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Diurnal Double Maxima (DDM) structures observations in South Africa

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Abstract content
 (Max 300 words)

Pre or post noon foF2 enhancements have been observed in addition to its daytime peak. These structures are referred to as either diurnal double maxima (DDM, a term adopted here) or bite-outs. DDM structures have been observed both during quiet and disturbed geomagnetic conditions. However the driving mechanisms of these structures are not well understood. Two examples of DDM structures, from 11 February 2011 and 7 March 2011, seen on foF2 measurements obtained from the South African ionosonde network, namely Grahamstown, Madimbo and Hermanus, will be discussed. The DDM structures on both days were observed between 10:00 and 15:30 UT, and had relative amplitudes between 5% and 17%. Both DDM structures are observed on relatively low geomagnetic active days, where the maximum Hermanus K index is 4 and maximum global Kp index is 3.7. Thermospheric wind measurements/models will be investigated in order to understand the driving forces.

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