



Observations of Jupiter with Juno's Microwave Radiometer

Michael Janssen and the MWR Science Team

Jet Propulsion Laboratory, California Institute of Technology, Pasadena, United States (michael.a.janssen@jpl.nasa.gov)

The Juno Microwave Radiometer (MWR) was designed to investigate Jupiter's atmosphere and radiation belts as one of a suite of instruments that form the core of the Juno mission. The MWR is a six-frequency microwave radiometer with frequencies distributed approximately by octave from 600 MHz to 22 GHz. Combined, these allow the atmosphere to be probed continuously from the vicinity of the NH₃ cloud tops at around the 0.7-bar pressure level to at least as deep as 1000 bars. The MWR's main objectives are to investigate the unknown composition and dynamics of Jupiter's deep neutral atmosphere, with a secondary objective to study Jupiter's radiation belts with emphasis on the innermost regions of the magnetosphere. By the time of the meeting the Juno spacecraft will have made four observing passes of Jupiter distributed over a range of longitudes. Results will be presented on the nature and depth of the atmospheric circulations that are seen, along with details of the workings of the inner radiation belts.