

"Collaborative programme between IPGP and OHRC"

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ERI contact: Prof. Hitoshi Kawakatsu

Location : ERI, University of Tokyo.

Dates : 29 oct.-24 nov. 2012

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General Objectives :

My stay took place in the framework of the collaborative programme between ERI (Earthquake Research Institute, University of Tokyo) and IPG (Institut de Physique du Globe de Paris), both institutions having a strong tradition of excellence in the investigation, understanding and monitoring of natural earth processes (short time and long time scale phenomena) .

It was aimed at reinforcing scientific collaborative projects on deep Earth processes between both institutions, and was focused this time on seismic anisotropy. This stay enabled to identify key problems where both labs are interested in, to initiate new projects.

- Discussions on the origin of seismic anisotropy:

participants : Hitoshi Kawakatsu, Jean-Paul Montagner, Thorsten Becker, Martha Savage, Alex-Ruh Song, and many other scientists and students from ERI.

Seminar-Discussion of the recent paper of Song and Kawakatsu "Subduction of oceanic asthenosphere: Evidence from sub-slab seismic anisotropy", GRL, 39, 2012.

- Recovery of seismic data at NIED (Tsukuba) for investigating the Miyagi-Oki earthquake (14/06/2008) in the framework of the project "Passive monitoring of seismogenic zones by seismic anisotropy".

- Participation to the French-Japanese seminar "Earthquakes and Tsunamis" at French Embassy, Tokyo, 13-15 nov.

- Writing of an ERC proposal "ASTRIDE: Anisotropic seismology: Time Reversal Imaging and Deep Earth processes" submitted on Nov. 20, 2012.

Part of this proposal is devoted to the joint collaboration between PI (Jean-Paul Montagner) and ERI seismologists on the investigation of seismic hum for looking for climatic influence (Kiwamu Nishida) and another part on the integration of seismic anisotropy results for a better understanding of the LAB (Lithosphere-Asthenosphere Boundary), separation of intrinsic and extrinsic (artificial) anisotropies (Hitoshi Kawakatsu).

- Discussion on future ERI-IPGP workshop. It will take place on March 11-13, 2013 at ERI. organizing committee: Hitoshi Kawakatsu, Kenji Satake, Jean-Paul Montagner, Jean-Pierre Vilotte. the previous joint workshop took place in Paris at IPGP in october 2011. It will be devoted to the "Imaging and monitoring of Active Subduction zones and volcanoes"

Joint publication in 2012:

Montagner, J.-P., C. Larmat C., M. Fink, Y. Capdeville, B. Romanowicz, E. Clévéde, and H. Kawakatsu (2012) Time-reversal Method and cross-correlation techniques by normal-mode theory, **Geophys. J. Int.**, 191, 637-652.