GRAVITY WAVES-INDUCED ELECTRIC FIELDS IN THE EQUATORIAL ELECTROJET

H. C. Aveiro, C. M. Denardini, M. A. Abdu

Division of Aeronomy, Instituto Nacional de Pesquisas Espaciais, Sao Jose dos Campos - SP, Brazil

From the Type 2 irregularity phase velocities of the equatorial electrojet (EEJ) measured by radar, we have obtained the equatorial electric fields (EEF). The vertical EEF is derived directly from Type 2 velocities and the magnetic field strength at the corresponding height, while the zonal EEF is calculated using a conductivities model developed by Denardini (2007). The EEF show signatures of the presence of gravity waves, from which we calculated the efficiency factor R in the production of an additional EEF deduced by Anandarao et al (1977). We summarize some characteristics of those gravity waves and discuss the methodology.