



Ionospheric effects of Poincare waves

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In observations TEC it has been established, that after geomagnetic storms in an ionosphere some perturbations are observed. Features of these perturbations are: 1- the duration of such perturbations are several hours, 2 – the large ionospheric effects appear at day-time, 3 - their amplitude grows from high latitudes to middle latitudes, 4 - the phase of perturbations does not depend on latitudes. It is impossible to explain such TEC perturbations from the waves propagating from high latitudes to equator. It is supposed, that such ionospheric perturbations can be caused by excitation in an atmosphere of Poincare waves. Poincare waves are the waves propagating along a longitude. The observed structure of spatial-temporal distribution of TEC is determined by a standing wave - superposition of Poincare waves propagating in different directions. The parameters of Poincare waves which can form such standing waves are appreciated and the calculations of TEC perturbations connected with these waves are carried out in the work. Results allow to explain observed latitudinal and longitudinal features of TEC distribution.