

IAVCEI News 2003 No. 1

INTERNATIONAL ASSOCIATION OF VOLCANOLOGY AND CHEMISTRY OF THE EARTH'S INTERIOR

General Assembly Alert

General Assembly Alert IAVCEI members should mark 13-17 November 2004 firmly on their calendars now for what will be one of the most spectacular settings for a General Assembly. The place is Pucon in southern Chile, a small resort town between the beautiful Lake Villarrica and one of the world's most serene active volcanoes, the glacier-covered and persistently active volcano Villarrica. On 29 and 30 March 2003 the President and Secretary General visited



Steve Sparks, President

Pucon with members of the local organizing committee from Sernageomin (the Geological Survey of Chile) to familiarize themselves with the conference facilities, and to progress planning of the meeting. Hugo Moreno and Jorge Clavero represented the local committee and Louisa Martinez represented the conference company from Santiago which will coordinate the logistics of the meeting including registration, booking of accommodations, processing of abstracts, and on-site management of the General Assembly.

The Grand Hotel Pucon will host the General Assembly and has excellent conference facilities, which can easily cope with numbers up to a thousand. The hotel offers a range of accommodations, from top-of-the-range suites to condominium apartments which can house several students. Thus, most of the delegates can be housed in the hotel at a range of prices to suit everyone. The hotel sits next to a beach on the lake with stunning views in all directions. The President and Secretary General endured great "hardship" testing the Chilean cuisine, Chilean wines, and the national drink of Pisco Sour to make sure that they were of sufficient quality for discerning IAVCEI members. The short answer was that members can expect the highest standards of hospitality. The hotel has Internet facilities, a gym, two swimming pools, a beach, a miniclub for kids, and, of course, a substantial bar that can be expected to meet the challenge of hundreds of thirsty volcanologists. Pucon itself is a small elegant resort geared to summer tourists and winter skiers. For IAVCEI members interested in probability theory, there is a large casino as well as numerous bars and restaurants.

Rooms at the hotel are of an exceptionally high standard and very reasonably priced. Members will be offered very competitive all-in-one packages which will include registration fees, accommodation, food, beverages, entertainment, and the usual midweek field trip.

One of our other tasks was to scout out the midweek field trip and its logistics. Villarrica can offer not only stunning volcanic scenery but fantastic geology. The Wednesday field trip can expect to see lavas, historic lahar deposits, two intriguing large-scale basaltic ignimbrites, and plinian deposits from neighboring volcanoes. There are also thermal baths in which members can spend time ensuring the geothermal systems around Villarrica are stable. With a conference attendance of 500-700 people the logistics of the trip are far from trivial, but Jorge and Hugo have this well in hand to ensure everyone has a memorable day. There are, of course, pre-conference trips in northern and central Chile and post-conference trips in southern Chile during which we will study some of the most spectacular geology in the world.

Quite a lot of progress was made in the arrangements for the meeting. As has become a tradition with IAVCEI, posters will be given prominence and there will be a two-hour session every day devoted solely to posters. At other times, poster sessions will be concurrent with 4 to 6 oral sessions. The decision has been made to have 15-minute talks (12 minutes plus 3 minutes for questions). Readers can find the scientific programs in this newsletter. It is expected that the second circular will be available by June 2003. Other scientific activities will include a plenary lecture on Andean Geology, an awards ceremony, some short courses, and specialist workshops. Keep in mind 15 May 2004 as the abstract submission and early-bird registration deadline. Significant discounts will be offered to IAVCEI members and early-bird registrants.

Members may be concerned that Southern Chile seems a long way from anywhere. However, there are many direct flights from North America, Europe, and Australasia to Santiago, where there are numerous regional flights to the regional town of Temuco (a 90-minute flight). Delegates will be met at both airports. Anyone who has

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Steve McNutt, Sec-Gen

IAVCEI HOMEPAGE: www.iavcei.org

Helping the Libraries of Volcano Observatories in Colombia and Cameroon

Through the sponsorship of IAVCEI and the K.B Mather library at the Geophysical Institute (GI), University of Alaska, Fairbanks (UAF), a new project has been initiated to collect reading materials on various earth science topics and ship them to the libraries of volcano observatories located in developing countries. The material consists mainly of used textbooks on mathematics, physics, chemistry, and geology, and issues of professional journals on geosciences. Most books and journals came from the duplicate collection of the K.B Mather library, with occasional donations from active and retired scientists who wish to help libraries around the world. IAVCEI funded packaging and shipping of all materials.

Having started my scientific career in Colombia I am keenly aware of how difficult it is to conduct research with limited bibliographic references, so this is a task that I am happy to do for as long as I can lift a 30+ kg box full of books, and of course, as long as there are materials to send. During a trip to Colombia in the summer 2002, I had the opportunity to see how highly beneficial the donations have been for the library of the Observatorio Vulcanológico y Sismológico de Manizales (OVSM). Ever since the materials started arriving, there has been great excitement, resulting in an increase in the number of library patrons, mostly high school and undergraduate students, and scientists from the observatory itself. Recently we also sent a donation for the library of the Department of Geology and Environmental Science at the University of Buea in Cameroon, and we anticipate similar results as in Colombia.

If you know of a library in a developing country that would accept this sort of help, let us know and we will contact them and offer whatever materials we have in stock, or place the library on a wait list until we collect donations that are suitable to be sent. We also encourage all of you who have used or duplicate books and journals on earth sciences to help us in our effort to make a difference in places where a subscription to professional journals is simply out of the question, mainly because of the lack of funding. To help please contact Steve McNutt (steve@giseis.alaska.edu) or John J Sanchez (jjalaska@giseis.alaska.edu).

John J. Sánchez, Graduate Student
 Geophysical Institute-University of Alaska, Fairbanks
 903 N. Koyukuk Dr. Fairbanks, AK 99775, USA.
 Phone: 907-4747309, Fax 907-4745618
 Web: <http://www.aeic.alaska.edu/input/sanchez>

ACKNOWLEDGEMENTS:

We wish to warmly thank all who have contributed to this effort: Judy Triplehorn, librarian at the K.B. Mather Library, GI-UAF; Sue Cave, at the Gi's mail room (thanks for putting up with me and all those heavy bags!); Ann Wood, GI library; Indira Zuluaga and Mateo D. Sanchez (my wife and son) for their help, patience, and encouragement.

Here is a list of donors: Keith B. Mather Library, Geophysical Institute-UAF, Diana Solie, Stephen R. McNutt, John J. Sánchez, Sigrún Hreinsdóttir, Jim Dixon, Niren N. Biswas, Darren Chertkoff.

Continued from page 1

not been to Chile and envisages difficulties is encouraged to think again. The beauty of the country and friendliness of the people, and the activity of the volcano make Chile a great place for IAVCEI to meet.

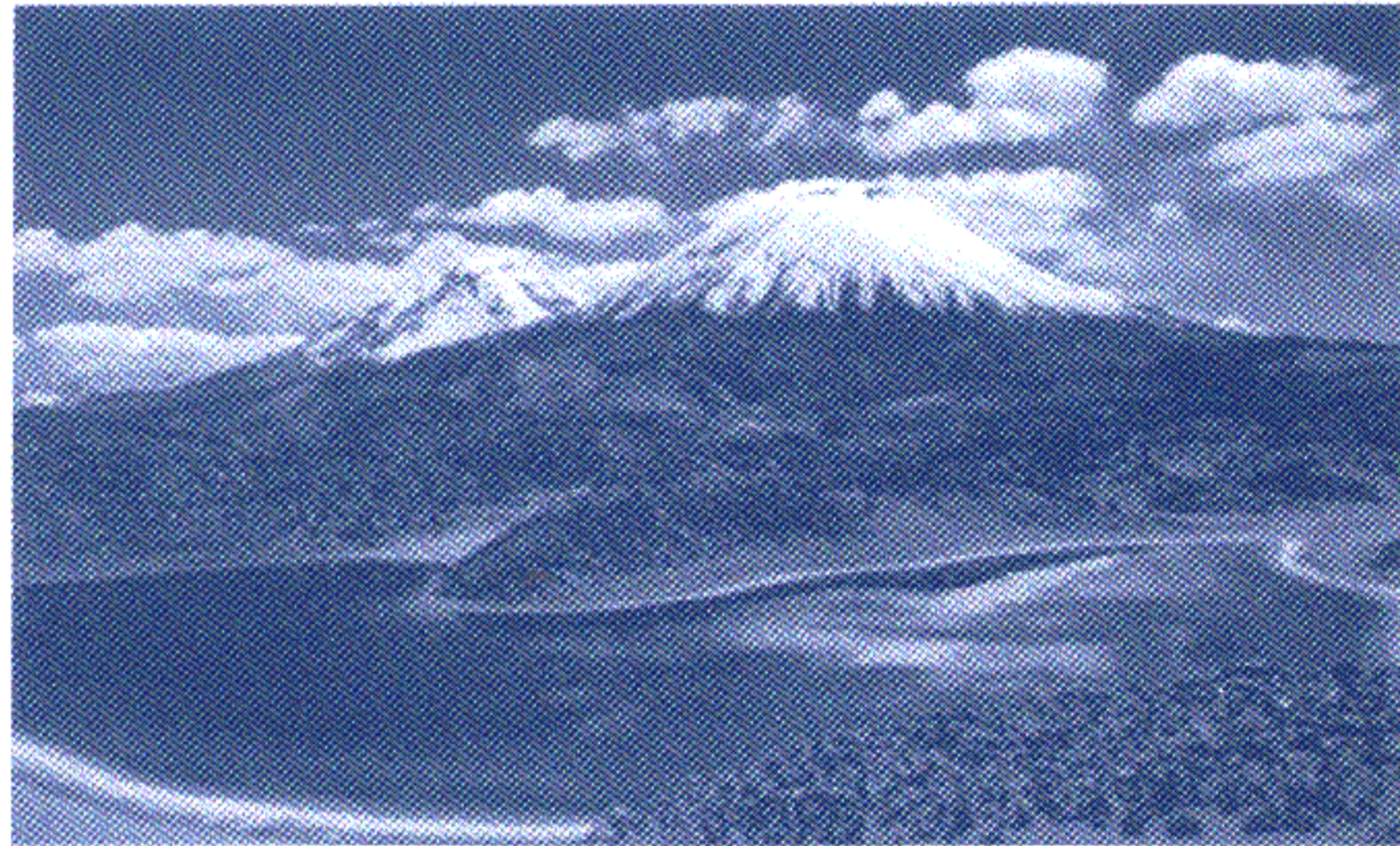
Steve Sparks, President
 Steve McNutt, Secretary-General



Lonquimay Volcano, 1988 - 1989 eruption

Local Organizing Committee

Chairman:	José Frutos (Sernageomin Deputy Subdirector)
Executive Secretary:	José A. Naranjo
Other members:	Jorge Clavero Luis Lara Hugo Moreno Germán Pineda Carlos Portigliati



Nevados de Payachata volcanoes

Scientific Committee

Jorge Clavero, Chile (President)
 Bernard Chouet, USA
 Moyra Gardeweg, Chile
 Fernando Henríquez, Chile
 Jeff Hedenquist, Canada
 Wes Hildreth, USA
 Setsuya Nakada, Japan
 José A. Naranjo, Chile
 Steve Sparks, UK

IMPORTANT DATES

■ First Circular	September 2002
■ Second Circular	June 2003
■ Abstract Deadline	May 2004
■ Early Registration	July 2004
■ Meeting	14-19 November 2004

Chile 2004 Final Scientific Program

Symposium	#	Thematic session
1 Volcanoes, ore deposits and geothermal systems	1	1a Origin of Iron oxide-Cu-Ag deposits: the magmatic-hydrothermal controversy
	2	1b Epithermal and Geothermal systems: active ore formation?
	3	1c Porphyry deposits: relationships to volcanism?
2 Structural control on volcanism and volcano instability	4	2a Geodynamic and structural controls on volcanism
	5	2b Debris avalanches and volcano instability
3 Eruption dynamics	6	3a Explosive volcanism
	7	3b Explosive mafic volcanism
	8	3c Lava/dome flow dynamics
	9	3d Modelling volcanic processes
	10	3e Explosive magma interaction with aquifers and hydrothermal systems
4 Calderas and ignimbrite volcanism	11	
5 Assessing volcanic hazards and risks	12	5a Hazard management and Emergency planning
	13	5b Volcanic hazard mapping
6 Environmental impacts of volcanic eruptions	14	6a Impact of volcanic eruptions on weather and climate
	15	6b Impact of volcanic eruptions on environment and society
	16	6c Volcanic lakes and environmental impact of volcanic fluids on ambient waters
7 Slab, mantle and crustal contributions to Arc and Intraplate Magmatism (Magma generation and evolution)	17	7a Arc magma genesis
	18	7b Magmatism in Shallowing and Steepening Subduction Zones
	19	7c Intraplate magmatism
8 Monitoring and Imaging volcanoes	20	8a Integrated monitoring
	21	8b Imaging the inside of volcanoes
	22	8c Remote sensing of volcanoes
	23	8d Quantitative Volcano Seismology
	24	8e Integrated Electromagnetic monitoring and EM tomography of volcanoes
	25	8f Geophysical and modelling constraints on the relationship of subduction to arc magmatism
9 Plutonism	26	9a The effects of volatiles on the evolution of granitic magmas
	27	9b Geophysical evidence for mid crustal intrusions and implications for crustal rheology
	28	9c Shape, structure and emplacement mechanisms of arc plutons and their relationships to hydrothermal mineralisation
10 Magmatic volatile budgets and controls on magma degassing	29	
11 Sub-glacial, sub-aqueous volcanism and volcanic debris flows	30	
12 Rates of magmatic processes	31	12a Time-scales of magma-chamber processes
	32	12b Tephrochronology and volcano geochronology

Chile 2004 Field Trips

A series of five pre-, one intra-, and five post-meeting field trips will be offered to the attendees. In order to better organize them, pre-meeting field trips will be scheduled to volcanic areas of the Central Andes of northern Chile, whereas post-meeting field trips will take place in volcanic areas of the Southern Andes. An intra-meeting (free) will be offered on Wednesday.

A. Pre-meeting Field Trips

- A1 - Parinacota volcano and Taapaca Volcanic Complex: debris avalanches and dome-related explosive activity
- A2 - Láscar volcano and La Pacana caldera
- A3 - El Laco Fe-Au-Cu deposit and Chuquicamata porphyry copper
- A4 - Maricunga Au-Ag Belt and Ojos del Salado volcanic chain
- A5 - Construction of the Andean Mesozoic plutonic arc (Chañaral-Copiapó-Vallenar traverses)

Intra-meeting:

- B. Overview to the geology of Villarrica volcano

C. Post-meeting Field Trips

- C1 - Laguna del Maule
- C2 - Villarrica, Llaima and Lonquimay volcanoes
- C3 - Explosive postglacial volcanism of Villarrica volcano
- C4 - Osorno and Calbuco volcanoes
- C5 - Lanín and Quetrupillán volcanoes....so close, so far

For more information, please contact:

Jorge Clavero - jclavero@sernageomin.cl

NEW IAVCEI EXECUTIVE COMMITTEE 2003-2007

(No vote was needed because only one valid nomination was received for each position –ed.)

President	Oded Navon (Israel)
Secretary-General	Steve McNutt (USA)
Vice-President 1	Jocelyn McPhie (Australia)
Vice-President 2	Toshitsugu Fujii (Japan)
Exec Comm Member	Jean-Christophe Komorowski (France)
Exec Comm Member	Anita Grunder (USA)
Exec Comm Member	Hugo Moreno-Roa (Chile)
Exec Comm Member	Rene Solidum (Philippines)

Special thanks to the Nominating Committee for helping to administer the process:

Wally Johnson, Chair
Jim Gardner
Roberto Scandone
Claude Jaupart
Setsuya Nakada

A full report on the nominations process will appear in the next IAVCEI Newsletter.

3rd Biennial Workshop on Subduction Pro

What was once a quiet backwater in the study Earth processes has become a locus of real-time observation. A group of researchers with a focus on North Pacific arcs has completed its first cycle of biennial meetings to consider and strengthen this new flow of data. Some 120 participants from the US, Russia, Japan, UK, Argentina, and Italy attended the June 10-14, 2002 event at the University of Alaska Fairbanks (UAF). The meeting itself was preceded and followed by field trips to neotectonic features of the Kenai Peninsula, volcanoes of Cook Inlet, the Valley of Ten Thousand Smokes of Katmai National Park, and a short course on volcano remote sensing. Previous meetings of the series were held in Petropavlovsk, Kamchatka, Russia in July 1998 and in Sapporo, Hokkaido, Japan in July 2000.

Called “AJAKS” for Alaska-Japan-Kamchatka Subduction Project, the consortium represents the maturation of a solid earth research community whose focus spans the continuous zone of vigorous subduction and associated volcanism and seismicity stretching from Japan through Kamchatka to Alaska. This collaboration is much needed in light of the commonality of scientific promise and hazard monitoring needs across the region, but was delayed in its natural development by the adversarial international relationships that characterized the 20th century here.

The theme was “linkages among tectonism, magma genesis, and eruption in volcanic arcs”. An “Aleutian symposium” provided a synopsis of recent advances in understanding the Aleutian volcanic arc. Much recent progress is attributable to dramatic growth of the Alaska Volcano Observatory (AVO), which maintains real-time seismic monitoring networks on 25 active volcanoes from Cook Inlet to Adak, conducts continuous operational satellite surveillance of Alaska and Kamchatka for volcanic hot spots and ash plumes, and is now implementing real-time continuous GPS networks. This day-long summary by a number of contributors from the US Geological Survey, US universities, and Alaska Division of Geological and Geophysical Surveys was followed by sessions on “Eruption Processes”, “Subduction in the North Pacific: Variations on a Theme or Time for Revolution?”, “Volcano Monitoring in Volcanic Arcs”, “Arc Crust: Extension, Compression, Shearing, Plutons, Underplating, and Evolution”, and “Volcano History, Chemistry, and Hazards”. A keynote speech, given by Professor Shigeo Aramaki of Nihon University on “Fuji Volcano: Volcanology and Hazard Mitigation”, reminded us of how mere repetition of geologic events of the recent historic past would be far more disastrous now due to the greater size and complexity of society today. There were also informal evening discussions on the concept of a national or international volcano center focused on subduction zone



Workshop participants from Moscow, Kamchatka, Michigan ground zero of the greatest eruption of the 20th century (Photo by J. Eichelberger).

volcanism, on potential scientific contributions to stewardship of the Amchitka underground nuclear test site, and on the need for monitoring volcanoes of the Kurile Islands. A tour of Quaternary stratigraphy by Jim Beget and Mary Keskinen of UAF and “back-arc soak” in a local hot springs provided mid-week rejuvenation. At the farewell dinner, Thomas P. Miller (USGS, Anchorage) was honored for his contributions to international collaborations in volcanology in the North Pacific and to understanding of the Aleutian volcanic arc.

Scientifically, the meeting made clear that enormous strides are being made in understanding both subduction dynamics and magma dynamics. For example, geodetic measurements have turned some of the ominous “seismic gaps” of yesterday into zones of free-slipping subduction zones today. On the other hand, there is unexpected complexity in the velocity field near plate margins that is not understood, and how instantaneous velocities integrate over time to topography is yet to be appreciated. Much of the volcanism in the eastern portion of the Aleutian arc and the tectonic tears in its western portion appear to be

Processes Completes North Pacific Meeting



Michigan, Ohio, California, and Bristol (UK) gather at
Novarupta Volcano, Katmai National Park, Alaska

geologically brand-new: this has certainly not been a steady-state system since its Eocene inception. Indeed, in light of many cases of young volcanoes sitting on old substrate there was discussion of the possibility of a punctuated cadence to magma production. Participants speculated as to whether the Kamchatka and Aleutian tempos might match through a common tie to velocity of North American/North Pacific plate convergence. There remains much to be learned about the subduction to strike-slip break near Amchitka Pass and about the Kamchatka-Aleutian “corner” with its prodigious rate of magma production. Another regime of interest is the base of the overriding plate. Tectonic erosion there may be important – and may even overwhelm – arc accretion. New work in marine geology and geophysics is now the greatest need.

Comparable progress is being made in magma dynamics, driven by coupled field and experimental petrologic observations, by geophysical monitoring, and by short half-life isotope geochemistry. Again, the new geodetic techniques of GPS and InSAR are playing an important role. Although arc volcanism at individual centers is by nature pulsatory,

there is geodetic evidence of continuous magma production at depth and petrologic evidence of eruptive triggering from fresh inputs. Synthesis of insights from geodetic measurements and petrology is especially advanced at Usu Volcano on Hokkaido and Okmok Caldera in the Aleutians. In many arc volcanoes where tectonic controls are strong, large zoned magma bodies of yesteryear are yielding to smaller discrete magma pods and dikes. Understanding the apparent paradox between the extensive plutonic substrate of mid- to shallow-crustal arc exposures and the accumulating evidence for smallish crustal magma bodies beneath active volcanoes remains a productive area for future research. Rates of key processes such as recharge, withdrawal, and crystal growth are becoming known and are sometimes remarkably fast. As short as some processes are in time, it is remarkable how large they are in spatial extent – in many cases more than an individual volcanic edifice must be considered in understanding magmatic phenomena. It is as important to understand why volcanoes are not present in some places as to understand why they are present in some places. A continuing puzzle is the abundant evidence for shallow magma storage and mixing with shallowly derived components, as well as the paucity of primitive magmas on the one hand, yet the lack of chemical or even isotopic changes in magmas across the Aleutian continent-ocean boundary on the other. We are driven to suspect interaction of rising magmas with melts from their own arc fore bearers, rather than with old crust.

Understanding linkages between tectonism and magmatism and between tectonism and eruption exhibits much more “need for improvement”. Thermally, there is little apparent fit between thermal models of subduction and petrologic reality of parental arc magmas. Articles of faith regarding the generative properties of the mantle wedge may become casualties of revolution, but a new belief system has yet to be formulated. Mechanically, there must be a link between major tectonic events and major magmatic events. Indeed, major magmatic events *are* major tectonic events. It would be nice to know what that linkage is. Indeed, it would be nice to know it right away given the expected imminence of both eruption and earthquake at Mount Fuji.

As hoped, strong international collaborations are developing rapidly. Perhaps our “poster child” is the AVO – Kamchatka Volcanic Eruption Response Team (KVERT) partnership, but there are many strong basic research ties as well in geodetic, seismic, and petrologic projects in the region. Examples are work by F. Kimata of Nagoya University, D. Mann and J. Freymueller of UAF, and M. Kasahara of Hokkaido University on deformation of Okmok Caldera in the Aleutians, by E. Gordeev of EMSD-Kamchatka, G. Yogodzinsky of U South Carolina and J. Lees of U North

Continued on page 6

Carolina, P. Kelemen of Woods Hole, and M. Kasahara on the slab “tear” and Aleutian-Kamchatka “corner” and its relation to arc chemistry, by J. Bourgeois of U Washington, V. Ponomareva of IVGG-Kamchatka, and P. Kyle of NM Inst of Mines and Technology on major Quaternary eruptions and tsunamis, and collaborative volcanological and petrological studies in Kamchatka by T. Churikova and B. Ivanov of IVGG-Kamchatka and P. Izbekov, J. Gardner, B. Browne and J. Eichelberger of UAF, among others. There were also discussions with university administrators on extending collaboration beyond geophysical monitoring and research to science education through cooperative agreements among the universities of Hokkaido, Kamchatka, and Alaska. The intent is to provide undergraduates and graduate students from Japan, Russia, and the US with a path for experiencing international science in a challenging environment, where the excitement of exploration and discovery are still common rewards.

Although there is much to learn, we already know enough to say that the North Pacific is the best place on Earth to study the interplay of subduction and magma genesis. This one swath of plate convergence varies from head-on to highly oblique subduction, from continental crustal to oceanic crustal arc substrate, from sediment-rich to sediment-starved subduction, from plate-locked to freely slipping subduction. It is also ground zero for important global social issues ranging from the generation of ocean-crossing tsunamis to the impact of volcanic ash on international air travel to the legacy of nuclear testing within a prolific international fishery.

The conference was sponsored by generous grants from the US Geological Survey (primarily through AVO), programs in the Office of International Science and Engineering and Division of Earth Sciences of the National Science Foundation, the UAF Geophysical Institute and International Arctic Research Center, and the International Association for Volcanology and Chemistry of Earth’s Interior. The steering committee consisted of B. Ivanov and E. Gordeev (Russia), M. Kasahara and M. Nakagawa (Japan), and J. Eichelberger (chair, USA). The next workshop in the series will be held in Petropavlovsk in 2004. Additional information can be obtained at www.avo.alaska.edu/kasp.

John Eichelberger and Jon Dehn
UAF Geophysical Institute
Fairbanks, Alaska.

IAVCEI is pleased to announce a new life member:

Professor Hayashi Shintaro.

Please consider becoming a life member — it is good for you and for IAVCEI.

Penrose Conference and IAVCEI Workshop on Neogene-Quaternary Continental Margin

Over the past 20 years an increasing number of scientific papers focusing on continental margin volcanic arcs have been published in journals on volcanology and igneous petrology. Mexico is a supreme location to study such volcanism, because of the long-lasting subduction processes off of western Mexico, since at least from the Cretaceous, and includes Mesozoic accreted terranes, Paleogene Sierra Madre Occidental volcanic arc, and the Neogene Mexican Volcanic Belt. Most studies have been focused in the volcanic rocks of the well exposed Mexican Volcanic Belt, that crosses Mexico from coast to coast between parallels 19° and 21°. The time has come for a general review of what is known about this volcanism, and to discuss the types of studies that are needed in the future. For this purpose, we are organizing a Penrose Conference on the Neogene continental margin volcanism and an IAVCEI (International Association of Volcanology and Chemistry of the Earth’s Interior) workshop. The Penrose Conference will be held in the vicinity of Popocatepetl volcano, at Metepec, Puebla, Mexico, and will include a 2-day field trip to the active Popocatepetl volcano. During the 5 days following, an IAVCEI workshop will be held as field trips to other locations within the Mexican Volcanic Belt, where discussions on calderas, cinder cone fields, debris avalanche deposits, strato-volcanoes, and related volcanism would continue. The GSA Penrose Conference will be January 12-16, 2004, and the IAVCEI workshop will be January 18-22, 2004. You can register for either one or both of the events.

Penrose Conference — \$480 registration fee
IAVCEI Workshop — \$400 registration fee

Deadlines Penrose Conference:

Pre-registration form submission: September 1, 2003
Abstract Submission: September 15, 2003
Registration Payment: November 1, 2003

Deadline Workshop:

Pre-registration form submission: September 1, 2003
Registration Payment: November 1, 2003

At present, the Registration Form is **not** ready.

Information concerning the meetings can be found at <http://tepetl.igeofcu.unam.mx/penrose/index.html> or through any of the conveners:

Gerardo J. Aguirre-Díaz
Centro de Geociencias, Campus UNAM-Juriquilla
Querétaro, Querétaro CP 76230, México
Tel: (5) 5623 4116, ext 107, (442) 238 1116, ext 107
Fax: (5) 5623 4101, (442) 238 1101
Mensajes: (5) 5623 4102, (442) 238 1102
ger@geociencias.unam.mx

José Luis Macías
Departamento de Vulcanología del Instituto de Geofísica, UNAM, Circuito Exterior, Ciudad Universitaria, México, D.F., 04510, México.
E-mail: macias@tonatiuh.igeofcu.unam.mx

Claus Siebe
Departamento de Vulcanología del Instituto de Geofísica, UNAM, Circuito Exterior, Ciudad Universitaria, México, D.F., 04510, México.
E-mail: csiebe@tonatiuh.igeofcu.unam.mx

Focus International for Disaster Reduction on Vulnerability November 17 to the Surroundings of Villarica Volcano

In order to explain and promote disaster reduction to an broadening cross-section of audiences worldwide, the United Nations Inter-Agency Secretariat for the International Strategy for Disasters Reduction (ISDR) organises public awareness campaigns – entitled World Disasters Reduction Campaigns – on a new theme every year. Last year the chosen theme was « Disaster Reduction for Sustainable Mountain Development »

No community is immune from the threat of natural disasters, but mountain communities are particularly vulnerable. Winds seem to blow harder and snowfalls are more perilous in the high passes, while avalanches can wipe out whole villages. Heavy rains can wash away fields, long droughts can spell starvation. Earthquakes can send hillsides tumbling, volcanic eruptions can make thousands homeless. Altitude, steepness, and vulnerability to pollution and climate change put mountain people at risk more than ever. Poverty forces people to build homes on hazard-prone slopes, and demographic pressures pushes them to settle at the bases of volcanoes, and other seismically active areas.

Several initiatives within this UN-umbrella partner initiative highlight the way ahead and how to live with risk, through risk mapping, education and mountain development. A brochure on « Disaster Reduction for Sustainable Mountain development », published by the UN/ISDR Secretariat, offers information on the issues at hand, as well as concrete

examples of disaster reduction solutions already in practice in mountain areas worldwide. The UN/ISDR Secretariat has also produced in collaboration with the European Volcanological Society (SVE) a children's booklet on volcanoes and volcanic risk reduction.

This new booklet entitled « Volcano Daily » –Technical text of this publication is by Henry Gaudru (European Volcanological Society) member of the IAVCEI (International Association of Volcanology and Chemistry of the Earth's Interior) and adviser on volcanic risks for ISDR.

Volcano Daily is intended to enlighten young people around the world of the dangers that volcanoes present and, in particular, of measures that can be taken to prevent and protect against volcanic disaster.

This subject is a part of the information campaign on disaster reduction for sustainable mountain development, which accompanied the celebration by the United Nations of the International Year of Mountains 2002.

FREE COPIES (in french, english, or spanish) are available at: United Nations, ISDR Secretariat,

Palais des Nations, 1211 Geneva 10, Switzerland

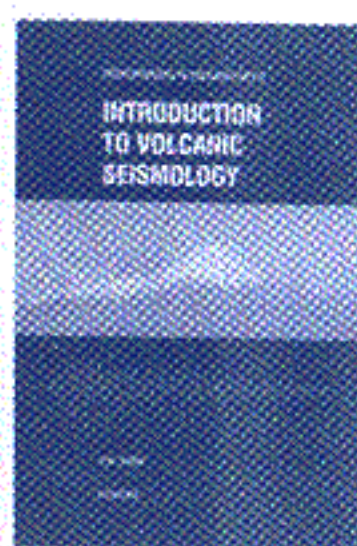
Fax : +41-22-917-0563

Email : isdr@un.org

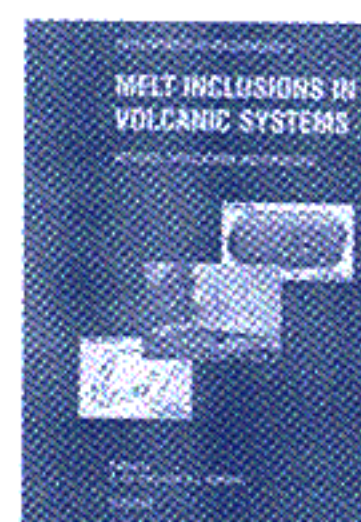
Further details : HGaudruSVE@compuserve.com

Or SVE website : <http://www.sveurop.org>

30% discount for IAVCEI members on the following titles in the series *Developments in Volcanology*



Introduction to Volcanic Seismology
Developments in Volcanology, 6
Publication June 2003
by **V. Zobin**



Melt Inclusions in Volcanic Systems
Developments in Volcanology, 5
Publication May 2003
Edited by **B. de Vivo, R.J. Bodnar**

From Magma to Tephra
Developments in Volcanology, 4
Publication Year 1998
Paperback published in 2001
Edited by **A. Freundt, M. Rosi**



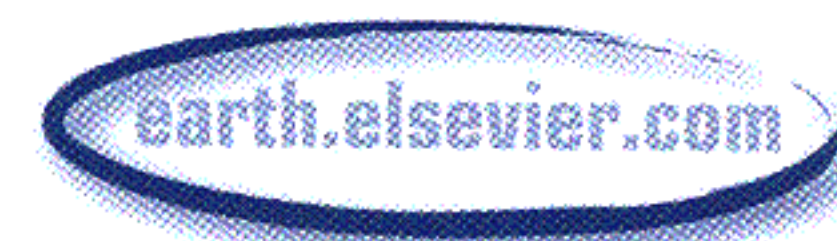
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ALSO OF INTEREST:

Geochemical and Tectonic Evolution of Arc-Backarc Hydrothermal Systems
Developments in Geochemistry, 8
by **N. Shikazono**

Treatise on Geochemistry
Reference Work, 10 Volume set

For more details see:



IAVCEI-IUGG 2003 Auxiliary Program

Below is a list of IAVCEI Commission and Executive Committee meetings to be held at IUGG in Sapporo.

Commission meetings are planned to begin at the end of the most closely related scientific sessions and will be held in the same rooms. 18:00 is a placeholder time and meetings may be slightly earlier or later depending on the availability of the rooms.

6/29	IUGG Exec Comm (Sparks and McNutt)	
6/30	LIPS Commission	18:00
	Gases Commission	18:00
	IAVCEI Exec Comm	18:00-22:00
7/1	VEA Commission	18:00
	IUGG Council (Sparks)	
7/2	IUGG Welcome party	
7/3	IUGG Exec Comm (Sparks and McNutt)	
	Volc Seis Commission	18:00
	Heat Flow Commission	18:30
7/4	IAVCEI General meeting (new officers take over)	17:00
	IAVCEI dinner at Sapporo	
	Beer Garden	19:30

Future IAVCEI/Volcanology Meetings

- IUGG General Assembly
Sapporo, Japan
June 30 - July 11, 2003; contact: iugg2003@ics-inc.co.jp
- State-of-the-Arc
Cascades, Portland, Oregon, August 16-21, 2003;
contact: leeman@ruf.rice.edu
- Cities on Volcanoes 3
Hawaii, July 14-18, 2003;
contact: <http://www.uhh.hawaii.edu/~cov3>
- Third International Field Workshop
Kamchatka
August 24-27, 2003; contact ponomoreva@geo.tv-sign.ru
- Penrose Conference, PLUME IV
Iceland, August 25-29, 2003; contact foulger@usgs.gov
- International Geological Congress
Florence, Italy
August 16-26, 2004; contact: www.iugs.org
- IAVCEI 2004 General Assembly
Pucon, Chile
November 14-19, 2004; contact: hmoreno@chilesat.net
- IAVCEI 2005 China
Continental Basalt Volcanism
(tentative)
- Additional information is available on the IAVCEI Web site www.iavcei.org

Executive Committee 1999-2003

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Vice President	Joerg Keller (Ger.)	Joerg.Keller@minpet.uni-freiburg.de
Vice President	Tadahide Ui (Jap.)	ui@ep.sci.hokudai.ac.jp
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	Bruce Houghton (NZ)	b.houghton@gns.cri.nz
	Jocelyn McPhie (Austr.)	J.McPhie@UTAS.EDU.AU
	Hugo Moreno (Chile)	hmoreno@chilesat.net
	Raden Sukhar (Indo.)	sukhyar@vsi.dpe.go.id
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Deputy Secretary-General	Jim Gardner (USA)	gardner@dino.gi.alaska.edu
Member Secretary	Caroline Giddings (Austr.)	members@iavcei.org

This issue was edited by Steve McNutt:
Secretary-General, IAVCEI
and Jim Gardner: Deputy Secretary General

Layout and design
by Marie Gilbert, Sheila Finch

IAVCEI Newsletter Regional Editors 2002-2003

Region	Editor	E-mail
Asia	Raden Sukhar	sukhyar@bsi.dpe.gd.id
South/Central America	Hugo Moreno	hmoreno@chilesat.net
Europe	Hazel Rymer	H.Rymer@open.ac.uk
North America	Jim Gardner	gardner@gi.alaska.edu
Oceania	Jocelyn McPhie	J.McPhie@utas.edu.au