



Plasma Interactions with the Atmospheres of Io, Europa and Enceladus

Fran Bagenal (1), Peter Delamere (1), Vincent Dols (1), Bobby Fleshman (1,2)

(1) University of Colorado, Boulder, CO USA(bagenal@lasp.colorado.edu), (2) University of Oklahoma, Norman, OK USA

Interactions of the magnetospheric plasma with the extended atmospheres of Io, Europa and Enceladus involves not only the physical chemistry of the incoming plasma reacting with neutrals but also the electrodynamics that causes deflection of the plasma around the conducting objects (or their ionospheres). Furthermore, the neutral exosphere and scattered corona depend on the energy deposited by the plasma interaction. We present models we have developed that tackle each of these components of the interaction and compare with observations.