

November 2001

VGP Section Newsletter #6

Here is the latest issue of the VGP Section electronic newsletter. Please direct enquiries and contributions for future issues to fagents@asu.edu.

In this issue:

- (1) VGP highlights at the AGU Fall Meeting**
- (2) AGU elections**
- (3) 2002 AGU Spring Meeting news (including full descriptions of special sessions)**
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- (7) DISCCRS: A New Program for Recent PhDs in Climate Change Research**

(1) VGP HIGHLIGHTS AT AGU FALL MEETING

* Our VGP reception will be Tuesday, December 11, approximately 5:30 to 7:00 p.m. in Moscone Room 304. Food and beverages will be provided (the latter provided by GERM) and our principal activity will be presentation of the Bowen Award to A.T. Anderson (University of Chicago).

* The AGU Honors ceremony will be 5:30 pm Wednesday, December 12, at the San Francisco Hilton. A.W. Hofmann will receive the Harry H. Hess Medal and several VGP-nominated 2001 Fellows will be honored:

R. Boehler
H. Elderfield
R. Griffiths
W. White

(T. Grove and B. Wood were honored at the 2001 spring meeting).

(2) AGU ELECTIONS - Please vote!

AGU elections are scheduled for the November 2 to December 21 time slot. VGP nominees for President: C.R. Bacon and M.J. Rutherford, for Secretary J.M. Eiler and M.M. Hirschmann. VGP section member Al Hofmann is a nominee for International Secretary.

Their statements of interest and plans are in the September 25, 2001 EOS and are available on the AGU Web site at <http://www.agu.org/elections>.

Basic Instructions for e-mail voting are also given at this site. If AGU has your current e-mail address you have received a ballot and PIN number. If you have not received an e-mail ballot, AGU does not have your correct e-mail address. You can "fix" this problem by going to the AGU Web site "Membership Directory" and correcting your address. You can also request a paper ballot (see info in November issues of EOS).

Too few of us vote but the future role of VGP within AGU depends upon your officers!

(3) 2002 AGU SPRING MEETING NEWS

Plans for special sessions for the 2002 AGU Spring Meeting in Washington, May 28-May 31 (Tuesday-Friday), 2002 are nearly complete. The following meeting themes have been approved by the Program Committee:

- * Climate and Global Change
- * Biogeochemical Cycles and Trace Gases

- * Earth's Dynamic Interior
- * Resources
- * Environmental Quality
- * Science and Policy Interactions
- * Frontiers in Geophysics

The VGP Section will host the following Special Sessions:

- V01 Element Partitioning and Diffusion in the Earth's Interior
- V02 Education on Volcanology at the Graduate and Undergraduate Levels
- V03 Minerals, Solutions and Microbial Life
- V04 Hydrothermal Environments: Coupling Experimental, Field and Analytical Techniques
- V05 Determining Diamond Provenance
- V06 Volatiles and Light Elements in Magmatic Systems
- V07 Multidisciplinary Constraints on Volcanic Volatile Budgets

Other sessions either co-sponsored by VGP or of likely interest to VGP members:

Union:

- U01 Earth's Core: New Insights and Challenges
- U02 Geophysics in the 20th Century: Contributions from Washington

Geodesy

- G02 GPS Navigation as a Tool for Earth Science

Mineralogical Society of America

- M01 Mineral Structures and Stabilities
- M02 Transformations in Earth Materials: Electronic, Magnetic, and Structural Transitions
- M03 Advances in Mineral Physics with Synchrotron Applications
- M04 Deciphering Seismic Observations through the Lens of Mineral Physics

Seismology

- S01 Understanding the heterogeneity of the lower mantle
- S02 Dynamics of the Oceanic Mantle
- S03 Hotspots: Observations and theoretical models

DETAILS OF SESSION DESCRIPTIONS VOLCANOLOGY, GEOCHEMISTRY, AND PETROLOGY

V01 Element Partitioning and Diffusion in the Earth's Interior

This session will discuss recent progress in the field of element partitioning and diffusion at high pressures and temperatures. Geochemical models of large-scale differentiation processes such as core formation, mineral fractionation in a deep magma ocean, and partial melting beneath hot spots, mid-ocean ridges and subduction zones require accurate studies of major and trace element partitioning and diffusion at conditions relevant to the Earth's deep interior. A combination of novel experimental and analytical techniques has led to a large increase in the number and quality of these studies. New data on the systematics of mineral-melt trace element partitioning, metal-silicate melt partitioning, and major and trace element diffusion in both solid and liquid phases will provide quantitative tests of geochemical and geodynamical models for Earth differentiation.

Conveners: Wim van Westrenen, Geophysical Laboratory, Carnegie Institution of Washington 5251 Broad Branch Rd, NW, Washington, DC 20015 USA, Tel: +1-202-478-8926, Fax: +1-202-478-8901, email: w.van_westrenen@gl.ciw.edu, and James A Van Orman, Geophysical Laboratory, Carnegie Institution of Washington 5251 Broad Branch Rd, NW, Washington, DC 20015 USA, Tel: +1-202-478-8929, Fax: +1-202-478-8901, email: j.van_orman@gl.ciw.edu

V02 Education on Volcanology at the Graduate and Undergraduate Levels

Volcanology is an interdisciplinary science and is thus an excellent topic for education at several levels. Introductory courses may use examples from volcanology to illuminate basic concepts. Advanced undergraduate classes offer a chance to integrate knowledge. Further, natural hazards are of broad interest to the environmental studies community, and at the undergraduate level, volcanology provides a good bridge to the environmental/social sciences community. Graduate courses may be quite specialized, and are used to prepare students for professional careers in research. In this session we intend to explore the range and depth of courses offered in volcanology at many universities, and to understand and improve the role volcanology plays in general science education.

Conveners: Stephen R McNutt, Alaska Volcano Observatory, UAFGI P.O. Box 757320, Fairbanks, AK 99775-7320 USA, Tel: +1-907-474-7131, Fax: +1-907-474-5618, email: steve@giseis.alaska.edu, and Katherine V Cashman, University of Oregon, Department of Geological Science, Eugene, OR 97403-4692 USA, Tel: +1-541-346-4573, Fax: +1-541-346-4692, email: cashman@oregon.uoregon.edu, and William I Rose, Michigan Technological University, Dept of Geological & Engineering Sciences 1400 Townsend Dr, Houghton, MI 49931 USA, Tel: +1-906-487-2531, Fax: +1-906-487-3371, email: raman@mtu.edu

V03 Minerals, Solutions and Microbial Life

Microbes play an important role in the geochemistry of the planet. This session will bring together theoretical, experimental and observational studies on a variety of biochemical and geochemical systems that cover low to extreme conditions of temperature, pressure, pH, salinity, desiccation, and radiation. Papers addressing the interaction of biological systems with geological processes on earth and outer planetary bodies are welcomed as are papers on the origin/evolution of life and on the diversity/viability of life in various geochemical environments. The development and application of new experimental and analytical techniques added with natural observations has provided new insights into the interaction of microbes with minerals and aqueous solutions. Such biogeochemical studies have begun to provide valuable insight into various biochemical processes as well as understanding of the origins and limits of life. Experiments on hydrothermal biochemical systems have provided new information about the evolutionary formation of metastable and non-quenchable phases as well as kinetics and pathways information at extreme conditions.

Conveners: James H. Scott, Carnegie Institution of Washington, Geophysical Laboratory 5251 Broad Branch Rd, NW, Washington, DC 20015 USA, Tel: +1-202-478-8986, Fax: +1-202-478-8901, email: j.scott@gl.ciw.edu, and Anurag Sharma, Carnegie Institution of Washington, Geophysical Laboratory 5251 Broad Branch Rd, NW, Washington, DC 20015 USA, Tel: +1-202-478-8957, Fax: +1-202-478-8901, email: a.sharma@gl.ciw.edu, and George Cody, Carnegie Institution of Washington, Geophysical Laboratory 5251 Broad

Branch Rd., NW, Washington, DC 20015 USA, Tel: +1-202-478-8980, Fax: +1-202-478-8901, email: g.cody@gl.ciw.edu

V04 Hydrothermal Environments: Coupling Experimental, Field and Analytical Techniques

Understanding the physico-chemical conditions of magmatic-hydrothermal ore-forming environments requires detailed knowledge of the melt-crystal-fluid equilibria that obtain in such systems. This knowledge comes from two areas of active geological research: 1) the analysis of melt and fluid inclusions in natural systems; and 2) controlled laboratory experiments in which the thermodynamics of ore-forming processes are determined. Techniques such as laser ablation inductively coupled mass spectrometry allow us to accurately determine the chemical composition of melt/fluid inclusions in fossilized hydrothermal systems. Classical hydrothermal experiments allow us to map out the physical chemistry of the evolving melt-crystal-fluid system at the conditions that would have existed during formation of the hydrothermal system. It is imperative that scientists from both camps come together to discuss their data and hypotheses for additional research. This session is designed to bring together both the analyst and the experimentalist to discuss our recent data and hypotheses for future research.

Conveners: Adam C. Simon, University of Maryland, Department of Geology, College Park, MD 20742 USA, Tel: +1-202-405-0235, Fax: +1-301-314-9661, email: asimon@geol.umd.edu, and Philip A. Candela, University of Maryland, Department of Geology, College Park, MD 20742-4211 USA, Tel: +1-301-405-2783, Fax: +1-301-314-9661, email: candela@geol.umd.edu, and Philip Piccoli, University of Maryland, Department of Geology, College Park, MD 20742-4211 USA, Tel: +1-301-405-6966, Fax: +1-301-314-9661, email: piccoli@geol.umd.edu

V05 Determining Diamond Provenance

Diamonds continue to offer fundamental insights into Earth processes ranging from bolide impacts to mantle dynamics. The need to remove so-called "conflict diamonds" from the market has provided an added urgency to discover characteristic properties that reveal the history of diamond genesis and emplacement. This session will focus on the most recent advances in diamond analysis and characterization and their implications regarding diamond formation and provenancing.

Conveners: Peter J. Heaney, Pennsylvania State University, Department of Geosciences 309 Deike Building, University Park, PA 16802 USA, Tel: +1-814-865-6821, Fax: +1-814-861-8808, email: heaney@geosc.psu.edu, and Edward P. Vicenzi, Smithsonian Institution, Department of Mineral Sciences 10th & Constitution Ave, NW, Washington, DC 20560-0119 USA, Tel: +1-202-357-2594, Fax: +1-202-357-2476, email: vicenzi@volcano.si.edu

V06 Volatiles and Light Elements in Magmatic Systems

This special session aims to bring together recent and on-going studies which highlight the role of volatiles (e.g. CO₂, H₂O, SO₂, Cl) and light elements (e.g. Li, Be, B, F) in various magmatic systems, i.e. MORB, OIB, subduction systems, etcetera. Especially important is the unique or clearer insight the study of these tracers bring to our understanding of specific aspects of magmatic systems. Contributions detailing a wide variety of studies are encouraged: e.g. magmatic assimilation of various seawater-derived or influenced

components, contrasting on- and off-axis ridge magmatic systems, compositions of phenocryst melt-inclusions, volatile fluxes in subduction systems, geochemical and geophysical aspects of mantle regions. Also encouraged are contributions showcasing advances in relevant analytical techniques, theoretical approaches or fundamental behavior of these geochemical tracers.

Conveners: Erik Hauri, Carnegie Institution of Washington, Dept. of Terrestrial Magnetism 5241 Broad Branch Road, NW, Washington, DC 20015 USA, Tel: 202-478-8471, email: hauri@dtm.ciw.edu; Petrus J. le Roux, Carnegie Institution of Washington, Dept of Terrestrial Magnetism 5241 Broad Branch Rd., NW, Washington, DC 20015 USA, Tel: +1-202-478-8475, Fax: +1-202-478-8821, email: leroux@dtm.ciw.edu

V07 Multidisciplinary Constraints on Volcanic Volatile Budgets

Volcanoes can emit volatiles both passively and explosively, impacting the atmosphere, hydrosphere and biosphere on scales from local to global. Volatiles are also released by magma bodies covertly, sequestered by hydrothermal systems which may slowly accumulate at depth whilst decomposing and weakening the core of the volcanic edifice. The action of different degassing regimes during inter-eruptive periods will control to some degree the size of the volatile reservoir that may be tapped during a major eruption, be it explosive or effusive. However, illuminating the degassing processes acting at individual volcanoes requires long-term campaigns. This session aims to bring together remote sensors, petrologists, volcanologists, geochemists and hopefully geophysicists to discuss topical work on the supply, storage and emission of volcanic gases. Remote sensing using established and recently launched instruments (TOMS, MODIS, ASTER) capable of quantifying SO₂, sulfate aerosol and ash in volcanic clouds has built a valuable database of observations covering the last 25 or so years. Petrological estimates of volatile emissions augment this database by extending it back prior to remote sensing and into prehistory. Volcano monitoring using COSPEC, FTIR and other techniques characterizes the size, chemistry and short-term variability of passive volcanic plumes. We solicit contributions on these topics but also on studies that illuminate processes potentially responsible for discrepancies between remotely sensed and petrological data (e.g., the excess sulfur problem). These could include magmatic gas scrubbing, sulfur speciation and thermodynamics, hydrothermal studies and geophysical imaging of volcano interiors. Papers on new instruments or techniques for measuring volatile species emitted by volcanoes are also encouraged.

Conveners: Simon A. Carn, University of Maryland Baltimore County, Joint Center for Earth Systems Technology (NASA/UMBC) 1000 Hilltop Circle, Baltimore, MD 21250 USA, Tel: +1-410-455-1454, Fax: +1-410-455-1291, email: scarn@umbc.edu, and Bill Rose, Michigan Technological University, Geological and Engineering Sciences 1400 Townsend Drive, Houghton, MI 49931 USA, Tel: +1-906-487-2367, Fax: +1-906-487-3371, email: raman@mtu.edu, and Steve Schaefer, University of Maryland Baltimore County, Joint Center for Earth Systems Technology (NASA/UMBC) 1000 Hilltop Circle, Baltimore, MD 21250 USA, email: schaefer@core2.gsfc.nasa.gov, and Paul Wallace, Department of Geological Sciences, 1272 University of Oregon, Eugene, OR 97403-1272, Tel: +1-541-346-5985, Fax: +1-541-346-4692, Email: pwallace@darkwing.uoregon.edu

UNION

U01 Earth's Core: New Insights and Challenges

Recent observational and theoretical studies reveal major insights into the structure of the Earth's core and the dynamics at the center of the Earth but also pose new challenges. The progress was made at many fronts, including Geochemistry, Geodesy, Geomagnetism, Seismology, and Tectonophysics. This session will provide an interdisciplinary forum for presenting recent results and debates on the Earth's core. Topics include constraints on rotation of the inner core, fine structure of the inner core and influence of the mantle, theoretical and laboratory constraints on mineral properties at core conditions, geodynamo, core composition and formation, major and trace element partitioning during core crystallization, and interactions between the core and mantle.

Conveners: Xiaodong Song, Dept. of Geology, University of Illinois, Urbana, IL 61801 USA, Tel: 217-333-1841, Fax: 217-244-4996, email: xsong@uiuc.edu; Richard J. Walker, Dept. of Geology, University of Maryland, College Park, MD 20742 USA, Tel: 301-405-4089, Fax: 301-314-9661, email: rjwalker@geol.umd.edu; Lars Stixrude, Dept. of Geological Sciences, University of Michigan, Ann Arbor, MI 48109-1063 USA, Tel: 734-647-9071, Fax: 734-763-4690, email: stixrude@umich.edu; William F. McDonough, Dept. of Geology, University of Maryland, College Park, MD 20742 USA, Tel: 301-405-5561, Fax: 301-314-9661, email: mcdonough@geol.umd.edu; and Daniel P. Lathrop, Dept. of Physics, University of Maryland, College Park, MD 20742 USA, Tel: 301-405-1594, Fax: 301-301-1678, email: dpl@compl

U02 Geophysics in the 20th Century: Contributions from Washington

In 1900, large-scale, systematic and institutionalized research in Geophysics did not exist. By the end of the 20th century this had become the main model not only for geophysical research but essentially all of scientific research. This special session --held on the occasion of the 100th anniversary of the founding of the Carnegie Institution of Washington (CIW) -- will explore the historical legacies and interagency linkages which have contributed to the development of the geophysical sciences in the Washington, DC area over the last 100 years. The nation's capital plays a unique role as host to more organizations dedicated to some aspect of geophysical research (such as AAAS, American Geological Institute, AGU, CIW, Defense Mapping Agency, Geological Society of Washington, IRIS, JOI, Mineralogical Society of America, NASA, NIST, Naval Observatory, NOAA, Naval Research Lab, NSF, Smithsonian Institution, and USGS) than any other locale in the world. Contributions to this session are sought that will highlight the role of the Washington scientific community in the growth of Geophysics.

Conveners: Shaun J. Hardy, Carnegie Institution of Washington, 5241 Broad Branch Road, N.W., Washington, DC 20015 USA, Tel: 202-478-7960, Fax: 202-478-8821, email: hardy@dtm.ciw.edu, and Steven B. Shirey, Department of Terrestrial Magnetism Carnegie Institution of Washington, 5241 Broad Branch Road, N.W., Washington, DC 20015 USA, Tel: 202-478-8473, Fax: 202-478-8821, email: shirey@dtm.ciw.edu, and C. Susan Weiler, Biology Department, Whitman College, Walla Walla, WA 99362 USA, Tel: 509-527-5948, Fax: 509-527-5961, email: weiler@whitman.edu

GEODESY

G02 GPS Navigation as a Tool for Earth Science

Precise positioning of moving GPS receivers is an enabling technology for studying the Earth by remote sensing. It is a practical and affordable way to get precise geographic registration for many kinds of data, and speed and acceleration corrections, e.g. for air and sea gravimetry. It is used in mapping topography, bathymetry, sea-surface, and ice thickness, from ships, airplanes, and satellites, with various kinds of sonar, radar, and lidar. New developments include the combination of GPS and acoustic underwater positioning to monitor sea-floor tectonics, the observing in real time of earthquake ground motion and volcano inflation, and the use of buoys at sea to make tidal measurements, calibrate satellite altimeters, or detect tsunamis; all this happens at a time when the increasing use of robotic vehicles is opening the way to cheaper and faster surveys of larger areas. Authors are encouraged to send abstracts on any of these or similar topics; presentations are sought on both actual applications, and on the relevant GPS techniques.

Conveners: Oscar L. Colombo, GEST/NASA GSFC, Code 926, Greenbelt, MD 20771 USA, Tel: 301-614-6093, Fax: 301-614-6099, email: ocolombo@geodesy2.gsfc.nasa.gov, and Dorota Grejner-Brzezinska, Dept. of Civil and Environmental Engineering and Geodetic Science, The Ohio State University, 2070 Neil Avenue, Columbus, OH 43210-1275 USA, Tel: 614-292-8787, Fax: 614-292-2957, email: dorota@cfm.ohio-state.edu

MINERALOGICAL SOCIETY OF AMERICA

M01 Mineral Structures and Stabilities

This session will focus on all aspects of mineral crystal structures, as well as the stability of minerals under varying geological conditions. Emphasis will be on experimental and theoretical studies of the connectivity and topology of mineral structures (and synthetic analogs), including how they respond to changing conditions of pressure and temperature.

Conveners: Peter C Burns, University of Notre Dame, Department of Civil Engineering and Geological Sciences 156 Fitzpatrick Hall University of Notre Dame, Notre Dame, IN 46556 USA, Tel: 219-631-7380, Fax: 219-631-9236, email: pburns@nd.edu, and Jeffrey E. Post, Smithsonian Institution, Mineral Sciences NHB 119, Washington, DC 20560 USA, Tel: (202) 357-4009, Fax: (202) 357-2476, email: post.jeffrey@nmnh.si.edu

M02 Transformations in Earth Materials: Electronic, Magnetic, and Structural Transitions

The study of the Earth as a whole cannot be considered complete without understanding and characterizing earth materials at a fundamental level. With the advancement of the diamond anvil cell techniques the possibilities for the fundamental materials research are rapidly expanding. The aim of this session is to present the manifold of techniques and new results in studies of electronic, magnetic and structural transformations in earth materials. The emphasis will be on electronic and magnetic properties, and their coupling to elastic, structural properties of materials. Results from other techniques are also welcome, including experimental and theoretical studies of electronic and magnetic properties at varying P, T conditions.

Conveners: Viktor Struzhkin, Geophysical Laboratory, 5251 Broad Branch Rd., NW, Washington, DC 20015 USA, Tel: 202-478-8952, Fax: 202-478-8901, email: struzhkin@gl.ciw.edu, and Nancy L Ross, Virginia Tech, Dept. of Geological Sciences

4044 Derring Hall, Blacksburg, VA 24061 USA, Tel: (540) 231-6356, Fax: (540) 231-3386, email: nross@vt.edu

M03 Advances in Mineral Physics with Synchrotron Applications

Synchrotron sources provide high-brilliance and low-emittance x-ray beams. A vast new frontier has opened for application of synchrotron radiation in mineral physics. Some of the most fundamental properties of minerals, including crystalline and non-crystalline structures, elasticity, electronic and phonon density of states, can now be measured to deep mantle and core conditions -information that is essential for understanding the Earth's interior. This session will provide an interdisciplinary forum for the presentation of frontier techniques and recent results with synchrotron application on all aspects of the Earth's deep interior.

Conveners: Guoyin Shen, University of Chicago, Consortium for Advanced Radiation Sources 9700 S. Cass Ave Bldg 434A, APS, Chicago, IL 60637 USA, Tel: 630 252 0429, Fax: 630 252 0436, email: shen@cars.uchicago.edu, and Thomas Duffy, Princeton University, Department of Geosciences, Princeton, NJ 08544 USA, Tel: (609) 258-6769, Fax: (609) 258-1274, email: duffy@princeton.edu

M04 Deciphering Seismic Observations through the Lens of Mineral Physics

Seismic discontinuities in the Earth's interior are major features observed by seismologists. The interpretation of these discontinuities relies on laboratory experimental data at high pressures and temperatures. Recent advances in seismology and mineral physics have produced large quantity high-quality data that are waiting to be interpreted. This session encourages seismologists to put forward seismic observations that require mineral physics data for interpretation and mineral physicists to present experimental data that can be used for interpreting seismic observations. Subjects include seismic data that indicate velocity discontinuities in the mantle, seismic activity in the subduction zone, low-velocity zone, phase transformations that may be associated with observed velocity discontinuities in the mantle, elastic properties of minerals at high pressure and temperature, and rock deformation.

Conveners: Yingwei Fei, Geophysical Laboratory, 5251 Broad Branch Rd., NW, Washington, DC 20015 USA, Tel: 202-478-8936, Fax: 202-478-8901, email: fei@gl.ciw.edu, and Paul Silver, Department of Terrestrial Magnetism, 5241 Broad Branch Road, N.W., Washington, DC 20015 USA, Tel: 202/478-8834, Fax: 202/478-8821, email: silver@dtm.ciw.edu

SEISMOLOGY

S01 Understanding the Heterogeneity of the Lower Mantle

Featuring extreme velocity decrements, decoupled P and S wave variability, strong anisotropy and multiscale structure, seismic heterogeneity in the lower mantle is clearly not exclusively thermal in origin. Layering, mixing, melting, flow banding, and other effects are at work, but where, why and with what effects? This session explores the evidence for these composition- and state-induced variations in lower mantle elasticity and viscosity, the mineral physics and geochemical interpretations of that evidence, and the dynamic implications for planetary chemical and thermal evolution.

Conveners: Justin S Revenaugh, Earth Sciences, University of California, Santa Cruz, CA 95064 USA, Tel: 831-459-3164, email: jsr@coltrane.ucsc.edu, and Sebastian Rost, Earth Sciences, University of California, Santa Cruz, CA 95064 USA, Tel: 831-459-3132, email: srost@es.ucsc.edu, and Quentin Williams, Earth Sciences, University of California, Santa Cruz, CA 95064 USA, Tel: 831-459-3132, email: quentw@emerald.ucsc.edu

S02 Dynamics of the Oceanic Mantle

Plate tectonics and associated deformation at Earth's surface are the manifestation of thermal convection in the mantle. The oceanic domain is a logical focus for studies of mantle dynamic processes because fundamental components of convection can have a simple tectonic manifestations beneath the oceans, and the signatures of dynamic processes are far less likely to be overprinted here than in continental settings. In recent years, models have been developed to describe a number of important dynamic processes beneath the oceans, including focused upwelling and swell formation at hotspots, hotspot-ridge interaction, small-scale convection beneath the plates, mantle flow and melt migration beneath spreading centers and propagating rifts, and slab-induced flow in back-arc and fore-arc environments. A new generation of seismic instrumentation and imaging, geodynamic theory and modeling, and geochemical and petrological techniques are being used to constrain and evaluate these models. This session will provide an interdisciplinary forum for the presentation of recent results on all aspects of oceanic mantle dynamics.

Conveners: Jim Gaherty, School of Earth and Atmospheric Sciences, Georgia Institute of Technology, Atlanta, GA 30332-0340 USA, Tel: (404)894-1992, Fax: (404)894-5638, email: gaherty@eas.gatech.edu, and Dan Lizarralde, School of Earth and Atmospheric Sciences, Georgia Institute of Technology, Atlanta, GA 30332-0340 USA, Tel: (404)894-1992, Fax: (404)894-5638, , and Don Forsyth, Dept. of Geological Sciences, Brown University, Providence, RI 02912 USA, Tel: (401) 863-1699, Fax: (401) 863-2058, email: Donald_Forsyth@brown.edu, and Bob Detrick, Dept. of Geology & Geophysics, Woods Hole Oceanographic Institution 360 Woods Hole Road, Woods Hole, MA 02543-1542 USA, Tel: (508) 289-3335, Fax: (508) 457-2150, email: rdetrick@whoi.edu

S03 Hotspots: Observations and theoretical models

The past few years have seen several new developments in studies of both continental and oceanic hotspots. Seismic tomographic models of unprecedented clarity have revealed the crustal and mantle structure beneath several hotspots. An increasing number of geochemical studies have suggested the presence of recycled slabs in the mantle beneath hotspots, but there are few constraints on the amount or age of various recycled components. Recent experimental studies on mantle rheology have led to dynamic models that reconcile geochemical and geophysical data. New paleomagnetic data, however, raise questions about the motion of hotspots and about the nature of associated mantle upwelling. The objective of this special session is to bring together researchers working on different hotspot systems to promote discussion and comparison of observational constraints and theoretical models pertinent to the dynamics and structure of the crust and mantle beneath hotspots.

Conveners: Yang Shen, Graduate School of Oceanography, University of Rhode Island South Ferry Road, Narragansett, RI 02818 USA, Tel: 401-874-6848, Fax: 401-874-6818, email: yshen@gso.uri.edu, and Erik Hauri, Carnegie Institution of Washington, Dept. of Terrestrial Magnetism 5241 Broad Branch Road, NW, Washington, DC 20015 USA, Tel: 202-478-8471, email: hauri@dtm.ciw.edu

Sincerely yours,
Steve Shirey
VGP Spring Program Chair

(4) DATA PUBLICATION IN GEOCHEMISTRY

Geochemistry has to re-visit its habits of data publication. An exponentially increasing number of high quality data are lost to science because they are never published and instead buried in investigators' files. In addition, many published geochemical data are not nearly as useful to the community as they could be, because essential information on sample location and analytical information, in other words the so-called metadata, are not included in the publication. The problem has reached crisis proportions and we all

have to do our share to improve this situation.

Please take part in a discussion of this. Please read and distribute a recent editorial in G-cubed (<http://g-cubed.org/gc2001/2001GC000234/fs2001GC000234.html>) and comment on a proposal for a geochemical data/metadata publication format (<http://earthref.org/metadata/GERM/>)

Hubert Staudigel and Al Hofmann

(5) G-CUBED UPDATE

G-cubed now has a search engine. Go and check it out! The engine includes a complete text search in addition to search by keywords, authors, etc. If you have not yet signed up for the publication alerts, please do so and you will receive e-mail notification for new G-cubed papers. The use of G-cubed is free of charge until April, 2002.

Hubert Staudigel
Publications Committee Chair

(6) RECENT PH.D. ANNOUNCEMENTS IN EOS

Recent PhDs and/or their advisors are encouraged to submit details of their accomplishments to the Geophysicists column in Eos. Information requested includes the dissertation title, student name, university, advisor name, and month and year of completion

(7) DISCCRS: A NEW PROGRAM FOR RECENT PH.D.S IN CLIMATE CHANGE RESEARCH

Please share this message with students and recent Ph.D. graduates.

The transition from student to independent researcher is a challenging one, particularly for those engaged in interdisciplinary research. To address this, the AGU, American Society of Limnology and Oceanography (ASLO), American Meteorological Society (AMS) and Ecological Society of America (ESA) are jointly sponsoring a new initiative for recent PhDs, built around the theme of climate change. The transition from student to independent researcher is a challenging one, particularly for those engaged in interdisciplinary research. To address this, the AGU, American Society of Limnology and Oceanography (ASLO), American Meteorological Society (AMS) and Ecological Society of America (ESA) are jointly sponsoring a new initiative for recent PhDs, built around the theme of climate change.

More information on this program appears in the November 20 issue of Eos on page 567. Information regarding this program will shortly be posted on the top page of the AGU website.

DISCCRS is funded by NSF and NASA.

C. Susan Weiler, DISCCRS Program Director, Whitman College, weiler@whitman.edu