

What is this? (Ans. p. 3)

Newsletter of the
DIVISION OF ATOMIC, MOLECULAR, & OPTICAL PHYSICS
 of the
American Physical Society

June 1991

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The DAMOP Newsletter is
 prepared by J. Peterson
 at Kansas State University
 because Kim Coy had her
 first baby, Allison Marie,
 April 14.

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Chair's Letter

In this first Letter of the new DAMOP year, I'd like to tell you of our plans for the coming twelve months and solicit your help and your advice.

DAMOP's most important activity continues to be its annual meeting, and plans for the 1992 meeting in Chicago are well underway. The general topics for the invited sessions were determined by the Program Committee at the DAMOP meeting in April. In addition to the opening plenary session of prizewinners' talks, the program will have twelve sessions of invited papers making it the largest program in DAMOP history. The number of invited sessions at the annual meeting has doubled since 1987; this growth reflects the diversity and vitality of our community and, in particular, the revolution in optical physics that has touched virtually every area of experimental and theoretical AMO physics. A preliminary announcement of the 1992 meeting is given in this Newsletter; more details and an advance look at the program will be given in the next Newsletter. Mark the date of the Chicago DAMOP meeting on your calendar now -- 20-22 May 1992; it promises to be a great meeting.

DAMOP is continuing to work to increase the visibility of AMO physics both within the physics community and within the broader scientific community. As part of our effort during the coming year, we intend to interact with the NRC Committee on Atomic, Molecular, and Optical Sciences (CAMOS), which is currently planning a major assessment of research opportunities in AMO science. It is anticipated that significant community input will be solicited for that report. Gordon Dunn, Chair of CAMOS, has recently written an

excellent report entitled *Research Briefing on Selected Opportunities in Atomic, Molecular, and Optical Sciences*. More information on that report and details of how to obtain a copy are given on page 6 of this Newsletter.

During the coming year, the DAMOP Executive Committee will be considering the feasibility of instituting an award for the best presentation by a graduate student at the annual meeting. The logistics of implementing such an award are quite complicated, but the goal of rewarding excellence in graduate research and in the presentation of that research makes the effort worthwhile.

Also of interest, DAMOP has just completed a major revision of its Bylaws, which was required following the adoption of the new APS Constitution and Bylaws. A major change is the expansion of the Executive Committee to include six (rather than three) Members-at-Large and a Chair, Chair-Elect, and Vice-Chair (rather than just a Chair and Vice-Chair). Adoption of the new Bylaws will create a large number of Executive Committee vacancies, which will be filled in the spring elections. A copy of the Bylaws and a ballot for ratification are included with this Newsletter.

Now, it is time to ask for your help. First, please send suggestions for candidates for the open Executive Committee positions (Chair-Elect, Vice-Chair, and four Members-at-Large) to Bernd Crasemann, Physics Department, University of Oregon, Eugene, Oregon 97403 before 30 August 1991. Second, please consider nominating your distinguished colleagues for Fellowship. We may elect 1/2% of our members to Fellowship each year. Forms may be obtained from and should be returned before 1 April 1992 to Mrs. Maximilla

Cassell, American Physical Society, 335 East 45th Street, New York, NY 10017 [phone (212) 682-7341]. Nominations will be reviewed and ranked by the DAMOP Fellowship Committee in May 1992 and will be sent to the APS Council for approval in November 1992. Third, feel free to contact any of our committee Chairs or members concerning any aspect of DAMOP operations. All of our committees for the 1991-1992 year are listed in this Newsletter.

Finally, if you haven't already paid your \$5.00 DAMOP dues, please, please do so! As you are all aware, the new APS Constitution and Bylaws provides for proportional representation on the APS council. Divisions are entitled to one Councillor for each 3% of the total membership of the APS. Last year our membership (2592) was about 100 persons *greater than* the 6% level, and we received permission to elect a second Councillor; the initial term of our new Councillor was fixed at one year in order to stagger the terms of all Councillors. We are extremely excited about increasing both our representation and the visibility of AMO physics on the Council. A ballot for the new Division Councillor is enclosed with this Newsletter. Regrettably, the latest membership figures show that our membership is now about 50 persons *less than* the 6% level, and we will lose our second Councillor unless we increase our membership by 31 December 1991. Therefore, it is extremely important that you renew your membership in DAMOP and that you urge your colleagues and students to join DAMOP. Even if you have already mailed your dues bill, it's not too late to renew or to join. Just send a check for \$5.00 to the Membership Department, American Physical Society, 335 East 45th Street, New York, NY 10017 along with a note telling them that you want to join the DAMOP. If possible, include your APS membership number (which can be found on the mailing label of this Newsletter, on *Physics Today*, or any journal you receive from the APS) in the note and on the check. Thanks very much for your help.

Sincerely,
Pat Dehmer

Future DAMOP Meetings

1993 - Reno, Nevada, May 17-19 (Mon.-Wed.) Host: University of Nevada, Reno, Paul Neill.
1994 - Washington, DC (Spring APS Meeting).
1995 - Toronto, Canada, May 17-19. Host: University of Toronto, David May.

New DAMOP Officers and Committees

The DAMOP Officers for 1991 are:

Chair: Patricia Dehmer
Vice-Chair: David Wineland
Secretary-Treasurer: Jim McGuire



We wish to thank the past Chair, **Tony Starace**, for his thorough commitment to our interests. This year DAMOP will elect both a Chair-Elect and a Vice-Chair in accord with the new APS constitution.

DAMOP EXECUTIVE COMMITTEE members are: P.M. Dehmer (Chair), D. Wineland, J. McGuire, D. Larson, A. Starace, K. Kirby, G. Drake, B. Dunning, C. Greene and J.G. Eden.

DAMOP NOMINATING COMMITTEE members are: B. Crasemann (Chair), R. Freeman, D. Larson, E. Merzbacher and R. Stebbings. The Nominating Committee prepares slates of candidates for Officers and Members-at-Large of the Executive Committee. This year many vacancies must be filled. Your suggestions of appropriate candidates to the Chair of the Nominating Committee is encouraged.

DAMOP FELLOWSHIP COMMITTEE members are: K. Kirby (Chair), W. Cooke, K.C. Kulander and G.H. Dunn. This committee recommends candidates for Fellowship in the Council of the American Physical Society. Final approval is given by the Council of the American Physical Society.

DAMOP PUBLICATIONS COMMITTEE members are: Gordon F. Drake (Chair), Ronald J.W. Henry, Vincent McKoy, Lorenzo Narducci, Harvey Gould and Robert N. Compton. This committee attends to matter pertinent to scientific publications.

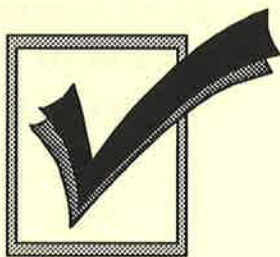
DAMOP PROGRAM COMMITTEE: D. Wineland, as Vice Chair of DAMOP, serves as Chair of the Program Committee which will set the scientific program for meetings in 1993. The committee members are: P. Bucksbaum, G. Drake, E. Hinds, R. Marrs, J. McGuire, B. Phillips, P. Dehmer, T.F. Gallagher, K. Kirby, S.R. Leone, S.R. Lundeen, W. Stwalley, B. Crasemann, R. Freeman, P. Lambropoulos, K. McAdam, D. Pritchard. Please give program suggestions to any of these people.

Election of Division Councillor

Candidates for Division Councillor to the APS.

**Joseph Dehmer, Tom
McIlrath and David**

Norcross have all agreed to run for one new position as DAMOP Councillor to APS. This person will act as liaison between DAMOP and APS, joining Dan Larson, elected for a four year term last year.



DEHMER, JOSEPH L., BS 1967, Washington University; PhD 1971, University of Chicago; Postdoctoral Fellow, 1971-73; Assistant Physicist, 1973-75; Physicist, 1975-80; Senior Physicist, 1980-present, Argonne National Laboratory. Fellow, American Physical Society; Member, Optical Society of America, American Chemical Society, and Radiation Research Society. University of Chicago Award for Distinguished Performance at Argonne National Laboratory, 1989. Consultant, National Bureau of Standards, 1980-86; NRC Committee on Atomic and Molecular Science (CAMS), 1983-86; CAMS Panel on Opportunities in Atomic and Molecular Physics, 1981-83; NRC Committee on Line Spectra of the Elements and Atomic Spectroscopy, 1987-90; Panel on Atomic and Molecular Science with Synchrotron Radiation for the DOE report *Future Opportunities for Research in Atomic, Molecular, and Optical Sciences*, 1989-90. DAMOP ACTIVITIES: Nominating Committee, 1984-85, 87-88; Publications Committee, 1989-91; Local Organizing Committee, 1992 DAMOP Meeting, Chicago. EDITORIAL BOARDS: Journal of Chemical Physics, 1983-85; Journal of Electron Spectroscopy, 1986-; Chemical Physics Letters, 1991-. REVIEW PANELS: DOE Office of Basic Energy Sciences Review Committees for Oak Ridge National Laboratory, 1983; Brookhaven National Laboratory, 1984, 1985 (Chair); Lawrence Berkeley Laboratory, 1989; DOE Office of Health and Environment Research Review Committee for New York University, 1978; Review Panel for NSF Science and Technology Centers, 1988; Tenure Proposal Review Committee, National Synchrotron Light Source, Brookhaven National Laboratory, 1989. CONFERENCE ORGANIZATION: Chair, Gordon Research Conference on Electron Spectroscopy, 1986; International Advisory Board and Program Committee, 4th International Conference on Electron Spectroscopy, 1988-89. RESEARCH INTERESTS: Resonant multiphoton studies of the spectroscopy and dynamics of highly excited states of atoms and molecules; decay of Rydberg states and doubly excited states by autoionization and predissociation; nonlinear processes in atoms and molecules; photoelectron and photoion angular distributions, fluorescence polarization, and alignment in photoionization; angle-resolved photoelectron studies of atoms and molecules using synchrotron radiation; theoretical studies of shape resonances in electron-molecule scattering and in valence- and inner-shell photoionization spectra of molecules.

McILRATH, THOMAS J., BS, Michigan State University, 1960; PhD, Princeton University, 1966; NATO Postdoctoral Fellow, Oxford University, 1966-67; Research Fellow, Harvard College Observatory, 1967-1970; Research Associate, Harvard College Observatory and lecturer in Astronomy, Harvard University, 1970-1973; Visiting Associate Professor, IFDAM, University of Maryland, 1973-74; Associate Professor, IFDAM/IPST, University of Maryland, 1974-81;

Professor, IPST, University of Maryland, 1981-present; Staff Physicist, National Institute of Standards and Technology (formerly National Bureau of Standards), Gaithersburg, Maryland, 1974-present; Consultant, Princeton Plasma Physics Laboratory, 1984-present; Consultant, AT&T Bell Laboratories, 1985-present; Fellow, Optical Society of America; Fellow, American Physical Society; The Society of Sigma Xi; Sigma Pi Sigma; Special Achievement Award, National Bureau of Standards, 1977 and 1980; Certificate of Recognition, National Bureau of Standards, 1979; IR-100 Award (with T.B. Lucatorto and J. Roberts), for invention of one of the 100 most significant new technical products of the year, 1981 (awarded by Industrial Research Magazine); Department of Commerce Silver Medal (received jointly with T.B. Lucatorto) for Research in Plasma Studies and Spectroscopy, 1980. RESEARCH INTERESTS: Nonlinear optical processes in gases, high-intensity-laser physics, X-ray and vacuum ultraviolet physics.

NORCROSS, DAVID W., BA 1963, Harvard College; MSc 1965, University of Illinois; PhD 1970, University College London; Research Physicist, Sperry Rand Research Center, 1965-1967; Postdoctoral Research Associate, University of Colorado/Joint Institute for Laboratory Astrophysics, 1970-1974; Physicist, Quantum Physics Division, National Bureau of Standards, 1974-Present; Fellow, Joint Institute for Laboratory Astrophysics, 1974-present; Lecturer, Department of Physics, University of Colorado, 1974-present; Chairman, Joint Institute for Laboratory Astrophysics, 1983-1984; Program Analyst, National Bureau of Standards, 1988-1989; Division Chief, Quantum Physics Division, National Institute of Standards and Technology, 1989-present; Co-Chairman, Local Organizing Committee, APS Topical Conference on "Atomic Processes in High Temperature Plasmas," 1979; Program Committee, APS Division of Electron and Atomic Physics, 1981-1984; Chairman, Local Organizing Committee, Annual Meeting, APS Division of Electron and Atomic Physics, 1983; Program Committee, Topical Conference on "Atomic and Molecular Collisions in Excited States, 1990; Secretary, Theoretical Atomic, Molecular, and Optical Community, 1990-present; Fellow, American Physical Society, 1980; Bronze Medal, Department of Commerce, 1982. RESEARCH INTERESTS: Theory of electron collisions with atoms, molecules, and ions; atomic and molecular negative ions; photoionization and photodetachment; relativistic atomic structure and collisions.

The Ballot is located on page 11 of this
Newsletter.

Answer to "What's this?" (front page)

Comparison of theory and experiment for the R parameter related to the relative phase of substrates in excitation of the first excited states of atomic hydrogen produced in collisions of 54.4 eV electrons taken from Bray, Madison and McCarthy, Phys. Rev. **A41**, 5916 (1990). Theory and experiment disagree for e+H in excitation to the lowest excited state. If we can't do e+H after 80 years after Bohr's first ideas, then how practical is the quantum theory for most complex systems such as H₂O and DNA?

DAMOP Business Meeting

May 21, 1991

The business meeting was opened by DAMOP Chair **Tony Starace**. New officers were introduced. **Dave Wineland** has been elected Vice Chair and **Kate Kirby** a new member of the Executive Committee. Certificates of Fellowship were presented to our newly elected Fellows who are listed in the last Newsletter.

Jim McGuire, Secretary-Treasurer, reported that DAMOP membership is about 2,500 people, up a little from a year ago. DAMOP is about the same size as Chemical Physics, Plasma Physics, and Nuclear Physics and smaller than High Energy (3,200 members) and Condensed Matter (6,000 members). The treasury has \$52,183, but expenses of the annual meeting will reduce this amount. Nevertheless, DAMOP made about \$6,000 at the last meeting in Monterey due in part to the effort of the local chair, **Tom Rescigno**. DAMOP does not make much, if any, profit at meetings held jointly with APS. As usual, DAMOP's biggest expense is the Newsletter. It is not cheaper for us to do it ourselves than to have it done by APS headquarters. Special praise was given to outgoing Chair **Tony Starace** for his effective substance and style as Chair of DAMOP.

Tony Starace, DAMOP Chair, appointed **Pat Dehmer**, **Charles Clark**, **Barry Dunning**, and **Jim McGuire** to investigate a prize for the best presentation by a graduate student at the annual DAMOP meeting.

Steve Smith and **John Cooper** reported on small, but useful, increases in NSF funding for AMO physics. **Joe Martinez** gave a similar report for DOE and supplied copies of reports for DOE workshops on the future of AMO physics.

THANKS - We gratefully acknowledge the financial support of Coherent, Inc. and of Spectra Physics Inc. Each company donated money with the help of **Jabez McClelland** of NIST to support our reception at our annual meetings.



23rd Annual Meeting of the Division of Atomic, Molecular, and Optical Physics

Chicago, Illinois

20-22 May 1992

Preliminary Announcement

The 23rd Annual Meeting of the Division of Atomic, Molecular, and Optical Physics (DAMOP) will be held in Chicago, Illinois on 20-22 May 1992. These dates are the Wednesday through Friday immediately preceding the Memorial Day weekend. The host institution is Argonne National Laboratory, and the local organizing committee is chaired by H. Gordon Berry. Partial support for the meeting has been provided by The University of Chicago Board of Governors for Argonne National Laboratory, by Argonne's Division of Educational Programs, by the Associate Laboratory Director for Energy, Environmental, and Biological Research, and by the Associate Laboratory Director for Physical Research.

The scientific program will consist of a plenary session featuring the winners of the Davisson-Germer Prize and the Will Allis Prize, 12 symposia, 10 sessions of contributed oral papers, and 3 sessions of contributed poster papers. No oral sessions will be scheduled opposite the poster sessions. Details of the program will be given in future issues of the *Bulletin of the American Physical Society (BAPS)* and in the DAMOP Newsletter. In addition to the scientific program, there will be a reception on Tuesday evening and a conference dinner on Thursday evening.

All scientific sessions and scheduled social events will be held at the Westin Hotel (900 N. Michigan Avenue) on Chicago's famed Magnificent Mile. The hotel is exceptionally well located (next to the John Hancock Tower) and provides easy access to the best that Chicago has to offer, including fine restaurants, museums, art galleries, the symphony and theater, night life, shopping, professional sports, and the Lake Michigan beaches. An orientation session for accompanying persons will be held early in the meeting and literature will be provided to acquaint participants and their families with the complete array of sightseeing possibilities.

Registration

The registration fee for the conference will cover all costs, including the reception, the coffee breaks, and the banquet dinner. The fees are as follows. Before 1 April 1992: Members - \$150; Non-members - \$225; Students - \$50. After 1 April 1992: Members - \$175; Non-

members - \$265; Students - \$50. A preregistration form will be published in a forthcoming issue of *BAPS*.

Contributed Papers

Abstracts in the areas of atomic, molecular, and optical physics may be submitted for either oral or poster presentation. Each oral presentation will be allotted 10 minutes for the main presentation and 2 minutes for discussion. Each poster presentation will be allotted a poster board that is 4 ft. by 8 ft. A first author should submit no more than one abstract. All abstracts must be camera ready and must conform to the APS guidelines, which are given in *BAPS*, 36 1866 (1991). Please note on one corner of the abstract whether you prefer an oral session or a poster session.

Abstracts (one original and two duplicates) should be sent to Patricia Dehmer, Argonne National Lab., Building 203, Argonne, IL 60439 before 7 February 1992. Abstracts received after that date will not be included in the regular program that is published in *BAPS*. Postdeadline abstracts may be submitted until 1 May 1992 and will be included in the program if space permits. Postdeadline abstracts should be submitted to the same address as abstracts for the regular program.

Accommodations

Approximately 300 rooms have been reserved at the Westin Hotel for meeting participants. Unusually attractive room rates have been obtained for our meeting -- single rooms are \$82+tax/night and double rooms are \$92+tax/night. A limited amount of financial assistance for students attending the meeting is being provided by Argonne's Division of Educational Programs. Students wishing to apply for assistance should contact H. Gordon Berry, Argonne National Laboratory, Physics Division, Argonne, IL 60439 before 7 February 1992.

Travel

Chicago is easily reached by air via either O'Hare International Airport or Midway Airport. Arrangements are being made with United Airlines to provide special discount fares for meeting participants; more information on this and on details of local transportation between the airports and the conference hotel will be given in future announcements.

Further Information

Further details about the meeting, as well as registration and hotel reservation forms, will appear in subsequent

announcements in *BAPS* and in the DAMOP Newsletter. For additional information, please contact H. Gordon Berry, Argonne National Laboratory, Physics Division, Argonne, IL 60439 or by electronic mail DAMOP@ANLPHY (Bitnet) or DAMOP@ANL.GOV (Internet).

Nominations Sought for the Davisson-Germer & Will Allis Prizes



We are seeking nominations for the next Davisson-Germer and Will Allis Prizes. Nominations may be made by sending a vitae, citing clearly the accomplishment to be recognized, providing a proposed citation and having at least three letters of support sent before 1 September 1991 to:

Davis-Germer Prize

Gordon H. Dunn
JILA
Campus Box 440
University of Colorado
Boulder, CO 80309-0440

Will Allis Prize

Norman Bardsley
L296
Lawrence Livermore
Laboratory
Livermore, CA 94550

Congressional Day Report

About 140 members of the American Physical Society met on April 25 to visit Senators and Representatives after the APS meeting in Washington. These APS members were put in groups of about four and were scheduled to meet with four or five Senators or Representatives or their staff members. Meetings typically took about 30 minutes and APS members talked about various physics projects and how they could be helped by Congress. Members representing APS were advised not to lobby (i.e., to ask for direct support of a particular piece of legislation of direct benefit) but rather to discuss issues of general interest such as the SSC, the manned space station, or their own local interests. After the visits, a reception was held with Congressman George Brown (D-CA) and five Nobel Laureates in attendance. People attending commented that the experience helped them understand how the funding process and political processes works and gave an opportunity to meet some interesting people. DAMOP was recognized for leadership in organizing Congressional Day. Mike Lubbel of DAMOP and Tina Kaarsberg of APS were two of the principal organizers, and we thank them.

NRC Report (CAMOS)

The Committee on Atomic, Molecular, and Optical Sciences of the National Research Council's Board on Physics and Astronomy has prepared a research briefing at the request of the Director of the Office of Energy Research of the Department of Energy (DOE) to provide the DOE, other federal agencies, and the atomic, molecular, and optical (AMO) sciences community at large with an assessment of some forefront research areas. The request was motivated by a concern for the health of AMO sciences mutually shared by DOE, the National Research Council's Board on Physics and Astronomy, and the AMO community.

In addition to giving a glimpse of the nature and character of the AMO field, this research briefing identifies and discusses a few selected opportunities and highlights from forefront research in the field, and it acknowledges specific issues associated with these areas of opportunity.

The Committee on Atomic, Molecular, and Optical Sciences has recently proposed that a detailed study of the scientific and technological opportunities of the field be conducted by the National Research Council. The broader study will assess the state of knowledge of the field of atomic, molecular, and optical sciences and identify the priorities of the community in pursuing its research agenda over the next several years. The latter task will be done from a variety of perspectives. This includes the impact on testing and understanding fundamental laws and impact on energy technologies, other sciences, the environment, commerce, and so forth. It is expected that this broader study will not only assist federal agencies in future program planning but will also enable those researchers who are just entering the field to identify those areas that show special promise for addressing the nation's needs. The proposed study has received the endorsement of the Department of Energy.

Since this research briefing was initiated on the basis of concern for the health of the AMO field, the CAMOS believes that it is appropriate to comment briefly on the support structure and trends for the field. Support is not discussed elsewhere in this research briefing. Just as the field itself is diverse in character, so also is funding for the field. Core funding to *university-based* AMO sciences comes primarily through the National Science Foundation, the Department of Energy, the Department of Defense, and the National Aeronautics and Space Administration. Strong programs also exist at national and industrial laboratories, with funding through some of the same agencies and, of course, private companies.

Over the past five years, the modest increases in university funding for AMO research that have been realized have not kept up with the cost of doing forefront research. This has resulted in the decline during that period in the ability of the AMO community to do forefront research. This situation is not very different from that experienced in other fields of science over the same time frame; however, much more serious is the fact that opportunities in some segments (for example, optical physics) of the field have virtually exploded over the same period. As program managers have tried to respond to those opportunities as best they could, funding for essentially *all* parts of the field has thinned dangerously. The diversity of the field and the fact that research in much of the field is basic to the development of advanced technologies have led to a structure wherein much of the funding is tied to relevant technologies. Write Gordon Dunn or Pat M. Dehmer for a copy.

WHO'S UNCITED NOW?

Scientists who like to one-up their colleagues in other disciplines can now do so in a new way. Last month, David Pendlebury of the Philadelphia-based Institute for Scientific Information came up with the startling conclusion that 55% of the papers published in journals covered by ISI's citation database did not receive a single citation in the 5 years after they were published (*Science*, 7 December, p. 1331).

FEWEST UNCITED PAPERS:

Atomic, Molecular, and Chemical Physics	9.2*
Particle and Field Physics	16.7
Inorganic and Nuclear Chemistry	17.0
Nuclear Physics	17.3
Fluid and Plasma Physics	18.2
Organic Chemistry	18.6
Condensed Matter Physics	19.1
Biochemistry and Molecular Biology	19.4

SUBDISCIPLINES WITH MOST UNCITED PAPERS:

Engineering	86.9
Energy and Fuels	80.3
Applied Chemistry	78.0
Material Science	66.4
Electrical Engineering	66.2

*Fraction of papers with no citations.

We thank Tony Starace for bringing this to our attention.

Bylaws of the Division of Atomic, Molecular and Optical Physics

Following the recent adoption of the new APS Constitution and Bylaws, each APS subunit (i.e., each Division, Topical Group, Forum, and Section) was requested to revise its Bylaws both to bring them into conformance with the new Society rules and regulations and to standardize them with respect to one another. The new DAMOP Bylaws are given below. The three major changes are (1) the expansion of the Executive Committee to include six (rather than three) elected Members-at-Large, (2) the elimination of the two appointed Members-at-Large (such appointed members are now forbidden by the APS Constitution and Bylaws), and (3) the expansion of the set of Officers to include a Chair, Chair-Elect, and Vice-Chair (rather than just a Chair and Vice-Chair). There are a number of minor changes, most of which involve style or the details of the Division committee structure. The Bylaws are based on a "model" written by the APS Committee on Constitution and Bylaws, which is currently chaired by Pat Dehmer. (Dehmer notes that the "model" Bylaws were heavily influenced by the current DAMOP Bylaws; thus, in the future, the Bylaws of all APS subunits will have the DAMOP stamp.) **Please vote using the ballot on page 11.**

(In the following text, "Society" shall signify the American Physical Society; "Council" and "Executive Board" shall signify the Council, and the Executive Board of the Society, respectively; "Executive-Secretary" shall signify that Officer of the Society; and "Regular Meeting" shall signify the principal meeting held once a year by the Division.)

ARTICLE I -- NAME

This Division of the American Physical Society shall be called the Division of Atomic, Molecular, and Optical Physics.

ARTICLE II -- OBJECTIVE

The objective of the Division shall be the advancement and diffusion of knowledge regarding atoms, simple molecules, and their constituents. The scope of this Division shall comprise the fundamental principles of atomic, molecular, and optical physics; physical phenomena involving electrons, ions, atoms, simple molecules, and the electromagnetic field; and the applications of these principles and phenomena.

ARTICLE III -- ENABLING CONSTITUTIONAL PROVISION

Article VIII of the Constitution of the Society, as said Article may be subsequently revised or amended, is hereby incorporated in these Bylaws by reference.

ARTICLE IV -- MEMBERSHIP

The members of the Division shall consist of members of the Society who have indicated in accordance with procedures established by Council their desire to join the Division and who retain membership from year to year by the payment of designated dues or by other method established by Council.

ARTICLE V -- EXECUTIVE COMMITTEE

1. **Governance.** The Division shall be governed by an Executive Committee, which shall have general charge of the affairs of the Division.
2. **Composition.** The Executive Committee shall consist of the Officers of the Division, the most recent Past Chair, the Division Councillor(s), and six Members-at-Large elected to staggered three-year terms.
3. **Executive Committee Meetings.** The Executive Committee shall meet at least once each year. Any member of the Executive Committee unable to attend a meeting may name a nonvoting alternate to represent him or her, subject to the approval of the Chair. The Chair of the Division shall preside over the Executive Committee meetings. A majority of the voting members, including at least two Officers, shall constitute a quorum.

ARTICLE VI -- OFFICERS AND DIVISION COUNCILLOR(S)

1. **Officers.** The Officers of the Division shall be a Chair, a Chair-Elect, a Vice-Chair, and a Secretary-Treasurer.
2. **Duties of the Chair.** The Chair shall preside at all meetings of the Executive Committee and Business Sessions of the Division at which his or her attendance is possible.
3. **Duties of the Chair-Elect.** The Chair-Elect shall act in place of the Chair if the latter is unable to perform his

or her duties. The Chair-Elect shall perform such other functions as may be explicitly provided in the Bylaws.

4. Duties of the Vice-Chair. The Vice-Chair shall act in place of the Chair-Elect if the latter is unable to perform his or her duties. The Vice-Chair shall perform such other functions as may be explicitly provided in the Bylaws.

5. Duties of the Secretary-Treasurer. The Secretary-Treasurer shall maintain the records of the Division including minutes of Executive Committee meetings and Business Sessions, Division activities, and membership lists. The Secretary-Treasurer shall notify the Executive Committee of matters requiring the decision of said Committee and shall prepare the agenda of Executive Committee meetings and Business Sessions. The Secretary-Treasurer shall prepare minutes of Executive Committee meetings and Business Sessions and shall submit these minutes to each member of the Executive Committee and to the Executive Secretary within four weeks after each meeting. Following elections, such minutes are to include the results of the election and a roster of the current Executive Committee membership.

The Secretary-Treasurer shall keep the Council and Executive Secretary of the Society informed of the activities and needs of the Division.

The Secretary-Treasurer shall have responsibility for all funds in the custody of or placed at the disposal of the Division and shall authorize disbursements from such funds for expenses in a manner that is consistent with the general policies of the Society and the Division. Financial records shall be kept on an annual basis consistent with the fiscal policies of the Society. The Secretary-Treasurer shall present a financial report at each meeting of the Executive Committee and at the annual Business Session of the Division.

The Secretary-Treasurer shall oversee the preparation and distribution of the *Newsletter of the Division of Atomic, Molecular, and Optical Physics*. There shall be at least three issues per year; the timing of these issues shall be determined by the Secretary-Treasurer, subject to approval of the Executive Committee or its delegate.

6. Duties of the Division Councillor(s). The Division Councillor(s) shall serve as liaison between the Council of the Society and the Executive Committee of the Division. Following each Council meeting, the Division Councillor(s) shall report to the Chair and the Secretary-Treasurer regarding the Council actions that affect the

status and operations of the Division. Reports shall be made to the entire Executive Committee during their regularly scheduled meetings.

ARTICLE VII -- ELECTION AND TENURE OF THE OFFICERS, EXECUTIVE COMMITTEE MEMBERS, AND DIVISION COUNCILLOR(S)

1. Qualifications. Officers, Division Councillor(s), and Members-at-Large of the Executive Committee must be members of the Division before assuming office.

2. Ballot. The Vice-Chair, Secretary-Treasurer, Division Councillor(s), and Members-at-Large of the Executive Committee shall be elected by mail ballot as hereinafter provided.

3. Nomination and Election of the Vice-Chair, Secretary-Treasurer, and Executive Committee Members. Each year the Nominating Committee shall nominate at least two candidates for the office of Vice-Chair, for Secretary-Treasurer during the final year of the term of the current Secretary-Treasurer, and for open positions of Members-at-Large of the Executive Committee. The Nominating Committee shall notify the Secretary-Treasurer of the results not later than sixteen weeks before the Regular Meeting. The Secretary-Treasurer shall inform the Division members of the nominations made and shall invite these members to suggest candidates for the various offices and Executive Committee positions. If as many as five percent of the total Division membership determined on 30 June of the year preceding the election suggests the same person for the same office, that person shall be deemed to have been nominated.

The Secretary-Treasurer shall poll the Division membership by mail ballot, stating a closing date at least three weeks prior to the Regular Meeting. Ballots shall be returned to and counted by the Secretary-Treasurer or his or her designate. Election shall be decided by a plurality of those voting. If there is a tie, the Executive Committee shall decide the election, with the Chair voting only in the case of a tie among the other Executive Committee members. The Secretary-Treasurer shall communicate the results of the election to the Chair at least two weeks prior to the Regular Meeting and shall publish the results in a manner designated for official announcements.

4. Nomination and Election of a Division Councillor. During the final year of the term of a Division Councillor and when the Division has more than one Division Councillor, the Secretary-Treasurer shall

determine from the Executive Secretary if the terminating Division Councillor position is to continue. Such determination shall be made by the Executive Secretary based on Division membership according to rules specified in the Constitution and Bylaws. If the position is to continue or whenever the Executive Secretary informs the Division that a new Division Councillor is to be elected, the Executive Committee shall nominate at least two candidates for the open position. The Secretary-Treasurer shall inform the Division members of the nominations made and shall invite these members to suggest additional candidates. If as many as five percent of the total Division membership determined on 30 June of the year preceding the election suggests the same person, that person shall be deemed to have been nominated. The Secretary-Treasurer shall poll the Division by mail ballot, stating a closing date at least three weeks before 1 September. Ballots shall be returned to and counted by the Secretary-Treasurer or his or her designate. Election shall be by plurality of those voting. If there is a tie, the Executive Committee shall decide the election, with the Chair voting only in the case of a tie among the other Executive Committee members. The Secretary-Treasurer shall communicate the results of the election to the Chair and to the Executive Secretary before 1 September of the year prior to that in which the new Councillor assumes office and shall publish the results in a manner designated for official announcements.

5. Official Year. The official year shall extend from the close of one Regular Meeting to the close of the next Regular Meeting.

6. Vice-Chair, Chair-Elect, and Chair. The member elected as Vice-Chair shall serve in that office for one year, then for one year as Chair-Elect, and then for one year as Chair. The Chair shall not be eligible for the office of Vice-Chair in the year following his or her term of office.

7. Terms of Office. The terms of office of the Officers and Members-at-Large of the Executive Committee shall begin at the close of the Regular Meeting of the Division following their election. The Secretary-Treasurer shall serve for a term of three years and may not serve more than two consecutive terms. The tenure of a Member-at-Large of the Executive Committee shall terminate in the event of his or her assumption of a post as an elected Officer of the Division, and the unexpired portion of his or her term shall be filled as hereinafter provided for a vacancy.

The term of office of a Division Councillor shall begin at the beginning of the calendar year following his or her election. Divisional Councillors shall serve for a term of four years and may not serve more than two consecutive terms unless otherwise specified by Council.

8. Vacancies in Offices. If a vacancy occurs in the office of Chair, the Chair-Elect shall succeed and complete the term and shall serve as Chair also in the following year. The Vice-Chair shall serve simultaneously as Chair-Elect during the remainder of the term and shall continue to serve as Chair-Elect in the following term.

If a vacancy occurs in the office of Chair-Elect otherwise than through advancement to Chair, the Vice-Chair shall become Chair-Elect. In this case, and also if the office of Vice-Chair becomes vacant for other reasons, the office of Vice-Chair shall remain vacant for the remainder of the term. In the next scheduled election, candidates for both Chair-Elect and Vice-Chair shall be nominated.

If vacancies occur in the offices of both the Chair and the Chair-Elect, the Vice-Chair shall become Chair and shall complete the term. In this case a special election shall be held to fill the offices of Chair-Elect and Vice-Chair. The members so elected shall continue to serve as officers in the normal succession order.

Vacancies in any other elected office shall be filled (or left unfilled) by the Executive Committee until such time as the vacancy can be filled by regular election procedures.

ARTICLE VIII -- APPOINTED COMMITTEES

1. Nominating Committee. The Nominating Committee shall consist of four members appointed by the Chair to staggered two-year terms and one member appointed by the Council for a one year term. The Chair shall ascertain through the Executive Secretary the identity of this member. The Chair shall appoint the Chair of the Nominating Committee from among the members, with the restriction that the members appointed by Council shall not be eligible for Chair. The Nominating Committee shall prepare a slate of candidates for the positions of Vice-Chair, Secretary-Treasurer, and Members-at-Large of the Executive Committee according to Article VII.3 of these Bylaws. The Nominating Committee shall advise the Chair on suitable candidates for Society committees, including relevant Society Prize and Award committees, and on candidates for Society

offices. The Nominating Committee shall perform such other functions as described in the Bylaws.

2. Program Committee. The Program Committee shall consist of the Chair, the Chair-Elect, the Vice-Chair, the Secretary-Treasurer and fifteen other members appointed by the Chair, upon recommendation of the Chair-Elect, to staggered three-year terms. The Chair-Elect shall serve as Chair of the Program Committee. The Program Committee shall have the responsibility of assisting the Executive Secretary, or his or her designate, in arranging the meetings of the Society. This activity shall include the scheduling of contributed papers within the areas of interest of this Division, as well as the arranging, in cooperation with the Executive Secretary or his or her designate, of symposia and sessions of invited papers sponsored by the Division for a meeting. For meetings of the Division, including the Regular Meeting, the Program Committee shall be responsible for the solicitation and selection of invited and review papers and for the arrangement of the programs of such meetings.

3. Fellowship Committee. The Fellowship Committee shall consist of the Vice-Chair and four other members appointed by the Executive Committee, upon recommendation of the Chair, to a one-year term. The Vice-Chair shall serve as Chair of the Fellowship Committee. The Fellowship Committee shall promote the nomination of candidates for Fellowship, shall review the qualifications of such candidates, and shall report its recommendations to the Executive Committee for submission to the Executive Secretary of the Society.

4. Publications Committee. The Publications Committee shall consist of six members appointed by the Chair to staggered three year terms. The Chair shall appoint the Chair of the Publications Committee from among the members. The Publications Committee shall solicit articles for *Physics News*, shall interact with the editors of the *Physical Review* and *Physical Review Letters* on matters of interest to the Division, and shall perform such other functions as the Chair or the Executive Committee may direct.

5. Terms of Office of Appointed Committee Members. The terms of committee members appointed or recommended by an incoming Chair shall commence at the beginning of the year in which he or she assumes office.

6. Ad Hoc Committees. The Chair shall appoint other ad hoc committees as necessary, which shall serve only during his or her term as Chair.

ARTICLE IX -- MEETINGS

1. Regular Meeting. One meeting of the Division, to be known as the Regular Meeting, shall be held annually at such time and place as shall be ordered by the Executive Committee, subject to approval by the Executive Board. Whenever it shall be feasible and not to the disadvantage of the members of the Division, the Executive Committee may order this or any other meeting to be held conjointly with a Meeting of the Society or of another society, conference, or group, so long as such joint meeting does not conflict importantly with the schedule of Meetings of the Society as determined by the Executive Board. The registration fee for the Regular Meeting, when not held jointly with a Meeting of the Society, shall be fixed after consultation with the Executive Secretary. Non-members of the Society shall pay a surcharge to be set each year by the Executive Board.

2. Annual Business Session. Each year the Division shall hold a Business Session which shall be a session of the Regular Meeting. This Business Session shall be devoted exclusively to the reports of officers and committees, election results, and the transaction of business affairs. No scientific program of the Division shall be presented simultaneously with the Business Session. A majority vote of those Division members present at the Business Session shall be sufficient for approval of actions. The Secretary-Treasurer shall notify the Division members of the agenda for the Business Session no later than three weeks prior to the Regular Meeting.

3. Other Meetings. Meetings of the Division, other than the Regular Meeting, may be initiated by the Executive Committee or by petition of twenty percent of the members of the Division, subject to approval by the Executive Board. Special conferences may be sponsored in whole or in part by the Division, subject to the rules and regulations specified in the Society Constitution and Bylaws.

4. Papers at Meetings. Programs of meetings of the Division may provide for the inclusion of both invited and contributed papers. When a meeting of the Division is held in conjunction with a meeting of the Society, the rules of the Society shall apply to submitted papers. When a meeting of the Division is not held in conjunction with a meeting of the Society, the Executive Committee shall prescribe the subject and character of the meeting, which may include limitations on the subject matter of submitted papers. The Secretary-

Treasurer shall fix the deadline date for receipt of titles and abstracts in consultation with the Executive Secretary and shall designate the place to which they should be sent. The amount of tie to be allowed for the presentation of a paper at the Regular Meeting shall be determined by the Program Committee, except as otherwise directed by the Executive Committee. These allotments of time shall be consistent with the Constitution and Bylaws of the Society and with regulations of Council.

ARTICLE X -- DUES

Dues for maintenance of membership in the Division shall be established by Council.

ARTICLE XI -- OFFICIAL ANNOUNCEMENTS

Official announcements shall be made in the *Bulletin of the American Physical Society*, in the *Newsletter of the Division of Atomic, Molecular, and Optical Physics*, and in such other publications as the Executive Committee may direct.

ARTICLE XII -- PROCEDURE OF AMENDMENT OF BYLAWS

Proposal of an Amendment to these Bylaws may be made by the Council, by the Executive Committee, or by a petition to the Chair signed by not fewer than ten

percent of the members of the Division. If the proposed amendment originates within the Division, it must be approved by Council before further action can be taken. Following Council approval, the Secretary-Treasurer shall distribute copies of the proposed Amendment to all members of the Division not less than three weeks before the Regular Meeting and opportunity shall be given for discussion during the Business Session. With the unanimous consent of those members present and voting, the voting on the proposed Amendment may be carried out at the Business Session. Without that consent, the voting on the proposed Amendment shall be as follows. Not later than twelve weeks after said Regular Meeting the Secretary-Treasurer shall again distribute copies of the proposed Amendment, accompanied by ballot forms. Adoption of the Amendment shall require a two-thirds vote by those voting.

Meetings of Interest

Gaseous Electronics Conference (GES) University of New Mexico, Albuquerque, NM, Oct. 22-25, 1991. Contact C.C. Lin, University of Wisconsin.

BALLOT

For Division Councillor: (Vote for one.)

- ☐ J. Dehmer
- ☐ T. McIlrath
- ☐ D. Norcross

In regard to the new DAMOP Bylaws:

- ☐ Approve
- ☐ Disapprove

Please return this ballot before **1 August 1991** to:

Jim McGuire
DAMOP Secretary
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New Orleans, LA 70118

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