(II) International Topics

Session1 Global Plate Reconstruction and Geodynamic Processes Through Geological Time

(Conveners: Zheng-Xiang Li, Xiaodong Song, LijunLiu, GuoliangZhang, Jian Zhang, Haipeng Li)

TIME: October21 LOCATION: Room3(Multi functional Hall C on the first floor)

Early Earth system: Hadean to Archaean

Chair: Jian Zhang, Zheng-Xiang Li

Time	Sequence	Title	Speaker
8:30-8:55	*1	Onset of plate tectonics: Evidence from petrology	Shujuanjiao
8:55-9:20	*2	Late Archean geodynamic transition regime: a perspective from the North China Craton	WeiWang
9:10-9:25	3	Paleomagnetism of the Kelly Dyke Swarm: Plate mobility in the Archean	Uwe Kirscher
9:25-9:40	4	The formation of a unified basement of the Yangtze Craton	Liang Zhang
9:40-9:55	5	Nanoconfined proton flux in serpentinites as a bioenergetic hypothesis for life's emergence on pre-ocean Earth	Jingbo Nan
9:55-10:10		**Discussion**	
10:10-10:20		**Rest**	

Chemical geodynamics

Chair: Guoliang Zhang, Piero A. B. de Sampaio

Time	Sequence	Title	Speaker
10:20-10:45	*7	Large scale mantle heterogeneity: A legacy of plate tectonic supercycles	Luc S. Doucet
10:45-11:00	❀8	Mantle plume activity in the Mirovoi ocean: evidence from accreted oceanic slices in North Wales	Piero A. B. de Sampaio
11:00-11:15	9	Global Distribution of Intraplate Strongly Alkaline Volcanism Controlled by the Stability of Hydrous Minerals (Amphibole ± Phlogopite)	Chutian Shu
11:15-11:30	10	Enhanced mantle cooling and global perturbations linked to the onset of modern plate tectonics	Qian Chen
11:30-11:45	❀11	The Imaging of the Lithosphere-asthenosphere Discontinuities Beneath the Pacific Ocean	Haonan Chen
11:45-12:00	12	The Identification of Paleoproterozoic Southern Margin Orogen in the North China Craton and Constraints on the Reconstruction of the Nuna Supercontinent	Zhen-Xin Li

Plate reconstruction and geodynamic modelling

Chair：Lijun Liu，Chutian Shu

Time	Sequence	Title	Speaker
13:30-13:45	13	Evaluating Plate Reconstruction Models Using Deep-time Earth Data: A Case Study of Detrital Zircon Data	Dongchuan Jian
13:45-14:00	14	Proterozoic (1.62 Ga) Taishan dykes of the North China Craton: Evaluating a potential link to the Melville Bugt dyke swarm, Greenland	Chong Wang
14:00-14:15	15	Global Distribution of Intraplate Strongly Alkaline Volcanism Paleomagnetism of the ca. 1.56 Ga Daly Head mafic dykes in South Australia and its implications for the supercontinent Nuna	Yebo Liu
14:15-14:30	❁16	Numerical Simulation of True Polar Wander Process Driven by Mantle Convection	Yusen Liu
14:30-14:45	17	The evolution of dense ULVZs and their distribution relative to LLSVPs	Xi Liu
14:45-15:00	18	From Surface to Core: Supercontinent-driven Core-mantle Boundary Heat Flux Variations and their Impact on the Geomagnetic Dipole	Peilong Yan

Sessio2 High-Performance Computing Space-Weather/Electromagnetic-Environment Disasters

（Conveners:Bojing Zhu, Yongbing Li, WuWang, Yonghui Li, Henry Tufo）

TIME：October21 LOCATION：Room20(Conference Hall E on the third floor of Zone B)

Chair：Yongbing Li

Time	Sequence	Title	Speaker
8:30-8:55	✱1	Advancements in integrating real-time and reanalysis data for accurate weather forecasting	Chunxiang Shi
8:55-9:10	2	Late Eocene Orbital pacing of the Asian Monsoon and Its Implications for Geomagnetic-Climate Coupling	Minghao Ma
9:10-9:25	3	Obliquity-Modulated Limits of the Mio-Pliocene ITCZ in East Asia: Insights from Planetary Forcing and Meridional Energy Gradients	Rui Zhang
9:25-9:40	4	Lattice Boltzmann Method for Magnetohydrodynamic Flow on DCU Cluster	Wu Wang
9:40-9:55	5	SolarZip: An Efffcient and Adaptive Compression Framework for Solar EUV Imaging Data	Dingwen Tao
9:55-10:10	6	Investigating the connection between temperature and magnetic field in the plasma migration mechanism of Earth's outer core	Shichao Wang
10:10-10:20		**Rest**	
10:20-10:45	✱7	Advances in Research on China's Zhangheng-1 (CSES-1) Geophysical Satellite for Natural Disaster Monitoring	Jianping Huang
10:45-11:00	8	Advancements and Future Outlook for Building the Tianhe Supercomputing Application Ecosystem	Chunye Gong

11:00-11:15	9	Early warning system of SEP-induced space weather disasters on the supercomputer	Bojing Zhu
11:15-11:30	10	Nonparametric KMCM for Non-Equilibrium Plasmas	Yanpeng Wang
11:30-11:45	11	MHD simulations of small-scale magnetic reconnection in the partially ionized low solar atmosphere	Abdullah Zafar
11:45-12:00	12	The dynamic interplay of Spirit, Hurricane and Solar Wind in the Sun-Earth panoramic system	Delong Chi

Chair：Yonghui Li

Time	Sequence	Title	Speaker
13:30-13:55	*13	AI Revolutionizes Astronomical Data Processing	Hui Liu
13:55-14:10	14	Digital Sun： A numerical fulcrum for the Digital Space	Qingguang Yan
14:10-14:25	15	OAM Signals in Electromagnetic Waves: A Novel Approach to Detecting Space Plasma	Liang Dong
14:25-14:40	16	Artificial Neural Networks for Searching Earthquake Patterns Based on Long-term Complete Seismic Catalog Created by Finite Element Model	Xianying Wang
14:40-14:55	17	National Supercomputer Center in Jinan:The Indigenous Shenwei Supercomputer and Its Applications in Earth and Astronomical Sciences	Yanyan Chen
14:55-15:10	18	Improved RHPIC-LBM and its application in particle acceleration. Part 1: Multi-component-abundance-isotope module	Shichao Wang
15:10-15:20		**Rest**	
15:20-15:45	*19	Diting-obspicker:a 100 Million Parameters Deep Learning Seismic Phase Picker for Seismic Big Data	Ming Zhao
15:45-16:00	20	Independent computing power and digital intelligence drive industry growth	Chengdong Qian
16:00-16:15	21	Speciation of Au+ and Cu+ in silicate melts studied by First principle molecular dynamic simulations	Yongbing Li
16:15-16:30	22	Iron isotope fractionation among Diopside- Hedenbergite invested by First-principle calculation	Yang Zhao
16:30-16:45	23	Electrical imaging uncovers fresh insights into plate tectonics at stalled mid-ocean ridges	Xianying Wang
16:45-17:00	24	Improved RHPIC-LBM and its application in particle acceleration. Part 2: Wave-particle interaction turbulence acceleration	Zehua Fu