

# 地球物理学报 (月刊)

(DIQIU WULI XUEBAO)

2023年3月 第66卷 第3期

## 目次



### 空间与大气物理学·大地测量学

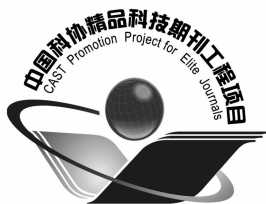
- 0871 火星磁鞘中小尺度磁洞发生率的观测 .....  
..... 陈洋军, 吴明雨, 肖苏东, 王国强,  
陈远强, 姜悦群, 杜爱民, 张铁龙
- 0881 基于太阳辐照校准地基日冕仪光度的方法研究及初步测试 ..... 唐宁, 于晓雨, 刘大洋,  
王翔宇, 韩建平, 孙明哲, 刘维新, 夏利东
- 0891 10~50 MHz 地基低频射电天文数字接收机及上位机软件研制 ... 许丙强, 白宇, 路光,  
平劲松, 王明远, 杨文军, 王震, 严发宝
- 0905 北太平洋海温与广西前汛期降水的联系 ...  
..... 覃皓
- 0920 极端气候事件综合危险性等级指标构建及近60年来长江流域极端气候综合分析 .....  
..... 张存杰, 肖潺, 李帅, 珠杰桑布,  
任玉玉, 张思齐, 王荣
- 0939 基于 GNSS 的再分析资料对流层延迟精度评估 ..... 上官明, 程旭, 潘雄, 党萌,  
吴露振, 谢自春
- 0951 基于贝叶斯估计的深海 GNSS-A 定位精度 ..... 明锋, 杨元喜, 曾安敏
- 0961 基于 GNSS-A 的海洋声速变化估计及其对定位的影响 ..... 张盛秋, 杨元喜, 徐天河
- 0973 不同地球模型对中国陆区大气负荷位移建模的影响 ..... 李长海, 钟萍, 姜中山,  
汤苗, 杨兴海, 由晓文
- 0986 Sentinel-3 测高数据在湖库区域的波形跟踪方法——以东平湖和峡山水库为例 .....  
..... 杨兴起, 郭斌, 邢文雪, 项颖颖,  
郭瑞莲, 徐莹, 季民

- 0997 利用 GPS 垂直位移反演区域陆地水储量变化的 TSVD-Tikhonov 正则化方法 .....  
..... 钟波, 李贤炮, 李建成, 汪海洪, 丁剑
- 1015 南极验潮站对全球地震海啸的响应 .....  
..... 陈帅均, 艾松涛

### 地球动力学·地震学·海洋地球物理学

- 1025 地壳滑脱层对大陆裂谷发育演化的影响——基于数值模拟方法 .....  
..... 范庆凯, 郭金瑞, 王炎阳
- 1036 郟庐断裂带中南段地壳厚度与泊松比研究 .....  
..... 陈立艺, 王未来, 蔡光耀
- 1050 基于背景噪声研究青藏高原东缘三维横波速度结构 ..... 谭友恒, 于湘伟, 宋倩, 章文波
- 1070 维西—乔后断裂带的深部变形机制与构造活动特征 ... 王一咪, 徐龙辉, 杨海燕, 金明培
- 1086 2021 年青海玛多  $M_w$ 7.3 地震同震和早期震后断层滑动模型及发震构造摩擦属性 .....  
..... 赵磊, 许文斌, 方楠, 刘计洪, 冯光财
- 1098 基于机器学习的地表破裂自动识别和填图——以 2021 年青海玛多  $M_w$ 7.4 级地震为例 ... 曾宪阳, 刘静, 王伟, 姚文倩, 吴静,  
刘小利, 韩龙飞, 王文鑫, 邢宇堃,  
杜瑞林, 杨绪前
- 1113 上海及邻区微震检测与定位 ..... 张雅楠,  
李红谊, 张盛中, 李炎臻, 黄雅芬, 钟卫星
- 1125 基于 GP14.3 运动学混合震源模型和 SPECFEM 3D 谱元法的宽频地震动模拟 ..... 巴振宁,  
赵靖轩, 张郁山, 梁建文, 张玉洁
- 1139 加勒比海东南部温盐阶梯的地震海洋学研究 ..... 张鹏, 宋海斌, 范文豪, 杨顺, 刘梦丽

- 1153 阵列式光纤地震仪在西藏易贡湖地区的浅层探测实验研究 …… 张衡, 张文涛, 黄稳柱, 裴顺平, 恩和得力海, 李云月, 赵俊猛
- 1164 三维各向异性裂缝介质正演模拟的三种交错网格适应性比较及 Lebedev 方法的改进 ……  
… 徐云贵, 廖建平, 周林, 刘和秀, 张青, 谢敬涛, 王立歆
- 1180 基于振幅加权的拖缆与海底地震资料联合波形反演方法 …… 杨华臣, 张建中, 吴志强
- 1192 地震绕射波弱信号 U-net 网络提取方法 ……  
…………… 盛同杰, 赵惊涛, 彭苏萍
- 1205 地面多分量地震数据 P/S 波分离的深度学习  
方法 …… 黄河, 王腾飞, 程玖兵, 熊一能, 朱峰
- 1220 连续缺失地震数据的高阶流式预测滤波插值  
方法 …… 吴庚, 刘财, 刘殿秘, 刘洋, 郑植升
- 1232 基于优势低频带地震数据的属性融合断层识别方法 …… 陈国飞, 石颖, 杨会东, 宋宝权, 王维红, 于波, 熊向东
- 1244 同步提取三参数小波变换及其在储层含气性检测中的应用 ……  
…………… 刘笛, 胡英, 陈辉, 李军, 方玉霞
- 1257 基于位场曲面延拓的航磁成图数据精度评价方法研究 ……  
…………… 张义蜜, 熊盛青, 于长春, 王万银
- 1269 时间域航空电磁激发极化参数三维反演研究  
… 满开峰, 殷长春, 刘云鹤, 孙思源, 熊彬
- 1281 基于 MLS 形函数处理边界的电阻率法有限单元正演模拟 …… 麻昌英, 赵文学, 汤文武, 柳建新, 闫玲玲, 周聪, 秦臻, 钟炜城, 程流燕
- 1298 层状各向异性地层中含环状天线槽随钻方位电磁波测井几何因子算法 ……  
…………… 于蕾, 汪宏年, 王浩森, 殷长春



Contents

Space and Atmospheric physics · Geodesy

- 0871 Observations of occurrence rates of small-scale magnetic holes in the Martian magnetosheath .....  
 ... CHEN YangJun, WU MingYu, XIAO SuDong,  
 WANG GuoQiang, CHEN YuanQiang, LOU YueQun,  
 DU AiMin, ZHANG TieLong
- 0881 Study on the method of the photometry calibration of ground-based coronagraph according to solar irradiance and preliminary test ..... TANG Ning, YU XiaoYu,  
 LIU DaYang, WANG XiangYu, HAN JianPing,  
 SUN MingZhe, LIU WeiXin, XIA LiDong
- 0891 Development of 10~50 MHz ground based low frequency radio astronomical digital receiver and PC software ...  
 XU BingQiang, BAI Yu, LU Guang, PING JingSong,  
 WANG MingYuan, YANG WenJun,  
 WANG Zhen, YAN FaBao
- 0905 The connection between the North Pacific sea temperature and the first rainy season precipitation of Guangxi ...  
 ..... QIN Hao
- 0920 Construction of multi-extreme climate events composite grads index and comprehensive analysis of extreme climate in the Yangtze River Basin from 1961 to 2020  
 ..... ZHANG CunJie, XIAO Chan, LI Shuai,  
 SANGBU ChuJie, REN YuYu, ZHANG SiQi,  
 WANG Rong
- 0939 Assessments of global tropospheric delay retrieval from reanalysis based on GNSS data .....  
 ..... SHANGGUAN Ming, CHENG Xu, PAN Xiong,  
 DANG Meng, WU LuZhen, XIE ZiChun
- 0951 Positioning accuracy of GNSS-A in deep sea based on Bayesian estimation .....

- ..... MING Feng, YANG YuanXi, ZENG AnMin
- 0961 Estimation of ocean sound velocity variation based on GNSS-A and its influence on positioning .....  
 ..... ZHANG ShengQiu, YANG YuanXi, XU TianHe
- 0973 The influence of different earth models on atmospheric load displacement modeling in Chinese continent .....  
 ..... LI ChangHai, ZHONG Ping, JIANG ZhongShan,  
 TANG Miao, YANG XingHai, YOU XiaoWen
- 0986 Waveform retracking method of Sentinel-3 altimetry data in lake and reservoir areas—Taking Dongping Lake and Xiashan Reservoir as examples .....  
 ..... YANG XingChao, GUO Bin, XING WenXue,  
 XIANG YingYing, GUO RuiLian, XU Ying, JI Min
- 0997 Inversion of regional terrestrial water storage changes using GPS vertical displacements based on TSVD-Tikhonov regularization method ..... ZHONG Bo, LI XianPao,  
 LI JianCheng, WANG HaiHong, DING Jian
- 1015 Response of Antarctic tide gauge stations to global earthquake-caused tsunamis ..... CHEN ShuaiJun, AI SongTao

Geodynamics · Seismology · Marine Geophysics

- 1025 Controls of crustal detachment layer on the development and evolution of continental rifts—Based on numerical simulations ..... FAN QingKai, GUO JinRui,  
 WANG YanYang
- 1036 Crustal thickness and Poisson's ratio beneath the middle-southern segment of Tan-Lu fault zone .....  
 ..... CHEN LiYi, WANG WeiLai, CAI GuangYao
- 1050 Three-dimensional shear wave velocity structure in the eastern margin of the Tibetan Plateau based on the ambient noise ..... TAN YouHeng, YU XiangWei,  
 SONG Qian, ZHANG WenBo

- 1070 **Deep deformation mechanism and active tectonic along the Weixi-Qiaohou fault zone** ..... WANG YiMi, XU LongHui, YANG HaiYan, JIN MingPei
- 1086 **Coseismic and early postseismic fault slip model and the seismogenic fault friction properties of the 2021 Qinghai Madoi  $M_w$  7.3 earthquake** ... ZHAO Lei, XU WenBin, FANG Nan, LIU JiHong, FENG GuangCai
- 1098 **Machine learning in identifying and mapping the surface rupture of the 2021  $M_w$  7.4 Madoi earthquake, Qinghai** ..... ZENG XianYang, LIU Jing, WANG Wei, YAO WenQian, WU Jing, LIU XiaoLi, HAN LongFei, WANG WengXin, XING YuKun, DU RuiLin, YANG XuQian
- 1113 **Microseismic detection and location in Shanghai and its adjacent areas** ..... ZHANG YaNan, LI HongYi, ZHANG ShengZhong, LI YanZhen, HUANG YaFen, ZHONG WeiXing
- 1125 **Broadband ground motion spectral element simulation based on GP14.3 kinematic hybrid source model and SPECFEM 3D** ..... BA ZhenNing, ZHAO JingXuan, ZHANG YuShan, LIANG JianWen, ZHANG YuJie
- 1139 **Seismic oceanography study of thermohaline staircases in the Southeast Caribbean Sea** ..... ZHANG Peng, SONG HaiBin, FAN WenHao, YANG Shun, LIU MengLi
- 1153 **A new application of fiber seismometer in the Yigong Lake, Tibetan Plateau** ..... ZHANG Heng, ZHANG WenTao, HUANG WenZhu, PEI ShunPing, Enhedelihai Nilot, LI Elita Yunyue, ZHAO JunMeng
- 1164 **Comparing the adaptability of three different staggered-grids for the simulation of 3D anisotropic fractured media and improving the Lebedev method** ..... XU YunGui, LIAO JianPing, ZHOU Lin, LIU HeXiu, ZHANG Qing, XIE JingTao, WANG LiXin
- 1180 **Joint full-waveform inversion of towed-streamer and ocean-bottom seismic data with amplitude weighting** ..... YANG HuaChen, ZHANG JianZhong, WU ZhiQiang
- 1192 **Seismic diffraction extraction method using U-net for weak signals** ..... SHENG TongJie, ZHAO JingTao, PENG SuPing
- 1205 **P/S separation of multi-component seismograms using a deep learning method** ... HUANG He, WANG TengFei, CHENG JiuBing, XIONG YiNeng, ZHU Feng
- 1220 **Seismic data interpolation beyond continuous missing data using high-order streaming prediction filter** ..... WU Geng, LIU Cai, LIU DianMi, LIU Yang, ZHENG ZhiSheng
- 1232 **Fault identification method of attribute fusion based on seismic optimized frequency of seismic data** ..... CHEN GuoFei, SHI Ying, YANG HuiDong, SONG BaoQuan, WANG WeiHong, YU Bo, XIONG XiangDong
- 1244 **Synchroextracting three-parameter wavelet transform and its application in hydrocarbon detection of reservoir** ..... LIU Di, HU Ying, CHEN Hui, LI Jun, FANG YuXia
- 1257 **Research on accuracy evaluation method of "curved surface continuation" for aeromagnetic mapping data** ..... ZHANG YiMi, XIONG ShengQing, YU ChangChun, WANG WanYin
- 1269 **3D inversion of time-domain airborne EM data for IP parameters** ..... MAN KaiFeng, YIN ChangChun, LIU YunHe, SUN SiYuan, XIONG Bin
- 1281 **FEM forward modeling of resistivity method with boundary conditions implemented by MLS shape function** ..... MA ChangYing, ZHAO WenXue, TANG WenWu, LIU JianXin, YAN LingLing, ZHOU Cong, QIN Zhen, ZHONG WeiCheng, CHENG LiuYan
- 1298 **Algorithm of geometrical factor of the azimuthal electromagnetic wave logging while drilling with annular antenna recesses in layered anisotropic formation** ... YU Lei, WANG HongNian, WANG HaoSen, YIN ChangChun



## Applied geophysics