

# APS-AAPT meet in Chicago

Sessions on SQUID's and applications of physics in agriculture, such as microwave transmitters used for animal feeding and identification, will be featured at the joint meeting.

Bruce C. Carr

The highlights of this year's joint annual meeting of The American Physical Society and the American Association of Physics Teachers will be a memorial session for John C. Slater, discussions on trends toward applied physics in physics education and a special symposium on the applications of physics in agriculture. The Societies have chosen the windy city of Chicago as the location for the meeting, which will be held 7-10 February.

The headquarters hotel will be the Palmer House, at the corner of State and Monroe Streets in the downtown area. Persons wishing to register in advance may do so on Sunday, 6 February, from 5:00 to 10:00 pm at the third-floor registration area. Regular registration will begin at 8:30 am on Monday. Registra-

tion fees are as follows: \$15 for APS or AAPT members, \$25 for non-members and \$3 for full-time graduate students. Undergraduates may register at no charge with the Society of Physics Students.

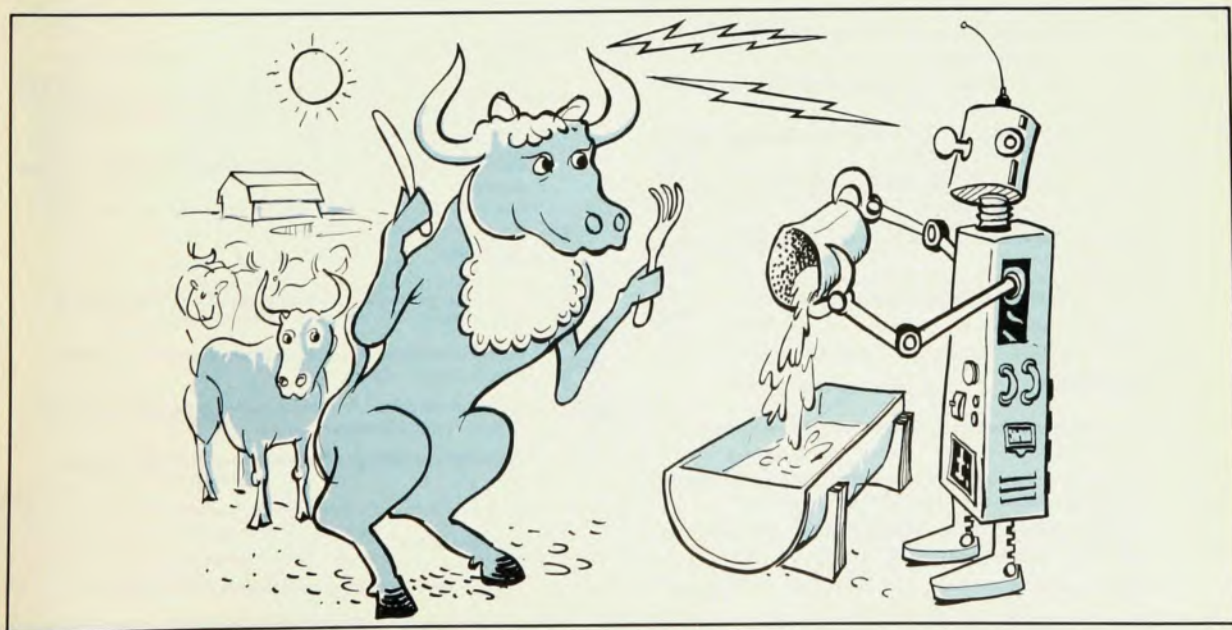
## APS special interest

Included in the APS program of 24 invited-paper sessions and 35 contributed-paper sessions will be two symposia sponsored by the Committee on the Applications of Physics. On Monday, 7 February, Carl E. Nielsen (Ohio State University) will lead off the morning symposium on "Applications of Physics in Agriculture" with his talk on solar ponds. The other speakers in this session will be Dale M. Holm (Los Alamos Scientific Laboratory), Doyle B. Peters

(University of Illinois) and David Pimentel (Cornell University). On Thursday, 10 February, a second symposium on "Applications of Superconducting Quantum Interference Devices (SQUID's)" will be held featuring presentations by John Clarke (University of California, Berkeley), Samuel J. Williamson and Donald B. Sullivan (New York University) and Hans H. Zappe (IBM Watson Research Center).

A memorial session for John C. Slater, a theoretical physicist who died 25 July 1976, will be held on Monday afternoon. Slater's long and productive career will be reviewed by John Van Vleck of Harvard

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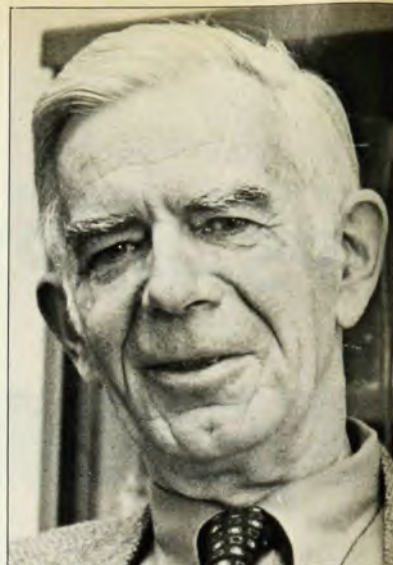




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University. He will be followed by Philip Morse and George Koster, both of MIT, who will describe Slater's work during the period 1930-66. The final speaker will be Per-Olav Löwdin (Uppsala University), speaking on Slater's scientific activities at the University of Florida.

The Forum on Physics and Society has organized a session for Monday evening entitled, "Report from the 94th Congress, Prospects for the 95th." At this session five former Congressional Fellows will relate their experiences in Washington. Haven Whiteside of the Senate Subcom-

mittee on Environmental Pollution is among the speakers scheduled—his topic will be "The Clean Air Act, a Political and Scientific Update."

Among the sessions of special interest are two sessions scheduled for Wednesday afternoon. The Division of Cosmic Physics has arranged a session on "Viking Results and Cosmic Physics" and a session on current topics in nuclear physics will be sponsored by the Division of Nuclear Physics.

The annual business meeting of the APS will be held Monday, 7 February at

11:30 am. The Council will convene on Sunday, the day preceding the joint annual meeting, and all APS members are invited to attend. The Council meeting is expected to run from 9:30 am to 5:30 pm, due to the large amount of business that must be transacted.

#### AAPT special interest

The program of the AAPT includes ten sessions of invited papers, the results of the AAPT apparatus competition, eight commercially sponsored workshops, the annual Film Show and a number of con-

## Invited papers and special events

### MORNING

**Particles and fields:** The new particles (APS) Samios; Felst; Goldhaber; Peoples; Rosner

**Symposium on applications of physics in agriculture** (APS) Nielsen; Holm; Peters; Pimentel

**Electron and atomic physics:** Fundamental atomic physics (APS) Dehmelt; Deslattes; Rich; Canter

**Papers of interest to two-year college teachers** (AAPT) Aldridge; Campbell; Tinker; Hitchingham

**The energy-environment simulator** (AAPT) Bartlett; Krisciunas; Kirkpatrick; Amend

**Ozone and human life** (SPS) Anderson; Cicerone

**Business meeting** (APS)

### AFTERNOON

**Memorial Session for John C. Slater** (APS) Van Vleck; Morse; Koster; Löwdin

**Symposium on trends toward applied physics in physics education** (APS, AAPT) Collins; Stevenson; Symko; Franzen

**Particles and fields:** Hadron interactions (APS) Dunwoodie; Stanton; Bensinger; Yokosawa; Kenney

**Electron and atomic physics:** Collisions of laser-excited atoms

(APS) Pritchard; Szöke; Hessel; Brewer

**Papers of interest to high-school teachers** (AAPT) Fowler; Ellenstein; Hein; Zollman

**Symposium II** (SPS) topic and speakers to be announced

### EVENING

**Symposium of the Forum on Physics and Society:** Report from the 94th Congress, prospects for the 95th (APS) Whiteside; Moss; Hoffman; Hafemeister; Smith

**Getting science to the public** (AAPT) Goldwater; Wheeler; Friedman; Burkhart

### MORNING

**Unified gauge theories and their implications** (APS) Weinberg; Baltay; Lee

**Biological physics:** Non-ionizing radiation applications (APS) Straub; Grodsky; Barrett; Guy

**Solid-state physics:** Frontiers in applied solid-state physics (APS) Scifres; Harris; Brandhorst; Lemons

**Symposium on testing** (AAPT) Finn; Anderson; Angel; Russell

### AFTERNOON

**Symposium III** (SPS) topic and speakers to be announced

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tributed-paper sessions on topics ranging from elementary-school science and intellectual development to apparatus and new courses.

Several events have been scheduled for the day preceding the meeting, Sunday, 6 February. These include a discussion on audio-tutorial methods used at Purdue University, a workshop on applied mathematical physics using the programmable hand calculator and a repeat of the popular workshops on physics teaching and the development of reasoning. These Sunday events require

preregistration with the AAPT.

Other activities organized by the AAPT are also scheduled:

► A session on energy use has been arranged by the Pre-College Committee. The ERDA energy-environment simulator will be described and demonstrated in this Monday morning session and then be available for use the next two days. Albert A. Bartlett (University of Colorado, Boulder) will be the first speaker on the topic of "Exponential Growth in a Finite Environment."

► On Monday afternoon, representatives from major curriculum development projects will present papers on high-school text books. As part of this session, Ernest Burkman (Florida State University), Uri Haber-Schaim (Boston University) and Fletcher Watson (Harvard University) will participate in a panel discussion on high-school physics teaching. Each of the panelists has participated in science curriculum development projects, such as the *Individualized Science Instructional System* (ISIS) and the *Physical Science Study Committee* (PSSC).

► "Getting Science to the Public," a session arranged by the AAPT Committee on Science Education for the General Public will be held Monday evening in a workshop format.

► A rap session with AAPT officers has been scheduled for Monday afternoon at 4:30 pm. The annual business session will take place Thursday at 11:00 am, when Robert Karplus, professor of physics at the University of California,

Berkeley, will be installed as the new president of the AAPT. Distinguished Service Citations will be presented at the business session. The recipients will be Alfred M. Bork (University of California, Irvine), Monica Bainter (University of Wisconsin), Ernest Coleman (University of Minnesota), Walter C. Connally (Appalachian State University), Homer L. Dodge (retired, Mechanicsville, Md.), Haym Kruglak (Western Michigan University) and Joe P. Meyer (Oak Park and River Forest High School, Oak Park, Ill.).

The Society of Physics Students will sponsor a four-part series of invited papers, all under the title of "Ozone and Human Life." Invited-paper speakers and their topics will be announced.

The Chicago section of the AAPT has made arrangements for a visit to the Museum of Science and Industry. Buses will leave the Palmer House at 6:30 pm, Wednesday, and tickets may be purchased (\$1.50 round-trip) at registration for the joint annual meeting.

#### Joint sessions

A Joint APS-AAPT symposium on "Trends Toward Applied Physics in Physics Education" will be held on Monday afternoon. Esther Conwell (Xerox Corp) will preside over this symposium, which has been arranged by the APS Committee on Professional Concerns. The first speaker will be Stewart B. Collins (Cooperative Education Association), who will present a paper entitled, "Cooperative Education and the Physics

Joint ceremonial session (APS, AAPT)

#### EVENING

Cocktail party (no host)

#### MORNING

**Cosmic physics:** Nuclear astrophysics (APS) Clayton; Rolfs; Dearborn; Arnett

**Chemical physics:** Photoconversion of energy by electrical and chemical systems (APS) Albrecht; Cohen; Wrighton

**Particles and fields:** Production of leptons and high-transverse-momentum particles (APS) Cronin; Walker; Ashford; Willis; Pilcher

**Fluid dynamics:** Aerodynamic processes in isotope enrichment (APS) Touryan; Bier; Muntz; Campargue; Davidovits; Fox

**Invited papers of general interest** (AAPT) Tinker; Weems; Eddy; Franklin

#### AFTERNOON

**Cosmic physics:** Viking results and cosmic physics (APS) Soffen; Levin; Mason; Muller

**Chemical physics:** Photoconversion of electricity by biophysical systems (APS) Kaufmann; Katz; Packer

**Particles and fields:** Particle theory (APS) Deser; Bardeen; Mandula; Weis

**Nuclear physics:** Current topics in nuclear physics (APS) Poskanzer; Raman; deVries; Gelbke

**Symposium IV** (SPS) topic and speakers to be announced

#### EVENING

Visit to the Museum of Science and Industry (AAPT)

#### MORNING

**Plasma physics:** Advanced-fusion concepts (APS) Nation; Johnson; Logan; Martin; Miley

**Nuclear physics:** Spectroscopy with nuclear reactions (APS) Baker; Betts; Doering; Rapaport

**Symposium on applications of superconducting quantum interference devices (SQUID's)** (APS) Clarke; Williamson; Sullivan; Zappe

**Computer dialogs at Irvine** (AAPT) Ballard; Morasco; Herman; Bork

**Business session** (AAPT)

#### AFTERNOON

**Plasma physics:** Plasma confinement, stability and heating in toroidal devices (APS) Post; Takahashi; Jahns; Turner

**Nuclear physics:** Medium-energy physics (APS) Amsler; Dover; Eisenstein; Marshak

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Undergraduate." Wolfgang Franzen (Boston University) will discuss an informal survey of MS-degree programs in applied physics, and James R. Stevenson (Georgia Institute of Technology) and Orest Symko (University of Utah) will discuss applied-physics programs at their respective affiliations.

The Ceremonial Session of the two Societies will be held Tuesday afternoon in the Grand-State Ballroom of the Palmer House. Incoming APS president George E. Pake (Xerox Palo Alto Research Center) and AAPT president Kenneth E. Davis (Reed College) will preside.

Opening the session will be retiring APS president William A. Fowler (California Institute of Technology), who will present the Dannie Heineman Prize for Mathematical Physics to Steven Weinberg. Weinberg is Higgins Professor of Physics at Harvard University and senior scientist at the Smithsonian Astrophysical Observatory; he is currently spending a sabbatical leave as visiting professor of physics at Stanford University. The Heineman Prize, which is sponsored by the APS and the American Institute of Physics, will be presented to Weinberg for "his formulation of unified gauge theories of weak and electromagnetic interactions, and his analyses of the role of spontaneous symmetry breaking in such theories. . . ." Following the presentation, Fowler will give his address as retiring APS president.

The rest of the Ceremonial Session will then be devoted to the AAPT. Janet B. Guernsey of Wellesley College will present the Oersted Medal to H. Richard Crane of the University of Michigan. The response of the recipient will follow. The session will close with the 1977 Richtmyer Lecture, sponsored by the AAPT. Michael Tinkham, Gordon McKay Professor of Applied Physics and chairman of the department of physics at Harvard University, will speak on "Superconductivity, Pure and Applied."

### Tourist Chicago

The Palmer House is located near many points of interest in Chicago—the Art Institute of Chicago, Orchestra Hall, the Shubert Theatre and the major downtown shopping center are all within walking distance of the hotel. Between the Palmer House and Lake Michigan is Grant Park, which contains Shedd Aquarium, Adler Planetarium and the Natural History Museum. Information on the various attractions in Chicago may be obtained from the Chicago Convention and Tourism Bureau, 332 South Michigan Avenue, Chicago, Ill. 60604.

### Other events and services

The 25th Annual Physics Show, operated by the American Institute of Physics, will feature an extensive display of scientific instruments, components and



materials, as well as books, periodicals and teaching aids. Some 60 companies will occupy booths in the upper exhibit hall on the fourth floor of the Palmer House. Show hours will be from 10:00 am to 5:00 pm on Monday and Tuesday, and from 10:00 am to 4:00 pm on Wednesday. Show guides will be available at the registration desk.

After the Ceremonial Session a cashbar cocktail party will be held from 5:00 to 7:00 pm. The APS will provide hors d'oeuvres.

A press service will be managed by Audrey Likely of AIP, on behalf of The American Physical Society. The press room will be located in the third-floor dining rooms. Press conferences will be held and physicists from the meeting will be available for interviews with science writers and reporters. News releases will be distributed by the AIP Public Relations Office.

A placement register will be conducted by AIP for the purpose of arranging interviews between physicists seeking employment and prospective employers. The register will be located in the third-floor exhibit hall, adjacent to the registration desks. An AIP Placement Consultant will be available for personal consultation. The register will be open 9:00 am–5:00 pm on Monday, Tuesday and Wednesday and 9:00 am–noon on Thursday.

Representatives of the National Science Foundation will be available Monday through Wednesday, from 9:00 am to 5:00 pm, to provide advice and counsel on NSF programs of interest to Society members. They will also be located in the registration area. Arnold A. Strassenburg, professional associate of the NSF Directorate for Science Education, will be on hand to answer questions concerning NSF education programs. □