



A near-Infrared reflectance data cube of the Martian surface

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OMEGA ("Observatoire pour la Minéralogie, l'Eau, les Glaces et l'Activité") the hyperspectral VIS-NIR imager on board Mars Express, has acquired a global coverage of Mars, with major outcomes in terms of surface and atmospheric properties. The image-cubes acquired within the last 10 years have enabled in particular the building of global maps of key minerals using independent OMEGA observations for each pixel. Following those previous global studies, a new approach consists in deriving a 3-D global image cube of Mars by merging atmospheric- and aerosol-corrected NIR data cubes. The aerosol correction is performed using a radiative transfer model developed by Vincendon et al. (2007). The final product is a global cube containing $0.97\mu\text{m}$ to $2.5\mu\text{m}$ spectra at a resolution of 32pix per degree with a surface coverage of $\sim 90\%$ from 60S to 60N. It allows the extraction of spectrum from any location of Mars, and global maps can directly constructed. We will present global maps of new spectral criteria giving global mineral distributions. The application of surface radiative transfer model to each spectrum will enable the retrieve of quantitative mineral abundance distributions. A comparison with global maps of mineral abundances by TES (Thermal Emission Spectrometer) is foreseen.