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Poster
One of the main parameters that characterize the ionosphere is the electron density showing changes regarding solar activity, geomagnetic activity, position, season, ...etc.

The quality of radio signals passing through this mysterious area of our Earth’s atmosphere is affected by the behavior and state of the electron density. Hence there is a need to understand its evolution as a function not only of time but also of solar and geomagnetic activity.

One of the key parameters making it possible to identify this behavior and its connection with the degradation of radio signals used in radio telecommunications is the measurement of the total electron content (TEC). Variations in TEC can cause signal delays, phase distortions, and scintillations, impacting the accuracy and reliability of telecommunications systems.

This study aims to represent the first multi-year analysis of TEC results obtained from a GPS station installed at the Oukaimden Observatory, located at an altitude of about 2700 meters on the High Atlas mountain range, about 78 kilometers south of Marrakech, Morocco.

We are going to present the evolution of total electron content (TEC) as a function of time and of solar and geomagnetic parameters: in this context, F10.7 solar flux and Interplanetary Magnetic Fields (IMF) as solar proxies and Kp and Dst indices as geomagnetic activity proxies are considered.

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