IO'S FLUX TUBE FOOTPRINT

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Abstract

Continued observations of the IFT Footprint at NASA's Infrared Telescope facility (IRTF) and Hubble Space Telescope (HST) now better constrain the nature of the interaction between Jupiter's magnetic field and Io. Evidence of multiple, closely–spaced (double) IFT footprints is found on occasion in both IR and UV observations. Observations of H3+ emission (IRTF) are numerous enough to establish the behavior of the footprint intensity and lead angle with footprint System III longitude and time. The repeatable lead angle behavior, which determines the position of the IFT foot at any System III longitude, may be of special interest in studies of the occurrence probability of DAM radio emissions.

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