirlwind recorded by the Rover [Environmental Monitoring Station](#) (REMS) instrument. Those

characteristics can include a brief dip in air pressure, a change in wind direction, a change in wind speed, a rise in air temperature or a dip in ultraviolet light reaching the rover. Two of the events included all five characteristics.

Vasavada said that the winds blow from all directions where the rover sits, in between the central mound of Gale Crater (Aeolis Mons/Mt. Sharp) and the rim of the crater, which makes it an area ripe for dust devils.

Vasavada also points out that the [Spirit and Opportunity](#) rovers were able to capture [dust devils](#) in their own vicinity, which was an exciting accomplishment. Curiosity's MastCams can take 720p (1280x720 pixels) high-definition video at a rate of about 10 frames per second, so if the team was ever lucky enough to capture a dust devil in action, it would be our best-ever view of a dust devil on the surface of Mars, and would be tremendously exciting.

Here's a huge dust devil captured from orbit by the HiRISE camera on the Mars Reconnaissance Orbiter:

Source: [Universe Today](#)

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