Geophysical Research Abstracts, Vol. 8, 03834, 2006
SRef-ID: 1607-7962/gra/EGU06-A-03834
© European Geosciences Union 2006

Equatorial plasma bubbles from IGS and ESTB African stations: new results

A. Portillo (1), M. Herraiz (1), S. M. Radicella (2) and L. Ciraolo (3)

(1) Dept. of Geophysics and Meteorology, Universidad Complutense, Madrid, Spain, (2) Aeronomy and Radiopropagation Laboratory, International Centre for Theoretical Physics "Abdus Salam", Trieste, Italy, (3) Istituto di Fisica Applicata "Nello Carrara", Consiglio Nazionale delle Ricerche, Firenze, Italy, (anportil@fis.ucm.es / Fax: +0034913944398 / Phone: +0034913944440)

The increasing quality requirements of trans-ionospheric radio communications have prompted investigators to pay increased attention to ionospheric anomalies. In this context, the study of the ionospheric plasma density field-aligned deplections, known as plasma bubbles, is receiving special treatment.

In this work, slant Total Electron Content (sTEC) calibrated data taken every 10 minutes from EGNOS Test Bed (BRAZ, DOUA, LOME, and NDJA) and IGS (ASC1, MALI, and NKLG) stations are used to detect Equatorial Plasma Bubbles (EPBs) in the African equatoral region during the first six months of 2004. The method to identify these irregularities consists on subtracting the trend of every curve of sTEC against Universal Time from the original data, and the EPBs size is estimated by measuring the amplitude variation in the corresponding graphs. The results obtained are compared with those previously obtained with a more reduced database.