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Progress of SinoProbe – Deep Exploration in China 2008-2012

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The SinoProbe – Deep Exploration in China, is a multidisciplinary earth science research program, of unprecedented scope and scientific ambition on geosciences. The overall aim of the SinoProbe is to reveal the composition, structure and evolution of the continental lithosphere underneath China. SinoProbe 2008-2012, the initial phase of the SinoProbe, has achieved a lot of technological innovations together with some important scientific discoveries in the field of deep exploration in China, with a great innovation value for the society. It has completed a total length of 6000 km deep seismic reflection profiling in Tibet, South China, North China, and Northeast China, impelling China to be a major advanced country of the international society of deep exploration. It has carried out national-wide geochemical baseline (with 78 elements) and magnetotelluric (MT) Array (by 4°4', and 1°1' in North China and Tibet), 3D exploration in ore deposit districts in eastern China, several fruitful continental scientific drilling boreholes, two regional in-situ stress monitoring networks, geodynamic modeling of the lithosphere underneath the continental China, and instrumentation development for deep exploration in China, etc. Meanwhile, it has made some new understandings on the Mesozoic – Cenozoic

geological and tectonic evolution of the continental China. Also, it has made some valuable explorations on organizing and administration of big-science program. It has brought out a strong influence into the geoscience society of the world. The SinoProbe 2008-2012 has made a strong foundation for the organizing and implementation of the full scale SinoProbe – Deep Exploration in China as a Major National Science and Technology Program. The SinoProbe is considered as a major signature geoscience program during the transition of China from a big country of geoscience to a powerful country of geoscience. *SinoProbe – Deep Exploration in China, opening a new time of geoscience research in China*, had been assessed to be one of the top 10 scientific and technological progresses of China in 2011, by the Chinese Academy of Sciences and the Chinese Academy of Engineering. The international synchronization of the SinoProbe – Deep Exploration in China, has been assessed to be the special progress of the Chinese Academy of Geological Sciences in 2012.

Key words: SinoProbe - deep exploration in China, crustal structure, deep seismic reflection, MT array, scientific drilling, special progress

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