

1974 III

The American Physical Society

Division of Electron and Atomic Physics

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TO MEMBERS OF THE DEAP from Francis Pichanick

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2. 1975 Executive Committee

The executive committeeman position is being contested and details are on the accompanying ballot. There was to have been a two-man race for Divisional Councillor, but at the last minute Ron Geballe was unable to run and King Walters has thereby been elected unopposed. The remainder of the committee is as follows:

<u>One Year Term:</u>	Chairman	- Benjamin Bederson New York University
	Immediate Past Chairman	- Arthur Schawlow Stanford University
	Vice-Chairman	- Francis Pipkin Harvard University
	Secretary	- Chun Lin
	Treasurer	University of Wisconsin

Divisional Councillor until Dec. 1978: King Walters, Rice University

Executive Committeemen (terms expiring on the months indicated):

Roy Garstang December 1975
JILA

Eugen Merzbacher December 1976

In addition the chairman may appoint two committeemen for one-year terms.

Retiring are Ron Geballe (University of Washington) as Divisional Councillor and Keith Jefferts (Bell), Ralph Nicholls (York University) and Thor Rhodin (Cornell) as executive committeemen.

3. 1975 Annual Meeting

(a) Arrangements

The Sixth Annual Meeting of the DEAP will take place in Chicago on December 2-4, 1974. Technical sessions will be held in lecture theaters at the Center for Continuing Education, 1307 East 60th Street, which is located on the southern edge of the University of Chicago campus. Most participants will also be housed at the Center, with some being housed at 50th On-The-Lake Motel, 4900 South Lake Shore Drive. Bus transportation between 50th On-The-Lake and the Center will be provided.

Registration will be conducted in the lobby of the Center from 7:00 - 10:00 PM on Sunday, December 1. A cash bar will be available during this Registration period. Additional registration sessions will be held on December 2 and 3 (8:30 - 11:30 AM and 1:30 - 4:00 PM) in the lobby of the Center. The Registration Fee is \$18 up to November 15, and thereafter \$25. Unsupported students may register for \$3.00.

Tickets for the banquet to be held on Tuesday, December 3rd must be purchased from the Registration Desk before noon on Monday, December 2. Messages may be left at the hotel desk at the Center.

Registration and Hotel Reservation forms are enclosed for your convenience. They can be returned directly to the Center. Most airline transportation will be to O'Hare Airport. Midway Airport is closer and more convenient, but has very few flights. Limousing transportation from O'Hare Airport directly to the Center is available. Mini-buses leave from a location near Continental bus stop every 1/2 hour on the 1/2 hour from 7:30 AM to 4:30 PM and from 7:30 PM to 11:30 PM. There are also buses at 5:45 PM and 6:45 PM. The fare is \$3.90. Since the direct service is new we have no experience with its reliability. An alternate source of transportation is to take the Continental bus from the airport to the Palmer House Hotel downtown, from the Palmer House one can either take a cab (\$4-6) or take the Illinois Central Commuter train from the corner of Randolph and Michigan Avenue to 59th Street. For those who drive parking is available in a lot behind the Center for Continuing Education. The cost of parking is \$.50 per exit.

The banquet will be held at 7:45 PM on Tuesday, December 3 at the Mandar Inn, a northern Chinese Restaurant. The banquet will be preceded by a cocktail party at 6:30 PM.

The Annual Business Meeting will be held in the Assembly Room at 10:00 AM on Tuesday, December 3. The meeting will be conducted by Arthur Schawlow as Retiring Chairman. The officers for 1975 are Benjamin Bederson (Chairman), Francis Pipkin (Vice-Chairman), and Chun Lin (Secretary-Treasurer).

At the opening of the business meeting a tribute will be paid to the late Victor W. Cohen. A symposium on Energy and Basic Research, organized by Rolf Sinclair, will follow the business session.

The technical session will include six symposia and three separate invited papers. These have been arranged by our program committee consisting of Benjamin Bederson (Chairman), Stanley Bashkin, Richard Brewer, Stanley Brodsky, Robert Celotta, Richard Deslattes, Alexander Dalgarno, Joseph Eberly, James Faller, Robert Freund, Edward Gerjouy, John Park, James Peterson, Francis Pichanick, Hugh Robinson, Eugene Rudd, Gabor Samorjai, Arthur Schawlow, Rolf Sinclair, Ronald Stebbings.

The invited papers are "Laser Isotope Separation" by B.B. Snavely, "Penning Trap Techniques" by Norval Fortson, and "Photon Echo Quantum Beats" by I.D. Abella.

The symposia and names of the organizers are "Photoelectron Angular Distributions from Gases and Surfaces" (R.J. Celotta), "Coherence, Alignment and Orientation in Atoms and Molecules" (S. Bashkin), "Atomic and Molecular Reactions in the Upper Atmosphere" (J.R. Peterson), "Doppler-Free Spectroscopy and Multiphoton Processes" (T.W. Hansch), "Use of High-Energy Accelerators in Atomic Physics" (I.A. Sellin), and "Laser Spectroscopy" (D.H. Levy).

Contributed Papers will be given in parallel sessions and the conventional variety of projection equipment will be available. Anyone requesting special equipment should advise the organizers as soon as possible at the address given on the registration form. Space will be available for anyone desiring to arrange informal sessions.

This year we have a record number of 158 contributed papers, and obviously some conflicts are inevitable. Persistent complainers will not be eligible for amnesty or pardon and the traditional sentence of a term on the Program Committee still applies. The sessions were arranged by Ben Bederson, Robert Freund and Francis Pichanick.

The DEAP is indebted to the local committee, spearheaded by Don Levy and Steve Berry, for the weeks of work which are needed to organize a meeting of this kind. We also express our appreciation to the University of Chicago for acting as host to the meeting.

(b) Program of Symposia

(I) Photoelectron Angular Distribution from Gases and Surfaces

(Robert Celotta, organizer)

1. Theory of the Angular Distribution of Photoelectrons Emitted from Gas Phase Targets, Dan Dill, Boston University
2. Angular Distributions of Photoelectrons Ejected from Gases, James Samson, University of Nebraska - Lincoln
3. Photoelectron Angular Distributions from Surfaces : Theory, J. W. Gadzuk, NBS
4. Directional Photoemission Measurements on Two Dimensional Systems, Neville Smith, Bell Laboratories

(II) Coherence, Alignment, and Orientation in Atoms and Molecules

(Stanley Bashkin, organizer)

1. Macroscopic Point of View and Technique, Ugo Fano, University of Chicago.
2. Polarization and Coherence in the Beam-Foil Light Source, C. H. Liu, University of Arizona
3. Optically Induced Quantum Beats, J. A. Paisner, Stanford University
4. Coherence in Atomic Vapors, W. Happer, Columbia University

(III) Atomic and Molecular Reactions in the Upper Atmosphere

(James Peterson, organizer)

1. Atmospheric Reactions, an Overview, F. E. Niles, US Army Ballistic Research Laboratory
2. The Dissociative Excitation of Atmospheric Gases by Electron Impact : Some Important Geophysical Consequences, E. C. Zipf, University of Pittsburgh
3. Energy Transfer Processes in the Neutral Atmosphere, T. G. Slanger, Stanford Research Institute
4. Laboratory Measurements of Ionospheric Ion-Neutral Reaction Rates, D. L. Albritton, NOAA

(IV) Doppler-Free Spectroscopy and Multiphoton Processes

(T. W. Hansch, organizer)

1. New Advances in Quantum-Beat Spectroscopy Using Pulsed Dye Lasers, S. Haroche, University of Paris
2. Molecular Beam Spectroscopy with Lasers, S. Ezekiel, MIT
3. Recent Topics in Laser Saturation Spectroscopy, P. E. Toschek, University of Heidelberg
4. Two-Photon Spectroscopy without Doppler- Broadening, T. W. Hansch, Stanford University

(V) Use of High-Energy Accelerators in Atomic Physics

(Ivan Sellin, organizer)

1. Status Report of the ad hoc Working Panel on Accelerator-Related Atomic Physics Research, Bernd Craseman, University of Oregon
2. Experimental Studies of Atomic Processes in Inner Shells Using Highly Stripped Heavy Ions, J. R. MacDonald, Kansas State University
3. Independent-Electron Processes in Energetic Ion-Atom Collisions, Eugen Merzbacher, University of North Carolina - Chapel Hill
4. Atomic Collisions Research with High Energy Heavy Ion Beams, C. D. Moak, Oak Ridge

(VI) Laser Spectroscopy

(David Levy, organizer)

1. Time- and Wavelength-Resolved Spectra of Pulsed Chemical Lasers, M. J. Berry, University of Wisconsin
2. Two-Photon and Stark Lamb Dips, T. Oka, NRC Ottawa
3. Lasers, Supersonic Beams, NO_2 , and New Possibilities for Molecular Spectroscopy, R. E. Smalley, University of Chicago

(VII) Energy and Basic Research

(Rolf Sinclair, organizer)

1. Funding of Basic Research Related to Energy, M. K. Wilson, NSF
2. Energy and Basic Research in Physics, F. T. Smith, Stanford Research Institute

4. News of the Division

The DEAP has formed a publications committee consisting of Dan Kleppner (MIT), Ivan Sellin (Oak Ridge and the University of Tennessee), Ron Stebbings (Rice University) and myself.

Our initial business is to discuss with the editor of Physical Review A possible re-organization of the journal such as splitting it into two separate monthly issues and sub-titling the contents page. The committee will be concerned with all aspects of APS and AIP publications including referee systems. We shall be glad to receive any comments and suggestions from the membership.

Gordon Dunn (JILA) is the DEAP consultant to the AIP on systems of indexing for the journals, and I am sure he would be glad to receive suggestions from members of the division.

Marvin Mittleman (CCNY) is the New DEAP representative in New York to assist in arranging sessions for the big meetings. He succeeds Hyatt Gibbs (Bell).

DIVISION OF ELECTRON AND ATOMIC PHYSICS

BALLOT

The names listed below are presented by the nominating committee for the office of executive committeeman. Please register your vote by marking the appropriate box. The vitae of the candidates are summarized below.

EXECUTIVE COMMITTEEMAN (3 year term). Vote for one.

- ☐ Bailey Donnally (Lake Forest College)
- ☐ Earl McDaniel (Georgia Institute of Technology)
- ☐ Laird Schearer (University of Missouri-Rolla)

Return your ballot to the Secretary-Treasurer in the enclosed envelope.

Deadline for receipt of ballots in November 25, 1974

DONNALLY, BAILEY, 43, B.S. 1950, M.S. 1951, Auburn. Ph.D. 1961 Minnesota. Asst. Prof. 1955-61, Dept. Chairman 1959-61, College of St. Thomas. Assoc. Prof. 1961-6, Prof. and Dept. Chairman 1966-, Lake Forest College. Visiting Prof. 1961, Auburn. Visiting Fellow 1966-7, Yale. AAPT-AIP Visiting Scientist. President 1964-5 Chicago Section, Chairman 1966 Committee on Special Lectures, Chairman 1966-8, Committee on Special Apparatus, 1965 Apparatus Prize. Distinguished Service Citation, President 1967 all of Am. Assoc. of Physics Teachers. Fellow and member of Council, Am. Assoc. for Advancement of Science. Member Commission on College Physics. Member of Governing Board, Am. Inst. of Phys. Advisory Committee, Research Corp. Lifetimes of metastable negative ions, sources and scattering of polarized protons, deuterons and electrons, proton-atom charge exchange, atom-surface interactions, ionizing atom-atom collisions, spectra of stripped ions.

MCDANIEL, EARL W., 48, B.S. 1948, M.S. 1950, Georgia Tech. Ph.D. 1954, Univ Michigan. Asst. Prof. 1954-6, Assoc. Prof. 1956-61, Prof. 1961-70. Regents' Prof. 1970-, Georgia Tech. Visiting Lecturer 1963, Univ. Michigan. Visiting Scholar 1966-7, Univ. Durham. Fulbright Senior Scholar 1966-7. Guggenheim Fellow 1966-7. Georgia Scientist of the Year, 1971. Executive Committee 1964-6, Secretary 1965-6, Gaseous Electronics Conference. Local Chairman 1971, DEAP Annual Meeting. DEAP nominating committee 1962-3, Chairman 1973. General committee 1965-71, Int. Conf. on Physics of Electron and Atomic Collisions. Editorial advisory board of "Atomic Data". Co-editor of "Case Studies in Atomic Physics". Consultant on reactor physics, controlled thermonuclear plasmas, upper atmosphere, electrical discharges and gas lasers. Atomic collisions, gas lasers, ionization collisions, ionic mobility, ion-molecule reactions, gas-filled radiation detectors, radiocarbon dating.

SCHEARER, LAIRD D., 42, B.S. 1954 Muhlenberg College, M.S. 1958, Lehigh Ph.D. 1966, Rice. Test Engineer 1954-5, Hughes Aircraft. Inst. 1955-9, Lafayette College. Scientist 1959-68, Senior Scientist 1968-71, Texas Instruments. Instructor 1964-5, Rice. Prof. and Dept. Chairman 1971-, Univ. Missouri-Rolla. Wilson Award (Rice) 1966, Texas Instruments Fellow 1963-5. Nato Senior Fellow 1973. DEAP Program Committee 1972-4. Executive Committee 1973-5, Gaseous Electronics Conference. Optical pumping magnetometers, magnetic relaxation, inelastic thermal collisions, paraelectric resonance, liquid crystals, chemiluminescence, polarized ions, coherence transfer, kinetic reaction coefficients, Penning ionization, molecular g-Factors.