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OMEGA/MEx Mars surface compositional mapping: an overview

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On board Mars Express, OMEGA is mapping the surface of Mars since January 2004. With an IFOV of 1.2 mrad, the spatial sampling varies from 300m to 5 km depending on the observation altitude, from pericenter to 4000 km respectively. The spectral range (0.35 to 5.1 μm) and spectral sampling have been chosen to enable the identification of most surface constituents: minerals (silicates, oxides, hydrated minerals, salts), frosts and ices. The resulting dataset acquired so far, with more than 50% of the planet covered at medium (2 – 5 km) resolution, and most types of units sampled at high resolution, offers a unique possibility to decipher the Martian geological and climatic history, over timescales ranging from billion of years to seasonal variations. We will present and discuss some of the most striking results.