

**ON FORECASTING OF THE HELIOGEOPHYSICAL PARAMETERS  
WITH USE OF STATE SPACE RECONSTRUCTION AND SELF-  
ORGANIZING ARTIFICIAL NEURAL NETWORKS.**

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While the methods of long-term forecasting of the heliogeophysical parameters with use of artificial neural networks are developed and applied the tasks of the operative and short-term forecasting (days-months) are not solved. With this goal self-organizing artificial networks have been used and a task of forecasting has been transformed to a task of recognition. To generate additional information attributes and to justify the assigning a number of the classes for a self-organizing network the state space reconstruction methods have been applied which are used in nonlinear dynamical systems theory. A comparison of the forecasting results for AP and F10.7 indexes is carried out. The degrees of correlation of forecasting and examination time series for different intervals of forecasting are determined. An analysis of the results shows the effectiveness of proposed method for operative prediction of the heliogeophysical parameters. Simultaneously with a task of prediction a research problem of extraction in the raw time series the stable sequences -classes or patterns of behaviour, which could assist to understand physics of researched heliogeophysical processes is solved.