

R005-21

B会場：11/5 AM2 (10:45-12:30)

10:45～11:00

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Study of the ionospheric spatial correlation

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In this study, we make a study for the Ionospheric spatial correlation scale. Firstly, the ionospheric horizontal spatial correlation study was conducted to collect global TECmap data from TEC Production that provided by the Jet Propulsion Laboratory (JPL). We use the monthly-averaged TEC over the world to calculate the deviation of the TEC and then the spatial correlation coefficient matrix of the deviation is also derived. According to the definition of correlation distance in statistics, the spatial characteristic scale is retrieved in the Zonal and meridian directions, and their variation of solar activity levels, geomagnetic field configuration conditions and seasonal conditions are investigated in details. Then, we using COSMIC occultation data, ion concentration profile data interpolation to establish electronic density three-dimensional grid data, the error covariance matrix of each level, and the error of the ion concentration in the vertical direction help poor matrix, analysis and study its time and space distribution at different heights, and its distribution in the vertical direction, The correlation scale model in the vertical direction of the ionosphere is constructed.