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Combining quiet- and disturbance-hmF2 models to provide a forecasting tool for hmF2

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The quiet behavior of the ionospheric electron density peak height of the F2 region, hmF2, at mid latitude has been evaluated from average electron density profiles providing more reliable hmF2 measurement than converting hmF2 from M(3000)F2. A model temporal extent has been obtained by considering the daily and seasonal variations and the solar activity influence on them. The quiet-hmF2 model provides better performance than current IRI does. A disturbance-hmF2 model has been added to the quiet-hmF2 providing a forecasting tool for hmF2 in response to the configuration and variation of the interplanetary magnetic field. The performance of this tool under particular events will be presented.