



Photometric properties of the lunar surface from AMIE/SMART-1 multiangular imaging.

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Spot pointing observations (i.e. observing a target on the lunar surface under different emergence angles) have been conducted in 2006 by the AMIE camera onboard the SMART-1 spacecraft in order to study the optical/photometric properties of selected areas on the Moon. These multiangular observations are used to assess the variability of the photometric behavior and physical properties (roughness, scattering properties) of the lunar surface. This information is a key for documenting geological processes related to regolith formation and evolution (maturity), to volcanic unit emplacement (such as pyroclastic deposits) and to cratering (e.g. melts and blocks distributions in the crater floor and ejecta). The objective of the present paper is to evaluate the quality of the available datasets for photometric studies and to estimate the influence of the geometry of observations on the derivation of quantitative photometric products (e.g., phase functions).