

APS-AAPT meet in New York

There will be special sessions on biophysics, nuclear physics, field theory, astrophysics and the social aspects of science as well as celebrations of the fiftieth anniversaries of both AAPT and AIP.

The annual joint meeting of The American Physical Society and The American Association of Physics Teachers will take place on Monday through Thursday, 26-29 January 1981. However on Sunday, 25 January, AAPT will conduct a number of workshops.

The New York Hilton Hotel, 1335 Avenue of the Americas, will serve as the headquarters for the entire meeting. Early registration will be held from 6:00 to 9:00 pm on Sunday at the registration area on the second floor; regular registration hours are scheduled from 9:00 am to 5:00 pm for each of the following four days.

The APS meeting is organized into 24 invited paper sessions and 16 contributed-paper sessions. The total number of contributed papers for this meeting is 205, the smallest number of contributed papers at an Annual Meeting held in New York City since 1948, when there were 187.

Awards

The Ceremonial Session of the two societies will take place in the Sutton Ballroom at 2:00 pm on Tuesday afternoon. The retiring APS president, Herman Feshbach, will present the 1981 Dannie Heineman Prize for Mathematical Physics to Jeffrey Goldstone of MIT and the 1981 LeRoy Apker Award to Richard P. Binzel of Macalester College, St. Paul, Minnesota (see page 81).

Goldstone, professor of physics at MIT, was awarded the Heineman Prize "for his contribution to nuclear physics, condensed matter physics and the quantum field theory, in establishing the first rigorous diagrammatic technique for the many-body problem and

in proving a fundamental theorem on spontaneously broken global symmetry." The award is endowed by the Heineman Foundation for Research, Educational, Charitable and Scientific Purposes, Inc; the award is administered by APS and AIP.

Goldstone earned a BA in 1954 and a PhD in 1958, both from Cambridge University. He was a research fellow of Trinity College, Cambridge from 1956 to 1960, and in 1962 became a staff fellow. From 1961 to 1976 he was a university lecturer in the department of applied mathematics and theoretical physics at Cambridge and in 1976 became reader in mathematical physics. Since 1977 Goldstone has been a professor in the MIT physics department. He is a Fellow of the Royal Society.

After Feshbach delivers his retirement address, his successor, Arthur Schawlow, will turn the session over to the AAPT president, Robert G. Fuller. James B. Gerhart, the past AAPT president, will present the Oersted Medal for excellence in physics teaching to Robert Karplus of the University of California, Berkeley. Karplus will address the gathering with a talk titled "Autonomy and Input." Then Hans Frauenfelder of the University of Illinois, Urbana will deliver the 40th Richtmyer Memorial Lecture, "The Physics of Biomolecules." The evening's ceremonies will be concluded by a no-host cocktail party from 6:00 to 8:00 pm.

Karplus, who is professor of physics at the University of California, Berkeley and associate director of the Lawrence Hall of Science, received his SB (1945), AM (1946) and his PhD in chemical physics (1948) from Harvard University. He served on the Harvard faculty for four years before joining the

Berkeley staff. He has done research in analytical chemistry, infrared spectroscopy, microwave spectroscopy, molecular structure, field theories, magnetohydrodynamics, geomagnetism, elementary education and the development of reasoning.

Frauenfelder received a diploma in 1947 and DrScNat in 1950 from the Swiss Federal Institute of Technology, where he became associate professor in 1952. He remained there another six years and then went to Urbana, where he is now a professor in the physics department. Frauenfelder has worked in nuclear physics and reactions of biomolecules.

The APS/AAPT Committee on the Program for the Annual Meeting has arranged three sessions on the most recent advances in physics: Recent Advances in Cosmic Physics on Wednesday morning will feature Claude R. Canizares (MIT) talking on x-ray spectroscopy with the Einstein Observatory, W. Ku (Columbia University) on x-ray observations of quasars, Virginia Trimble (University of Maryland) on relativistic astrophysics and K. J. Frost (Goddard Space Flight Center) on solar flares and the solar maximum mission. Recent Advances in Nuclear Physics will be described on Wednesday afternoon by Eric Adelberger (University of Washington) on parity violations in nuclear systems, Frank Stephens (Lawrence Berkeley Lab) on high spin states in nuclei, I. Sick (University of Basel) on recent investigations in light nuclei with high-energy electrons and Francesco Iachello (University of Groningen) on dynamical symmetries in nuclei. On Thursday morning the topic will be Light and Life. J. J. Wolken (Carnegie-Mellon

University) will speak on photoprocesses and evolution; H. H. Seligar (Johns Hopkins University) will speak on environmental photobiology; F. Urbach (Temple University School of Medicine) will talk about the effects of sunlight on man, and J. H. Epstein (University of California Medical Center-San Francisco) will talk about photomedicine.

Joint sessions

Several joint APS/AAPT sessions have been arranged for the meeting. On Monday morning is a session on Elementary-School Science Programs with Clifford E. Swartz (State University of New York at Stony Brook) Robert Karplus (Lawrence Hall of Science), Joseph M. Dasbach (AAAS) and Morris Shamos (New York University). Another joint session on Monday morning is a symposium on American physicists and science in developing countries; the speakers are Gordon Hiebert (NSF), M. Anandakrishnan (United Nations), Peter Kennedy (University of Edinburgh), J. William McGowan (University of Western Ontario) and Michael Moravcsik (University of Oregon).

Wednesday morning "Topics in Atomic Physics" will be considered by D. H. Jaacks (Nebraska), D. J. Wine-land (NBS), P. O. Egan (Yale) and B. Muller (J. W. Goethe-Universitat). A



FRAUNFELDER

panel discussion organized by the women and minorities committees of the two societies will take place on Wednesday morning. "Affirmative Action: The Way It Really Works" is the topic for a panel including Herman Feshbach, Arno Penzias (Bell Labs) and Roland Schmitt (GE). Also on the Wednesday morning agenda is a joint symposium titled "Foundations of Fusion Physics." The speakers will be Thomas Stix and Earl Tanner (Prince-



KARPLUS

ton Plasma Physics Laboratory), Nicholas Krall (Jaycor Co.) and Harold Grad (New York University).

Owen Gingerich (Harvard University), Emilio Segré (University of California, Berkeley), Jesse Greenstein (Caltech) and Robert S. Mulliken (University of Chicago) will review the history of spectroscopy at a joint session on Wednesday afternoon. Simultaneously, the APS Forum on Physics and Society and the AAPT will sponsor

Invited Papers and Special Events

Sun

MORNING AND AFTERNOON

Workshop (AAPT) Numerical Procedures in Introductory Physics
Workshop (AAPT) Introductory Pascal
Workshop (AAPT) An Introduction to Microcomputers as Laboratory Instruments
Workshop (AAPT) Developing Student Confidence in Physics

Mon

MORNING

Particles (APS) Recent Developments: Lee-Franzini, Witten, Fairbank
Nuclear Physics (APS) Recent Developments in Theory: Wambach, Strottman, Wildenthal, Davies
Biological Physics (APS) Hearing: From Biophysics to Bionic Ear: Hudspeth, Sachs, Merzenich
Elementary School Science Programs (AAPT, APS): Swartz, Karplus, Dasbach, Shamos
American Physicists and Science in Developing Countries (APS, AAPT): Hiebert, Anandakrishnan, Kennedy, McGowan, Moravcsik

AFTERNOON

Symposium to Honor Andrei Sakharov (APS): Furth, Adler, Bjorken, Chalidze, Yankelevitch
Nuclear Physics (APS) Recent Developments in Nuclear Astrophysics: Bethe, Baym, Norman, Rolfs

Applications (APS) Megagauss Physics: Orbach, Muira, Caird, Erber

Workshop (AAPT) Multiplying Options and Subtracting Biases: Sexism in the Classroom

Symposium (AAPT) New Imaging Techniques—Medical and Space: Kundel, Rubenstein, Ziskin, Carter, Alexander, Long

EVENING

Workshop (AAPT) Numerical Procedures in Introductory Physics I

Workshop (AAPT) Introductory Pascal I

Scientists, Human Rights and the Legislative Process (APS): Brown, Cox, Yarym-Agayev, Gottfried

Tues

MORNING

Symposium (APS) Celebration of 50th Anniversary of AIP: Feshbach, Fuller, Weart, Ramsey, Branscomb

Recent Developments in Quantum Field Theory and its Applications (APS): Shigemitsu, Lowenstein, Eichten, Goldstone

MX Missile (APS): Zeilberg, Welch, Warnke, Fiero, Garwin
Training Graduate Teaching Assistants (AAPT)

Use of Personal Computers in Learning Physics (AAPT)

AFTERNOON

Joint APS-AAPT Ceremonial Session: Feshbach, Gerhart, Karplus, Fraunfelder



GOLDSTONE

a symposium on "Physics in Unusual or Alternative Settings." Gary W. Cariveau (Detroit Institute of Art), Gary A. Baum (Institute of Paper Chemistry), Herbert I. Fushfeld (New York University) and Paul Horwitz (Bolt, Beranek & Newman) are scheduled.

On Thursday morning is a joint session on Perspectives on Communicating Science to the Public. Speakers participating in the panel discussion are to be Walter Sullivan (*New York*

Times), Rae Goodell (MIT) and Eustace Mendis (Ontario Science Centre).

The AAPT also has slated a full agenda of events for the meeting. On Wednesday at 5:00 pm Robert Fuller, retiring president of the AAPT, will preside at an awards sessions in the Beekman Room. Distinguished Service Citations will be awarded to Jean H. Brattin (Shaker Heights High School, Shaker Heights, Ohio), John Cameron (University of Wisconsin,

Madison), Donald F. Kirwan (University of Rhode Island), Lillian C. McDermott (University of Washington), Herbert D. Peckham (Gavilan College, Gilroy, California), Jearl D. Walker (Cleveland State University) and Jack Willis (University of Rhode Island). A "rap session" with society officers will follow immediately afterwards.

The 50th Anniversary Symposium of the AAPT highlights Wednesday's events. In the morning session of the symposium, Jon D. Miller (Northern Illinois University) will speak on "The Scientific Literacy of the American People: A Reinterpretation," A. B. Arons's (University of Washington) talk will be called "Whither Do We Hurry Hence?" and Clifford E. Swartz (State University of New York at Stony Brook) will talk on "Henceward, Ho!" The afternoon session will feature Franklin A. Long (Cornell University) on "Role of Scientists in Development of US Science Policy," Edward M. Purcell (Harvard University) on "New Practical Physics," and Philip Morrison (MIT) on "The New General Physics."

A variety of commercial and committee-sponsored workshops have been scheduled throughout the meeting. Topics include introductory microcomputers, introductory Pascal, numerical procedures in introductory physics, de-

EVENING

Cocktail party: no host

Symposium, Section B, AAAS (APS) Physics Around You: Walker

Wed

MORNING

Cosmic Physics (APS) Recent Advances: Canizares, Ku, Trimble, Frost

Topics in Atomic Physics (APS, AAPT): Jaecks, Wineland, Egan, Muller

Panel Discussion (APS, AAPT) Affirmative Action—The Way it Really Works: Feshbach, Penzias, Schmitt

Plasma Physics (APS, AAPT) Foundations of Fusion Physics: Stix, Tanner, Krall, Grad

Symposium (AAPT) on 50th Anniversary of AAPT: Miller, Arons, Swartz

AFTERNOON

Nuclear Physics (APS) Recent Advances: Adelberger, Stephens, Sick, Iachello

History of Spectroscopy (APS, AAPT): Gingrich, Segre, Greenstein, Mulliken

Particles (APS) New Experimental Results: Kurkin, Kondo, Murtagh, LoSecco

Physics in Unusual or Alternative Settings (APS, AAPT): Cariveau, Baum, Fushfeld, Horwitz

Symposium (AAPT) on 50th Anniversary of AAPT: Long, Purcell, Morrison

Demonstrations and Laboratories in Musical Acoustics (AAPT): Rossing, Benade, Hartmann, Roll

Awards Session (AAPT)

EVENING

Workshop (AAPT) Numerical Procedures in Introductory Physics II

Workshop (AAPT) Introductory Pascal II

Thurs

MORNING

Biological Physics (APS) Light and Life: Wolken, Seligar, Urbach, Epstein

Atomic Processes at High Temperature and Density (APS): Huebner, Rozsnyai, Griem, Yaakobi

Symposium (APS) Ten Years of Energy and Environmental Studies at Princeton: Reynolds, von Hippel, Williams, Fels, Socolow

Panel (AAPT, APS) Perspectives on Communicating Science to the Public: Sullivan, Goodell, Mendis

Multimedia Resource Centers (AAPT): Weinstock, Bork, Dowling, Neie, Zollman, Spears

AFTERNOON

Particles (APS) Strong and Weak Interaction Phenomena in e^+e^- Collisions: Gidal, Sannes, Cabibbo

Panel (AAPT) Starting a Microcomputer Facility: Luehrmann, Ingoldsby, Tinker

veloping student confidence in physics, PET Microcomputer Programs (PASCO), microcomputer interfacing to the physics laboratory (Sargent-Welch), digital electronics (PASCO and E & L) and sexism in the science classroom. For information contact the AAPT Executive Office, Graduate Physics Building, SUNY, Stony Brook, N. Y. 11794.

Other activities organized by the AAPT include:

- Open houses on Sunday for secondary school and two-year college physics teachers at 2:00 pm in Suite 534 and at 7:30 pm in Suite 543, respectively
- The semiannual Apparatus Competition—entries will be on display from 9:00 am to 5:00 pm Monday through Wednesday in the Clinton Suite
- The Film Show—physics and physics-related films will be shown at noon Monday through Wednesday as well as later in the day on Tuesday and Wednesday.

Other events

The 50th Anniversary of the American Institute of Physics will be celebrated with a special symposium on Tuesday morning. The speakers will be Herman Feshbach (MIT), Robert Fuller (University of Nebraska), Spencer Weart (AIP), Norman Ramsey (Harvard University) and Lewis Branscomb (IBM). In addition, AIP will hold an open house on Monday from 4:00 to 7:00 pm at its headquarters building, located at 335 East 45th Street, between 1st and 2nd Avenues, near the United Nations. All APS and AAPT members are invited to attend, visit the facilities and enjoy some wine and cheese.

A physics show featuring the latest in research instruments, apparatus and materials, and a display of scientific books and periodicals, will be located in the Rhinelander Gallery on the second floor. Exhibit hours are 10:00 am to 5:00 pm on Monday and Tuesday, and from 10:00 am to 3:00 pm on Wednesday.

The AIP Placement Center, in Gramercy Suite Room A, will be open from 9:00 am to 5:00 pm on the first three days of the meeting and from 9:00 am to 12:00 noon on Thursday. The primary purpose of the Center is to arrange personal interviews between physicists seeking employment and prospective employers attending the meeting. Those interested should write to the AIP Placement Center, 335 East 45th Street, New York, N. Y. 10017.

The AIP Public Information Division will provide a news room on behalf of the APS, in Suite 524 throughout the meeting. The service will arrange press conferences and interviews with scientists for science writers and reporters; it will also distribute press releases.



Around New York

There is always a multitude of things to do in New York City—even in January. Entertainment, sightseeing, culture and great food are there for the seeking.

For those interested in the theater, TKTS (Times Square Ticket Center) at 47th Street and Broadway sells half-price tickets on the day of the performance of certain Broadway and Off-Broadway shows. Current hits include "Annie," "Barnum," "Children of a Lesser God," "Chorus Line," "Evita," "Home," "Morning's at Seven," "Sugar Babies" and "Your Arms Too Short To Box With God."

A number of museums are in the vicinity of the Hilton. The Museums of Modern Art and of American Folk Art are located on 53rd Street between Fifth Avenue and the Avenue of the Americas. The former is closed on Wednesdays, the latter on Monday. Those willing to venture farther afield may wish to visit the American Museum of Natural History (Central Park West and 79th Street), the Solomon R. Guggenheim Museum (Fifth Avenue and 89th Street), the Metropolitan Museum of Art (Fifth Avenue and 82nd Street) or the Whitney Museum of American Art (Madison Avenue and 75th Street). All but the first are closed on Monday.

Those who decide to walk around the city may wish to visit Rockefeller Center (Fifth Avenue and 49th Street), Radio City Music Hall (Avenue of the Americas and 50th Street), the New York Public Library (Fifth Avenue and 42nd Street), the Empire State Building (Fifth Avenue and 34th Street) or the United Nations (First Avenue and 45th Street).

The New York Convention and Visitors Bureau (2 Columbus Circle, New York, N. Y. 10019) can provide a visitor's guide and map, a restaurant guide or a shopping guide free of charge. They are open every weekday 9:00 am to 6:00 pm; the telephone number is (212) 397-8222.