



Io observations by Juno/JIRAM

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The Jovian InfraRed Auroral Mapper (JIRAM) onboard the NASA Juno spacecraft is a dual-band imager and spectrometer designed to study the Jovian atmosphere and aurorae. In addition to its primary goal, JIRAM has been used to obtain images and spectra of the Galilean satellites, Jupiter's major moons. In December 2017, JIRAM was able to observe Io from about 500,000 km, yielding a ~ 100 km spatial resolution. These observations allowed characterization of the location and morphology of Io's hot spots, SO₂ frost distribution, and the temperature of selected locations on the surface. A possible new hot spot/volcano is identified close to the South Pole. The images of this region also show significant variations of the hot spot morphology, possibly due to lava flows. One year later, JIRAM was able to observe Io from a closer distance, and during an eclipse by Jupiter.

In this study, we present a summary of JIRAM's images, spectra and JIRAM-derived maps of Io.