

Newsletter of the Volcanology and Igneous Petrology Division  
Geological Association of Canada

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#40

May 1996

### EDITOR UP FRONT

I must confess to a most depressed feeling as I look at the total sum of responses to our requests for nominations for the various executive positions in the Division. There were times when I almost bowed to probable membership opinion by printing this little missive on absorbent paper to facilitate its (re-?)use as kitty litter. Hope -and a certain sadism- have led me to retaining the hard copy medium.....

In short, not **ONE** letter - no that's not quite true. We did get one nomination form back, bearing four names who were not division members and a fifth who had already undertaken not to run again..... Somewhat in mitigation, I will note that editing of *Ash Fall* is probably best left in a university, government, or other setting with access to facilities which can process the volume of material coming off the net. So I was especially pleased to get a confirmation from Ned Chown of his very courteous E-mail offer, to take over our modest finances and ultimately *Ash Fall*. Let me add his name to the wall of fame, as exempt from persecution by yours truly; I can actually go looking for a job this summer. For the rest of you out there; not a terribly good return on the amount of trees we slaughtered. With the honourable exceptions of those who have served before and are serving now, *be ashamed of yourselves*.

This year's annual meeting is set for **12 noon on Wednesday, May 29th in Room 54-544, University Centre at the University of Manitoba**, as usual, at the GAC/MAC. Pizza has already been ordered. Come and congratulate this year's winner of the **Career Achievement Award** and exercise your franchise in voting in a new exec. Absentees will probably be volunteered. The time has passed when we were due to field a slate of candidates to you for your approval at the Division's annual meeting. Accordingly the election at the annual meeting will be an open one, with nominations, including Ned's, being accepted from the floor. I'm not sure whether this jives with the niceties of our Division bylaws; on the flip side, I see no other choice.

Lastly, you will note that this issue of *Ash Fall* is heavily biased towards information about books, conferences, Web sites etc and little on volcanic activity; I'm leaving this till next issue. This is not so much a punishment as a lack of space; I thought I'd get the "perishable" stuff to you first. The next issue will contain the minutes of the annual meeting, together with an update on volcanic activity, including Montserrat. Until then, look forward to seeing (some of) you at GAC/MAC and, of course, receiving your future articles....

**Paul@Ashfall+GEOLOG (pmetcalfe@gsc.emr.ca ; (604)666-1129/988-3541)**

## NEWS

### IAVCEI NOW HAS INDIVIDUAL MEMBERSHIPS!

Beginning in 1996, individuals can become members in the International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI). Membership includes:

Automatic mailing of IAVCEI conference circulars and registration forms.

Receipt of IAVCEI News.

Discounted cost of Bulletin of Volcanology

Name and address added to the membership list and IAVCEI home page

Individual postal voting rights for elections and changes to IAVCEI Statutes and By-Laws (assuming that your country is a member of IUGG)

The membership application form is on the World Wide Web at:

**<http://xrftmac.lanl.gov/HEIKEN/one/membership>**

For complete information on IAVCEI and its commissions, look at the IAVCEI home page at:

**[http://xrftmac.lanl.gov/Heiken/IAVCEI\\_home\\_page](http://xrftmac.lanl.gov/Heiken/IAVCEI_home_page)**

For those who do not have web access, please ask for an application form by writing or faxing:

**IAVCEI MEMBERSHIP, ACTS**

**GPO Box 2200, ACT 2601, Canberra, Australia**

**Fax: 61-6-257- 3256**

***Grant Heiken ([heiken@lanl.gov](mailto:heiken@lanl.gov))***

***Los Alamos National Laboratory***

### BULL. VOLC. MANUSCRIPT SUBMISSION POLICY CHANGE

Last year the editors of Bulletin of Volcanology decided that a new policy would be used for manuscript submissions. The previous free-for-all policy, whereby authors picked any Editor they wanted, did not work well and is no longer in effect. Instead, the principal author is to fax or E-mail only the title, number of pages, abstract, acknowledgements, and introduction or conclusions to:

**Don Swanson**

**[donswan@forsterite.geology.washington.edu](mailto:donswan@forsterite.geology.washington.edu)**

**Fax: 1-206-553-5587 OR 1-206-553-8350.**

Authors should also include a fax number and E-mail address. This will make it possible for the Executive Editor to find a suitable editor quickly without the author wasting time (and postage) by mailing an entire package.

***Don Swanson***

***Incoming Executive Editor, Bulletin of Volcanology***

### E-MAIL ADDRESS LIST

Five months ago Jon Dehn (Geological Survey of Japan) started a page listing the names, specialties, E-mail addresses and home page URLs of volcanologists and volcanophiles on the Internet. He asked those of you who were interested to drop him a line giving permission to post your addresses. It has become a moderate success, so far ca. 300 have answered and that page is the 4th most popular of the Web Site. Recently Jon removed the names of those who hadn't answered to minimize download time, but everyone is still welcome! The page will continue to be updated on a weekly basis. For those who responded, thanks and you might want to check your entry, a few typos have appeared (sorry). For those of you haven't responded, it's never too late; the list is at:

**<http://www.aist.go.jp/GSJJ/~jdehn/vnews/vlist1.htm>**

Jon Dehn (fax: +81 (11) 709-1817; E-mail: [jdehn@gsj.go.jp](mailto:jdehn@gsj.go.jp))

Geological Survey of Japan, Hokkaido Branch

## **NATIONAL GEOGRAPHIC TELEVISION SPECIAL ON VOLCANOES - HELP**

National Geographic Television is currently developing a one-hour television special on volcanoes to air on network television in early 1998. They are currently seeking help from scientists, filmmakers, photographers, journalists, and others. In the Geographic tradition, the film will concentrate on the power and beauty of volcanoes. Aside from dealing with recent work in volcanology and geology, Geographic also hopes to tell the stories of several individuals who have exciting, unique, and previously untold stories and amateur video footage, news footage that describe the destructive power of an eruption. They are especially interested in the recent eruptions at Rabaul and Ruapehu, also Montserrat, as well as advances in eruption-prediction technology and warning systems. Contact **Chris Tedeschi, National Geographic Television, 4370 Tujunga Avenue, Suite 300, Studio City, CA 91604; ph (818) 506-8300; fx (818) 506-8200; [tedeschi@hsc.usc.edu](mailto:tedeschi@hsc.usc.edu)**

## **INTERNATIONAL SPACE STATION EARTH OBSERVATIONAL CAPABILITIES**

The International Space Station (ISS) will include a number of capabilities that will allow observations of the terrestrial environment, including volcanic activity. These capabilities will include attach points on the Station truss to accommodate external Earth observations payloads, and a nadir pointing window that will support both tended and untended Earth observations in a shirt sleeve environment. Plans are underway to procure and install, prior to launch, an upgraded window. Images of ISS conceptual designs as well as assembly sequences and other data are available on the World Wide Web at <http://issa-www.jsc.nasa.gov/>

At present, there is no formal Space Station Earth Observations Program, but the authors would like to gauge the interest of the volcanologic community in the use of Space Station observational capabilities. Members of the community can contact Dean Eppler in the International Space Station Research Management Office by e-mail at [depler@ssf4.jsc.nasa.gov](mailto:depler@ssf4.jsc.nasa.gov), by phone at (713) 244-8216 or by fax at (713) 244-8958. We welcome your input and suggestions.

*Dean Eppler*

## **NEW BOOKS**

### **PARICUTIN GUIDEBOOK**

Rodriguez, S., Komorowski, J.C., Jimenez, V. and Siebe, C.

50th Anniversary Commemorative Edition, UNAM. Guidebook for a geologic excursion to Paricutin volcano, State of Michoacan Spanish and English, softbound with 22 Figs. 8 colour photographs, 47 pages. Price 10 U.S. \$; includes 1st class mail within the U.S.

Available from: Claus Siebe, Instituto de Geofisica, UNAM, Ciudad Universitaria, C.P. 04510 Coyoacan, Mexico, D.F., MEXICO

### **ISLAND BORN OF FIRE: VOLCANO PITON DE LA FOURNAISE**

Written and illustrated by R. B. Trombley, DeVRY Institute of Technology

ISBN 0-07-065326-7; McGraw-Hill Publishing; Special price: \$29.95

### **MONOGRAPH ON REUNION ISLAND VOLCANISM**

In 1990, the Centre for Volcanological Research (Centre de Recherches Volcanologiques, CNRS-Université Blaise Pascal) in Clermont-Ferrand published a Monograph on Reunion Island volcanism comprising 16 contributions by 23 authors. A limited number of spare copies are still available and we would be willing to distribute them free to scientists involved in the study of similar sites or topics. The text is French but abstracts and figure captions have English translations. Various topics are treated : lithosphere structure, internal structure, submarine and subaerial morphologies and structures, chronology, dynamics of Piton de la Fournaise, ...

Contact Marie-Claude Kornprobst by E-mail: [crv@opgc.univ-bpclermont.fr](mailto:crv@opgc.univ-bpclermont.fr)

## **'PUMICE AND ASH'; AN ACCOUNT OF THE 1994 RABAU VOLCANIC ERUPTIONS**

By Sue Lauer (formerly of Rabaul International School)

Soft Cover 80 Pages, glossy; Cost: \$AUD 34.95 including postage and handling.

First published book with written accounts by eye-witness observers of the 1994 Rabaul volcanic eruptions (Papua New Guinea). Over 80 full colour photographs taken by Nicholas Lauer (formerly of Rabaul Volcano Observatory), covering the very first moments and continuing activity until April 1995. Includes satellite images, maps, newspaper extracts, journal entries and more.

Web Site: <http://www.nor.com.au/media/cpdres/>

**CPD Resources, PO Box 4037, Lismore NSW 2480, AUSTRALIA**

**Phone: (066) 24 5655 from overseas dial +61 66 24 5655**

**Fax: (066) 24 5656 from overseas dial +61 66 24 5656**

**E-mail: [cpdres@nor.com.au](mailto:cpdres@nor.com.au)**

## **NEOGENE AND RELATED MAGMATISM IN THE CARPATHO-PANNONIAN REGION**

*Acta Vulcanologica* - Special issue - Volume 7/2 (1995)

Edited by H. Downes & O. Vaselli

a special issue on the magmatism in the Carpatho-Pannonian area.

WWW: URL: <http://www.dst.unipi.it/index.html>

## **MAUNA LOA REVEALED: STRUCTURE, COMPOSITION, HISTORY, AND HAZARDS**

J. M. Rhodes, and John P. Lockwood, Editors

Geophysical Monograph, Volume 92, 1995. Approx. 360 pages, hardbound, ISBN 0-87590-049-6, AGU code GM0920496. List price - \$70.00 AGU; member price - \$49.00

Mauna Loa is the largest and among the most productive of the world's volcanoes. Due to its potential as a laboratory, it has been selected as one of the 14 volcanoes in the Decade Volcano Project, started in an effort to better understand (*sic*) and reduce the risks associated with volcanoes. The volume covers Mauna Loa's: geologic and exploratory history, submarine geology, structure, petrologic and geochemical characteristics, hazards to surrounding areas, and its changing landscape. It also elaborates on research methods such as: remote sensing, the use of gravity, seismic and deformational studies for eruption monitoring and forecasting.

North America:	Europe:	Other:
Ph.: (800) 966-2481	(49) 5556-1440	(202) 462-6900
Fax: (202) 328-0566	(49) 5556-4709	(202) 328-0566
E-Mail: <a href="mailto:cust_ser@kosmos.agu.org">cust_ser@kosmos.agu.org</a>	<a href="mailto:agu@linux1.mpae.gwdg.de">agu@linux1.mpae.gwdg.de</a>	<a href="mailto:cust_ser@kosmos.agu.org">cust_ser@kosmos.agu.org</a>
World Wide Web: <a href="http://www.agu.org">http://www.agu.org</a>		

## **MAGNETIC STUFF**

### **THE MOUNT ST. HELENS VOLCANO: FIRE & LIFE**

A videodisc including 3,000 slides and 20 minutes of video clips about Mount St. Helens, the eruption (before, during, and after), the land, animals, plants and people of the area, is available from:

**Bullfrog Films**

**P.O. Box 149**

**Oley, PA 19547**

**Ph.: (800) 543-3764**

**fax (610) 370-1978**

**E-mail: [bullfrog@igc.apc.org](mailto:bullfrog@igc.apc.org)**

Price: \$249 + \$5.00 shipping and handling.

## **VIDEOTAPE OF 1995 FOGO ERUPTION**

Ref.: SVE open-file 095-Af.01 - Fogo eruption - Volcanoes of the World Document, 1996; © SVE

The video tape about the eruption of the Fogo volcano (Cape Verde) in April 1995 is now available as a 45 mn VHS copy video-film from Hi8, direct sound only, filmed by Henry Gaudru (SVE-SVG). During this spectacular eruption, a team from SVE-SVG of Geneva filmed five days (14th-19th April) the eruptive activity: Strombolian explosions, lava fountains, lava flows and gas-flame combustion.

People interested in obtaining a VHS PAL copy (price 80 USD) or NTSC copy (on special request, 100USD), please contact:

**H.Gaudru**  
**101626.3303@compuserve.com**

**OR: European Volcanological Society**  
**C.P.1, 1211 Geneva 17 - Switzerland**  
**Fax :41.22.759.21.05**

## **FOR THE WEBSTERS EPSL ONLINE LAUNCHED**

EPSL ONLINE, the first fully fledged online Journal in the Earth Sciences, is the online version of Earth and Planetary Science Letters, and offers desktop access to full text articles of EPSL; everything published in the parent journal since January 1996, and will be updated monthly.

EPSL ONLINE provides its subscribers with: direct access to the full abstracts of referenced papers, the option to print full papers including figures in typeset quality, access to peer reviewed background data sets made available by authors, sophisticated search and browse options for full-text articles, the facility to have colour figures published online in colour, with no extra charges to authors, an author index including e-mail addresses, a keyword thesaurus and a who's who directory.

It is possible to try EPSL ONLINE for free! The free trial of EPSL ONLINE contains three sample articles to give an indication of what to expect:

**<http://www.elsevier.nl/locate/epsl>**  
**<http://www.elsevier.com/locate/epsl> (mirror site USA)**

## **VESUVIUS DECADE VOLCANO WWW PAGES**

Vesuvio (Vesuvius) is one of fifteen Decade Volcanoes, well studied and its eruptive history well documented, both from reconstructions based on intense field and laboratory work, and in countless contemporaneous sources. The last several months have been filled with gathering and compiling an on-line resource concerning Vesuvio that might serve as a nucleus for a more sophisticated "Vesuvio Decade Volcano" site where all relevant information is united and presented in a synthetic way. These pages, at:

Geomar, Germany (**<http://www.geomar.de/personal/bbehncke/VESUVIO.html>**)  
and MTU (mirror: **<http://www.geo.mtu.edu/~boris/VESUVIO.html>**)

are not necessarily complete. We appeal to everyone who has worked or is working on Vesuvio to help construct this site. Since there are some conflicting views concerning particular issues, they should all be regarded and be open to discussion.

This growing resource is made available via two sites. One in Central Europe (now with faster connectivity), the other a mirror at the MTU Volcanoes Page. This resource would not be a part of Behncke's pages or the MTU pages, but authored by all who contribute. Anyone who would like to contribute material (text, maps, pictures or images) or provide links to more Vesuvio resources are encouraged to do so. All materials will be properly accredited to the contributors. Suggestions on presentation and writing style are also welcome. All contributions and inquiries to: **[bbehncke@geomar.de](mailto:bbehncke@geomar.de)** Also check out the VESUVIUS Home page at **<http://tribeca.ios.com/~dobran>**

## **VOLCANIC TREMOR BIBLIOGRAPHY DATABASE**

This is an announcement for a bibliography database on the World Wide Web, at:

**<http://www.giseis.alaska.edu/dbases/dbaselead.html>**

This site can also be reached through the Alaska Volcano Observatory Home Page, at **<http://www.giseis.alaska.edu>**. The bibliography database contains over 700 published references related to volcanic tremor. It is available in various formats, one of which should import into your favourite database or text editor software. The database format allows for searches under keywords, authors, volcanoes, and other fields which can be separately specified. If you do not have access to the World Wide Web, the bibliography database can be obtained through anonymous ftp at: **[giseis.alaska.edu/pub/dbftp](ftp://giseis.alaska.edu/pub/dbftp)**

***Stephen R. McNutt and Milton Garces ([milton@giseis.alaska.edu](mailto:milton@giseis.alaska.edu))***

## **TEXT-BASED INTERFACE TO STROMBOLI ON-LINE**

There are still people around with text-oriented access to the Net, and we don't think they should remain denied the privilege of using STROMBOLI ONLINE. We are therefore happy to announce the availability of a text-based interface to our SOL site. The instructions are as follows: **telnet to [ezinfo.ethz.ch](tel://ezinfo.ethz.ch)**

**login as: GUEST/GAST/OSPITE**

***(for English/German/Italian version, respectively)***

**On the first menu type EXTORG to go to External Organizations**

**Type VOLCANO to access STROMBOLI ONLINE**

We remind lucky owners of graphical Web browsers that the URLs for SOL are:

ENGLISH **<http://www.ezinfo.ethz.ch/ezinfo/volcano/strombolihomee.html>**

GERMAN **<http://www.ezinfo.ethz.ch/ezinfo/volcano/strombolihome.html>**

ITALIAN **<http://www.ezinfo.ethz.ch/ezinfo/volcano/strombolihomei.html>**

***Juerg Alean and Roberto Carniel***

## **CONFERENCES, SYMPOSIA AND FIELD TRIPS**

### **IAVCEI GENERAL ASSEMBLY**

**January 19-24, 1997, Puerto Vallarta, Mexico**

**Abstract deadline: September 1, 1996.**

**<http://charro.igeofcu.unam.mx/iavcei97/iavcei97.html>**

## **COMMISSION ON EXPLOSIVE VOLCANISM**

**(1) Eruption of magma from shallow chambers.** Magma withdrawal and mixing; degassing of volatiles; magma ascent in conduits; feeding-system geometry; magmatic/hydromagmatic fragmentation; hydrothermal systems and their interaction with eruptive dynamics; factors controlling the behaviour of eruption columns; evolution of eruptive behaviour; reservoir parameters and style of eruption. Convener: Mauro Rosi, Dip. di Scienze della Terra, Universita di Pisa, Via Santa Maria 53, I-56126 Pisa, Italy; phone: (39) 50 847 212; fax: (39) 50 500 675

E-mail: [rosi@dst.unipi.it](mailto:rosi@dst.unipi.it)

**(2) Volcanic particle flows** Structure and distribution of particulate volcanic flow deposits; criteria to distinguish resulting deposits; transport processes of particulate volcanic flows; transitions in flow behaviour; eruption parameters generating various flows; the roles of topography and water; the influence of transport temperature; particulate flows on land and under water. Convener: Armin Freundt, GEOMAR, Wischhofstr. 1-3, D-24148 Kiel, Germany phone: (49) 431-7202 252; fax: (49) 431-7202 217; E-mail: [afreundt@geomar.de](mailto:afreundt@geomar.de)

**(3) Collapse calderas and large-volume eruptions in Latin-America** Tectonic setting of calderas; exploring the internal structure of calderas; regional tectonics versus volcano-tectonics; exploring the evolution of their underlying reservoirs; processes and controls on caldera subsidence; the geometry of eruptive vent systems; calderas on land and in the sea; caldera-related volcanic deposits and intrusive rocks; large hydrothermal systems. Convenor: Joan Martí, Institute of Earth Sciences, CSIC, c/ Lluís Solé Sabarís s/n, 08028 Barcelona (Spain); phone: (34-3) 330 27 16; fax: (34-3) 411 00 22; E-mail joan.marti@ija.csic.es

### **HIGH-LEVEL SILICIC MAGMATISM AND RELATED HYDROTHERMAL SYSTEMS**

Anatomy and textural development of high-level granitic systems; physical and chemical properties of volatile-rich silicic melts and magmas; degassing and evolution of magma-hydrothermal systems; pegmatite-aplite systems; granite-related hydrothermal mineralization; degassing of high-level magma chambers and the atmosphere. Convenors: R. Seltmann, Geological Survey of Canada, 601 Booth Street, Ottawa, Ontario, K1A 0E8, Canada, E-mail: seltm@gsc.emr.ca, Fax (1) 613 996 9820; B. Lehmann, Technische Universität, Clausthal, Adolph-Roemer-Str. 2A, 38678 Clausthal-Zellerfeld, Germany, lehmann@immr.tu-clausthal.de, Fax (49) 5323 72 2321; J. Lowenstern, USGS Volcano Hazards Team, Mail Stop 910, 345 Middlefield Road, Menlo Park, CA 94025, USA, E-mail: jlwnstrn@usgs.gov, Fax (1) 415 329 5203

### **REMOTE SENSING OF VOLCANOES ON EARTH AND THE PLANETS**

Large-volume terrestrial and extra-terrestrial volcanism: theoretical predictions and comparative studies, recent results from planetary missions - what can they tell us about volcanism?, planetary data: availability, usage, and limitations, current and future planetary missions: what can we expect to learn about extra-terrestrial volcanism in the next few years?, topographic and deformation mapping of volcanoes, atmospheric emissions on Earth and the planets, thermal measurements of active flows on Earth and Io, volcanic hazard monitoring, geologic mapping using multispectral images, observations of marine volcanism using satellite altimetry. Convenors: Rosaly Lopes-Gautier, Jet Propulsion Laboratory, Mail Stop 183-601, 4800 Oak Grove Drive, Pasadena, CA 91109, USA, rlopes@jpluvs.jpl.nasa.gov, phone: (818)393-0996 / 393-4584, fax: (818)393-4530; Peter Mouginiis-Mark, Hawaii Institute of Geophysics and Planetology, University of Hawaii, Honolulu, Hawaii 96822, USA, pmm@kahana.pg.d.hawaii.edu, phone: (808)956-3147, fax: (808)956-6322; Adriana Ocampo, Jet Propulsion Laboratory, Mail Stop 183-601, 4800 Oak Grove Drive, Pasadena, CA 91109, USA, aocampo@jpluvs.jpl.nasa.gov, phone: (818)393-1080, fax: (818)393-4530

### **VOLCANIC ERUPTIONS AND ARCHAEOLOGY**

This special symposium will focus on the effects that past volcanic eruptions had on prehistoric and historic societies and will be geared towards the mitigation of volcanic risk by a better understanding of the past by creating a forum which brings together archaeologists as well as volcanologists in order to close existing gaps in our knowledge of volcanic eruptions and their impact on past societies. Recent experiences at Popocatepetl volcano have shown that these types of studies might be very valuable in understanding future eruptions and their possible impact.

Convenors:

Claus Siebe, Instituto de Geofísica, UNAM, Ciudad Universitaria, C.P. 04510 Coyoacán, Mexico, D.F., Mexico, Tel: (525) 6-22-41-19 and 6-22-41-46, FAX: 525-550-2486, E-mail: csiebe@tonatiuh.igeofcu.unam.mx; C. Dan Miller, U.S. Geological Survey, Cascades Volcano Observatory, 5400 MacArthur Blvd., Vancouver, WA. 98661, U.S.A., (360) 696-7885 (office), (360) 696-7866 (fax), E-mail: cdmiller@pwavan.wr.usgs.gov

# EUROPEAN SEISMOLOGICAL COMMISSION XXV GENERAL ASSEMBLY

Reykjavik, Iceland: September 9th-14th, 1996

Details: ESC XXV General Assembly, The Icelandic Meteorological Office,  
Bustadavegur 9, 150 Reykjavik, Iceland.  
Fax: +354 552 8121; Email: [esc96@vedur.is](mailto:esc96@vedur.is)  
(<http://ui.nmh.ac.uk/esc.html> and <http://www.vedur.is/esc/html>)

## SESSIONS AND SYMPOSIA

### SS-1: Seismicity, Deformation, and Structure of Volcanoes (September 9th)

Convenors: Freysteinn Sigmundsson ([fs@norvol.hi.is](mailto:fs@norvol.hi.is)); Bill McGuire ([w.mcguire@ucl.ac.uk](mailto:w.mcguire@ucl.ac.uk)); Rolf Schick ([rs@zeus.geologie.uni-stuttgart.de](mailto:rs@zeus.geologie.uni-stuttgart.de))

To promote multidisciplinary discussion about structure and internal processes of volcanoes.

### SS-3: Seismicity and Structure of Ridges

Convenors: Pall Einarsson, Iceland, and Hideki Shimamura, Japan.

Seismicity of active mid-ocean ridges and its relation to tectonic and magmatic processes; crustal structure and crustal formation at constructive plate boundaries; faulting and fracture pattern revealed by mapping of the ocean floor.

### SS-4: Hot Spots: Mantle Structure and Processes

Convenors: Ingi Th. Bjarnason, Iceland, and R. White, UK.

All basic fields of geoscience on mantle hot spots; hot spots in general, but some emphasis naturally on Iceland.

## FIELD TRIPS

### A1 Large Fissure Eruptions of the Eastern Rift Zone.

A three day pre-conference trip to the plate boundary areas in south- central Iceland, the source areas of recent major basaltic fissure eruptions (e.g. Laki 1783).

Trip leader: Gudrun Larsen, University of Iceland.

### A2 Tjarnes Fracture Zone, Northern Rift Zone and the Krafla Volcanic System.

A three day post-conference trip to the plate boundary areas in north Iceland. Highlights are the transform fault at Husavik, faulting structures at a rift-transform junction, and rifting and volcanic products of the Krafla rifting episode 1975-1984.

Trip leader: Pall Einarsson, University of Iceland.

### B1 South Iceland Seismic Zone.

A one day trip to the transform zone of south Iceland, a zone of historic destructive earthquakes and bookshelf faulting. Seismic hazards in Selfoss, strike-slip faults of the 1896 earthquakes in Skeid, a visit to the SIL-system Saurbaer seismic station, Hekla Volcano exhibit, 1912 faults at Selsund.

Trip leader: Pall Einarsson, University of Iceland.

### B2 Reykjanes Peninsula Oblique Rift, Tectonism and Volcanism.

A one day trip to the plate boundary where the Mid-Atlantic Ridge goes ashore. Stapafell pillow lavas, Reykjanes fissure swarm, normal faults, eruptive fissures, dykes, strike-slip faults, Svartsengi geothermal power station, Krisuvik geothermal area, Graenavatn maar, Hrutagja shield volcano.

Trip leader: Pall Imsland, University of Iceland.

## SUMMER SCHOOL ON OCEAN CRUST AND OPHIOLITES

Iceland, 23 -31 August 1996

The summer school will offer a review of our present understanding on deep mantle and crustal processes during ocean ridge formation as constrained by available knowledge on active oceanic ridges and ophiolites. The venue is Kirkjubaejarklaustur, a small village in SE Iceland, favourably located for short excursions to the active rift zone to the west and the deeply (1-1.5 km) eroded Tertiary crust to the east. The village is flanked on one side by thick subaquatic hyaloclastite formations and on the other by the two largest lava flows on Earth in historic times.

European postgraduates and postdocs, with active interest in ocean ridge or ophiolite related studies, are invited to apply. Applications containing a curriculum vitae and reasons for active interest should be sent before June 1st 1996:

**Karl Gronvold**

**Nordic Volcanoogical Institute, Reykjavik, Iceland**

**Fax: +354 562 9767 E-mail [karl@norvol.hi.is](mailto:karl@norvol.hi.is)**

It is expected, but not obligatory, that participants prepare a poster describing their research project. Title of poster should be included in the application. It is anticipated that travel and subsistence of participants will be fully covered by the sponsors. Further information: <http://www.norvol.hi.is/index.html>



## **IX INTL. COURSE ON VOLCANOLOGY AND VOLCANIC GEOPHYSICS**

**Canary Islands 23rd October - 12th November 1996**

**Organizer:** Departamento de Volcanologia, Museo Nacional de Ciencias Naturales, CSIC, España  
**Supporters:** UNESCO, IAVCEI, European Volcanological Programme (EVOP), European Science Foundation (ESF), European Center for Geodynamics and Seismology (ECGS), Spanish Ministry of Education and Research (MEC), Spanish National Council of Scientific Research (CSIC)  
**Duration:** Three weeks  
**Language:** Spanish (some lectures could be given in other European official languages)  
**Required:** Diploma in Earth Science

The Course will be devoted to two of the main aspects of volcanic risk: monitoring of volcanic activity and the management of risk maps. The theoretical lectures will take place in the "Casa de los Volcanes" (Lanzarote Island). A review of the different eruptive mechanisms will be given, especially the physical aspects of the phenomenon and its modelling. Different techniques for monitoring volcanic activity will be discussed, emphasizing the most innovative aspects of instrumental development. A third part will discuss volcanic risk, presenting methodologies for the generation and management of volcanic hazard & risk maps and various aspects of its, both in case of a crisis and dormant periods.

The last days of the Course will take place on Tenerife Island where field trips will show aspects of the recent research carried out in the projects "Teide European Laboratory Volcano" and "Teide Decade Volcano". Field trips have been planned so that they will show the most characteristic aspects of Canarian volcanism.

**Information:** **Dra. Alicia Garcia**  
Departamento de Volcanologia, Museo Nacional de Ciencias Naturales, CSIC  
Jose Gutierrez Abascal, 2, 28006 MADRID. Spain  
Tel: 34.1.4111328; Fax: 34.1.5644740; E-mail: mcnor72@pinar1.csic.es

## **AGU CHAPMAN CONFERENCE ON SHALLOW LEVEL PROCESSES IN OCEAN ISLAND MAGMATISM: DISTINGUISHING MANTLE AND CRUSTAL SIGNATURES**

**November 10th-16th, 1996, Tenerife, Canary Islands**

**Abstract Deadline:** July 16, 1996

**Pre-registration Deadline:** August 12, 1996

**Conveners:** **Wendy Bohrson**, Department of Geological Sciences, University of California, Santa Barbara, CA 93106, E-mail: bohrson@magic.geol.ucsb.edu, tel. 805-893-8782  
**Jon Davidson**, Department of Earth and Space Sciences, University of California, Los Angeles, CA 90024, E-mail: davidson@ess.ucla.edu, tel. 310-206-3042  
**John A. Wolff**, Department of Geology, University of Texas, Arlington, Texas, E-mail: wolff@albert.uta.edu, tel. 817-273-2989.

**Topics to be discussed:**

1. The state of the science in chemical geodynamics, as determined from studies of oceanic magmas.
2. The pressure-temperature-time constraints on ocean island magmatism.
3. The physical process of magma-crust interaction.
4. The geochemistry of magma interaction.

Applications for travel support can be obtained from the American Geophysical Union at the address below. Deadline for receipt of travel applications is July 16, 1996.

A camera-ready original and two copies of all abstracts must be submitted in standard AGU abstract format and mailed to the AGU address below. If you wish to submit your abstract using e-mail, contact the AGU Meetings Department.

**Future Information:** 202-462-6900 (in D.C. or outside North America) or 1-800-966-2481 (in North America); fax: 202-328-0566; E-mail: meetinginfo@kosmos.agu.org

## **CHAPMAN CONFERENCE ON CRATER LAKES, TERRESTRIAL DEGASSING AND HYPER-ACID FLUIDS IN THE ENVIRONMENT**

**4th official meeting of the IAVCEI Commission on Volcanic Lakes**

**5-9 September, 1996, The Lodge, Crater Lake, OR**

**Conveners:** **Johan C. Varekamp**: Earth & Environmental Sciences, Wesleyan University, Middletown CT 06459-0139; E-mail: jvarekamp@wesleyan.edu; Tel: (860) 685 2248; Fax: (860) 685 3651  
**Gary L. Rowe**: U.S.G.S., Water Resources Division, 975 West Third Avenue, Columbus OH 43212-3192; E-mail: glrowe@wrldmail.er.usgs.gov Tel: (614) 469 5553 x 133; Fax: (614) 469 5626

**PRELIMINARY ANNOUNCEMENT OF GSA FIELD TRIP**  
**SOLITARIO DOME, LACCOLITH, & CALDERA SYSTEM, TRANS-PECOS, TEXAS**  
**October 23rd (late afternoon) - October 27th (late afternoon flight to Denver)**

**Christopher Henry**, Nevada Bureau of Mines and Geology; 702-784-6691, [chenry@nbgm.unr.edu](mailto:chenry@nbgm.unr.edu);  
**William R. Muehlberger**, University of Texas at Austin; 512-471-4885, [wmuehl@mail.utexas.edu](mailto:wmuehl@mail.utexas.edu).  
Maximum: 28. Cost: \$375, includes lodging, meals, airfare El Paso - Denver

This field trip will examine the Solitario, a large, mid-Tertiary laccolith-caldera complex with a 16-km-diameter dome over which developed a 6x2-km caldera. This "laccocaldera" underwent a complex sequence of pre-doming sill, laccolith, and dike intrusion and concurrent volcanism; doming with emplacement of a main laccolith; ash-flow eruption and caldera collapse; intracaldera sedimentation and volcanism; and late intrusion. The Solitario evolved over an interval of approximately 1 Ma in three distinct pulses at 36.0, 35.4, and 35.0 Ma. The size, duration, and episodic activity of Solitario magmatism are more typical of large ash-flow calderas than of most previously described laccoliths.

The trip will briefly examine the small Christmas Mountains laccocaldera, parts of the Ouachita-Marathon and Laramide foldbelts, and late Cenozoic grabens of the southern part of the Rio Grande Rift. Two days will be spent on the structure and igneous geology of the dome and caldera. The trip will then look at the Chinati Mountains caldera during the return.

**VESUVIUS DECADE VOLCANO CEV-CMVD WORKSHOP**

**17-23 September 1996, Marad Hotel, Torre del Greco, Napoli.**

Coordinators: Roberto Santacroce, Mauro Rosi, Alessandro Sbrana and Raffaello Cioni Dipartimento di Scienze della Terra Università di Pisa; Lucia Civetta, Osservatorio Vesuviano Napoli.

Somma-Vesuvius is a moderate size composite central volcano consisting of an older, repeatedly collapsed structure, presently forming the hemicircular Monte Somma caldera, and of a more recent cone, Vesuvius, built inside the caldera. The lowermost lavas are not younger than 0.3-0.5 Ma: this age can be assumed as marking the onset of the volcanic activity in the area. Over the last 25,000 years Vesuvius has been characterized by extremely variable kinds of activity ranging from quiet lava emission and moderate strombolian explosions to catastrophic explosive plinian eruptions. The last eruption of Vesuvius occurred in 1944. However, Vesuvius must be regarded as one of the most dangerous volcano in the world because of highly variable eruptive behaviour. More than 700,000 people live on the slopes of the volcano and within 10 km radius from the summit crater, and the outskirts of Naples itself are not more than 15 km from the vent. The present congestion and urbanization of the area results in a situation of extremely high potential risk. Towns surrounding the volcano may require an evacuation of more than 600,000.

The field workshop will focus on representative depositional sequences of eruptions of each different magnitude occurred at Vesuvius. Discussion will focus on emplacement of pyroclastic deposits, eruption dynamics, the role of external fluids in conditioning the eruptive style as well as the role and relevance of the sequence of melt extraction from stratified magma chambers.

Day 1 Visit to the upper part, the 1944 crater and products, the Mount Somma caldera;

Day 2 Volcanic stratigraphy of the past 19,000 yr activity,

Day 3 Deposits of the plinian eruption of 19,000 ybp (Basal Pumice);

Day 4 deposits of the 79 AD plinian eruption;

Day 5 visit to the archaeological areas devastated by the 79 eruption;

Day 6 deposits of the 1631 eruption.

**Mauro Rosi**

**Dipartimento di Scienze della Terra Via S. Maria 53, 56126 Pisa Italy**

**(Fax 50-500675; Email [rosi@dst.unipi.it](mailto:rosi@dst.unipi.it))**

**1996 WESTERN PACIFIC GEOPHYSICS MEETING**

**July 23-27, 1996, Brisbane, Australia**

This meeting, organized similarly to AGU's annual meetings, is intended to serve the needs of geophysicists interested in studies in the western Pacific region, but papers on all related aspects of geophysical sciences are encouraged. Complete information on AGU's WWW Homepage (<http://www.agu.org>) and in the February 6th and 20th issues of EOS.

Special sessions related to your section:

**V01 Living With Large Eruptions: Lessons From Recent Volcanic Events**

Convener: Wally Johnson, Australian Geological Survey Organization, GPO Box 378, Canberra, ACT 2601, Australia, tel: 61-6-249 9377, fax: 61-6-2499983, e-mail: [wjohnson@agso.gov.au](mailto:wjohnson@agso.gov.au)

**V02 Magmatic Volatiles: Timing of Release and Role in Explosive Eruptions**

Convener: Bruce Houghton, Institute of Geological and Nuclear Sciences, Wairakei Research Centre, Taupo, New Zealand, tel: 64-7-3748211, fax: 64-7-3748199, e-mail: b.houghton@gns.cri.nz

### **V03 Lava Flow Emplacement Mechanisms**

Convener: Katharine Cashman, Department of Geological Sciences, University of Oregon, Eugene, OR 97403-1272, tel: 503-346-4323, fax: 503-346-4692, e-mail: cashman@oregon.uoregon.edu

### **V04 Andesitic Volcanism and Petrogenesis of Subduction- Related Magmas**

Convener: Dave Gust, School of Geology, Queensland University of Technology, Brisbane, QLD, Australia, tel: 61-7-8642324, fax: 61-7-8641535, e-mail: d.gust@qut.edu.au

### **V05 Hydrothermal Activity and its Setting in Marginal Basins of the W & SW Pacific**

Conveners: R. Binns, CSIRO Division of Exploration and Mining, P.O. Box 136, North Ryde, NSW 2113, Australia, tel: 61-2-8878741, fax: 61-2-8878921, e-mail: R.Binns@syd.dem.csiro.au; and K. Crook, HURL-SOEST, University of Hawaii, 1000 Pope Road MSB303-B, Honolulu, HI 96822, fax: 808-956-9772, e-mail: crook@soest.hawaii.edu

### **V06 Ancient Volcanic Successions: Evolution, Facies Architecture, and Mineralization?**

Conveners: J. McPhie, CODES, University of Tasmania, GPO Box 252C, Hobart, TAS 7001, Australia, tel: 61-02-202472, fax: 61-02-207662, e-mail: J.McPhie@geol.utas.edu.au; and R. Cas, Department of Earth Sciences, Monash University, Clayton, VIC 3168, Australia, tel: 61-3-905 4898, fax: 61-3-9053865, e-mail: rcas@artemis.earth.monash.edu.au

## **SG2 Structure and Dynamics of the Australian Lithosphere**

### **SG2.00 Large Scale Structure of Continental Lithosphere**

Conveners: Bruce Goleby, Australian Geological Survey Organization, Canberra, ACT 2601, Australia, tel: 61-6-2499404, e-mail: bgoleby@agso.gov.au; and Rob van der Hilst, Massachusetts Institute of Technology, Cambridge, MA 02139, E-mail: rvdh@MIT.edu or rob@rses.anu.edu.au

### **SG2.02 Archean and Proterozoic Evolution of the Australian Cratons**

Convener: Jean Braun, Research School of Earth Sciences, ANU, Canberra, ACT 0200, Australia, tel: 61-6-2495512, fax: 61-6-2495443, E-mail: Jean.Braun@anu.edu.au

### **SG2.03 Phanerozoic History of Eastern Australia and Surrounding Plate Boundaries**

Conveners: Rob van der Hilst, Massachusetts Institute of Technology, Cambridge, MA 02139, e-mail: rvdh@MIT.edu or rob@rses.anu.edu.au; and Chris Klootwijk, Australian Geological Survey Organization, Canberra, ACT 2601, Australia, tel: 61-6-2499324, fax: 61-6-2499986, e-mail: cklootwi@agso.gov.au

## **SEDI Fifth International Symposium**

### **SD01.1 High-Pressure Properties of Silicates, Oxides, and the Deep Mantle**

Convener: I.N.S. Jackson, RSES, Australian National University, Canberra, ACT 0200, Australia, fax: 61-6-249-0738, e-mail: Ian.Jackson@anu.edu.au

### **SD01.2 Phases and Properties of Iron and the Core**

Conveners: Orson L. Anderson, Institute of Geophysics and Planetary Physics, UCLA, Los Angeles, CA 90024, fax: 310-206-3051; and Surendra Saxena, Department Mineralogy and Petrology, University of Uppsala, POB 555, Uppsala, S-75122, Sweden, tel: 46-18-2559, fax: 46-18-182591

### **SD02.1 Seismology: Structure of the Core and Lower Mantle**

Convener: B.L.N. Kennett, RSES, Australian National University, Canberra, ACT 0200, Australia, fax: 61-6-257-2737, e-mail: Brian@rses.anu.edu.au

### **SD02.2 Seismology: Anisotropy and Attenuation in the Lower Mantle and Core**

Convener: B.L.N. Kennett, RSES, Australian National University, Canberra, ACT 0200, Australia, fax: 61-6-257-2737, e-mail: Brian@rses.anu.edu.au

**SD03.1 The Dynamo: Theoretical and Numerical Advances and Observational Constraints** Convener: D. Ivers, School of Mathematics and Statistics, University of Sydney, F07, Sydney, NSW 2006, Australia, fax: 61-6-692-4534, e-mail: ivers\_d@maths.su.oz.au

**SD03.2 Mantle Influences on Dynamo Behavior** Time scale for changes in the frequency of geomagnetic reversal, control by the mantle, evidence from palaeomagnetism; possible mechanisms and related changes in mantle behavior or properties. Convener: P. McFadden, Australian Geological Survey Organization, GPO Box 378, Canberra, ACT 2601, Australia, fax: 61-6-249-9986, e-mail: pmcfadde@agso.gov.au

**SD04.1 Geodesy: Mantle Viscosity, Core Ellipticity, and Related Problems** Constraints on mantle viscosity, deeper layers, linking of upper and lower layers, departure of the core ellipticity from equilibrium. Convener: K. Lambeck, RSES, Australian National University, Canberra, ACT 0200, Australia, fax: 61-6-249-5443, e-mail: chair.SEDI@anu.edu.au

**SD05.1 Mantle Convection, Depth of Subduction, and the Source(s) of Plumes** Sources of buoyancy at the upper and lower boundaries, slab subduction, ultimate fate of the lithospheric slabs, core-mantle boundary as a source of heat, surface hot spots, influence of the transition zone on processes. Convener: G. Houseman, Department of Earth Sciences, Monash University, Clayton, VIC 3168, Australia, fax: 61-3-99054903, E-mail: greg@artemis.earth.monash.edu.au

## SECOND ANNOUNCEMENTS

### PAN PACIFIC HAZARDS '96 CONFERENCE - AERIAL VOLCANO TOUR

As part of the Pan Pacific Hazards '96 Conference to be held July 29 - Aug. 2 in Vancouver, British Columbia, it is proposed to charter a 40 seat pressurized, turboprop aircraft to flyby and around - weather permitting (usually fine that time of year)- a variety of Cascades or Coast Range volcanoes. Possible volcanoes to be seen on the flight include (dependent on weather/time): In Canada - Mt. Silverthorne, Mt. Cayley, Meager Mt., Mt. Garibaldi and a wide variety of volcanic features; In the USA - Mt. Baker, Glacier Peak, Mt. Ranier, Mt. Adams, Mt. Hood and Mt. St. Helens. The cost of such a charter flight would be in the range of \$150-200 Canadian

*Terry Spurgeon; (604) 666-5489 (tspurgeo@sfu.ca)*

### WORKSHOP ON TUFFS- PROPERTIES, USES, HYDROLOGY, AND RESOURCES

Santa Fe, New Mexico, November 10-15, 1996

<http://xrftmac.lanl.gov/page1/Programs/TUFFWkshop>

### MID-ATLANTIC RIDGE SYMPOSIUM

Iceland, June 1996

InterRidge Office, University of Durham

Tel: 44+ 191 374 2532; Fax: 44+ 191 374 2510

E-mail: [intridge@durham.ac.uk](mailto:intridge@durham.ac.uk).

### NEW MEXICO GEOLOGICAL SOCIETY FALL 1996 FIELD CONFERENCE

Jemez and Nacimiento Mountains, September 25th-28th, 1996

Fraser Goff, Los Alamos National Laboratory

(505) 667-8060

FAX: (505) 665-3285; [fraser@esslab.lanl.gov](mailto:fraser@esslab.lanl.gov)

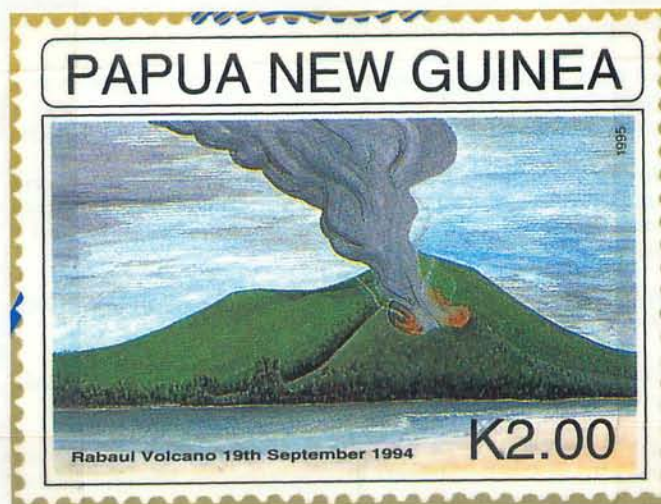
### VOLCANOLOGY SUMMER FIELD COURSE

New Mexico, Summer 1996

Gary Smith, University of New Mexico

phone: (505) 277-2348; FAX: (505) 277-8843; e-mail: [gsmith@unm.edu](mailto:gsmith@unm.edu).

## EJECTA



*Thanks, once again, to Lindsay Bottomer - ed.*