Cellular modelling of the magnetosphere-ionosphere substorm activity

B.V.Kozelov and T.V.Kozelova (Polar Geophysical Institute, Apatity, Murmansk region, 184209 Russia)

The cellular modelling of the magnetosphere-ionosphere system related with the substorm activity is discussed. The cellular modelling is a powerful method of the study of the complex systems. Recently we presented several simple models which demonstrated the dynamical analogies of the magnetosphere-ionosphere substorm activity. The development of these models requires their further complication. Here we discuss the possible ways of such complication to extend the set of the magnetosphere-ionosphere processes which are taken into consideration. The importance of some model parameters are tested and the results are presented.

The work is supported by grant RFBR-01-05-64827.