



# MEETING PROGRAM

## CITIES ON VOLCANOES 5 CONFERENCE

Shimabara, Japan  
November 19-23, 2007

[www.citiesonvolcanoes5.com](http://www.citiesonvolcanoes5.com)

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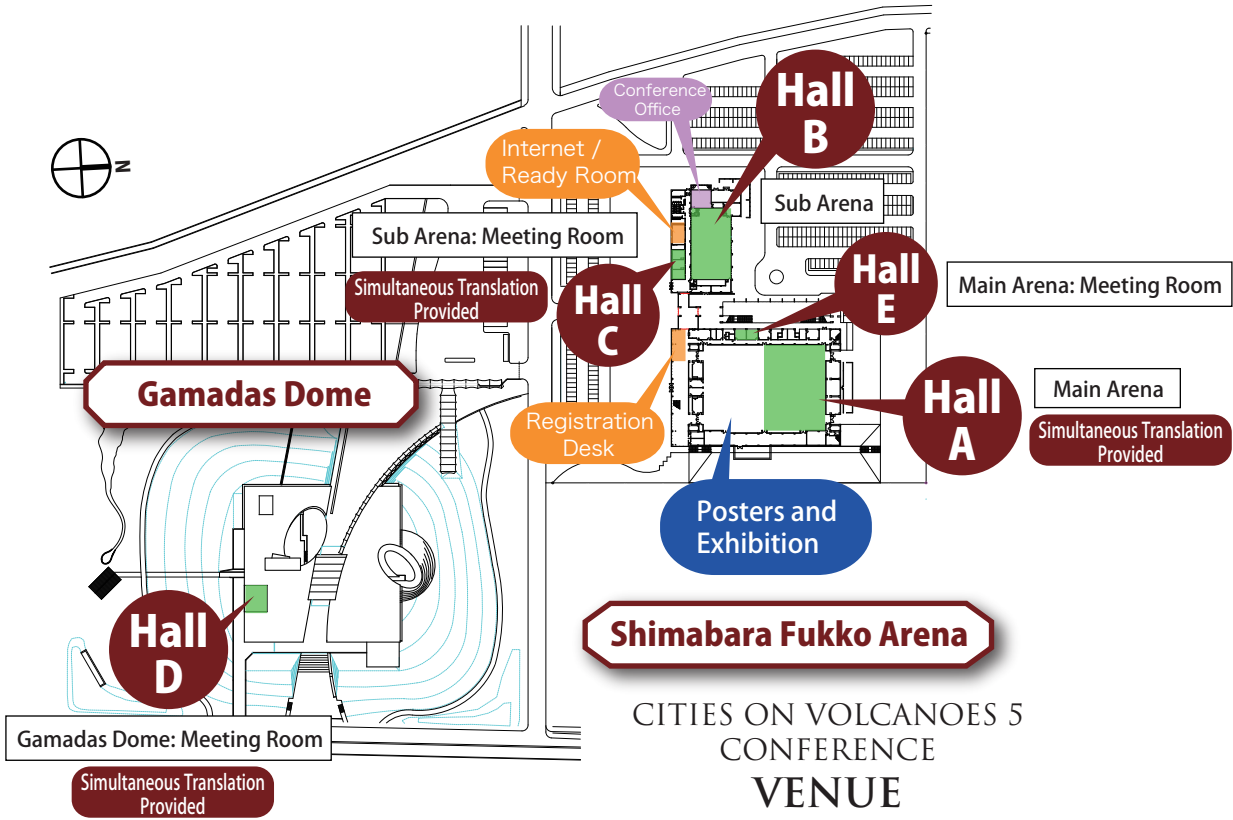




Shimabara Fukko Arena



Gamadas Dome  
(Mt. Unzen Disaster Memorial Hall)



**MEETING PROGRAM**  
**CITIES ON VOLCANOES 5 CONFERENCE**  
**SHIMABARA (JAPAN)**

**Hosted by**  
**Volcanological Society of Japan**  
**and**  
**The City of Shimabara**

**2007**

**Co-hosted by**  
International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI)  
Faculty of Sciences, Kyushu University  
Earthquake Research Institute, the University of Tokyo  
Kyushu Regional Development Bureau, Ministry of Land, Infrastructure and Transport  
Nagasaki Prefecture  
The City of Unzen  
The City of Minamishimabara  
Mount Unzen Disaster Memorial Foundation

**Supported by**  
Japan Society for the Promotion of Science (JSPS)  
The Commemorative Organization for the Japan World Exposition ('70)  
Tokyo Geographical Society

## COMMITTEES

### Advisory Committee Members

Genjiro Kaneko (Governor of Nagasaki Prefecture)  
Teijiro Yoshioka (City Mayor of Shimabara)  
Fumio Kyuma (Member of the House of Representatives)  
Noriaki Miyoshi (Speaker of Nagasaki Prefectural Assembly)  
Morikane Kitaura (Chairman of Shimabara Municipal Assembly)  
Kazuuya Ohta (Emeritus Professor of Kyushu University)  
Shigeo Aramaki (Yamanashi Institute of Environmental Science)

### Organizing Committee Members

#### *Chairman:*

Setsuya Nakada (Earthquake Research Institute, Univ. of Tokyo)

#### *Members:*

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Eisuke Fujita (Nat'l Research Inst. for Earth Science and Disaster Prevention)  
Koji Hata (Unzen Restoration Work Office)  
Junichi Hirabayashi (Volcanic Fluid Research Center, Tokyo Institute of Technology)  
Hideo Hoshizumi (Geological Survey of Japan, AIST)  
Kazuhiro Ishihara (Disaster Prevention Research Institute, Kyoto Univ.)  
Kazuaki Ito (Information Institute of Disaster Prevention)  
Takuro Kimura (Research Institute for Social Safety)  
Shigeru Ikeda (Fukuoka District Meteorological Observatory)  
Yasuyuki Miyake (Faculty of Sciences, Shinshu Univ.)  
Hiromu Okada (Crisis & Environment Management Policy Institute)  
Yoshinori Mogami (Officer for Nature Conservation of Unzen, Ministry of Environment)  
Hiroshi Shimizu (Faculty of Sciences, Kyushu Univ.)  
Kazuo Takahashi (Faculty of Engineering, Nagasaki Univ.)  
Hideo Taniguchi (Deputy Mayor, City of Shimabara)  
Tadahide Ui (Crisis & Environment Management Policy Institute)

### Science Committee Members

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Peter Baxter (University of Cambridge, UK)  
Carolyn Driedger (US Geological Survey, USA)  
David Johnston (Institute of Geological and Nuclear Science, NZ)  
Warner Marzocchi (Istituto Nazionale di Geofisica e Vulcanologia, Italy)  
Yasuyuki Miyake (Japan)  
Setsuya Nakada (Japan) *Chair*  
Chris Newhall (US Geological Survey emeritus, Philippines)  
Steve Sparks (University of Bristol, UK)  
Tadahide Ui (Japan)

### Secretariat Members

Shin'ichi Sugimoto (City of Shimabara)  
Takeshi Matsushima (Faculty of Sciences, Kyushu University)  
Eiji Matsushita (City of Shimabara)  
The Convention Co. Ltd.

## OFFICIAL EVENTS

November 18 (Sun), Day 0 evening  
Hall B of Shimabara Fukko Arena, 18:00-20:00

### **Ice Breaker**

Drinks and light snacks are served. Shimabara people and children will present Japanese traditional performance, *Noh* and *Kyogen*. Participants and accompanied persons who made registration can join Ice Breaker without fee. Shuttle buses depart from the venue to hotels after the Ice Breaker.

November 21 (Wed), Day 3 evening  
**Party in Shimabara Castle:** 17:00-19:00

The Mayor of Shimabara City hosts this party for all COV participants and accompanied persons. The party will be held at the Shimabara Castle and City Cultural Hall, which is the final destination of the intra-meeting field excursion on Wednesday. Free drink is provided with local foods cooked by Shimabara Women's Club and Japan Self-Defense Force (JSDF). Japanese martial arts and traditional music are played by Shimabara city's people. Traditional tea ceremony will also be held in the Shimabara Castle. Participants can dip with the Japanese culture such as dressing Kimono, Bonsai, calligraphy, etc. Shuttle buses will be prepared after the party.

November 23 (Fri), Day 5 evening  
Tsukumo Hotel: 18:00-19:30

### **Farewell Party**

All COV participants and accompanied persons are invited. All move to the Tsukumo hotel by bus from the venue after the Closing ceremony. Japanese music and entertainment will be presented by Shimabara people. Shuttle buses depart from the venue to hotels after the Farewell Party.

## INTRA-MEETING FIELD EXCURSION

*Detail will be announced at the venue no later than the afternoon of November 20 (Tue), Day 2.*

Participants should meet before 8:20 a.m., November 21 (Wed) in the parking space in front of Gamadas Dome (in front of Fukko arena). Participants will be separated into 3 groups, each of which moved with multiple buses. Buses depart at 8:30. The excursion terminates at the Shimabara Castle before 5:00 p.m., where the party is ready for all COV participants.

## ACTIVITIES (FORUMS) DURING THE CONFERENCE

November 19 (Mon), Day 1 afternoon

Hall A: 14:00 -17:50

**Volcanic Disaster Seen from Citizens - Looking Back at Three Volcanic Eruption Disasters -**

*Organized by Mutual support network of the citizens living around volcano*

November 20 (Tue), Day 2 morning

Hall B: 9:00-11:50 (**only in Japanese**)

**Citizens and Mass Media Forum - The Future of Disaster Prevention and Mitigation - Thinking from the Mt. Fugen Disaster**

*Organized by The Citizens and Mass Media Forum Executive Committee*

November 20 (Tue), Day 2 afternoon

Hall A: 13:30-16:40

**Forum on How to Pass on Lessons Learned from Past Disasters**

*Organized by Nagasaki Prefectural Government*

November 22 (Thu), Day 4 afternoon

Hall B: 13:30-17:30 (**only in Japanese**)

**Forum on Volcanic Sabo and Disaster Reduction**

*Organized by Kyushu Regional Development Bureau, Ministry of Land, Infrastructure and Transport*

November 22 (Thu), Day 4 evening

Annaka Public Hall: after the official conference program until 21:00

**Discussion with Local People who Experienced Unzen Disaster**

Organized by T. Omachi (NPO Shimabara Fugen-kai)

First 60 are acceptable. Free small food and drink are served. No registration is needed. Further information will be announced at the venue.

November 23 (Fri), Day 5 morning

Hall A: 10:10-11:30

**Kid's Volcano Workshop**

*Organized by Kyushu Volcano Network*

November 23 (Fri), Day 5 noon time

Hall A: 12:00-13:30

**Eat volcanoes! Volcano Experiments in Kitchen**

*Organized by Kazan Net Japan, Kyushu Volcano Network*

November 23 (Fri), Day 5 afternoon

Hall A: 13:40-15:10

**Volcano Q & A in Shimabara; Let's Ask Volcanologists in the World**

*Organized by Volcanological Society of Japan, Kyushu Volcano Network*

## WORKSHOPS AND MEETINGS

November 18 (Sun), Day 0 afternoon

Hall E: 15:30-18:30

**Workshop on Eruption forecasting through the Bayesian Event Tree: Moving from theory to practice with the software package BET\_EF**

*Organized by W. Marzocchi*

Free to attend.

November 18 (Sun), Day 0 afternoon

Kowakien Hotel: 10:00-18:00

**2<sup>nd</sup> International Workshop on Acoustic Remote Sensing of Volcanoes (IWARS)**

*Organized by M. Garaces*

40 are acceptable with 6,300 yen for registration including lunch and coffee.

November 19 (Mon), Day 1 evening

Hall C: following the oral session of 1-1 (18:00-18:50)

**Meeting of Committee of Explosive Volcanism (CEV)**

*Organized by S. Takarada*

November 19 (Mon), Day 1 evening

Hall E: 18:00-20:00

**Meeting of Cities and Volcanoes (CAV) committee**

*Organized by D. Johnston*

November 20 (Tue), Day 2 evening

Hall E: 18:00-20:00

**Meeting of Executive Committee of IAVCEI**

*Organized by S. Nakada and J. Marti*

November 20 (Tue), Day 2 evening

Tsukumo Hotel: 18:30-20:00

**Meeting of World Organization of Volcano Observatories (WOVO)**

*Organized by F. Schwandner*

November 22 (Thu), Day 4 evening

Hall D: following the oral session of 3-2 (16:50-18:20)

**Informal meeting of outreach exchange**

*Organized by C. Driedger*

November 22 (Thu), Day 4 evening

Tsukumo Hotel: 18:30-21:00

**Meeting of International Volcanic Health Hazard Network (IVHHN)**

*Organized by C. Horwell and P. Baxter*



## SCIENCE SESSIONS AND CO-CONVENERS

### Symposium 1. Knowing volcanoes

#### **Session 1-1.** Recent developments in volcano research

*Keywords: Basic research, eruption mechanisms, structure and development of volcanoes, volcanic products, hazards assessment*

Co-conveners: H. Hoshizumi, J. Major\*, Y. Miyake, A. Neri, S. Takarada\*\*

#### **Session 1-2.** Volcano observation research and eruption forecast and alert programs

*Keywords: Volcano monitoring, eruption forecast and prediction*

Co-conveners: J. Ewert\*, E. Fujita\*\*, M. Garces, K. Ishihara, M. Martini, C. Newhall\*\*

#### **Session 1-3.** Health hazards of coexisting with active volcanoes

*Keywords: Human health, medical care, geologic pollution*

Co-conveners: P. Baxter\*, C. Horwell\*\*, Y. Ishimine\*\*

### Symposium 2. Volcanoes and cities

#### **Session 2-1a.** Responding to Natural Disasters: Case Histories with Lessons for Volcano Crises

*Keywords: Emergency response, alert notification, evacuation, role of media*

Co-conveners: S. Bailey\*, C. Gardner\*, R. Solidum, T. Yamamoto, H. Yamasato\*\*, T. Yokota

#### **Session 2-1b.** Assessing long term volcanic hazards and risks

*Keywords: Infrequent volcanic eruptions, development of new volcanoes, large magnitude eruptions*

Co-conveners: C. Connor\*, S. Sparks\*\*, T. Ui\*\*

#### **Session 2-2.** Impacts of volcanic activity on infrastructure and effective risk reduction strategies

*Keywords: Hazard assessment and mapping, risk analysis, sabo, cost-benefit analysis*

Co-conveners: N. Anyoji\*, R. Imura, J. Kurihara, Y. Nakamura\*\*, C. Neal\*\*, T. Pierson, G. Zuccaro

#### **Session 2-3.** Long-term land-use planning that mitigates volcanic risk

*Keywords: Land use planning, hazard-resilient communities, reconstruction planning*

Co-conveners: J. Becker, Á. Höskuldsson, D. Johnston, T. Kimura, W. Saunders\*, K. Takahashi\*\*, T. Tanabe

### Symposium 3. Living with volcanoes

#### **Session 3-1.** Linkage for reducing volcanic risks: Cooperation and mutual support among researchers, administrators, mass media, inhabitants, local organization and volunteers

*Keywords: Linkage, cooperation, information exchange, crisis communication*

Co-conveners: J. Clavero, G. Leonard\*, K. Nakagawa, H. Okada\*\*, S. Shozawa, D. Thompson, T. Tsuchida\*\*

#### **Session 3-2.** Education and Outreach--Strategies that Improve Community Awareness about Volcanoes

*Keywords: Education and risk communication*

Co-conveners: C. Driedger\*, S. Hayashi\*\*, S. Ikebe, H. Itoh, K. Ronan, J. Woodcock

#### **Session 3-3.** Communities and volcanism - archaeology, tradition and recovery

*Keywords: Historical disasters, recovery processes, cultural tradition*

Co-conveners: R. Blong, S. Cronin\*\*, I. Kitahara\*, S. Mimatsu, S. Nakada, I. Nakamura, M. Rosi

(\*Leader, \*\*Subleaders)



Hall A		
9:00-9:40	<b>Opening ceremony</b>	
9:40-10:40	Conference lectures <i>Chaired by H. Shimizu</i>	
9:40-10:10	<u>Kazuya Ohta</u> <b>The 1990-1995 Eruption of Unzen Volcano -Spectacle of Lava Dome Growth and Menace of Pyroclastic Flows and Lahar-</b>	<u>CL 1</u>
10:10-10:40	<u>Shigeo Aramaki</u> <b>Last 30 Years of Volcanic Hazard Mitigation in Japan</b>	<u>CL 2</u>
10:40-10:50	- Break -	
10:50-11:50	<b>Plenary talks</b>	
	Session 1-1: Recent developments in volcano research <i>Chairpersons: J. Major, Y. Miyake</i>	
10:50-11:20	<u>Bruce F. Houghton</u> <b>Recent Developments In Volcano Research: Diversity In Volcanism</b>	<u>11-O-01</u>
	Session 3-1: Linkage for reducing volcanic risks: Cooperation and mutual support amongst researchers, administrators, mass media, inhabitants, local organization and volunteers <i>Chairpersons: G. Leonard, J. Clavero, H. Okada</i>	
11:20-11:50	<u>Hiromu Okada</u> <b>Volcano Risk Mitigation Strategy Based on a Cooperative Linkage Among Officials, Scientists, People and Media - Decades-long Efforts and State-of-the-art at Mt. Usu, Japan</b>	<u>31-O-01</u>
11:50-13:10	- Lunch -	
13:20-13:50	<b>Plenary talk</b>	
	Session 3-3: Communities and volcanism-archeology, tradition and recovery <i>Chairpersons: S. Cronin, I. Kitahara, I. Nakamura</i>	
	<u>Kazuaki Itoh</u> <b>Historical Volcanic Eruptions and Coexistence of Human Communities with Volcanoes</b>	<u>33-O-01</u>
13:50-14:00	- Break -	
14:00-17:50	- Forum on Volcanic Disaster Seen from Citizens -	

Hall B		
	Session 1-1: Recent developments in volcano research <i>Chairpersons: J. Major, Y. Miyake</i>	
14:00-14:20	<u>Dapeng Zhao</u> <b>Seismic Imaging of Magma Chambers Under Active Arc Volcanoes and Hotspots</b>	<u>11-O-02</u>
14:20-14:40	<u>Hetty Triastuty</u> , Masato Iguchi, Takeshi Tameguri <b>Temporal Change of Spectra of Volcanic Earthquakes at Kuchinoerabujima Volcano, Japan</b>	<u>11-O-03</u>
14:40-15:00	<u>Jim Cole</u> <b>Subvolcanic Plumbing Systems beneath caldera volcanoes: Relevance to Prediction of Eruptions</b>	<u>11-O-04</u>
15:00-15:20	<u>Edward W Llewellyn</u> <b>A Numerical Model for the Development of Magma Permeability During an Eruption</b>	<u>11-O-05</u>

15:20-15:40	<u>Tomaso Esposti Ongaro</u> , Amanda Clarke, Augusto Neri, Barry Voight, Christina Widiwijayanti <b>Fluid Dynamics of Volcanic Blasts: Application to the Soufriere Hills Volcano, Montserrat (W.I.)</b>	<b>11-O-06</b> <i>Invited</i>
15:40-16:10	<b>- Coffee break -</b>	
16:10-16:30	<u>Victoria C. Smith</u> , Jon Blundy, Jose Luis Arce <b>Insights Into Magmatic Processes At Nevado De Toluca, Mexico</b>	<b>11-O-07</b>
16:30-16:50	<u>Hugh Tuffen</u> , Rosie Smith, Peter Sammonds <b>Brittle-ductile Deformation of Silicic Lava: Implications for Lava Dome Emplacement and Seismicity</b>	<b>11-O-08</b> <i>Invited</i>
16:50-17:10	Marie Edmonds <b>Observations of Volcanic Degassing Processes and Their Implications for Hazard Assessment</b>	<b>11-O-09</b> <i>Invited</i>
17:10-17:30	<u>Hiroshi Shinohara</u> <b>Degassing of Convecting Magma Column: Interplay with Eruptive Activities</b>	<b>11-O-10</b>
17:30-17:50	<u>Bettina Scheu</u> , Ulrich Kueppers, Olivier Spieler, Donald B. Dingwell <b>Experimental Volcanology on Eruptive Products of Unzen Volcano: 1990 - 1995 Eruption</b>	<b>11-O-11</b>

### Hall C

Session 3-1: Linkage for reducing volcanic risks: Cooperation and mutual support amongst researchers, administrators, mass media, inhabitants, local organization and volunteers

*Chairpersons: G. Leonard, J. Clavero, H. Okada*

14:00-14:20	Matthew S. Davis, Franco Barberi, Roberto Isaia, <u>Rosella Nave</u> , Tullio Ricci <b>Volcanic Risk Perception in Campi Flegrei Area (Southern Italy)</b>	<b>31-O-02</b> <i>Invited</i>
14:20-14:40	<u>Marta Calvache</u> <b>Colombia Experiences of Managing Volcanic Crisis, Galeras and Nevado Del Huila Eruptions</b>	<b>31-O-03</b>
14:40-15:00	<u>Shigeo Aramaki</u> <b>How the Word 'Pyroclastic Flow' Became Accepted Among the Japanese Citizens</b>	<b>31-O-04</b>
15:00-15:20	Jennifer N. Adleman, Seth F. Snedigar <b>The Alaska Volcano Observatory's Information Management Systems during the 2006 eruption of Augustine Volcano, Cook Inlet, Alaska</b>	<b>31-O-05</b> <i>Invited</i>
15:20-15:40	Tokumi Saito, Nobuo Doi <b>Cooperation with the Press in Dealing with the Mt. Iwate Volcanic Crisis</b>	<b>31-O-06</b>
15:40-16:10	<b>- Coffee break -</b>	
16:10-16:30	<u>Jo Horrocks</u> , Graham S. Leonard, Peter Wood, David M. Johnston, Richard Smith <b>New Zealand's All-hazard Civil Defence Emergency Management Structure: Cooperation and Mutual Support for Volcanic Crisis Management</b>	<b>31-O-07</b> <i>Invited</i>
16:30-16:50	Jorge Munoz, Leonardo Cari, Viviana Portales, Ines Segura, Lionel Fidel, Victor Carlotto, Jersy Marino, Luisa Macedo, Rosario Quispe, Raul Luna, Ana Arguedas, <u>Catherine Hickson</u> , Mike Ellerbeck, Fernando Munoz Carmona <b>Transforming Geoscience Knowledge into Disaster Prevention Action in the Andes: The MAP:GAC Experience</b>	<b>31-O-08</b>
16:50-17:10	<u>Tatsuro Chiba</u> <b>The Miyakejima 2000 Eruption and Web Journalism</b>	<b>31-O-09</b>
17:10-17:30	<u>Hugo A. Yepes</u> , Edgardo Bartomioli, Pablo A. Samaniego, Patricia A. Mothes, Patricio A. Ramon, Diego Barba, Santiago Arellano, David R. Rivero, Daniel Andrade <b>Combining Scientific and Social Components to Achieve Sustainable Risk Mitigation at Tungurahua Volcano, Ecuador (Ecuador)</b>	<b>31-O-10</b> <i>Invited</i>

17:30-17:50	<u>Jody Woodcock</u> <b>Collaborative Communication Efforts Key to Reducing Volcanic Risk in Pierce County, Washington, USA</b>	<b>31-O-11</b> <i>Invited</i>
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### Hall D

#### Session 3-3: Communities and volcanism-archeology, tradition and recovery

*Chairpersons: A. Ford, S. Cronin, I. Kitahara, I. Nakamura*

14:00-14:20	<u>Tsukasa Ohba</u> <b>Folktales, Legends, and Myths about Volcanoes</b>	<b>33-O-02</b>
14:20-14:40	<u>Karoly Nemeth</u> , Shane J. Cronin, Douglas T. Charley <b>Pitfalls of Interpretation of Volcanic Eruptions on the Basis of Oral Traditions: the AD 1452-53 "Great Kuwae Event" (Vanuatu)</b>	<b>33-O-03</b>
14:40-15:00	<u>Tsutomu Soda</u> <b>The Impact of Haruna Volcano on Human Life in the 5-6th Centuries A.D.</b>	<b>33-O-04</b>
15:00-15:20	<u>Armann Hoskuldsson</u> , Thorvaldur Thordarson <b>The Eruption of Oaefajokull 1362 and Destruction of the District Herad, SE-Iceland</b>	<b>33-O-05</b> <i>Invited</i>
15:20-15:40	<u>Masanori Aoyagi</u> , Ryoji Motomura, Mitsuyuki Takano, Akira Baba, Hiroyuki Kamei, Katsushi Ikeuchi, Toshitsugu Fujii, Minoru Yoneda, Kazuhiko Takeuchi, Takashi Oguchi <b>Restoration of Cultural and Natural Environment of the Area Covered by Volcanic Eruptions</b>	<b>33-O-06</b>
15:40-16:10	<b>- Coffee break -</b>	
16:10-16:30	<u>H.-U.Schmincke</u> , S. Kutterolf, A. Freundt, W. Perez, J. Rausch, W. Strauch <b>Four Major Late Holocene Explosive Eruptions That Affected The Larger Managua Area (Nicaragua)</b>	<b>33-O-07</b>
16:30-16:50	<u>Norie Ichinose</u> <b>The Damage of the Mt.Tokachi Eruption in 1926 and the Recovery Process of Kamifurano</b>	<b>33-O-08</b>
16:50-17:10	<u>Saburo Mimatsu</u> <b>Role of Those Living at the Foot of Volcano-Handling down the Wisdom to the Next Generation</b>	<b>33-O-09</b>
17:10-17:30	<u>Naoya Sekiya</u> <b>Socio Economic Impact of Volcanic Eruptions</b>	<b>33-O-10</b>
17:30-17:50	<u>Isao Nakamura</u> <b>Socio-psychological Issues in Relation to Eruption Hazards</b>	<b>33-O-11</b>

## Posters I

November 19-20

Core time: 16:40-18:00, Nov. 20

## Session 1-1: Recent developments in volcano research (round 1)

*Unzen Volcano (1-24), pyroclastic flows (25-36), debris avalanche (37-40), gas-hydrothermal activity (41-54), tephra (55-63), geophysical studies (69-92) and eruption histories (93-107)*

- 11-P-01** Marco Brenna, Keiko Suzuki-Kamata, Mary Gee  
**Emplacement Temperatures Determined by Progressive Thermal Demagnetization of Six Volcanic Deposits from the 1990-1995 Eruption of Unzen-Fugendake, Southwestern Japan**
- 11-P-02** Yoshihiko Goto, Setsuya Nakada, Mitsuhiro Yoshimoto, Taketo Shimano, Masaru Kurokawa, Takeshi Sugimoto, Sumio Sakuma, Hideo Hoshizumi, Kozo Uto  
**Character and Origin of Lithofacies in the Conduit of Unzen Volcano, Japan**
- 11-P-03** Koichiro Watanabe, Kenji Hatae, Takushi Yamanaka, Yoshinobu Motomura, Kazunori Watanabe  
**Petrochemistry of Juvenile Micro-pumice Detected From Early Tephra Before Lava Dome Appearance in Unzen Volcano 1990-1995 Eruption**
- 11-P-04** Takeshi Sugimoto, Hideo Hoshizumi, Hiroshi Shimizu  
**History of Mayuyama, Unzen Volcano, Japan: Inferred from Stratigraphy and Petrological Feature of Borehole Cores**
- 11-P-05** Takeshi Sugimoto, Setsuya Nakada, Takako Akimasa, Masaru Kurokawa  
**Geochemical Evolution of Unzen Volcano: Analysis of Drilling Cores from USDP-3**
- 11-P-06** Kunihiisa Terai  
**The Movie Record of the Growth of Lava Dome for 5 Years**
- 11-P-07** Yuhki Kohno, Takeshi Matsushima, Satoshi Matsumoto, Hiroshi Shimizu  
**Magma Chamber Model of Unzen Volcano Causing 1990-1995 Eruption Inferred from Seismic and Ground Deformation Data Using FEM**
- 11-P-08** Sachihiko Taguchi, Yumi Kubo, Soichiro Yoshii, Hitoshi Chiba  
**Silicified Rock at the Unzen-Jigoku Steaming Ground, Nagasaki, Japan**
- 11-P-09** Christyanne Melendez, Shinji Takarada, Nancy Riggs  
**The 1792 Mt. Mayuyama Debris Avalanche, Unzen Volcano, Japan: Implications from Field Characteristics, Granulometry, and Clast-shape Analysis for Transport and Emplacement Mechanisms**
- 11-P-10** Ayako Okubo, Yoshikazu Tanaka, Tadashi Nakatsuka, Tsuneomi Kagiya, Wataru Kanda, Naoto Kitada, Mitsuru Utsugi, Kazuhiro Ishihara, Hiroshi Shimizu, Takeshi Matsushima, Daisuke Miki, Tetsuro Takayama, Masayo Fukushima  
**Utility of Aeromagnetic Studies for Imaging of Subsurface Structures in Two Active Volcanoes: Unzen and Sakurajima Volcanoes, Kyushu, Japan**
- 11-P-11** Satoshi Hamasaki, Hideo Hoshizumi, Yuichi Morishita, Setsuya Nakada, Masaru Kurokawa  
**Hydrothermal System Inside Unzen Volcanic Terrain by Alteration Analysis of Conduit Drilling, USDP-4**
- 11-P-12** Takeshi Saito, Naoto Ishikawa  
**Eruptive Conditions of the Last Three Historical Eruptions at Unzen Volcano, Japan, Identified by Magnetic Petrological Analyses**
- 11-P-13** Noritoshi Morikawa, Kohei Kazahaya, Masaya Yasuhara, Hiroshi A. Takahashi, Akihiko Inamura, Michiko Ohwada, Francois J. LuGuern, Tadashi Kono, Shinji Ohsawa, Yuki Yusa, Koichi Kitaoka  
**Geochemical and Hydrological Studies on Groundwaters around Unzen Volcano: With Reference to Dispersion of Magmatic Volatiles through Groundwater Flow System**

- 11-P-14** Satoshi Matsumoto, Hiroshi Shimizu, Masazumi Onishi, Kenji Uehira, Norimichi Matsuwo  
**Seismic Reflection Survey of the Crustal Structure beneath Unzen Volcano, Kyushu, Japan**
- 11-P-15** Wahyu Srigutomo, Tsuneomi Kagiya, Wataru Kanda, Hiroshi Munekane, Takeshi Hashimoto, Yoshikazu Tanaka, Hisashi Utada, Mitsuru Utsugi  
**Resistivity Structure of Unzen Volcano Derived from Time Domain Electromagnetic (TDEM) Survey**
- 11-P-16** Bettina Scheu, Ulrich Kueppers, Oliver Spieler, Donald B. Dingwell  
**Determination of Surface area of silicic magma**
- 11-P-17** Hiroshi A. Takahashi, Kohei Kazahaya, Hiroshi Shinohara, Noritoshi Morikawa, Michiko Ohwada, Hiroko Handa, Toshio Nakamura  
**Diffusive Degassing of Magmatic CO<sub>2</sub> around Unzen Volcano, SW Japan**
- 11-P-18** Satoshi Noguchi, Atsushi Toramaru, Setsuya Nakada  
**Groundmass Crystallization Process in the Dacite Dikes of Unzen Scientific Drilling Project 4 (USDP-4)**
- 11-P-19** Daisuke Nagai  
**Characteristics of the June 3, 1991 Pyroclastic Surge at Unzen Volcano, Kyushu Island, Japan, and Implications for Disaster Mitigation**
- 11-P-20** Atsushi Saiga, Satoshi Matsumoto, Kenji Uehira, Kodo Umakoshi, Takeshi Matsushima, Hiroshi Shimizu  
**Crustal Velocity Structure beneath Unzen volcano**
- 11-P-21** Atsushi Watanabe, Satoshi Matsumoto, Hiroshi Shimizu  
**Scatterer Distribution beneath Unzen Volcano**
- 11-P-22** Hakim Saibi, Sachio Ehara, Yasuhiro Fujimitsu, Jun Nishijima, Koichiro Fukuoka  
**Numerical and Geosciences Investigations of Obama Geothermal Field, Western Flank of Unzen Volcano**
- 11-P-23** Takeshi Hashimoto  
**Year-to-year Change in Self-potential on Unzen Volcano**
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- 32-P-10** Tim R. Orr, Darcy Bevins  
**Public Outreach and Education by the Hawaiian Volcano Observatory**
- 32-P-11** Hirotsugu Kooka, Yuji Sorimach, Junichi Ootomo, Hiromu Okada, Keiji Wada, Mario Yoshida  
**Various Public Relations for Community Awareness about Risk and Beneficence of the Tokachi-dake Volcano, in northern Japan**
- 32-P-12** Hideyuki Itoh, Mario Yoshida, Norikuni Harada, Shinya Yoshida  
**Collaborated work for Disaster Reducing and Outreach with Citizen, Administrators and Scientists, at Kamifurano Town, Tokachi-dake Volcano**
- 32-P-13** Graham S. Leonard, Maureen Coomer, Brad Scott, Richard T. Smith, Harry Keys, Nicki Hughes, David M. Johnston  
**Public Awareness and Education at Tongariro Volcanic Complex, New Zealand: Social Science Guiding Risk Management for a Transient Dispersed Population**
- 32-P-14** Shintaro Hayashi  
**Libra: a Board Game for Teaching Uncertainty of Volcanic Disaster**
- 32-P-15** Miyuki Yoshikawa, Shin'ichiro Ikebe, Chika Mizoguchi, Yasuaki Sudo  
**The 'Kids in Aso as Volcanologists' Project – Building Children's Volcanological Skills**
- 32-P-16** Jennifer N. Adleman  
**Alaska's Volcano Teaching Kit: building Awareness of Volcanic Hazards through State-wide Science Education**
- 32-P-17** Masaya Sakamoto, Kisei Kinoshita, Nobuya Tomioka, Hirotsugu Togoshi  
**School Education for Volcanic Disaster Mitigation using 3D Satellite Image Presentation System SiPSE**
- 32-P-18** Angeles Llinares, Ramon Ortiz  
**Teacher Guide for Education in Volcanic Risk, Civil Defence Spain**
- 32-P-19** Tadahide Ui, Editorial Board for Supplementary Readers on Tarumae Volcano  
**Supplementary Readers on Tarumae Volcano**
- 32-P-20** Yuta Sakamoto, Yoshie Shimizu, Kazuyuki Nakagawa, Masato Koyama  
**Nine Years of School Children's Summer Course in Seismology and Volcanology**
- 32-P-21** Carolyn Driedger, Anne Doherty  
**Living with a Volcano in your Backyard: an Education Program to Better Acquaint Students and Teachers with Mount Rainier, Washington, USA**
- 32-P-22** Atsushi Yoshii, Toshikuni Okamura  
**Educational Program on Regeneration of Woodlands after Usu Volcano Eruption**

- 32-P-23** Junji Dobasi  
**Potential of Unzen Volcano as Teaching Material - its Application to the Periods for Integrated-Study at Junior High School-**
- 32-P-24** Yoshio Owaki, Yasuhiro Sekiguchi, Hideki Kobayashi, Toshiharu Sakuma, Mitsuo Inoue, Hatsue Fujihira, Akemi Sekiguchi, Kiminari Matsuo, Sekio Ichikawa, Kazuo Kubota, Tomiyuki Kobayashi, Yoshio Seto, Kinjiro Takasugi, Junichi Tsuyuki, Tetsuo Motegi, Norio Yamada, Yukio Yamada  
**Mt.Fuji and Sakawa-River—How Do We Hand Down the Ancesters' Fighting to the Descendants?**
- 32-P-25** Takashi Nagao, Yoshio Fukuda, Naoki Higuchi, Toshiyuki Yamashita, Naoko Fujita, Takeshi Hiyoke, Misao Maeda  
**Learning the Mysteries of Abu Volcano Group on Hagi City with Citizens and School Children**
- 32-P-26** Jennifer Anderson  
**Mitigating Risk through Student Education**
- 32-P-27** Akira Tsune  
**Volcanological Education Program 'Six Ways to Enjoy Volcanic Rocks in Sakurajima'**
- 32-P-28** Saburo Mimatsu  
**Lesson from Mt. Usu Eruptions – Fruit of Volcanic Disaster Prevention Activities During the Dormant Period**
- 32-P-29** Yuki Sadaike  
**Project Exhibition about Mt. Usu Eruption in 2000**
- 32-P-30** Anne Doherty, Edwin Bernbaum  
**Mount Rainier-Fuji Sister Mountain Curriculum Project and Teacher Exchange Program**
- 32-P-31** Hisaomi Yamaguchi  
**Practice of Field Museum Activities on Nature and Culture of Mt. Aso**
- 32-P-32** Ryusuke Imura, Ebino Highlands Volunteer Group, The Miyazaki Office of River and National Highway, MLIT  
**The Education Program for Understanding Volcanic Hazards in the Kirishima Volcano, Japan**
- Session 3-3: Communities and volcanism-archeology, tradition and recovery
- 33-P-01** Ryoji Motomura, Norie Matsumoto, Hirotohi Hiwaki, Yasunari Takada, Shunichi Ikegami  
**The Archaeology of Mentality in the Study of Pompeii**
- 33-P-02** Masanori Aoyagi, Claudia Angelelli, Satoshi Matsuyama, Katsuhiro Iwaki, Akira Matsuda, Tomoo Mukai  
**An Archaeological Excavation of a Roman Site in the Southern Part of Italy**
- 33-P-03** Sintaro Ono, Tetsuro Morimoto, Jun Takamatsu, Atsuhiko Bannno, Takeshi Oishi, Masataka Kagesawa, Katsushi Ikeuchi  
**3-D Modeling of Somma and Pompei Excavations Bureid by Eruption of Mt.Vesuvio**
- 33-P-04** Toshitsugu Fujii, Kenji Niihori, Takayuki Kaneko, Masashi Nagai, Mitsuhiro Yoshimoto, Atsushi Yasuda, Setsuya Nakada  
**Burial Process of the Roman Villa on the Northern Flank of Mt.Vesuvius**
- 33-P-05** Takashi Oguchi, Kyoko Kataoka, Zhou Lin, Ronald De Rose, Wataru Morishima, Tatsuto Aoki, Goro Komatsu  
**Watershed Geomorphology and Sedimentolgy of Vesuvius Volcano (Italy) and Pinatubo Volcano (the Philippines)**
- 33-P-06** Kazuhiko Takeuchi, Nobuo Sugiyama, Yoko Kano, Emilla Allevato, Gaetano Di Pasquale, Cohe Sugiyama  
**Restoraiton of Cultural Landscape and Natural Environment at the Area Covered by Eruptions**

Poster



- 33-P-07** Hiroyuki Kamei, Makiko Watanabe, Takayuki Ako, Yuzuru Inoue, Katsura Kogawa, Ibusuki-City Education Board  
**Geophysical Survey of Archaeological Sites Suffered from Volcanic Eruption of MT. Kaimondake in 874 AD, Kagoshima, Japan**
- 33-P-08** Mitsuyuki Takano, Eiji Nitta  
**Investigation of the Remains Suffered from Eruption of the Ninth Century of Mt. Kaimondake**
- 33-P-09** Kyoko S. Kataoka, Vern Manville, Atsushi Urabe, Atsushi Kajiyama  
**A Large-scale Breakout Flood from an Ignimbrite-Dammed River after the Numazawako Eruption (BC 3400), Northeast Japan: Geomorphic and Sedimentary Evidence and Lahar Hazards**
- 33-P-10** Cohe Sugiyama, Koichiro Saito, Kenji Niihori, Yuki Ueda, the Society of Volcanological and Archeology in Ilands  
**Villages and Volcanic Eruptions at Izu islands, Japan, in YAYOI period**
- 33-P-11** Kenji Niihori, Yuki Ueda, Cohe Sugiyama, Kouichirou Saitou  
**The Burial Processes of Remnants from the Era of Yayoi in Miyakejima Volcano, Japan**
- 33-P-12** Ryusuke Imura  
**Reexamination of the Eruptive Activity of Kirishima Volcano Recorded in the Heike Monogatari (The Tale of the Heike)**
- 33-P-13** Akira Baba, Masataka Yoshida, Shino Fukuju, Tatsuya Tamai, Haruka Kinoshita  
**Digital Archive System for Historical Materials on Volcano Disasters**
- 33-P-14** Mizuyo Oura  
**Hazard Perceptions Observed in Stone Structures Built after Eruptions of Mt. Asama in the 3rd Year of the Tenmei Era, 1783**
- 33-P-15** Sylviane L. G. Lebon, Freysteinn Sigmundsson  
**Benefits of Improved Communication Between Volcanologists and Rehabilitation Teams in case of Volcanic Eruption? The case of Agricultural Land**
- 33-P-16** Hugh Tuffen, Martin Pedersen, Nina Mueller, Brian Wynne, Paul Oldham, Gonzalo Araoz, Noel Cass, Harry Pinkerton, Zoe Young  
**Erupting Conversations: Social Volcanology in Ecuador**
- 33-P-17** Eliecer Duarte, Erick Fernandez  
**Commemorating The 40th Anniversary of Arenal Volcano Eruptions**
- 33-P-18** Jean-Christophe Galillard, Christopher Gomez  
**Overcoming volcanic cataclysms: The Aetas of the Philippines in the face of the 1991 Pinatubo Eruption**
- 33-P-19** Thomas M Wilson, Jim W. Cole, Shane J. Cronin, David M. Johnston, Carol Stewart  
**Agricultural Recovery from an Explosive Volcanic Eruption**

Poster

Hall A		
8:30-10:00	<b>Plenary talks</b> Session 2-1a: Responding to Natural Disasters: Case histories with lessons for volcano crises <i>Chairpersons: C. Gardner, R. Solidum</i>	
8:30-9:00	<u>Tokumi Saito</u> , Nobuo Doi <b>Case Studies of Iwate Volcanic Crisis in 1998</b>	<u>21a-O-01</u>
	Session 2-3: Long-term land-use planning that mitigates volcanic risks <i>Chairpersons: J. Becker, A. Hoskuldsson, K. Takahashi</i>	
9:00-9:30	<u>Jim Kauahikaua</u> , Frank Trusdell <b>A History of Lava Flow Hazard Mitigation Efforts in Hawaii</b>	<u>23-O-01</u>
	Session 2-2: Impacts of volcanic activity on infrastructure and effective risk reduction <i>Chairpersons: T. Pierson, N. Anyoji</i>	
9:30-10:00	<u>Hirosh Ikeya</u> <b>The Heisei-eruption of Mt. Unzen and Measures Against Volcanic Disasters</b>	<u>22-O-01</u>
10:00-10:10	- Break -	
	Session 1-1: Recent developments in volcano research <i>Chairpersons: S. Takarada, H. Hoshizumi</i>	
10:10-10:30	<u>Setsuya Nakada</u> , Yoshihiko Goto, Sumio Sakuma, Hiroshi Shimizu <b>Scientific Results of Conduit Drilling at Mount Unzen</b>	<u>11-O-12</u>
10:30-10:50	<u>Glen S. Mattioli</u> , Barry Voight, Derek Elsworth, Alan Linde, Selwyn Sacks, Peter Malin, Larry Brown, Amanda Clarke, Steve Sparks, Jurgen Neuberg, Vicky Hards, William Johnston, Dannie Hidayat, Christina Widiwijayanti, Simon Young, Eylon Shalev, Pyiko Williams <b>The CALIPSO Project on Soufriere Hills Volcano, Montserrat, BWI: Status and Scientific Results From 2003 to 2007</b>	<u>11-O-13</u> <i>Invited</i>
10:50-11:10	<u>George Bergantz</u> , Josef Dufek <b>Probing the Emergent Structures and Mechanics of Pyroclastic Flows: Integrating the Dynamics and Deposits of Volcanic Eruptions</b>	<u>11-O-14</u> <i>Invited</i>
11:10-11:30	<u>Shinji Takarada</u> , Christyanne Melendez <b>Contrasting Depositional Features and Emplacement Mechanism of the 1991-95 Block-and-ash Flows and 1792 Mayuyama Debris Avalanche at Unzen Volcano, Japan</b>	<u>11-O-15</u> <i>Invited</i>
11:30-11:50	<u>Pierfrancesco Dellino</u> , Bernd Zimanowski, Ralf Buettner, Luigi La Volpe, Daniela Mele, Roberto Sulpizio <b>Large Scale Experiments on The Mechanics of Pyroclastic Flows</b>	<u>11-O-16</u>
11:50-12:10	<u>Sylvain J. Charbonnier</u> , Ralf Gertisser <b>TITAN2D Modelling of Block-and-ash Flows at Merapi Volcano, Java, Indonesia: Implications for Hazard Assessment</b>	<u>11-O-17</u>
12:10-13:30	- Lunch -	
13:30-16:40	- Forum on how to pass on lessons learned from past disasters -	
16:40-18:00	Poster core time	
Hall B		
	Session 1-1: Recent developments in volcano research <i>Chairpersons: A. Neri, S. Takarada</i>	
13:30-13:50	<u>Kazuhiko Kano</u> , Yudai Sato <b>Motion of Volcanic Fragments in Pyroclastic Density Currents and Volcanic Debris Avalanches as Indicated by Thermo-Remanent Magnetization Vectors</b>	<u>11-O-18</u>

## November 20 (Tuesday)

## Day 2 (2)

13:50-14:10	<u>Costanza Bonadonna</u> <b>Recent Developments in Modeling of Tephra Dispersal</b>	<b>11-O-19</b> <i>Invited</i>
14:10-14:30	<u>Fukashi Maeno</u> , Fumihiko Imamura, Hiromitsu Taniguchi <b>Numerical Investigations of Tsunamis generated by Pyroclastic Flows from the Kikai Caldera, Japan</b>	<b>11-O-20</b>
14:30-14:50	Yan Lavallee, Kai-Uwe Hess, Benoit Cordonnier, <u>Donald B. Dingwell</u> <b>A non-Newtonian Rheological Law for Highly Crystalline Dome Lavas</b>	<b>11-O-21</b>
14:50-15:20	<b>- Coffee break -</b>	
15:20-15:40	<u>Vern Manville</u> , Shane J. Cronin <b>18 March 2007 Ruapehu Crater Lake Break-out Lahar: Preliminary Results</b>	<b>11-O-22</b>
15:40-16:00	<u>Sarah A. Fagents</u> , Stephen M. Baloga, Bruce F. Houghton, Vernon Manville <b>Modeling Lahar Evolution and Runout Behavior</b>	<b>11-O-23</b> <i>Invited</i>
16:00-16:20	Massimiliano Favalli, Francesco Mazzarini, Maria Teresa Pareschi, Paolo Papale, Giuseppe D. Chirico <b>Lava Flow Hazard Maps Through Numerical Simulations</b>	<b>11-O-24</b> <i>Invited</i>
16:20-16:40	<u>Kyle R. Anderson</u> , Paul Segall <b>Building a Numerical Volcano: Modeling the Evolution of Effusive Silicic Eruptions</b>	<b>11-O-25</b>

### Hall C

Session 2-3: Long-term land-use planning that mitigates volcanic risks

*Chairpersons: J. Becker, A. Hoskuldsson, K. Takahashi*

10:10-10:30	<u>Peter Frenzen</u> <b>Landuse and Emergency Response Planning: Lessons from Mount St Helens</b>	<b>23-O-02</b> <i>Invited</i>
10:30-10:50	David M. Johnston, Wendy Saunders, Julia Becker, Graham Leonard <b>Reducing Volcanic Risk Through Land-use Planning: Is it an Option?</b>	<b>23-O-03</b>
10:50-11:10	<u>Christina R. Magill</u> , Miho Yoshimura, Naomichi Miyaji, Hiroshi Machida, Kazuo Takahashi, Kimiro Meguro, K John McAneney, Takashi Mikajiri, Masako Ikeda <b>Probabilistic Tephra Fall Hazard and Consequences for Greater Tokyo</b>	<b>23-O-04</b>
11:10-11:30	<u>Kiyoshi Yamanaka</u> <b>Land Use Plan After 2000 Eruption of Usu Volcano</b>	<b>23-O-05</b>
11:30-11:50	<u>Takuro Kimura</u> <b>Eruption Hazards and Reconstruction of Communities by Raising the Land</b>	<b>23-O-06</b>
11:50-12:10	<u>Shigeki Yamanaka</u> <b>Current Situation of Disaster Victim Assistance in Japan</b>	<b>23-O-07</b>
12:10-13:30	<b>- Lunch -</b>	

Session 2-1a: Responding to Natural Disasters: Case histories with lessons for volcano crises

*Chairpersons: C. Gardner, R. Solidum*

13:30-13:50	<u>Tom Miner</u> <b>Understanding Disaster Response</b>	<b>21a-O-02</b> <i>Keynote</i>
13:50-14:10	Volcanic Risk Survey - Italian Civil Protection Department ( <u>Chiara Cardaci</u> ) <b>From MESIMEX Exercise to the Stromboli Emergency: the Italian Civil Protection Organization for the Volcanic Risk</b>	<b>21a-O-03</b> <i>Invited</i>
14:10-14:30	<u>Supriyati D. Andreastuti</u> <b>Simultaneous Hazardous Events: The 2006 Eruption of Merapi Volcano and The M6.4 Yogyakarta Earthquake, Indonesia</b>	<b>21a-O-04</b> <i>Invited</i>

## November 20 (Tuesday)

## Day 2 (3)

14:30-14:50	<u>Andrew C. Tupper</u> , Gordon E. Jackson, Rebecca K. Patrick <b>Volcanoes And Aviation: Lessons Learned In The 25 Years Since The 'Jakarta Incident', And Lessons We Have Yet To Learn</b>	<b>21a-O-05</b> <i>Invited</i>
14:50-15:20	- Coffee break -  <i>Chairpersons: H. Yamasato, S. Bailey</i>	
15:20-15:40	<u>Juan C. Gavilanes-Ruiz</u> , Alicia Cuevas-Muniz, Nick Varley, Gemma Gwynne, John Stevenson, Elia Serratos-Chavez, Ricardo Saucedo-Giron, Anaid Perez-Perez, Mary Aboukhalil, Abel Cortes-Cortes <b>Increase of Eruptive Activity and the Role of Journalists at Volcan de Colima, Mexico: The Need to Understand People's Perception of Risk</b>	<b>21a-O-06</b>
15:40-15:55	<u>Kazunori Tanihara</u> <b>TV News on Recent Volcano Crises in Japan</b>	<b>21a-O-07</b> <i>Invited</i>
15:55-16:10	<u>Yoichi Sasai</u> <b>The 2000 Eruption of Miyake-jima Volcano: From Total Evacuation (September, 2000) till Return Home (February, 2005)</b>	<b>21a-O-08</b> <i>Invited</i>
16:10-16:25	<u>Katsumi Seki</u> <b>Crisis Management in the Eruption of Usu Volcano in 2000</b>	<b>21a-O-09</b> <i>Invited</i>
16:25-16:40	<u>Koji Ikeuchi</u> , Takashi Yokota <b>Volcanic Disaster Prevention Countermeasures in Terms of Evacuation Systems at Eruptions and Related Phenomena</b>	<b>21a-O-10</b> <i>Invited</i>
<b>Hall D</b>		
<b>Session 2-2. Impacts of volcanic activity on infrastructure and effective risk reduction</b>		
<i>Chairpersons: T. Pierson, N. Anyoji</i>		
10:10-10:30	<u>Etsuro Shimokawa</u> <b>Erosion and Sediment Discharge of Tephra-covered Hillslopes</b>	<b>22-O-02</b> <i>Keynote</i>
10:30-10:50	Hugo F Murcia, <u>Jose Luis Macias</u> <b>Lahars and Rain-Triggered Floods at Tapachula, Chiapas, Mexico derived from the Tacana Volcanic Complex</b>	<b>22-O-03</b>
10:50-11:10	<u>Jerry A. Fano</u> <b>Optimized Countermeasures for Debris Flow and Landslide Mitigation in Mayon Volcano, Philippines</b>	<b>22-O-04</b>
11:10-11:30	<u>Hariyono Utomo</u> , Tadahiro Kanno, Tomoyuki Noro, A. Lesto Prabhancana Kusumo <b>Countermeasures of Mt. Merapi Volcanic Disaster Mitigation; Strategy Development Planning to Prevent Infrastructure</b>	<b>22-O-05</b>
11:30-11:50	<u>Harry J. Keys</u> <b>Ruapehu Lahar 18 March 2007 - Lessons For Hazard Assessment And Risk Mitigation From 1995-2007</b>	<b>22-O-06</b> <i>Keynote</i>
11:50-12:10	<u>Thomas C. Pierson</u> <b>Potential Impact of Post-Eruption River Channel Aggradation on Infrastructure</b>	<b>22-O-07</b> <i>Keynote</i>
12:10-13:30	- Lunch -  <i>Chairpersons: G. Zuccaro, R. Imura</i>	
13:30-13:50	<u>Nathan J. Wood</u> <b>Variations in Community Vulnerability to Lahar Hazards of Mount Rainier, Washington (USA)</b>	<b>22-O-08</b> <i>keynote</i>
13:50-14:10	<u>Ciro Del Negro</u> , Alessia Ciraudo, Annamaria Vicari <b>Mapping Lava Flow Hazards at Mt Etna Using Numerical Simulations</b>	<b>22-O-09</b>
14:10-14:30	<u>Catherine J. Lowe</u> , Muki Haklay, Paul Longley, William J. McGuire, Richard E. A. Robertson <b>Increasing Preparedness Through Volcanic Vulnerability and Risk Mapping</b>	<b>22-O-10</b>

## November 20 (Tuesday)

## Day 2 (4)

14:30-14:50	<u>Yoichi Nakamura</u> , Kazuyoshi Fukushima, Xinghai Jin, Motoo Ukawa, Teruko Sato <b>An Assessment of Japanese Mitigation Systems on Volcanic Disasters: A Review of Hazard Maps, Mitigation Programs, and Risk Analyses</b>	<u><b>22-O-11</b></u>
14:50-15:20	- Coffee break -  <i>Chairpersons: C. Neal, Y. Nakamura</i>	
15:20-15:40	<u>Giulio Zuccaro</u> <b>Damage Impact Scenarios and Mitigation Measures in the Vesuvian Villages</b>	<u><b>22-O-12</b></u> <i>Keynote</i>
15:40-16:00	<u>Ian R. Chapman</u> , Mark Bebbington, Shane J. Cronin, Micheal. B. Turner <b>Vulnerability Analysis of the Power-Distribution Infrastructure in Western North Island of New Zealand to Ashfall from Mt Taranaki/Egmont</b>	<u><b>22-O-13</b></u>
16:00-16:20	<u>Scott T Barnard</u> , James W. Cole, David M. Johnston <b>Potential Impacts of Volcanic Ash on Wastewater Systems and Telecommunications Infrastructure in New Zealand</b>	<u><b>22-O-14</b></u>
16:20-16:40	<u>Nobuo Anyoji</u> , Yasuo Ishii, Nobuaki Sakai <b>Evaluation of the Design Target for the Volcanic Sabo Planning Based on the Cumulative Frequency of Eruptive Magnitude</b>	<u><b>22-O-15</b></u>

Hall A		
8:30-10:30	<b>Plenary talks</b>	
	Session 1-3: Health Hazards of coexisting with active volcanoes <i>Chairpersons: P. Baxter, C. Horwell, Y. Ishimine, E. Yano, K. Nogami</i>	
8:30-9:00	<u>Peter J. Baxter</u> <b>Emergency Planning and Mitigation at Vesuvius, Italy: A Human Risk-based Approach</b>	<b>13-O-01</b>
	Session 3-2: Education and Outreach-Strategies that improve community awareness about volcanoes <i>Chairpersons: C. Driedger, H. Itoh, S. Ikebe</i>	
9:00-9:30	<u>Fernando Munoz-Carmona</u> <b>Volcano Education and Risk Communication - Some Comments from a Scientist Perspective</b>	<b>32-O-01</b>
	Session 1-2: Volcano observation research and eruption forecast and alert programs <i>Chairpersons: J. Ewert, M. Garces</i>	
9:30-10:00	<u>John W. Ewert, David J. Schneider</u> <b>Volcano Observatories and Volcano Hazards Mitigation in the Information Age</b>	<b>12-O-01</b>
10:00-10:10	<b>- Break -</b>	
	Session 1-3: Health Hazards of coexisting with active volcanoes <i>Chairpersons: P. Baxter, C. Horwell, Y. Ishimine, E. Yano, K. Nogami</i>	
10:10-10:30	<u>Hiroko Fujita</u> <b>Relief Activities for Victims of a Pyroclastic Surge During the Unzen Crisis</b>	<b>13-O-02</b>
10:30-10:50	<u>Eiji Matsushita</u> <b>Occupational Safety and Health Measures for Personnel Engaged in Disaster Countermeasures against Volcanic Eruptions at Mt. Unzen Fugendake</b>	<b>13-O-03</b>
10:50-11:10	<u>Akinori Takagi</u> <b>Psychiatric Problems Among Citizens During the Unzen Eruption</b>	<b>13-O-04</b>
11:10-11:30	<u>Maria Luisa Carapezza, Franco Barberi, Peter Baxter</u> <b>Health Hazard From Endogenous Gas Emissions In Alban Hills (Rome, Italy)</b>	<b>13-O-05</b> <i>Invited</i>
11:30-11:50	<u>Simon Carn, Francois Kervyn, Prudence Mitangala, Georgina M. Sawyer</u> <b>The Health Impacts of Persistent Degassing at Nyiragongo Volcano (DR Congo)</b>	<b>13-O-06</b>
11:50-12:10	<u>Naoko Iino, Kisei Kinoshita, Masaya Sakamoto, Thomas Bouquet, Chikara Kanagaki</u> <b>High Sulphur-Dioxide Concentration Events at the Surface of Miyakejima and Sakurajima Volcanoes</b>	<b>13-O-07</b>
12:10-13:30	<b>- Lunch -</b>	
	<b>Plenary talk</b>	
	Session 2-1b: Assessing long term volcanic hazards and risks <i>Chairpersons: C. Connor, Tadahide Ui</i>	
13:30-14:00	<u>Charles Connor, Tadahide Ui, Steven Sparks</u> <b>Challenges of Long-Term Volcanic Hazard Assessment</b>	<b>21b-O-01</b>
14:00-14:10	<b>- Break -</b>	
	Session 1-2: Volcano observation research and eruption forecast and alert programs <i>Chairpersons: C. Newhall, M. Martini</i>	
14:10-14:30	<u>Hitoshi Yamasato, Takayuki Sakai, Yoshiaki Fujiwara</u> <b>Infrasonic Observation near Active Volcanoes and its Results in Japan</b>	<b>12-O-08</b>

14:30-14:50	<u>Florian M. Schwandner</u> , Jacopo Selva, Hideki Ueda, Dina Y. Venezky, Daniel P. Cervelli, Bruce Weertman, Kelly Stroker, Stephen D. Malone, Eisuke Fujita, Warner Marzocchi, Steven P. Schilling, Christopher G. Newhall <b>WOVOdat: The World Organization of Volcano Observatories Database of Volcanic Unrest</b>	<b>12-O-09</b>
14:50-15:10	<u>Warner Marzocchi</u> , Laura Sandri, Jacopo Selva, Gordon Woo <b>Integrating Eruption Forecasting and Cost/Benefit Analysis for Decision Making During an Emergency: the Case of BET_EF Applied to Vesuvius in the MESIMEX Experiment</b>	<b>12-O-10</b> <i>Invited</i>
15:10-15:40	<b>- Coffee break -</b>  <i>[Stromboli subsession]</i>	
15:40-16:00	Franco Barberi, Mauro Rosi, Roberto Scandone <b>The 2007 Stromboli Eruption</b>	<b>12-O-11</b>
16:00-16:20	<u>Sonia Calvari</u> , Luigi Lodato, Letizia Spampinato, Enzo Boschi <b>Comparison Between the 2002-03 and 2007 Flank Eruptions at Stromboli Volcano: Basis for Predicting Future Volcanic Events</b>	<b>12-O-12</b>
16:20-16:40	Ernesto Bernardo, Mauro Coltelli, Maria Marsella, <u>Cristina Proietti</u> , Alberico Sonnessa, Paolo Tommasi <b>Topographic Monitoring of The 2007 Stromboli Eruption</b>	<b>12-O-13</b>
16:40-18:00	<b>Poster core time</b>	
	<b>Hall B</b>	
	Session 1-2: Volcano observation research and eruption forecast and alert programs	
	<i>Chairpersons: J. Ewert, M. Garces</i>	
10:10-10:30	Seth C. Moran, Jeff T. Freymueller, Rick A. La Husen, Ken A. McGee, Mike P. Poland, John A. Power, David A. Schmidt, Dave J. Schneider, Cindy Werner, Randy A. White <b>Instrumentation Requirements for Improving Monitoring Capabilities at U.S. Volcanoes</b>	<b>12-O-02</b> <i>Invited</i>
10:30-10:50	<u>Diana C. Roman</u> <b>Local Stress Field Reorientations Preceding Volcanic Activity: A Synthesis of Case Studies from Alaska and Montserrat</b>	<b>12-O-03</b>
10:50-11:10	<u>Antonius Ratdomopurbo</u> <b>Precursory Data of the 2006 eruption of Mt. Merapi</b>	<b>12-O-04</b>
11:10-11:30	<u>Hidefumi Watanabe</u> , Yuichi Morita <b>Towards Mid-Term Eruption Prediction: A Conceptual Model and Some Evidence from the Results of Integrated Monitoring of Izu-Oshima Volcano, Japan</b>	<b>12-O-05</b>
11:30-11:50	<u>Ronald J Thomas</u> , Paul R Krehbiel, William Rison, Harald Edens, Stephen R. McNutt, <b>Monitoring Volcanic Activity by Real-time Observations of Lightning and Electrical Activity</b>	<b>12-O-06</b> <i>Invited</i>
11:50-12:10	<u>Hugo Yepes</u> , Patricio A. Ramon, Jorge Bustillos, Milton Garces, David Fee, A. Stefke <b>Infrasound Detection During 2007 Mild Explosive Activity At Tungurahua Volcano, Ecuador</b>	<b>12-O-07</b>
	<b>Hall C</b>	
	Session 2-1a: Responding to Natural Disasters: Case histories with lessons for volcano crises	
	<i>Chairpersons: S. Bailey, T. Nakahashi</i>	
10:10-10:30	<u>Antonia Bornas</u> , Carmencita B. Arpa, Ma. Arturo S. Daag, Perla J. Delos Reyes, Eduardo P Laguerta, Patrick R Raymond, Ma. Hannah T Mirabueno, Jeffrey S. Perez, Renato U Solidum Jr <b>The 2006 Supertyphoon Reming Lahars of Mayon Volcano, Philippines</b>	<b>21a-O-11</b> <i>Invited</i>



10:30-10:50	<u>Cedric D. Daep</u> <b>Civil Defense Disaster Preparedness and Response to Mayon Lahar from Typhoon Reming</b>	<u>21a-O-12</u>
10:50-11:10	<u>Julia S. Becker</u> , <u>Graham S. Leonard</u> , <u>Douglas Paton</u> , <u>David M. Johnston</u> , <u>Petra Buergelt</u> <b>Organisational Response to the March 18, 2007 Mount Ruapehu Crater Lake Dam-burst Lahar: Expectations Before the Event and Implications for Response</b>	<u>21a-O-13</u>
11:10-11:30	<u>Vicky Hards</u> <b>12 Years of Eruptive Activity at The Soufriere Hills Volcano, Montserrat and 12 Years of Monitoring: A Challenge in Understanding Volcanic Processes and Achieving Meaningful Communication of Hazard</b>	<u>21a-O-14</u>
11:30-11:50	<u>Steve J. Saunders</u> , <u>Herman Patia</u> , <u>Felix Taranu</u> , <u>Jonathon Kuduon</u> , <u>James Cowlyn</u> , <u>Yuichi Nishimura</u> <b>How To Deal With Unpredictable Volcanoes In A Developing Country?</b>	<u>21a-O-15</u> <i>Invited</i>
11:50-12:10	<u>Herman Patia</u> , <u>Ima Itikarai</u> , <u>Steve Saunders</u> , <u>Felix Taranu</u> <b>Emergency Response To The 2005 Volcanic Eruption At Garbuna, Papua New Guinea</b>	<u>21a-O-16</u> <i>Invited</i>

Session 2-1b: Assessing long term volcanic hazards and risks

*Chairpersons: C. Connor, Tadahide Ui*

14:10-14:30	<u>Servando De la Cruz-Reyna</u> , <u>Ana T. Mendoza-Rosas</u> <b>A Quatitative Estimate of the Volcanic Hazard Based on Eruption Energy Release Trends</b>	<u>21b-O-02</u> <i>keynote</i>
14:30-14:50	<u>Hirofumi Kondo</u> , <u>Ichiro Ando</u> <b>Methodology of the Evaluation of Regions of Future Volcanism Based on Spatio-Temporal Patterns in Volcanism Combined with the Related Phenomena</b>	<u>21b-O-03</u> <i>keynote</i>
14:50-15:10	<u>Olivier Jaquet</u> , <u>Christian Lantuejoul</u> <b>A Stochastic Model for Estimation of Long-Term Volcanic Hazard</b>	<u>21b-O-04</u> <i>Invited</i>
15:10-15:40	- Coffee break -	
15:40-16:00	<u>Sue H. Mahony</u> , <u>R. S. J. Sparks</u> , <u>Laura J. Connor</u> , <u>Chuck B. Connor</u> <b>Assessing Long-term Volcanic Hazards Using Volcano Distribution Databases</b>	<u>21b-O-05</u>
16:00-16:20	<u>Alain C. M. Volentik</u> , <u>Charles B. Connor</u> , <u>Laura J. Connor</u> , <u>Costanza Bonadonna</u> , <u>Christopher G. Newhall</u> <b>Volcanic Hazard Assessment for the Bataan Nuclear Power Plant, Luzon Peninsula, Philippines</b>	<u>21b-O-06</u> <i>Invited</i>
16:20-16:40	<u>Alanna L. Simpson</u> , <u>R. Wally Johnson</u> , <u>Lee Siebert</u> <b>Supporting International Development in the Asia-Pacific Region through Probabilistic Volcanic Eruption Assessment</b>	<u>21b-O-07</u>

Hall D

Session 3-2: Education and Outreach-Strategies that improve community awareness about volcanoes

*Chairpersons: C. Driedger, H. Itoh, S. Ikebe*

10:10-10:30	<u>Todd Cullings</u> , <u>Peter Frenzen</u> <b>Effective Communication Through Message-Based Interpretation</b>	<u>32-O-02</u> <i>Invited</i>
10:30-10:50	<u>Sian Crossweller</u> , <u>Jenni Barclay</u> , <u>Peter Simmons</u> , <u>Richard Robertson</u> , <u>Irene Lorenzoni</u> <b>Lost in Translation: Communicating Volcanic Risk in the Eastern Caribbean</b>	<u>32-O-03</u>
10:50-11:10	<u>A. Lesto Prabhancana Kusumo</u> , <u>Hariyono Utomo</u> , <u>Tomoyuki Noro</u> <b>Merapi Case Study: Applicable Integrated Management Technology as Volcanic Disaster Prevention System on Community Basis at Balerante Main Observatory Post</b>	<u>32-O-04</u>

## November 22 (Thursday)

## Day 4 (4)

11:10-11:30	<u>Eliecer Duarte</u> , Erick Fernandez <b>Tourism around Active Volcanoes in Costa Rica—Opportunities to Raise Awareness and Reduce Hazards</b>	<b>32-O-05</b> <i>Invited</i>
11:30-11:50	<u>Shinichiro Ikebe</u> <b>The Role of the Museum in Volcano Education</b>	<b>32-O-06</b>
11:50-12:10	<u>Daisuke Yoshida</u> <b>Efforts to Learn About Volcanoes at Mount Unzen Disaster Memorial Hall</b>	<b>32-O-07</b> <i>Invited</i>
12:10-13:30	- Lunch -  <i>Chairpersons: S. Hayashi, J. Woodcock</i>	
14:10-14:30	<u>Maria Luisa Carapezza</u> , Caterina Piccione, Lucia Pruiti <b>Educational Activity at Ingv Centres to Mitigate Risk of Vulcano and Stromboli Active Volcanoes</b>	<b>32-O-08</b>
14:30-14:50	<u>Daisuke Fukushima</u> <b>Volcano Education and Ecomuseums</b>	<b>32-O-09</b>
14:50-15:10	<u>Kunihisa Terai</u> <b>The Teaching of Volcano at School</b>	<b>32-O-10</b> <i>Invited</i>
15:10-15:40	- Coffee break -	
15:40-16:00	<u>Jan M. Lindsay</u> , Audrie McKenzie <b>Virtual Volcano Field Trips in New Zealand: Enthusing School Children in the Science behind Volcanoes</b>	<b>32-O-11</b>
16:00-16:20	<u>Rosella Nave</u> , Romano Camass, Massimo Crescimbeni <b>A Multidisciplinary and Multi-Hazard Educational Path: The Italian Edurisk Project</b>	<b>32-O-12</b>
16:20-16:40	<u>Shintaro Hayashi</u> <b>The Tastiest Book on Volcano, in the World as an Teaching Material in Japanese Public School to Reduce Volcanic Hazards</b>	<b>32-O-13</b> <i>Invited</i>

### Posters II

November 22-23

Core time: 16:40-18:00, Nov. 22

#### Session 1-1: Recent developments in volcano research (round 2)

*Lava flows (108-113), magma processes (114-124) and eruption processes (148-159)*

- 11-P-108** Alessia Cirauda, Ciro Del Negro, Michele Dragoni, Andrea Tallarico, Annamaria Vicari  
**A Cellular Automata Model for the Formation of Lava Tubes**
- 11-P-109** Annamaria Vicari, Alessia Cirauda, Ciro Del Negro  
**Cellular Automata Flow Simulations Using Thermal Satellite Data at Mt Etna**
- 11-P-110** Yoshihiro Takeshita, Yoshihide Nunokawa, Yoichi Nakamura, Toyosaburo Sakai  
**Rhyolitic Magmatism of the Takahara Volcano, Japan, Inferred From Various Petrographic Features of the Obsidian**
- 11-P-111** Christopher W. Hamilton, Steve Baloga, Sarah A. Fagents, Samuel Hulme, Benjamin Brooks, James Foster  
**Topographic Controls on Pahoehoe Lava Flow Inflation**
- 11-P-112** Gino M. Crisci, Maria V. Avolio, Donato D'Ambrosio, Valeria Lupiano, Rocco Rongo, William Spataro  
**Lava Flow Invasion Susceptibility Map for Etnian East Flank: A Methodology by Cellular Automata**
- 11-P-113** Antonio Costa, Giovanni Macedonio  
**Lava Flow Simulation Based on Shallow-Layer Equations**
- 11-P-114** Daniele Giordano, J. Kelly Russell, Donald B. Dingwell  
**Viscosity of Magmatic liquids: an empirical model**

- 11-P-115** Tsukasa Ohba  
**Garnet-Clinopyroxene Fractionation from Arc Basalts beneath Northern Honshu, Japan**
- 11-P-116** Cedric Schnyder, Olivier Bachmann  
**Relationships Between Pre-KPT and KPT Volcanic Rocks on Kos Island (Dodecanese, Greece): Crescendo to the Largest Eruption of the Modern Aegean Arc**
- 11-P-117** Takashi Nagao, Masamichi Ikeda, Susumu Kakubuchi  
**Origin of the Mafic and Ultramafic Xenolith-bearing Dacites from Southwest Japan Arc**
- 11-P-118** Danilo M. Palladino, Silvia Simej, Konstantinos Kyriakopoulos  
**Shear-induced Magma Fragmentation in Volcanic Conduits: Evidence from the Kos Plateau Tuff, Aegean Volcanic Arc**
- 11-P-119** Eiichi Sato, Hiroaki Sato  
**Effect of Magma Pocket on the Mixing Process of Two Magmas of Contrasting Viscosity and Density: Analogue Experimental Approach**
- 11-P-120** Alexander Proussevitch, Gopal Mulukutla, Dork Sahagian  
**A New 3D Method of Measuring Bubble Size Distributions from Bubble Fragments in Volcanic Ashes**
- 11-P-121** Kazuhide Matsuoka, Junji Yamamoto, Yuji Sano, Hirokazu Fujimaki  
**Isotope Study of Olivine-hosted Fluid Inclusions From Northeast Japan Volcanoes**
- 11-P-122** Minoru Kusakabe, Keisuke Nagao, Takeshi Ohba, Sung Hyun Park, Jong Ik Lee  
**Geochemistry of Thermal Fluids from Deception Island, Antarctica**
- 11-P-123** Yasuyuki Miyake, Tatsuro Tsugane, Kuniaki Makino, Kou Takahashi, Kuniaki Nishiki, Masayuki Sakagami  
**Magmatic Process in Asama Volcano, Central Japan during September 2004 Eruptions**
- 11-P-124** Mitsuo Matsumoto, Atsushi Toramaru  
**Difficulty in the Numerical Analysis of Magma Convection by SIMPLER Algorithm**
- 11-P-125** Masayuki Murase, Takeo Ito, Yoshinari Hayashi, Takeshi Sagiya, Fumiaki Kimata, Hidefumi Watanabe  
**Time-Dependent Model for Volume Changes in Pressure Sources of Volcanic Swarm Activity off the East Coast of Izu Peninsula, Central Japan using Geodetic Data during 1973-1998**
- 11-P-126** Masao Ban, Kotaro Miura, Hikaru Sato, Shiho Hirotani  
**Long to Middle Term Temporal Variation of Magma Feeding System: An Example of Recent Magma Chamber Beneath Zao Volcano**
- 11-P-127** Carmela Freda, Mario Gaeta, Valeria Misiti, Silvio Mollo, Daniela Dolfi, Piergiorgio Scarlato  
**Magma-Carbonate Interaction: An Experimental Study on Ultrapotassic Rocks**
- 11-P-128** Satoshi Okumura, Michihiko Nakamura, Akira Tsuchiyama, Tsukasa Nakano, Kentaro Uesugi  
**Shear Deformation Experiments on Vesiculated Rhyolitic Melts: Evolution of Bubble Connectivity**
- 11-P-129** Mario Gaeta, Tommaso Di Rocco, Carmela Freda, Luigi Dallai, Massimo Tiepolo, Cristina Perinelli, Piergiorgio Scarlato  
**The Origin of "Hyper-calcic" Silicate Melts and Their Role as Crustal Contaminant**
- 11-P-130** Akihiko Tomiya  
**Magma-Feeding System Beneath Usu Volcano, Japan: Replacement or Continuous Existence?**
- 11-P-131** Rebecca J. Carey, Bruce F. Houghton, Thorvaldur Thordarson  
**Dispersal Characteristics of Wet and Dry Phases of the Askja 1875 Eruption, Iceland**

Poster

- 11-P-132** Susumu Kakubuchi, Emiko Iwamoto, Hiroki Yamasaki  
**Geochemical Variation of Volcanic Rocks within the Taiwan-Shinzi Folded Zone in Southwest Japan**
- 11-P-133** Atsushi Toramaru, Takahiro Miwa  
**Vesiculation and Crystallization under Constant Amount of Decompression: Numerical Study and its Comparison with Laboratory Experiments**
- 11-P-134** Akira Tsune  
**Chemical Characteristics of Cross-cutting Dissolution Surfaces in Magmatic Plagioclases**
- 11-P-135** Paolo Papale, Antonella Longo, Melissa Vassalli, Gilberto Saccorotti, David Barbato, Michele Barsanti  
**Numerical Simulations of Magma Chamber Dynamics and Associated gravity, Deformation, and Seismic Signals**
- 11-P-136** Madoka Shimono, Masaya Miyoshi, Takaaki Fukuoka, Takashi Sano, Toshiaki Hasenaka  
**Along-arc Variation of Boron Data: The Influence of Philippine Sea Plate on the Composition of Mantle Beneath Kyushu, SW Japan Arc**
- 11-P-137** Zilda T. França, Marceliano Lago, Elizabeth Widom, Victor H. Forjaz  
**Azores Mantelic Plume and Volcanic Implications**
- 11-P-138** Masaya Miyoshi, Madoka Shimono, Toshiaki Hasenaka, Takashi Sano, Takaaki Fukuoka, Kuniyuki Furukawa, Taro Shinmura  
**The Evolving Fluid Flux from the Subducting Plate Beneath Aso Area: Evidence From Boron in Volcanic Products**
- 11-P-139** Hidemi Ishibashi, Hideaki Nakamura, Masataka Saito, Hiroaki Sato  
**Viscosity Measurement of Crystal Bearing Magma**
- 11-P-140** Toshiaki Hasenaka, Maiko Morinaga, Masaya Miyoshi  
**Kusasenrigahama Pumice Cone From Aso Volcano, Kyushu, Japan: Petrological Characteristics of Pumice and Coeval Volcanic Products Representing One of the Largest Eruption After Caldera-formation**
- 11-P-141** Gianluca Sottili, Jacopo Taddeucci, Danilo M. Palladino, Greg A. Valentine, Guido Ventura  
**Magma-water Interaction in CO<sub>2</sub>-rich Enviroments: a Study Case from Albano Maar, Colli Albani (Central Italy)**
- 11-P-142** Gianluca Sottili, Salvatore Martino, Danilo M. Palladino, Antonella Paciello, Francesca Bozzano  
**Tidal Triggering of Lava Fountain Activity at Mount Etna, (Italy)**
- 11-P-143** Marco Aloisi, Alessandro Bonaccorso, Alessandro Bonforte, Salvatore Gambino, Francesco Guglielmino, Mario Mattia, Mimmo Palano, Giuseppe Puglisi  
**Modeling of Several Recent Mt. Etna Eruptions by Using Ground Deformation to Image Different Sources and Mechanisms**
- 11-P-144** Yuki Suzuki, Setsuya Nakada  
**Remobilization of Highly Crystalline Felsic Magma by Injection of Mafic Magma: Constraints from the Middle 6th Century Eruption at Haruna Volcano**
- 11-P-145** Yutaka Wada, Daisuke Miura  
**Repetition of Fragmentation and Welding inside the Conduit: Evidences from Nakaoku Tuffite Dikes, Central Kii Peninsula, SW Japan**
- 11-P-146** Gilda M. Currenti, Ciro Del Negro, Danila Scandura  
**Thermal-mechanical Modeling of Ground Deformation and Stress Field in a Viscoelastic Medium**
- 11-P-147** Daisuke Miura, Kiyoshi Toshida, Ken-ichi Arai, Tatsuya Ochiai, Michihisa Tanaka  
**Eruptive History for the Last 40,000 Years of Esan Volcano, Northern Japan**
- 11-P-148** Takahuro Miwa, Atsushi Toramaru, Masato Iguchi  
**Material Scientific Study on Vulcanian Eruptions of Sakurajima Volcano, Japan**

Poster

- 11-P-149** Mara S. Morgenstern, Pinaki Chakraborty, Paulo Zandonade, Joanna M. Austin, Susan W. Kieffer  
**Experiments on the Gas Dynamics of the Mt. St. Helens 1980 Lateral Blast**
- 11-P-150** Kazutaka Mannen, Takashi Ito  
**Formation of Scoria Cone in 1986 Eruption of Izu-Oshima**
- 11-P-151** Louise R. Doyle, Phil A. Shane, Ian A. Nairn  
**Mafic Triggering of the Mangaone Subgroup Eruptions, Okataina Volcanic Centre, New Zealand: Implications for Eruption Precursors**
- 11-P-152** Taketo Shimano, Masato Iguchi  
**Ascent Process of Magma during Recent Successive Eruptions at Suwanosejima Volcano, SW Japan**
- 11-P-153** Jon J. Major, Daniel Dzurisin, Steve P. Schilling, Michael P. Poland  
**Quantifying Motion of the Effusing Mount St. Helens Lava Dome Using Oblique Terrestrial Photography**
- 11-P-154** Akihiko Yokoo, Takeshi Tameguri, Masato Iguchi  
**Expansion Process of Lava Plug Associated with Vulcanian Eruption of Sakurajima Volcano**
- 11-P-155** Sarah M. Gordee, Sharon R. Allen, Jocelyn McPhie  
**Facies Reconstructions of Submarine Felsic Volcanic Products as a Tool for Modern Volcanic Hazard Mitigation**
- 11-P-156** Takeshi Saito, Naoto Ishikawa, Masayuki Torii, Takeshi Sugimoto, Masato Iguchi  
**Magnetic Petrology and Its Implications for Eruption Process of the 1884-1885 Andesite Lava of Suwanosejima Volcano, Japan**
- 11-P-157** Toru Ishikawa, Keiko Suzuki-Kamata  
**Phreatomagmatic Eruption Occurred in Felsic Lava Flows Emplacing the Wet Environment: Example of Hime-shima Volcanic Group, North Kyusyu, Japan**
- 11-P-158** Pierre Tinard, Jean-Luc Froger, Valerie Cayol, Yo Fukushima, Thomas Staudacher, Thierry Souriot, Pierre Briole  
**New Insights in the Dynamic of the Volcanic Processes at Piton de la Fournaise Volcano (Reunion Island) Using ENVISAT-ASAR Data**

Session 1-2: Volcano observation research and eruption forecast and alert programs

(1-16: seismicity, 17-26: deformation, 27-55: EM, gravity and geochemistry, 56-65: System and Monitoring, 66-68: Geology & Petrology, 69-73: Hazard, 74-79: Remote sensing, 80-81: Acoustics, 82-89: General)

- 12-P-01** Tanja Petersen  
**Swarms of Repeating Events at Shishaldin Volcano, Alaska**
- 12-P-02** Cheng-Horng Lin, Konstantinos I. Konstantinou  
**Extremely Long-period Tremors at the Tatun Volcano Group, Northern Taiwan**
- 12-P-03** Yuehong Ming, Lupei Zhu, Jianping Wu  
**Harmonic Events in Changhaishan-Tianchi Volcano**
- 12-P-04** Jianping Wu, Yuehong Ming, Lihua Fang, Wei Su, Weilai Wang  
**Recent Seismic Unrest at Chanbaishan Tianchi Volcano**
- 12-P-05** Kodo Umakoshi, Kousuke Kajihara, Emi Matsui, Hiroshi Shimizu  
**Seismic Events Observed Prior to and During the 1990-1995 Eruption of Unzen Volcano, Japan**
- 12-P-06** Naoko Itasaka, Kodo Umakoshi, Hiroshi Shimizu  
**Seismic Activity in the Early Stage of Dome Growth at Unzen Volcano, Japan (May - June 1991)**
- 12-P-07** Marcello Martini, Flora Giudicepietro, Luca D'auria, Walter De Cesare, Massimo Orazi, Giovanni Scarpato, Rosario Peluso, Antonietta Esposito, Raffaele Curciotti, Teresa Caputo, Patrizia Riocciolino, Antonio Caputo  
**Seismic Monitoring of Stromboli Volcanic Activity: the February 2007 Effusive Eruption**

- 12-P-08** Carlos Cardona, Marta Calvache, Bernardo Pulgarin, Adriana Agudelo, Cristian Santacoloma, Andrew Lockhart, Randall White, Jeffrey Marso  
**Seismic Signals Associated to Phreatic Eruptions of the Nevado del Huila Volcano (Colombia). February and April 2007**
- 12-P-09** Carlos Cardona, Bernardo Pulgarin, Adriana Agudelo, Cristian Santacoloma, Marta Calvache, Steve Schilling, Andrew Lockhart, Jeffrey Marso  
**1994 and 2007 Debris Flows on the Paez River Valley (Colombia): Calibrating to the plot of the LAHAR-Z Method.**
- 12-P-10** Haruhisa Nakamichi, Fumiaki Kimata, Fumito Yamazaki, Makoto Okubo, Mamoru Yamada, Toshiki Watanabe  
**Precise Hypocenter Distribution and Very-Long-Period Events of Ontake Volcano, Central Japan**
- 12-P-11** Jun Oikawa, Yoshiaki Ida  
**Nature of N-type Earthquakes Observed at Asama Volcano: Time Variation of Wave Parameters and Hypocenter Distribution**
- 12-P-12** Ryo Honda, Toshikazu Tanada  
**Temporal Changes in S-wave Splitting Associated with 2001 Hakone Earthquake Swarm.**
- 12-P-13** Toshikazu Tanada, Yasushi Daita, Masatake Harada, Ryo Honda, Yohei Yukutake, Hiroshi Ito  
**The 2001 swarm activity in the Hakone volcano**
- 12-P-14** Tomokazu Kobayashi, Takao Ohminato, Yoshiaki Ida, Eisuke Fujita  
**Analysis of Long Period Seismic Signals Observed before the Caldera Formation during the 2000 Miyake-jima Volcanic Activity**
- 12-P-15** Hironori Sakaguchi, Yoshihiro Sawada, Yasuaki Sudo  
**Volcanic activity and tremor at Aso Nakadake after 1930**
- 12-P-16** Teruo Yamawaki, Kenji Nogami, Yasuo Ogawa, Jun-ichi Hirabayashi  
**Similar Earthquakes Observed at Kusatsu-Shirane Volcano**
- 12-P-17** Milton Ordonez  
**Deformation Measurements at Machin Volcano, Colombia: An Approach to a New Volcanic Activity**
- 12-P-18** Takeshi Matsushima, Yuhki Kohno, Akihiko Hirao, Hiroshi Shimizu  
**GPS Monitoring of the Lava Dome Deformation of Heisei Shinzan, Unzen Volcano**
- 12-P-19** Shigeru Nakao, Kazuhiko Goto, Hiroshi Yakiwara, Shuichiro Hirano, Yoshiaki Tamura, Minoru Tanaka  
**Crustal Deformation Derived from Continuous GPS Observation in Northern Part of Kinko Bay, Kagoshima, Japan**
- 12-P-20** Hiroaki Takahashi  
**Real-time Eruption Magnitude Estimation from Far-field Geodetic Data: A Proposal for Volcano Early Warning**
- 12-P-21** Akimichi Takagi, Keiichi Fukui, Hitoshi Yamasato, Takayuki Sakai, Shinobu Andou, Koji Kato, Masaaki Churei  
**Estimation of Magma Supply System of Izu-Oshima Volcano Using by High Density GPS and EDM Network**
- 12-P-22** Hiroshi Aoyama, Hiromitsu Oshima  
**Tilt Change Preceding to a Small Phreatic Explosion of Meakan-dake Volcano**
- 12-P-23** Takahiro Ohkura, Jun Oikawa  
**GPS observation of crustal movements in Aso Caldera**
- 12-P-24** Bertha Marquez-Azua, Mabel Padlog  
**A Study of Risk Through a Geodesic Network in the Metropolitan Area of Guadalajara**
- 12-P-25** Hitoshi Y. Mori  
**Long Term Prediction of the Activity of Mt. Usu with the Leveling Survey**

- 12-P-26** Estu Kriswati, Muhamad Hendrasto, Umar Rosadi  
**Deformation of Bromo volcano Prior to 2004's Phreatic Eruption**
- 12-P-27** Hideaki Hase, Takeshi Hashimoto, Yasunori Nishida, Mitsuru Utsugi, Hiroyuki Inoue, Mizue Saba  
**Hydrothermal System Beneath Usu Volcano Inferred from Self-potential Survey**
- 12-P-28** Sadato Ueki, Hiroshi Shimizu, Kazuya Uchida, Tokumitsu Maekawa, Yasuaki Sudo, Hiroki Miyamachi, Hidefumi Watanabe, Kazuhiro Ishihara  
**Gravity Changes Observed during the 1990-1995 Eruption of Unzen Volcano, Japan**
- 12-P-29** Ciro Del Negro, Salvatore Giudice, Filippo Greco, Rosalba Napoli, Antonino Sicali  
**Magnetic and Gravity Observations at Stromboli Volcano**
- 12-P-30** Rosalba Napoli, Gilda Currenti, Ciro Del Negro, Salvatore Giudice, Antonino Sicali  
**A Review Of Magnetic Field Monitoring At Mt Etna (Italy)**
- 12-P-31** Yoichi Sasai, Julio P. Sabit, Juan M Cordon Jr., Edgardo U. Villacorte, Jacques Zlotnicki, Jean-Paul Toutain, Makoto Harada, Hideaki Hase, Jaime S. Sincioco, Toshiyasu Nagao  
**Electromagnetic and Geochemical Monitoring of Taal Volcano, the Philippines: 2005 - 2007**
- 12-P-32** Masaaki Churei, Akira Yamazaki  
**Reexamination on the Geomagnetic Changes in Association with Lava Domes Extrusion of the Unzen Volcano in 1991**
- 12-P-33** Shin'ya Onizawa, Nobuo Matsushima, Tsuneo Ishido, Yuji Nishi, Shinichi Takakura, Hideaki Hase  
**Hydrothermal System in Izu-Oshima Volcano as Inferred from Self-potential Measurements**
- 12-P-34** Aurora Armienta, Angel Gomez, Servando De la Cruz Reyna, Nora E. Cenicerros, Olivia Cruz, Alejandra Aguayo, Teofilo Hernandez  
**Hydrogeochemical Monitoring of Popocatepetl and Citlaltepelt Volcanoes**
- 12-P-35** Pedro Hernandez, Kenji Notsu, Toshiya Mori, Nemesio Perez  
**Diffuse CO<sub>2</sub> Emission at Izu-Oshima Volcano, Japan**
- 12-P-36** Gladys Melian, David Calvo, German Padilla, Wilhelmo de Fuentes, Jeremias Cabral, Zuleyka Bandomo, Alberto Mota Gomes, Pedro A. Hernandez, Eleazar Padron, Marianela Brito, Sonia Melo, Inocencio Barros, Nemesio M. Perez  
**Observed Changes on Diffuse Carbon Dioxide Emission Rate from Fogo Volcano, Cape Verde**
- 12-P-37** Pedro A. Hernandez, Nemesio M. Perez, Thrainn Frioriksson, Gretar Ivarsson, Gestur Gislason, Egbert Jolie, Evjenia Ilyinskaya, Andri Thorhallsson  
**Diffuse Carbon Dioxide Emissions From Hengill Volcanic System, Iceland**
- 12-P-38** Rayco Marrero, Gladys Melian, Pedro Hernandez, Nemesio Perez  
**Hydrogeochemical Monitoring for Volcanic Surveillance at Tenerife, Canary Islands**
- 12-P-39** German Padilla, Samara Dionis, Jose Barrancos, Gladys Melian, Eleazar Padron, Pedro A. Hernandez, Nemesio Perez, Wilfried Strauch  
**Diffuse CO<sub>2</sub> Emission from Volcanic Lakes in Nicaragua, Central America**
- 12-P-40** Marianela Brito, Gladys Melian, David Calvo, Jose Barrancos, Dacil Nolasco, German Padilla, Eleazar Padron, Rayco Marrero, Pedro Hernandez, Nemesio Perez  
**Temporal Variations of Diffuse CO<sub>2</sub> Emission from the Summit Crater of Teide Volcano, Tenerife, Canary Islands, Spain**
- 12-P-41** Eleazar Padron, Pedro A. Hernandez, Nemesio M. Perez, Theofilos Toulkeridis, Jose Barrancos, Gladys Melian, Bo Galle  
**H<sub>2</sub>O, CO<sub>2</sub>, SO<sub>2</sub> and H<sub>2</sub>S Emission from Sierra Negra Volcano, Galapagos**
- 12-P-42** Jose Barrancos, Sussana Briz, German Padilla, Isabel Fernandez, Guillermo Santana, Samara Dionis, Nemesio Perez, Pedro Hernandez, Bo Galle, Wildfried Strauch  
**H<sub>2</sub>O, CO<sub>2</sub>, SO<sub>2</sub>, H<sub>2</sub>S and HCl Emission from Masaya Volcano, Nicaragua**
- 12-P-43** Celestino S. Saquilon, Alejo V. Baloloy  
**Sulfur Dioxide (SO<sub>2</sub>) Emission Rates from Mayon Volcano, Philippines During the 2006 Eruptions**



- 12-P-44** Eric Reiter  
**GIS : A Tool for Volcanic Gases' Survey : A Case Study at Vulcano Island, Southern Italy**
- 12-P-45** Franco Tassi, Bruno Capaccioni, Orlando Vaselli, Antonella Buccianti  
**Behaviour and Fate of Organic Gas Compounds in Volcanic Fluids: A New Geochemical Monitoring Tool for Volcanic Surveillance**
- 12-P-46** Orlando Vaselli, Franco Tassi, Erik Fernandez, Eliecer Duarte  
**Chemical Evolution of Fumarolic Fluids, Seismic Activity and Visual Changes at Turrialba Volcano (Costa Rica): Evidences for a Resuming of the Volcanic Activity?**
- 12-P-47** Nemesio M. Perez, German Padilla, Gladys Melian, David Calvo, Alberto Mota Gomes, Zuleika Bandomo, Jeremias Cabral, Jose Barrancos, Pedro A. Hernandez, Sonia Melo, Inocencio Barros  
**H<sub>2</sub>O, CO<sub>2</sub>, SO<sub>2</sub>, H<sub>2</sub>S and HCl Emission from Fogo Volcano, Cape Verde**
- 12-P-48** Tomoyasu Nodera, Toshiya Mori, Kenji Notsu  
**Development of Volcanic SO<sub>2</sub> Imaging System with Small Machine-vision CCD Cameras**
- 12-P-49** Issa Ibrahim, Takeshi Ohba, Minoru Kusakabe, Yutaka Yoshida, Hiroshi Satake, Tsuyoshi Ohizumi, William C. Evans, George W. Kling, Gregory Tanyileke  
**Over Two Decades of CO<sub>2</sub> and Conductivity Profiles Change at Lakes Monoun and Nyos (Cameroon)**
- 12-P-50** Takehiko Mori, Junichi Hirabayashi, Kenji Nogami  
**Measurement of SO<sub>2</sub> Emission Rate at Kuchinoerabujima Volcan**
- 12-P-51** Vicentina Cruz, Jean Paul Toutain, Pablo Masias  
**Monitoring of the Spring Waters and Geochemistry of Ashes Leachates During the Eruptive Crisis (2006) of the Ubinas Volcano, Peru**
- 12-P-52** Christopher G. Newhall, Randall White  
**Why Monitor Water Wells and Springs on Volcanoes?**
- 12-P-53** Kohei Kazahaya, Michiko Ohwada, Toshiya Mori, Jun-ichi Hirabayashi, Hitoshi Yamasato, Makoto Miyashita, Yoshihiro Ueda, Shin'ya Onizawa, Takehiko Mori, Tomoaki Shuto, Hiroaki Kagesawa  
**Monitoring of Sulfur Dioxide Flux from Asama Volcano, Japan**
- 12-P-54** Takeshi Saito, Shinji Ohsawa, Kazuhiro Amita, Hiroyuki Inoue, Tsuneomi Kagiya, Hideo Mawatari, Takahiro Ohkura, Hironori Sakaguchi, Norimasa Shimobayashi, Yasuaki Sudo, Takeshi Sugimoto, Akihiko Terada, Mitsuru Utsugi, Makoto Yamada, Miyuki Yoshikawa, Shin Yoshikawa  
**Chemical Features of the Lake Water and Floating Sulfur from Yudamari Crater Lake, Aso Volcano, Japan**
- 12-P-55** Noboru Sasahara  
**Surveys of Volcanic Activity in the Waters around Japan by the Japan Coast Guard**
- 12-P-56** Alicia Garcia, Marta Tarraga, Josep Vila, Ramon Ortiz  
**Development of an Automatic Forecasting Tool for Volcanic Activity. An Application to Teide Volcano**
- 12-P-57** Orlando Macedo, Jean-Philippe Metaxian, Domingo Ramos, Edu Taipe  
**Monitoring and Surveillance of Current Ubinas Volcano Eruption**
- 12-P-58** Pablo Samaniego, Hugo Yepes, Santiago Arekkao, Pablo Palacios, Patricia Mothers, Jean-Luc Le Pennec, Lilana Troncoso, IGEPN staff  
**Monitoring a Waxing and Waning Volcanic Activity: the July 14th and August 16th 2006 Eruptions of Tungurahua Volcano (Ecuador)**
- 12-P-59** Hugo A. Yepes, Pablo Palacios  
**A Seismic Activity Index Related to the Eruption Process at Tungurahua Volcano**
- 12-P-60** Diego Mauricio Gomez M., Roberto A. Torres C., Betty Silva P., Patricia Ponce V., Lourdes Narvaez M., Adriana Ortega E., Marta Lucia Calvache V.  
**Activity Levels at Galeras Volcano and its Implications**

- 12-P-61** Diego Mauricio Gomez M., Roberto A. Torres C., Betty Silva P., Patricia Ponce V., Lourdes Narvaez M., Adriana Ortega E., Marta Lucia Calvache  
**Eruptive Activity at Galeras Volcano from June, 2004 up to June, 2007**
- 12-P-62** Ima Itikarai, Felix Taranu, Jonathan Kuduon  
**Improving the Time-Window for Forecasting Volcanic Eruptions; Case Study for Rabaul Caldera, Papua New Guinea.**
- 12-P-63** Hideki Ueda, Eisuke Fujita, Motoo Ukawa, Eiji Yamamoto  
**Automatic Detection System for Anomalous Volcanic Crustal Deformation Using Real Time Observation Data**
- 12-P-64** Bradley J Scott  
**Volcano Alert Systems: Is There A Generic Global One ?**
- 12-P-65** Jiandong Xu  
**Active Volcano Monitoring and Research in China**
- 12-P-66** Yuko Sekiguchi, Toshiaki Hasenaka, Shinji Nagaoka, Yasushi Mori  
**The Transition of Magma Supply System between 100 and 29 ka at Aira Caldera in Southern Kyushu**
- 12-P-67** Arnau Folch, Antonio Costa, Giovanni Macedonio  
**APOLLO: an Automatic Procedure to Forecast Transport and Deposition of Tephra**
- 12-P-68** Hisashi Sasaki, Sakae Mukoyama  
**The Research Method of Volcanic Eruption Using High-resolution Satellite Images and Digital Orthophoto**
- 12-P-69** Juan T. Camacho  
**CNMI Emergency Management Office Volcano Monitoring System and Anatahan Volcano Eruption**
- 12-P-70** Minoru Urai  
**The 2006 Merapi Eruption Observed by Earth Observing Satellites**
- 12-P-71** John Makario Londono, Gloria Patricia Cortez, Ricardo A Mendez  
**Recent Volcanic Activity of Cerro Machin Volcano, Colombia. 1988-2007, and Implications of Volcanic Hazard Assessment**
- 12-P-72** Elizabeth I. Rovere, Gustavo A. Flores  
**Volcanic Hazard in Copahue Volcano, Andes of Argentina and Chile.**
- 12-P-73** Nick Varley, John Stevenson, Gabriel Reyes, Jeffrey Johnson  
**Developing the Monitoring Strategy at Volcan de Colima, Mexico: integrating thermal and infrasound data**
- 12-P-74** Shinobu Andou, Sin Chikasawa, Akimi Kaziya, Naoki Sakuma, Masanobu Odai  
**Investigation of Effect of Meteorological Factors to the Volcano Thermal Observation Data using Infrared Thermal Camera**
- 12-P-75** Sophie Pearson, Charles Connor, Ward Sanford, Wilfried Strauch, Patty Mothes, Peter Young  
**Continuous Thermal Monitoring of Fumaroles at Active Volcanoes in Nicaragua and Ecuador**
- 12-P-76** Sadayuki Kitagawa, Shinobu Ando, Keiichi Fukui, Akimichi Takagi  
**Lava Dome Deformation at Unzen Volcano as Viewed from ALOS PALSAR Interferometry**
- 12-P-77** Takayuki Kaneko, Kenji Takasaki, Atsushi Yasuda, Wooster Martin, J.  
**Realtime Monitoring of Active Volcanoes in East Asia Using Satellite Visible and Infrared Images**
- 12-P-78** Sonia Calvari  
**Volcanic Processes, and Possible Precursors of Eruptions at Etna and Stromboli Volcanoes Revealed by Thermal Surveys**
- 12-P-79** Kisei Kinoshita, Eduardo Laguerta, Ernesto Corpuz, Satoshi Tsuchida, Chikara Kanagaki, Takahiro Fukuzumi, Naoko Iino  
**Network Camera Monitoring of the Mayon 2006 Eruption and Insular Volcanoes in Southwest Japan**

- 12-P-80** David Fee, Milton Garces, Robin Matoza, Tim Orr, Richard Hoblitt  
**Seismoacoustic Tremor Recordings At The P'u' 'O'o Crater Complex, Kilauea Volcano, Hawaii**
- 12-P-81** Milton Garces, David Fee, Andrea Steffke, Michael Hedlin, Robin Matoza, Hugo Yepes, Pablo Palacios, David McCormack, Henry Bass, Claus Hetzer, Rene Servranckx, James Kauahikaua, Tim Orr, Seth Moran, Rick Hoblitt, Bernard Chouet, Gregory Waite, Davida Streett, Grace Swanson  
**Tuning Infrasound Arrays for Automated Remote Sensing of Hazardous Eruptions**
- 12-P-82** Steven Sherburn, Art Jolly, Bradley Scott  
**Volcanic Unrest at Ngauruhoe, New Zealand?**
- 12-P-83** Eisuke Fujita, Masataka Hidaka, Akio Goto, Susumu Umino  
**Barrier and Water Control Simulation for Lava-flow**
- 12-P-84** Jun Okada, Hiromu Okada  
**Cryptodome Formation Process by Precise DEM Analysis - Mt. Usu (1977-82) and Mount St. Helens (1980)**
- 12-P-85** Hiroshi Shimizu, Takeshi Matsushima, Yuki Kohno, Satoshi Matsumoto, Kenji Uehira, Atsushi Saiga, Atsushi Watanabe  
**Monitoring of Magma Re-accumulation Process After the 1990-1995 Eruption of Unzen Volcano**
- 12-P-86** Hiromitsu Taniguchi, Akio Goto, Mie Ichihara, Fukashi Maeno, Miwa Kuri, Taketo Shimano, Katsuya Kaneko, Isao Yamada  
**Development and a Maneuver of "Mobile Observatory for Volcanic Explosion (MOVE)"**
- 12-P-87** Masato Iguchi, Muhamad Hendrasto, Surono, Jun-ichi Hirabayashi  
**Feedback of Results of Japan-Indonesia Collaboration on Indonesian Volcanoes toward Japanese Prediction of Volcanic Eruption**
- 12-P-88** Hiroyuki Hamaguchi, Mifundu Wafula, Mahinda Kasereka  
**The Unusual Lava Lake Activity and its Influence on the 2002 Eruption at Nyiragongo Volcano in Democratic Repblic of Congo (DRC)**
- 12-P-89** Md Mansurul Haque  
**Global Warming and Climate Change: Challenges for Bangladesh**
- Session 1-3: Health Hazards of coexisting with active volcanoes
- 13-P-01** Julie Calkins, Pierre Delmelle  
**Environmental Exposure to Volcanic Fluoride and Health Risk Evaluation**
- 13-P-02** Catherine J. Hickson, T.C. Spurgeon, J. Speed, I. Nicholson, A. C. Rust  
**A Deadly Eruption of Tseax Volcano, Canada: Flash Flood or Gas?**
- 13-P-03** A. Jeff Sutton, Tamar Elias, Elizabeth Tam, Douglas Dockery, John Ray, June Kunimoto  
**Volcanic Air Pollution: A Widespread Volcanic Hazard in Hawai'i.**
- 13-P-04** Jennifer S. Le Blond, Claire J. Horwell, Gordon Cressey, Caroline A. Kirk, Clive Oppenheimer  
**Developing a Rapid and Reliable Method of Quantifying the Amount of Crystalline Silica in Volcanic Ash Using X-ray Diffraction**
- 13-P-05** Sabina A. Michnowicz, John P. Grattan  
**A Constellation of Disease' European Health Crises and the Laki Fissure Eruption**
- 13-P-06** Kenji Nogami, Jun-ichi Hirabayashi  
**Gas Incident Induced by Heavy Snow at Doroyu Hot Spa, Northeast Honshu, Japan**
- 13-P-07** Shigeru Suto  
**Reinvestigation of the Volcanic Gas Disaster and the Reaction of the Municipal Office in Japan**
- 13-P-08** Yasuhiro Ishimine  
**Measures Taken by the Local Officials Against the Sulfur Dioxide Emission From Miyakajima Volcano**

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- 13-P-09** Akinori Takagi  
**The Evacuation at Takagi Psychiatric Hospital During the Unzen Eruptions in the 1990s**
- Session 2-1a: Responding to Natural Disasters: Case histories with lessons for volcano crises
- 21a-P-01** Dario A. Gomez  
**Preventive Evacuation, a Difficult Reality Due to Galeras Volcano Activity**
- 21a-P-02** Lina Dorado  
**Management of the disaster situation due to a possible volcanic eruption of the Galeras Volcano situated on Nariño Department Colombia.**
- 21a-P-03** Bernardo Pulgarin, Carlos Cardona, Marta Calvache, Andrew Lockhart, Randy White  
**Huila Lahars Caused by Rapid, Voluminous Water Expulsion**
- 21a-P-04** Adriana Agudelo, Marta Calvache  
**Volcano Emergency Management at Nevado del Huila, Colombia**
- 21a-P-05** Hugo A. Yepes, Patricio A. Ramon, Diego Barba, Santiago Arellano, Pablo A. Samaniego, Minard L. Hall, Patricia A. Mothes, Alexandra Alvarado, Jean-Luc Lepennec, Hiroyuki Kumagai, David R. Rivero  
**Tungurahua Volcano's 2006 Eruptions, Monitoring and Alert Notifications**
- 21a-P-06** Patricio A. Ramon, Hugo A. Yepes  
**Tungurahua Volcano 2006 Eruptions, Experiences from Scientists responsible for Early Warnings**
- 21a-P-07** Theofilos Toulkeridis  
**Volcanic Crisis in Ecuador 1998-2007: Unprepared Public Versus Unprepared Authorities - Some Lessons Learned**
- 21a-P-08** Marco Rivera, Jersy Marino, Nicole C. Lautze, Lourdes Cacya, Vicentina Cruz, Jean-Claude Thouret  
**Explosive Activity at Ubinas Volcano (Peru) During March 2006 to April 2007**
- 21a-P-09** Nicole Lautze, Marco Rivera, Jersy Marino, Lourdes Cacya, Vicentina Cruz, Jean-Claude Thouret  
**Scientific and Social Response to 2006-07 Activity at Ubinas Volcano, Southern Peru**
- 21a-P-10** Ana Lillian Martin, Mauro Valdes, Fabiola Mendiola  
**Volcanic Hazard in Mexico City**
- 21a-P-11** Jose M. Marrero, Angeles Llinares, Ramon Ortiz  
**Develop of a Software Tool for Evacuation Management in Volcanic Crises and Application to Evacuation of the Icod Valley, Threatened by Teide Volcano, Tenerife, Canary Island, Spain**
- 21a-P-12** Daisy Wheeler, Chris E. Gregg, Frank A. Trusdell  
**Displaced Residents of Pagan Island: Perceptions of Natural Hazards 25 Years After Evacuation**
- 21a-P-13** Gari C. Mayberry, John S. Pallister  
**Lessons Learned from Office of U.S. Foreign Disaster Assistance (OFDA) and Volcano Disaster Assistance Program (VDAP) Volcano-Related Responses Worldwide During 2004 to 2007**
- 21a-P-14** Cynthia A. Gardner, Steve C. Bailey  
**Staying Focused: Preparing for Low-Probability, High-Hazard Volcanic Events**
- 21a-P-15** Wally R. Johnson, Kila Mulina, Jonathan Kuduon, Herman Patia  
**Comparative Assessment of Disaster Management Conditions at Lamington Volcano, Papua New Guinea, in 1951 and 2007: Case Study of a 'Score Card' Methodology**
- 21a-P-16** Muhamad Hendrasto  
**A Small Town of Kakaskasen, Tomohon City, on The Eastern Foot of Lokon Volcano, North Sulawesi, Indonesia**

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<b>21a-P-17</b>	<u>Graham S. Leonard</u> , Harry Keys, Colin Lawrence, Douglas Paton, Julia Becker, David M. Johnston <b>Effective Warning Systems: A Model Developed in Preparation for the 18th March, 2007, Crater Lake Barrier-collapse Lahar, Ruapehu Volcano, New Zealand</b>	Poster
<b>21a-P-18</b>	<u>Shane J. Cronin</u> , Karoly Nemeth, Jonathan N. Procter, Douglas T. Charley, Morris J. Harrison, Esline Garaebiti, Brad J. Scott, Steve Sherburn, Philipson Bani, Michel Lardy <b>Community Emergency Management During the 2005 Ambae Eruption, Vanuatu, SW Pacific</b>	
<b>21a-P-19</b>	<u>Hitoshi Yamasato</u> <b>Monitoring of Volcanic Activity and Advisory Information in Volcano Crises - Case Histories of Usu and Miyake in 2000 -</b>	Invited
<b>21a-P-20</b>	<u>Takashi Yokota</u> <b>The New Volcanic Alert Level</b>	Invited
<b>21a-P-21</b>	<u>Tomoyuki Kanno</u> , Yuji Fushiya, Toru Shiga, Masami Taniguchi, Nobuaki Shigeno, Hideki Iino, Tamio Oikawa, Tsuyoshi Kakishita <b>Advanced Evacuation Framework Based on Eruption Scenario and Volcano Information of Hokkaido-Komagatake Volcano</b>	
<b>21a-P-22</b>	<u>Tetsuya Nakahashi</u> , Masato Koyama, Toshiko Kikkawa <b>Comparison for Interorganizational Relation of Volcanic Eruption Disaster-mitigation for Residents</b>	Invited
Session 2-1b: Assessing long term volcanic hazards and risks		
<b>21b-P-01</b>	<u>Nobuhiro Demboya</u> , Tomoyoshi Takeda, Toshiaki Sakai <b>The Lifetime of Volcanoes on the Japanese Islands for Reasonable Evaluation of Potentiality of Volcanoes</b>	
<b>21b-P-02</b>	<u>Kiyoshi Toshida</u> , Yasuhisa Tajima, Masayuki Oishi <b>Correlation Between Changes in Long Term Eruption Rate and Edifice Collapse, Magma Temperature, and Magma Geochemistry</b>	
<b>21b-P-03</b>	<u>Hirohito Inakura</u> , Yukihisa Nishizono, Hirofumi Kondo, Ichiro Ando, Kazuhiro Tanaka <b>GIS Database of Monogenetic Volcanoes in Kyushu &amp; Yamaguchi, SW Japan</b>	Invited
<b>21b-P-04</b>	<u>Susanna Jenkins</u> , Russell Blong, John McAneney, Keping Chen <b>A Study of Population Exposure To Tephra Fall In The Asia-Pacific Region</b>	
<b>21b-P-05</b>	<u>J. Armando Saballos</u> , Mikel Diez, Charles Connor <b>Assessing the Tephra Fallout Hazard at Concepcion Volcano, Nicaragua: Numerical Modeling Using TEPHRA2</b>	
<b>21b-P-06</b>	<u>Ana Teresa Mendoza-Rosas</u> , Servando De la Cruz-Reyna <b>A Statistical Method for Volcanic Hazard Assessment: Applications to Three High-Risk Volcanoes of Mexico</b>	
<b>21b-P-07</b>	<u>Benjamin Bernard</u> , Benjamin van Wyk de Vries <b>Assessing Volcanic Debris Avalanche Hazards With a Simple Statistical Method</b>	
<b>21b-P-08</b>	<u>Masashi Tsukui</u> , Shun Nakano, Koichiro Saito <b>Linkage of Eruptions and Earthquakes in the 9th Century along Boundary Between East-West Japan</b>	
<b>21b-P-09</b>	<u>Mitsuhiro Nakagawa</u> , Ryuta Furukawa, Ryo Takahashi <b>Geological and Petrological Approach for Long-term Eruption Prediction: Case Studies of Tarumai and Hokkaido-Komagatake Volcanoes in Southwestern Hokkaido</b>	
<b>21b-P-10</b>	<u>Yuichi Nishimura</u> <b>Volcanism-induced Tsunamis and Tsunamiites</b>	
<b>21b-P-11</b>	<u>Takeshi Ohba</u> , Takeshi Sawa, Noriyasu Taira, Tsanyao F. Yang, Hsiao F. Lee, Tefang F. Lan, Michiko Ohwada, Noritoshi Morikawa, Kohei Kazahaya <b>CO<sub>2</sub>/H<sub>2</sub>O Ratio of Magmatic Gas Estimated from the Analysis of Fumarolic Gas; Implication to Tatun Volcano, Taiwan</b>	

- 21b-P-12** Chang-Hwa Chen, Chao-Chung Lin  
**The Most Recent Eruption of the Tatun Volcanic Group Near Metropolitan Taipei, Taiwan: Inferred From Juvenile Volcanic Ashes in the Taipei Basin Deposits**
- 21b-P-13** Konstantinos I. Konstantinou, Cheng-Horng Lin  
**Long-Term Seismic Monitoring of the Tatun Volcano Group, Northern Taiwan**
- 21b-P-14** Rudy Daliman, E. K. Abdurachman  
**Phreato-Magmatic Eruption as Future Hazard in Densely Populated Area Around Ceremai Volcano, West Java**
- 21b-P-15** Steven G. Clegg, Jim M. Harrison, Esline Garaebiti, Kelby E. Hicks, Alan A. Monek, Anna J. Coulbeck  
**Exposure Risks to Local Populations from Volcanic Gas and Ash Emissions at Consistently Degassing Volcanoes in Vanuatu**
- 21b-P-16** Sergio Salinas, Claus Siebe  
**Phreato-plinian Activity, a Previously Unrecognized Hazard at Jocotitlan Volcano, Central Mexico**
- 21b-P-17** Ricardo Saucedo, Juan C. Gavilanes, Jose L. Macias, Jose L. Arce, Jean C. Komorouski  
**The 1913 Plinian Eruptive at Volcan de Colima, Mexico**
- 21b-P-18** Jacopo Selva, Warner Marzocchi, Giovanni Orsi, Mauro di Vito, Laura Sandri, Michaela Quaglino, Antonio Costa  
**The Bayesian Event Tree for Short- and Long-term Eruption Forecasting (BET\_EF) at Campi Flegrei, Italy**
- 21b-P-19** Lucas Donny Setdadji, Koichiro Watanabe  
**Quaternary Calderas in Java Island and its Proximity, Sunda Arc, Indonesia**
- 21b-P-20** Keiko Suzuki-Kamata  
**Huge Caldera-forming Eruptions and Associated Disasters**
- 21b-P-21** Yoshihiro Sawada, Yuko Matsuda, Yoshikazu Sampei, Koji Seto, Michiaki Imaizumi, Tetsuo Kobayashi  
**Origin of Volatile Components in the Aira Pyroclastics, SW Japan: Why and How did Catastrophic Pyroclastic Eruption Take Place?**
- 21b-P-22** Hanjing Hong, Hui Liu  
**Preliminary Study on Active States of Volcano and Classification of Volcanoes in China**
- 21b-P-23** Gerardo J. Aguirre-Díaz  
**Possible Volcanic Hazard in Active Collapse-calderas of the Mexican Volcanic Belt**
- 21b-P-24** Roberto Hernandez, German Ramirez, Camilo Yanez, Saul Venegas  
**Urbanization and Volcanic Hazard: Case Guadalajara City, Mexico**
- 21b-P-25** Carlos A. Borrero, Hardany Castillo, Cesar Ossa  
**Extension of The Unknown Alkaline Volcanism in The Southeastern Colombia**

Poster

Invited

## Hall B

## Session 1-2: Volcano observation research and eruption forecast and alert programs

Chairpersons: J. Ewert, E. Fujita

- |             |   |                                  |
|-------------|---|----------------------------------|
| 8:30-8:50   | <u>Andrew C. Tupper</u> , Gordon E. Jackson, Rebecca K. Patrick<br><b>Volcanic Ash and Aviation safety: Challenges To Delivering Timely Eruption Information</b>  | <b>12-O-14</b><br><i>Invited</i> |
| 8:50-9:10   | Marianne Guffanti, Steven Albersheim, Grace Swanson, Charles Holliday<br><b>Role of Volcano Observatories in the US National Plan for Providing Ash-Hazard Warnings to Aviation</b>   | <b>12-O-15</b><br><i>Invited</i> |
| 9:10-9:30   | Zhong Lu, Oh-Ig Kwoun, Cynthia Fuhs, Dave Jackson, <u>Daniel Dzurisin</u><br><b>Semi-automated SAR Processing System and Applications of InSAR to Monitoring Volcanoes in the Aleutian Arc, Alaska</b>                              | <b>12-O-16</b><br><i>Invited</i> |
| 9:30-9:50   | David G. Macfarlane, Geoff Wadge, Henry M. Odbert, Mike R. James, Duncan A. Robertson, Harry Pinkerton<br><b>Ground-based Thermal and Topographic Remote Sensing of Volcanic Terrain Using The AVTIS Millimetre Wave Instrument</b> | <b>12-O-17</b><br><i>Invited</i> |
| 9:50-10:10  | <b>- Coffee break -</b>   |                                  |
| 10:10-10:30 | <u>Simon A. Carn</u> , Arlin J. Krueger, Nick A. Krotkov, Kai Yang, Keith Evans<br><b>Measuring Volcanic Emissions with the Ozone Monitoring Instrument (OMI)</b>   | <b>12-O-18</b><br><i>Invited</i> |
| 10:30-10:50 | Shoji Matsubara, Touchy Nakamura, Masanobu Shimada, <u>Yukinori Nakajima</u><br><b>Disaster Management Support using Daichi (ALOS)</b>  | <b>12-O-19</b><br><i>Invited</i> |
| 10:50-11:10 | <u>Lucas Donny Setijadji</u><br><b>Observation on Relationships Between Merapi Volcano Eruptions March-July 2006 and Yogyakarta Earthquake 27 May 2006 (Central Java, Indonesia)</b>  | <b>12-O-20</b>                   |
| 11:10-11:30 | <u>Harry J Keys</u> , Colin Lawrence<br><b>The Eastern Ruapehu Lahar Alarm Warning System In Tongariro National Park, New Zealand, And Its Successful Response To The 18 March 2007 Lahar</b>                                       | <b>12-O-21</b>                   |

## Hall C

## Session 2-1b: Assessing long term volcanic hazards and risks

Chairpersons: S. Sparks, T. Kagiya

- |             |   |                                   |
|-------------|---|-----------------------------------|
| 8:30-8:50   | <u>Giovanni Orsi</u> , Mauro A. Di Vito, Francesco Dell'Erba, Michaela Quaglini, Warner Marzocchi, Laura Sandri, Jacopo Selva<br><b>Assessing Volcanic Hazards at the Restless Campi Flegrei Caldera, Italy</b> | <b>21b-O-08</b><br><i>Keynote</i> |
| 8:50-9:10   | Natalia Deligne, Stuart G. Coles, <u>Stephen R. J. Sparks</u><br><b>Recurrence Rates of Large Explosive Volcanic Eruptions</b>  | <b>21b-O-09</b>                   |
| 9:10-9:30   | <u>Tsuneomi Kagiya</u> , Yuichi Morita<br><b>First step to Understand a Preparing Process of Caldera Forming Eruption</b>   | <b>21b-O-10</b><br><i>Invited</i> |
| 9:30-9:50   | <u>Sandra G. Catane</u> , Tadahide Ui<br><b>Challenges in Caldera-related Hazard and Risk Assessment in Developing Countries</b>  | <b>21b-O-11</b><br><i>Invited</i> |
| 9:50-10:10  | <b>- Coffee break -</b>   |                                   |
| 10:10-10:30 | <u>Victoria C. Smith</u> , Phil Shane, Ian A. Nairn, Darren M. Gravley<br><b>Rhyolite Eruptions Tapping Multiple Magma Bodies: Implications for Monitoring of Calderas and Hazards</b>                          | <b>21b-O-12</b>                   |
| 10:30-10:50 | <u>Jan M. Lindsay</u> , Catherine Molloy, Phil Shane<br><b>Assessing Long-term Volcanic Hazard and Risk in Auckland, New Zealand</b>  | <b>21b-O-13</b>                   |

10:50-11:10	<u>Claus Siebe</u> , Victor Hugo Garduno-Monroy, Juan Carlos Mora-Chaparro, Marie-Noelle Guilbaud, Gabriel Valdes, Sergio Salinas-Sanchez, Mari Sumita, Hans-Ulrich Schmincke, Elizabeth Widom <b>A Reappraisal of Volcan Jorullo (Mexico) Almost 250 Years After its Birth in a Sugar Cane Field</b>	<u>21b-O-14</u>
11:10-11:30	<u>Joan Marti</u> , Ramon Ortiz, Alicia Felpeto, Antonio Ordonez, Adelina Geyer, Llorena Planagoma <b>Volcanic Risk Assessment In Areas without Historical Volcanism. The Case of Olot, Catalan Volcanic Zone</b>	<u>21b-O-15</u>

## Hall D

## Session 1-3: Health Hazards of coexisting with active volcanoes

*Chairpersons: P. Baxter, C. Horwell, Y. Ishimine, E. Yano, K. Nogami*

8:30-8:50	<u>Hajime Ishihara</u> <b>2000 Miyakejima Eruption –Changing Countermeasures for Volcanic Gases–</b>	<u>13-O-08</u>
8:50-9:10	<u>Eiji Yano</u> <b>Fatal Accidents by Volcanic Gas and their Prevention</b>	<u>13-O-09</u>
9:10-9:30	Kenji Nogami, Jun-ichi Hirabayashi, Jyo Oosaka <b>Factors Contributing to Volcanic Gas Accidents in Japan</b>	<u>13-O-10</u>
9:30-9:50	<u>Yosuke Kobayashi</u> , Kenta Higuchi, Shinji Tokonami, Shinji Yoshinaga, Suminori Akiba <b>Enhanced Atmospheric Radon Concentration Due to Volcanic Activity</b>	<u>13-O-11</u>
9:50-10:10	<b>- Coffee break -</b>	
10:10-10:30	<u>Yoshikazu Kikawada</u> , Satoshi Kawai, Takao Oi <b>Effect of Acidic River Water Neutralization on Mobility of Arsenic in Kusatsu-Shirane Volcano Area, Gunma, Japan</b>	<u>13-O-12</u>
10:30-10:50	Claire J. Horwell, Ben J. Williamson, Jennifer S Le Blond <b>Cristobalite Formation in the Soufrière Hills Lava Dome: Implications for Health Hazard Assessment</b>	<u>13-O-13</u>
10:50-11:10	Sara Barsotti, Daniele Andronico, Willy Aspinall, Peter Baxter, Paola Del Carlo, Thea Hincks, <u>Augusto Neri</u> <b>Quantitative Assessments of Health Hazards from Volcanic Ash at Mt. Etna (Italy)</b>	<u>13-O-14</u>
11:10-11:30	<u>Julius Plinduo</u> , Victor Golpak, Carolyn Annerud <b>Management of Health Hazards and Societal Impact of Recent Volcanoes Eruptions in Papua New Guinea</b>	<u>13-O-15</u>

## Hall A

10:10-11:30	<b>- Kid's volcano workshop-</b>	
12:00-13:30	<b>- Eat volcanoes! Volcano experiments in kitchen -</b>	
13:40-15:10	<b>- Volcano Q&amp;A for kids in Shimabara; Let's ask volcanologists in the world -</b>	
15:30-17:00	<b>Closing ceremony</b>	
18:00-19:30	<b>- Farewell Party at Tsukumo Hotel -</b>	



## PREPARATION OF ORAL PRESENTATION

All presenters of oral slots have to drop in *Internet/Ready Room* to check and upload your presentation file into the meeting main computer by the previous afternoon of the presentation. *Internet/Ready Room* is next to Halls B and C in the Fukko Arena. Conference staffs will help you in this process.

Presentation files should be prepared in only MS PowerPoint version 2003 or earlier. Nobody can use his (or her) own computer in the meeting halls. Presenters are requested to take their files in either USB, memory stick/card, CD or DVD.

Loading the files for presentations on November 22 (Thu), Day 4, should be completed by the afternoon of November 20 (Tue), Day 2, because the Ready Room is closed throughout November 21 (Wed).

*\* Loaded files are used only for their presentation, and will be deleted completely from all computers after the conference, except for the cases where LOC requests to use them for making conference report with their agreement.*

## POSTER PRESENTATION

All posters are presented in the space next Hall A (near entrance) in Fukko Arena. Poster presentation is divided into two rounds; November 19-20 and November 22-23.

Putting poster on the board is requested during 9:00-12:00 a.m. of November 19 (Mon) for the first round, and by 9:00 a.m. of November 22 (Thu) for the second round.

**Core time of the first round: 16:40-18:00 on November 20 (Tue), Day 2.**

**Core time of the second round: 16:40-18:00 on November 22 (Thu), Day 4.**

*Note: This is the first day of presentation of the second round*

Removal of posters is requested during 18:00-18:30 of November 20 (Tue) for the first round, and during 15:00-17:30 of November 23 (Fri) for the second round. Posters left on the boards will be removed and dumped by LOC.

## INTERNET ACCESS

Wireless LAN is available within buildings of the venue during the conference. Internet access using LAN cable is also possible in the *Internet/Ready Room* where a few Windows PC's are usable.

## TRANSPORTATION TO NAGASAKI AIRPORT AND ISAHAYA JR STATION

No	Shimabara	Isahaya JR St.	Nagasaki Airport	Remarks
<b>SB1</b>	5:00*	6:20 West	6:50	Nov. 24 (Fri)
RB1	6:20***	7:34 East	8:05	Everyday
RB2	7:25***	8:39 East	9:10	Everyday
<b>SB2</b>	8:30*	9:50 West	10:20,	Nov. 24 (Sat)
<b>SB3</b>	9:30*	10:50 West	11:20	Nov. 24 (Sat)
<b>SB4</b>	11:00*	12:20 West	12:50	Nov. 24 (Sat)
RB3	12:35***	13:49 East	14:20	Everyday
RB4	15:40***	16:54 East	17:25	Everyday
<b>SB5</b>	16:30**	17:50 West	18:20	Nov. 23 (Fri)

SB and RB are chartered shuttle and regular buses, respectively.

Isahaya JR Station East: Bus stops in the terminal building on the eastern side of the station.

Isahaya JR Station West: Bus stops on the western side of the station. Need to go under tunnel to the train platform.

\* Shuttle bus (SB1 to 4) stops in Tsukumo Hotel, Hotel Kowakien, Minato-Hirobaba (near Hotel Hakusan), Zeimusho-mae (near Business Hotel Chidori and Shimabara Dai-ichi Hotel), Ohte, (near Station Hotel and Hanamizuki) and Shimabara St.

\*\* SB5 goes directly for Isayaha without any stops near hotels, the passengers should ride with their luggage at venue.

\*\*\* Note: Regular bus (RB1 to 4) departs from Shimabara-ko (port), and stops at Shimabara Bus Terminal (near Zeimusho-mae), Ohte and Shimabara Station. Shimabara-ko is 3 km from the venue (about 10 min by taxi).

## LIST OF HOTELS AND PHONE NUMBERS

	Names of Hotels	Numbers
1	Business Hotel Chidori	0957-62-4845
2	Business Hotel Gaiko	0957-63-1316
3	Business Hotel Horaisen	0957-62-4446
4	Business Hotel Toraya	0957-63-3332
5	Fujinoi Ryokan	0957-62-4406
6	Hotel&Spa Hanamizuki	0957-62-1000
7	Hotel Hakusan	0957-63-5400
8	Hotel Nampuro	0957-62-5111
9	Iwanaga Ryokan	0957-62-2121
10	New Queen Hotel	0957-64-5511
11	Ryokan Kaiboso	0957-62-2225
12	Saiwaiya Ryokan	0957-62-3073
13	Shimabara Dai-ichi Hotel	0957-63-0011
14	Shimabara Kanko Hotel Kowakien	0957-62-5211
15	Shimabara Station Hotel	0957-65-0666
16	Shimabara Youth Hostel	0957-62-4451
17	Shin'yama Onsen Uenoyu	0957-63-2290
18	Tsukumo Hotel	0957-62-3111
19	Shimabara Training Center	0957-64-2201



To Nagasaki, Isahaya

0 500m 1km



①⑨ Shimabara Training Center (out of this map)  
30min. from venue by shuttle bus

# Accommodations

(Alphabetical Order)

Bus stop for shuttle bus

- ① Business Hotel Chidori
- ② Business Hotel Gaiko
- ③ Business Hotel Horaisen
- ④ Business Hotel Toraya
- ⑤ Fujinoi Ryokan
- ⑥ Hotel & Spa Hanamizuki
- ⑦ Hotel Hakusan
- ⑧ Hotel Nampuro
- ⑨ Iwanaga Ryokan
- ⑩ New Queen Hotel
- ⑪ Ryokan Kaiboso
- ⑫ Saiwaiya Ryokan
- ⑬ Shimabara Dai-ichi Hotel
- ⑭ Shimabara Kanko Hotel Kowakien
- ⑮ Shimabara Station Hotel
- ⑯ Shimabara Youth Hostel
- ⑰ Shin'yama Onsen Uenoyu
- ⑱ Tsukumo Hotel
- ⑲ Shimabara Training Center (See top-left of this map)

## Shimabara City

Mayuyama

To Fukuoka

To Kumamoto

Shimabara Port

Shimabara Fukuoka expressway

Shimabara Fukko Arena

Shimabara Fukko Arena

**Venue**

Mount Unzen Disaster Memorial Hall (UDMH)  
GAMADAS DOME

To Unzen

To Minami-Shimabara

# CITIES ON VOLCANOES 5 - SCHEDULE FOR THE WEEK

Day		Hall A Main Arena Hall	Hall B Sub Arena Hall	Hall C Sub Arena Meeting Room	Hall D Gamadas Dome		
November 18th Sunday	Daytime	Registration at Lobby	Meeting of Volcanological Society of Japan		WS BET-FE at Hall E	WS IWARS at Kowakien Hotel	
	Evening	Ice Breaker Party					
19th Monday	AM	Opening Ceremony					
		Conference Lectures					
		Plenary Talk 1-1					
		Plenary Talk 3-1					
	PM	Plenary Talk 3-3					
		Forum Volcano Citizenship Network	Sess. 1-1 Volcano Studies	Sess. 3-1 Linkage for Reducing Risks	Sess. 3-3 Communities and Volcanism		
		Night			CEV Meeting		
20th Tuesday	AM	Plenary Talk 2-1a					
		Plenary Talk 2-3					
		Plenary Talk 2-2					
		Sess. 1-1 Volcano Studies	Forum People and Mass Media	Sess. 2-3 Land-use Plan	Sess. 2-2 Hazard Assessment		
	PM	Forum Tradition of Volcanic Disaster	Sess. 1-1 Volcano Studies	Sess. 2-1a Emergency Response	Sess. 2-2 Hazard Assessment		
	Evening	Poster Session #1 Core Time					
	Night						IAVCEI EC Meeting at Hall E
21st Wednesday	Daytime	Intra-meeting field excursion to Unzen Volcano					
	Evening	Party hosted by Mayor at Shimabara Castle					
22nd Thursday	AM	Plenary Talk 1-3					
		Plenary Talk 3-2					
		Plenary Talk 1-2					
		Sess. 1-3 Health Hazard	Sess. 1-2 Volcano Monitoring	Sess. 2-1a Emergency Response	Sess. 3-2 Education and Outreach		
	PM	Plenary Talk 2-1b					
		Sess. 1-2 Volcano Monitoring	Forum Volcanic Sabo and Disaster Reduction	Sess. 2-1b Long term Hazards and Risks	Sess. 3-2 Education and Outreach		
	Evening	Poster Session #2 Core Time					
Night						WS IVHHN at Tsukumo Hotel	
23rd Friday National Holiday	AM	Kid's Volcano Workshop	Sess. 1-2 Volcano Monitoring	Sess. 2-1b Long term Hazards and Risks	Sess. 1-3 Health Hazard		Disaster Prevention Drill
	PM	Eat Volcano ! Experiment in Kitchen					Helicopter Flight over Unzen
		Volcano Q&A				WS Disaster Volunteer	
		Closing Ceremony					
	Evening	Farewell Party at Tsukumo Hotel					

Session    Forum    Social Event    Field Trip    Workshop/Meeting