# Modelling of the influence of solid-fuel rocket launches on concentrations of electrons and ionic components in daytime e-region of ionosphere

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Behavior of E-region of ionosphere during rocket launches is presented on the basis of modelling calculations. The model has taken into account, on one hand, chemical processes with a participation of the products of solid-fuel combustion and, on other hand, processes forming an ionization balance in natural conditions. Special attention is paid to a study of the role of H2O, NO, HCl, CO2 in the photochemical balance of upper atmosphere. The concentrations of 29 minor neutral constituents and 26 positive ions are calculated in our model. About 150 chemical reaction have been taken into account in the calculation. Results of the calculations show that input of high temperature near the rocket engine plume causes sufficient variation of electron density and an increasing of negative ion Cl- concentrations.