

**The Relationship between Io's Thermal Regimes and non-SO<sub>2</sub> Surface Constituents.  
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There are a number of features in the infrared spectra, obtained by the Galileo Near Infrared Mapping Spectrometer (NIMS) instrument, of Io's surface that are not related to the absorptions of SO<sub>2</sub>. Some of these features appear to correlate remarkably well with visible albedo. Most notably, the 3.15micron absorption feature(1) has a positive correlation with visually white material, principally in the equatorial region. The constituents contributing non-SO<sub>2</sub> features to Io's spectrum have not yet been identified. The spatial relationship between the occurrence of these constituents and thermal regimes on Io presented in this talk provides constraints on the physical properties of candidate materials. Mapping of these features is based on the full spectral distant observations obtained by NIMS during the Galileo prime and GEM mission phases and on spectral mapping techniques developed by L. Soderblom.

(1) Shirley, J, 2001 BAAS 33 #3, 1063

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