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## **Strong equatorial plasma bubble associated with prominent TEC enhancement observed at mid-latitude ionosphere under the quiescent condition**

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Equatorial plasma bubbles (EPBs) are typically ionospheric irregularities that frequently occur at the low latitudes and equatorial regions, which can significantly affect the propagation of radio waves. In this study, we reported a unique strong EPB that happened at middle latitudes over the Asian sector during the quiescent period. The multiple observations including total electron content (TEC) from Beidou geostationary satellites and GPS, ionosondes, in-situ electron density from SWARM and meteor radar are used to explore the characteristic and mechanism of the observed EPB. The unique strong EPB was associated with great nighttime TEC/electron density enhancement at the middle latitudes, which moves toward eastward. The potential physical processes of the observed EPB are also discussed.