

ERI/IPGP Joint Workshop on Subduction Process

Program

Place: Seminar room 3rd floor, Building #1

April 15, 2009 AM **Rupture processes, NV Tremors in subduction zones and muon**

- 9:00 – 9:10 Opening
- 9:10 – 9:30 Tanaka, H, Cosmic-ray muon radiography of a volcano
- 9:30 – 9:50 Lesparre,N., Geophysical density tomography using cosmic ray muons
- 9:50 –10:20 **Break**
- 10:20-10:40 Miyake,H. and K.Koketsu, Source Modeling of Subduction-Zone Earthquakes towards Long-Period Ground Motion Simulation
- 10:40-11:00 Bernard,P., Constraining aseismic versus seismic deformation in fault zones combining strain and tiltmeters with seismicity analysis
- 11:00-11:20 Ide,S., Characteristics of seismic component of slow earthquakes
- 11:20-11:40 Kato,N., Numerical Simulation of Recurrence of Asperity Rupture in the Sanriku Region, Northeastern Japan
- 11:40-12:00 Vilotte,J.-P., Mechanics and dynamics of seismic rupture: geometry and multiscale problems
- 12:00-14:00 **Lunch & Posters**

April 15, 2009 PM **Subduction zones from observation to models**

Seismic imaging and seismicity

- 14:00-14:20 Iidaka,T., Fine seismic structure of the subducting Philippine Sea slab in Japan.
- 14:20-14:40 Laigle,M., Lesser Antilles Arc and Mediterranean Hellenic subduction zones seismic structure and activity approached with recent surveys (MCS, OBS and land seismometer refraction, earthquake and noise studies)
- 14:40-15:00 Mochizuki,K., Characteristics of asperities: recent results from marine seismic surveys and observations
- 15:00-15:20 Montagner ,J.-P., Seismic Noise in Broadband Global Networks
- 15:20-15:50 **Break**

Geodynamics: Geodesy, Gravimetry and Convective processes

- 15:50-16:10 Socquet,A., Asperities, barriers and transition zone in the North Chile seismic gap: State of the art after the 2007 Mw 7.7 Tocopilla earthquake inferred by GPS and InSAR data
- 16:10-16:30 Kato, T., and M. Iwakuni , Tectonics of East Asia and Western Pacific as seen from GPS observations

- 16:30-16:50 Lognonné, P., Quakes and tsunami detection in the Japan ionosphere.
16:50-17:10 Watada,S., Waves in the atmosphere and ionosphere after earthquakes and volcanic eruptions.
17:10-17:30 Tanaka,Y., Modeling gravity variations caused by great earthquakes and comparisons with GRACE data

April 16, 2009 AM New Observational Approaches for imaging and monitoring volcanoes and earthquakes

Physical Processes of volcanoes

- 9:00- 9:20 Kaminski,E., Dynamics of turbulent volcanic plumes: new insights from analogical modeling
9:20- 9:40 Koyaguchi,T., The condition of eruption column collapse during explosive eruptions
9:40-10:00 Vergnolle,S., Listening to volcanoes: a tool for understanding eruption dynamics
10:00-10:20 Takeo,M., Recent volcanic activity of Mt. Asama and it's magma supply path

10:20-10:40 **Break**

Seismic Noise and new instrumentation

- 10:40-11:00 Shapiro,N., Seismic Noise (TBD)
11:00-11:20 Nishida,K., Global surface wave tomography using seismic hum
11:20-11:40 Brenguier,F., Monitoring the upper-crust using seismic noise : A potential tool for studying subduction zones ?
11:40-12:00 Araya, A., A.Takamori and T.Hori, Development of seismic/geodesic instruments using laser interferometry
12: 00-12:20 Sano, O., How to measure stress and its variation

12:20-14:30 **Lunch & Posters (in Communication Lounge, 2nd floor, Building #1)**

April 16 PM

- 14:00-14:30 **Short Reports from chairs**
14:30-17:00 **Working group meetings**

18:00-20:00 **Banquet**

April 17

- 9:00-12:00 **Working group meetings**

12:00-14:00 **Lunch & Discussion**

14:00-15:30 **Synthesis**

POSTERS

1. Hatano, T., Granular friction: constitutive law and particle dynamics
2. Suzuki, T., and T. Yamashita, Nondimensional control parameters governing the behavior of 1-D fault slip: effects of frictional heating, inelastic pore creation and fluid flow
3. Mori, M., T. Kato, M. Furuya, T. Ochi, S. Miyazaki, and Y. Aoki, Source process of the Solomon Islands earthquake of April 1st, 2007 (Mw8.1) based on SAR data
4. Ochi, T., and T. Kato, The plate coupling in the Tokai District, the central Japan, inferred from different data using triangular dislocation elements
5. Amalvict, M., Gravimetry and GPS measurements for hydrology and geodesy: examples in France, Africa and Antarctica
6. Kato, A., E. Kurashimo, T. Igarashi, S. Sakai, T. Iidaka, M. Shinohara, T. Kanazawa, T. Yamada, N. Hirata, and T. Iwasaki, Can a reactivation of ancient rift systems trigger devastating intraplate earthquakes?
7. Reynard, B., N. Hilaret, I. Daniel, J.-P. Perrillat, S. Petitgirard, Y. Wang, N. Noshiyama and S. Merkel, Serpentine and subduction zone seismicity
8. Kawakatsu, H., Seismic constraints on the deep water transportation and deep "dry" cold slab beneath SW Japan
9. Tonegawa, T., K. Nishida, T. Watanabe, and K. Shiomi, Seismic interferometry of teleseismic S-wave coda for retrieval of body waves –An application to the Philippine Sea slab underneath the Japanese Islands
10. Baba, K., H. Utada, H. Shimizu, T. Goto, T. Kasaya, N. Tada, T. Koyama, and M. Uyeshima, A reference 1-D model of electrical conductivity for the upper mantle beneath the Philippine Sea
11. Morishige, M., S. Honda and M. Yoshida, Possibility of hot anomaly in the sub-slab mantle at northeast Japan subduction zone
12. Kawakatsu, H., P. Kumar, Y. Takei, M. Shinohara, T. Kanazawa, E. Araki and K. Suyehiro, A new model for lithosphere-asthenosphere boundary and asthenosphere of oceanic plates
13. Utada, H., H. Shimizu, K. Baba, T. Koyama, M. Obayashi and Y. Fukao, Is the mantle transition zone globally dry? -- Observational evidence from electrical conductivity
14. Idehara, K., Small-scale scattering near the core-mantle boundary beneath western Pacific: implications for a localized compositional heterogeneity in the lowermost mantle
15. Lognonné, P., Moon seismic noise and strange quark matter nuggets impacts
16. Lesparre, N., Geophysical density tomography using cosmic ray muons

17. Kaminski,E., Composition of the Earth according to chondritic models
18. Tasaka,M. and M.Toriumi, Development of olivine crystal preferred orientations in the Oshima peridotite mass
19. Nagaoka, Y., K. Nishida, M. Takeo, and Y. Aoki, Subsurface structure of Mt. Asama, Japan, and its temporal change inferred from coda wave interferometry
20. Miyabayashi, S., T. Igarashi, Y. Aoki, and M. Takeo, Imaging Mt. Fuji with receiver functions
21. Aoki, Y., Magma plumbing system of Mt. Asama, Japan