



Sulfate deposits seen at high resolution by OMEGA/Mars Express.

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The imaging spectrometer OMEGA, onboard Mars Express allowed the identification of extended hydrated sulfate deposits in the Valles Marineris and Terra Meridiani regions. Specifically, the minerals kieserite, gypsum, and other polyhydrated sulfates were identified. Strong ferric absorption bands are identified in association with these deposits. These sulfate deposits are always associated with layered deposits. Over the last three months, these sulfate deposits were observed at high resolution (~300 m/pixel), while they had mostly been observed at lower resolution (~2 km) until then. The high resolution campaign allowed us to confirm and extend the mineralogical mapping acquired thus far. Globally, the consistency between lower resolution observations and higher resolution observations is excellent. The higher resolution observations allow to confirm that even tentative mineralogical identifications associated to weak absorption bands or isolated pixels were reliable. Moreover, higher resolution observations allow us to obtain distinct signatures for the different minerals, since the effect of mixing with other minerals is reduced. Thus, several areas, which were not identified at lower spatial resolution, are very distinct at higher resolution.