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IONOSPHERIC SCINTILLATIONS AND VARIABILITY OF TOTAL ELECTRON CONTENT [TEC]
AND THEIR EFFECT ON GNSS OVER AKURE, NIGERIA.**Abstract**

The effect of Space weather is usually linked to disturbances in the ionosphere (gradients in the Total electron content (TEC) and ionospheric Scintillations). These have significant effects especially for GPS users causing degradation in range measurements, loss of lock by the receiver of the GPS signal. This paper therefore presents the study of ionospheric variations in terms of Total Electron Content (TEC) as well as the Scintillation index (S4) over a tropical region at Akure, Nigeria (7.15°N, 5.12°E) using NovAtel GSV 4000B GPS-SCINDA system. This system is capable of tracking up to 14 GPS satellites simultaneously. The dual frequency signals from the GPS satellites recorded and have been analyzed to study the ionospheric variations in terms of Total Electron Content (TEC) as well as the Scintillation index (S4) using the GPS-TEC analysis application software provided by Institute of scientific research, Boston College, USA. Result obtained shows significant daily and seasonal variation TEC gradients in the region.