GPS-DERIVED IONOSPHERIC TOTAL ELECTRON CONTENT (TEC) RESPONSE DURING TWO RECENT MAGNETIC STORMS

B. Massinas (1), P. Frangos (2), H. Kontoes (3), D. Paradissis (1)

(1) Dionysos Satellite Observatory-Department of Surveying, National Technical University of Athens (NTUA), (2) Department of Information Transmission Systems and Material Technology, National Technical University of Athens (NTUA), (3) Institute for Space Applications and Remote Sensing, National Observatory of Athens (NOA) (billmass@central.ntua.gr / Fax: +30-210-7722670)

This study presents the Ionospheric Total Electron Content (TEC) response during two recent magnetic storms. A mathematical approach based on the observations of the permanent Global Positioning System (GPS) station at Dionysos Satellite Observatory (DSO) of the National Technical University of Athens (NTUA) was used to obtain temporal evolution of the Total Electron Content (TEC) values. By using the data from the permanent GPS station, a reliable regional ionosphere model of high temporal resolution has been computed.