

Performance of Neural Network based Ionospheric Tomography Performance of Neural Network based Ionospheric Tomography

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Three-dimensional ionospheric tomography is effective for investigations of the dynamics of ionospheric phenomena. However, it is an ill-posed problem in the context of sparse data, and accurate electron density reconstruction is difficult. A neural network tomographic approach, a multilayer neural network trained by minimizing an objective function, allows reconstruction of sparse data. In this study, we validate the reconstruction performance of the developed algorithm using numerical simulations. Then we apply it to the practical data observed in March 2011, Japan.

キーワード: ionospheric tomography, Neural Network

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