



## **Ionospheric response to the geomagnetic storm on 21 August 2003 storm over China using ionospheric tomography**

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In this study, we develop a constraint model assisted ionospheric tomography technique. Ionospheric electron density (IED) images are reconstructed by using the technique and the dual-frequency GPS data from Crustal Movement Observation Network of China (CMONOC). Tomographic results show the main ionospheric effects of the storm over China and two prominent structures in the ionosphere, such as the disturbance and mid-latitude trough. The storm phase effects are as follows: the negative storm phase effect appears in F region, the positive storm phase effect occurs above F region. A comparison between the profile obtained from reconstruction and that from ionosonde data confirms the reliability of the reconstructed results.