Session 5 – Space weather effects on low and mid-latitudes

Mid-latitude ionospheric response to the super geomagnetic storm of March 2015

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Abstract:

We have shown the response of the mid-latitude D-region ionosphere to the super geomagnetic storm of 17th March, 2015 using radio remote sensing technique. This geomagnetic storm, resulted from the coronal mass ejection on 15th March, was the strongest storm of 24th solar cycle. We analysed the VLF signal from four mid-latitude receiving stations. It is seen that, the storm enhanced the entire diurnal signal throughout the course of the storm. We have observed similar type of response in all the propagation paths. We estimated the enhancement of electron density in the D-region ionosphere during this period with the help of a radio propagation model.