



## **JIRAM, the Image Spectrometer in the Near Infrared proposed to NASA for joining to the Juno Mission to Jupiter.**

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JIRAM, the Jovian InfraRed Auroral Mapper, has been proposed as integration of the payload of the NASA New Frontiers mission Juno to Jupiter to be launched in 2011. JIRAM shares a single telescope, between an infrared camera and a spectrometer to allow a large observational flexibility in obtaining at the same time simultaneous images in the L and M bands with the spectral radiance over the central zone of the images. Moreover, JIRAM will be able to perform spectral imaging of the planet in the 2-5  $\mu\text{m}$  spectral region with a spectral resolution better than 10 nm. Instrument design, modes and observation strategy will be optimized for operations aboard a spinning satellite in polar orbit around Jupiter.

JIRAM, by means of its high contrast imaging and spectroscopy, will be contributed to the Juno mission in the exploration of the dynamics and the chemistry of Jovian auroral regions, in the study of the Jovian hot spots in order to determine their vertical structure and hence to test their formation mechanisms and in the sounding of the Jupiter atmosphere to map water moist convection and determine the water abundance and other constituents at depths corresponding to the water clouds.

The JIRAM heritage comes from Italian made visual-infrared imaging spectrometers dedicated to planetary exploration like Cassini /VIMS-V, Rosetta and Venus Express /VIRTIS, and Dawn /VIR-MS.