

The American Physical Society

Division of Electron and Atomic Physics

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TO MEMBERS OF THE DEAP from Tom Miller

I. Report on the 1978 DEAP Meeting at Madison

The annual meeting, held at the Wisconsin Center of the University of Wisconsin, was a success. There were 353 registrants, with 177 contributed papers and 23 invited papers presented. The banquet at the Wisconsin Center Guest House was attended by about 240 persons. The Madison meeting featured our first post-deadline poster session one evening, which turned out to be a pleasant social occasion as well. We all thank Wilmer Anderson and Chun Lin and their colleagues for the effort which they put in toward making this meeting an enjoyable one. The DEAP disclaims any responsibility for (a) taxi strikes, (b) operation of the Chicago airport, and (c) the closing of Madison pubs at 1 am.

II. APS March Meeting, Chicago (19-23 March 1979)

The DEAP is sponsoring two symposia, with the speakers listed:

1. Atoms and Molecules in Flames and Plasmas (organized by Terry A. Miller).
Alan Eckbreth, "Spatially Precise Laser Diagnostics for Practical Flame Probing."
Kermit C. Smyth, "Optogalvanic Spectroscopy; A New Look at Atoms and Molecules."
V. E. Vondybey, "Studies of Molecular Ions and Other Transient Species by Time-Resolved Laser Induced Fluorescence."
A. Fontijn, "HTFFR and HTP Measurements of the Kinetics of Isolated Elementary Reactions from 300-1800 K."
2. Resonance Phenomena on Surfaces (organized by Robert J. Celotta).
E. G. McRae, "Electronic Surface Resonances of Crystals."
Milton W. Cole will speak on atom scattering from surfaces.
S. Y. Tong, "Electron Resonances from Adsorbed Molecules and Atoms."
George C. Schatz, "Theory of Raman Scattering from Molecules Adsorbed on Electrode Surfaces."

III. APS Spring Meeting, Washington DC (23-26 April 1979)

1. The DEAP will sponsor three symposia, including a two-part memorial to Herb Broida sponsored jointly with the Division of Chemical Physics.

- A. H. P. Broida Memorial Symposium (organized by E. Ambler).
E. Ambler, "Scientific and Personal Contributions of H. P. Broida."
D. O. Harris, "Microwave-Optical Double Resonance."
Albert M. F. Lau, "Theory of Laser Chemistry."
R. N. Zare, "Spectroscopy of NO₂."

B. H. P. Broida Memorial, continued: Molecular Interactions Studied by Spectroscopy (organized by H. Schiff).

- L. E. Brus, "Matrix Isolation of Molecules."
R. Field, "Laser Spectroscopy of Diatomic Molecules; BaO."
D. Levy, "Spectroscopy in Supersonically Cooled Beams."
W. C. Lineberger, "Photoelectron Spectroscopy of Clusters."

C. Coherence and Polarization Phenomena (organized by Michael Lubell).
J. Macek, "Pure and Mixed States in Atomic Collisions."

- I. V. Hertel, "Collisional Orientation and Alignment Measurements in Scattering Processes in Laser Excited Atoms."
G. K. Walters, "Electron Spin Polarization Effects in Low Energy Electron Diffraction from Surfaces, and in the Degradation of Chiral Molecules."
M. S. Lubell, "Polarized Electron Scattering Experiments: A New Generation of Atomic Collision Physics."

- D. Radiation Damped Cooling of Ions and Molecules (organized by Gordon Dunn).
H. Demelt, "Motional Sideband Cooling."
D. Wineland, "Laser Cooling of Ions Stored in Penning Traps."
A. Ashkin, "Trapping and Cooling of Neutral Atoms by Resonance Radiation Pressure."

2. The DEAP Executive Committee will meet on Sunday evening, April 22. The agenda for this meeting consists of routine reports plus a number of items which are discussed in several sections below; input from DEAP members is requested. The Executive Committee consists of Patricia Dehmer, Richard Deslattes, Robert Hill, Hugh Kelly, Daniel Kleppner, Neal Lane, Eugen Merzbacher (chairperson), Thomas Miller, Eugene Rudd, Ivan Sellin, and King Walters.

3. The DEAP Program Committee will meet at noon on Monday, April 23. Symposia and invited speakers for our 1979 annual meeting as well as for several APS meetings through April 1980 will be decided on. DEAP Members are urged to provide suggestions to one of the members of this committee: James Bayfield, Klaus Berkner, Gordon Berry, David Crandall, Bernd Crasemann, Richard Deslattes, David Golden, George Hurst, Carl Lineberger, James Macdonald, Joseph Macek, Steven Manson, Earl McDaniel, John Park, John Risley, Eugene Rudd (chairperson), Roberta Saxon, Alfred Schlacter, Stephen Shafroth, Robin Shakeshaft, and Henry Stroke.

4. The Nominating Committee will meet at noon on Tuesday, April 24. The chairperson of the Committee is Aaron Temkin. Three other persons will be appointed soon. The Committee will select a slate of candidates to be presented to the DEAP membership later in the year. Offices to be filled are vice-chairperson, secretary-treasurer, and one Executive Committee position. Temkin would like to hear from DEAP members with recommendations for nominations. His address is: NASA Goddard Space Flight Center, Code 680.1, Greenbelt, MD 20771.

IV. Time-of-Year Poll

At the Madison meeting a poll was taken regarding the time-of-year of the annual DEAP meeting. Objections have been frequently heard in the past, but it was not known if there was widespread discontent, or if there was any single reason. The statistics of the poll aren't terrific: 74 people have responded. Fifty-five percent of these people said they want to see the meeting moved to another time of the year. Their major objection was that early December is too busy because of the end of the fall semester at universities, and the holidays. The second major objection concerned the weather in early December. Other people specifically mentioned the travel difficulties this time of year, and the proximity to the date of the Gaseous Electronics Conference. Opinion was divided as to the best alternate meeting time; 37% of the people who object to December said that May is best. "September," "summer," and "conflict or merger with the GEC" shared second place equally.

Some respondents asked if the DEAP deliberately selects cold climates. The answer is that the DEAP tends to disregard climate as a consideration. The Executive Committee must choose from invitations, issued by persons who are willing to spend the time required to host the meeting at their institution. We rarely have several invitations to choose from, and with the recent ERA decision of the APS Council we will have even fewer; see the next item below. Informal discussions have revealed that it is not out of the question to hold the DEAP meeting along with the GEC if the prospect doesn't scare off invitations from hosts. Clearly, these questions require deeper study. Is it possible to satisfy more than 45% of the attendees?

V. The Equal Rights Amendment

On 18 November 1978 the APS Council adopted the following resolution.

"Be it therefore resolved that until the present Equal Rights Amendment is ratified, or the present period for the ratification lapses, whichever occurs first, the APS schedule general and divisional meetings, beyond those already scheduled, only in states which have ratified (and not rescinded - should Congress permit rescision) the Equal Rights Amendment."

The present period of ratification runs until March 1982. The DEAP has already scheduled meetings through 1981 and has invitations from the University of Oklahoma, the University of Georgia, and the Joint Institute for Laboratory Astrophysics to host the 1982 meeting. Georgia and Oklahoma cannot be considered at this point, under the APS resolution, for 1982. Although JILA would be a popular choice the Executive Committee would rather have several invitations to choose from. The matter will be discussed at the April 22 meeting of the Executive Committee, and a decision may be made then or postponed. Persons who have an interest in hosting the DEAP meeting in 1982 (or beyond) should contact Eugen Merzbacher at (919) 933-2079 or at the address given on the letterhead.

Our incoming Division Councillor, Ivan Sellin, requests that members communicate their feelings on the APS Council action in regard to the ERA, so that he can feel confident about representing the DEAP before the Council. He says that the choices are (a) to do nothing; (b) to attempt to rescind the resolution; or (c) to attempt a compromise (e.g., letting Divisions do what they wish, or letting them go ahead and schedule meetings beyond March 1982, anywhere) Sellin would particularly like to hear from persons who can document any hardships which have occurred as a result of the Council resolution, or who wish to foresee the future impact of the resolution. Please contact Sellin at Building 5500, PO Box X, ORNL, Oak Ridge, TN 37380, before the APS meeting in Washington in April. Sellin also asks that members communicate to him matters that they feel should be brought up with the APS Council; he in turn will report to DEAP members via this newsletter.

VI. Nominations for APS Offices and Committees

The DEAP officers are occasionally called upon by the APS Council to recommend DEAP members who would be willing to run for APS offices or to serve on APS committees. We would like to hear from people who have suggestions for candidates or who want to get involved in such activities themselves. The APS Nominating Committee and the Council Executive Committee will meet next November to choose various candidates for offices. Our incoming Division Councillor, Ivan Sellin, would like to get information from DEAP members on possible candidates much earlier than November, however, because nominations must be made by more than one Councillor. Sellin's address is given in the section above.

VII. Other APS Matters

1. The AIP tells us that it costs them more to collect dues from Division members than they take in for us. In 1979 the AIP will test a new system: instead of collecting Division dues they will simply allocate to the Divisions the same amount of money that was collected in 1978. APS members will still be asked to indicate which Divisions they wish to be a member of, but they will pay only APS dues, not separate Division dues.

2. The APS Committee on Professional Concerns is considering broadening its activities and renaming itself. Interested persons should contact the chairperson, Brian Schwartz of the Department of Physics, Brooklyn College, Brooklyn, NY 11210.

3. The APS is considering the formation of a committee on the diffusion of knowledge at the secondary school level. Interested persons should contact Gertrude

Goldhaber, Physics Department, Brookhaven National Laboratory, Upton, NY 11973.

VIII. Davisson-Germer Prize

The Davisson-Germer Prize, sponsored by Bell Labs, was set up in 1965 to recognize and encourage outstanding work in atomic physics or surface physics. A committee has been established to select a prizewinner for 1979, in atomic physics. Suggestions for candidates for the Davisson-Germer Prize should be sent to one of the committee members: P. L. Bender (chairperson), V. Hughes, J. N. Bardsley, E. W. McDaniel, or W. Happer.

IX. 1979 DEAP Annual Meeting in Houston

The Eleventh Annual DEAP Meeting will be held at the Shamrock Hilton Hotel in Houston, Texas, on December 10-12, 1979. G. King Walters of Rice University is heading the local committee. An open house at Rice University is planned for Tuesday afternoon, December 11, before a reception and banquet at the Faculty Club. Forms for preregistration and hotel reservations will be mailed with the next newsletter. Abstracts for contributed papers (one original and two copies for each paper) should be sent to the DEAP Program Committee Chairperson, Eugene Rudd, Department of Physics and Astronomy, University of Nebraska, Lincoln, NE 68588, and must be received by September 6, 1979.

X. Other Meetings

1. 1979 Physical Electronics Conference. The 39th Annual Physical Electronics Conference will be held at the University of Maryland in College Park, 18-20 June, 1979. Full information has been given in the January Bulletin. Homer Hagstrom of Bell Labs is the general chairman. The abstract deadline is 4 May 1979.

2. 1979 Gordon Conference on Atomic Physics. The fourth Gordon Conference on Atomic Physics (25-29 June 1979) will emphasize "New Developments in Atomic Physics." The site of the upcoming conference will be the Brewster Academy on the shores of Lake Winnepesaukee. Attendance will be limited to about 125 persons. Some of the topics to be discussed include diamagnetism in laser excitation, resonances and diagnostic aspects of electron-atom and plasma recombination processes, correlation and coherence effects in heavy particle collision phenomena, new developments in gauge theory predictions of parity violation in atoms, theoretical and experimental aspects of excimer lasers. A poster session will be held consisting of a limited number of contributions from attendees. Afternoons will be free for recreation and discussions. Registration, board, and meals will cost \$185. The program and application details will appear in the March issue of Science magazine. The organizing committee for this conference is chaired by Aaron Temkin. The vice-chairman is Stephen Lundeen.

3. XIth International Conference on the Physics of Electronic and Atomic Collisions. The XIth ICPEAC will be held in Kyoto, Japan on 29 August - 4 September 1979. Information may be obtained from K. Takayanagi, Institute of Space and Aeronautical Science, University of Tokyo, Komaba 4-6-1, Meguro-ku, Tokyo 153 Japan. The abstract deadline is 20 April 1979. Mitio Inokuti of Argonne National Laboratory has sent DEAP members information on package tours. John Risley of North Carolina State University has sent out information on NSF travel grants that the US members of the ICPEAC committee hope to be able to award; the deadline for application is 15 April 1979.

4. 32nd Gaseous Electronics Conference. The 1979 GEC will be held in Pittsburgh on 9-12 October, with Westinghouse Research and Development Center acting as the host institution. Peter Chantry of Westinghouse is the local chairman.