



Enceladus' plasma interaction with Saturn's magnetosphere

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We study the local plasma interaction of Enceladus and its south polar neutral gas plume with the Saturnian magnetosphere with three-dimensional plasma simulations. In our presentation we will compare our model results with the magnetic field and neutral gas observations of Cassini's flybys at Enceladus to constrain properties of Enceladus' gas plumes. Through charge exchange and ionization in the gas cloud the plasma flow is slowed and diverted. We investigate how the neutral gas environment around Enceladus modifies the magnetospheric plasma flow and magnetic field environment around Enceladus and provide estimates of the total mass loading rate in the vicinity of Enceladus.