Oral | Symbol P (Space and Planetary Sciences) | P-CG Complex & General

[P-CG38_1PM2] Planetary atmosphere, ionosphere and magnetosphere
Convener:*Takeshi Imamura(Japan Aerospace Exploration Agency, Institute of Space and Astronautical Science), Kanako Seki(Solar-Terrestrial Environment Laboratory, Nagoya University), Yukihiro Takahashi(Graduate School of Science, Hokkaido University), Yoshiyuki O. Takahashi(Center for Planetary Science), Keiichiro Fukazawa(Research Institute for Information Technology, Kyushu University), Hiromu Nakagawa(Planetary Atmosphere Physics Laboratory, Department of Geophysics, Graduate School of Science, Tohoku University), Chair:Hiromu Nakagawa(Planetary Atmosphere Physics Laboratory, Department of Geophysics, Graduate School of Science, Tohoku University)
Thu. May 1, 2014 4:15 PM - 6:00 PM 423 (4F)
Studies of planetary atmospheres, ionospheres and magnetospheres will be presented and discussed. Results of ground-based observations, plans of spacecraft missions, and theoretical studies are welcome.

5:30 PM - 5:45 PM

[PCG38-P14_PG] Data analysis of Jupiter's decametric radio emission observed by LWA1
3-min talk in an oral session
*Yoshiaki SHIMANOUCHI1, Kazumasa IMAI1, Tracy CLARKE2, Charles A. HIGGINS3, Masafumi IMAI4 (1.Kochi National College of Technology, 2.Naval Research Laboratory, 3.Middle Tennessee State University, 4.Kyoto University)
Keywords: Jupiter radio, decametric wave, data analysis, radio source, radio emission mechanism, LWA1

We present new results in the study of Jupiter's decametric emission obtained using the newly commissioned Long Wavelength Array Station 1 (LWA1). The LWA1 is a low frequency radio array operating in the frequency band between 10 and 88 MHz. The array consists of 256 dual polarization dipole stands, and observations are possible with up to four simultaneous beams, each of which has two independent tuning frequencies. The LWA1 is well suited to studying details of Jovian phenomena due to its high sensitivity as well as high time and frequency resolution over a wide bandwidth. We present LWA1 observations and the developed data analysis software by using IDL. The observed Io-C dynamic spectrum on March 10, 2012 shows the modulation lanes of both left and right hand polarization components share the same lane structure. It indicates that the both left and right hand Io-C radiations are emitted from the southern hemisphere. And the locations of the radio sources along the Jupiter's magnetic field should be very close.