

# Ionospheric Disturbance During the Passage of Ejecta of 15 July 2000 Geomagnetic Storm

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The case study of the magnetospheric-ionospheric response to the geomagnetic storm of 15 July 2000 has revealed many interesting features. This event was associated with a full-halo coronal mass ejection (CME); we have traced its passage through studying the observations from three different satellites. We used data from Solar Heliospheric Observatory mission (SOHO), (WIND) spacecraft, Geosynchronous Operational Environmental Satellite (GOES). Ground-based hourly  $f_oF2$  data, which is proportional to the square root of  $NmF2$ , provided by the Space Physics Interactive Data Resource (SPIDR) have been collected for twelve ionosond stations during the time period 14~19 July 2000. A new analytical method is used to correct the  $f_oF2$  data to a central location, and a time correction values have been calculated for each station. The integrated  $f_oF2$  data showed a regular daily variation within the frequency range (3.5~11 MHz) on undisturbed day of 14<sup>th</sup>, a damping by the end of 15<sup>st</sup> at 19UT, and recovery on 17<sup>th</sup> at 10UT. We found that the damping and recovery phase are coincident with the passage time of the ejecta as verified by WIND observations. The signatures of the passage of the shock and their driver CME have been discussed for both the satellite and the ionospheric observations.