

SOLAR FLUX EFFECTS ON THE PREREVERSAL VERTICAL DRIFT FOR SOLAR MINIMUM CONDITIONS: A COMPARISON BETWEEN OBSERVATIONAL DATA AND IRI MODEL

Ângela M. Santos, Mangalathayil A. Abdu, Paulo A. B. Nogueira

Instituto Nacional de Pesquisas Espaciais, S. J. Campos, SP, Brazil - email: angela@dae.inpe.br,

This study presents an analysis of the evening F- region prereversal vertical drift variation over Brazil as a function of the solar flux (F10.7). The vertical drift is determined using true heights data obtained from ionograms recorded by digisondes operated at in São Luis (44.2° W, 2.33° S, dip angle: -2.7°) and Fortaleza (38.45° W, 3.9° S, dip angle: -11.5°). Data collected from October to December in the solar minimum years of 2006 and 2007 were used in the analysis. The results show that for both São Luis and Fortaleza the evening vertical drift significant dependence on solar flux variation, i.e., the vertical drift increases with the increase in solar flux. This results of vertical drift will compared with model IRI and are discussed from the perspective of validating the IRI model.

Aeronomy, ionosphere, vertical drift

Ângela M. Santos, Av dos Astronautas, 1.758 Jd. Granja - CEP: 12227-010
São José dos Campos – SP, Brasil, tel: 55 (12) 3945-6000, e-mail: www.inpe.br/