

# The American Physical Society

## Division of Electron and Atomic Physics

EUGEN MERZBACHER, *Chairman*  
Dept. of Physics and Astronomy  
University of North Carolina  
Chapel Hill, North Carolina 27514

M. EUGENE RUDD, *Vice-Chairman*  
Department of Physics  
University of Nebraska  
Lincoln, Nebraska 68588

THOMAS M. MILLER, *Secy.-Treas.*  
Dept. of Physics and Astronomy  
University of Oklahoma  
Norman, Oklahoma 73019  
405-325-3961

June 1979

TO MEMBERS OF THE DEAP from Tom Miller

### REPORT OF THE NOMINATING COMMITTEE

The Nominating Committee, appointed by Eugén Merzbacher, consists of Aaron Temkin (chairperson), Peter Lambropoulos, Earl McDaniel, and Ivan Sellin. The slate of candidates which they submitted is as follows:

Chairperson	M. Eugene Rudd	(1 year)
Vice-Chairperson	Bernd Crasemann	(1 year)
Secretary-Treasurer	Thomas M. Miller	(1 year)
Executive Committee Member	Joseph H. Eberly Robert T. Poe Winthrop W. Smith	(one to be elected for a three-year term)

Under the Bylaws additional nominations for any of the above offices by members of the DEAP will be recognized and included on the ballot if the nomination is supported in writing by five percent (83) of the members. Such nominations duly signed must reach me no later than September 10, 1979. In the absence of a contest for any given office, the relevant nominee will be declared elected. Ballots for contested offices will be mailed in September.

The remainder of the Executive Committee is as follows: Eugen Merzbacher is currently Chairperson and will remain on the Committee for one more year as Most Recent Past Chairperson, replacing Neal Lane. Ivan Sellin will serve on the Committee as Division Councillor until 1/83. The elected Committee members are Richard Deslattes (until 12/79), Daniel Kleppner (until 12/80), and Hugh Kelly (until 12/81). Serving one-year terms appointed by the chairperson are Patricia Dehmer and Robert Hill.

The DEAP Program Committee is chaired by Eugene Rudd and is responsible for organizing symposia and related programs at DEAP and APS meetings.

The DEAP Fellowship Committee is chaired by Bernd Crasemann and is responsible for making recommendations to the APS Council on elevations to fellowship for APS members whose experience is in atomic physics. Nominations supported by two fellows and accompanied by a vita for the nominee may be sent to Crasemann at the Department of Physics, 122 Science I, University of Oregon, Eugene, OR 97403.

### REPORT FROM THE DIVISION COUNCILLOR

The APS Council rejected a motion which would have modified their earlier resolution supporting the Equal Rights Amendment and which would have had the effect of giving the divisions freedom in selecting sites for annual meetings.

It was announced to Council that Senator Kennedy has requested hearings on proposed legislation to promote careers for women in science and technology. The APS Panel on Public Affairs will represent the APS in an advisory capacity concerning this legislation.

The AAPT has expressed a desire for greater contributions to the joint APS-AAPT

annual meeting through general interest symposia and other forms of increased interaction. The DEAP has received approval for a joint symposium with the AAPT on "The History of the Atom," to be organized by G. S. Hurst and presented at Chicago next January. Suggestions for 1981 would be welcomed by the DEAP Program Committee.

The Washington, DC APS meeting will likely expand to five days by 1981 owing to the necessity of being housed entirely within the Shoreham-Americana Hotel by that date.

The APS Congressional Fellowship Program attracted few applicants this year. Council has increased the annual stipend to \$25,000. DEAP members who have a broad public service interest besides their research and teaching work are urged to consider this program.

In fact, DEAP members are urged to take a greater interest in the activities of the APS (and the DEAP). Comments by members are desired and are often solicited in the Bulletin and in this newsletter by the APS Council, the DEAP Executive Committee, and by the Division Councillor. More responses would make the relevant decisions easier. Issues of governance affecting the role of the divisions in the APS seem likely to arise with increasing frequency; the history of the Council action in advance of consultation with some affected divisions with respect to journal refereeing policy, the ERA boycott, and terms and conditions of award of the new Broida Prize are all exemplars.

Comments would be welcomed by our Division Councillor, Ivan Sellin, ORNL, Building 5500, PO Box X, Oak Ridge, TN 37830.

#### DEAP MEETINGS AND THEIR TIMING

An announcement of the DEAP annual meeting at Houston is attached to this newsletter. The 1980 meeting will be in Los Angeles, hosted by the University of Southern California. The 1981 meeting will be hosted by New York University. The 1982 meeting will be in Boulder, sponsored by JILA.

Eugen Merzbacher has appointed a subcommittee to make a recommendation in Houston regarding the time-of-year of the DEAP annual meeting. Eugene Rudd will chair the subcommittee; the other members are Patricia Dehmer, Robert Hill, and myself. Your thoughts on the matter should be communicated to one of these persons.

#### AD HOC STUDY GROUP ON SUPPORT FOR ATOMIC PHYSICS

At the request of the DEAP Executive Committee, a study group has been formed to explore the feasibility and the wisdom of creating an advisory committee that would articulate the interests and concerns of atomic physics and atomic physicists to the agencies responsible for the support of the field. The study group will judge whether the DEAP community is prepared to sustain a standing committee that would speak with authority about atomic physics and would make the case for atomic physics as a vital discipline. If it concludes that such a representative advisory committee be formed, the study group is expected to make recommendations about the structure and function of the new committee. Other questions to be addressed are: To whom and how would such a committee report; how would it be related to the DEAP and to the existing Committee on Atomic and Molecular Science of the National Academy of Sciences; and how would the members be chosen?

DEAP members and friends of atomic physics are invited to send comments on the study group's task to the chairman of the study group, Alexander Dalgarno, Department of Astronomy, Harvard University, Cambridge, MA 02138. The study group is expected to make a preliminary report at the Houston meeting of DEAP in December.

#### THE BROIDA PRIZE

The APS Council approved the "Herbert P. Broida Prize in Atomic and Molecular Spectroscopy or Chemical Physics," sponsored by Broida's friends and the Office of

Naval Research. In Council discussion preceding this action, there was general agreement that the term "atomic and molecular spectroscopy" would be very broadly interpreted. The prizes of \$5000 each will be awarded in odd-numbered years beginning in 1981. The organizers are hoping for increased support now that the APS has approved the prize: contributions to the "H. P. Broida Memorial Fund" may be sent to the Department of Physics, University of California at Santa Barbara, Santa Barbara, CA 93106.

#### ATOMIC PHYSICS SURVEY SUBCOMMITTEE

A subcommittee of the National Academy of Sciences Committee on Atomic and Molecular Science is undertaking a study of the present state of research in atomic and molecular science in the US. The subcommittee will obtain information on numbers of research workers and the nature of research activities, geographical location, types of research organizations participating, demographic information, training, and levels and sources of support. On the basis of such data the Committee will prepare a report on the status and health of the field including appropriate recommendations of policy. The report will be widely distributed to workers in the field, to funding agencies, and to appropriate scientific administrators. The Chairman of the subcommittee is Benjamin Bederson of NYU, and Stephen Smith of JILA is Co-Chairman. Jean Gallagher of JILA will serve as project officer.

#### PHYSICS NEWS IN 1979

The DEAP will be asked to contribute to Physics News in 1979, a booklet published by the AIP primarily for journalists and science writers. (Copies of last year's issue were available at the Madison meeting.) Persons who can make suggestions on topics which represent interesting and significant impacts on the field during the past year should write to me or to Eugen Merzbacher. We will ask about six people to write short (500 word) articles which the editor, Gerald Present, can consider for 1979. Last year the DEAP was represented by articles on a new measurement of the Rydberg, laser cooling of atoms, laser-induced energy transfer, and atomic physics with relativistic beams.

#### ELEVENTH ANNUAL MEETING OF THE DEAP AT HOUSTON

The Eleventh Annual Meeting of the DEAP will be held in Houston, TX on December 10 - 12, 1979. The scientific program will consist of contributed papers, invited papers, and symposia. The Department of Physics of Rice University will act as host. We wish to acknowledge the efforts of G. King Walters and Neal F. Lane for making the local arrangements.

The scientific sessions will be held at the Shamrock Hilton Hotel, South Main Street and Holcombe Blvd., and participants will be housed there. Rates are \$30 per single room and \$39 per double room. Participants are urged to make their reservations early. A block of 250 rooms has been reserved for the conference for which reservations must be received by November 18th; after this date reservations will be accepted on a "first-come, first-served" basis as long as there are rooms available. Reservations will be held until 6 pm on the date of arrival.

Those arriving at Houston Intercontinental Airport should take the Air Coach bus (\$4.50 one way or \$8.50 round trip) to the South Main Terminal, which is directly across Main Street from the Shamrock Hilton. From Hobby Airport, take the Hobby Airport Limousine (\$3.00 one way or \$5.50 round trip) to the South Main Terminal. Alternatively, Yellow Cab taxi from Intercontinental costs \$15.55 (plus \$0.55 per each additional person to a total of five); or from Hobby Airport, \$12.00 with no additional cost up to a total of five persons.

Registration will take place in the North Lobby of the Shamrock Hilton Hotel from 4 pm to 8 pm on Sunday, December 9, and throughout the conference.

On Sunday evening between 7 pm and 10 pm there will be an informal reception with

a cash bar in the Embassy Room. On Tuesday afternoon, 11 December, there will be an open house at Rice University, followed by a reception with a cash bar at the Rice Faculty Club at 6 pm. The traditional banquet will also be held at the Faculty Club that evening, at 7 pm. Chartered buses (two) will shuttle between the Shamrock Hilton Hotel and Rice University during the afternoon and evening.

Preregistration will greatly facilitate the planning and functioning of the meeting. The registration fee will be \$20 up to 15 November and \$25 thereafter. The fee for unsupported students and unemployed is \$3. Please use the preregistration form provided in this newsletter, indicate whether you will attend the banquet, and provide the hotel registration information.

Abstracts for contributed papers (one original and two duplicates for each paper) in Bulletin format, should be sent to the chairperson of the program committee, M. Eugene Rudd, at the address given on the letterhead, and must be received by 17 September 1979. Authors are requested to indicate on one corner of their abstract form whether they prefer a poster session, an oral session, or have no preference.

#### LANE TO VISIT WASHINGTON, DC

A member of the DEAP Executive Committee, Most Recent Past Chairperson Neal Lane, is expected to become Physics Division Director for the National Science Foundation for one year beginning August 1, 1979, while Marcel Bardou is on sabbatical.

#### VITAE OF NOMINEES

CRASEMANN, BERND, 57, BA 1948, UCLA. PhD 1953, University of California at Berkeley. Assistant Prof. 1953-58, Associate Prof. 1958-63, Prof. 1963- , University of Oregon. Chairman of the Dept. of Physics 1976- . Deputy Director, Office of Scientific and Scholarly Research, Graduate School 1959-60. Special Assistant to the Dean, College of Liberal Arts, 1958-60. Visiting positions at Brookhaven National Laboratory 1961-62, University of California at Berkeley 1968-69 and summer 1960, Lawrence Radiation Laboratory (Livermore) 1968-69, NASA Ames Research Center 1975-76, Université Paris VI "Pierre et Marie Curie" summer 1977. Member, NAS Committee on Atomic and Molecular Science 1976-79, and Vice-Chairman 1978- ; Chairman, ad hoc Panel on Accelerator-Related Atomic Physics Research; Chairman, ad hoc Panel on Synchrotron Radiation. Member, Working Committee, Stanford Synchrotron Radiation Users Organization 1977- , and Proposal Review Panel, Stanford Synchrotron Radiation Laboratory 1978- . Member, Editorial Board, Physical Review C 1978. Chairperson of DEAP Fellowship Committee 1978- . Atomic inner-shell processes: x-ray and Auger transition probabilities, and atomic effects in nuclear transitions. Applications of synchrotron radiation to research in atomic physics.

EBERLY, JOSEPH HENRY, 43, BS 1957, Pennsylvania State University. MS 1959, PhD 1962, Stanford University. NAS-NRC Postdoctoral Fellow USNOLWO 1962-64; Research Physicist Naval Ordnance Lab 1964-67; Lecturer, University of Maryland 1964-65; faculty member, University of Rochester since 1967, presently Professor of Physics and of Optics; US Navy Civilian Service Award 1964; NAS Exchange Lecturer to Eastern Europe 1970; Visiting Scholar SLAC and Department of Physics, Stanford University 1971-72; Guest Visitor, University of Sussex, summer 1973; Visiting Fellow, JILA, 1977-78. Chairman or member of organizing committees for: Rochester Conferences on Coherence and Quantum Optics 1966, 72, 77; Aspen Workshop on Intense Fields 1975; International Conference on Multiphoton Processes 1977, 80; Symposium on Computer Films for Research in Physics and Chemistry 1978; Europhysics Study Conference on Multiphoton Processes 1979. Co-editor MULTIPHOTON BIBLIOGRAPHY 1970-76, 77, 78. Member DEAP Program Committee 1973-76, DEAP Nominating Committee 1977, DEAP representative at NSF Theory Program Review 1977. Member Finance Committee, Optical Society of America 1978-80. Member of APS Frank Isakson Prize Committee 1979. Associate Editor Physical Review A 1979-81. Atomic tests of QED, stochastic atom-photon interactions, resonance fluorescence, superradiance and optical pulse propagation, atomic, molecular, and free electron multiphoton interactions.

MILLER, THOMAS M., 38, BS 1962, MS 1964, PhD 1968, Georgia Institute of Technology. Assistant Prof. 1969-74, New York University. Physicist 1974-78, Stanford Research Institute. Associate Prof. 1978- , Univeristy of Oklahoma. Visiting Fellow 1977, University of Birmingham (UK). Program Committee IXth ICPEAC, and various DEAP committees. Electron-atom/molecule scattering, ionic photodissociation and photo-detachment, electric polarizabilities, ion-ion neutralization, excited atom-molecule collisions.

POE, ROBERT T., 44, BS 1956, Hamline University. MS 1958, PhD 1963, University of California at Berkeley. Research Physicist, Lawrence Berkeley Laboratory 1963-64, Assistant Prof. 1964-69, Associate Prof. 1969-72, Prof. 1972- , Chairman of Dept. of Physics 1976- , University of California at Riverside. Visiting Scientist: BNL, LBL, CERN, Academia Sinica, Cambridge Fellow, etc. Electron-atom/molecule, photon-atom, atom-molecule interactions; many-body effects in atomic systems; elementary particle physics; applied studies in energy and alternate energy.

RUDD, M. EUGENE, 51, BA 1950, Concordia College. MA 1955, University of Buffalo. PhD 1962, Univeristy of Nebraska. Assistant Prof. 1954-56, Associate Prof. 1956-64, Prof. 1964-65, Concordia College. Associate Prof. 1965-68, Prof. 1968- , Acting Chairman, Dept. of Physics and Astronomy, University of Nebraska-Lincoln. NSF Science Faculty Fellow 1960-61, Visiting Physicist, University of Aarhus, Denmark, summer 1972. Member, General Committee 1971-75, Executive Committee 1973-75, Nominating Committee 1975, Coordinator of Student Travel Grants 1973-75, ICPEAC. Member, Program Committee 1973-74, Nominating Committee 1973, Chairman of Local Committee 1976, Chairperson of Program Committee 1979, and Vice-Chairperson 1979, DEAP. Electron ejection cross sections in ion-, electron-, and atom-atom collisions; autoionization; Auger effect.

SMITH, WINTHROP W., 42, BA 1958, Amherst College. PhD 1963, MIT. NAS-NRC Postdoctoral Fellow, JILA, 1963-65. Lecturer, Dept. of Physics and Astronomy, University of Colorado 1964-65. Instructor, Assistant Prof. 1965-69, Physics, Columbia University. Associate Prof., Prof., 1969- , University of Connecticut. Research Participant: 1969-74, Oak Ridge National Laboratory; summer 1972, Visiting Prof., University of Tennessee; 1978- , Los Alamos Scientific Laboratory; summer 1979, Lawrence Livermore Laboratory. Visiting Fellow, 1975-76, JILA. General Committee, ICPEAC, 1973-77. NAS-NRC Ad Hoc Panel on Accelerator-Related Atomic Physics, 1975-76. NAS Committee on Atomic and Molecular Science 1976-79. Chairman, Gordon Research Conference on Atomic Physics, 1977. Member, DEAP Nominating Committee 1977; Program Committee, 1978. Chairman, New England Section, APS, 1979. Atomic collisions, heavy-particle collision spectroscopy, lifetimes and spectra of excited ions, atomic hyperfine structure, soft x-ray spectra from collisions, laser spectroscopy.

1979 Annual Meeting of the APS Division of Electron and Atomic Physics  
Houston, Texas, 10-12 December 1979

\_\_\_\_\_  
Name

\_\_\_\_\_  
Affiliation

\_\_\_\_\_  
Address

\_\_\_\_ Preregistration fee (make checks payable to DEAP-Houston, \$20.00  
before 11 November 1979 and \$25.00 thereafter).

\_\_\_\_ I expect to attend the banquet (\$12.50) with \_\_\_\_\_ guests. (Tickets sold  
at registration.)

Please reserve a room at the Shamrock Hilton Hotel:

\_\_\_\_ Single occupancy, \$30.00 per room. \_\_\_\_\_ Double occupancy, \$39.00 per room.

If room is to be shared, by whom? \_\_\_\_\_

Arriving \_\_\_\_\_ am on \_\_\_\_\_ . Departing \_\_\_\_\_ am on \_\_\_\_\_ .  
\_\_\_\_\_ pm \_\_\_\_\_ pm

\_\_\_\_ I will make my own housing arrangements.

Please enclose a check for registration fee (see above).

Return to DEAP-Houston, Dept. of Physics, Rice University,  
PO Box 1892, Houston, TX 77001