

Signs of recent Ice Age noted on Mars

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Mars has apparently undergone a recent Ice Age, scientists say.

Researchers drew the conclusion based on the distribution of ice at and slightly below ground level near the Red Planet's polar regions.

Two hypotheses have been suggested to explain this ice: that it fell there as precipitation during recent ice ages, or that water vapor spread through the surface rocks, gravel and soil.

To find out which alternative was correct, Samuel C. Schon of Brown University in Rhode Island and colleagues used data from the High Resolution Imaging Science Experiment, or HiRISE, an imaging instrument aboard NASA's Mars Reconnaissance Orbiter spacecraft.

The group examined the structure of exposed subsurface Martian terrain. The researchers noticed that the terrain features layered deposits many meters (yards) thick that stretch over many hundreds of meters.

They suggest that climate variations are most likely the source of this stratification. The layers probably formed as dust, ice, and snow were deposited on the ground during recent ice ages, which occurred during periods when Mars's axis of rotation was more tilted than usual, the scientists argued.

Vapor diffusion would be unlikely to result in the layered structure, they added. They note that the observations also suggest that significant subsurface ice may remain in the 30-50 degrees mid-latitude regions.

The findings were published Aug. 6 online in the research journal *Geophysical Research Letters*.