

PPS004-P01

Room: Convention Hall

Time: May 25 17:15-18:45

Planetary Atmosphere Studied with Millimeter Wave Band NMA Interferometer

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Radio interferometer is a powerful tool for observing the planets in our solar system thanks to its high spatial resolution. We are carrying out the campaign observations toward Venus, Mars, Jupiter, Saturn, Neptune, and their satellites by using Nobeyama Millimeter Array (NMA) of National Astronomical Observatory of Japan. In the present compact baseline arrangement of the NMA, the spatial resolution is about 4 to 5 arcsec, which allows us to spatially resolve the disk of Mars, Venus, Jupiter, and Saturn. By applying retrieval analysis carefully to the observed spectral lines, we will be able to address the vertical distributions of the molecular species and the velocity structures of the planetary middle atmospheres.

In this meeting, we will present the preliminary scientific results and current operational status of the NMA.

Keywords: radio astronomy, planetary atmosphere, radio interferometer, nagoya university