



Report on Pre-cruise Training

Reporting date (Day/Month/Year): 10/11/2015

Name: Amila Sandaruwan RATNAYAKE

Affiliation and job title: Postdoctoral researcher, Department of Geoscience, Shimane University, Japan

| | |
|--|---|
| IODP Expedition Number and Name | IODP Exp. 357, Atlantis Massif Serpentinization and Life |
| Responsibility in IODP Expedition | Organic geochemist (Ex. Sedimentologist) |
| Training Period (including transportation) | From (Day/Month/Year) 03/11/2015 to (Day/Month/Year) 05/11/2015 |
| Venue | Kochi Core Center |

Result of the training and future plan

Attending the pre-cruise training program was a great opportunity in my future career. In this training program, three scientists from Exp. 360 (Indian Ridge Moho) and two scientists from Exp. 361 (Southern African Climates) joined with me and also they kindly treat and help me during the training program. The first lecture was conducted by Dr. Gupta. He introduced the outline of Kochi Core Center and IODP expeditions. In addition, I would be able to observe both old and new core repositories and some laboratories such as rock mechanics and rock/ sampling cutting. I am sure that it was remarkable experience in my life to see such core storage at one place. Also, it was fascinated to observe several archives half from previous expeditions close to Exp. 360 and 361. In addition, I could be able to get basic but valuable information regarding onshore science party at the Bremen Core Repository during the morning session.

The afternoon section consisted of two presentations about structure, history, ships/ platforms, and core repositories of IODP expedition. I learned many things such as drilling methods (riser drilling, riser-less drilling and mission-specific), ship/ vessels, a structure of core flow and onboard tasks. In the question section, almost all participants were enthusiastically waiting to ask their own questions from curators of Kochi Core Center. These questions are mainly highlighted about previous offshore expedition experience such as food and lifestyle in JOIDES Resolution. I was enjoying seeing photos of the previous expedition in JOIDES Resolution.

Finally, I had an opportunity to meet Dr. Minoru Ikehara. He introduced me role and responsibilities of organic geochemist during the onshore and offshore science parties. Also, he provided IODP standard user guides such as CHNS analysis advanced user guide, coulometer user guide, gas analysis reporter user guide that would be definitely helpful me in upcoming IODP Exp. 357 onshore science party at the Bremen Core Repository, Germany.

In this training program, I had a great opportunity to know research facilities and equipment of organic geochemistry laboratory at Kochi Core Center. At the moment, I have no chance to analyze the compound specific stable isotope ($\delta^{13}\text{C}$) composition of lipid biomarkers using gas chromatography-combustion/isotope ratio mass spectrometry (GC-C/IRMS) at Shimane University, Japan. Therefore, I and Prof. Y. Sampei are planning to submit the application form in February to use organic geochemistry laboratory at Kochi Core Center. In addition, we are planning to develop a new method to measure $\delta^{13}\text{C}$ values of sterane and hopane biomarkers at Kochi Core Center. Finally, the entire training experiences will offer strengthened my abilities, knowledge and self-confidence for the IODP Exp. 357.

Notes

Note:

- The report should be submitted to the J-DESC/IODP Travel Support through email (travel@j-desc.org) **within two weeks after the training.**