

Mars: The Dynamic Planet

Mars is the fourth planet from the Sun . It is a dynamic planet, with ice clouds, dust storms, volcanoes, vast plains, highlands, polar ice, and craters.

In this portrait we find several of these imposing features. The tactile areas on this image show only the shapes of these features, not their relative altitude.

Starting at the topmost edge, find a raised area, slightly left of center. This is a dust storm near the northern pole.

Next, a band of water ice clouds cuts a swath across the northern regions. This appears as a pronounced, flat, smooth, diagonal shape just under the polar dust storm.

Moving downward and just right of center, a large, relatively flat tactile region is a vast plain where the surface of Mars is heavily dust-

covered. The area covers almost the whole central and eastern parts of the northern hemisphere. The raised areas bounding this region are less dusty.

The irregularly-shaped lower edge of the dusty plains marks a transition into a less dusty area called Meridiani, which is just southwest of the centerpoint of this view. This is where the Mars Rover, Opportunity, has been gathering data since 2004.

Moving to the southern hemisphere, more water ice clouds can be found at far left and far right. These appear as thin depressions along the planet's left and right edges.

At the very bottom of this view, the southern polar ice cap covers the south pole and is a smooth, flat area on the tactile image. The top boundary of the southern ice cap creates a raised, straight, horizontal edge.

Just above and to the right of the southern polar ice cap, the curved rim of the Hellas basin is subtly apparent, with a raised area inside it. The Hellas basin is a giant impact crater, one of the largest

impact craters in our solar system. A dust storm was occurring when this shot was taken. Mars dust storms frequently originate in the Hellas Basin. This powerful storm triggered other dust storms far away on Mars.

**For more information on Tactile Astronomy projects from the Space Telescope Science Institute in Baltimore, Maryland, go to the following page at the Web site, Amazing Space:
<http://amazing-space.stsci.edu/tactile-astronomy/>**