
RESEARCH ARTICLES

SPACE PHYSICS

- 429 *ZhiPeng Ren, WeiXing Wan, JianGang Xiong, and Xing Li*
Influence of annual atmospheric tide asymmetry on annual anomalies of the ionospheric mean state
(doi: 10.26464/epp2020041)
- 436 *Xing Li, WeiXing Wan, JinBin Cao, and ZhiPeng Ren*
Wavenumber-4 spectral component extracted from TIMED/SABER observations (doi: 10.26464/epp2020040)
- 449 *Xing Li, WeiXing Wan, JinBin Cao, and ZhiPeng Ren*
The source of tropospheric tides (doi: 10.26464/epp2020049)

ATMOSPHERIC PHYSICS

- 461 *XiangHui Xue, DongSong Sun, HaiYun Xia, and XianKang Dou*
Inertial gravity waves observed by a Doppler wind LiDAR and their possible sources
(doi: 10.26464/epp2020039)
- 472 *ShengYang Gu, Xin Hou, JiaHui Qi, KeMin TengChen, and XianKang Dou*
Responses of middle atmospheric circulation to the 2009 major sudden stratospheric warming
(doi: 10.26464/epp2020046)
- 479 *Jie Gu, YeHui Zhang, Na Yang, and Rui Wang*
Diurnal variability of the planetary boundary layer height estimated from radiosonde data
(doi: 10.26464/epp2020042)
- 493 *Zheng Ma, Yun Gong, ShaoDong Zhang, JiaHui Luo, QiHou Zhou, ChunMing Huang, and KaiMing Huang*
Comparison of stratospheric evolution during the major sudden stratospheric warming events in 2018 and 2019 (doi: 10.26464/epp2020044)
- 504 *Xiao Liu, JiYao Xu, and Jia Yue*
Global static stability and its relation to gravity waves in the middle atmosphere
(doi: 10.26464/epp2020047)

SOLID EARTH

- 513 *Ting Lei, HuaJian Yao, and Chao Zhang*
Effect of lateral heterogeneity on 2-D Rayleigh wave ZH ratio sensitivity kernels based on the adjoint method: Synthetic and inversion examples (doi: 10.26464/epp2020050)
- 523 *JingXing Fang, Feng Qian, and HaiMing Zhang*
Analysis of the role of branching angle in the dynamic rupture process on a 3-D branching fault system
(doi: 10.26464/epp2020043)

PERSPECTIVE

SOLID EARTH

- 532 *Qing-Yu Wang, and HuaJian Yao*
Monitoring of velocity changes based on seismic ambient noise: A brief review and perspective
(doi: 10.26464/epp2020048)

COVER

In Ma Z and Gong Y et al. (10.26464/epp2020044), stratospheric evolutions of daily mean geopotential heights are presented during the 15 days of the postwarming periods in the 2018 and 2019 major SSWs. Transitions of the polar vortices, associated with the propagation of anticyclones, are all observed over the Atlantic region, which illustrates that the types of 2018 and 2019 SSWs are split-displacement and displacement-split, respectively. These results will stimulate the interest in transition-type SSWs. See pages 493–503.