Widespread Megaripple Activity Across the North Polar Ergs of Mars

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Martian megaripples, which are intermediate-scale (5–40-m spacing, ~1–2-m tall) wind-driven (aeolian) bedforms, have been studied extensively and thought to be largely inactive relics of past climates save for a few exceptions.

Key Points:

• Abundant megaripple populations were identified across the north polar ergs of Mars and found to be migrating with dunes and ripples.

• Polar megaripple dynamics and sand fluxes are enhanced relative to lower-latitude sites, despite the shorter migration season due to polar ice.

• Spring and summer winds and polar storms were attributed as the cause for the increased activity rather than ice-related processes.