

Feasibility of the GPS/TEC tomography of TID structures: Approach with multi-layer neural network CT

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We have applied a method of the computerized tomography that has recently developed with a multi-layer neural network in order to understand whether or not the electron density distribution associated with TID can be reconstructed. We have found that this application works well with several reasonable assumptions for the electron density profiles in the mid-latitude and for the latitude of the GPS spacecraft. How the degree of the reconstruction changes with the modification of the assumptions is shown, and the condition for the good reconstruction for large-scale TID structure is also presented.