

ERI-IPGP/IPGP-ERI ワークショップ 2013 開催報告

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2年毎に行っているパリ地球物理研究所 (IPGP) との合同ワークショップを “Imaging and Monitoring Active Subduction Zones and Volcanoes II” と題して、2013年3月11-13日に地震研究所において開催した（前回は2011年のTodai Forumの際）。大学院生／PDを含む15名ほどのIPGPメンバーと添付にあるようなプログラムにそって、2011年東北沖地震、津波・電離層の波動伝播、ミュオンラジオグラフィ、火山物理、内部構造、スロー地震、震源物理など両研究所がカバーする幅広い研究分野について活発な議論がおこなわれた。今回は、両研究所の若手（学生・PDを含む）に積極的に口頭発表を割り当てたことが功を奏したと思われる。WS3日目はGroup Discussionとして、今後の共同研究の可能性を、自発的な研究グループごとに検討する機会を設けた（そのまとめを後ろに添付）。

Group Discussionとは別に、両機関の実行委員と小屋口所長を交えた意見交換の昼食の場を持った（準備不足により自腹にしたのは抜かった！）。具体的な出席者は、IPGP: Profs. Montagner, Volotte, Kaminski/ERI: Koyaguchi, Kawakatsu, Obara, Iidakaである。IPGP側からは、共同で学位を出すようなプログラム（co-degree）が作れるならば、学生にとってIPGP/ERIに所属して研究を行うインセンティブになることが期待できると提案があったが、学位に関しては地震研の一存では決まらないことを伝えた。また前回のTodai Forumなどの効果も意識しつつ、パリ市などにも積極的に働きかけ共同研究・人材交流の資金を提案していくことを検討していることがIPGP側から示された。最終的には、今後は学生のインターンシップなども含め積極的に個別の共同研究を推進し、その実績のもとに将来の連携を模索していくことが確認された。すなわちGroup Discussionのレポート等で個別の共同研究を“見える化”しつつ、2年後の次回のWSでそれらの進捗を踏まえてさらに将来の連携の可能性を模索していくことが確認された。





Workshop IPGP-ERI

Imaging and Monitoring Active Subduction Zones and Volcanoes II

11-13 March 2013: @ Earthquake Research Institute (Seminar Room, Bldg#1)

25minutes/presentation (15' oral +10' discussion);

March 11 (Monday) Morning: *Tohoku - Tsunami*

9:00 *Opening: by T. Koyaguchi (ERI director)*

9:15 **A. Kato** *Various failure processes for the 2011 Tohoku-Oki earthquake revealed from foreshock and aftershock activities*

9:40 **J.-P. Vilotte** *Broadband imaging and Numerical simulation of the 2011 Tohoku earthquake*

10:05 **Y. Yokota** *A very-long-term SSE triggering the 2011 Tohoku earthquake*

Break

10:50 **G. Occhipinti:** *From Sumatra 2004 to Tohoku-Oki 2011: what we learn about Earthquake & Tsunami detection by ionospheric sounding*

11:15 **S. Watada** *Recent advancement in observation and propagation theory of distant tsunami*

11:40 **P. Bernard** *Tsunami detection and characterization from onland, long-period tilt records: the case of the 2010, M=8.7, Maule (Chile) subduction earthquake*

12:05 **T. Maeda** *Real-time tsunami monitoring with dense ocean bottom network by data-assimilation technique*

“Bento” lunch

13:30 *Poster Session (start with 2-slide presentations)*

March 11 (Monday) Afternoon: *Imaging - Seismic noise*

15:00 **H. Tanaka** *Muography in the observation of volcanoes*

15:25 **N. Lesparre** *Imaging the hydrothermal system of La Soufrière de Guadeloupe volcano*

15:50 **R. Nishiyama** *Joint inversion of gravity and muon radiography data to achieve 3D density structural analysis of volcanoes*

Break

16:35 **N. Fuji** *Towards high-frequency waveform inversion for 3D elastic structure*

17:00 **K. Nishida** *Body-wave propagation extracted from seismic hum*

17:25 **J.-P. Montagner** *Passive monitoring of seismogenic zones by seismic anisotropy*

17:50 **A. Takeo** *Uppermost mantle structure beneath oceanic regions from ambient noise analysis of OBS records*

March 12 (Tuesday) Morning: *Volcanology*

9:00 **Y. Morita** *Volcanoes much affected by ambient stress in Japan - Volcanoes in Izu islands and Izu peninsula*

9:25 **B. Taisne** *Dynamics of magma movements using radiated seismic energy*

9:50 **A. Peltier** *Constraints on the current behaviour of Piton de La Fournaise volcano (Réunion) from GPS data*

10:15 **Y. Aoki** *Subsidence of the collapsed caldera of Miyakejima 2006-2011*

Break

11:00 **P. Agrinier** *Isotopic evidence for quick freshening of magmatic chlorine in the Lesser Antilles arc volcanoes*

11:25 **Mie Ichihara** *Shallow and deep triggering of Plinian-type eruptions inferred from acoustic and seismic eruption tremors*

11:50 **S. Paillat** *A revisit of volcanic plumes dynamics above fissural vents Part I: Experimental study of source effects on planar turbulent jets*

13:15 Poster Session

March 12 (Tuesday) Afternoon: Subduction zones - Seismic sources

- 14:45 **M.-P. Bouin** *Seismicity and structure of the Lesser Antilles subduction zone*
15:10 **N. Feuillet** *Understanding the seismic cycle on the Lesser Antilles megathrust with geological, paleogeodetical, paleoseismological and historical data*
15:35 **T. Iwasaki** *Lateral Structural Variation of the Downgoing Philippine Sea Plate beneath the SW Japan Arc*
16:00 **S. Singh** *Crustal structure and deep penetrating faults in the 2012 Wharton Basin great earthquake rupture zone*

Break

- 16:45 **K. Obara** *Variety of slow earthquakes in SW Japan and along the Pacific Rim*
17:10 **N. Poiata** *Array analysis methods for detection classification and location of seismic sources*
17:35 **T. Yamashita** *Thermo-mechanical and -chemical effects on dynamic fault slip*

18:30 Reception @ Abreuvoir

Wednesday Morning

Group discussions.

Plenary session - Conclusions

Poster session:

(board size: 1.75m-high x 1.15m-wide)

1. **Aurelien Mordret** *What can we learn from ambient seismic noise in exploration geophysics context?*
2. Aurelien Mordret (for **Florent Brenguier**) *Namazu project: Crustal seismic velocity changes and deformation associated with the 2011 Tohoku-oki earthquake*
3. **Maria Saade** *Spatio-temporal variations of seismic anisotropy in seismogenic zones (numerical approach)*
4. **Satoshi Kusumoto** *Cause of travel-time difference between observed and synthetic waveforms of distant tsunamis*
5. **Takeo Ishibe** *Seismicity rate changes in Tohoku and Kanto regions after the 2011 Tohoku-oki earthquake*
6. **Lewis Schardong** *Toward a high resolution tomography of Earth's lowermost mantle*
7. **Akiko Takeo** *Quantitative relationship between nonvolcanic tremor and very low frequency earthquakes beneath southwest Japan*
8. **Satoko Murotani** *Extension of scaling relations of seismic moment, source and asperity areas, and average slip to M9-class earthquakes*
9. **Tomoya Harada** *A deep thrust outer-rise earthquake immediately triggered a shallow normal outer-rise earthquake - The Dec. 7, 2012 Off-Sanriku earthquake (Mj 7.4)*
10. **Taro Kusagaya** *Development of a multifold segmented muon detection system to improve the maximum resolvable distance of muography*
11. **Edouard Kaminski** *Entrainment in negatively buoyant jets: a controversial role of buoyancy at large negative Richardson number*
12. **Hiroshi Tsuruoka** *GRiD MT with W-phase monitoring -Global and Japan-*
13. **Junichi Fukuda** *Reduction of frictional stability illuminated by rapid afterslip following the 2011 Tohoku-oki earthquake*
14. **M. Takeo** *Ground Deformation Cycles in a Magma-effusive Stage, Sub-Plinian and Vulcanian Eruptions at Kirishima Volcanoes*
15. **Simanchal Padhy** *Lateral structural change of the subducting Pacific plate beneath Japan inferred from high-frequency body wave analysis*