

## **Research Report for ERI visit from May 20 to June 24, 2016**

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I had three major objectives for this year's visit to ERI. The first is to attend a special session on the structure and dynamics of the suboceanic mantle at the JpGU meeting. This special session was organized by myself, along with Prof. Hitoshi Kawakatsu, Dr. Kiyoshi Baba (both at ERI), and Dr. Jim Gaherty at Columbia University, and it was also one of the joint JpGU-AGU sessions. We had a great collection of presentations, and I was particularly intrigued by the invited talk by Dr. Brian Kennett (ANU). Fortunately, he stayed at ERI as a visiting professor for a while after the JpGU meeting, and I was able to meet him in person and clarify various questions.

The second objective is to further my understanding on the evolution of the suboceanic mantle, and more specifically, about its seismic anisotropy. I have learned considerably from discussion with Prof. Kawakatsu, and together with the meeting with Dr. Kennett, I was able to come up with a new research idea on the connection between the geophysical and geochemical aspects of the suboceanic mantle. Also, Prof. Nozomu Takeuchi showed recent results from his work on seismic scattering, which was very helpful for me to design my future plan on teleseismic migration. In addition, the Oceanic Hemispheric Research Center had an informal meeting on future research cruises, and I had an opportunity to comment from a geochemical perspective.

The last is to provide a series of special lectures on geodynamics, over the span of four weeks. In addition to eight lectures in total, I met each student in person to discuss a potential research topic for a term paper assignment. I have been away from the Japanese education system for more than twenty years, and this was the first time to have somewhat deep interactions with students in Japan. This experience was very valuable.