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第 47 回米国地球物理学連合秋季大会 (AGU 2014 Fall Meeting) 参加報告

Report on American Geophysical Union (AGU) 2014 Fall Meeting

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The 47th annual American Geophysical Union (AGU) Fall Meeting was held at San Francisco, USA, on 15–19 December 2014. It is the largest Earth and space science meeting in the world. This meeting reached an attendance of more than 24,000 attendees, showcasing more than 1,700 sessions and more than 23,000 oral and poster presentations. This year's meeting was took place at Moscone Center South (747 Howard Street), West (800 Howard Street) and a newly added venue of the Marriott Marquis (55 Fourth Street), in the central San Francisco.

During the five days, I mainly attended the focus groups of “Minerals and Rocks Physics” and “Study of Earth’s Deep Interior”. I had an oral presentation of “Sound velocities and melting of Fe-Ni-Si system at high pressures under shock loading” in the session of “‘Iron Workers’ United: Integrating the Elastic, Thermal, and Transport Properties of Earth’s Core” of the ‘Mineral and Rock Physics’ section/focus group on 15 December (Fig. 1). In my presentation, I reported our measured density and sound velocity of a silicon-rich Fe-Ni system as a model core composition at the Earth’s core conditions by shock wave experiment and direct comparisons between measurements and the observed seismic data of the Earth’s core. Our results indicate that silicon is present as the primary light element in the Earth’s liquid outer core. This is the first experimental confirmation that was not done previously by direct measurements. In addition, on the basis of the silicon-rich core composition,

Fig. 1. (Color online) Photograph of the author’s oral presentation at AGU2014 Fall Meeting.

a more reasonable geotherm and the core formation process can be constrained. During the presentation, our study aroused concerns and discussions of some peers. Through communications with relevant experts and professionals, I got some good comments and suggestions for our future work.

After meeting, we, parts of participants from Hiroshima University, Ehime University, Kyoto University, and Bayerischen Geoinstituts, visited, on the way to San Andreas Fault field trip, the Golden Gate Bridge that is one of the most internationally recognized symbols of San Francisco (Fig. 2). It opened in 1937 and was, until 1964, a suspension bridge with the longest main span in the world, about 1,300 m. In addition, we inspected and investigated the San Andreas Fault at Bear Valley. The San An-

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San Andreas Fault is the sliding boundary between the Pacific Plate and the North American Plate. It separates California into two from Cape Mendocino to the Mexican border. And, the San Andreas Fault has had some notable earthquakes, such as 1857 Fort Tejon earthquake and 1906 San Francisco earthquake.

The above contents are my impressions that I participated in the AGU Fall meeting for the first time. Through this meeting, I have learned many peer researches and frontiers that broadened my horizons and gave me inspirations. At last, I would like to thank the Japan Society of High Pressure Science and Technology, for the support and travel scholarship.

Fig. 2. (Color online) Group photo at the front of the Golden Gate Bridge, San Francisco.