

THE DAY-TO-DAY VARIABILITY OF THE OCCURRENCE OF EQUATORIAL PLASMA BUBBLES

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We investigate the day-to-day variability of the plasma bubble activity by analyzing the TIMED/GUVI, ROCSAT-1, DMSP, and CHAMP satellite data. The pre-reversal enhancement (PRE) is known as the most important single parameter for the onset of plasma bubbles but we do not know yet to what extent the day-to-day variability of the bubble activity can be attributed to the PRE. We will obtain the magnitude of the PRE from ROCSAT-1 and the occurrence of bubbles in relation to the PRE will be investigated by using the coincident observations of bubbles from TIMED/GUVI, DMSP, and CHAMP. By conducting one-to-one comparison of the PRE characteristics with the bubble occurrence we will examine the role of the PRE in the onset of bubbles.

Equatorial plasma bubble; pre-reversal enhancement, vertical plasma drift

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