DEEP-2024

International Symposium on Deep Earth Exploration and Practices
22-24 October, 2024
Beijing, P.R. China

All information will be available on https://deep2024.sinoprobe.org after 15 April 2024.

HOSTS

SinoProbe Laboratory of Ministry of Natural Resources of P.R. China
National Natural Science Foundation of China

BACKGROUND

Deep Earth exploration is a multi-disciplinary, complex undertaking aimed at understanding the structure, dynamics and evolution of the continents and their margins. Interactions between Earth's tectonic plates produced the continents and oceans that characterise our planet while creating the mineral resources that support our standard of living. Active tectonic processes are also responsible for devastating hazards such as earthquakes and volcanic eruptions, and control Earth's surface topography which fundamentally affects the climate, environment, and our modern life. Therefore, it is of common interest to society worldwide to study the interior of the Earth and to gain fundamental insights into how our planet operates.

What is SinoProbe
SinoProbe is funded by the Chinese Government for Earth exploration with unprecedented scope and ambition. The overall aim of SinoProbe is to take a multi-disciplinary approach in studying the composition, structure, and evolution of the continental lithosphere of China. SinoProbe-I, the initial phase of SinoProbe, was launched in 2008 and was successfully completed in 2016. This was followed by DREAM (Deep Resources Exploration and Advanced Mining) from 2016-2021 and Deep Geological Survey from 2016. The achievement of the past years has

outlined a wide range of exciting scientific research directions and defined new questions to be addressed by SinoProbe-II. SinoProbe-II is now underway. It will focus on the bottleneck of deep earth exploration technology, develop an Aeronautical-Surface-Interior exploration technology and equipment system. To enable geoscientists to reach the deeper interior of the Earth. It will conduct deep structure and deep material exploration along key zones across China and in its adjacent areas, including acquisition of 20,000km of seismic reflection profiles, high density broad-band seismological data with a 30x30km station density, and MT data at 1°x1°, as well as super-deep scientific drilling and observations. Advances in geosciences and understanding mineralization improve the efficiency of mineral exploration to make breakthroughs in mineral discovery to support modern society. Such advances also serve green development strategies to achieve net-zero carbon by contributing to CO_2 deep sequestration and clean energy. SinoProbe-II will accumulate a huge number of valuable data about the deep Earth, and through wide data exchange, up-to-date computer and AI technologies will benefit geosciences and related disciplines, education, and international cooperative research. SinoProbe-II will also co-initiate the Global Probe project, "Earth CT", with prominent organizations including ILP, IUGS, IUGG, ICDP, DCO, GFZ, and VESGEI and universities and institutes from a large number of countries.

What is the DEEP Symposium

SinoProbe maintains an "open-door policy" in international communication and cooperation. The successful 2011 ISDEL，DEEP-2018 and DEEP-2021 meetings were attended by hundreds of geophysicists and geologists from the USA, Canada, Brazil, Russia, Australia, Japan, Germany, Italy, Spain, Sweden, Denmark, Turkey, Poland, UK, Ireland, South Africa, India, Singapore, etc., as well as China. International attendees included principal and co-principal investigators of international deep exploration programmes, such as COCORP and EarthScope of the United States, LithoProbe and CCArray of Canada, AGCRC of Australia, and EuroProbe, TopoEurope, and AlpArray of Europe. DEEP-2021, from November 1-6, 2021, had been planned for Nanjing, China, but was transformed into a virtual international event due to COVID with 1231 scientists from 44 countries. DEEP-2021 built a lively platform for communication, with over 85,000 clicks of which 50%

clicks were international.

DEEP-2024 will similarly offer an unprecedented opportunity for establishing international collaboration within the earth sciences. SinoProbe-II is looking for close partnership and collaboration through the DEEP-2024 platform, aiming for integration of exploration and research of critical geological study areas worldwide, and contributing to the international sharing of exploration data and results, with the overall objective of enhancing our knowledge of the Earth and its mineral resources.

SCIENTIFIC PROGRAMME

Topics

The theme of DEEP-2024 is " Wide Open Collaboration".

The major preliminary topics are as follows:
1. Lithospheric structure and deep dynamics in the Qinghai-Tibet Plateau and adjacent areas
2. Lithospheric deep structure and evolution across orogenic belts
3. Lithospheric structure and evolution of cratons
4. Deep earth material probing and isotopic mapping
5. Deep scientific drilling: engineering and opportunities
6. Mineral resources and deep processes
7. Geohazards and crust deformation
8. Geologic carbon storage and geothermal energy
9. New techniques and methods of deep exploration into crust and mantle
10. How to make 3D continental studies? Where on Earth should we explore?

Based on the preliminary topics, we **CALL for session and 1 day pre-meeting workshop proposals now**. Each proposal must include session title, short description within 300 words, intending conveners and keynote speaker(s). Please send your proposals to 1437922567@qq.com and sinoprobe@cags.ac.cn before **30 March, 2024**.

Field Trips

DEEP-2024 will offer two or more post-meeting excursions intended for

international participants. Details will be given on DEEP-2024 webpage.

Financial Support

DEEP-2024 will provide financial support to selected foreign invited speakers of the Workshop and Plenary Session as well as Conveners and Keynote speakers of the topical sessions. This financial support may consist of: one or more of: international air ticket, accommodation fee, post-symposium field trip fee. Registration fees are waived for foreign invited speakers and convenors.

Applications for financial support should be made through the online Registration and Abstract Submission tool before **1 August 2024 or as early as possible**.

KEY DATES AND DEADLINES

27 February 2024:	Deadline of session proposal
1 April 2024:	Website Online
1 June 2024:	Online Registration, Abstract Submission, Field Trip sign-up, and Housing Application all open
1 August 2024:	End of abstract submission
1 September 2024:	End of field trip sign-up
10 October 2024:	Distribution of Program
21 October 2024：	Pre-meeting Workshop
22-24 October 2024:	DEEP-2024, Beijing

CONTACT INFORMATION

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