

Image: Barchan and linear dunes on Mars

March 11 2024, by Monika Luabeya



Credit: NASA/JPL-Caltech/University of Arizona

On Jan. 16, 2020, the Mars Reconnaissance Orbiter (MRO) captured this image of two types of sand dunes on Mars: barchan and linear dunes.

The small dots are called barchan dunes, and from their shape we can tell that they are upwind. The downwind dunes are long and linear. These two types of dune each show the wind direction in different ways: the barchans have a steep slope and crescent-shaped "horns" that point downwind, while the linear dunes are stretched out along the primary [wind direction](#). Linear dunes, however, typically indicate at least two different prevailing winds, which stretch out the sand along their average direction.

Barchan and [linear dunes](#) aren't just a Martian phenomenon; we can also see them on Earth. Astronauts aboard the International Space Station have snapped photos of them occurring in Brazil and Saudi Arabia.

Provided by NASA

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