

# The plasma density structure of the equatorial ionosphere observed by PPS on-board the EXOS-C satellite

# Jyunpei Uemoto[1]; Takayuki Ono[2]; Atsushi Kumamoto[3]; Masahide Iizima[4]

[1] Geophys Sci, Tohoku Univ; [2] Department of Astronomy and Geophysics, Tohoku Univ.; [3] Tohoku Univ.; [4] Geophysical Inst., Tohoku Univ.

To clarify the possible properties of the F3 layer, which have been predicted by Balan et.,al (1995), topside ionograms obtained by the Planetary Plasma Sounder (PPS) system on-board the EXOS-C satellite are analyzed. By analyzing the EXOS-C sounder data of 8 passes observed in March and 11 passes in May 1987, we have found 6 passes in March and 7 passes in May where the equatorial anomaly phenomena are identified. Most of them showed the asymmetry of the density and structure; the north crest indicated higher density and sharper structure than the south one. This tendency is possibly caused by the modulation of the seasonal trans dip equator neutral wind.

We have also found the 6 passes in March and 6 passes in May where an enhanced layer is added above the F2 peak. These additional layers were more distinct structure than those found in May. To understand the detail signature of these equatorial ionosphere structures, a model calculation is needed to explain this nature in terms of  $E \times B$  drift, interaction with neutral wind, etc.