



Meteoroid-induced vaporisation on Mercury and the Moon

G.Cremonese (1), M.Bruno (2), S.Marchi (3)

(1) INAF-Osservatorio Astronomico di Padova - Italy, (2) Università di Torino - Italy, (3) Università di Padova - Italy

Meteoroid impact has been shown to be a source of sodium, and most likely of other elements, at the Moon. The same process is also relevant for Mercury. Using a new estimate of the meteoroid flux of particles greater than 1 cm at Mercury and the Moon and the Cintala (1992) meteoroid distribution for size smaller than 1 cm, we have calculated the contribution of sodium to their exospheres due to the impacts. Then we make the comparison on how this mechanism is important on both bodies. We show also the resulting production rate of sodium and potassium in the vapor according to a specific model of the surface composition for both bodies.