



The albedo spectrum of Phobos from UV to IR obtained with SPICAM and OMEGA on Mars Express

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Mars Express made several encounters with Phobos for the last 6 years, including recent very close flybys (closest approach ~ 120 km from the Phobos surface) executed in February and March 2010. Observations with SPICAM and OMEGA covers the range from UV (190-310 nm) to visible and mid IR up to $5 \mu\text{m}$, which allows to build a composite spectrum of the reflectance and try to determine the composition of its surface material by comparison with laboratory spectra of meteoritic material and mineral samples. Special care must be taken to combine measurements of the three spectrometers which have different FOV, to ensure that the solar incidence angle, the phase angle and the emission angle are identical in the three wavelength domains. Spectra will be presented for both "blue" units and "red" units. For the determination of the geometrical albedo, observations made from a larger distance are preferred, allowing comparison with other asteroids like Lutetia.

Since Phobos is rather believed to be formed from Mars debris (like the Moon from Earth debris), a possible similarity of reflectance spectrum with asteroids would point to the idea that the surface material was processed through space weathering or is of external origin.