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Equatorial ionospheric irregularities is an important space weather phenomenon, which can disrupt GNSS and communication systems. COSMIC 2 GNSS RO observations are affected via scintillations in signal amplitudes and phases. At the same time, we can use these scintillations to monitor and geolocate the ionospheric irregularities, which are of great value to the space weather services. Geolocation of the irregularities based on the RO signals is difficult, as any irregularities along the line between the GNSS and RO satellite can cause scintillation. Several geolocation methods are known. A back propagation (BP) method to geolocate the irregularities originally developed in 2001 and applied for GPS/MET RO data is being modified and applied for COSMIC 2 scintillation data. Because the equatorial irregularities are often associated with plasma bubbles, which are visible to the NASA UV imager GOLD, we have been using the GOLD images to validate the BP geolocation method. In this presentation, we will show the progress of recent validation effort of the BP geolocation method by comparing the COSMIC 2 geolocated irregularities with plasma bubbles in GOLD UV observations. Though, GOLD observations are only available in the American sector, COSMIC 2 observations can be used geolocate ionospheric irregularities throughout the equatorial and low latitudes
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