

The American Physical Society

DIVISION OF ATOMIC, MOLECULAR, AND OPTICAL PHYSICS

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July 1987

To Members of the AMO Physics Division, from Win Smith:

I. AMO PHYSICS DIVISION ELECTION RESULTS

Congratulations go to Walter Johnson of Notre Dame, the newly-elected Vice-Chairperson, and to Bob Freund of AT&T Bell Labs who is the new member of the Executive Committee of the Division. Carl Lineberger assumes the role of Chairperson of the AMO Division and I was elected as the new Secretary-Treasurer. Thanks go to all nine people who agreed to stand for Divisional office in what turned out to be a close election.

II. REPORT ON THE 1987 AMO PHYSICS DIVISION ANNUAL MEETING IN CAMBRIDGE, MASSACHUSETTS

The Eighteenth Annual Meeting of the Division was held at the Hyatt Regency Hotel in Cambridge on May 18-20, with the Harvard-Smithsonian Center for Astrophysics as local hosts. Registered attendance at the meeting was 587; there were 21 invited papers and 406 contributed papers. There were 13 corporate sponsors.

At the Business Meeting, outgoing Secretary-Treasurer Kate Kirby reported that the AMO Physics Division has 3372 members as of May 1, 1987. The treasury, which started the year (July 1, 1986) with a balance of \$12,403.50 had an estimated balance of \$17,925 as of June 30, 1987. This increase has been due to additional revenue from the 1986 Annual Meeting held in Eugene. Many thanks go to Kate for her service to the Division over the past few years and her many accomplishments on our behalf. Outgoing AMO Division Chairperson Richard Deslattes awarded APS Fellowship Certificates to the 16 new Fellows nominated by our Division and listed in the December '86 Newsletter.

Left-over food from the conference outing at the New England Aquarium was donated to several institutions for the homeless in Boston.

Warm thanks go to the members of the Local Committee chaired by W. H. Parkinson for their superb organization and hospitality at this meeting. Members of the Local Committee were: Bartley Cardon, James Cornell, Alec Dalgarno, David Duquette, Carolyn Duzy, Nancy Galluccio, Larry Gardner, Kate Kirby, John Kohl, Charles Kolb, Tom Mossberg, Ed Murad, Frank Pipkin, Leanne Pitchford, Erwin Pollakoff, Dave Pritchard, Peter L. Smith, Glen Stark and George Victor. We are grateful to all of you for your efforts.

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III. AMO PHYSICS DIVISION COMMITTEES FOR 1987/88

The membership of the various divisional committees for the coming year is given below. In each case, the name of the chairperson is underlined and his address is given in parentheses. This is to remind you that you are welcome to and strongly encouraged to communicate your needs and suggestions to these committees. We need your help if the division is to function smoothly!

Executive Committee: W. Carl Lineberger (JILA, Univ. of Colorado), Walter Johnson, Winthrop Smith, Norman Bardley, Alec Dalgaro, Richard Deslattes, Gordon Dunn, Patricia Dehmer, Norval Fortson and Robert Freund.

Program Committee: Walter R. Johnson (Physics Department, Univ. of Notre Dame), Dana Anderson, Howard Bryant, John Hutchinson, Larry Hunter, Jeff Kimble, Vincent McKoy, Jim McGuire, Jim Samson, Ivan Sellin, Fred Schlachter, Dan Larson, J.D. Garcia, Peter Mohr, Peter L. Smith and Linda Young.

Nominating Committee: Robert S. Freund (AT&T Bell Labs, Room 1D-256, Murray Hill, NJ 07974), John Carlsten, Alec Dalgaro and Joe Dehmer.

Fellowship Committee: Alec Dalgaro, John L. Hall and two more yet to be named. *P. R. Land, John J. N. Lane*

Publications Committee: David Ritchard (Dept. of Physics, MIT, Cambridge, MA 02139), Alan Edwards, Hanspeter Helm, Mike Raymer, Bill Reinhardt, Carl Wieman.

New Committee - Political Action: the purpose of this committee is to raise the visibility of AMO physics and articulate its accomplishments to a wider community. Members are: Gordon Dunn (JILA, Univ. of Colorado, Boulder, CO 80309), Daniel Kleppner and Ron Stebbings.

IV. FUTURE DIVISIONAL ANNUAL MEETINGS

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The 1988 Annual Meeting of the Division of Atomic, Molecular, and Optical Physics will be held in conjunction with the American Physical Society's national "Washington" meeting to be held at the Baltimore Convention Center, Baltimore, MD on April 18-21, 1988. By agreeing to combine our annual meeting with this traditional APS general meeting and changing its date somewhat, we are cooperating with the stated APS Council policy of strengthening the national meetings of the Society and encouraging interchange between fields of physics. The April APS meeting is traditionally a major meeting of the Division of Particles and Fields as well as of the Division of Nuclear Physics. Next year's meeting will feature multiple symposia by these three divisions and in addition, by the APS Division of Astrophysics, the Division of Plasma Physics, the Forum on Physics and Society and the APS Topical Group on Particle Beams.

We are getting favored treatment from the APS in 1988 in that our invited paper symposia and poster sessions will (with one exception) not run in parallel with any other AMO invited sessions. Those who have attended meetings in the past at the Baltimore Convention Center will probably agree that it is spacious, comfortable and well designed for meetings such as ours. All of the AMO sessions in Baltimore will be confined to the first three days (Monday-Wednesday) of the four-day APS meetings. The meeting in general will be extraordinarily rich with some 48 invited sessions spread across many fields of physics. The tentative topics for the AMO sessions at this writing are: Quantum Optics and Chaos, AMO Physics with Large Accelerators, Cooled Ion/Atom Beams and Clouds, Dynamics of Resonant Multiphoton Ionization Processes, Atomic and Molecular Processes in Astrophysics (Joint session with the Division of Astrophysics) and Sources of Short Wavelength XUV Radiation.

The AMO Physics Division's 1989 Annual Meeting will be held in conjunction with a meeting of the Canadian Physical Society's Division of Atomic and Molecular Physics at Windsor, Ontario. Dates are May 17-19, 1989. Gordon Drake of the University of Windsor is local chairman of the conference.

The Executive Committee has voted to accept the unanimous recommendation of the 1990 Site Selection Committee to hold 1990 AMO Divisional Meeting on the Monterey Peninsula in Northern California, with the Lawrence Livermore National Laboratory as local hosts. Members of the LLNL staff who will be particularly involved in hosting this meeting include N. Bardeley, R. Bauer, K. Kulander and T. Rescigno. The strong regional interest in AMO Physics, easy air access and gracious accommodations in the Monterey area were important factors in deciding the location of the meeting.

V. SITE SELECTION FOR THE 1991 ANNUAL MEETING

The site-selection committee for the 1991 Meeting consists of Walter Johnson, Ron Henry and Roberta Saxon. This committee is eager to receive offers and suggestions regarding the site for this meeting. Please communicate with one of the members of this committee before April 1, 1988 if your institution wishes to be in the running for the 1991 Meeting.

VI. SUMMARY OF CAMS ACTIVITIES

At the Cambridge meeting Michael Lubell reported for NRC Committee on Atomic and Molecular Science Chairman Lloyd Armstrong on the critical issues they will be dealing with in the near future. These include the proposed NSF Centers for science and technology and other dedicated facilities (such as heavy ion storage rings); and the SSC. Two studies by CAMS have been completed but not yet published: one is an international survey of the state of atomic and molecular science around the world; the other is a study of the need for and the science which could be done with heavy ion storage rings. The latter study was requested by DOE. A new advisory committee to DOE has been set up: the Basic Energy Sciences Advisory Committee (BESAC). Joe Macek represents the AMO community on the new committee.

VII. NEWS FROM NSF

Peter Mohr reported for NSF at the Cambridge meeting that there is a proposed increase in the FY88 NSF budget for Atomic and Molecular Physics of approximately 10%. Mohr will turn over his duties as rotator for Atomic Physics in the Physics Division at NSF to Richard Pratt (Univ. of Pittsburgh) in September 1987. Rolf Sinclair has advised that NSF is always on the lookout for active researchers who are interested in serving at NSF in the future for one or two years as Program Officers in Atomic, Molecular and Plasma Physics. Both experimentalists and theorists are needed. NSF is also receptive to couples that might serve in Washington concurrently in appropriate slots. Contact Rolf at NSF for further details. -- Physics Division Director Harvey Willard will retire at the end of August 1987 and Gary Crawley, a nuclear physicist from Michigan State, will fill in for one year.

Dan Kleppner reported to the Executive Committee at the Cambridge meeting on a planned new initiative at NSF for the establishment of science and technology centers. This reflects a changing climate at NSF. Their budget is expected to double in the next 5 years -- with part of this increase going to fund these centers and part going to the disciplines within NSF. The centers do not have to be cross-disciplinary. The teaching element and training of new students in the sciences appears to be important.

VIII. GORDON RESEARCH CONFERENCES

The 1987 Atomic Physics Conference was held July 6-10 at Brewster Academy, Woliboro, NH under the chairmanship of Tom McIlrath. The next Atomic Physics Conference is expected in Summer 1989.

On August 10-14, 1987, a related Gordon Conference on the Dynamics of Simple Systems in Chemistry and Physics will be held at Brewster Academy. See the appropriate March 1987 issue of Science magazine for details.

IX. THE CHINESE SCHOLARS PROGRAM

This program is jointly sponsored by the American Physical Society and the Chinese Academy of Science. It has been renewed until the year 1990. Groups interested in inviting appropriate scholars for a one or two year visit should contact B. Bederson, Physics Dept., New York University, 4 Washington Place, New York, NY 10002, or phone him at (212) 998-8044. A stipend of approximately \$14,000 is paid to the scholar by the host; travel costs are borne by the PRC.

X. SOME OTHER FORTHCOMING MEETINGS

SASHIA: Symposium on Atomic Spectroscopy and Highly-Ionized Atoms will be held at the Hickory Ridge Conference Center, Lisle, Illinois, August 17-21, 1987. The meeting will combine the traditions of the previous SAS meetings (Berkeley, 1983 and Tucson, 1979) plus the atomic physics studies of highly-charged ions using accelerators (Oxford, 1983 and the previous beam-foil spectroscopy meetings) to review fundamental aspects of atomic structure and discuss new developments in the field in an informal atmosphere. The deadline for contributed papers is past. Contacts: Dr. Gordon Berry, Physics Division, Argonne National Laboratory, (312) 972-4039 or Mrs. Miriam Holden, ANL Conference Services, Argonne National Laboratory, 9700 So. Cass Ave., Argonne, IL 60439, (312) 972-5587.

The Fortieth Annual Gaseous Electronics Conference will be held on October 13-16, 1987, at the Georgia Institute of Technology, Atlanta, GA. The meeting is a topical conference of the American Physical Society and is sponsored by the Division of Atomic, Molecular and Optical Physics. The Gaseous Electronics Conference addresses basic atomic and molecular collisional processes and phenomena in ionized gases. Traditional topics include fundamental processes in electric discharges, arcs, gas lasers, electrical breakdown, switching, plasma chemistry, plasma-surface interactions, ionospheric physics and other topics in ionized gases. Contacts: Professor M. R. Flannery, Secretary of the Gaseous Electronics Conference, School of Physics, Georgia Institute of Technology, Atlanta, GA 30332, (404) 894-5263, or

Dr. Joseph M. Proud, Chairman of the Gaseous Electronics Conference, GTE Laboratories, 40 Sylvan Road, Waltham, MA 02254, (617) 466-2539.

The Third International Laser Science Conference (ILS-III) will be held in Atlantic City, NJ, November 1-5, 1987. This is the Annual Meeting of the APS Topical Group on Laser Science and is co-sponsored by the Optical Society of America. Specific symposium topics include: 1) Lasers and Coherent Sources; 2) Nonlinear Optical Phenomena and Applications; 3) Atomic, Molecular and Ionic Spectroscopy; 4) Condensed Matter, Surface and Particle Spectroscopy; 5) Laser Photophysics, Photochemistry and Photobiology; and 6) Diagnostic and Analytical Applications of Lasers. Pre-registration fee is \$100 for OSA and APS members and \$130 for non-members (\$40 for students) if received before October 1, 1987 (\$130, \$160 and \$60, respectively thereafter). For further information on the conference, contact Lynn V. Borders or William C. Stwalley, Iowa Laser Facility, University of Iowa, Iowa City, Iowa 52242-1294; phone (319) 335-1299; TWX 910-525-1398; Btlnet BLWCSPD@UIAMVS.

The June '88 APS Meeting will be held in Montreal, jointly with the Canadian Association of Physicists. Our Division will organize a symposium of invited papers at that meeting.

XII. TASK FORCE FORMED TO STUDY FUTURE PLANS FOR PHYSICAL REVIEW

A task force has been established by the APS to study and make recommendations concerning the long-range future of the Physical Review journals. Ben Bederson reported at the Cambridge Executive Committee meeting that the principal issue is the large size of the journals. King Walters is chairing the new APS task force and Frank Pipkin is serving on it. Division members with constructive suggestions may want to transmit them to Walters or Pipkin. The first meeting of the task force with the editors will be on Sept. 14. It hopes to complete its work within a year of that date.