

REAL-TIME 3D IONOSPHERE IMAGING FROM GROUND BASED GNSS STATIONS DATA

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We presented a service for real-time 3D ionosphere model reconstruction from global navigation satellite systems (GNSS) data. High image resolution for European Russia region is reached due to data from ground based GNSS station network, deployed by Institute of Applied Geophysics of The Federal Service for Hydrometeorology and Environmental Monitoring of Russia (Roshydromet). Dedicated GNSS data format and its SQL-backed implementation has been developed to perform data acquisition, transmission and storage. High orbital radio tomography method is used to construct 3D ionosphere image. We present detailed description of functionality of all components of the system, from acquisition of station equipment to 3D electron density reconstruction procedure and posting total electron content map on the Internet.