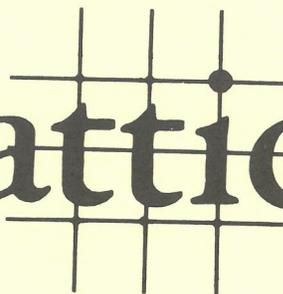


The Lattice



Vol. 4, No. 2, May 1988

Hydrous Phyllosilicates Exclusive of Micas topic of Fall Short Course in Denver

Interest is already high for the second 1988 MSA-sponsored short course to be held in Denver, Colorado October 29-30, just prior to the MSA/GSA Annual Meeting. Sturges W. Bailey, University of Wisconsin-Madison, has put together a high quality program for the two-day meeting.

Topics and speakers include: Polytypism of 1:1 layer silicates, Bailey; Kaolin minerals: structures and stabilities, R. F. Giese, Jr., SUNY-Buffalo; Kaolin minerals: occurrences and origins, H. H. Murray, University of Indiana; Serpentine minerals: structures and petrology, F. J. Wicks and D. S. O'Hanley, Royal Ontario Museum; Structures and compositions of other trioctahedral 1:1 phyllosilicates, Bailey; Isotopic studies of phyllosilicates, S. M. Savin, Case Western Reserve University; Talc, pyrophyllite, and related minerals, S. Guggenheim, University of Illinois, and B. W. Evans, University of Washington; Phase equilibria of serpentines and chlorites, J. V. Chernosky, University of Maine, R. Berman, University of British Columbia, and L. T. Bryndzia, University of Chicago; Chlorites: structures and crystal chemistry, Bailey; Chlorites: metamorphic petrology, J. Laird, University of New Hampshire; Vermiculite, C. de la Calle, C. S. I. C., and H. Suquet, Universite Pierre et Marie Curie; Smectite, N. Guven, Texas Tech University; Vector representation of phyllosilicate compositions, D. M. Burt, Arizona State University; Regular and random interstratifications, R. C. Reynolds, Jr., Dartmouth College; Sepiolite and palygorskite, B. F. Jones, U.S. Geological Survey, and E. Galan, Universidad de Sevilla; and Crystal chemistry, classification, and identification of modulated layer silicates, Guggenheim and R. A. Eggleton, Australian National University.

The course will begin with a welcoming reception Friday evening, October 28. Sessions begin at 8 a.m. Saturday morning and continue through 4:30 p.m. Sunday

evening. Registration fees include the meeting and accompanying *Reviews in Mineralogy* volume, lunch and coffee breaks Saturday and Sunday, and the welcoming reception Friday evening.

Registration fees are:

	Professional	Student*
MSA Member	\$220	\$50
Non-Member**	\$260	\$70

*Student registration fees are offset by corporate contributions.
**Registration fees include membership in MSA for 1989.

The course will be held at the Holiday Inn-Downtown Denver. The sleeping room rates will be approximately \$60-\$65 for a double

room. These are special rates for GSA meeting participants. Individuals staying at the hotel for the MSA Short Course may elect to stay at the hotel throughout the GSA meeting for the same room rates. Room registration information will be available in the August issue of this newsletter. Individual participants are responsible for making their own sleeping room accommodations.

Space at the course is limited to 120 individuals. To register, please complete the registration form and return it with the appropriate registration fee as quickly as possible. Space cannot be held unless the

Continued on page 4.

Members listed in new Directory

The attached *Membership Directory for 1988-1991* lists 2528 MSA members for 1988. This is one of the largest membership directories ever published by the Society. The *Directory* features an alphabetical listing of all members giving membership type, join date, and main and secondary interest areas in addition to address and telephone numbers.

The *Directory* includes 1770 dues-paying members and fellows, 412 students, 10 spouses, 310 life members and fellows, 20 associated life members and fellows, and 6 honorary fellows.

Interest areas vary widely. Mineralogy was the choice of 24% of the members listed, followed by Geochemistry and Metamorphic Petrology each with 11%, Igneous Petrology with 10%, Crystallography/Crystal Chemistry 9%, Economic Geology 8%, Phase Equilibrium 4%, Clay Mineralogy 4%, and Sedimentary Petrology 1%. Two percent indicated another area of interest, while no interest area was available for 15% of the individuals listed.

Approximately 1800 cards were returned by the membership updating address and

telephone information and providing birth date, highest degree earned, and the institution where that degree was earned. Of the members listed, 42% have either a Ph.D. or Doctor of Science degree.

The *Directory* was produced directly from computer files at the MSA Business Office. The address and telephone number(s) for individuals who did not return the directory card were taken from the computer and previous membership directory. Telephone numbers were used if the area code matched the address city and state.

Words and names with more than one capital letter will have a space before the second capital letter, i.e., Mc Andrew. The computer requires this space in order to print the second capital letter. Foreign phone numbers have a hyphen following the numbers placed in the () on the directory cards.

Care has been taken to proofread the names and addresses in this list. However, if your name or other information is incorrect, please write to the MSA Business Office with the correct information.

From the President

Vital contributions made by abstractors

Access to publications across the broad range of mineralogical sciences is increasingly being achieved through computerized reference systems which can identify and retrieve the contents of thousands of journals by key words, by author, or by combinations of these and other factors. The Mineralogical Society of Great Britain and the Mineralogical Society of America jointly publish *Mineralogical Abstracts*, and have collaborated for years to cover as many of the host of relevant journals as possible, principally through the services of volunteer abstractors. Many abstracts prepared by the authors themselves are inadequate; they may be too complete, incomplete, or in inappropriate formats for publication. Thus, abstractors make valuable contributions to our science by using their technical expertise to bring the contents of diverse research papers into *Mineralogical Abstracts*, which is now part of the computerized *GeoAbstracts* data reference service, DIALOG file 292.

Abstractors have commonly not received the recognition and appreciation they deserve from their professional colleagues. On behalf of this Society, I would like to offer my warmest thanks to each and every abstractor. I also want to record my appreciation to the employers of abstractors, who pay the salaries and operating expenses for many abstractors. I would like also to specially thank the people involved with the production of *Mineralogical Abstracts* from its long-time Principal Editor, Professor R. A. Howie, through all the associated editors and the persons responsible for the literature from specific countries and subjects. Special

thanks are also due to Professor Karl A. Riggs of Mississippi State University for his years of effort to organize abstractors in America.

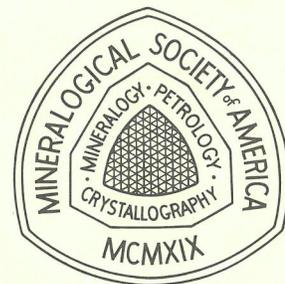
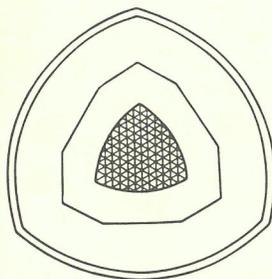
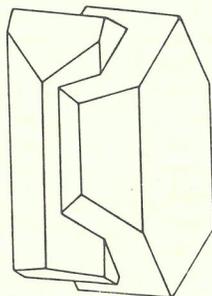
Many wish to volunteer to serve MSA. Would you be willing to serve by becoming an abstractor? Usually an abstractor covers one or, at most, a few journals in a topic in which they have expertise. Currently, an abstractor is needed for *Soviet Physics—Crystallography*. Other journals become "available" from time to time. Please contact Professor Riggs at (601) 325-2910 or by mail if you can help.

MSA Council has twice declined to publish a decennial index to the *American Mineralogist*. The principal reasons are the large cost involved, and the increasing perception that computerized reference services adequately fulfill the needs of many scientists. Council recognizes that computer systems are not available everywhere, but notes that most libraries with collections of research journals also have access to computerized reference services. It is implicit in these arguments that abstractors will have covered each journal and entered an appropriate abstract into the computer files! Thus, the vital contributions of abstractors to their profession must be fully appreciated by all.

Sincerely,

David B. Stewart

David B. Stewart
1988 President



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 1988 are \$40 for professional members; \$20 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 \$140. 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.

1988 President: D. B. Stewart, U. S.
Geological Survey

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

Vice-President: C. W. Burnham, Harvard
University

Secretary: Maryellen Cameron, Miami
University of Ohio

Treasurer: G. L. Nord, Jr., U.S.
Geological Survey

Office Manager/Accountant: Susan L. Myers

Mineralogical Society of America
1625 I Street N.W., Suite 414
Washington, D.C. 20006
(202) 775-4344

Meeting Calendar

June

- 10 Abstract deadline for the 1988 Geological Society of America Annual Meeting, October 31-November 3, Denver, Colorado.
- 19-24 11th International Symposium on the Reactivity of Solids, Princeton, New Jersey. *Details: Dr. M. Stanley Whittingham, P.O. Box 669, Ridgefield, CT 06877.*
- 20-24 X-Ray Powder Diffraction, a Concentrated Course in Computer Methods and Quantitative Analysis, Albany, New York. *Details: Dr. Henry Chessin, X-Ray Clinic, State University of New York, Department of Physics, 1400 Washington Avenue, Albany, NY 12222; (518) 442-4512 or 13.*
- 27 Paul Niggli Colloquium. *Details: ETH Zurich, Institut für Mineralogie und Petrographie, Z.Hd. Frau Claudia Buchel, ETH Zentrum, CH-8092 Zurich, Switzerland.*

July

- 25-28 First International Symposium on Thermodynamics of Natural Processes, Strasbourg, France. *Details: Dr. Bertrand Fritz, Secretary General-TNP1-1988, Institut de Geologie, 1, rue Blessig, F-67084 Strasbourg Cedex, France; (33) 88.35.85.73; telex ULP 870260 F or CNRSCRO 890032 F.*

August

- 12-15 Mineralogy of Precious Metal Deposits, Golden, Colorado, sponsored by the Colorado Chapter of Friends of Mineralogy. *Details: James A. McGlasson, 7387 South Flower Street, Littleton, CO 80123, (303) 972-0376; or James F. Hurlbut, 622 Gardenia Ct., Golden, CO 80401, (303) 279-7796.*
- 14-19 Penrose Conference on "The Origin and Evolution of Anorthosites and Associated Rocks," Chugwater, Wyoming. *Details: B. Ronald Frost, Department of Geology and Geophysics, P. O. Box 3006, University of Wyoming, Laramie, WY 82071; (307) 766-4290.*

- 21-24 Fifth Annual Midyear Meeting of the Society of Economic Paleontologists and Mineralogists, Columbus, Ohio. *Details: SEPM, P.O. Box 4756, Tulsa, OK 74159; (918) 743-9765.*

September

- 4-8 Zeolites as Catalysts, Sorbents and Detergent Buildings, Wurzburg, West Germany. *Details: Dr. Hellmut G. Karge, Fritz-Haber-Institut der Max-Planck-Gesellschaft, Faradayweg 4-6, D-1000 Berlin 33, West Germany.*
- 18-21 25th Annual Meeting of the Clay Minerals Society, Grand Rapids, Michigan. *Details: Dr. Thomas J. Pinnavaia, Dept of Chemistry, Michigan State Univ, East Lansing, MI 48824; (517) 355-4626.*

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

February

- 12 The Tenth Symposium sponsored by the Friends of Mineralogy, the Tucson Gem and Mineral Society, and MSA, Tucson, AZ. *Details: Henry Truebe, FM-TGMS-MSA Symposium, c/o Dallhold Resources, 2002 N. Forbes Blvd, Tucson, AZ 85745.*

May

- MAC Short Course: Diagenesis; Montreal, Quebec, Canada. *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, VA 22070-1001; (703) 648-6053.*

Additional Details

The Materials Research Society has issued a general call for papers for its 1988 Fall Meeting to be held November 28-December 3, 1988 in Boston, MA. The deadline for abstracts for all symposia is June 10, 1988. Comprised of 25 topical symposia, the meeting will also include a short course program, complementary equipment exhibit, and will discuss new materials development, new characterization methods, and new processing technology. For more
May, 1988

information, contact MRS, 9800 McKnight Road, Suite 327, Pittsburgh, PA 15237; (412) 367-3003.

The 10th Symposium sponsored jointly by the Friends of Mineralogy, the Tucson Gem and Mineral Society, and MSA will be held in Tucson on February 12, 1989. The topic of the Symposium will be Galena, the featured mineral of the 35th Tucson Gem and Mineral Show. Papers are invited on topics in any way related to galena including its descriptive

mineralogy, associations or paragenesis, classic localities, etc.

If you would like to present a paper please write immediately with your topic, a few sentences describing the paper, and an address and/or phone number at which you may be contacted. Presentations will be limited to 15 to 20 minutes to be followed by a period for questions.

For more information, contact Chairperson Henry Truebe, FM-TGMS-MSA Symposium, c/o Dallhold Resources, 2002 N. Forbes Blvd., Tucson, AZ 85745.

Welcome!

The following new members and students have joined MSA effective January 1, 1988. As they are listed in the attached Membership Directory, only their names and sponsors are listed below.

Applications for membership may be obtained from the Business Office, 1625 I Street N.W., Suite 414, Washington, D.C. 20006; (202) 775-4344.

Asher, Pranoti, *sponsors: R. Joesten and A. R. Philpotts*

Boggs, Robert M., *sponsor: MSA*

Brice, Tania H., *sponsors: W. A. Crawford and M. L. Crawford*

Chyi, Kwo-Ling, *sponsor: MSA*

Daniels, Eric, *sponsors: S. P. Altaner and D. M. Henderson*

Denison, Cambria, *sponsors: W. D. Carlson and C. Clowe*

Etemadi, Bijan, *sponsor: MSA*

Harville, Donald G., *sponsor: MSA*

Heady, Eileen, *sponsor: MSA*

Hoelzel, Alexander, *sponsor: MSA*

Huffman, Alan Royce, *sponsor: A. K. Kronenberg*

Hurlow, Hugh A., *sponsor: M. U. K. Khattak*

Jamtveit, Bjorn, *sponsors: K. Bucher and J. Kible*

Joesten, Raymond, *sponsor: MSA*

Johnson, Gerald, *sponsor: MSA*

Krishnan, Vijaylakshmi, *sponsors: D. H. Lindsley and S. R. Bohlen*

McKenna, Lawrence W., *sponsor: MSA*

Lee, Vivian, *sponsors: P. Deines and D. M. Kerrick*

Ley, Richard M., *sponsor: MSA*

Meng, Yanx, *sponsors: S.-C. Su and J. D. Pasteris*

Metropokij, William C., *sponsors: C. A. Francis and C. S. Hurlbut*

Mulkern, Michael P., *sponsor: MSA*

Nemetz, David A., *sponsor: MSA*

Osborne, Margery D., *sponsors: R. J. Ferguson and N. M. Halden*

Pacalo, R. E. G., *sponsors: S. R. Bohlen and R. C. Liebermann*

Petrov, Ivan, *sponsors: S. S. Hafner and I. Abs-Wurmbach*

Richards, Jennifer Ann, *sponsors: R. K. Popp and W. Lamb*

Ridgway, Eric R., *sponsors: F. F. Foit, Jr. and R. Boggs*

Rose, Timothy P., *sponsors: R. Schaal and P. Schiffman*

Ruo, Leslie Ling Chin, *sponsor: MSA*

Sato, Kohei, *sponsors: K. Ono and Y. Sakamaki*

Scheetz, John W., *sponsors: W. Ussler III and J. S. Miller*

Schwarze, Elizabeth T., *sponsors: C. Denison and C. A. Clowe*

Snyder, Janet G., *sponsor: MSA*

Souza, Peter A., *sponsors: J. Laird and D. A. Gust*

Todd, Clifford, *sponsors: M. U. K. Khattak and B. W. Evans*

Van Horn, Stephen, *sponsors: A. R. Philpotts and R. Joesten*

Zhou, Fuxing, *sponsors: D. H. Lindsley and P. R. Bartholomew*

Deadlines approach for MSA Awards and Activities

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

July 1: Nominations for Roebling Medal
Nominations for MSA Award
Nominations for Office (1989 Ballot)
Nominations for Fellowship in MSA (Form at Business Office)

August 1: 1988 Member Ballot
Applications for Mineralogy/
Petrology Research Grant
(Form at Business Office)

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 where a form is necessary.

In Memoriam

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

Fisher, D. Jerome
Life Fellow, 1922

Raynor, Lance Robert
Student, 1983

Smith, Dudley T.
Life Member, 1935

Short Course

Continued from page 1.

registration fee is included with the completed registration form.

There will be a limited number of student scholarships available. Students wishing to apply for the scholarships should send a completed registration form and payment to the MSA Business Office along with a request for the scholarship application. The scholarship application will then be sent. Completed scholarship applications must be returned no later than September 1. Recipients of the scholarships will be notified and their registration fee reimbursed.

Additional information may be obtained from the Business Office, 1625 I Street N.W., Suite 414, Washington, D.C. 20006; (202) 775-4344, or watch for more details in the August issue of this newsletter.

Did you know . . .

. . . Jeremy K. Burdett, University of Chicago, stated in his review paper, "Perspectives in Structural Chemistry" (*Chem. Rev.* 1988, 88, 3-30): "There is a superb series of volumes published by the American Mineralogical Society [sic] entitled *Reviews in Mineralogy*." We thank him for the good words and remind members that all titles are available from the MSA Business Office.

. . . Individuals with copies or volumes of the *American Mineralogist* or other journals that they no longer need should contact the American Geological Institute, F. L. Klinger, c/o AGI Publications Department, 4220 King Street, Alexandria, VA 22302. A new volunteer service will match geoscience journal donors and needy libraries. Most institutions will reimburse journal packing and transportation costs.

. . . Volume 18 of the *Reviews in Mineralogy* series, *Spectroscopic Methods in Mineralogy and Geology*, is now available from the MSA Business Office. The cost is \$18 less the 30% discount for members (\$12.60). You may place your order by calling the Business Office at (202) 775-4344 and charging the cost to your credit card, or by sending your payment to the office. Orders under \$70 must be prepaid. Prepaid orders are not charged shipping and handling.

. . . The 1988 Membership Ballot will be sent to all members in May. Please cast your vote by returning the ballot to the Business Office by August 1, 1988.

REGISTRATION FORM

Hydrous Phyllosilicates Exclusive of Micas

October 29-30
Denver, Colorado

Please 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 120 individuals on a first-come, first-served basis.

Please print or type.

Name _____
(first) (middle initial) (last)

Address _____

(city) (state) (zip/postal code) (province) (country)

Telephone numbers () () _____
(office) (home)

Please indicate appropriate registration category:

	Professional	Student**
MSA Member	\$220	\$50
Non-member*	\$260	\$70

*includes 1989 membership dues.

**student registration fees offset by corporate contributions.

Please check method of payment:

___ Enclosed is a check or money order in the amount of \$ _____.

___ Please charge my ___ 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)

(expiration date) (signature)

Please list any special meal requirements _____

1888. Geological Society of America. 1988



THIS IS A MEETING AT A SPECIAL PLACE WITH SPECIAL PLANS FOR YOU. WE INVITE YOU TO ATTEND—PREPARE NOW FOR THAT "ONCE-IN-A-CENTURY TRIP"!

Denver is situated where the vast Interior Plains of the United States meet the spectacular Front Ranges of the Rocky Mountains. It provides one of the most varied geologic settings of any major American city and is an extraordinary location in which to celebrate GSA's 100th year.

The topographic and structural basin beneath the city is an important source of hydrocarbons in the Rocky Mountain foreland region. The Front Ranges to the west are characterized by colorful upper Paleozoic sedimentary rocks, which bring tourists to the Garden of the Gods and to the Red Rocks Amphitheater, and by the historical mining districts in the Precambrian igneous and metamorphic rocks of the Colorado Mineral Belt. The ranges also mark the eastern edge of the geologically complex Cordilleran mountain system that extends from Alaska to Tierra del Fuego.

In addition to their mineral wealth, the mountains to the west provide a dramatic geologic display that you will not want to miss. This is indeed a special place for a special year.

CENTENNIAL OPENING CEREMONIES AND MEGASYMPOSIUM

The *Centennial Opening Ceremonies* will lead off the Centennial Celebration on Monday morning, just prior to the General Session. The ceremonies will be a tribute to GSA and to the science of geology.

Centennial General Session

On Monday morning, October 31, after the Opening Ceremonies, the Opening General Session will be "North America in 4-D."

This megasymposium, unopposed by any other session, will be convened by Albert W. Bally, GSA President.

TECHNICAL PROGRAM

*CALL FOR PAPERS
ABSTRACTS DEADLINE FOR
SYMPOSIA AND
VOLUNTEERED PAPERS
FRIDAY, JUNE 10, 1988*

Technical sessions consist of both volunteered and invited papers, organized in one of four presentation formats: invited symposia, open symposia, theme sessions, and discipline sessions. The formats are distinguished by the mix of invited and volunteered papers. In *invited symposia*, all speakers are invited by the conveners. *Open symposia* have both invited and volunteered components; volunteer contributors must contact the convener about submitting an abstract. If a paper is not accepted for an open symposium, it will be considered for a discipline session along with regular volunteered abstracts. *Theme sessions* have no invited speakers but are organized around specific topics listed on the 1988 abstract form. If an abstract is submitted to, but not accepted for, a theme session, it will continue through the evaluation process to be considered for the appropriate discipline session. *Discipline sessions* are organized from volunteered abstracts submitted to GSA on a general basis and assigned to one of 34 discipline classifications.

After review, selection of volunteered papers for presentation in theme or discipline sessions is made by members of the Joint Technical Program Committee (JTPC). Each discipline has a representative on the JTPC, appointed by either a GSA Division or an Associated Society.

Theme session organizers will be designated either by the sponsoring Division or Associated Society or by the Technical Program Committee chairmen.

1988 Technical Program Chairmen

William W. Hay
University Museum
Campus Box 218
University of Colorado
Boulder, CO 80309
(303) 492-7370

Samuel S. Adams
Dept. of Geology and
Geological Engineering
Colorado School of Mines
Golden, CO 80401
(303) 273-3800

A. R. (Pete) Palmer
GSA
3300 Penrose Place
P.O. Box 9140
Boulder, CO 80301
(303) 447-2020

INVITED SYMPOSIA PROCEDURE

- All symposium abstracts (invited and volunteered) are to be submitted directly to the convener by June 10.

OPEN SYMPOSIA PROCEDURE

- Authors interested in volunteering an abstract for an open symposium must contact the convener by May 1 to be sure that the abstract will be consistent with the mission of the symposium.
- If agreed upon with the convener, the author will submit the abstract directly to the convener by June 10. The paper then will be reviewed with the other abstracts submitted for the symposium.
- After review, abstracts not selected by the convener for inclusion in the symposium will be automatically submitted for consideration as volunteered papers.

SYMPOSIA

- Open symposia are indicated with an asterisk (*). Convener contact information is given for the open symposia only. The symposium schedule will be finalized in July, but a preliminary schedule will be available by May 1. Please call the GSA Meetings Department for information.

1. **Phanerozoic Tectonics of North America.** Structural Geology and Tectonics Division. A. W. Snoke, University of Wyoming; G. A. Davis, University of Southern California.

*2. **Controls on the Distribution and Quality of Cretaceous Coals.** Coal Geology Division. P. J. McCabe, USGS, MS 972, Federal Center, Box 25046, Denver, CO 80225, (303) 236-7550; J. T. Parrish, University of Arizona.

*3. **Processes of Continental Growth: Geophysical and Geologic Evidence.** Geophysics Division. W. D. Mooney, USGS, MS 977, 345 Middlefield Road, Menlo Park, CA 94025, (415) 329-4764; A. G. Green, Geological Survey of Canada, Ottawa.

*4. **Hazard Reduction in the 21st Century.** Engineering Geology Division. T. L. Holzer, USGS, MS 977, 345 Middlefield Road, Menlo Park, CA 94025, (415) 329-5637; F. B. Leighton, Leighton and Associates.

5. **Mars: Geologic Analyses and Future Missions.** Planetary Geology Division. R. E. Arvidson, Washington University.

*6. **Modern Glaciomarine Deposits: Polar vs. Temperate Environments.** Quaternary Geology and Geomorphology Division. G. M. Ashley, Dept. of Geological Sciences, Rutgers University, New Brunswick, NJ 08903, (201) 932-2221; J. B. Anderson, Rice University.

*7. **Ancient Glaciomarine Deposits: Polar vs. Temperate Environments.** J.M.G. Miller, Vanderbilt University, Nashville, TN 37235, (615) 322-2976; Carolyn Eyles, McMaster University.

8. **History of the Establishment of a Geologic Framework for Human Evolution.** History of Geology Division. L. F. Laporte, University of California, Santa Cruz.

9. **New World Geoarchaeology.** Archaeological Geology Division. Fekri Hassan, Washington State University; C. R. Ferring, North Texas State University.

10. **Use of Geophysical Methods for Hydrogeologic Characterization and for Problems of Contaminant Transport.** Hydrogeology Division. S. W. Wheatcraft, University of Nevada, Reno.

11. **Chemistry and Physics of Minerals in the Mantle.** Mineralogical Society. H.O.A. Meyer, Purdue University.

12. **A Tale of Two Cratons: Contrasts in Crust-Mantle Evolution.** Geochemical Society. P. A. Mueller, University of Florida; J. L. Wooden, USGS, Menlo Park.

13. **Individual Work Stations: Information Supermarkets for Geoscientists.** Geoscience Information Society and International Association of Mathematical Geology. J. V. Lerud,

Montana College of Mineral Science and Technology; D. C. Ward, University of Illinois, Urbana.

14. **Computer-Assisted Phylogeny Programs in Research and Teaching.** Paleontological Society and Society of Vertebrate Paleontologists. K. Padian and D. Lindberg, University of California, Berkeley.

15. **Case Histories of World-Class Mineral Discoveries.** Society of Economic Geologists. R. W. Hutchinson, Colorado School of Mines.

16. **Sedimentary Petrology: Old Foundations and New Implications for Teaching.** National Association of Geology Teachers. M. D. Picard, University of Utah.

17. **Last Interglaciation/Glaciation Transition (122-64 ka) In North America.** P. U. Clark, University of Illinois, Chicago; P. Lea, University of Colorado.

*18. **Role of Geology in the Superconducting Super Collider Site-Selection Process.** K. V. Lusa and H. H. Suneson, Oklahoma Geological Survey, University of Oklahoma, 830 Van Vleet Oval, Norman, OK 73019, (405) 325-3031.

*19. **Andean Magmatism and Its Tectonic Setting.** R. S. Harmon, Dept. of Geological Sciences, Southern Methodist University, Dallas, TX 75275, (214) 692-2750; I.W.D. Dalziel, University of Texas, Austin; S. M. Kay, Cornell University.

20. **Siljan Ring Well, Sweden: Deep Drilling in Crystalline Rocks.** J. R. Castano, Consultant, Houston, Texas.

*21. **Seismicity, Quaternary Faulting, and Earthquake Hazards in the Rocky Mountain Region.** I. G. Wong, Woodward-Clyde Consultants, 500 12th St., Suite 100, Oakland, CA 94607, (415) 893-3600; W. P. Rogers, Colorado Geological Survey.

22. **Thermal Evolution of the Sevier Hinterland.** K. V. Hodges, Massachusetts Institute of Technology; J. F. Sutter, USGS, Reston.

23. **Historical Perspectives and Future Directions in Mineral Deposits Research and Major Metals Utilization.** R. W. Hutchinson, Colorado School of Mines.

24. **EEZ-Scan: Results of the U.S. Geological Survey GLORIA Survey Program.** M. L. Holmes, University of Washington; G. W. Hill, USGS, Reston.

*25. **Dynamics of Climate Change.** M. Leinen, School of Oceanography, University of Rhode Island, Narragansett, RI 02882-1197, (401) 792-6268; D. K. Rea, University of Michigan.

26. **Productivity, Accumulation, and Preservation of Organic Matter: Recent and Ancient Sediment Records.** J. W. Farrington, University of Massachusetts, Boston; J. K. Whelan, Woods Hole Oceanographic Institution.
- *27. **Late Proterozoic Evolution of Western North America: A Reevaluation.** G. M. Ross, Geological Survey of Canada, 3303 33rd St., N.W., Calgary, Alberta T2L 2A7, Canada, (403) 284-0323; N. Christie-Blick, Lamont-Doherty Geological Observatory.
- *28. **Mineral Resources of Solution-Collapse Breccias and Filled Sinkholes.** K. J. Wenrich, USGS, MS 905, Federal Center, Box 25046, Denver, CO 80225, (303) 236-1563; H. A. Tourtelot, USGS, Denver.
29. **Fractals in Geology.** C. C. Barton and G.C.P. King, USGS, Denver.
- *30. **Paleomagnetism and North American Apparent Polar Wander Paths: Cenozoic to Precambrian.** J. W. Geissman, Dept. of Geology, University of New Mexico, Albuquerque, NM 87131, (505) 277-0887; R. F. Butler, University of Arizona.

THEME SESSION PROCEDURE

To submit an abstract for consideration for a theme session, the author must check the appropriate theme session box, as well as a discipline box.

- All abstracts will be reviewed by the appropriate JTPC reviewers in the discipline for which they are submitted.
- During its July 15 meeting, the JTPC will organize theme sessions from the abstracts approved for presentation.

THEME SESSIONS

- Diagenesis of Lacustrine Rocks
- Geology and Public Policy for the 21st Century
- Geophysical Patterns in North America
- Global Aspects of Sedimentary Geology
- Organic Compounds in Ground Water
- Paleontologic Constraints on Accreted Terranes
- Physics and Chemistry of Mylonites
- Secular Variation in the Sedimentary Record

PRESENTATION MODES

Papers may be presented in either oral or poster mode:

Oral Presentation Mode. The normal length of an oral presentation is 15 minutes,

including time for discussion. Projection equipment consists of TWO 35-mm projectors, one overhead projector, and two screens.

Poster Presentation Mode. Approximately 40% of volunteered papers are presented as posters. Each poster session speaker is provided with three horizontal, free-standing display boards approximately 8' wide and 4' high. Poster presentations are scheduled in four-hour intervals.

ABSTRACTS INSTRUCTIONS

All abstracts must be submitted on the 1988 abstract form, available from the Abstracts Coordinator, GSA Headquarters, from the conveners of symposia, 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.

EMPLOYMENT SERVICE

GSA will again offer its employment interview service. Booths are provided for employers to interview applicants who are registered with the service. GSA staff members will be available to assist in scheduling these interviews. Computer listings of our applicant file and résumés are available to employers. See the March issue of *GSA News & Information* for forms and further information, or contact Clara Hodgson, Employment Service Coordinator, GSA headquarters.

EXHIBITS

A 260-booth exhibit will be open from Sunday, October 30, through Wednesday, November 2, in Currigan Hall. Exhibitors will be on hand to display and demonstrate computer hardware and software, X-ray diffraction and measurement equipment, powder diffraction equipment, cameras, isotope ratio mass spectrometers, microanalysis equipment, publications, maps, mineral and fossil specimens, gems, jewelry, field supplies, and camping equipment. Many universities and

educational organizations will have booths as well.

GSA welcomes many repeat exhibitors, but we also encourage participation by innovative companies, universities, and organizations with products and services appealing to geologists. If you are interested in participating or want to see a particular exhibitor in Denver, please contact Kathy Ohmie, Exhibits Coordinator, GSA headquarters.

CENTENNIAL SPECIAL DISPLAYS

Prior to and during the meeting, Science of Geology displays sponsored by GSA may be seen at the Denver Museum of Natural History, the Denver Public Library, and the downtown Columbia Savings Bank.

During the meeting at Currigan Hall, the GSA Founders Display will exhibit rare maps and books in addition to other memorabilia related to the founding, development, and future of GSA.

TRAVEL AND LODGING

TRANSPORTATION

Air carriers offering the most convenient and economical fares from major U.S. cities into Denver are United and Continental. Advance bookings are the best route to lowest fares, so check with your travel agent now. Be aware, however, of cancellation and/or change penalties. Official rental-car and travel agencies will be announced in the May issue of *GSA News & Information*.

ACCOMMODATIONS

GSA has selected eight official downtown hotels, which will offer special convention rates: Brown Palace, Denver Inn, Executive Tower Inn, Holiday Inn, Hyatt Regency, Marriott City Center, Radisson, and Westin. Both the Hyatt Regency and the Marriott City Center will serve as headquarters.

The nontechnical program (social and business events) will be held at the Hyatt Regency and the Marriott Hotels; the technical program will be at the Denver Convention Complex and the Radisson Hotel; Exhibits, Registration, and Employment Service will also be at the Denver Convention Complex. The Technical Program schedule and hotel information/reservation forms will be published in the August issue of *GSA News & Information*.

FOR MEETING INFORMATION: GSA, P.O. Box 9140, Boulder, CO 80301, (303) 447-2020 or 1-800-GSA-1988