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The American Physical Society
DIVISION OF ELECTRON AND ATOMIC PHYSICS

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September 1985

To Members of the DEAP from Kate Kirby

FIRST ANNOUNCEMENT OF THE
JOINT MEETING OF THE
DIVISION OF ELECTRON AND ATOMIC PHYSICS
AND THE
DIVISION OF CHEMICAL PHYSICS
UNIVERSITY OF OREGON, EUGENE, OREGON
18-20 JUNE 1986

SUBMISSION OF ABSTRACTS

Abstracts for contributed papers (one original and two duplicates) in standard Bulletin format should be sent to the Secretary-Treasurer, Kate P. Kirby, Center for Astrophysics, 60 Garden St., Cambridge, MA 02138. The deadline for receiving abstracts is February 28, 1986.

Please note on one corner of the abstract whether you prefer an oral session or a poster session. Please sign your abstract! In addition, please include an appropriate PACS number on your abstract. The PACS numbers will be used to aid in sorting the abstracts into sessions, and, therefore, they should be as specific as possible and should indicate the type of audience you wish to address.

Both overhead and 35 mm slide projectors will be available in the oral sessions. The poster boards are 6 feet tall by 4 feet wide and will be available throughout the meeting. For the convenience of all attendees, it is urged that you put up your poster the first morning.

I. SEVENTEENTH ANNUAL MEETING OF THE DIVISION OF ELECTRON AND ATOMIC
PHYSICS, Eugene, Oregon June 18-20, 1986

The Seventeenth Annual Meeting of the Division of Electron and Atomic Physics will be held jointly with the Division of Chemical Physics, on the campus of the University of Oregon in Eugene, Oregon, on Wednesday through Friday, 18-20 June 1986. The hosts will be the Chemical Physics Institute and the Departments of Physics and Chemistry of the University of Oregon, with Bernd Crasemann and Paul Engelking serving as local chairmen. The local organizing committee includes Tom Dyke, John Farley, Dave Herrick, Sandy Hill, Bruce Hudson, Steve Kevan, and John Moseley. The program will consist of symposia, invited papers, and contributed papers.

Eugene, Oregon, is served by several airlines (American, Frontier, Horizon and United), the Amtrak railway system, and by Greyhound and Trailways bus lines. Plane reservations should be made as early as possible because the number of commercial flights is limited. On Interstate Highway 5, Eugene is located 540 miles north of San Francisco and 120 miles south of Portland. From the Eugene airport, limousine service is available to the campus, to hotels and motels. The fare is \$4.50. The Valley River Inn and the Hilton Hotel operate free airport pickup services for their guests. Automobile rental is available at the Airport and in town from national as well as local agencies; advance reservations are recommended.

Because Eugene is ideally situated in the scenic northwest, a number of excursions are planned for the weekend following the Meeting. These include one- or two-day white-water rafting trips on the McKenzie or North Umpqua River, a bus tour of the Cascade Mountains with lunch at a rustic lodge, a day hike along the Skyline Trail on the Cascade Crest (snow conditions permitting), and a bus tour to the Central Oregon beaches. Please note on the Housing Reservation Form if you plan to take any of these trips. University Inn rooms must be vacated by 09:00 Saturday morning; however, hotel and motel rooms can be booked for extended periods.

The annual Oregon Bach Festival begins after the end of the Meeting. Noted conductor Helmut Rilling from Stuttgart directs the Festival. For program and ticket information, write to Oregon Bach Festival, School of Music, University of Oregon, Eugene, OR 97403.

Persons who wish to tour the Northwest on their own after the Meeting can obtain information on the rental of bicycles, canoes, skis or automobiles and on hiking and cross-country skiing trails and cycling routes by calling the Chemical Physics Institute, (503) 686-4774. Maps and information on Oregon tourism are available by writing to Travel Information Section, 101 Transportation Building, Salem, OR 97310.

Registration will take place in the lobby of the University Inn, 1000 Patterson Street, on Tuesday 17 June from 3:00 to 10:00 PM. A wine and cheese reception is offered in the University Inn from 5:00 to 9:00 PM. On subsequent days, the registration desk will be located in the lobby of Science Building I, where most of the scientific sessions are held. A registration fee of \$70.00 (\$60.00 before May 17) will cover administrative costs, printing the meeting abstracts, bus transportation to and from hotels, and morning and afternoon refreshments. The conference banquet will be a Salmon Bake in Jasper Park (or Shotgun Creek) on Thursday, June 19. Transportation will be supplied.

Housing options are as follows:

- (a) The University Inn, 1000 Patterson Street, is a campus residence with 240 twin-bedded rooms with private baths, pleasant common rooms and dining hall, within walking distance of the Science Buildings. The room-and-board package at the Inn is the least expensive option for participants.
- (b) The Valley River Inn, 1000 Valley River Way, is an elegant hotel overlooking the Willamette River, with heated swimming pool, saunas, jacuzzi, gardens, and a good restaurant. A block of 150 rooms has been reserved for DEAP/DCP Meeting participants. A shuttle bus service to the University campus will be provided. The campus can also be reached from the Inn via a scenic riverfront bicycle path and bridge (approximately 3 miles). Bicycles can be rented in town for approximately \$25/week.
- (c) The Eugene Hilton Hotel, 66 East 6th Avenue, has set aside 150 rooms for DEAP/DCP participants. The hotel is located downtown, approximately 1½ miles from the campus; shuttle-bus service will be provided.

Rates are indicated on the Housing Reservation Form. Participants are urged to make reservations as early as possible; the hotels will not hold our room blocks beyond May 17.

All those who plan to attend the meeting should return the Housing Reservation and Registration Form by May 17, 1986, to: DEAP-Oregon, Chemical Physics Institute, University of Oregon, Eugene, OR 97403.

II. NBS FISCAL YEAR 1987 PRECISION MEASUREMENT GRANTS

Applications are being solicited for two new NBS Precision Measurement Grants to be awarded beginning 1 October 1986 (Fiscal Year 1987). Each grant is in the amount of \$30,000 per year, renewable for up to two additional years. NBS sponsors these grants to encourage research in the field of measurement science, and to foster contacts between NBS scientists and those researchers in the academic community who are actively engaged in such work. Candidates' pre-proposal summaries and biographical information must reach NBS by 1 February 1986. For more information contact Barry N. Taylor, Chairman, NBS Precision Measurement Grants Committee, National Bureau of Standards, Building 220, Room B258, Gaithersburg, MD 20899, (301) 921-2701.

III. RESEARCH FUNDS AVAILABLE AT NATIONAL LASER USERS FACILITY FOR EXPERIMENTS IN HIGH-ENERGY-DENSITY PHYSICS

The U.S. Department of Energy funds the operation of the National Laser Users Facility, thus making it possible for researchers to conduct experiments without direct charge. In addition, the Department of Energy provides research funds directly to users for experiments in laser fusion, plasma physics, X-ray laser studies, and associated applications. Approximately \$650,000 are available to support users' research. Proposals requesting allocation of facility time should be submitted to the Manager, NLUF, by December 15, 1985. For more information about proposal guidelines and the resources available at NLUF, contact Thomas C. Bristow, Manager, National Laser Users Facility, Laboratory for Laser Energetics, University of Rochester, 250 East River Road, Rochester, NY 14623; (716) 275-2074.

HOUSING RESERVATION AND REGISTRATION FORM
Joint Meeting of the DEAP and DCP, Eugene, Oregon
18-20 June 1986

RETURN BY MAY 17, 1986 --- PLEASE PRINT

NAME _____
MAILING ADDRESS _____
DAYTIME TELEPHONE NUMBER (____) _____

ACCOMMODATIONS

Please indicate first (1) and second (2) choices.

A. University Inn

Package, arrival 17 June to departure 20 June with meals:
breakfast and lunch 18, 19, 20 June; dinner 18 June

- () Single-room and board package \$110.30
() Twin-bedded room and board package, per person \$83.60
Same as above but departure 21 June by 9:00 AM
() Single-room package \$137.60
() Twin-bedded room and board package, per person \$102.00

B. Valley River Inn

Rates per room per night, 6% tax additional

	<u>River</u>	<u>Pool</u>	<u>Guest</u>	<u>Patio</u>	<u>Standard</u>
Single	\$67	\$62	\$57	\$42	\$42
Double	\$75	\$70	\$65	\$50	\$50

() Type of room preferred _____ Rate \$ _____
Arrival date _____ Time _____ Departure date _____

C. Eugene Hilton

Rates per room per night, 6% tax additional: Single \$40; Double \$48

() Type of room preferred _____ Rate \$ _____
Arrival date _____ Time _____ Departure date _____

To guarantee hotel reservations

- () One night's room + tax deposit included herewith
() Credit card number to guarantee hotel room reservation
VISA () MASTERCARD () AMEX ()

Number _____ Expires _____ Signature _____

Please enclose check or money order payable to "DEAP-Oregon"

Registration, before 17 May, \$60, then \$70.... \$ _____
Salmon bake, _____ tickets at \$17 \$ _____
University Inn package..... \$ _____
(Or) one night's hotel room deposit..... \$ _____
Total enclosed \$ _____

Please indicate post-meeting excursion you are likely to take:

White-water rafting one-day _____ two-day _____
Bus tours: Cascades _____ Oregon Coast _____
Day hike in Cascade Mountain _____ Number of persons _____

Please mail this form by 17 May 1986 with check or money order to:

DEAP-Oregon
Chemical Physics Institute
University of Oregon
Eugene, OR 97403

IV. CAMS WORKSHOP ON THE LASER-ATOMIC FRONTIER

The organization of the CAMS Workshop on the Laser-Atomic Frontier which was announced in the June 1985 DEAP newsletter has now been completed. This Workshop will be held in the Lecture Room at the National Academy of Science, 2101 Constitution Avenue, N.W., Washington, D.C., starting at 8:30 a.m. on Friday, October 11, 1985. The major purpose of this Workshop is to define this field and highlight the exciting developments and opportunities for representatives from government agencies and congressional staff science advisors, as well as science newswriters. This Workshop is a follow-up on the atomic and molecular science aspects of the 1984 Research Briefing on Selected Opportunities in Physics which was prepared for the Office of Science and Technology Policy, the National Science Foundation, and selected federal departments and agencies by a committee co-chaired by Professors Hans Frauenfelder and Mildred Dresselhaus.

The laser continues to have a revolutionary impact in the field from which it emerged -- atomic physics. The laser-atomic frontier comprises research opportunities generated by joining laser methods with new techniques in atomic and molecular physics.

Opportunities at the laser-atomic frontier include research with trapped particles; femtosecond (10^{-15} sec) spectroscopy and other new forms of spectroscopy; the study of previously inaccessible atomic, molecular, and ionic species; and the development of novel light sources. Advances in these areas will lead to new tests of basic theory and deepen our understanding of the structure of matter at the atomic and molecular level, including transfer of energy and the nature of chemical reactions. In addition to high scientific interest, many of these topics are likely to yield technological advances.*

The format of the Workshop will be a series of overview talks presented by experts in each area with a discussion period after each talk. The agenda is as follows:

0830	Convene Workshop, Introduction	F.M. Pipkin, Harvard Univ.
0840	1. New Spectroscopies	R. Zare, Stanford Univ.
0930	2. New Light Sources	T.J. McIlrath, AT&T Bell Labs.†
1020	BREAK	
1035	3. Trapped Particles	W. Phillips, National Bureau of Standards
1125	4. Intense Electromagnetic Fields	L. Armstrong, Jr., Johns Hopkins University
1215	LUNCH	
1345	5. Laser-Atomic research in National Programs	J.H. Birely, Los Alamos National Laboratory
1435	6. Laser-Atomic Research in Industry	C.V. Shank, AT&T Bell Labs.
1525	BREAK	
1540	7. Laser-Atomic Research in Universities	D. Kleppner, Massachusetts Institute of Technology
1630	8. Summary and Discussion	F.M. Pipkin - Monitor
1730	ADJOURN	

*Research Briefings 1984, "Report of the Research Briefing Panel on Selected Opportunities in Physics", p. 108. National Academy Press, Washington, DC, 1984.

†Permanent address: IPST, University of Maryland, College Park, MD 20742.

The meeting is open to the public. Please call Don Shapero at (202) 334-3520 if you plan to come.

CAMS sponsors workshops such as this one on the Laser-Atomic Frontier periodically primarily in order to focus attention in Washington on some issues of importance to the AMO community. CAMS also carries out studies which it feels will be of interest and benefit to the community. For example, a study of computer usage has just been completed, and a study of the state of the theoretical component of the field is in progress. If you have suggestions for future workshops or studies, please contact Lloyd Armstrong, the Chairman of CAMS, at (301) 338-7362.

V. ANNOUNCEMENTS

Nominations for Fellowship in the APS should be sent to Evelyn Bennett at the American Physical Society, 335 E. 45th St., New York, NY 10017. The nominations should be submitted on the official APS form, which can be obtained by writing to Ms. Bennett at the APS or R. Shakeshaft at USC who is Chairman of the DEAP Fellowship Committee. Nominations must be signed by two members of the APS. The vita of the candidate should be submitted along with this form and any other supporting material (not reprints!). The deadline for receipt of nominations is February 10, 1986.

The Gordon Research Conference on Electron Spectroscopy is scheduled to be held at Brewster Academy, Wolfeboro, New Hampshire, on 14-18 July 1986. The Conference program, together with application information, will be published in SCIENCE in mid-March 1986. Further information can be obtained by writing J.L. Dehmer, Building 203, Argonne National Laboratory, Argonne, IL 60439.

The Conference on Lasers and Electro-Optics (CLEO) and the International Quantum Electronics Conference (IQEC) will be held conjointly June 9-13, 1986, at the Moscone Center in San Francisco. The deadline for submission of abstracts is January 6, 1986. Further conference information can be obtained by writing CLEO/IQEC '86, Optical Society of America, 1816 Jefferson Place, N.W., Washington, DC 20036; tel. (202) 223-0920.