



Olivine-Bearing Dune Fields and Wall Rock in Coprates Chasma

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Dune sand, wall spurs, and boulders are all partially composed of olivine (according to CRISM data), a common mineral formed in volcanic processes, supporting the notion for local sourcing of dunes. Olivine is highly susceptible to weathering by aqueous processes indicating these dunes and the wall debris formed after any such activity. Interestingly, clay minerals (known as phyllosilicates) are detected farther up the wall suggesting that aqueous alteration of wall materials has occurred in the ancient past.