

R009-13

B会場：11/6 AM2 (10:45-12:30)

12:15~12:30

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Global distribution of Jovian ionospheric holes associated with Jupiter lightning

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The polar perijove passes of Juno provide a unique opportunity to monitor Jovian lightning. One of the lightning-induced electromagnetic waves is a group of dispersed millisecond pulses called Jupiter dispersed pulses (JDPs), observed at frequencies below 150 kHz. During the course of Juno perijoves through 33 orbits, we collected over four thousand snapshots including one or more JDPs recorded by the radio and plasma wave (Waves) instrument. Assuming that JDPs propagate in the free left-hand ordinary (L-O) mode, we proposed an O mode propagation model in which low-density plasma irregularities are located between Juno and lightning strokes. These irregularities directly connect to ionospheric holes with densities below 250 cm^{-3} . Hence, observing JDPs gives a useful tool to identify low density holes in the Jovian ionosphere. Also, we compare the JDP locations with the cloud features captured by the Hubble Space Telescope. In this presentation, we show the global distribution of ionospheric holes estimated from JDPs.