

# The Lattice

Vol. 3, No. 2, May 1987

## *From the President*

### Research funding and committee projects are key items for discussion

Dear Members,

There are a number of items to report on, including some of immediate concern to the Society.

#### **Board on Earth Sciences (NRC) "Summit Meeting"**

This meeting on February 6th was chaired by former MSA President Gary Ernst, and attended by 55 chief officers and directors of earth science societies. Frank Press, National Academy of Sciences (NAS), addressed some of the major issues facing the earth science (ES) community, e.g., the cyclical changes forced by the world economy and how they are adversely affecting U.S. industry (notably oil, steel and minerals), as well as universities in which ES departments are now being abolished. He emphasized that the leadership of NAS and the National Science Foundation (NSF) is committed to the building up of more interdisciplinary research centers, and he exhorted us to "get our act together" to capitalize on the many exciting opportunities in ES. He urged better integration of federal labs with universities and reiterated that often heard but seldom believed commitment of the federal government to double the NSF budget for research over the next five years. During the day numerous other speakers called attention to what they considered the big issues in earth sciences. Here are a few examples:

1. Big science vs. small science; consortia vs. individual investigators. Consortia absorbed 12 percent of NSF-Earth Science (EAR) monies in 1985, 19 percent in 1986, and will get 25 percent in 1987. "Once established, they can't be turned off," was the comment heard. Frank Press said that the Board on Earth Sciences (BES) must establish priorities for large research projects. As an example of that, under BES direction, NSF, U.S. Geological Survey, Department of Energy (DOE), and NASA spent \$64,000 in April 1986 backing a workshop on Physics

and Chemistry of Earth Materials to explore "the future directions of the disciplinary fields of petrology, geochemistry, mineral physics, and rock physics/mechanics" and "to identify those areas of research that would benefit from increased collaboration/cooperation" (contact Charles T. Prewitt at the Geophysical Lab for a report of that workshop).

The general agreement was that major new initiatives in ES are needed that "capture the imagination"—words like "dramatic" and "romantic" were used. Societal issues (the economy and the environment) should be emphasized, especially atmospheric pollution, the apparent straight-line decline of the minerals industry (to 0.0 in 1995?), and the national (non-)policy toward the petroleum industry. Earth scientists are almost totally uninvolved in influencing policy on energy and minerals!

The fabled Super Collider project will cost \$5-6 billion plus \$1 billion a year to maintain; it will support a maximum of 1000 scientists (yes, that works out to \$1,000,000 each!). Controversy rages—is it worth it? And how much will come out of NSF's budget? Jack Oliver said that for \$6 billion we could shoot seismic lines at a 40 km grid over the surface of the entire continent! Mineralogists and petrologists might have other ideas. A few spoke up for individual researchers and felt good that the ES community does not have a consensus. Jim Hays (NSF) expects an 11 to 12 percent increase in funding for individual grants in 1987 over 1986.

My feeling is that if you are not in a research consortium (with or without a label) and you want federal funding, you had best start one or insinuate yourself into one.

2. Research Equipment. Dan Weill (NSF) said equipment constitutes 10 percent of the NSF-EAR budget (\$4.2 million), as opposed to 25 percent in other sciences. It was mentioned that there is a vast array of unused high-tech instrumentation in hurting industries and some may be available to universities.

3. Earth Science Education. There are 120 university departments in the U.S. that have Ph.D. programs in ES, with an average of 20 faculty members each. Dan Weill (NSF) said approximately 100 are "fundable". American Geological Institute (AGI) statistics show that we are doing a poor job of ES education at the secondary school level; if we were doing better, we might have many more college students in ES who couldn't anticipate employment in their field of study.

What role MSA? I will recommend to MSA's Council at its meeting on May 17 that we initiate a Research Committee to keep track of changing federal funding policies, to represent mineralogy and petrology per se on the BES, to communicate to the membership on the formation of new journals (Physics and Chemistry of Minerals affected the American Mineralogist substantially) and of new research consortia (e.g., the high-pressure center), and possibly to report trends and suggest new ones to the MSA community.

#### **MSA Executive Committee Meeting**

The executive committee (President Ribbe, Secretary Meyer, Treasurer Nord) met with Executive Secretary Minich and Vice President David Stewart at the Society's office on February 5 to discuss a multitude of business matters that had accumulated since the first 1987 Council meeting in November. Accounting procedures and the budget occupied a good share of the time, as did discussions of the responsibilities of the Development and Futures (formerly Outlook) committees.

The Futures Committee is chaired by the Vice-President and is charged with studying the long-range affects of specific activities on the Society. Some topics under consideration are an assessment of the quality of the technical sessions at the MSA/GSA meeting,

*Continued on page 2.*



## From the President

Continued from page 1.

new recognition awards, and the pros and cons of accepting advertising in the journal.

The Development Committee, chaired by Catherine Skinner, has been asked to prepare both an attractive poster and a brochure describing the discipline of mineralogy for the benefit of primary and secondary school

*The Lattice* is published quarterly (February, May, August, November) by the Mineralogical Society of America. The newsletter is distributed to MSA members as a service. Articles and letters from readers are welcome.

The Mineralogical Society of America is composed of individuals interested in mineralogy, crystallography, and petrology. Founded in 1919, the Society promotes, through education and research, the understanding and application of mineralogy by industry and the public.

Membership benefits include: *The American Mineralogist*, published bi-monthly; 30% discount on volumes in the *Reviews in Mineralogy* series; *The Lattice*; Membership Directory; special subscription rates for *Mineralogical Abstracts*, *Physics and Chemistry of Minerals*, *Journal of Petrology*, and *Journal of Metamorphic Geology*; reduced registration fees at MSA short courses and the joint MSA/Geological Society of America annual meeting; participation in a Society that supports the many facets of mineralogy.

Dues for 1987 are \$35 for professional members; \$15 for students. Membership is on a calendar year basis. Individuals who join after January 1, 1987 will be sent all back issues of the journal for volume 72, 1987.

For additional membership information and an application, and/or to receive a price list of the Society's publications, contact the Business Office.

Institutions may subscribe to *The American Mineralogist* for the annual rate of \$130. The subscription price includes any new volume of the *Reviews in Mineralogy* series published during the calendar year of the subscription. Payment must be received in full before a subscription will be started.

1987 President: P. H. Ribbe, Virginia Polytechnic Institute and State Univ

Past-President: P. B. Barton, Jr., U.S. Geological Survey

Vice-President: D. B. Stewart, U.S. Geological Survey

Secretary: H. O. A. Meyer, Purdue Univ

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Executive Secretary: Barbara B. Minich

Mineralogical Society of America  
1625 I Street N.W., Suite 414  
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(202) 775-4344

students. The committee will develop a specific recommendation to Council, for a MSA lectureship program including selection criteria for speakers, possible topics and their audiences, management procedures, and financing.

If you have ideas for either of these committees, please write directly to: Futures Committee—David Stewart, MS 959, National Center, U.S. Geological Survey, Reston, VA 22092, (703) 648-6945; Development Committee—Catherine Skinner, P.O. Box 894, Woodbury, CT 06798, (203) 432-3787.

## Nomination deadlines approach

Nomination deadlines are fast approaching for the many MSA awards and activities. Please note the appropriate deadlines below and submit your nominations by the due date to the MSA Business Office.

The Roebling Medal is given for eminence as represented by outstanding original research in mineralogy; the MSA Award is given for outstanding contribution(s) prior to the recipient's 35th birthday. The 1988 recipient must be younger than 37 years as of January 1, 1987. The 1988 Crystallography Research Grant is given for an outstanding research proposal from a scientist 25-35 years of age. Fellowship in the Society is awarded in recognition of a member's significant contributions to mineralogical sciences and/or the Society.

**July 1: Nominations for Roebling Medal**

**Nominations for MSA Award  
Nominations for Fellowship in MSA\***

**Nominations for Office (1988 Ballot)**

**August 1: Applications for Crystallography Research Grant\*  
1987 Member Ballot**

**November 1: Nominations for 1988 American Mineralogist Undergraduate Award**

All nominations may be sent to the MSA Business Office, 1625 I Street N.W., Suite 414, Washington, D.C. 20006. Nominations may be submitted in the form of a letter except in the case of those items marked with a "\*", which require that a special form be completed. These forms are available from the Business Office.

## Upcoming Meetings of Note

MSA Short Course on Thermodynamic Modelling, October 22-25, 1987. Complete details on this meeting and a registration form are included in this issue. Registration is limited to 100 individuals on a first-come, first serve basis, so register today!

V. M. Goldschmidt Centenary Conference, May 11-13, 1988. Sponsored by the Geochemical Society, with MSA, the International Association of Geochemistry and Cosmochemistry, and the Association of Exploration Geochemists. The first circular will be mailed to all MSA members in the immediate future. For more information, see the calendar section in this issue.

The MSA Short Course, titled *Spectroscopic Methods in Mineralogy and Geology*, will be held May 13-15, 1988. This course will take place immediately following the Goldschmidt Conference in the Baltimore, MD vicinity. Complete details and a registration form will appear in upcoming issues. For more details, see the calendar section in this issue.

MSA Short Course, *Serpentines, Chlorites, and other Non-Mica Phyllosilicates*, will be held immediately prior to the MSA/GSA annual meeting October 28-30, 1988. A registration form and information on registration fees will be published in the May 1988 issue of this newsletter. For tentative topics, see the calendar section in this issue.

I'll have a report of the May Council meeting for you in the August issue of *The Lattice*. If you have items of concern for the Society, call me at (703) 961-6880 any weekday afternoon.

Congenially,

*Paul H. Ribbe*

Paul H. Ribbe  
President

## Members in the news

Congratulations to...Jane Selverstone, Harvard University, James A. Tyburczy, Arizona State University, and George H. Wolf, Arizona State University, who received the Presidential Young Investigator Award in Earth Sciences sponsored by the National Science Foundation (NSF) ... Katharine and Bryant Mather who will be honored at the International Conference on Concrete Durability. The five-day conference recognizes the life-time contributions of both individuals.

A correction from the last issue, Robert Bodnar, who also received the NSF Young Investigator Award, received the Lindgren Award from the Society of Economic Geologists at their meeting last November.

May, 1987



# JTPC representative explains MSA's role in reviewing abstracts

by Roger G. Burns  
MSA Representative

The 1987 annual meeting of the Geological Society of America (GSA) and its associated societies, which include MSA, are being held this year in Phoenix, Arizona, October 26-29. Readers are reminded that the deadline for the arrival of abstracts at the GSA offices in Boulder is June 11, 1987. Abstract forms may be obtained by writing to GSA, 3300 Penrose Place, P.O. Box 9140, Boulder, CO 80301.

MSA is responsible for reviewing abstracts and programming oral and poster sessions for the following five categories:

**Mineralogy/Crystallography;**  
**Experimental Petrology;**  
**Igneous Petrology;**  
**Metamorphic Petrology; and**  
**Volcanology.**

In addition, MSA also organizes a half-day symposium each year. The topic for the Phoenix meeting is "Synchrotron Radiation Research in the Geological Sciences," and is being convened by Gordon Brown, Jr. and Charles T. Prewitt.

The MSA delegation to the Joint Technical Program Committee (JTPC) this year consists of Roger G. Burns (representative), and Jo Laird and James J. Papike (conferees). Other representatives who have served on the JTPC during the past three years include Timothy Grove, Maryellen Cameron, and Rick Abbott.

Members may be interested in the current MSA procedure for reviewing GSA abstracts and for organizing sessions during the JTPC meeting held at Boulder in mid-July. The MSA delegates each select three additional people to assist them in reviewing the abstracts submitted for the five categories listed above. The abstracts are graded on a six-point scale (where 1 is best and 6 is worst), and the average score of the four reviewers of each abstract is obtained prior to the JTPC meeting. The cutoff between abstracts accepted and abstracts rejected is determined by the number of oral slots available for each session (a number assigned by GSA, depending on the total number of abstracts submitted in all categories). If the number of oral slots dictates that all abstracts with an average score above, for example, 3.75 be rejected, the same rejection level is applied to poster session abstracts. The same standard is maintained for both oral and poster session abstracts even if there are open poster slots. Invariably, more abstracts are received than can be accommodated in the sessions available during the four days of the annual GSA meetings. As a result, approximately 20 percent of the abstracts in each category have to be rejected each year.

The oral slots are generally oversubscribed: only 12-16 papers can be scheduled during a three to four hour session, and several abstracts may have to be transferred to openings in poster sessions.

At the JTPC meeting in mid-July, the MSA delegation has to schedule the oral and poster sessions, as well as times for the MSA business meeting, presidential address, awards luncheon, and symposium, with the minimum of conflict. This is always a problem because affiliated societies (e.g., Geochemical Society, Society of Economic Geologists) are also scheduling their sessions and some of the presentations in these sessions may be of interest to MSA members.

Last year, a total of 1541 abstracts were submitted for the GSA annual meeting in San Antonio, of which 248 abstracts were reviewed by the MSA delegates to the JTPC. The breakdown of these abstracts, together with the number of sessions allocated to each category, was:

**Mineralogy/Crystallography:** 29 of 38 accepted for 1 scheduled oral session (16) papers and 1 scheduled poster session (13);

**Experimental Petrology:** 15 of 23 accepted for 1 scheduled oral session (10) and 1 scheduled poster session (5);

**Igneous Petrology:** 67 of 97 accepted for 3 scheduled oral sessions (48) and 1 scheduled poster session (19);

**Metamorphic Petrology:** 42 of 57 accepted for 2 scheduled oral sessions (30) and 1 scheduled poster session;

**Volcanology:** 25 of 33 accepted for 1 scheduled oral session (16) and 1 scheduled poster session (9);

**MSA Symposium:** 11 accepted for 1 oral session.

The MSA delegation continues to explore ways to increase the number of sessions available for oral presentations at the annual GSA meetings. We are always on the lookout for volunteers to assist in reviewing the abstracts in the five categories handled by MSA. The use of four referees to rank the abstracts assures that the reviews are as fair, broad, and balanced as possible. Anyone willing to review abstracts submitted for the 1988 annual meeting in Denver should contact Roger Burns, Jo Laird, or Jim Papike.

*Editor's note: A total of 1,541 volunteered abstracts were received for the 1986 meeting in San Antonio. The five categories reviewed by MSA JTPC members accounted for 15 percent of the total number of abstracts received. Overall, 1,191 or 77 percent of the total volunteered abstracts were accepted. The historical average of acceptance for all volunteered abstracts is 75 percent. The average for the categories reviewed by MSA JTPC members in 1986 was 72 percent.*

## Did you know...

The Scientific Information Service, Inc. is the U.S. agent for the database services of FIZ Karlsruhe offering the Inorganic Crystal Structure Database system of the University of Bonn. The database is a comprehensive compilation of evaluated data defining known crystal structures of inorganic compounds. The data is taken from open literature (95 percent from scientific journals) and is checked automatically for accuracy. For more information and a demonstration write or call the company at 7 Woodland Avenue, Larchmont, New York 10538; (800) 247-3825.

MSA's sister society, the Mineralogical Society of Great Britain, publishes several journals of interest to MSA members. *Mineralogical Magazine*, Volume 51, is \$170 for 1987; *Clay Minerals*, Volume 22, is \$110 for 1987. *Mineralogical Abstracts* is offered to MSA members (individuals only) at the special rate of \$25 through the MSA

Business Office. Subscriptions for the other two journals should be paid directly to MSGB, attn: Publications Manager, 41 Queen's Gate, London SW7 5HR, England. For a price list of special publications please write to the above address.

*Rocks & Minerals*, the official publication of both the Eastern Federation of Mineralogical and Lapidary Societies and Midwest Federation of Mineralogical and Geological Societies is offering a special introductory rate. Published since 1926, *Rocks & Minerals* contains comprehensive and interesting articles on mineralogy, geology, and paleontology. For more information and the special subscription rate, contact the publisher: Heldref Publications, 4000 Albemarle Street N.W., Washington, D.C. 20016; (202) 362-6445.

*Continued on page 4*



## Did you know...

Continued from page 3.

The delay in the appearance of the *Mineralogical Abstracts* (MA) index issues for 1985 onwards is much regretted. Professor Howie, editor, writes to say that this is due, not to any dilatoriness on the indexers' part, but to the attempt to move from a series of hand-written cards to a computerized hierarchical system. In the meantime, MSA members might like to note that abstracts from MA back to 1982 are now available for online searching in the Geo Abstracts data base (Dialog file 292).

The *Journal of Metamorphic Geology* is now available to MSA members for \$69.75—a 50 percent reduction. The quarterly journal brings together research on all aspects of metamorphic geology from a wide range of specialties. It is designed to appeal to workers in the fields of metamorphic petrology, mineral deposits geology, geochemistry, and other related fields of geology. Members who wish to take advantage of this offer should send payment to the MSA Business Office. Payment may be made by check, or money order (payable to MSA), or charged to your Visa, Mastercard, or American Express credit card.

A limited number of field trip guidebooks from the International Mineralogical Association (IMA) meeting are still available from the Business Office. The cost is \$3 each. The guidebooks are from the following field trips: A1. Colorado Rocky Mountain Ore Deposits; A5. Gem Pegmatites of Southern California; and B2. New Idria Region, California. The cost includes postage and handling. Prepayment is required.

The guidebook from the fifth field trip—B5. Regional Metamorphism and Metamorphic Phase Relations in Northwestern and Central New England—is available for \$5 in North America (\$6 overseas), postpaid. Checks should be made payable to "Geology Special" and sent to: Contribution No. 59, Department of Geology and Geography, University of Massachusetts, Amherst, MA 01003.

The *IMA Abstract Volume* containing 412 extended abstracts of papers presented at the 14th General Meeting of the IMA last July is available from the Business Office. The 284-page publication sells for \$10, including postage and handling. Prepayment to MSA is required.

Volunteer abstractors are urgently needed for *Mineralogical Abstracts*. If you are interested in helping out, please contact the American Organizer, Karl A. Riggs, Dept of Geology and Geography, Mississippi State University, P.O. Drawer 5167, Mississippi State, MS 39762; (601) 325-3915.

The 1984 *Science Citation Index* reports that *The American Mineralogist* has an impact factor of 1.779 and a cited half-life of greater than 10. The journal is second in impact factor in the field of mineralogy to *Contributions to Mineralogy and Petrology*. Only one other journal, out of 14 in the category, had a half-life greater than 10—*Mineralogical Magazine*.

The 1987 Member Ballot will be mailed to all members in May. Please indicate the candidates of your choice and return the ballot in the envelope provided. Ballots must be received at the MSA Business Office by August 1, 1987.

## In memoriam

We regret to announce the passing of the following MSA members and fellows. The Society extends its condolences to the families and friends of these scientists.

**Belsky, Howard**  
Member, 1982

**Donnay, Gabrielle H.**  
Life Fellow, 1947

**Fleischer, Arthur**  
Life Member, 1937

**Roberts, Willard L.**  
Life Fellow, 1950

**Watanabe, Takeo**  
Life Fellow, 1948

## MSA members offered discount on Clay Minerals publication


The *Proceedings of the Eighth International Clay Conference 1985* is being offered to MSA members for \$72. This represents a pre-publication discount of 10 percent. After publication, the price will be \$80. Use the coupon to order your copy today.

The *Proceedings* volume is from the meeting held July 28-August 2, 1985 organized by the Clay Minerals Society (CMS) and the U.S. Geological Survey under the auspices of Association Internationale pour l'Etude des Argiles. The volume is edited by Leonard G. Schultz, H. van Olphen and Frederick A. Mumpton. The 60 articles were selected from approximately 180 oral and 75 poster papers presented at the meeting.

The 450-page publication is organized by topic, including structure and crystal chemistry, mineralogy, geology and diagenesis, soils, iron and aluminum oxides, physical and chemical properties, catalysis and surface chemistry, organics on clays, and industrial and environmental applications. An author index, geographic index and comprehensive subject index are also included.

Payment should be made directly to CMS by writing Clays and Clay Minerals, P.O. Box 368, Lawrence, KS 66044 U.S.A. Advance payment in U.S. dollars is required. A publication date has not been set.

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# Welcome!

The following new members and students have joined MSA effective January 1, 1987. Welcome! Applications for membership may be obtained from the Business Office, 1625 I Street N.W., Suite 414, Washington, D.C. 20006. Memberships received from October 1 through December 31, 1987 will be made effective January 1, 1988 unless otherwise requested.

**Allen, Phillip**, 7538 Wigley Avenue, Jessup, MD 20794. *H:* (301) 799-4219. (ST-87)GE Sponsor: P. B. Leavens.

**Ballantyne, Paul**, Department of Geological Sciences, University College London, London WC1E 6BT, England. *O:* 01-3877050 x 2366. (ST-87)MP Sponsor: MSA.

**Barbera, Paul W.**, Department of Geology, Arizona State University, Tempe, AZ 85281. *O:* (602) 965-5175. *H:* (602) 784-9523. (ST-87)MP Sponsors: S. M. Peacock and D. M. Burt.

**Barnett, Daniel E.**, Earth Sciences Department, Dartmouth College, Hanover, NH 03755. *O:* (603) 646-2373. (ST-87)MP Sponsors: R. C. Reynolds, Jr. and M. Hluchy.

**Bignall, Gregory**, Geology Department, Otago University, Box 56, Dunedin, New Zealand. *O:* 64-24-771640x8845. (ST-87)IP Sponsors: D. S. Coombs and Y. Kawachi.

**Boer, Rudolf Hans**, University of Orange Free State, Department of Geology, P.O. Box 339, Bloemfontein, South Africa. *O:* 051-4012318. *H:* 051-479806. (M-87)GE Sponsor: MSA.

**Bresett, Stephen A.**, 804 Mechanic street, Ogdensburg, NY 13669. *H:* (315) 393-5711. (ST-87)IP Sponsor: MSA.

**Cartwright, Ian**, Department of Geology, University of Wisconsin, 1215 W. Dayton Street, Madison, WI 53706. *O:* (608) 263-3453. *H:* (608) 238-7444. (M-87)MP Sponsors: J. W. Valley and J. Morrison.

**Chang, Sewon**, Department of Geological Sciences, Seoul National University, Seoul 151, Korea. (ST-87)MI Sponsors: S. J. Kim and J. H. Noh.

**Chiba, Hitoshi**, Enrico Fermi Institute, University of Chicago, 5640 Ellis Avenue, Chicago, IL 60637. *O:* (312) 702-7776. *H:* (312) 288-5069. (M-87)GE Sponsor: MSA.

**Cho, Hyen-Goo**, Department of Geological Sciences, Seoul National University, Seoul 151, Korea. (ST-87)CM Sponsors: S. J. Kim and J. H. Noh.

**Choi, Hun Soo**, Department of Geological Sciences, Seoul National University, Seoul 151, Korea. (ST-87)MI Sponsors: S. J. Kim and J. H. Noh.

**Choi, Jin Beom**, Department of Geological Sciences, Seoul National University, Seoul 151, Korea. (ST-87)CC Sponsors: S. J. Kim and J. H. Noh.

**Cook, Stephen J.**, Department of Geology and Geophysics, University of Utah, Salt Lake City, UT 84112. (ST-87)MP Sponsors: J. R. Bowman and W. T. Parry.

**Deans, Alison**, 3745 Moorhead Avenue, Boulder, CO 80303. *H:* (303) 494-2642. (ST-87)MI Sponsors: J. L. Munoz and F. A. Caporuscio.

**Diamadi, Jr., Joseph**, 1106 W. Linden Street, #204, Riverside, CA 92507. *H:* (714) 686-1982. (ST-87)GE Sponsors: M. A. McKibben and L. Cohen.

**Gill, James B.**, Department of Earth Sciences, University of California, Santa Cruz, CA 95064. *O:* (408) 429-2425. (M-87)IP Sponsor: MSA.

**Grimes, Dena J.**, 6212 Rincon Way, Dallas, TX 75214. *H:* (214) 691-6250. (ST-87) Sponsor: MSA.

**Grunder, Anita L.**, Department of Geology, Oregon State University, Corvallis, OR 97331. *O:* (503) 754-2484. *H:* (503) 752-6003. (M-87)IP Sponsors: D. C. Willis and W. H. Taubeneck.

**Hames, Willis E.**, Department of Geology, Virginia Polytechnic Institute and State University, Blacksburg, VA 24061. (ST-87)MP Sponsors: P. H. Ribbe and R. J. Tracy.

**Hawkins, David P.**, 526 Twenty-Second Street N.W., Washington, D.C. 20037. *O:* (202) 994-6190. *H:* (202) 887-0308. (ST-87)MI Sponsor: R. P. Tollo.

**Jagannadham, Gollakota**, Box D, Geological Sciences, Virginia State University, Petersburg, VA 23803. *O:* (804) 520-5461. *H:* (804) 520-4218. (M-87)IP Sponsor: MSA.

**Johnson, Thomas M.**, Geology Department, 301 Earth Sciences, University of California, Berkeley, CA 94720. (ST-87) Sponsor: MSA.

**Kahn, Abid Murtaza**, Department of Geology, Seoul National University, Seoul 151, Korea. (ST-87) Sponsors: S. J. Kim and J. H. Noh.

**Lamers, F. J. M.**, Margrietlaan 10, 6151AJ Munstergeleen, The Netherlands. *O:* 011-31-4490-23788. *H:* 011-31-4490-18826. (M-87) MI Sponsor: MSA.

**Landis, Charles R.**, Department of Geosciences, Texas Tech University, Lubbock, TX 79409. *O:* (806) 742-3102. (ST-87)CM Sponsors: C. G. Barnes and W. M. Shannon.

**Leger, Albert**, Department of Earth and Planetary Sciences, Olin Hall, Johns Hopkins University, Baltimore, MD 21218. *O:* (301) 338-7034. *H:* (301) 685-1284. (ST-87)MP Sponsors: J. M. Ferry and H. P. Eugster.

**Livesey, Christina**, Department of Geology, Louisiana State University, Baton Rouge, LA 70803. *H:* (504) 344-7902. (ST-87)IP Sponsor: MSA.

**Madel, Robin E.**, 3745 Moorhead, Boulder, CO 80303. *O:* (303) 497-6822. *H:* (303) 494-2642. (ST-87)IP Sponsors: J. L. Munoz and F. A. Caporuscio.

**Milbunn, John W.**, Department of Earth and Space Sciences, University of California at Los Angeles, Los Angeles, CA 90024. (ST-87) Sponsor: MSA.

**Mutti, Laurence J.**, Department of Geology, Juniata College, Huntingdon, PA 16652. *O:* (814) 643-4310 x 602. *H:* (814) 669-4038. (M-87)MP Sponsors: J. M. Ferry and J. B. Brady.

**Noll, Mark R.**, 119 Nevada Avenue, Wilmington, DE 19803. *O:* (302) 451-8435. *H:* (302) 764-5324. (ST-87)GE Sponsor: MSA.

**Nyman, Matthew**, 32 Schiller Street, Apartment 3, Binghamton, NY 13905. *H:* (607) 798-7616. (ST-87)MP Sponsors: D. M. Jenkins and R. W. Lykins.

**O'Leary, Gerald A.**, 7413 Euclid N.E., Albuquerque, NM 87110. *O:* (505) 848-5000 x 4026. *H:* (505) 881-4182. (M-87)EG Sponsor: S. Atkin.

**Osborn, William L.**, 536 Glenhill Drive, Riverside, CA 92507. *H:* (714) 684-5711. (ST-87)GE Sponsor: M. A. McKibben.

**Rhee, Byung Ym**, Department of Geological Sciences, Seoul National University, Seoul 151, Korea. (ST-87)CM Sponsors: S. J. Kim and J. H. Noh.

**Schildes, Paul**, GE Research and Development Center, 1 River Road, Box 8 2C35, Schenectady, NY 12301. *O:* (518) 387-7785. *H:* (518) 372-3986. (M-87)MI Sponsor: R. C. DeVries.

**Song, Yong Sun**, Department of Geological Sciences, Seoul National University, Seoul 151, Korea. (ST-87)MP Sponsors: S. J. Kim and J. H. Noh.

**Stosch, H. G.**, Mineralogy-Petrology Institute, University of Koeln, 5000 Koeln 1, West Germany. (M-87) Sponsor: MSA.

**Walker, Richard T.**, 1024 120th Avenue S.E., Calgary, Alberta T2J 2K9 Canada. (ST-87)MP Sponsors: E. D. Ghent and M. Z. Stout.

**Wendlandt, Eric**, Department of Earth and Space Sciences, University of California, Los Angeles, CA 90024. (ST-87) Sponsor: MSA.

**Willis, Dana C.**, Department of Geology, Oregon State University, Corvallis, OR 97331. (ST-87) Sponsor: MSA.

**Wolf, George**, Department of Chemistry, Arizona State University, Tempe, AZ 85287. (M-87) Sponsor: MSA.



## Additional Details

### 1988 Spring Short Course

MSA will sponsor a Spring short course in 1988 titled Spectroscopic Methods in Mineralogy and Geology, from Friday, May 13 to Sunday, May 15. Frank C. Hawthorne, University of Manitoba, is the meeting convenor.

The two-and-one-half day meeting will provide an introduction to quantum mechanics, symmetry and group theory, spectrum fitting techniques, vibrational spectroscopy, vibrational spectroscopy in the OH-stretching region, Mossbauer, electronic absorption, NMR, ESR, XANES, and EXAFS spectroscopy, as well as Auger, XPS, and "future" spectroscopies.

Mark your calendars now and plan to attend. Watch for more information in the August issue of this newsletter. A registration form will be included in the November issue of *The Lattice*.

### V.M. Goldschmidt Conference

The V. M. Goldschmidt Centenary Conference, May 11-13, 1988, is sponsored by the Geochemical Society together with MSA, the International Association of Geochemistry and Cosmochemistry, and the Association of Exploration Geochemists. Symposia topics will include geochemical cycles, paleoceanography, the Archean environment, ore-forming processes, geochemistry with cosmogenic isotopes, environmental geochemistry, organic geochemistry in hydrocarbon exploration, diagenesis of humic substances, coal and kerogen, modern concepts in crystal chemistry, mantle petrology and mineralogy, and geochemistry of the platinum group metals. Several field trips are planned for May 14.

The conference will be held at the Hunt Valley Inn located just north of Baltimore, MD. The first circular will be mailed to all MSA members in the immediate future. To receive future mailings and abstract forms, please write to Goldschmidt Conference Coordinator, The Pennsylvania State University, 410 Keller Building, University Park, PA 16802.

### 1988 Fall Short Course

Serpentines, Chlorites, and other Non-Mica Phyllosilicates is the tentative title of MSA's 1988 Fall Short Course. The course will be held at the Holiday Inn, downtown Denver, October 28-30. S. W. Bailey, University of Wisconsin-Madison is the course convenor. Registration fees will be

6/*The Lattice*

## Meeting Calendar

As a member service this meeting calendar will be a regular feature in *The Lattice*. If you know of other meetings that should be included in this calendar, please send relevant information to the Business Office.

*\*See Additional Details.*

### 1987

#### May

25-27

Mineralogical Association of Canada, Saskatoon, Saskatchewan, Canada. *Details: MAC, Royal Ontario Museum, 100 Queen's Park, Toronto, Ontario, Canada M5S 2C6.*

#### June

11

Abstract deadline for the 1987 GSA meeting. *Details: GSA, 3300 Penrose Place, Boulder, CO 80301.*

12

Abstract deadline for the 1987 Fall meeting of the Materials Research Society. *Details: MRS, 9800 McKnight Road, Suite 327, Pittsburgh, PA 15237.*

#### July

1-3

Fluid Inclusion User School. Applied Mineralogy Group, Mineralogical Society. *Details: Dr. A. H. Rankin, Dept of Geology, Imperial College, London, SW7 2BP, England.*

6-10

Crypto-explosions and Catastrophes in the Geological Record: International workshop with focus on the Vredefort Structure (Parys, S. Africa). *Details: Organising Committee, Bernard Price Inst. for Geophysics, Univ of Witwatersrand, Johannesburg 2000, S. Africa.*

6-10

3rd International Congress on Applied Mineralogy (Orleans, France). *Details: Secretary ICAM 87, Laboratoire de Mineralogie Appliquee, Ecole Supérieure de L'Energie et des Matériaux, Domaine Universitaire de la Source, BP 6749, 45067 Orleans Cedex 2, France.*

27-28

Tectonic Setting of Layered Intrusives (Pretoria). *Details: Secretary, Indaba Organising Committee, Dept of Geology, Univ of Pretoria, S. Africa.*

27-Aug 8

NATO Advanced Study Institute: Physical Properties and Thermodynamic Behavior of Minerals (Cambridge). *Details: Dr. E. Salje, Dept of Earth Sciences, Downing St., Cambridge, U.K.*

#### August

12-20

14th International Congress, I.U.Cr. (Perth). *Details: Congress Organiser, Cryst. Centre, Univ of W. Australia, Nedlands, W. Australia.*

20-22

X-Ray Powder Diffractometry (Fremantle, W. Australia). *Details: E. H. Nickel, Div of Minerals and Geochem., CSIRO, Private Bag P.O., Wembley, WA 6014, Australia.*

20-23

1987 Annual Midyear Meeting of the Society of Economic Paleontologists and Mineralogists (SEPM). *Details: SEPM, P.O. Box 4756, Tulsa, OK 74159; (918) 743-9765.*

24-26

Solid State Properties of Minerals (Sydney). *Details: D. Haneman, Univ of New South Wales, Australia.*

25-27

25th Annual Meeting of the European High Pressure Research Group, Potsdam, East Germany. *Details: Prof. H. Vollstaedt, Akademie der Wissenschaften der DDR, Zentralinstitut für Physik der Erde, Telegrafenberg, 1500 Potsdam, East Germany.*

26-29

Pacific Rim Congress 87: International Congress on Geology Structure, Mineralisation and Economics of the Pacific Rim (Gold Coast, Australia). *Details: Aus. IMM Congress Secretariat, P. O. Box 731, Toowoong, Queensland 4066, Australia.*

#### September

1

Abstract deadline for the 9th Friends of Mineralogy—Tucson Gem and Mineral Society Symposium. *Details: FM-TGMS Symposium, Attn: Henry Truebe, Chairperson, c/o St. Joe American Corp., 2002 North Forbes Blvd., Tucson, AZ 85745.*

6-11

Electron Microscopy and Analysis Group 87: 6-7 Advanced course on Acquisition and Processing of Scanned Images; 7-11 Main Conference; 9-11 Workshop on Analytical E.M. with High Spatial Resolution. *Details: Meetings Office, Inst. of Physics, 47 Belgrave Sq., London SW1X 8QX, U.K.*

7-9

Science of Ceramics 14: International conference organized by Institute of Ceramics. Topics include chemistry and phase relations; physical properties; reactivity. *Details: Mrs. Buchanan, Shelton Hse., Shelton, Stoke-on-Trent, ST4 2DR, U.K.*

May, 1987



## September

7-10 6th Meeting of the European Clay Groups (Sevilla, Spain). *Details: Prof. Emilio Galan. EUROCLAY '87. Dpto. de Geologia, Facultad de Quimica. Apartado 553. Universidad de Sevilla. 41071 Sevilla, Spain.*

14-18 5th Meeting of Int. Working Group on Submicroscopy of Undisturbed Soil Materials. *Details: Dr. W. J. McHardy. Macaulay Inst. for Soil Research, Craigiebuckler, Aberdeen AB9 2QJ, U.K.*

## October

5-7 International Symposium on Crystallization and Precipitation. *Details: ISCAP '87, P.O. Box 607, Saskatoon, Saskatchewan, Canada S7K 3L6.*

22-25 Thermodynamic Modelling of Geological Materials: Minerals, Fluids, Melts. MSA Short Course, Phoenix, Arizona. *Details: See below.*

26-29 1987 MSA/GSA Annual Meeting, Phoenix, Arizona. *Details: MSA Business Office.*

30-Nov. 3 Chapman Conference on Perovskites: A Structure of Great Interest to Geophysics and Materials Science (Brisbee, Arizona) *Details: See below.*

## November

30-Dec 5 Materials Research Society Fall Meeting. *Details: MRS, 9800 McKnight Road, Suite 327, Pittsburgh, PA 15237; (412) 367-3003.*

## December

7-11 American Geophysical Union Fall Meeting, San Francisco, California. *Details: AGU, 2000 Florida Avenue N.W., Washington, D.C. 20009; (202) 462-6903.*

16-18 First Winter Conference. Theme: Spectroscopy. Mineralogical Society of Great Britain. *Details: Dr. D. J. Baughan, Dept of Geological Sciences, Aston University, Aston Triangle, Birmingham B4 7ET, U.K.*

## 1988

### February

14 9th Friends of Mineralogy—Tucson Gem and Mineral Society Symposium. *Details: FM-TGMS Symposium, Attn: Henry Truebe, Chairperson, c/o St. Joe American Corp., 2002 North Forbes Blvd., Tucson, AZ 85745.*

### April

5-8 Materials Research Society Spring Meeting. *Details: MRS, 9800 McKnight Road, Suite 327, Pittsburgh, PA 15237; (412) 367-3003.*

\*7-9 Second International Symposium on Experimental Mineralogy, Petrology, and Geochemistry. *Details: The Bochum Symposium, Institut für Mineralogie, Ruhr-Universität, Postfach 10 21 48, D-4630 Bochum 1, West Germany.*

### May

\*11-13 The V. M. Goldschmidt Conference organized by the Geochemical Society; co-sponsored by MSA. Baltimore, Maryland. *Details: See below.*

13-15 MSA 1988 Spring Short Course, Spectroscopic Methods in Mineralogy and Geology. *Details: MSA Business Office.*

15-20 American Geophysical Union Spring Meeting. Baltimore, Maryland. *Details: AGU, 2000 Florida Avenue N.W., Washington, D.C. 20009; (202) 462-6903.*

22-25 GAC/MAC/CSPG Joint Meeting. *Details: MAC, Royal Ontario Museum, 100 Queen's Park, Toronto, Ontario, Canada M5S 2C6.*

MAC Short Course: Heat Flow and Tectonic Regimes. *Details: See above.*

## October

29-30 Hydrous Phyllosilicates exclusive of Micas. MSA Short Course. Denver, Colorado. *Details: MSA Business Office.*

31-Nov. 3 1988 MSA/GSA Annual Meeting. Denver, Colorado. *Details: MSA Business Office.*

## November

28-Dec 3 Materials Research Society Fall Meeting. *Details: MRS, 9800 McKnight Road, Suite 327, Pittsburgh, PA 15237; (412) 367-3003.*

## 1989

### May

MAC Short Course: Diagenesis (Montreal). *Details: MAC, Royal Ontario Museum, 100 Queen's Park, Toronto, Ontario, Canada M5S 2C6.*

### July

9-19 28th International Geological Congress, Washington, D.C. *Details: Dr. Bruce B. Hanshaw, Secretary General, P.O. Box 1001, Herndon, Virginia 22070-1001; (703) 648-6053.*

## September

4-8 Second World Congress on Non-Metallic Minerals. *Details: General Chairman Professor Yan Dong Shen, Vice President, Academia Sinica, Guiyang, Guizhou Province, China.*

May, 1987

determined in early Spring 1988 and published with a registration form in the May 1988 issue of this newsletter.

## 2nd International Symposium Mineralogy, Petrology, Geochemistry

The Second International Symposium on Experimental Mineralogy, Petrology, and Geochemistry will be held in Bochum, West Germany, April 7-9, 1988. The meeting will be devoted to current progress in experimental studies in the fields of mineralogy, petrology, and geochemistry, to include crystal chemistry, ore deposits, rock deformation, crystal growth, fluid/rock interaction, element distribution, phase equilibria, physics of minerals and melts, and magma rheology, but not purely analytical results.

The Symposium will be held at Ruhr-Universität Bochum. The local organizing committee requests pre-registration, with the provisional title of any planned presentation before June 1, 1987. The second circular will be distributed in the Fall of 1987 only to those who have pre-registered. Sessions will consist of both invited and submitted papers. Sufficient time will be reserved for poster sessions.

For more information, and to pre-register, write to: The Bochum Symposium, Institut für Mineralogie, Ruhr-Universität, Postfach 10 21 48, D-4630 Bochum 1, West Germany.



## Thermodynamic Modelling of Geological Materials: Minerals, Fluids, Melts

Thermodynamic analysis of geological materials and processes, an indispensable tool for petrologists and geochemists, is the subject of the 1987 Fall Short Course. H. P. Eugster, Johns Hopkins University, and I. S. E. Carmichael, University of California-Berkeley, will convene the three-day course, October 26-28. It is hoped that the course, oriented towards earth materials, will provide a useful supplement to existing thermodynamics courses. It is assumed that participants are familiar with elementary geological thermodynamics.

Specific topics and speakers include: Minerals—R. C. Newton, University of Chicago, B. J. Wood, Northwestern University; and A. Navrotsky, Princeton University; Electrolytes—K. S. Pitzer, University of California-Berkeley; and J. W. Weare, University of California-San Diego; High P-T Aqueous Solutions—D. Sverjensky, Johns Hopkins University; Igneous Gases and Fluids—J. R. Holloway, Arizona State University; Ore Fluids—G. H. Brimhall, University of California-Berkeley; and D. A. Crerar, Princeton University; Metamorphic Fluids—J. Ferry, Johns Hopkins University; L. Baumgartner, Johns Hopkins University; Eugster; and S. N. Olsen, Johns Hopkins University; and Silicate Melts—M. S. Ghiorso, University of Washington, R. G. Berman, University of British Columbia; T. H. Brown, University of British Columbia; and Carmichael.

The Wickenburg Inn has been reserved for the sole use of meeting participants. Registration is limited to 100 individuals on a first-come, first-served basis. To keep costs as low as possible, participants are offered a choice of registration fees depending on the lodging accommodations. Most sleeping rooms have patios and are situated in small cabins with the exception of a few rooms in the lodge. At this time, there are no single accommodations available and registration is limited to meeting participants because of the limited number of sleeping rooms. All registrants will be provided lodging. Should additional accommodations become available once all individuals desiring to attend the meeting are housed, participants will be given the opportunity to reserve a single room at a higher registration fee.

The short course will begin with a welcoming reception Thursday evening, October 22 and continue through Sunday afternoon, October 25. Registration fees include Volume 17 of the Reviews in Mineralogy, lodging Thursday, Friday, and Saturday nights; breakfast and lunch Friday, Saturday, and Sunday; the welcoming reception and light buffet dinner Thursday evening; and dinner on Friday and Saturday evening. Transportation will be provided from the Phoenix airport at approximately 3:30 p.m. and 7:30 p.m. on Thursday, October 22. Buses will leave at approximately 3:00 p.m. Sunday afternoon, October 25, and return participants to the main GSA hotels. Transportation costs are included in the registration fees.

	Member	Non-Member
<b>Student</b>		
in quad room (4 individuals)	\$230	\$250*
in triple room (3 individuals)	\$250	\$270*
<b>Professional</b>		
in triple room (3 individuals)	\$365	\$410*
in double room (2 individuals)	\$405	\$450*

\*Includes MSA membership for 1988.

As registrations will be accepted in the order they are received, individuals interested in the short course are encouraged to complete the registration form on the following page and return it as early as possible to the MSA Business Office, 1625 I Street N.W., Suite 414, Washington, D.C. 20006. Payment must accompany the registration form.

## GSA Short Courses

A series of short courses will be offered by the Geological Society of America (GSA) at its 1987 Annual Meeting in Phoenix, AZ from October 26-29. The courses will utilize the geology of Arizona and are designed for participants with different levels of professional experience. You do not need to be a member of GSA to register for the meeting or to participate in a short course. Short course fees range from \$45-\$175, depending on the length of the course and required materials. For further information about any of the courses, contact Edna Collis at GSA, P.O. Box 9140, 3300 Penrose Place, Boulder, CO 80301; (303) 447-2020. The pre-registration deadline for all of these short courses is September 25, 1987. On-site registration is based on availability of space and the fee will be higher.

Two short courses and two field trips will address the topic "Planetary Geology and Remote Sensing." The short course on remote sensing includes an afternoon field

trip and a course manual with high-quality photographs from satellite sensors. The introductory course on the fundamentals of planetary geology will review results of solar system exploration. The Sunday field trip, also known as "The Holey Tour," will examine craters of varied origins, including Meteor Crater, Mormon Lake and Montezuma's Well.

A two-day course, "Contaminant Hydrogeology," will provide an introduction to the theory and practice of contaminant hydrogeology for professionals and graduate students.

"Quantitative Sedimentary Basin Modeling" is a one-day course to teach the theory and analysis of basin subsidence histories and mechanisms to those geologists with a general sedimentary background but no previous knowledge of basin modeling.

"Site Characterization for High-Level Nuclear Waste Disposal" will address legislative background and guiding federal documents, results of environmental

assessments and site characterization plans and processes.

The short course, "Current Aspects of Basin Analysis and Sedimentary Geology" will provide an introductory overview of the interacting fields of basin analysis and sedimentary geology.

Another short course, "Spread sheets on Microcomputers: Versatile Geological Tools" will enable computer novices to manipulate different types of geological data. Course participants will receive a complete commercial spreadsheet program.

The "Writing History of Geology Workshop" will teach participants to review essays and to research and write biographies, including memorials.

The "Paleoseismology and Active Tectonics" short course will review the type of near-surface displacements by normal, reverse and strike-slip faults and by folds. Geology of the earthquake source region and evaluating seismological data will also be addressed.



# REGISTRATION FORM

Thermodynamic Modelling of Geological Materials:  
Minerals, Fluids, Melts

October 22-25, 1987

Return this registration form, completed, to the MSA Business Office, 1625 I Street N.W., Suite 414, Washington, D.C. 20006. Payment must accompany this form. Registration is limited to 100 individuals on a first-come, first-served basis.

Please type or print.

Name \_\_\_\_\_  
(first) (middle initial) (last)  
Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
(city) (state) (zip/postal code) (province) (country)  
Telephone numbers ( ) ( )  
(office) (home)

Please check appropriate registration category.

	Member	Non-Member
Professional:		
in triple room (3 individuals)	___ \$365	___ \$410*
in double room (2 individuals)	___ \$405	___ \$450*
Student:		
in quad room (4 individuals)	___ \$230	___ \$250*
in triple room (3 individuals)	___ \$250	___ \$270*

\*includes MSA dues for 1988.

Total amount due: \$ \_\_\_\_\_

Please check method of payment:

\_\_\_ Enclosed is a check or money order in the amount of \$ \_\_\_\_\_.  
\_\_\_ Please charge me \_\_\_ Visa \_\_\_ Mastercard \_\_\_ American Express credit card  
in the amount of \$ \_\_\_\_\_. (Your credit card will be charged when the registration  
form is received. Should a refund be required, a credit will be applied to your  
charge card.)

\_\_\_\_\_  
(card number) (name on card--please print)  
\_\_\_\_\_  
(exp. date) (signature)

Please check items as appropriate:

\_\_\_ I wish to share accommodations with (your name must appear on the registration  
form of each individual listed below):

1. \_\_\_\_\_  
(please print full name and affiliation or city/state)  
2. \_\_\_\_\_  
(please print full name and affiliation or city/state)  
3. \_\_\_\_\_  
(please print full name and affiliation or city/state)

\_\_\_ Please assign me to a room. I am a \_\_\_ smoker \_\_\_ non-smoker.

Please list any special requirements regarding lodging or meals. \_\_\_\_\_  
\_\_\_\_\_

Please indicate your preference for the shuttle bus on Thursday, October 22.

\_\_\_ 3:30 p.m. \_\_\_ 7:30 p.m. \_\_\_ I do not plan to use the shuttle bus.





# 1987 ANNUAL MEETING

**G**SA's first visit to Phoenix will be well remembered. Arizona has an abundance of popular geologic destinations, so when the location is put together with an offering of 33 field trips and 27 well-selected symposia, this is shaping up as one of GSA's largest and most unusual meetings.

Using Phoenix as a gateway, visitors can reach impressive natural wonders and unusual cultures that excel in their beauty, scale, and emotional impact. Arizona's boundaries encompass the Grand Canyon, Lake Powell, San Francisco Peaks, Indian reservations, the Southwestern art community of Sedona, Oak Creek Canyon, Monument Valley, Canyon de Chelly, the Petrified Forest and Painted Desert, mining towns such as Prescott, the Mogollon Rim, Saguaro National Monument, and Arizona-Sonora Desert Museum. If at all possible, plan to extend your visit through a weekend. This really is a grand opportunity at an exquisite time of year.

## ALL-ARIZONA INVITATION

This is a cooperative effort that pools the resources and talents of geologists throughout the state of Arizona. Our General Chairman, William R. Dickinson, University of Arizona, has gathered support from every corner of the state. Although it is in the best tradition of clichés to praise the efforts of committees, please accept our word that this group has been singularly creative, diligent, and effective in bringing you an absolutely dynamite annual meeting.

## PRELIMINARY ANNOUNCEMENT AND CALL FOR PAPERS

Technical sessions consist of both volunteered and invited papers. Invited papers were preorganized into symposia. Papers submitted on a volunteered basis will be reviewed and then selected by the Joint Technical Program Committee in July. The final schedule for the entire technical program will appear in the August registration issue of *GSA News & Information*.

## VOLUNTEERED PAPERS

Abstracts are usually volunteered on a general basis to one of the 35 disciplines listed on the abstract form. In addition, some abstracts will be submitted to specific theme sessions. Theme sessions are being tried in 1987 as a method of encouraging open submission to topical sessions. Papers will be reviewed simultaneously and then selected for either general or theme sessions. Papers not accepted for a theme session will continue through the process to be considered for a general session organized by discipline rather than topic.

Abstracts for all the technical sessions (both oral and poster presentations) must be submitted on 1987 abstract forms, available from the Abstracts Coordinator, GSA headquarters, and from the geology departments of most colleges and universities. The abstract form will be used as camera-ready copy for publication of **Abstracts with Programs**. Senior

authors will be charged a \$15 fee if retyping is necessary, and there will be no opportunity for authors to review or revise typed abstracts after they are submitted. Note: No more than one abstract from any person as sole or senior author will be accepted for publication, and due to scheduling difficulties, no author may present more than one volunteered paper. These restrictions do not apply to symposia.

## DEADLINE FOR RECEIPT OF VOLUNTEERED ABSTRACTS AT GSA: THURSDAY, JUNE 11, 1987

Normal length of presentation is 15 minutes, including time for discussion. Projection equipment consists of TWO 35-mm (2" x 2") projectors, one overhead projector, and two screens. Each poster session speaker will be provided with three tackboards approximately 8' wide and 4' high. The boards are horizontal and free-standing in a 10' x 10' three-sided area. Poster presentations are scheduled in four-hour intervals.

## THEME SESSIONS: NEW FOR PHOENIX 1987

To provide a *timely and coherent forum for exciting ideas and topics*, the Joint Technical Program Committee (JTPC) for the 1987 Phoenix meeting of the GSA invites you to use a new way of bringing together technical presentations: theme sessions. A theme session is a topically named technical session suggested to the JTPC by any individual or division or associated society of the Geological Society of America. The organizers provide to the JTPC a title, theme statement, and a list of abstracts that they wish to have considered for the theme session. The abstracts will be treated as volunteered rather than invited, and they are subject to the same rigorous review by outside reviewers as other volunteered abstracts. The JTPC, if it is able to accommodate the suggested theme session, may modify the list of abstracts to be included and may add other volunteered abstracts that seem appropriate.

*If you would like to suggest a theme session for the 1987 national meeting, please follow these guidelines:*



1. Send your proposed title, a one-page statement of why the topic is timely, the names and addresses of two persons who have agreed to act as chairpersons for the session if it is accepted, and a list of suggestions for abstracts and participants in the session to either JTPC Chair or Co-Chair by *May 15, 1987*.
2. **DO NOT SEND ABSTRACTS WITH THE PROPOSAL.** Individual authors should send the abstracts directly to headquarters by the abstract deadline, June 11.
3. For each abstract you propose, please make sure that you list the exact abstract title and the names of all authors. *The speaker's name should be first.* This procedure will help the Abstracts Coordinator at GSA headquarters correctly identify the abstracts when they are submitted for consideration for this session.
4. By June 1, the JTPC Chairmen will decide which of the suggested theme sessions can be accommodated. The proposer will be notified immediately. *Acceptance of the theme session will not imply acceptance of any of the proposed abstracts.*
5. Again, *please do not send the abstracts with the proposal.* Ask each participant to write the title of the proposed theme session in pencil at the very bottom of the abstract form and to mail it directly to GSA by the abstracts deadline, *June 11*.

The following will be the procedure after June 11:

- All abstracts will be reviewed by the appropriate JTPC reviewer.
- On July 17, abstracts will be selected by the 26-member JTPC, which is composed of representatives from each division and society. The appropriate representatives will determine the schedule of abstracts for the theme session. The proposer will be notified approximately one week afterward.
- The theme sessions will appear in the meeting program identified by title and sponsoring individuals or organizations.

Although the themes will not have been published, due to the limited time we have for developing this new program for 1987, you may hear about a theme idea. *If you wish to submit an abstract for inclusion in a theme session someone else has suggested, write the title of the theme session in pencil at the very bottom of your abstract form, and mail it to be received at GSA headquarters by the volunteered abstract deadline, June 11.*

Clement G. Chase  
JTPC Chair  
Department of Geosciences  
University of Arizona  
Tucson, Arizona 85721  
(602) 621-2417

J. Dale Nations  
JTPC Co-Chair  
Department of Geology  
Northern Arizona University  
Flagstaff, Arizona 86011  
(602) 523-7180

## INVITED SYMPOSIA

Conveners for the following symposia have already chosen their speakers, who will submit invited abstracts directly to the convener. If you would like to talk with a convener directly, please call GSA for contact information.

1. **Geology of Human Origins and Cultural Evolution.** Archaeological Geology Division; Fekri Hassan,

- Washington State University.
2. **Predicting Coal Quality by Means of Basin Analysis, Geophysical Data, and Geochemical Techniques.** Coal Geology Division; Frederick Kuellmer, New Mexico Institute of Mining and Technology.
  3. **Neotectonics in Earthquake Evaluation.** Engineering Geology Division; Ellis Krinitzky, Waterways Experiment Station.
  4. **California-Arizona Crustal Transect: Detachment Terrane to Colorado Plateau.** Geophysics Division; Keith Howard, USGS Menlo Park.
  5. **History of Studies of Arid Lands: Ancient and Modern.** History of Geology Division; William Jordan, Millersville University.
  6. **Geochemical Reactions and Related Physical Processes Associated with Organic Compounds in Ground Water.** Hydrogeology Division; Mary Jo Baedeker, USGS Reston.
  7. **Global Change: A Geological Perspective on Earth-System Science.** Planetary Geology Division and Quaternary Geology and Geomorphology Division; Victor Baker, University of Arizona, and James Head, Brown University.
  8. **Tectonic versus Eustatic Effects on Cretaceous Sedimentation of the Western Interior of North America.** Sedimentary Geology Division; Niall Mateer, Laramie, Wyoming.
  9. **Structure and Tectonics of Accretionary Prisms.** Structural Geology and Tectonics Division; Darrel Cowan, University of Washington.
  10. **Paleoceanography and Paleontology of the Gulf of California.** Cushman Foundation; James Ingle, Stanford University.
  11. **Cenozoic Potassium-Rich Igneous Rocks of the Colorado Plateau and Surrounding Regions.** Geochemical Society; G. Nell Tyner, Florida Institute of Technology.
  12. **Collections for the Future: Archivists, Curators, Historians, Bibliographers Speak.** Geoscience Information Society; Jean Eaglesfield, Massachusetts Institute of Technology.
  13. **Synchrotron Radiation Research in Geological Sciences.** Mineralogical Society of America; Gordon Brown, Jr., Stanford University.
  14. **Time, Life, and the Rock Record: New Implications for Teaching.** National Association of Geology Teachers; Robert Norris, University of California, Santa Barbara.
  15. **Rates of Evolution in Fossil Lineages.** Paleontological Society; Bjorn Malmgren, University of Uppsala.
  16. **Proterozoic Ores of the Southern Cordillera.** Society of Economic Geologists; Spencer Titley, University of Arizona.
  17. **Ore-Bearing Granite Systems: Petrogenesis and Mineralization Processes.** Society of Economic Geologists; Holly Stein, USGS Denver.
  18. **Geology and Tectonics of Mexico.** Joaquin Ruiz, University of Arizona.
  19. **The Cordilleran-Caribbean Connection: Mesozoic Geology from the Mojave Desert to the Gulf of Mexico.** William Dickinson, University of Arizona.
  20. **Sedimentary Facies, Biostratigraphy, and Paleocology of the Southwestern Margin of the Cretaceous Western Interior Seaway.** Dale Nations, Northern Arizona University.
  21. **Tertiary Extensional Tectonics of the Colorado River Region.** Gary Axen, Northern Arizona University.
  22. **Early Proterozoic Continental Assembly of Southwestern North America.** Karl Karlstrom, Northern Arizona University.

ABSTRACTS COORDINATOR 303/447-8850

ALL OTHER MEETING INFORMATION 303/447-2020



23. **"Anorogenic" Silicic Magmatism: Proterozoic to the Present.** Eric Christiansen, Brigham Young University.
24. **Inception and Timing of Deformation in the Late Mesozoic and Early Cenozoic Cordilleran Fold-Thrust Belt.** Tim Lawton, New Mexico State University.
25. **Geology in China.** B. Clark Burchfiel, Massachusetts Institute of Technology.
26. **Origins of Methane in the Earth.** Martin Schoell, Chevron Oil Field Research Company, La Habra, California.
27. **Structure and Evolution of the Rio Grande Rift.** Kenneth Olsen, Los Alamos National Laboratory.

## HIGHLIGHTS

**Employment Service.** For applicant and employer registration, see March *GSA News & Information* or contact the GSA Employment Service Coordinator.

**Guest Program.** Tours, golf, tennis, and a hospitality room will be available.

**Welcoming Party.** Sunday, October 25, 6:00-9:00 p.m.

**All-GSA Awards Reception.** Monday, October 26, 6:00-7:00 p.m., following the Presidential Address.

**Alumni Night.** Monday, October 26, 7:00-9:30 p.m.

**Special Event Night.** Wednesday, October 28.

## TRAVEL AND LODGING

**Accommodations.** GSA has selected eleven official hotels, which offer special convention rates. A block of 600 rooms is reserved at the Hyatt Regency Phoenix, which, as headquarters, will host most of our social and business events. Hotel rates range from \$28 to \$80 for a single and from \$30 to \$90 for a double.

The Phoenix Civic Plaza will be the location of all technical sessions and exhibits. Approximately one-half of the rooms blocked in hotels are within easy walking distance of the Civic Plaza. Other rooms are a 20-minute drive. GSA will provide a convenient, all-day, free shuttle to these hotels.

Hotel forms will be available in the August issue of *GSA News & Information*. All housing will be processed in Phoenix by the official Housing Bureau.

**Transportation.** The major carriers into Phoenix are American, Continental, and United. Good fares also are available through basic service airlines such as American West and Southwest. Advance bookings are the best route to lowest fares, so check with your travel agent now. Everyone should be aware of cancellation penalties that often accompany the least-fare options. Official rental-car and travel agencies will be announced in the June issue of *GSA News & Information*.

**Arizona Information.** Abundant information and friendly people are available at the following contact numbers:

Arizona Office of Tourism  
1480 E. Bethany Home Road  
Phoenix, AZ 85014  
(602) 255-3618

Grand Canyon National Park Lodges  
P.O. Box 699  
Grand Canyon Village  
Grand Canyon, AZ 86023  
(602) 638-2401

Phoenix and Valley of the Sun Convention and Visitors Bureau  
505 North Second Street, Suite 300  
Phoenix, AZ 85004  
(602) 254-6500  
(800) 221-5596



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