



HAL
open science

A revised UValbedo spectrum of Phobos

Jean-Loup Bertaux

► **To cite this version:**

Jean-Loup Bertaux. A revised UValbedo spectrum of Phobos. European Planetary Science Congress 2010, Sep 2010, Rome (Italie), Italy. pp.410. hal-04115390

HAL Id: hal-04115390

<https://hal.science/hal-04115390>

Submitted on 8 Jun 2023

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



A revised UV albedo spectrum of Phobos

Jean-Loup Bertaux (1), Eric Quémerais (1) and Aurélie Rebérac(1).

(1) LATMOS/IPSL, UVSQ, rue des Garennes, 78 Guyancourt

Abstract

We present a revised spectral albedo of PHOBOS, collected in the UV (190-310 nm) with SPICAM during several encounters of Mars Express with Phobos.

1. Introduction

The SPICAM instrument on board Mars Express was used at almost all encounters of Mars Express with Phobos, in order to retrieve the albedo spectrum and try to determine the composition of its soil. Early results in the UV range (180-310 nm) were reported at DPS in 2004 by Perrier et al. (2004). They showed no sign of variation on Phobos, a low albedo, and three broad absorption spectral features at 210-240 nm, 255 and 300 nm.

2. Reason for revision

However, this early analysis was based on a calibration of SPICAM using observations of the star Delta Scorpii in 2004, and based on its IUE absolute flux. We realized that this star is not appropriate, since it became highly variable since 2001. Therefore, new calibrations were performed on other stars in 2005 and 2009. They show no variation between these dates, but the absolute calibration level and shape is somewhat different.

3. Results

As a result, the revised albedo spectrum of Phobos is higher by a factor of about two (at ~ 3%) in the range 200-300 nm; the spectral features have decreased significantly. There is still a significant absorption at 210-240 nm, similar to the well known interstellar dust absorption peak, which has been assigned by some authors to PAH molecules.

