

## 木星放射線帯と磁気圏尾部再結合現象との関連性の探査 - II

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## Examination of the relation between Jupiter's inner magnetosphere and magnetic reconfiguration events - II

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It is known that Jupiter's synchrotron radiation (JSR) has information on dynamics of the deep inner magnetosphere. We have made JSR observations more than a decade, and has showed that JSR generally shows short term variations by more than several tens percent with the time scale of days to weeks. A plausible causality of such the short term variations is due to solar UV/EUV variations initially proposed by Brice and McDonough (Icarus, 1973) and observationally confirmed by several groups including us, which is so to speak an externally driving process. However, this scenario cannot be always applicable to any short term JSR variations, rapid flux variations with the time scale within a few days (hereafter RFV), and any other processes are required.

As a process which might explain RFV, an internally driving process, so-called 'substorm like event' is known (see Louarn et al., JGR, 2014). This phenomena is interpreted as a magnetic reconfiguration event occurred in the Jupiter's magnetotail region. Although it is revealed that major magnetic reconfiguration events generally affect the whole magnetosphere from 10 to 80-120 R<sub>J</sub> (Jupiter's radii), however, it has not been known whether the events affect the deep inner magnetosphere within a few R<sub>J</sub>.

In order to reveal unknown dynamics of RFV, we have tried to examine relationship between the fast JSR variations and magnetic reconfiguration events. In this study we have used Jupiter's particular radio wave component in the hectometer wave range (HOM) as an indicator of RFV (cf. Misawa et al., sgepss2018), and have compared them with JSR total flux data observed with the Kashima 34m radio telescope of NICT at 2.3GHz and radio imaging data observed with the GMRT, India at 1.4GHz. A preliminary result shows a positive correlation between JSR variations and occurrence of the particular HOM. In the presentation, we will show results of the observational comparison and will discuss possible linkage processes.