

NUMERICAL MODELING OF THE IONOSPHERIC EFFECTS OF SOLAR FLARES

VLADIMIR KLIMENKO, Yury Koren'kov, Maxim Klimenko

West Department of N.V. Pushkov Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation, Russian Academy of Sciences, Kaliningrad, Russia, e-mail: vvk_48@mail.ru

The studying of the ionospheric effects of solar flares was spent both experimentally, and by means of numerical one-dimensional models of the ionosphere. Using of the global models allows describing the global changes of the ionospheric parameters both during the flare, and after its termination. The given research is devoted to numerical modeling of the ionospheric effects of several flares with use of the modeling representation of average statistical solar flare and model GSM TIP, which among other things allows describing in the self-consistent manner the global changes in the ionospheric conductivity, caused by flares on the Sun. For this purpose the modeling calculations were carried out with and without taking into account solar flares. The particular attention is given to variations of various ionospheric parameters after the termination of the flare. Modeling calculations allow to reveal a role of separate physical mechanisms in behavior of various ionospheric parameters, and first of all, electron concentration, both during flare and after the termination of flare.

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Vladimir Klimenko, West Department of IZMIRAN, Pobedy Av., 41, Kaliningrad, 236017, Russia, Tel./Fax. 7-4012-215606, e-mail: vvk_48@mail.ru