

The American Physical Society

DIVISION OF ELECTRON AND ATOMIC PHYSICS

RONALD F. STEBBINGS, Chairperson
RICE UNIVERSITY
DEPARTMENT OF SPACE PHYSICS & ASTRONOMY
HOUSTON, TEXAS 77005
(713) 527-8101, EXT. 3531

RICHARD D. DESLATTES, Vice-Chairperson
NATIONAL BUREAU OF STANDARDS
A141, PHYSICS BUILDING
GAITHERSBURG, MARYLAND 20899
(301) 921-2061

1985
III
sent in June 28
received July 17
KATE P. KIRBY, Secy.-Treas.
CENTER FOR ASTROPHYSICS
60 GARDEN STREET
CAMBRIDGE, MASSACHUSETTS 02138
(617) 495-7237

June 1985

To Members of the DEAP from Kate Kirby

I. DEAP ELECTION RESULTS

Congratulations to Gordon Dunn of JILA on his election to a three-year term on the Executive Committee in the March 1985 DEAP election. Thanks go to all the Division Members who voted in this election.

II. REPORT ON THE 1985 DEAP ANNUAL MEETING IN NORMAN, OKLAHOMA

The Sixteenth Annual Meeting of the DEAP was held on the campus of the University of Oklahoma in Norman 29-31 May 1985. The conference setting was perfect for our meeting and we extend our thanks to Dave Golden and the local committee who did an outstanding job of hosting the meeting. There were 377 registered participants, 29 invited papers, and 242 contributed papers. 288 conferees attended the banquet and viewed fantastic pictures of tornadoes shown by the after-dinner speaker who does research on severe storms. No real tornado was staged for our benefit, although the weather was very hot (compensating for last year's cold and rain in Storrs). Barry Schneider and Chris Bottcher held a workshop on Supercomputing in Atomic Physics on May 28 which was well attended. A workshop on the concerns of Theory in the Atomic and Molecular Physics Community was held the evening of 29 May (more about this later in this newsletter).

At the Business Meeting, the changes in the Division Bylaws were approved. The proposed revised Bylaws were mailed to the Division membership with the March newsletter. The changes include a change in the Division name to the "Division of Atomic, Molecular and Optical Physics". Before we begin to use this name, it must be approved by the Council of the APS and the Executive Committees of the other Divisions.

III. DEAP COMMITTEES FOR 1985/86

The membership of the various DEAP committees for 1985/86 has been finalized and is given below. In each case, the name of the chairperson is underlined and his address is given in parenthesis. This is to facilitate and encourage communication between Division Members and these committees. Your input is needed!

Executive Committee: Ronald Stebbings (Department of Space Physics and Astronomy, Rice University, Houston, TX 77005), Richard Deslattes (Vice-Chairperson), Bernd Crasemann (Divisional Councillor), Hugh Kelly (Most Recent Past Chairperson), Kate Kirby (Secretary-Treasurer), Robert Compton, William Wing, Gordon Dunn, Steve Manson, James Samson.

Program Committee: Richard Deslattes (National Bureau of Standards, A141, Physics Building, Gaithersburg, MD 20899); members serving through 5/86: Steve Chu, Harvey Gould, Tony Starace, Mike Raymer, Barry Schneider; members serving through 5/87: Sheldon Datz, Eugen Merzbacher, John Risley, Dave Golden, Ron Henry; members serving through 5/88: Fred Schlachter, Dan Larson, J.D. Garcia, Peter Mohr, Peter L. Smith.

Nominating Committee: Gordon Dunn (JILA, Box 440, University of Colorado, Boulder, CO 80309), Jim Peterson, Neal Lane, Bernd Crasemann.

Fellowship Committee: Robin Shakeshaft (Department of Physics, University of Southern California, University Park, Los Angeles, CA 90089), Patrick Richard, Gene Rudd, Tom Gallagher, Bernd Crasemann.

Publications Committee: Joseph Callaway (Physics Department, Louisiana State University, Baton Rouge, LA 70803), Jake Leventhal, David Norcross, Keith MacAdam.

IV. FUTURE DIVISION ANNUAL MEETINGS

The 1986 Annual Meeting of the Division of Electron and Atomic Physics will be held jointly with the Division of Chemical Physics on the campus of the University of Oregon in Eugene, Oregon 18-20 June 1986. The hosts will be the Chemical Physics Institute and the Departments of Physics and Chemistry of the University of Oregon, with Bernd Crasemann and Paul Engelking serving as local chairmen. Comfortable on-campus housing, as well as local hotels, will be available. Further details will be given in the next newsletter. Plans or ideas for possible workshops to take place before or after this meeting should be submitted to Bernd Crasemann (Department of Physics, 122 Science I, University of Oregon, Eugene, Oregon 97403).

The 1987 Annual Meeting will be held in Cambridge, Massachusetts, 18-20 May 1987. Please note the change in date from that previously announced. The meeting will be hosted by the Harvard-Smithsonian Center for Astrophysics and will utilize facilities at the Hyatt Regency Hotel in Cambridge.

The Executive Committee voted to accept an invitation from NBS-Gaithersburg to host the 1988 Annual Meeting. The Executive Committee felt that this presented an opportunity to experiment in holding the Division Annual Meeting in conjunction with the APS "April" meeting in Washington, D.C. Therefore, subject to further consultation with the local committee from NBS-Gaithersburg, the meeting is tentatively scheduled for 25-28 April 1988, in the Washington, D.C., area.

V. SITE SELECTION FOR 1989 ANNUAL MEETING

This year the site selection process (for the 1988 Annual Meeting) was a difficult one for the Executive Committee due to the large number of excellent proposals which were submitted. This difficult process was materially aided, however, by the work of a site selection committee, consisting of Ron Stebbings (Chm.), Walter Johnson and Robert Compton, which evaluated the proposals and made recommendations to the Executive Committee. The Executive Committee felt that the process worked well and intends to continue in this mode for the near future. Next year's committee consists of R. Deslattes, J. Samson and H. Kelly. This committee invites proposals from institutions for sites and circumstances for the Division's 1989 Annual Meeting. Such invitations should be received by R. Deslattes before March 15, 1986, in order that the committee's work may be completed before the Annual Meeting in Eugene, Oregon. The principal criteria and the relative weights used this year in the site selection process were: accessibility (10), facilities (10), local science (5), geographic balance (5), local attractions (10), fostering developing institutions (5), joint meeting opportunities (7), and availability of inexpensive housing accommodations (8). Similar considerations will be used this year and the recommendations will be presented to the Executive Committee at the 1986 Annual Meeting.

VI. CAMS: FORTHCOMING WORKSHOP AND ACTIVITIES

The Committee on Atomic and Molecular Science (CAMS) of the NRC has as its major concern the overview and general health of the field of atomic and molecular science in the U.S. CAMS is sponsoring a Workshop on "the Laser-Atomic Frontier" which will be held at the National Academy in Washington, D.C., on October 11, 1985. The major purpose of this workshop is to define this field and highlight the exciting developments and opportunities for representatives from government agencies and congressional staff science advisors, as well as science news writers. This Workshop is a follow-up on the atomic and molecular science aspects of the 1984 Research Briefing on Selected Opportunities in Physics which was prepared for the Office of Science and Technology Policy, the National Science Foundation, and selected federal departments and agencies by a committee co-chaired by Professors Hans Frauenfelder and Mildred Dresselhaus. The format of the workshop will be a series of overview talks presented by experts in each area with a discussion period after each talk. The last item on the agenda will be a panel discussion. The tentative agenda is as follows:

Morning

1. New spectroscopies
2. New light sources
3. Trapped particles
4. Intense electromagnetic fields

Afternoon

1. Relevance to national programs
2. Relevance to industry
3. Role of universities
4. Panel discussion

"The Future -- Where do we go from here?"

The meeting is open to the public. If you would like further information, contact either:

Professor Lloyd Armstrong, Jr.
Department of Physics and Astronomy
Johns Hopkins University
Baltimore, MD 21218
(301) 338-7375

Professor F. M. Pipkin
Department of Physics
Harvard University
Cambridge, MA 02138
(617) 495-2910

Other activities and concerns of CAMS include: 1) compilation of a new directory of atomic and molecular scientists; 2) a study of the problems in the theoretical atomic and molecular community; 3) a general effort to publicize the field of atomic and molecular physics.

The next meeting of CAMS will be held in Washington, D.C., on October 12, 1985. If you have concerns which you feel should be brought to the attention of CAMS, contact Lloyd Armstrong or Frank Pipkin.

VII. THEORETICAL ATOMIC AND MOLECULAR PHYSICS WORKSHOP

The second workshop on the "Theoretical Atomic, Molecular and Optical (AMO) Physics Community in the Next Decade", organized by J. Macek, S. Manson and D. Watson, was held Wednesday evening, May 29, during the Norman DEAP meeting. Some of the topics considered were:

- (a) Theoretical Physics Institute at Santa Barbara -- A. Dalgarno (Member of the Advisory Board of the Santa Barbara Institute as of September) presented information on the programs and procedures of the Theoretical Physics Institute.
- (b) NSF atomic and molecular theory funding -- N. Bardsley reviewed recent progress in funding for theoretical atomic and molecular physics by NSF.
- (c) Fellowships -- A. Starace presented information about the possible need for fellowship programs including what is currently available and what is being done in other disciplines.
- (d) AMO Theory Report -- J. McGuire, working group coordinator, discussed progress on preparation of a report for the CAMS Panel on Theoretical Atomic and Molecular Physics.

- (e) AMO Theory Institute — The University of Tennessee, Texas A&M, Louisiana State University, the University of Southern California and, jointly, Nebraska-Kansas State are considering submitting proposals to form an Institute in Atomic and Molecular Theory. It was voted that interested institutions should proceed with proposals as they wish. Proposers should keep the community and other interested institutions informed.
- (f) Future activities -- Aaron Temkin (NASA/Goddard Space Flight Center, Code 680, Greenbelt, MD 20771, 301/344-8091) was chosen as the next chairman of the community. George Victor (Harvard-Smithsonian Center for Astrophysics, 60 Garden Street, Cambridge, MA 02138, 617/495-7236) will distribute the newsletter. Anyone who is not currently receiving the newsletter and would like to receive future newsletters should contact George Victor.

VIII. DIVISIONAL COUNCILLOR'S REPORT

Bernd Crasemann, the DEAP Divisional Councillor, reports that:

1. Physical Review and Physical Review Letters have continued to grow rapidly over the past several years. There is some concern about how to deal with this growth. It is estimated that the APS is publishing approximately 40% of the world's fundamental physics.
2. In an effort to assess the status of APS meetings and to initiate a planning effort, past President Millie Dresselhaus has established a Task Force on Meetings. A decline in attendance at the General APS Meetings started in 1973, partly because of the growth of the specialized Divisions and partly because of a decline in funding in the physics community. There appears to be no way to revive the January meeting. There may be hope to reinvigorate the April ("Washington") meeting, and the DEAP is encouraged to study means of greater involvement in this meeting. The March meeting (primarily the Division of Condensed Matter) is getting out of bounds. Already for 1986 in Las Vegas, 58 sessions are planned with five parallel sessions of invited talks!
3. A Topical Group in Laser Science was approved by Council at its April meeting. C. B. Collins (University of Texas at Dallas) is Chairman, and R. C. Powell (Oklahoma State University) is Secretary-Treasurer. The Steering committee includes Rick Freeman, Will Happer, and Dick Zare, and the Program Committee is chaired by Bill Stwalley. The principal meeting of the group will be the annual International Laser Science Conference.
4. New appointments in the New York APS Office are Harry Lustig, presently Provost of City College of CUNY, to succeed Joe Burton as Treasurer of the Society, and Miriam Forman, of SUNY at Stony Brook, as Deputy Executive Secretary.

IX. RESEARCH FUNDS AVAILABLE AT NATIONAL LASER USERS FACILITY
FOR EXPERIMENTS IN HIGH-ENERGY-DENSITY PHYSICS

The U.S. Department of Energy funds the operation of the National Laser Users Facility, thus making it possible for researchers to conduct experiments without direct charge. In addition, the Department of Energy provides research funds directly to users for experiments in laser fusion, plasma physics, X-ray laser studies, and associated applications. Approximately \$650,000 are available to support users' research. Proposals requesting allocation of facility time should be submitted to the Manager, NLUF, by December 15, 1985. For more information about proposal guidelines and the resources available at NLUF, contact Thomas C. Bristow, Manager, National Laser Users Facility, Laboratory for Laser Energetics, University of Rochester, 250 East River Road, Rochester, NY 14623; (716) 275-2074.

X. COMMITTEE ON THE INTERNATIONAL FREEDOM OF SCIENTISTS

The Committee on the International Freedom of Scientists is a chartered committee of the American Physical Society with responsibility for recommending and coordinating activities aimed to preserve academic rights and human rights for physicists' colleagues, here and abroad. Of particular interest is the Small Committee program. Under this program, "Small Committees" are established for oppressed scientists, one Small Committee for each such scientist. APS members, as individuals, then communicate with their counterparts, writing letters, sending reprints or books, occasionally telephoning, or whatever. This person-to-person program is one of the most effective means available for protecting colleagues from escalating official harassment. Each APS Division has a Small Committee Representative, whose responsibility it is to establish and monitor Small Committees for oppressed scientists in disciplines closely related to that of the Division. The representative for the Division of Electron and Atomic Physics is Dr. Aaron Temkin. Any assistance, support, or suggestions regarding this program should be communicated to Dr. Temkin (NASA, Code 680.1, Goddard Space Flight Center, Greenbelt, MD 20771).

XI. ANNOUNCEMENTS

The referendum vote on the "time of year of the Annual Meeting" was as follows: 206 votes for May, 152 votes for autumn. The referendum vote on "the number of candidates for vice-chairperson" was: 133 votes for one candidate, 228 votes for two candidates.

Page charges for Physical Review A will be lowered to \$25/page starting in January 1986. Physical Review Letters has eliminated page charges and replaced them with a set fee for publication of \$200. Reprints will no longer be provided free of charge, but will continue to be offered for sale at the current price schedule.

Peter Mohr will replace Norman Bardsley as rotator in the Atomic Physics Program at NSF in September.