

## Plasma density structure at scales of a few kilometers in the cusp

Yuichi Okano<sup>1\*</sup>, Satoshi Taguchi<sup>1</sup>

<sup>1</sup>UEC

We have examined kilometer size density structure in the dayside cusp by using in-situ measurements made by DE 2 spacecraft. We analyzed high time resolution (16 milli-second) ion density data, and examined the occurrence characteristics of relatively large amplitude structures at scales of a few kilometers in terms of the background plasma density gradient, ion drift, and electron temperature. The result shows that the occurrence of the plasma density structure is high in the fast flow region, which is typical for the cusp, and in the region adjacent to and poleward of that region.

Keywords: cusp, plasma density structure, plasma flow, electron temperature