



ID de Contribution: 3

Type: Oral presentation

Evidence of a new component in the Martian 3 μm water band under North polar latitudes

vendredi 12 février 2021 14:15 (15 minutes)

Mars is known to present a widespread absorption band in the 3 μm spectral range. Related to water or aqueous hydration of a mixture, it has been used in previous studies to retrieve the surface hydration of the Red Planet, using observations of the OMEGA instrument onboard Mars-Express, that has been providing a global mapping of the Martian surface in the 0.3 – 5.1 μm spectral range from 2004 to 2010. These studies have revealed an overall increase of the water hydration in the polar regions. Several hypotheses currently exist to explain this phenomenon, but the exact nature of this water enhancement is not yet fully understood. Here, we present the first results of our study showing evidence of an additional component in this 3 μm band that only appears under Northern latitudes. As this signature has been observed to be stable across the years, we currently favor the hypothesis of a specific stable component. However, no clear association with other IR signatures has been firmly identified so far. Further investigations are required to fully understand this signature, but it may be of importance in the search for the origin of the strong increase of surface aqueous alteration in the Martian polar regions.

Field

Planetology (including small bodies and exoplanets)

Day constraints

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Classification de Session: Talk

Classification de thématique: Astrophysics