



Very Low Frequency Signal anomalies in association with geomagnetic storm

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The effect of solar wind and CMEs on the Earth environment is widely studied. The coupling processes between the magnetosphere and the ionosphere in response to geomagnetic storm is still under debate. In this contribution the correlation between geomagnetic storm to the lower ionosphere layer, the D region, is investigated. Effectively, the VLF signal amplitude of transmitter located at high latitudes and recorded at Algiers receiver is analysed during a storm conditions.

The results revealed that the nighttime signal amplitude decreases during high Kp index values. In addition to the data analysis, a Morlet wavelet was applied to the signal amplitude to determine the main oscillation periods during the storm.