

## 发展战略

- 月基对地观测的特点与应用潜力分析 ..... 吴季 (965)

## 研究论文

### 空间物理

- 电子重联中电磁场结构的粒子模拟 ..... 胡市航, 陆全明, 关云丹, 卢三 (970)  
磁鞘流驱动的弓形波及软X射线成像研究: Hybrid与PIC模拟 ..... 欧阳婉欣, 杨忠炜, 郭孝城, 李晖, 陆全明, 王赤 (979)  
基于范艾伦卫星观测下太阳风动压对嘶声波分布的影响 ..... 袁安, 李海梦, 唐荣欣, 欧阳志海, 熊鹰, 周猛, 冯泊溥, 邹文倩, 邓晓华 (988)  
地球磁层中合声波的频率与传播角分布特征 ..... 杨立贤, 刘斯, 高中磊, 周亚雄, 高阳, 王博闻, 金宇玥 (998)  
等离子体哨声波性质的实验研究 ..... 唐磊, 张乔枫, 陆全明, 高新亮, 柯阳光 (1006)  
基于GBR方法的K<sub>p</sub>指数预报模型 ..... 焦琦融, 张典钧, 刘文龙 (1012)  
太阳活动高低年广西及周边地区电离层时空频域特性 ..... 杨芸珍, 刘立龙, 莫诗蕾, 韩青宏, 张炎, 张亚丽, 曹文鹏 (1021)  
基于GNSS TEC的电离层模型IRI-Plas 2020与IRI-2020的全球精度评估 ..... 金俐君, 陈必焰, 王晓嫚, 吴定一 (1031)

- 基于双层气辉观测的特殊传播方向电离层行进式扰动事件 ..... 周尘砂, 赖昌, 徐寄遥, 吴坤, 袁韦 (1047)

- 2018—2019年平流层顶抬升事件期间的准定常行星波 ..... 苏伟, 黄春明 (1056)

### 空间天文

- 临近空间天文台发展现状与展望 ..... 李一健, 黄宛宁, 周江华, 张晓军, 张航悦 (1068)

### 行星科学

- 火星水的主要赋存状态及其红外光谱特征 ..... 尹浩安, 唐红, 李雄耀, 于雯 (1086)  
一种返回电子式的月表电场探测技术 ..... 金非凡, 刘超, 张贤国, 张爱兵, 王文静 (1106)

### 空间探测技术

- 基于SysML的空间有效载荷系统故障诊断方法 ..... 金鑫, 贺宇峰 (1120)  
基于数据生成和深度神经网络的空间非合作目标行为意图识别 ..... 余静, 彭晓东, 谢文明, 覃润楠, 王有亮 (1134)

- 28 nm 体硅工艺FPGA BRAM脉冲激光试验及翻转特性 ..... 薛国凤, 周昌义, 安军社, 吴昊, 王天文 (1147)

- 基于隐空间插值自编码器的卫星遥测参数异常检测 ..... 周台春, 郭国航, 肖志刚, 李虎 (1155)

- FlexRay总线的星载应用 ..... 胡继英朔, 朱岩, 周莉 (1166)

- 第44卷总目次 ..... (1177)

## Survey and Strategy

- Lunar Based Earth Observation and Its Potential Applications ..... *WU Ji* (965)

## Research Articles

### Space Physics

- Particle-in-cell Simulation of Electromagnetic Field Structure in the Electron-only Reconnection .....  
..... *HU Shihang, LU Quanming, GUAN Yundan, LU San* (970)
- Magnetosheath Jet-driven Bow Waves and Their Soft X-ray Imaging: Hybrid and PIC Simulations .....  
..... *OUYANG Wanxin, YANG Zhongwei, GUO Xiaocheng, LI Hui, LU Quanming, WANG Chi* (979)
- Influence of Solar Wind Dynamic Pressure on Hiss Distribution Based on Van Allen Probe Observations .....  
..... *YUAN An, LI Haimeng, TANG Rongxin, OUYANG Zhihai, XIONG Ying, ZHOU Meng, FENG Bopu, ZOU Wenqian, DENG Xiaohua* (988)
- Statistical Study on Propagation Characteristics of Chorus in the Earth's Magnetosphere .....  
..... *YANG Lixian, LIU Si, GAO Zhonglei, ZHOU Yaxiong, GAO Yang, WANG Bowen, JIN Yuyue* (998)
- Experimental Study on the Properties of Helicon Mode Whistler Waves .....  
..... *TANG Lei, ZHANG Qiaofeng, LU Quanming, GAO Xinliang, KE Yangguang* (1006)
- Kp* Index Forecast Model Based on GBR Method ..... *JIAO Qirong, ZHANG Dianjun, LIU Wenlong* (1012)
- Ionospheric TEC Variation in Guangxi and Surrounding during High and Low Solar Activity Years .....  
..... *YANG Yunzhen, LIU Lilong, MO Shilei, HAN Qinghong, ZHANG Yan, ZHANG Yali, CAO Wenpeng* (1021)
- Global Accuracy Assessment and Analysis of the Ionospheric Model IRI-Plas 2020 and IRI-2020 Based on GNSS Observations ..... *JIN Lijun, CHEN Biyan, WANG Xiaoman, WU Dingyi* (1031)
- Traveling Ionospheric Disturbance Events with Special Propagation Direction Based on Double-layer Airglow Observation ..... *ZHOU Chensha, LAI Chang, XUJiyao, WU Kun, YUAN Wei* (1047)
- Quasi-stationary Planetary Waves during the 2018—2019 Elevated Stratopause Event .....  
..... *SU Wei, HUANG Chunming* (1056)

### Space Astronomy

- Development Status and Prospects of Near Space Observatories .....  
..... *LI Yijian, HUANG Wanning, ZHOU Jianghua, ZHANG Xiaojun, ZHANG Hangyue* (1068)

### Planetary Science

- Occurrence and Infrared Absorption Spectra of Martian Water ..... *YIN Haoan, TANG Hong, LI Xiongyao, YU Wen* (1086)
- Return-type Electron-based Lunar Surface Electric Field Detection Technology .....  
..... *JIN Feifan, LIU Chao, ZHANG Xianguo, ZHANG Aibing, WANG Wenjing* (1106)

### Space Exploration Technology

- SysML-based Fault Diagnosis Method for Space Payload Systems ..... *JIN Xin, HE Yufeng* (1120)
- Spatial Non-cooperative Target Behavior Intent Recognition Based on Data Generation and Deep Neural Networks .....  
..... *YU Jing, PENG Xiaodong, XIE Wenming, QIN Runnan, WANG Youliang* (1134)
- SEE Upset Characteristics of BRAM in 28 nm Bulk FPGA by Pulsed Laser Test .....  
..... *XUE Guofeng, ZHOU Changyi, AN Junshe, WU Hao, WANG Tianwen* (1147)
- Anomaly Detection of Satellite Telemetry Data Based on Latent Space Interpolation Autoencoder .....  
..... *ZHOU Taichun, GUO Guohang, XIAO Zhigang, LI Hu* (1155)
- On-board Application of FlexRay Bus ..... *HU Jiyingshuo, ZHU Yan, ZHOU Li* (1166)
- Vol. 44 CONTENTS ..... (1180)