



## **The oxygen red OI 630.0 nm line nightglow intensity as an indicator of atmospheric waves propagation in the mid-latitude ionosphere F2 region**

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The behavior of the oxygen red OI 630.0 nm line nightglow intensity under influence of atmospheric gravity waves (AGWs) is considered, taking into account nightly changes of the thermosphere meridional wind by observations from Abastumani (41.75 N; 42.82 E). The vortical type perturbations, which can be in situ excited, are also considered. On the basis of theoretical model, the 630.0 nm line integral intensity variations are estimated taking into account thermosphere wind field changes and atmospheric waves propagation influence on the nighttime ionosphere F2 layer. A possibility of identification of waves propagation from polar and equatorial regions during various helio-geophysical conditions is noted. The cases of detected large scale traveling ionosphere disturbances -TIDs (mostly generated in the polar regions) and traveling atmospheric disturbances -TADs (which can be generated both in polar and equatorial regions) are demonstrated.

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