

A musical quest

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Study shows evolution of climate on Mars

The latest findings from the Zhurong rover have shed light on both the geological and the climate changes that Mars underwent about 400,000 years ago, offering new insight into the study of climate evolution on the red planet, according to a study published on Thursday in the journal Nature.

Mars is the planet that most closely resembles Earth in the solar system. It is thought that the study of its evolution can provide a reference for the future of our own planet.

Windblown sediments constitute the most important geological process on Mars in recent millennia, as they provide a record of the characteristics of the Martian climate and the process of climate change on the modern planet.

Researchers at the National Astronomical Observatories of China, the Institute of Geology and Geophysics and the Chinese Academy of Sciences' Institute of Tibetan Plateau Research, in collaboration with peers at Brown University in the United States, used the Tianwen 1 orbiter's high-resolution camera and the Zhurong rover's terrain and multispectral cameras, surface composition analyzer and meteorological measuring instruments to obtain data from the Martian surface.

They analyzed the wind direction and absolute model ages of Martian dunes on the southern Utopian Plain near the rover's landing site by studying their surface structure and impact crater size-frequency distribution.

Their findings suggest that the region probably experienced a change in climate marked by a change in the prevailing wind direction approximately 400,000 years ago, coinciding with the end of the Martian ice age.

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