

空间物理学

- 1185 2013年平流层爆发性增温期间高纬电离层半日潮汐波研究 罗嘉辉, 龚韵, 马铮, 张绍东, 黄春明
- 1197 极区电离层对流速度的浅层神经网络建模与分析 王平, 李浩, 韩冰, 胡泽骏, 高新波, 刘建军, 胡红桥

重力学·地球动力学·地震学·地电学

- 1214 青藏高原及周边区域岩石圈重力势能及其产生的偏应力场 李忠亚, 胡敏章, 王勇, 汪健, 申重阳, 李辉
- 1229 自重可压缩层状球体地球模型下地震变形算法的优化研究 刘泰, 唐河, 余雅文, 付广裕, 孟国杰
- 1240 基于GPS观测的红河断裂带现今分段及闭锁特征 王君毅, 许才军, 温扬茂, 臧建飞, 肖卓辉
- 1255 扬子与华夏块体缝合带区域的Rayleigh及Love波相速度层析成像 马军伟, 黄景秋, 付媛媛
- 1271 大兴安岭火山群区的深部速度结构及火山成因 张风雪, 吴庆举, 李永华, 张瑞青
- 1288 小江断裂带北段上地壳三维速度结构研究及鲁甸 $M_s6.5$ 地震构造分析 邓菲, 吴庆举, 许力生
- 1303 云南2020年巧家 $M_s5.0$ 地震序列发震构造及其与2014年鲁甸 $M_s6.5$ 地震的关系 宋倩, 梁姗姗, 于湘伟, 章文波, 李春来
- 1325 1976年唐山7.8级地震前地下水位变化与地震成核过程的关系 马玉川, 晏锐, 王广才, 余怀忠, 黎明晓, 丁志华, 张子广

- 1336 郯庐断裂带合肥—宿迁段及邻区大地电磁三维成像 范晔, 陈小斌, 汤吉, 崔腾飞, 孙翔宇, 王培杰, 刘钟尹
- 1354 华南地区樟树一宁德大地电磁测深剖面深部电性结构及热特征 李帅, 韩江涛, 刘立家, 孟凡文, 康建强, 吴懿豪, 辛中华

应用地球物理学

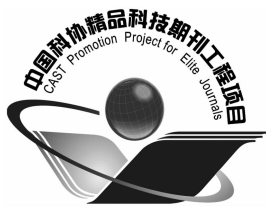
- 1376 基于组稀疏约束的微地震震源参数谱投影梯度反演 唐杰, 刘英昌, 李聪, 高翔, 孙成禹
- 1389 基于时间高精度-空间隐式矩形交错网格有限差分的弹性波数值模拟 徐世刚, 包乾宗, 任志明, 刘洋
- 1402 基于密度扰动的点扩散函数计算与三维深度域模拟成像 段伟国, 毛伟建, 张庆臣, 石星辰, 张建磊
- 1416 基于Marchenko理论的成像域与数据域间多次波消除方法对比 张乐乐, 邵婕, 郑忆康, 王一博, Evert Slob
- 1425 基于垂直构造梯度优化的全波形反演方法 张灵莉, 任玉晓, 刘斌, 王凯, 许新骥, 陈磊
- 1439 水合物赋存形式对石英砂电性特征影响的数值模拟研究 田海涛, 刘乐乐, 夏宇轩, 徐赛, 韦伟, 蔡建超
- 1451 基于球缝模型优化反演的裂缝储层评价新方法 刘诗琼, 石强, 汤继周, 刘堂晏, 赵文君, 陈鹏
- 1461 基于谱元法的广域电磁法三维正演模拟 徐锦通, 汤井田
- 1472 瞬变电磁低频近似Maxwell方程的CPML吸

- 收边界及施加方法 …… 柳尚斌, 李雪峰,
蓝日彦, 李敦仁, 孙怀凤
- 1482 瞬变电磁数据 L-PSO 反演方法 ……
…… 王书明, 底青云, 夏彤, 任子乾,
宋江涛, 邹贵安
- 1494 井中偶极声源在横向各向同性地层中的辐射
波场 …… 古希浩, 唐晓明, 苏远大
- 1508 斯通利波在渗透地层和裂缝带的反射及透
射:解析和数值方法模拟对比 ……
…… 夏飞月, 苏远大, 唐晓明
- 1519 在套管中激发环向传播的准 SH 波的有限元
模拟及实验研究 …… 陈雪莲, 庄妍, 夏飞月,
殷晓康, 唐晓明
- 1528 基于微扰理论的伽马-伽马密度测井快速正
演方法 …… 陈前, 张锋, 梁启轩, 刁书渊,
田立立, 范继林, 王才志, 刘英明, 潼永周



研究快报

- 1536 2022 年 1 月 8 日青海门源 $M_s6.9$ 地震孕震
环境和冷龙岭断裂分段延展特征 ……
…… 赵凌强, 孙翔宇, 詹艳, 杨海波,
王庆良, 郝明, 刘雪华



Contents

Space physics

- 1185 Study of the ionospheric semidiurnal tides at high latitude during the sudden stratospheric warming event in 2013
..... LUO JiaHui, GONG Yun, MA Zheng,
ZHANG ShaoDong, HUANG ChunMing
- 1197 Modeling the polar ionospheric convection velocity vectors using shadow neural networks
... WANG Ping, LI Jie, HAN Bing, HU ZeJun,
GAO XinBo, LIU JianJun, HU HongQiao

Gravity • Geodynamics • Seismology •
Geoelectricity

- 1214 Lithospheric gravitational potential energy and its contribution to tectonic stress field in the Tibetan Plateau and its surrounding regions
..... LI ZhongYa, HU MinZhang, WANG Yong,
WANG Jian, SHEN ChongYang, LI Hui
- 1229 Optimization of algorithm for seismic deformation in a self-gravitation, compressibility and layered Earth model
..... LIU Tai, TANG He, SHE YaWen,
FU GuangYu, MENG GuoJie
- 1240 Characteristics of segmentation and interseismic coupling along the Red River fault from GPS observations
..... WANG JunYi, XU CaiJun, WEN YangMao,
ZANG JianFei, XIAO ZhuoHui
- 1255 Phase velocity tomography of Rayleigh and Love waves in the suture zone between the Yangtze and Cathaysia Blocks
..... MA JunWei, HUANG JingQiu,
FU YuanYuan
- 1271 The deep seismic velocity structures beneath volcanoes in Great Xing'an Range and volcanic mechanism
..... ZHANG FengXue, WU QingJu, LI YongHua,
ZHANG RuiQing

- 1288 Three-dimensional upper crustal seismic velocity model for the northern Xiaojiang fault and tectonic analysis for Ludian $M_s6.5$ earthquake
..... DENG Fei, WU QingJu, XU LiSheng
- 1303 Seismogenic mechanism of the 2020 Qiaojia $M_s5.0$ earthquake sequence and its relationship with the 2014 Ludian $M_s6.5$ earthquake in Yunnan
... SONG Qian, LIANG ShanShan, YU XiangWei,
ZHANG WenBo, LI ChunLai
- 1325 Groundwater level changes before the 1976 Tangshan $M_s7.8$ earthquake and its relation with the earthquake nucleation process
..... MA YuChuan, YAN Rui,
WANG GuangCai, YU HuaiZhong, LI MingXiao,
DING ZhiHua, ZHANG ZiGuang
- 1336 Three-dimensional modelling of magnetotelluric data from the Hefei-Suqian segment of the Tanlu Fault Zone, Eastern China
..... FAN Ye, CHEN XiaoBin,
TANG Ji, CUI TengFa, SUN XiangYu,
WANG PeiJie, LIU ZhongYin
- 1354 The deep electrical structure and thermal characteristics of the Zhangshu-Ningde magnetotelluric profile in South China
..... LI Shuai, HAN JiangTao,
LIU LiJia, MENG FanWen, KANG JianQiang,
WU YiHao, XIN ZhongHua

Applied geophysics

- 1376 Group sparse constrained inversion of microseismic sources parameters based on spectral projection gradient method ...
..... TANG Jie, LIU YingChang, LI Cong,
GAO Xiang, SUN ChengYu
- 1389 Simulating elastic wave using temporal high accuracy and implicit spatial rectangular staggered-grid finite

- difference approaches ... XU ShiGang, BAO QianZong,
REN ZhiMing, LIU Yang
- 1402 Computation of density perturbation based point spread function and simulation of migration image in 3D depth domain DUAN WeiGuo, MAO WeiJian, ZHANG QingChen, SHI XingChen, ZHANG JianLei
- 1416 A comparison of imaging domain and data domain Marchenko multiple elimination schemes ZHANG LeLe, SHAO Jie, ZHENG YiKang, WANG YiBo, EVERT Slob
- 1425 Full waveform inversion method based on vertical structural gradient optimization ... ZHANG LingLi, REN YuXiao, LIU Bin, WANG Kai, XU XinJi, CHEN Lei
- 1439 Numerical simulation study on the influence of hydrate morphology on the electrical properties of quartz sand TIAN HaiTao, LIU LeLe, XIA YuXuan, XU Sai, WEI Wei, CAI JianChao
- 1451 Novel evaluation of fracture-type reservoir based on optimization inversion of Sphere-Fracture Model LIU ShiQiong, SHI Qiang, TANG JiZhou, LIU TangYan, ZHAO WenJun, CHEN Peng
- 1461 Spectral element method for 3D wide field electromagnetic method forward modeling XU JinTong, TANG JingTian
- 1472 A CPML ABC for Maxwell equations with low-frequency approximation in transient electromagnetic modeling LIU ShangBin, LI XueFeng, LAN RiYan, LI DunRen, SUN HuaiFeng
- 1482 Transient electromagnetic method inversion based on Lévy flight-particle swarm optimization WANG ShuMing, DI QingYun, XIA Tong, REN ZiQian, SONG JiangTao, ZOU GuiAn
- 1494 Borehole dipole-source radiation wavefield in transversely isotropic formation ... GU XiHao, TANG XiaoMing, SU YuanDa
- 1508 Stoneley wave reflection and transmission across permeable formations and fractured zones: Comparison of analytical and numerical modeling results XIA FeiYue, SU YuanDa, TANG XiaoMing
- 1519 Finite element simulation and experiment study on exciting quasi-SH wave circumferentially in the casing CHEN XueLian, ZHUANG Yan, XIA FeiYue, YIN XiaoKang, TANG XiaoMing
- 1528 A fast forward method of gamma-gamma density logging based on perturbation theory CHEN Qian, ZHANG Feng, LIANG QiXuan, DIAO ShuYuan, TIAN LiLi, FAN JiLin, WANG CaiZhi, LIU YingMing, TI YongZhou

Rapid Communication

- 1536 The seismogenic model of the Menyuan $M_s 6.9$ earthquake on January 8, 2022, Qinghai Province and segmented extensional characteristics of the Lenglongling fault ZHAO LingQiang, SUN XiangYu, ZHAN Yan, YANG HaiBo, WANG QingLiang, HAO Ming, LIU XueHua