

2<sup>nd</sup> International Conference on

# ASTROPHYSICS AND PARTICLE PHYSICS

November 13-15, 2017 San Antonio, USA

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## Ionospheric wave disturbances generated by the solar terminator using GPS

Investigation of the influence of the solar terminator (ST) in the Earth's ionosphere is an important task of ionospheric physics. With the new GPS-radio sounding technology to study the ionosphere, significant progress has been made. It has been found that ST is the generation of perturbation wave in the ionosphere. According to measurements GPS was found that these disturbances are observed in the form of wave packets in TEC. GPS observation variations allow the study of regular TEC variation, such as cyclic, seasonal, diurnal, identifying different kinds of trends and longer periods. The aim is to study the ionospheric wave disturbances generated by the solar terminator during sunrise and sunset, with the help of signals of global satellite radio navigation system GPS. To achieve this goal, we have solved a number of problems like the orbital motion of the satellites built systems GPS of the Volga Federal District; processed and calculated the TEC from the experimental data obtained from GNSS receivers located in Kazan (KZN) and the astronomical observatory, V P Engelhardt (EAO), TEC identified variations associated with the movement of the morning and night terminator. Collected data for the period from 01.01.16 to 31.12.16 on two sites (Kazan Federal University, KFU, Engelgardt Astronomical Observatory, EAO) were processed. For each day of the theoretical and experimental ST for each item, the orbital motion of satellites was calculated. It was found that in the winter time 35% and in summer time, 40%-45% of cases recorded the occurrence of TEC variations during the passage ST.

## Biography

Sherboev Murodjon completed his under graduation studies from Tajik National University, Dushanbe, Tajikistan in 2014. Currently, he is a graduate student of the Department of Radio Electronics, Kazan Federal University, Kazan, Russia. His research interests include the study of natural and anthropogenic ionospheric irregularities by radio occultation, the study of ionospheric wave disturbances generated by the solar terminator with GPS

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