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## Jupiter radio observation by the Japanese e-VLBI network

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The radiation mechanism of the Jupiter's decametric radio emissions has not been fully understood. The important parameter of this study is the coherent size of Jupiter's radio source, which can be determined by VLBI (Very Long Baseline Interferometry) observations. In this study, we developed a Jupiter radio e-VLBI system over the next generation Internet, JGN2plus and the Internet. The Jupiter radio e-VLBI observations by Kashima Space Research Center, Kochi National College of Technology, Agawa Jupiter Radio Observatory, Iitate Observatory (Tohoku University), and Awara Observatory (Fukui University of Technology), started from June 27th, 2009. The observing frequency of this Japanese e-VLBI network is from 26 to 28 MHz. The sampling frequency is 4 MHz for two channels (both polarization components). The analysis of the observed e-VLBI data is in underway. The important e-VLBI know-hows have been accumulated by these observations.

The Earth-Moon baseline length for the VLBI has a resolution of about 20 km for 20-25 MHz sources at Jupiter and will be able to open the window of new science for the micro structures and beaming of Jupiter's radio source. The future plan for the e-VLBI network on the Earth will be presented. Since a global e-VLBI network for the Earth stations will be needed to enable the Earth-Moon baseline VLBI, international collaboration is essential.

**Keywords:** Jupiter radio, e-VLBI, Radio source, Moon-Earth baseline VLBI, Radio emission mechanism, Future plan