New model to predict ionospheric electron density

Researchers from Indian Institute of Geomagnetism, Navi Mumbai have developed a global model to predict the ionospheric electron density with larger data coverage - a crucial need for communication and navigation.

A new Artificial Neural Networks based global Ionospheric Model has been developed using long-term ionospheric observations to predict the ionospheric electron density and the peak parameters.

Artificial Neural Networks replicate the processes in the human brain to solve problems such as pattern recognition, classification, clustering, generalization, linear and nonlinear data fitting, and time series prediction. Very few attempts have been made to model the global ionosphere variability using ANNs.