

Task Force: Global Geo Transects

(No.2021-CC4)

LEARDERS: Shuwen Dong, Hans Thybo, Larry Brown
SPONSORS: ILP, SinoProbe,
and IUGS, IRIS, ICDP, NSFC, CGS, GFZ, VESGEI, et al.

Task Force working

Provide technical standards for the New
GGT program

Including: data screening, data format, processing
procedures, mapping specifications, data
management and sharing

Establish a scientific committee for the Earth CT
Project

ABOUT THE GGT (EARTH CT)



When DEEP-2021 Held The Keynote Session :“**Earth CT---Quo Vadis---**Identifying critical areas of the Earth that are still unexplored by deep lithospheric techniques”

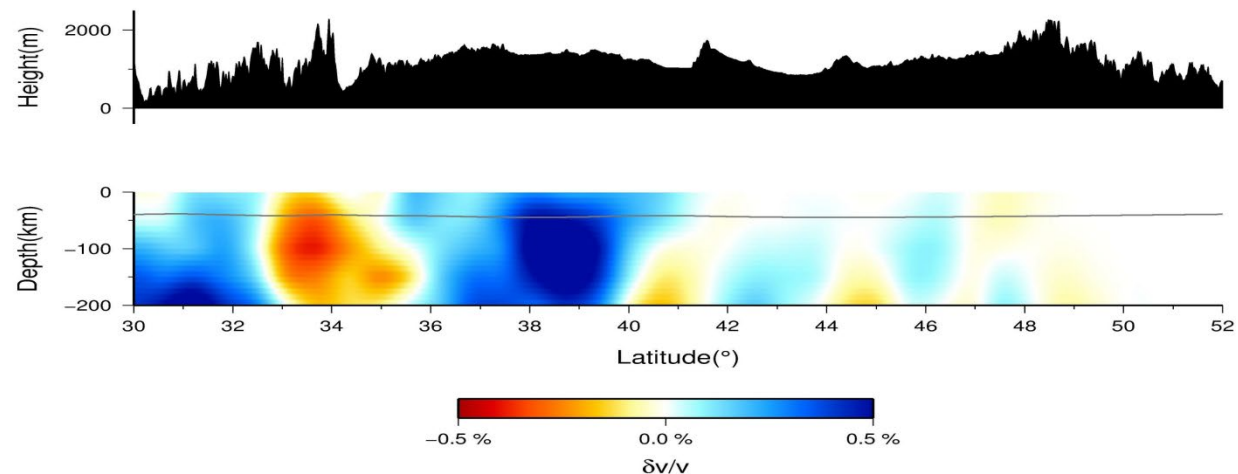
Earth CT Project

21 oral reports from 12 nations released their working planning.
140 scientists involved in the virtual discussion.

- ❖ To integrate the profiles to make a global transection
- ❖ Leading by deep seismic reflection technology and adopting multi-disciplinary approaches, transcontinental, continental-oceanic, super-long and high-resolution will focus on comprehensive research on geoscience transect.

Highlights of recent ILP Task Force work/results

(1) To continue to cooperate with Russia and Mongolia in the implementation of the tran-section of reflection seismic profile (Mongolia Section) linking the Qinghai-Tibet Plateau and the Siberian big geosection, which is about 1000km long. According to the trilateral cooperation agreement between China, Mongolia and Russia, field data acquisition will be run in 2022, but due to the impact of epidemic, it will be postponed to 2023



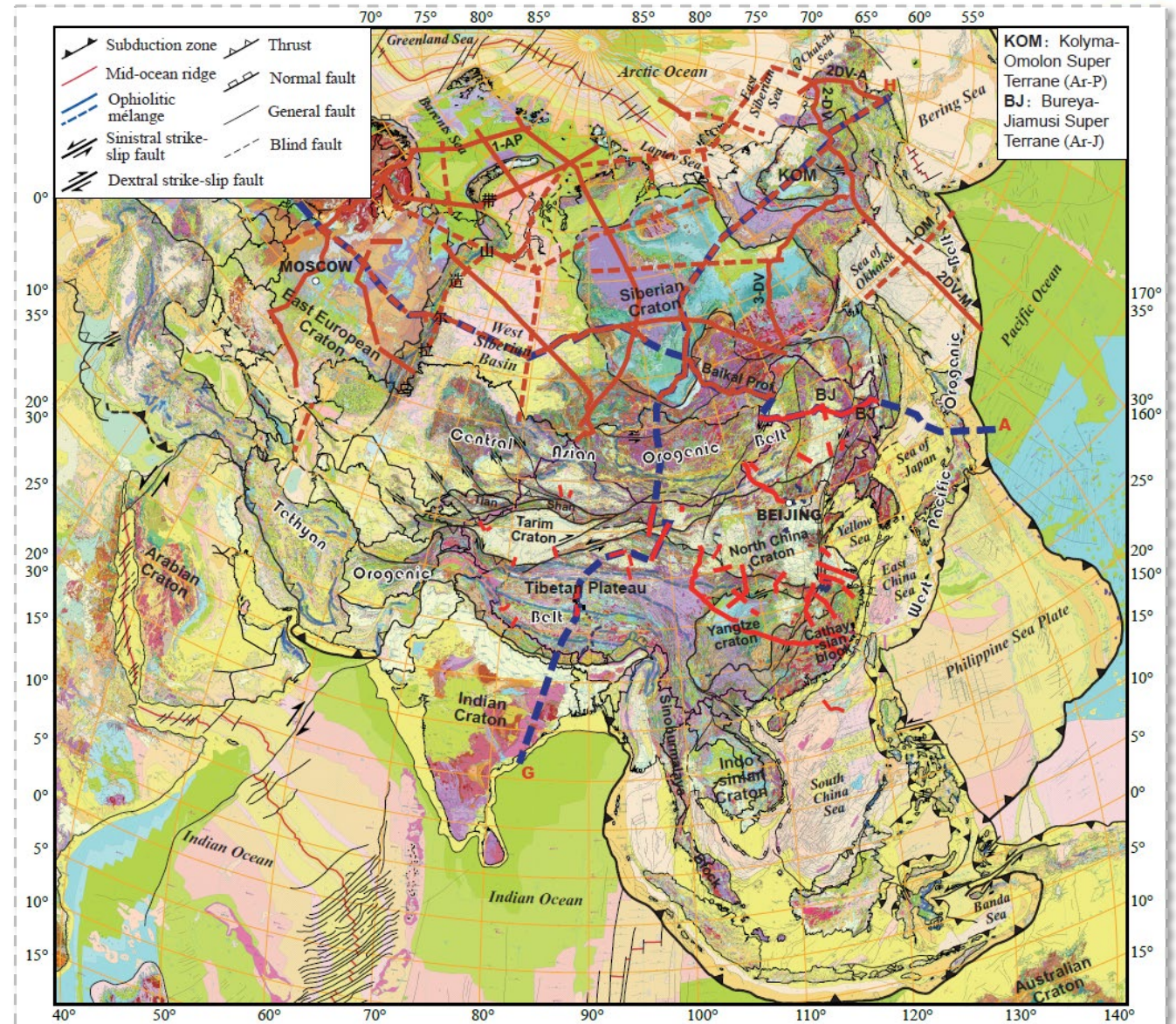
China-Russia-Mongolia



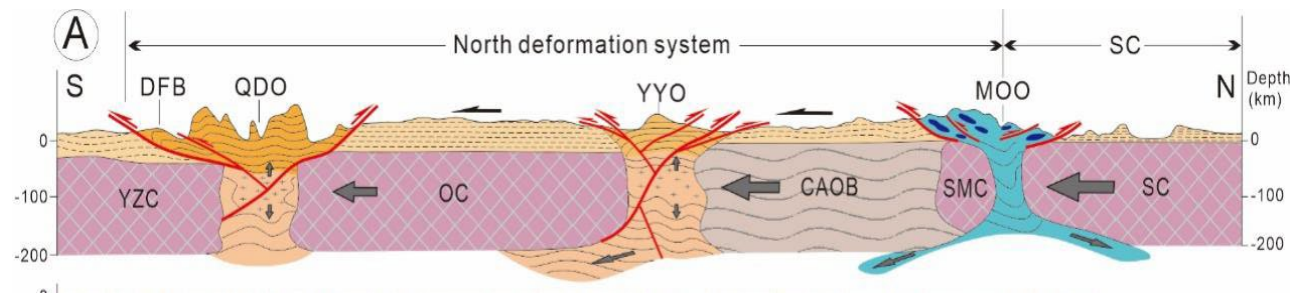
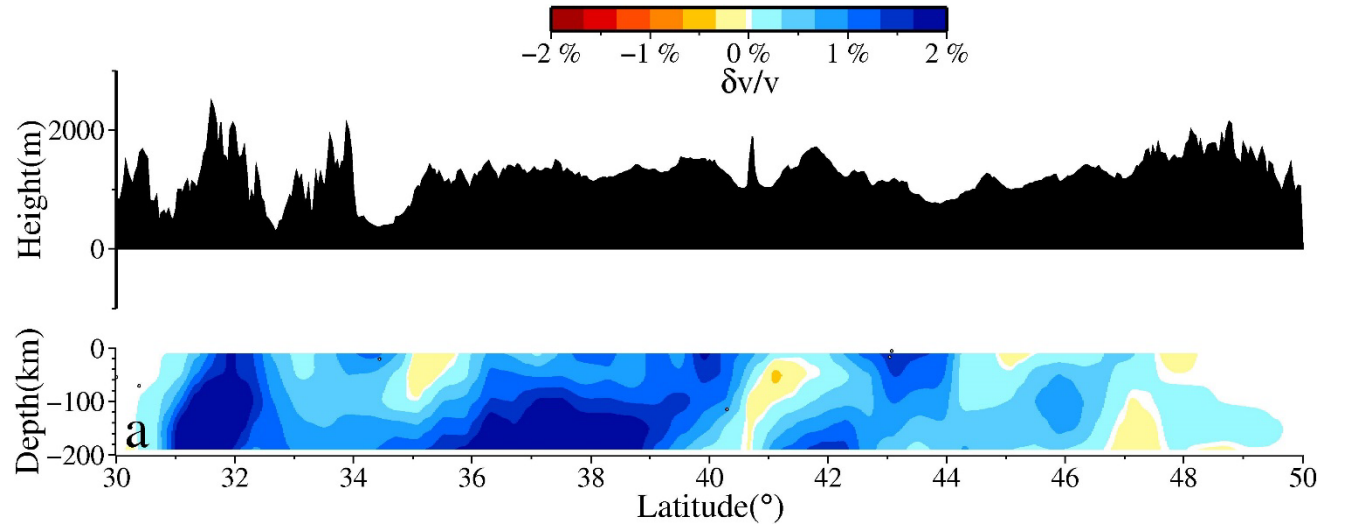
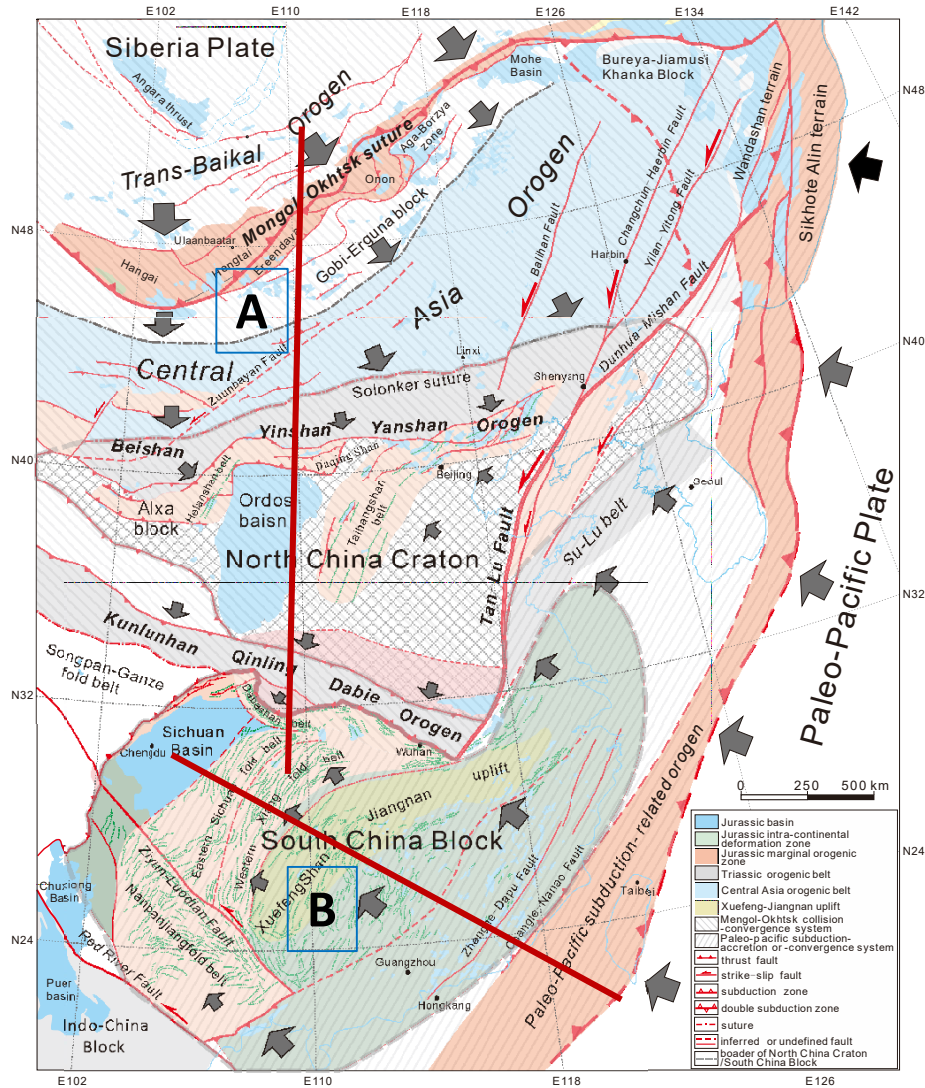
❖ After the Workshop in 2020 between Chinese Academy of Geological Sciences (CAGS) and Russian Geological Research Institute (VSEGEI), a **Construct Big-cross Transect** has been proposed

- E-W : NE China-Russia(Euro)
- N-S: Tibet-Mongolia-Siberia

❖ Unfortunately, due to the pandemic and other reasons, It is postponed to start in 2023

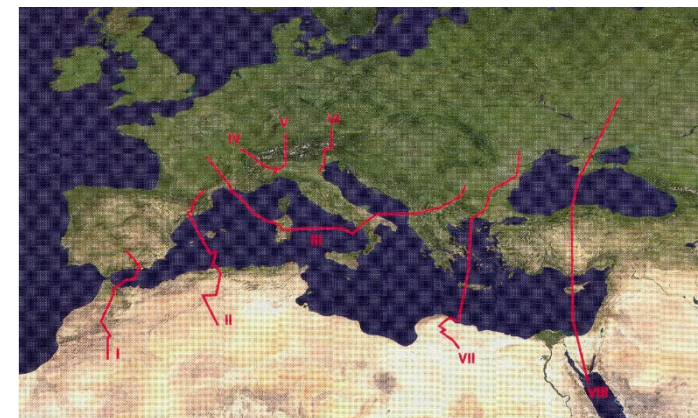
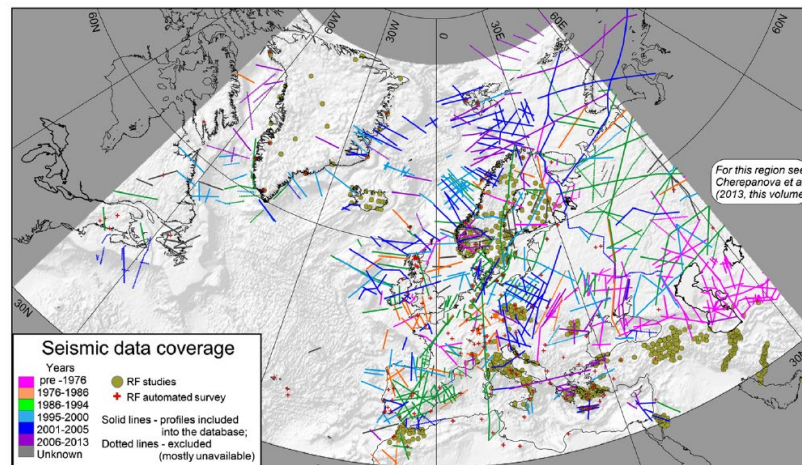
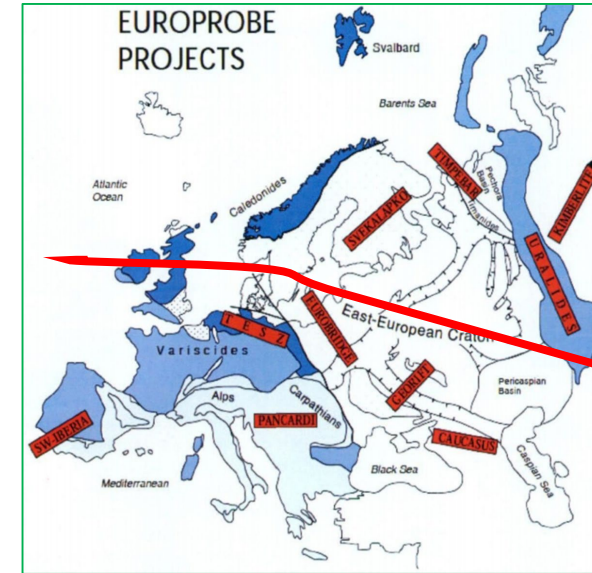
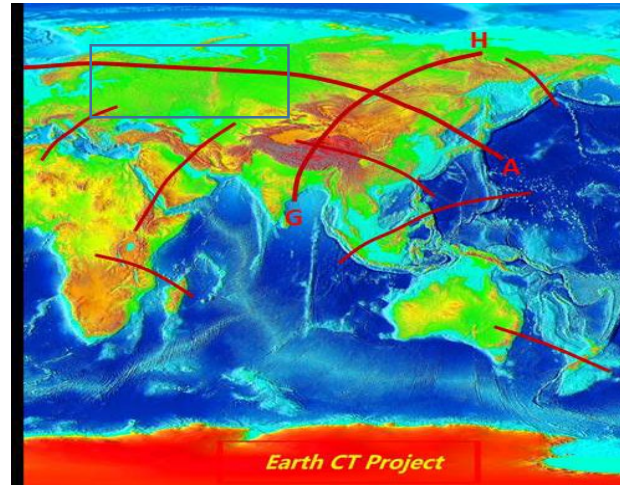


The transection from Siberia – Mongolia – North China



(2) To cooperate with GFZ for European GeoSection and sign a White Paper. In 2023, we will contact with IPGP and invite France to participate.

European part



Cooperation Contents:

1. GFZ takes the leadership in the collection of deep profiles and other geological/geophysical data and the construction of geological transects across the European continent and the Atlantic Ocean.
2. Ultra-long geological transects will be constructed to carry out comprehensive deep-earth scientific research and jointly compile scientific reports on the structure and evolution of the Eurasian continent.

Chinese Leading Scientists: Prof. DONG Shuwen, Prof. LV Qingtian, SinoProbe Lab, CAGS

German Leading Scientists: Prof. Charlotte Krawczyk, Prof. Magdalena Scheck-Wenderoth, Dr. Christian Haberland, GFZ



Presence at international meetings/workshops (this year)

Organized session in AGU (Dec.15-16) ;
Chaired in a session on deep exploration and
mineral resources in CGU (Dec, 1-3)

Publications of ILP Task Force members (2022)

1. Zhang, Y., Dong, S*., Wang, H., Feng, M., Thybo, H., Li, J., et al. (2022). Coupled lithospheric deformation in the Qinling orogen, central China: Insights from seismic reflection and surface-wave tomography. *Geophysical Research Letters*, 49, e2022GL097760. <https://doi.org/10.1029/2022GL097760>
2. S.H. Huang , H. Thybo,* , S.W. Dong,* , I.M. Artemieva , R.Z. He , B.F. Han, Q. Zhou, W. Shi, 2022, Upper mantle seismic structure in the Ordos Block, China, *Journal of Geodynamics*,151 (2022) 101921
3. Zhiheng Ren, Shuwen Dong*, Yueqiao Zhang, Xuanhua Chen, Wei Shi, and Yu Zhang 2022, Middle Jurassic intracontinental evolution of East Asia: Insights from the Tianshifu-Dongyingfang basin of the Liaodong Peninsula, NE China, *GSA Bulletin*, doi:10.1130/B36373.1.

New contacts (this year)

Prof. Dong Shuwen ,PI of SinoProbe Lab.

Prof. Dong Shuwen , Nanjing University

(swdong@cags.ac.cn; swdong@nju.edu.cn)

Usage of ILP funding (this year)

It is left for next year



Thank You !

Your suggestions are welcome: swdong@cags.ac.cn