

EGU2020-12340

<https://doi.org/10.5194/egusphere-egu2020-12340>

EGU General Assembly 2020

© Author(s) 2020. This work is distributed under the Creative Commons Attribution 4.0 License.



Preliminary Results of GNSS Radio Occultation Receiver onboard CSES

Song Xu¹, ZhiMa ZeRen¹, JiangPing Huang¹, XuHui Shen¹, Wei Chu¹, Rui Yan¹, Jing Cui¹, and Jian Lin²

¹Institute of Crustal Dynamics, China Earthquake Administration, Beijing, China

²Institute of Seismology, China Earthquake Administration, Wuhan, China

The China Seismo-Electromagnetic Satellite (CSES) was successfully launched on February 2, 2018. Its main scientific objective is to monitor earthquake related disturbances in the ionosphere. The Global Navigation Satellite System (GNSS) Radio Occultation Receiver (GOR) on board the satellite is able to observe the occultation events of Global Positioning System (GPS) and BeiDou navigation satellite System (BDS). Compared to some conventional observation means, GOR has the advantages of low cost, high accuracy, high precision, high vertical resolution, all-weather sounding, long-term constant and global coverage. The GOR on CSES can receive about 600 ionosphere occultation events each day and 16000 each month. The strip-shaped spatial distributions of the ionospheric characteristic parameters from the GOR show that the values of NmF_2 and HmF_2 are larger in the areas of the equator than in middle and high latitude areas.