

The impact of GOLD-O/N2 ratio assimilation on space weather forecasting system

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The propose of this study is to develop a data assimilation module for the observations of O/N2 ratio from the NASA' GOLD satellite based on the currently developing ionospheric space weather forecasting system. The directly assimilation of atmospheric parameters, such as the compositions of oxygen atom and nitrogen molecule concentrations, can improve the accuracy of the ionospheric plasma forecasting. Using this assimilation module, this study also evaluate its performance of plasma prediction during the geomagnetic storm event. The results are expected been the reference on the operational ionospheric space weather forecasting system.

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