IUGS UNESCO IGCP739
The Mesozoic-Palaeogene hyperthermal events

unesco
International Geoscience Programme

IUGS

NSFC

NANJING UNIVERSITY 1902

International Workshop on Mesozoic-Palaeogene Hyperthermal Events & Fifth IGCP 739 Workshop

Third Circular

August 16-28, 2025

Nanjing, China

Nanjing University, Xianlin Campus

Website: https://es.nju.edu.cn/igcp739/main.htm

CONTENTS

01 Invitation

Extreme global warming events in geologic history, known as hyperthermal events, provide potential analogues for modern warming. These events offer the potential to better understand the forcing(s), responses and feedbacks of the Earth’s climate system. The Mesozoic to Paleogene represented a critical period of climatic evolution, during which a series of characteristic hyperthermal events occurred, including: the Permian/Triassic boundary event (PTB), Triassic/Jurassic boundary event (TJB), Toarcian Oceanic Anoxic Event (TOAE), Cretaceous Oceanic Anoxic Events and Paleocene-Eocene Thermal Maximum (PETM).

UNESCO's International Geoscience Programme IGCP-739 (2021 – 2025) aims to decipher the triggering mechanisms of Mesozoic-Paleogene hyperthermal events and their associated environmental/biological responses. Significant progress has been achieved during the project implementation. To advance understanding of hyperthermal events, disseminate recent findings, and foster interdisciplinary collaboration, the "The International Workshop on Mesozoic – Palaeogene Hyperthermal

Events & Fifth IGCP 739 Workshop" will be convened at Nanjing University from August 16 – 18, 2025. This will be followed by a post-conference field excursion (August 19 – 26) in southern Tibet focusing on "Environmental Responses to Hyperthermal Events".

We welcome original findings, reviews, or reports on topics including (but not limited to) fundamental sedimentology, stratigraphy, geochemistry, palaeoclimatology and paleontology, as well as deep-time data assimilation studies and paleoclimate Earth system modelling at regional or global scales.

The organizing committee will do its best to provide an ideal environment and excellent facilities for discussing cutting-edge research on hyperthermal events. We look forward to productive discussions and new collaborations.

Conference Organizing Committee Chair

Xiumian HU

02 Organizer

State Key Laboratory of Critical Earth Material Cycling and Mineral Deposits, Nanjing University

School of Earth Sciences and Engineering, Nanjing University

Frontiers Science Center for Critical Earth Material Cycling, Nanjing University

IUGS/UNESCO IGCP 739 Project

Natural Science Foundation of China Key Project (No. 42488201)

National Key Research and Development Project of China (No. 2023YFF0804000)

03 Scientific and Organization Committee

Scientific Committee

(in alphabetic order)

Santanu Banerjee, Jian Cao, Xi Chen, Zhongqiang Chen, Jacopo Dal Corso, Ying Cui, Stephen Hesselbo, Xiumian Hu, Masayuki Ikeda, Shijun Jiang, David B. Kemp, Michał Krobicki, Mingsong Li, Chao Ma, Robert J. Newton, Mariano N. Remírez, Micha Ruhl, Haijun Song, Bo Wang, Chengshan Wang, Yongdong Wang, Shiling Yang, Weiqi Yao, İsmail Ömer Yilmaz, Xiaoqiao Wan

Local Organizing Committee

Chair: Xiumian Hu

Members (in alphabetic order): Jian Cao, Tianyu Chen, Xi Chen, Zhong Han, Tianchen He, Xin Jin, Jingxin Jiang, David Kemp, Xianghui Li, Yongxiang Li, Anlin Ma, Xisheng Xu, Yiwei Xu, Shang Zhu

Contacts

For academic information

Dr. Jingxin Jiang: Tele: 0086-17805110329; Email: jjxcug24@163.com

For registration, hotel reservation, payment and others:

Shang Zhu: Tele: 0086-15252450128; Email: zhushang@nju.edu.cn

04 General Information

Onsite Registration

Data & Time: 10:00-22:00 16th August, 2025

Location of Onsite Registration: Lobby, the 1st floor of International Conference Center, Nanjing University（南京大学国际会议中心）

Onsite Registration Fees (including the formal registration, the abstract volume, handouts, the gala dinner, coffee breaks, and lunch and dinner):

Professional: 370 USD/2,700 CNY; Students: 270 USD/2,000 CNY

Language of the Conference

English is the official language of the workshop. Please note that no simultaneous interpretation services will be provided.

Guidelines for Presentations

Invited talk (20 minutes) = 15-minutes presentation + 5-minutes Q&A

Regular talk (15 minutes) = 13-minutes presentation + 2-minutes Q&A

Poster presentation: posters should be sized 85 cm × 120 cm (width × height; A0 size) and must be displayed in advance in the designated area.

Slide Submission & Technical Support

Presenters are required to submit their presentation slides before the talk begins.

Assistants will be available to assist with uploading slides and technical setup during tea breaks.

Please prepare your slides in 16:9 format.

05 Conference Venue & Accommodation

Conference Venue

Both the workshop and accommodation are arranged in the Nanjing University International Conference Center (南京大学国际会议中心). The workshop will be held in the Zijin Hall (紫荆厅) at first floor.

Address: No. 163, Xianlin Avenue, Qixia District, Nanjing, Jiangsu


Transportation

✧ **From Lukou airport to Nanjing University International Conference Center ***

By Metro: Take Metro Line S1 from Lukou Airport, and transfer to Metro Line 3 at Nanjing South Railway Station, then switch to Metro Line 2 at Daxinggong Station to reach the Xianlin Campus of Nanjing University. The journey takes approximately 1 hour and 40 minutes.

By Taxi: Approximately 57 km, takes about 1 hour and costs around 200 RMB.

✧ **From Nanjing South Railway Station to Nanjing University International Conference Center**

By Metro: Take Metro Line 3 at Nanjing South Railway Station, then switch to Metro Line 2 at Daxinggong Station to reach the Xianlin Campus of Nanjing University. The journey takes approximately 1 hour.

By Taxi: Approximately 30 km, takes about 40 minutes and costs around 80 RMB.

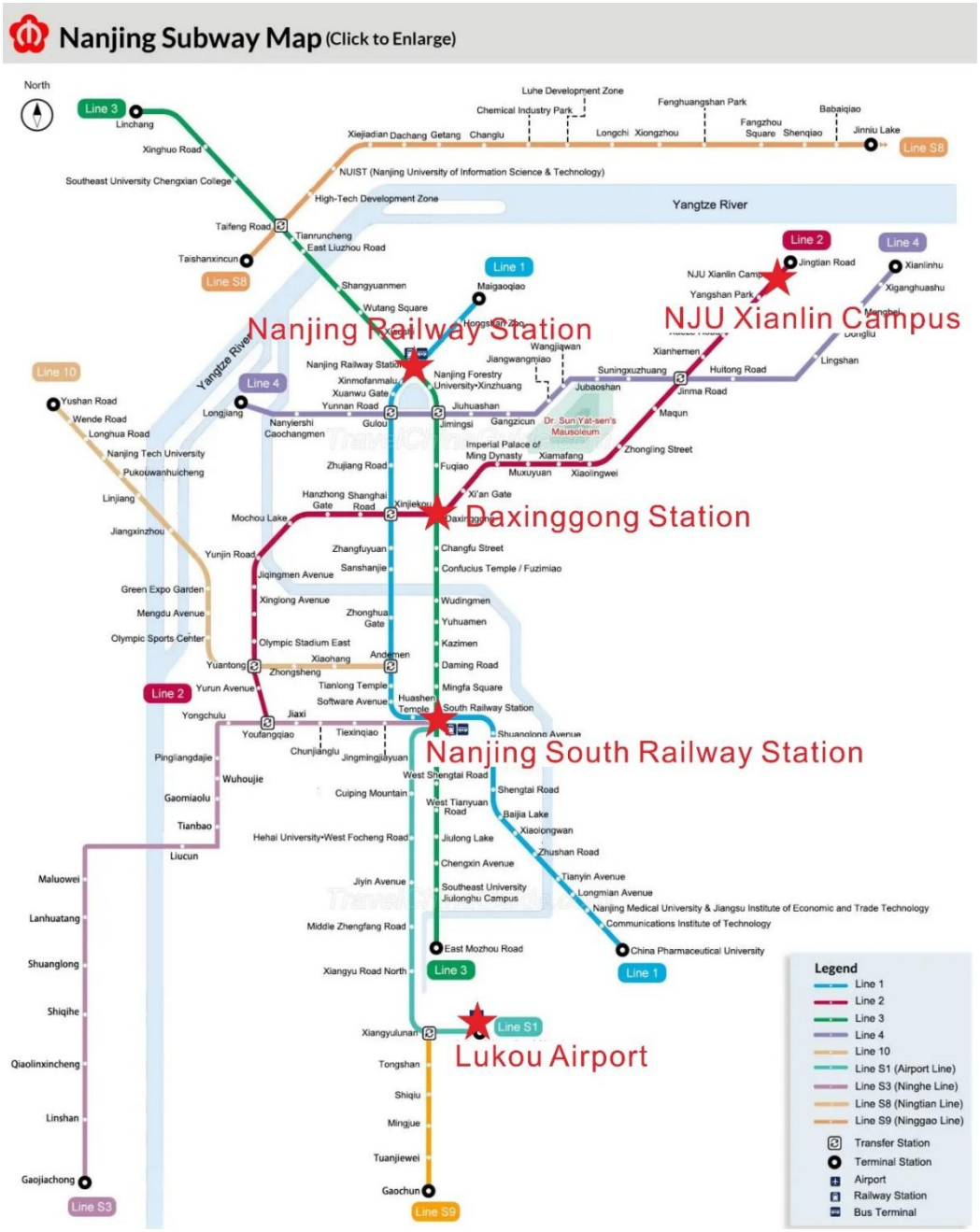
✧ **From Nanjing Railway Station to Nanjing University International Conference Center**

By Metro: Take Metro Line 3 at Nanjing Railway Station, then switch to Metro Line 2 at Daxinggong Station to reach the Xianlin Campus of Nanjing University. The journey takes approximately 1 hour.

By Taxi: approximately 17 km, takes about 27 minutes and costs around 50 RMB.

*** Please send your flight details to the conference team in advance. We plan to arrange two centralized pickups based on common arrival times. We will notify you of the pickup arrangements via email in advance. Those whose arrival time are not within the pick-up time, please make your**

own arrangements by referring the traffic advice in the "Transportation" section. We appreciate your understanding.



06 Workshop Programs

Invited Keynote talk (20 mins) (in alphabetic order)			
NO.	Name	Institution	Title
1	Stephen P. Hesselbo	University of Exeter, UK	*Integrated stratigraphy of the Early Jurassic: results from the Jurassic Earth System and Timescale project*
2	Terry Isson	University of Waikato, New Zealand	*To be confirmed*
3	David B. Kemp	China University of Geosciences (Wuhan)	*Stratigraphic constraints on maximum rates of carbon release during the Toarcian oceanic anoxic event*
4	Timothy Lyons	University of California, Riverside, USA	*Inorganic geochemical tracers of marine anoxia during Oceanic Anoxic Events: Windows to the drivers and biotic consequences of hyperthermal events*
5	Paul Pearson	University College of London, UK	*Hothouse carbon cycling and a PETM dead zone: the Paleogene of Tanzania*
6	Haijun Song	China University of Geosciences (Wuhan)	*Evidence for the link between hyperthermal events & biotic extinctions*
7	Weimu Xu	Trinity College Dublin, Ireland	*Hydrological and environmental responses during the Paleocene-Eocene Thermal Maximum at Modgunn Hydrothermal Vent Complex, Norwegian Continental Margin (IODP Expedition 396)*
8	Bo Wang	Nanjing Institute of Geology and Palaeontology, CAS, China	*Carbon and Hydrological Cycle Changes of the Carnian Pluvial Episode (Late Triassic)*
General talk (15 mins) (in alphabetic order)			
NO.	Name	Institution	Title
9	Stella Z. Buchwald	University of Hamburg, Germany	*Lipid biomarkers record marine and terrestrial ecosystem responses across the Permian Triassic mass extinction in the Dolomites*

			(Italy)
10	Wenhan Chen	Chengdu University of Technology, China	*Carbonate barium isotopes uncover the spatio-temporal evolution of marine primary productivity during the Toarcian Oceanic Anoxic Event*
11	Jianzhen Chen	Institute of Geology and Geophysics, CAS, China	*Microbial-algal community changes during the Oceanic Anoxic Event 2: Evidence from the chronology and biomarkers, Southwestern Tarim*
12	Xi Chen	China University of Geosciences (Beijing)	*Cretaceous Sea Surface Temperature Reconstruction in the Eastern Tethyan Realm*
13	Yixing Du	Chengdu University of Technology, China	*Carbon isotope fluctuations from Norian to the end of Triassic in the Tethys Himalaya, Southern Tibet (Xizang)*
14	Zhong Han	Nanjing Institute of Geology and Palaeontology, CAS, China	*Hydroclimatic extremes amplified low-latitude continental weathering during the early Toarcian*
15	Tianchen He	Hohai University, China	*Unravelling Deep-Time Oceanic Anoxic Events: Lessons from the End-Triassic Mass Extinction*
16	Masayuki Ikeda	The University of Tokyo, Japan	*Possible tipping points across the Mesozoic hyperthermals recorded in deep-sea succession in Japan*
17	Jingxin Jiang	Nanjing University, China	*No acidification in tropical shallow marine during the Paleocene-Eocene Thermal Maximum*
18	Simin Jin	China University of Geosciences (Wuhan)	*Astronomically paced hydrological change during the Paleocene-Eocene Thermal Maximum*
19	Tomonosuke Kanke	The University of Tokyo, Japan	*Reconciling uranium and thallium isotope records, volcanisms, and ocean anoxia during the early Toarcian*
20	Adrijan Košir	Research Centre of the Slovenian Academy of Sciences & Arts, Slovenia	*Stratigraphy of Paleocene-Eocene Carbon Isotope Excursions Recorded in Shallow Carbonate Ramp Successions of The Northern Adriatic Carbonate Platform, Slovenia*
21	Michał Krobicki	AGH University of Science and Technology, Poland	*Is the Toarcıan Anoxıc Event a Lımıt of the Kıoto Carbonate Platform Along the Perı-Gondwanıan Margın? – Case Study of the Hımalayan Kalı Gandakı Valley, Nepal – Prelımınary Results*

22	Meng Li	Henan Polytechnic University, China	*Intense wildfire response to Early Jurassic hyperthermal event with impact on floral turnover*
23	Xiaowei Li	Guizhou University, China	*Implications of Giant Ooids for the Carbonate Chemistry of Early Triassic Oceans*
24	Jinchao Liu	Nanjing University, China	*Lithium isotopic evidence for enhanced silicate weathering during the Toarcian Oceanic Anoxic Event*
25	Mingming Ma	Fujian Normal University, China	*Solar activity recorded by the early Paleogene lacustrine varve in the Nanxiong Basin*
26	Mariano N. Remírez	University of Copenhagen, Denmark	*Tracking global ocean anoxia during the (hyperthermal) Toarcian Oceanic Anoxic Event: Insights from uranium isotopes and oxidation-state-specific uranium ratios*
27	Micha Ruhl	Trinity College Dublin, Ireland	*Timing of The End-Triassic Mass Extinction, Carbon Cycle Perturbations, and Early Jurassic Recovery*
28	Li Tian	China University of Geosciences (Wuhan)	*Consistent biotic responses to past hyperthermals*
29	Ping Wang	Nanjing Normal University, China	*Sedimentary response to abrupt global warming during Paleocene-Eocene Thermal Maximum (PETM) in western Jianghan Basin, China*
30	Jessica Whiteside	San Diego State University, USA	*Floral trends, conifer physiognomy, pCO2, and hydrological proxies track "climatic whiplash" during CAMP volcanism*
31	Bilal Wadood	University of Swabi, Pakistan	*End-Permian Mass Extinction: Carbon Degassing, Geochemical Signatures, and Extreme Climate Forcing in the Salt Range, Pakistan*
32	Yiwei Xu	Nanjing Institute of Geology and Palaeontology, CAS, China	*Enhanced carbonate production during the OAE 1a*
33	Xinyuan Zheng	University of Minnesota, USA	*Potassium Isotope Evidence for Enhanced "Reverse Weathering" in the Cretaceous Ocean*

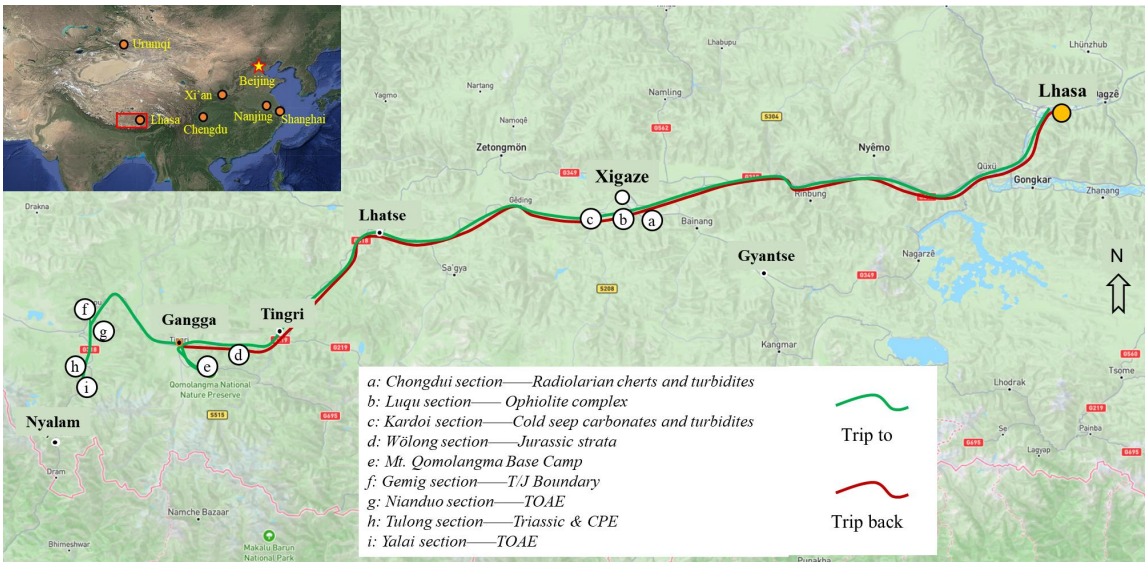
* Please note that this program is not the final version and may undergo minor adjustments. The workshop committee will release the finalized version two weeks prior to the event.

07 Poster List

(in alphabetic order)			
No.	Name	Institution	Title
1	Ahmed Nur Dalmar	University of Peshawar, Pakistan	*Paleo-environmental and stratigraphical analysis of the Turonian Red Beds, Northern Kirthar Range, Pakistan*
2	Weiming Ding	University of Minnesota, USA	*The development of stable cerium (Ce) isotopes as a new redox proxy: experimental quantification of isotopic fractionations during Ce sorption on iron oxides*
3	Shouyi Jiang	China University of Geosciences (Wuhan)	*Extinction of larger benthic foraminifera and size variations of foraminifera during the early Toarcian environmental crises in southern Tibet*
4	Tea Kolar Jurkovšek	Geological Survey of Slovenia	*Triassic conodont zonation of the Dinarides (western Tethys)*
5	Hiroki Kamikura	The University of Tokyo, Japan	*The timing and duration of large-scale carbon release and hydrological cycling during the Toarcian oceanic anoxic event (T-OAE) in Toyora area, southwest Japan*
6	Man Li	Hohai University, China	*A weathering control on nutrient cycling in mid-latitude mega-lakes across the Toarcian extreme warmth*
7	Qing Liu	China University of Geosciences (Wuhan)	*Redox changes across the PETM in the North Sea Basin (UK)*
8	Xiang Qin	Nanjing University, China	*First soda lake as an extremely alkaline response to Paleogene hyperthermals*
9	Xiaohua Teng	Zaozhuang University, China	*Evidence for Poleward Migration of the Asian Monsoon During the Paleocene-Eocene Thermal Maximum*
12	Bin Zhang	An Qing Normal University, China	*Precipitation is the main constrained factor for the Mesozoic and Cenozoic chemical weathering features in South China*
11	Yasu Wang	Hainan University, China	*Cretaceous–Paleogene calcareous nannofossils and their biostratigraphic and paleoceanographic implications in Southern Tibet*
12	Xiaoyue Zhang	China University of Geosciences (Wuhan)	*Astronomical and volcanic forcing of Paleocene carbon cycle perturbations in the Norwegian Sea Basin*
13	Yuqing Zhu	China University of Geosciences (Wuhan)	*Early Jurassic large-scale carbon release triggered rapid increases in terrestrial mercury fluxes*

08 Post-workshop Field Trip

Date	Day	Activity/Route	Theme/Geological Focus
19-Aug	Tue.	Nanjing Lukou Airport (NKG) → Lhasa Gonggar Airport (LXA)	
20-Aug	Wed.	**! CRITICAL: High Altitude Acclimatization Required (3700m). All participants must hydrate well, and avoid alcohol and strenuous activity**	
21-Aug	Thu.	Lhasa → Xigaze	
		Luqu Section, Luoqu Village	**Yarlung Zangbo Suture Ophiolite Complex**
		Chongdui Section	
		Chongdui → Xigaze	
22-Aug	Fri.	**Xigaze → Wolong Section & Kadui Section, Tingri County**	**Mid-Cretaceous Cold Seep Carbonates and Turbidites**
		Wolong Section, Zhaxizong Township	**Jurassic Strata**
		Tingri County Zhaxizong	
23-Aug	Sat.	Zhaxizong Town → Everest Base Camp	
		Everest Base Camp	
		Everest Base Camp → Zhaxizong → Gangga Town	
24-Aug	Sun.	Gangga Town → Nianduo Village	
		Gemig & Nianduo Sections	**Triassic-Jurassic Boundary, T-OAE Platform Changes & Storm Deposits**
		Gangga Town → Yalai Section	
		Yalai Section	**T-OAE Platform Changes & Storm Deposits**
		Tulong Section	**Triassic & CPE**
		Tulong Section → Gangga Town	
25-Aug	Mon.	Gangga Town → Lhasa	
26-Aug	Tue.	Free time in Lhasa / Depart Tibet	
		Return to Nanjing (NKG) or fly to Chengdu (CTU/TFU), Chongqing (CKG), Xi'an (XIY), Beijing (PEK), Shanghai (PVG/SHA)	



* Please note that some of the stops originally scheduled in First Circular were forced to be cancelled due to local policy reasons.

*** We will return to and stay in Lhasa on August 25. and depart from Lhasa on August 26. Participants can return from Lhasa back to Nanjing, or fly to major airports such as Chengdu, Chongqing, Xi'an, Beijing and Shanghai to connect to international flights.**

09 Sponsorships

- **State Key Laboratory of Critical Earth Material Cycling and Mineral Deposits, Nanjing University**

  南京大学关键地球物质循环与成矿全国重点实验室

- **School of Earth Sciences and Engineering, Nanjing University**

  南京大学地球科学与工程学院

- **Frontiers Science Center for Critical Earth Material Cycling, Nanjing University**

  南京大学关键地球物质循环前沿科学中心

- **Beijing Tethys Technology Co., Ltd.**

  北京特提斯科技有限公司

- **Nanjing Hongchuang Geological Exploration Technical Service Co., Ltd.**

  南京宏创地质勘查技术服务有限公司

- **Nanjing Jupu Testing Technology Co., Ltd**

  南京聚谱检测科技有限公司

- **Nanjing Shunke Testing Technology Co., Ltd.**

  南京顺科检测科技有限公司