

## SuperDARN 2点でSC時に同時観測された磁力線共鳴現象からのプラズマ圏密度推定

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## Plasmaspheric mass-density estimation from an FLR event simultaneously observed by two SuperDARN radars

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Geomagnetic pulsations include field-line eigen-oscillations generated by the field-line resonance (FLR). Their frequencies depend on the plasma density along the field line. The FLR frequency is expected to change sharply across the plasmopause, because of the sharp density change there. Since the pulsations oscillate the ionospheric plasma, too, there could exist cases in which SuperDARN radars monitor the two-dimensional (2D) distribution of the FLR frequency, from which we can estimate 2D plasma-density distribution on the magnetospheric equatorial plane, including the 2D location of the plasmopause. We have been looking for such cases in the data from the SuperDARN Radars near the occurrence times of Sudden Commencements (SCs), which are known to frequently cause pulsations.

In this paper we present a case in which, at the time of an SC, two SuperDARN radars simultaneously observed plasma-flow oscillations whose amplitudes and phases had latitude dependence typical to the FLR. The field-of-views of the two radars overlap, and thus it is possible that 2D features, such as the 2D flow directions, of the oscillations are estimated. From thus obtained information, it is possible that 2D plasma density distribution is estimated with high precision. More details will be presented at the meeting.