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# TEC Fluctuations Map – pilot phase of the new IGS Ionospheric Product

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Since 1998 Ionospheric Working Group of the International GNSS Service has been creating the reliable global VTEC maps. Currently the ionospheric maps are generated with 2 hour time resolution and show the mean state of the Total Electron Content for this period.They cannot demonstrate the whole dynamic of the electron concentration especially during the storm-time periods for the equatorial region and at high latitudes. However, in the last few years the number of the permanent GNSS station around North Geomagnetic Pole increased systematically and nowadays it is possible to create the map of ionospheric variability for this region. Importance of this topic has turned up in the latest IGS Ionosphere Working Group resolution passed during the International GNSS Service Workshop 2012. At the beginning 2013 the IGS is planning to start the pilot phase of the new ionospheric product - TEC Fluctuations map, which are generated at GRL/UWM Center in Olsztyn. The maps are created based on phase observations from over 150 permanent GNSS stations belong to IGS/EPN, PBO and POLENET Networks located over 45th degree of the north geomagnetic latitude. In order to estimate the level of the ionospheric variability ROT Index is used. The presentation shows the applied algorithm, the example maps for different ionospheric conditions and plans. In the future other IGS Ionosphere Associate Analysis Centers will also create maps of ionospheric variability for routine generation IGS combined product.