

## プラズマ圏の密度構造 shoulder を形成する過遮蔽の同定

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### Examination of overshielding electric field associated with the formation of plasmaspheric shoulder

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The IMAGE mission first gave us global images and revealed time variations of the plasmasphere by detecting resonantly scattered 30.4nm radiation of thermal He<sup>+</sup>. Plasmaspheric density structures that could not be distinguished before the IMAGE mission have been revealed. New terms, like "shoulders", "channels", "fingers", and "crenulations", have been given to those structures. Goldstein et al. [2002] suggested that the plasmaspheric shoulder observed on May 24, 2000 should be created by the outward flow at the dawn region triggered by the overshielding electric field in the inner magnetosphere. It was based on one example that they stated the mechanism regarding the shoulder formation. In this study, we statistically examined the overshielding electric field creating the shoulders using the ground-based magnetometer data. We show that the overshielding electric field is most likely to create the plasmaspheric shoulders in 2000.