**Occurrence SED/TOI structures in the ionospheric TEC observations during storms:case studies**

 I. I. Shagimuratov1, I. I. Efishov1, M.V.Klimenko1, M. V. Filatov2, N. Yu. Tepenitsyna1 and G. A. Yakimova1

 **1***West Department IZMIRAN, Kaliningrad, Russia*

2*Polar Geophysical Institue*, *Apatity*, *Russia*

Using ionex TEC data and Madrigal database we observed evolution of the storm-enhanced density (SED) and TOI structures during moderate geomagnetic storms of 4 November 2021 and 14 January 2022 over the high latitude ionosphere on a global scale. Storm of November started 3 November at 23UT, index Dst reached a minimum of -120nT at 14:00 on 4 November 2021. The January storm started near 12UT on 14January, index Dst reached a minimum of -90 nT on 14 January 2022. The effect of SED/TOI was very clearly identified in the daytime over Europe for November 2021storm. The TOI as an ionospheric plasma density extension transported from a dayside source toward the nightside across the polar cap region has been traced during booth events.