

The American Physical Society

Division of Electron and Atomic Physics

1974 II

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TO THE MEMBERSHIP OF THE DEAP from Francis Pichanick

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1. Reports of the Nominating Committees

At the beginning of the year a nominating committee was appointed in accordance with the regulations of the APS Council. The members are Stephen Smith (JILA, chairman), Ron Geballe (University of Washington, Seattle), Harold Metcalf (SUNY, Stony Brook) and King Walters (Rice). They have submitted a slate of candidates for the offices of chairman, vice-chairman, secretary-treasurer, and executive committeeman as listed below.

In addition the office of divisional councillor becomes vacant this year. This officer is a full voting member of both the APS Council and the DEAP Executive committee. Not only does he function as a member of each body, but acts as a vital liason between the APS Council and the DEAP. According to our by-laws the nominating committee for this office is the executive committee itself. The candidates submitted by the executive committee are also listed below. The by-laws stipulate that the divisional councillor may succeed himself once.

Slate of Nominees

<u>Chairman</u>	-Benjamin Bederson New York University	(1 year)
<u>Vice-Chairman</u>	-Francis M. Pipkin Harvard University	(1 year)
<u>Secretary-Treasurer</u>	-Chun C. Lin University of Wisconsin	(1 year)
<u>Divisional Councillor</u>	-Ronald Geballe Univ. of Washington, Seattle -G. King Walters Rice University	(One to be elected for a four-year term.)
<u>Executive Committeeman</u>	-Bailey Donnally Lake Forest College -Earl W. McDaniel Georgia Inst. of Technology -Laird D. Schearer Univ. of Missouri, Rolla	(One to be elected for a three-year term.)

The above slate reflects the tradition that the current vice-chairman succeed to the chairmanship.

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 per cent (86) of the members. Such nominations duly signed, must reach the Secretary-Treasurer no later than August 16, 1974.

In the absence of a contest for any given office, the relevant nominee will be declared elected. Ballots for contested offices will be mailed on about September 1, 1974.

The remainder of the executive committee is as follows:

Arthur Schawlow (Stanford) is currently chairman and will remain on the committee for one more year as Immediate Past Chairman, replacing King Walters (Rice). The elected committeemen are Thor Rhodin (Cornell) until 12/74, Roy Garstang (JILA) until 12/75, and Eugen Merzbacher (N. Carolina) until 12/76. Serving one-year terms appointed by the chairman are Ralph Nicholls (York) and Keith Jefferts (Bell).

On behalf of the Division I would like to express appreciation to the Nominating Committee and to the chairman, Steve Smith, in particular for the effort required in contacting the nominees and securing the biographical information.

Vitae of the Nominees

BEDERSON, BENJAMIN, 52, B.S. 1946, C.C.N.Y.; M.A. 1948 Columbia University; Ph.D. 1950 New York University, Scientific Aide 1944-6, Manhattan Project of Los Alamos. Staff member 1950-2, Research Lab. of Electronics, MIT. Assistant Prof. 1952-7, Assoc. Prof. 1957-9, Professor 1959-, Dept. Chairman 1973-, New York University. Visiting Scientist 1963, C.N.E.N., Frascati, Italy. Visiting Fellow 1968-9, JILA. Lecturer 1969, University of Bari, Italy, Secretary, Program and Steering Committees, ICPEAC 1959-67. Local Chairman, Int. Conf. on Atomic Physics, 1968. Trustee and Director, Inst. Medical Research and Studies, 1960-. Visiting Panel, NBS, 1962-4. NAS Advisory Committee to Army Research Office, 1968-. Chairman NAS Committee on Atomic and Molecular Physics, 1970-3. Editorial Board "Atomic Data" 1969-. Co-editor, Comments on Atomic and Molecular Physics, 1972-. DEAP Program Committee 1971-3, vice-chairman 1974. Physics Advisory Council to the NSF, 1973-. Nuclear and atomic moments, hyperfine structure. Low-energy electron scattering. Atom-atom scattering. Atomic Polarizabilities. Spin and polarization effects in electron scattering. Plasma physics.

PIPKIN, FRANCIS M., 46, B.A. 1950, Univ. Iowa. M.A. 1953, Ph.D. 1954, Princeton Jr. Fellow, Soc. of Fellows, 1954-7, Asst. Prof. 1957-60, Assoc. Prof. 1960-2, Prof. 1962-, Harvard. Procter Fellow 1953-4, Princeton. Sloan Fellow 1959-63. Fellow Am. Academy of Arts and Science. DEAP Executive Committee 1971. Chairman DEAP Nominating Committee 1971. National Academy of Sciences Committee on Atomic and Molecular Physics 1969-72. Program Advisor Stanford Linear Accelerator. Optical pumping, nuclear orientation, atomic beam studies of radioactive atoms, fast atomic beam spectroscopy. Also active in experimental elementary particle physics.

GEBALLE, RONALD, 56, B.S. 1938, M.A. 1940, Ph.D. 1943, Berkeley. Physicist, Berkeley Rad. Lab. 1942-3. Applied Physics Lab. 1943-6, Seattle. Asst. Prof. 1946-54, Assoc. Prof. 1954-9, Prof. and dept. chairman 1959-72, Assoc. Dean 1972- Univ. Washington, Seattle. Vice-chairman 1968, Chairman 1969, Divisional Councillor 1970-4, DEAP. Secretary 1967-, Int. Conference on Physics of Electron and Atomic Collisions. President 1968-9, Distinguished Service Citation 1972, Am. Assoc. of Physics Teachers. Member 1969-72, Committee on Atomic and Molecular Physics, Natl. Acad. of Sciences. Chairman Panel on Physics Education, and member of Physics Survey Committee, Natl. Acad. of Sciences. NSF Physics Advisory Committee. Member 1967-73, Advisory Committee, Research Corp. Advisory Panel, NAS-NRL Lab. Astrophys. for NBS (JILA). Gaseous electronics, swarm experiments, ionization and attachment coefficients, negative ions, charge transfer involving excited atomic hydrogen, excited states of H^- , physics education.

WALTERS, G. KING, 43, B.A. 1953 Rice University, Ph.D. (Physics) 1956 Duke University. Res. Assoc. and Instructor, Duke 1956-7. Scientist 1957-62, Corporate Res. Assoc. 1962-3, Texas Instruments. Professor 1963-, Acting Dean of Engineering 1968-9, Rice University. Acting Chief, Fire Technology Division, NBS 1971-2. NSF Fellow 1956-7. APS Committee on Economic Concerns 1970-2. Vice-chairman 1972, Chairman 1973, DEAP. DEAP Program Committee 1970-2 (chairman 1972). Chairman of Program Committee, Third International Conference on Atomic Physics. National Academy of Sciences Committee on Atoms and Molecules 1971-. Consultant Texas Instruments, Council of Graduate Schools. Assoc. Editor J. Geophysical Research; Advisory Editor Case Studies in Atomic Physics. Nuclear Magnetic Resonances, Liquid and Solid Helium, electron spin-resonance in solids, optical pumping, collisions, polarized targets and beams, electronically excited states in liquids, solar wind-magnetospheric interactions, biophysics and radio-astronomy.

LIN, CHUN C., 44, B.S. 1951, M.A. 1952 Berkley. Ph.D. 1955, Harvard. Asst. Prof. 1955-9, Assoc. Prof. 1959-63, Prof 1963-8 University of Oklahoma. Prof. 1968- University of Wisconsin. Sloan Fellow 1962-6. Executive Committee 1969-74, Secretary 1972-3, Gaseous Electronics Conference. Electron excitation of atoms and molecules, atomic collisions, microwave spectroscopy, electronic structure of atoms in solids, band structure of solids.

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. Instr. 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.

2. Sixth Annual Meeting of the DEAP

The Sixth Annual Meeting of the Division of Electron and Atomic Physics will take place on the campus of the University of Chicago on December 2-4, 1974. The meeting will consist of contributed papers, invited papers and symposia. Tentative topics scheduled for symposia and invited papers are beam-foil spectroscopy, highly ionized particles, laser and optical-microwave spectroscopy, multiphoton Doppler-free spectroscopy, high Rydberg states, reactions in the upper atmosphere, photons and oriented surfaces, transient optical phenomena, laser isotope separation, and collisions. At the business meeting there will be a panel on basic research relevant to the energy problem. The local committee consists of Steve Berry and Donald Levy. The Chemistry Department of the University of Chicago is acting as host.

THE DEADLINE FOR CONTRIBUTED PAPERS IS SEPTEMBER 13, 1974.

The Conference will be held at the Center for Continuing Education, 1307 East 60th Street, Chicago, Illinois 60637. All scientific sessions will be held at the Center and most participants will be housed in the Center. Those participants who cannot be accommodated at the Center will be housed at 50th On the Lake Motel, 4900 South Lake Shore Drive, Chicago, Illinois, and transportation to and from the Center will be provided. Since accommodation at the Center will be somewhat more convenient, and since it will be filled first, participants are urged to make their hotel reservations as early as possible.

A banquet will be held on the evening of December 3rd at the Mandar Inn, an excellent restaurant serving northern Chinese food. Transportation between the Center and the Mandar Inn will be provided. In previous years the banquet has been oversubscribed, and participants are asked to indicate on the pre-registration form whether they anticipate attending the banquet.

Pre-registration will greatly facilitate the smooth function of the meeting, will save you time and money, and will make available a maximum of services to registrants. The fee up to 15 November is \$18, and thereafter is \$25. The fee for unsupported students and unemployed is \$3. Please use the pre-registration form enclosed.

3. Speakers Invited to European Meetings

Quite often speakers from Europe have been invited to participate in DEAP symposia both at our Annual Meetings and at general meetings of the APS. These speakers usually obtain travel money from their governments since a formal invitation to our meetings is considered ample justification for the funding. The European Physical Society is anxious to reciprocate these invitations. Any person who receives an invitation to present a paper at a specific meeting of a physical society in Europe may get travel money from the NSF under the following circumstances.

- a) If the speaker has an NSF grant he would be given permission to use some of the money to pay for the trip;
- b) The speaker may get a travel grant from the NSF if he has no grant funds or if he has a grant from an agency which specifically precludes the use of its money for international travel.

4. News of Physical Review A

Lewis Snead, editor of Physical Review A, attended the DEAP Executive Committee meeting on December 9, 1973. I am including the following summarized extract from the minutes in the belief that the DEAP membership will find it informative.

- The average turnaround time of manuscripts sent to referees was 17 days.
- In 1973 the rejection rate ran 20-23 per cent.
- As of October 1973, authors who could not honor page charges were having an extra three months delay in publication. It is possible that the APS may provide additional subsidies for non-honored papers in an effort to reduce this delay.
- There are no plans for altering the format of Physical Review A in the immediate future. There is a possibility that issue C (Nuclear Physics) may, for a trial period, change to a system whereby authors are required to submit manuscripts in photo-ready form.
- The average size of a paper in issue A was 8.5 pages and growing. Referees are being urged to suggest ways of shortening papers where appropriate.
- The DEAP will be forming a publications committee to strengthen the interactions with Physical Review and Physical Review Letters.

5. AIP Booklet "Physics in 1974"

Each year the American Institute of Physics publishes a small booklet "Physics in 197n". The object of the booklet is to assist journalists around the country to prepare annual surveys of the progress of American Physics. The items that are included, generally two or three per sub-field, are those which might be considered newsworthy to the general public. Each item usually

runs about one or two hundred words. For the past three years I have contributed the items in areas related to DEAP with the assistance of Keith Jefferts and with suggestions from members of the executive committee. I would appreciate any suggested topics from the membership. The deadline is the end of July and items should be very recent developments which can be presented as news digestible by the general public. The names of institutions and individuals are important since in many cases local reporters wish to follow up these stories.

REMEMBER

THE CONTRIBUTED PAPER DEADLINE FOR THE SIXTH ANNUAL DEAP MEETING IS SEPTEMBER 13, 1974.

PUT A REMINDER ON YOUR OFFICE WALL OR BULLETIN BOARD.