

Juno/JIRAM infrared observations of Jupiter: results of the first two years

A. Mura¹, A. Adriani¹, J. E. P. Connerney², S. Bolton³, F. Altieri¹, B.M. Dinelli⁴, M.L. Moriconi⁴, M. Amoroso⁵, A. Cicchetti¹, F. Fabiano², G. Filacchione¹, D. Grassi¹, A. Migliorini¹, R. Noschese¹, A. Olivieri⁵, G. Piccioni¹, C. Plainaki⁵, G. Sindoni¹, R. Sordini¹, F. Tosi¹, D. Turrini¹

¹ *National Institute for Astrophysics, Italy*, ² *Southwest Research Institute, United States*, ³ *NASA Goddard Space Flight Center, United States*, ⁴ *Consiglio Nazionale delle Ricerche, Italy*, ⁵ *ASI, Italy*,

Abstract

JIRAM, the Jovian InfraRed Auroral Mapper on board NASA/Juno mission, is an infrared camera and a spectrometer working in the infrared spectral range 2-5 μ m. The primary scientific objectives of the instrument are the study of the infrared aurora emitted from H3+ excited by electron precipitation, and the study of the concentrations of atmospheric compounds like water, ammonia and phosphine. There are present in the Jupiter troposphere and, in particular, in the hot spots and below the cloud deck. In addition, JIRAM could study of Jupiter's clouds and the dynamics of the atmosphere, the galilean moons.

The instrument was able to get its observations during the PJ1 and from PJ4 to PJ 14 passes, resulting in an almost complete coverage of both the auroral and the atmospheric emission from the planet. Here we present a highlights from the results obtained from those observations.