

Dry ice blocks 'hovercraft' down Martian dunes

Dry ice (frozen carbon dioxide) blocks form naturally every winter in the Martian polar regions.

When warmed, dry ice blocks sublime (go directly from solid to gas), rather than melt. This creates a cushion of gas beneath the block that makes it very easy for the block to slide or roll down the dune slope, carving out a shallow trough.

Although Mars is colder and has much lower atmospheric pressure, calculations predict the same behavior as seen with experiments on Earth dunes. Videos can be found at [here](#).

When the block stops, it continues sublimating and the gas flow can dig out a pit. The block will eventually disappear, leaving just the track and ending-pit.

Over many winters, downhill motion of broken dry ice blocks can perhaps form the large linear gullies (up to 2km long!) seen on Martian dunes.

For more info, see Diniega et al., 2013, *Icarus*, doi:/10.1016/j.icarus.2013.04.006.

