

1987 II

The American Physical Society

DIVISION OF ATOMIC, MOLECULAR, AND OPTICAL PHYSICS

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March 1987

To Members of the Division of Atomic, Molecular, and Optical Physics from
Kate Kirby

I. ELECTION OF AMO DIVISION VICE-CHAIRPERSON,
SECRETARY-TREASURER, AND EXECUTIVE COMMITTEE MEMBER

A ballot is enclosed for the election of one person to each of the offices:
Vice-Chairperson, Secretary-Treasurer, and Executive Committee Member. The
Vice-Chairperson serves for one year, automatically succeeding to Chairperson
the following year. The Secretary-Treasurer serves for one year, but may be re-
appointed for up to two additional years. The Executive Committee Member serves
a three-year term. The slate of candidates is as follows:

Vice-Chairperson:

Walter R. Johnson
Donald C. Lorents
Thomas J. McIlrath

Secretary-Treasurer:

Michael G. Littman
Michael A. Morrison
Winthrop W. Smith

Executive Committee Member:

Robert Celotta
Robert S. Freund
Ronald Phaneuf

The 1987-88 Executive Committee will consist of:

W. Carl Lineberger, Chairperson
Richard Deslattes, Most Recent Past Chairperson
Alex Dalgarno, Divisional Councilor (through 12/90)
Gordon Dunn, Elected Member (through 5/88)
Patricia Dehmer, Elected Member (through 5/89)

In addition, there will be the newly elected member who will serve until May
1990, the newly elected Vice-Chairperson, and two members appointed by the
Chairperson who will serve during his term of office. BIOGRAPHICAL INFORMATION
ON ALL THE CANDIDATES IN THE CURRENT ELECTION APPEARS ON THE LAST SEVERAL PAGES
OF THE NEWSLETTER.

To have your vote count, your ballot must be postmarked by Friday, 17 April
1987.

* MARK YOUR BALLOT AND RETURN IT TODAY! *
* PLEASE USE ENCLOSED BALLOT ENVELOPE. *
* *****

II. FINAL ANNOUNCEMENT OF 18TH ANNUAL MEETING OF
ATOMIC, MOLECULAR, AND OPTICAL PHYSICS DIVISION
CAMBRIDGE, MASSACHUSETTS
18-20 MAY 1987

The 18th Annual Meeting of the Atomic, Molecular, and Optical Physics Division will be held in Cambridge, Massachusetts on May 18-20, 1987. The host institution is the Harvard-Smithsonian Center for Astrophysics. The local organizing Committee, chaired by W.H. Parkinson, is composed of Bartley L. Cardon, James Cornwell, Alex Dalgarno, David W. Duquette, Carolyn Duzy, Nancy Galluccio, Larry D. Gardner, Kate Kirby, John L. Kohl, Charles Kolb, Thomas Mossberg, Ed Murad, Francis M. Pipkin, Leanne C. Pitchford, Erwin Poliakoff, David Pritchard, Peter L. Smith, Glenn Stark, and George A. Victor. The scientific sessions will be held at the Hyatt Regency Hotel, located on the Charles River, between Harvard University and M.I.T. The hotel is convenient to the major research institutions of Cambridge and to downtown Boston.

The scientific program will consist of a plenary talk, symposia, contributed oral and poster papers, and a special "hot topics" symposium on Wednesday afternoon. The Program Committee that planned the symposia for this meeting included: Richard Deslattes (chairperson), Steve Chu, Harvey Gould, Tony Starace, Mike Raymer, Barry Schneider, Sheldon Datz, Eugen Merzbacher, John Risle, Dave Golden, Ron Henry, Fred Schlachter, Dan Larson, J.D. Garcia, Peter Mohr, and Peter L. Smith. The scientific sessions for this meeting were arranged by Kate Kirby, Carl Lineberger, and George A. Victor.

The Boston/Cambridge area boasts of many academic institutions, museums, and historical sites. The Cape Cod seashore, the Maine coastline, the White Mountains, and the Berkshire Mountains are all within 2-3 hour drives. May weather in southern New England is usually quite pleasant, though unpredictable. Temperatures may range from 50° to 75°F.

We have already received over 375 contributed abstracts for this meeting. Post-deadline abstracts will be accepted until several weeks before the meeting. Post-deadline papers will be presented in Poster Session III, on Wednesday afternoon, May 20.

When the BAPS May issue is published containing the program of the meeting, please check to confirm when your paper is scheduled. Everyone who clearly requested a poster session was scheduled as such. There were several papers requesting oral sessions which could not be accommodated and were assigned as posters.

TRANSPORTATION

Cambridge can be easily reached by air via Logan International Airport (in Boston). Delta Air Lines has been named the official air carrier for the conference. (To take advantage of special reduced fares for conference attendees, you or your travel agent must call Delta at 1-800-241-6760 and refer to file U0359. Be sure to mention the AMO Physics Division Meeting in Cambridge when making reservations.) Participants should note that Delta Air Lines (and other major carriers) are offering 'maxi-saver' fares to Boston that are at most \$99 (one way) if your stay includes the night of Saturday, May 16. Come early and enjoy an extra day in Boston.

Shuttle Schedule from Airport--A free shuttle will operate from Logan Airport Terminal C (Delta Air Lines) to the Hyatt Regency Hotel approximately every half

hour from 15:00 to 21:30 on Sunday May 17, and from the Hyatt Regency to the airport approximately every half hour from 8:00 to 13:00 on Thursday May 21. A more limited shuttle service will operate Wednesday evening. A representative from the Conference will be near the Information Booth at Terminal C with schedules and directions for the shuttle buses. The airport operates free MBTA buses that passengers may use to get from one terminal to another. All MBTA buses run approximately every 8 to 10 minutes, with the following routes:

#11: Loop to all terminals; A, B, C, D, E

#22: Loop of terminals A and B and the Airport subway station

#33: Loop of terminals C, D, and E and the Airport subway station

Public Transportation from Airport—The Airport is served by the Blue Line of the subway. The fare is 60 cents; you will need to purchase a token. Take either MBTA bus #22 or #33 to the Airport subway station. Take the INBOUND train and transfer to any SOUTHBOWN Green Line train at Government Center station. Take this one stop to Park Street station and transfer to the Red Line OUTBOUND toward Harvard. Take this either 2 stops to Kendall station or 4 stops to Harvard station. Kendall station is next to MIT; take Wadsworth St. to the river, turn right, and walk to the hotel (2.4 km). Harvard station is next to Harvard University, a bit farther away from the Hyatt Regency, but taxis are usually available outside the Harvard Cooperative Society building as you surface from the subway.

Taxis from Airport

Taxis are available at Logan Airport (but seriously oversubscribed on Sunday evenings). The ride to the Hyatt Regency costs about \$20.00. Taxis are often shared during peak travel times.

By Car

The Hyatt Regency is located at 575 Memorial Drive in Cambridge. From the Massachusetts Turnpike, take the Cambridge exit, continue across the bridge (over Charles River) to Memorial Drive. Turn right on Memorial Drive and go 1.4 km (0.9 miles). The Hyatt Regency is just past the overpass at the BU bridge on the left at the traffic light. Parking is available at the hotel for \$7/day. Conference participants are strongly urged to make use of the free shuttles and regular public transportation in lieu of bringing/renting an automobile. The traffic, lack of parking, and confusion in finding one's way in Boston are legendary, and deserve to be.

REGISTRATION

The comprehensive registration fee of \$110 (\$100 before April 1) covers meeting costs, shuttle transportation to and from the airport and Hyatt Regency, reception food and beverage, coffee break refreshments, admission, and the Conference outing at the New England Aquarium on Monday night. The student registration fee is \$40. The guest fee is \$30. Advance registration will be greatly appreciated by the Local Committee. Registration will be held at the Hyatt Regency on May 17 from 15:00 to 21:00, and a reception for meeting participants will be held at the hotel from 19:00 to 22:00.

Registration will continue throughout the meeting and the registration desk will be open at the following times:

Monday, May 18: 8:00 - 17:00
 Tuesday, May 19: 8:00 - 17:00
 Wednesday, May 20: 8:00 - 17:00

Telephone messages can be left for conference participants by calling (617) 492-1234 and asking for the AMO Physics Division Registration Desk.

ACCOMMODATIONS

The Cambridge Hyatt Regency Hotel has been reserved for all meeting sessions, and approximately 225 rooms have been set aside for conference accommodations. The Hyatt Regency is situated on the bank of the Charles River with a view across the river to the Back Bay area and the Boston skyline. During the conference, single, double, and twin-bedded rooms are \$108/night; triple occupancy in a twin room with a roll-away is \$20 extra/night. The rate is quite competitive with other hotels in the Cambridge area. Room reservations must be made before April 17 to obtain the reduced conference rate. AFTER APRIL 17 THERE MAY BE NO ROOMS AVAILABLE AT THE HYATT OR ANYWHERE IN THE CAMBRIDGE AREA. Please bear in mind that May is graduation season for many colleges and universities in Boston and vicinity, so that reservations should be made well in advance. USE HYATT RESERVATION FORM ON PAGE 10 OF NEWSLETTER.

No student/dormitory housing is available at this time of year. However, financial assistance will be available to allow students to stay at the Hyatt Regency Hotel in triple-occupancy rooms with other students for \$25 each per night. Students requesting this support must, by April 17, register for the meeting, reserve a room at the hotel, and notify the conference secretary (Nancy Galluccio), 60 Garden St., MS-50, Cambridge, MA 02138.

SPECIAL EVENTS

Sunday, May 17: Reception at the Hyatt Regency Hotel from 19:00 to 22:00.
 Monday, May 18: The Conference outing will be held at the New England Aquarium in Boston from 18:00 to 22:00. Aquarium exhibits will be open to participants throughout the evening. Cocktail party style food will be available in sufficient quantity to serve as the evening meal and a cash bar will provide beer, wine and soft drinks. Shuttle buses from the Hyatt Regency to the Aquarium will run every ten minutes from 18:00 to 19:00 and will return guests to the hotel between 21:00 and 22:00.

Tuesday, May 19: Open house/drop-in hour with Phys. Rev. A and Phys. Rev. Letters editors, 18:00-19:30. The room will be announced in the registration package.
 Wednesday, May 20: A special series of evening lectures on hot topics in astronomy, sponsored by the Harvard-Smithsonian Center for Astrophysics. The preliminary schedule of talks is:

Harvey D. Tananbaum, "New Developments in X-ray Astronomy"

Margaret Geller, "Large Scale Structure in the Universe"

Brian G. Marsden, "What's New in Comets"

Although no formal companion/spouse program is being organized, information regarding tours, museums, and historical sites will be available at the registration desk.

Laboratory Tours

Greater Boston has many academic and industrial research laboratories active in atomic, molecular, and optical physics. Arrangements have been made for a number of these labs to host visitors on Tuesday evening, May 19 and Thursday morning, May 21. They are all within walking distance, or are easily accessible by conference shuttle or public transportation from the meeting hotel. A printed guide, with map, to the various laboratories will be available. The Thursday morning schedule will include choices for tours at several major facilities. A comprehensive list and more information will be available with the registration material.

POSTER SESSIONS AND EQUIPMENT FOR ORAL SESSIONS

Posters will be on display in 5 contiguous rooms on the lobby level of the Hyatt Regency in the area known as Patriots' Hall. Posters should be prepared to fit into an area 1.2 meters high by 1.1 meters wide. Posters should be put up early in the morning of your poster session and should be removed by 19:00 that same evening in order to make room for poster papers the next day. For all oral sessions, both overhead and 35-mm slide projectors will be available.

WORKSHOP ON THEORETICAL ATOMIC, MOLECULAR AND OPTICAL PHYSICS

A meeting of the Theoretical Atomic, Molecular, and Optical Physics Community (TAMOC) is scheduled for Sunday evening, May 17, from 21:00 to 23:00. The room assignment will be posted in the lobby and available at the registration desk. All interested AMO scientists are invited and encouraged to attend. Anyone having agenda items should contact Tony Starace at (402) 472-2795 or George Victor at (617) 495-7236.

BUSINESS MEETING

The Division of Atomic, Molecular, and Optical Physics will hold its annual Business Meeting on Wednesday, May 20 at 10:30 in the J.F. Kennedy Ballroom. All are invited to attend. Results of the recent election will be announced and new officeholders present will be introduced. Fellowship certificates will be awarded to newly-elected fellows in the Division. M. Lubell will briefly discuss effective political action strategies.

PRESENTATION OF APS STUDY OF DIRECTED ENERGY WEAPONS

Dr. C.K.N. Patel, co-chairman of the A.P.S. Study Group on Directed Energy Weapons, will discuss the findings of that study at 11:00 on Wednesday, May 20 in the J.F. Kennedy Ballroom.

III. SCHEDULE OF SCIENTIFIC SYMPOSIA AT THE ANNUAL MEETING IN MAY

MONDAY MORNING

- A. Plenary Session: "Atomic Spectroscopy and Astrophysics--A Retrospective", L. Goldberg, Professor Emeritus, Harvard University.

- B. Atomic and Molecular Astrophysics, J.L. Kohl, presiding.

"Detection of the Carbene Ring C_3H_2 in the Laboratory and in the Interstellar Gas", P. Thaddeus, Harvard-Smithsonian Center for Astrophysics.

"Atoms, Molecules and the Universe in the Distant Past", J.H. Black, Univ. of Arizona.

MONDAY AFTERNOON

C. New Perspectives in Atomic, Molecular, and Optical Theory, Lloyd Armstrong, Jr., presiding.

"Chaos in Atomic, Molecular, and Optical Physics", P. Milonni, LANL.

"Topological Ideas from Atomic Physics: Berry's Phase", R. Jackiw, M.I.T.

"An Algebraic Approach to Scattering", Y. Alhassid, Yale.

TUESDAY MORNING

D. New Atomic Physics Using Lasers, A. Starace, presiding.

"Above Threshold Ionization (ATI) in Perspective: The Creation and Scattering of Free Electrons by Light", R. Freeman, AT&T Bell Laboratories.

"Theoretical Aspects of Above Threshold Ionization", R. Shakeshaft, USC.

"New Advances in Neutral Atom Trapping", D. Pritchard, M.I.T.

"Spectroscopy of Single Atoms", D. Wineland, N.B.S. - Boulder.

TUESDAY AFTERNOON

E. Dynamics of Fast Ion-Atom Collisions, A. Schlachter, presiding.

"Collisions between Fast Antiprotons and Noble Gas Atoms: Beyond the Independent Electron Approximation", H. Knudsen, Univ. of Aarhus (Denmark).

"The Forced Impulse Method Applied to the Double Ionization of Helium by Collision with High Energy Protons, Antiprotons and Alpha Particles", J. Reading, Texas A&M.

"Electron Capture, Ionization, and Transfer Ionization in Fast (0.1 - 1.0 E/A MeV) Highly Charged Ion Collisions with Helium", S. Datz, ORNL.

"Dynamics of Energetic Ion-He Atom Collisions", R. Olson, U. Missouri-Rolla.

WEDNESDAY MORNING

F. Atomic and Molecular Astrophysics II, L. Gardner, presiding

"Understanding the Ultraviolet Spectra of Cool Stars", C. Jordan, Oxford.

"Electron-Ion Excitation: Past and Future(?)", G. Dunn, JILA-NBS.

"Recombination Processes", G. A. Victor, Harvard-Smithsonian CfA.

G. Presentation/Discussion of APS Study of Directed Energy Weapons, R. D. Deslattes, presiding.

"Science and Technology of Directed Energy Weapons", C.K.N. Patel, AT&T Bell Laboratories.

WEDNESDAY AFTERNOON

H. Recent Developments in Atomic, Molecular, and Optical Physics, D. Larson, presiding.

Over half of the respondents do attend the Annual Meeting, citing most often the beneficial scientific focus and exchange at the meeting. Of those that do not attend, the predominant reasons are expenses (too high) and conflicting schedules.

Comments on the Annual Meeting

Thanks to all members (over 250) who responded to the survey sent out in the September/October Newsletter. In the middle of compiling these results, I also wished to thank the many members who did not respond. There was an overwhelming indication of interest in committees, both at the Division and at the APS level. The lists of names will be passed on to future nominating committees, vice chairpersons and chairpersons of the Division who make many of the appointments. I will try to summarize many of the responses below:

VI. MEMBERSHIP SURVEY RESULTS

The AMO Physics symposium at the April A.P.S. Meeting (20-23 April 1987) in Crystal City, VA, is "Current Topics in Many Body Theory". Speakers are:

Jonathan Sapirstein (Notre Dame) - "The Atomic Many Body Problem"

Robert L. Sugar (U. Cal., Santa Barbara) - "Numerical Simulation of Many Electron Systems in Condensed Matter Physics"

James P. Vary (Iowa State) - "Nuclear Many Body Theory - Recent Developments and Future Prospects"

Rodney J. Bartlett (Univ. of Florida) - "Coupled Cluster and Many Body Perturbation Theory Methods and Their Applications to Molecular Electronic Structure"

V. AMO PHYSICS SYMPOSIUM FOR A.P.S. APRIL MEETING

Sheldon Datz - "Historical Introduction"

Dudley Herschbach - "Dynamics of Feeble Bonds: There's Lots of Room at the Bottom"

Daniel Auerbach - "Probing the Dynamics of Gas-Surface Interactions with Molecular Beams"

Giacinto Scoles - "Chemical Dynamics In, On and Off Molecular Clusters"

Yuan Lee - "Infrared Absorption Spectroscopy of Hydrated Hydronium Ion"

W. Carl Lineberger - "Photoelectron Spectroscopy of Negative Ion Clusters"

Richard Smalley - "New Advances Toward a Molecular Surface Science"

The Committee on Atomic and Molecular Science (CAMS) of the NRC has organized a Workshop on "Molecular and Cluster Beam Science" to be held at the National Academy of Sciences in Washington, D.C., on April 24, 1987. Members of the science research community are encouraged to attend. The speakers include:

IV. CAMS WORKSHOP - APRIL 24, 1987

"First Capture of Antiprotons in an Ion Trap", G. Gabrielse, U. Washington.

"Squeezed States of Light", H.J. Kimble, Univ. of Texas-Austin.

"Molecular Structure Studies by 3D Imaging of Fast Ion Beams", E.P. Kanter, Argonne National Laboratory.

"New Positronium Measurements: The 1^3S_1 Decay Rate and the 2^3S_1 to $2^3P_{2,1,0}$ Transitions", A. Rich, Univ. of Michigan.

Half (101) indicated that high cost of housing/travel was not a factor, and the other half (105) indicated that it was a moderate factor (40%) or strongly-determining factor (60%) in decisions to attend the meeting. Six people commented specifically about the high cost of the hotel at the Cambridge meeting.

Almost everyone felt the meeting was about right in length. A number of issues were suggested for discussion at the Business Meeting: Funding for AMO Physics (include other agencies besides NSF - such as DOE, DOD, etc.); how to get more respect for AMO Physics and improvement of the visibility of the field; research in developing countries; proliferation of conferences; industry-university relations; location of the meeting; and program.

An overwhelming number of respondents (152 to 26) wanted to hear about other fields of physics, although some suggested that the field should be related to AMO in some way and that the invited speaker should be someone who is known to give an excellent talk. Several suggested a talk on SDI - and please note the inclusion of this in the Program of the 1987 Annual Meeting. A 5-page list of suggestions for invited symposia and speakers will be passed along to the Program Committee and kept in the files.

Most people felt that there should not be competing invited symposia sessions. Both oral contributed sessions (159 to 33) and poster sessions (180 to 18) were felt to be valuable. There were many comments regarding improvement in poster sessions. The largest number of suggestions concerned adequate space and adequate time for showing posters. My comments: The suggestion, made by many, that posters be displayed for 2 or 3 days has become impractical with the size of the meeting and the number of contributed papers. (There will be over 270 poster papers at the Cambridge meeting.) If one also wants to display posters near to the other meeting rooms so that browsing is possible, it is infeasible to display all posters throughout the meeting. The Program Committee has tried to minimize marathon poster sessions by having a poster session each day for approximately 2-1/2 hours, with 1/3 of the posters displayed each day.

In the category of other general suggestions to improve the program of the Annual Meeting, an overwhelming number of comments were received. They ranged from "there should be two-minute oral presentations summarizing the posters and eliminate the 10-minute oral papers" to "oral papers should be at least 15 minutes long followed by 3-5 for questions". One realizes there is much diversity of opinion about how symposia and invited speakers should be chosen. All the suggestions will be typed up and available for the consideration of the Executive Committee and Program Committee, as well as the membership (at the Business Meeting).

Comments on AMO Division Role in APS Community

The reaction to the joint AMO/DCP meeting in Eugene, Oregon, was positive (120 to 6). However, comments included: "bad timing - conflicted with other meetings", "poster and lecture rooms too crowded", and "too much chemistry". Members generally agreed (136 to 24) that we should strengthen our interaction with DCP, but the majority of comments indicated that this should be only occasional (every 2-5 years) and not to the exclusion of interactions with other fields.

On the question as to whether we should participate in the APS General Meeting (every 3 years), members indicated yes (143 to 43), but most added the qualifier that we should see how the 1988 meeting goes. Other frequent comments in this regard: "it might be politically necessary, but the meeting will suffer academically"; "the APS General Meetings are too large"; "the APS General Meetings are an anachronism"; "the accommodation costs are too large"; "only the politicians among us like the

idea"; "don't mess with something that's working well - it will only become worse, not better".

VII. ANNOUNCEMENTS

Congratulations to Dr. Steven Chu of AT&T Bell Laboratories who has been named recipient of the 1987 Herbert P. Broida Prize.

Congratulations to Professor Donald H. Levy of the University of Chicago who has been named recipient of the 1987 Earle K. Plyler Prize.

The Chinese Scholars Program, jointly sponsored by the American Physical Society and the Chinese Academy of Science, has been renewed until the year 1990. Groups interested in inviting appropriate scholars for a one or two year visit should contact B. Bederson, Physics Dept., New York University, 4 Washington Pl., NY, NY 10003, or phone him at (212) 598-2284. A stipend of \$14,000 is paid to the scholar by the host; travel costs are borne by the PRC.

IQEC '87 (International Quantum Electronics Conference) is being held jointly with CIEO '87 (Conference on Lasers and Electro-Optics) at the Baltimore Convention Center, April 17 - May 1, 1987. IQEC '87 is being organized into four major areas, each with its own chairman, by the Program Chairmen Dave Pritchard and Chuck Shank: Fundamental Physics and Laser Spectroscopy - W.D. Phillips; Optical Interactions with Solids and Liquids - D.S. Chemla; Non-Linear Optics - R.Y. Chen; Sources and High Intensity Interactions - C.K. Rhodes. In addition, a special session on Lasers in chemistry and biology has been organized featuring a special talk by Yuan T. Lee, recipient of the 1986 Nobel Prize in Chemistry. For registration forms and further information, write to CIEO/IQEC '87 Optical Society of America/1816 Jefferson Place N.W./Washington, D.C. 20036.

The XVth International Conference on the Physics of Electronic and Atomic Collisions will be held July 22-28, 1987, at Brighton, England. The conference deals with two-body interactions between ions, atoms, molecules, electrons, positrons, and photons. The collision energies of interest range from subthermal to millions of electron volts. Abstracts for contributed papers will be due March 1, 1987. Information about the Conference can be obtained by contacting: Dr. William R. Newell, Department of Physics, University College of London, London WC1E 6BT, England, UNITED KINGDOM; Tel. (01) 387 7050, Ext. 488.

The Fourth International Conference on Multiphoton Processes (ICOMP) will be held at the Joint Institute for Laboratory Astrophysics in Boulder, Colorado, USA, 13-17 July, 1987. Previous meetings in this series were held in Rochester (1977), Budapest (1980), and Crete (1984). The conference is concerned with the fundamental laser fields. Topics will include: multiphoton ionization of atoms and molecules, resonant multiphoton processes in atoms and molecules, selectivity in multiphoton processes, multiple ionization in strong fields, multiple excitation in atoms, nonlinear dynamics of many-photon absorption (chaos), effects of field fluctuations in multiphoton processes wave mixing, generation of short wavelength radiation, laser induced collisions, laser interactions with surfaces, plasmas, and liquids, and others, at the discretion of the program committee. For further information, contact: Stephen J. Smith, Chairman, Organizing Committee, JILA, University of Colorado, Boulder, CO 80309-0440, (303) 492-7788.

The Fortieth Annual Gaseous Electronics Conference will be held on October 13-16, 1987, at the Georgia Institute of Technology, Atlanta, Georgia. The meeting

is a topical conference of the American Physical Society and is sponsored by the Division of Atomic, Molecular and Optical Physics. The Gaseous Electronics Conference addresses basic atomic and molecular collisional processes and phenomena in ionized gases. Traditional topics include fundamental processes in electric discharges, arcs, gas lasers, electrical breakdown, switching, plasma chemistry, plasma-surface interactions, ionospheric physics and similar topics involving phenomena in ionized gases. Contacts: Professor M.R. Flannery, Secretary of the Gaseous Electronics Conference, School of Physics, Georgia Institute of Technology, Atlanta, Georgia 30332, (404) 894-5263, or Dr. Joseph M. Proud, Chairman of the Gaseous Electronics Conference, GTE Laboratories, 40 Sylvan Road, Waltham, MA 02254, (617) 466-2539.

Third International Laser Science Conference (ILS-III) will be held in Atlantic City, New Jersey, November 1-5, 1987. This is the Annual Meeting of the Topical Group on Laser Science of the American Physical Society and is co-sponsored by the American Physical Society and the Optical Society of America. Specific symposium topics include: 1) Lasers and Coherent Sources; 2) Nonlinear Optical Phenomena and Applications; 3) Atomic, Molecular and Ionic Spectroscopy; 4) Condensed Matter, Surface and Particle Spectroscopy; 5) Laser Photophysics, Photochemistry and Photobiology; and 6) Diagnostic and Analytical Applications of Lasers. A pre-registration fee of \$100 for OSA and APS members and \$130 for non-members (\$40 for students) received before October 1, 1987 (\$130 and \$160, respectively) (\$60 for students) thereafter) will be used to defray conference costs. To obtain a copy of the first call for papers and camera-ready abstract form (deadline June 12, 1987), contact: ILS-III, c/o Optical Society of America, 1816 Jefferson Place, N.W., Washington, D.C. 20036, (202) 223-0920. For further information on the conference, contact Lynn V. Borders or William C. Stwalley, Iowa Laser Facility, University of Iowa, Iowa City, Iowa 52242-1294, (phone (319) 335-1299; TWX 910-525-1398; Bitnet BIAWCSPD@UIAMVS).

APS -- Atomic, Molecular & Optical Physics Division Annual Meeting, May 18-20, 1987
HYATT REGENCY CAMBRIDGE, 575 Memorial Drive, Cambridge, MA 02139 (617) 492-1234

Number of Persons	Number of Beds	Rates per Night	Check One
1 Person	1	\$108	☐
2 Persons	1	\$108	☐
2 Persons*	2	\$108	☐
3 Persons	3	\$128	☐

*I would like to share a room with _____
Name _____
or have a roommate assigned _____
Check ☐ male ☐ female ☐ _____
Name _____

Date of Arrival _____
Date of Departure _____
Check In Time: 4 P.M.
Check Out Time: 12 Noon

Name _____
Address _____
City _____ State _____ Zip Code _____
Country _____ Telephone No. _____

Your reservation will be held until 6 P.M. unless accompanied by a deposit. You may also guarantee with a credit card number, expiration date, and signature.

Hold until 6 P.M. only _____
Guaranteed by _____
Check one _____
Signature _____

Deposit of \$ _____
Type of Credit Card _____
Card Number _____
Expiration Date _____

Please mail this form directly to HYATT REGENCY CAMBRIDGE before April 17, 1987.

SMITH, WINTROP W., 50, BA 1958, Amherst College; PhD 1963, M.I.T. Faculty member, University of Connecticut since 1969, presently Professor of Physics. NAS-NRC Postdoctoral fellow at the NBS, Lecturer Univ. of Colorado, 1963-65; Instructor to Assistant Professor, Physics, Columbia University, 1965-69; Fellow, APS. Visiting Fellow, JILA, Univ. of Colorado, 1975-76; Visiting Scientist: Oak Ridge National Laboratory, 1969-75; Univ. of Tennessee, 1972. Los Alamos, 1978-; Lawrence Livermore National Laboratory, 1979; Molecular Physics Laboratory, SRI International, 1982-83; NBS, 1983-84; Consultant: Brookhaven, 1982-85; Los Alamos, 1985-. Visiting Scholar, Stanford, 1982. Program Officer: Atomic, Molecular and Plasma Physics, National Science Foundation, 1983-84. Member, NRC Committee on Atomic and Molecular Science, 1976-79. Chm. Gordon Research Conference on Atomic Physics, 1977. Coordinator, 1980 Workshop on Accelerator-Based Atomic and Molecular Science. Nominating Committee, DEAP, 1977, 1984; Program Committee, 1978; Executive Committee, 1980-83. Atomic collisions, including coherence effects, inner-shell processes, electron and photon emission; lifetimes of excited states; atomic hyperfine structure; accelerator-based atomic physics; laser spectroscopy and photodetachment.

Executive Committee Member:

CELOTTA, ROBERT, 43, BS 1964, City College of New York; PhD 1969, New York University. Physicist at the National Bureau of Standards since 1971, presently Group Leader of the Electron Physics Group of the Radiation Physics Division; Postdoctoral Research Associate, Joint Institute for Laboratory Astrophysics at the University of Colorado, 1969-71; DEAP Program Committee, 1982-83; International Conference on Coherence and Correlation, Organizing Committee Chair, 1981; International Conference on the Physics of Electron and Atomic Collisions, General Committee, 1985-89; Review of Scientific Instruments, Editorial Board, 1982-85; Methods of Experimental Physics, Editor-in-Chief, 1981-. Laser photodetachment, negative ions, electron scattering from atoms, molecules, and surfaces, polarized electron interactions, surface magnetism, and scanning electron and scanning tunneling microscopy.

FREUND, ROBERT S., 48, BA 1960, Wesleyan University; PhD 1965, Harvard University. AT&T Bell Laboratories since 1966; Head, Department of Environmental Chemistry Research, 1976-79; Head, Department of Chemical Kinetics Research, 1979-; DEAP Program Committee, 1974-75; NRC Committee on Atomic and Molecular Sciences (CAMS), 1976-82, Nominating Committee Chairman, 1980; NJ Governor's Science Advisory Committee, 1979-83; Gaseous Electronics Conference Executive Committee, 1983-85; American Chemical Society Division of Physical Chemistry, Alternate Councilor, 1984-; Local Organizing Committee of the 1989 ICPEAC. Electron-molecule collisions; ionization cross sections; high-Rydberg atoms and molecules; molecular spectroscopy; physical chemistry of microelectronics processing.

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