
RESEARCH ARTICLES

SPACE PHYSICS

- 467 *Zhi Li, QuanMing Lu, RongSheng Wang, XinLiang Gao, and HuaYue Chen*
In situ evidence of resonant interactions between energetic electrons and whistler waves in magnetopause reconnection (doi: 10.26464/epp2019048)
- 474 *ChuXin Chen, and Chih-Ping Wang*
Contribution of patchy reconnection to the ion-to-electron temperature ratio in the Earth's magnetotail (doi: 10.26464/epp2019049)
- 481 *HuiJun Le, LiBo Liu, YiDing Chen, and Hui Zhang*
Anomaly distribution of ionospheric total electron content responses to some solar flares (doi: 10.26464/epp2019053)

ATMOSPHERIC PHYSICS

- 489 *YuJing Liao, QuanLiang Chen, and Xin Zhou*
Seasonal evolution of the effects of the El Niño–Southern Oscillation on lower stratospheric water vapor: Delayed effects in late winter and early spring (doi: 10.26464/epp2019050)

SOLID EARTH

- 501 *Ru Liu, YongHong Zhao, JiaYing Yang, Qi Zhang, and AnDong Xu*
Deformation field around a thrust fault: A comparison between laboratory results and GPS observations of the 2008 Wenchuan earthquake (doi: 10.26464/epp2019047)
- 510 *XingLin Lei, ZhiWei Wang, and JinRong Su*
Possible link between long-term and short-term water injections and earthquakes in salt mine and shale gas site in Changning, south Sichuan Basin, China (doi: 10.26464/epp2019052)
- 526 *Zhi Wei, and Li Zhao*
Lg-Q model and its implication on high-frequency ground motion for earthquakes in the Sichuan and Yunnan region (doi: 10.26464/epp2019054)
- 537 *BaoLong Zhang, SiDao Ni, and YuLin Chen*
Seismic attenuation in the lower mantle beneath Northeast China constrained from short-period reflected core phases at short epicentral distances (doi: 10.26464/epp2019055)
- 547 *YanZhe Zhao, and YanBin Wang*
Comparison of deterministic and stochastic approaches to crosshole seismic travel-time inversions (doi: 10.26464/epp2019056)

LETTER

PLANETARY SCIENCES

- 560 *Adriane Marques de Souza Franco, Markus Fränz, Ezequiel Echer, and Mauricio José Alves Bolzan*
Correlation length around Mars: a statistical study with MEX and MAVEN observations (doi: 10.26464/epp2019051)

COVER

In Lei XL et al. (10.26464/epp2019052), results of a study focusing on exploring the potential link between injection and seismicity in Changning, south Sichuan Basin, China. Evidence chains indicate that seismic activities, including a number of destructive $M \geq 5$ earthquakes were tectonic earthquakes that occurred as a result of fault reactivation induced by fluid injection for either salt or shale gas production. See pages 510–525.