



Preview: the New York meeting

When APS and AAPT hold their annual meeting this month, the program will include diverse events for the physicist as basic scientist, technologist, teacher, employee and world citizen

Marian S. Rothenberg

Applications of physics and new directions in teaching—these are the emphases in the joint meeting of The American Physical Society and the American Association of Physics Teachers. The four-day meeting, which takes place from Monday 29 January through Thursday 1 February in New York, will include APS sessions on air quality, transistors (organized with the Society of Physics Students), laser fusion, air-sea interactions, nuclear physics in medicine, technological perspectives for solid-state physics, applications of solid-state physics, and liquid crystals; AAPT has scheduled sessions on computers in physics teaching, multimedia teaching, new programs for two-year colleges, critiques of and improvements on the Keller plan, and outstanding new programs in secondary schools. And the two societies are jointly sponsoring a discussion of those parts of the “Bromley report” (the report of the National Academy of Sciences Physics Survey Committee) that deal with general education, as well as a session on nonprofessional courses that relate physics and society.

The APS program, organized by Ex-

ecutive Secretary William W. Havens and the Division program chairmen, includes 737 contributed and 115 invited papers, organized into 52 sessions. The number of contributed papers is down somewhat from the high of 831 last year in San Francisco and 777 two years ago in New York. AAPT, whose program chairman is Sherwood Haynes (Michigan State University), has scheduled 55 invited and 91 contributed papers, divided into 21 sessions. The New York Hilton is the headquarters hotel, but some of the APS contributed-paper sessions and most of the SPS sessions, as well as the American Institute of Physics Placement Bureau, will be located a few blocks away at the New York Sheraton.

Schedule for APS

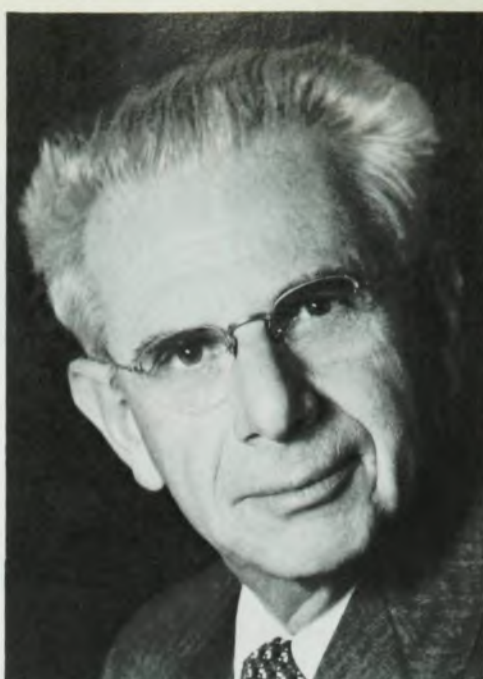
All APS divisions, with the exception of High Polymers, have organized technical programs, and several of the divisions will offer general interest sessions—in addition to the applied-physics symposia we have already noted. A general session has been arranged for Tuesday morning by APS as a whole: Peter Parker (Yale University) will talk on neutrino astronomy, H. William Koch, Director of AIP, will describe “The Communication Revolu-

tion in Physics,” and Kenneth G. Wilson (Cornell University), winner of the Heineman Prize, will talk on “Fluctuations, Renormalization and Scaling.”

The Forum on Physics and Society of APS has organized four sessions. The first of these, scheduled for Tuesday morning and jointly sponsored by AAPT, is called “People’s Physics—Nonprofessional Courses Relating Physics and Society.” Two of the four speakers will present “review” talks: John M. Fowler (University of Maryland) on environment courses and Martin Brown (University of California, Berkeley) on science-and-society courses. Christoph Hohenemser (Clark University) will describe his own course in his talk “Toward a Comprehensive Liberal Arts Program on Technology and Man,” and Alfred Z. Hendel (University of Michigan) will describe his program of “Physics for Nonpoets.”

Tuesday evening, the Forum is presenting three scientists who have recently visited China: C. N. Yang (Stony Brook), Marvin Goldberger (Princeton) and Arthur Galston (a biologist at Yale). Home movies will be a special feature of Yang’s presentation. The freedom of Soviet scientists will be the topic of a Wednesday-

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Receiving honors at this year's APS-AAPT meeting are (left to right) Kenneth G. Wilson, Arnold B. Arons and Michael E. Fisher. Wilson, who has won the AIP-APS Heineman Prize for Mathematical Physics, received his PhD from Cal Tech in 1961 and is now professor in the Laboratory of Nuclear Studies at Cornell University. He is being cited for his work in two areas: the implications of broken scale variance in quantum field theory and the scaling behavior of critical phenomena in statistical mechanics. Arons,

professor of physics at the University of Washington, Seattle, and winner of the AAPT Oersted Medal, is an oceanographer who has been actively interested in training elementary-school and high-school science teachers. He is a former president of AAPT. Fisher is to be the AAPT Richtmyer Lecturer. A theorist who is professor of chemistry at Cornell, Fisher's speciality is critical phenomena, and the subject of his lecture, to be given on Tuesday afternoon, will be "Critical Points and Their Exponents."

morning panel discussion, presided over by Fred Pollak (Brown University, now on sabbatical leave at Yeshiva University). Participants will be William Korey of Brooklyn College, whose speciality is Soviet affairs and human rights, Jack Cohen, biophysicist at the National Institutes of Health, who corresponds regularly with many Soviet scientists and has very recently been to Russia, and Philip Morse, president of APS.

The fourth Forum event is a "town meeting" on Thursday morning. Three invited speakers will present views on professionalism and the employment of physicists: Jack Golodner, Executive Secretary of the Council of AFL-CIO Unions for Scientific, Professional and Cultural Employees, David Wetstone (United Aircraft Research Laboratories) who belongs to both APS and the American Chemical Society and will compare the two societies, and Ronald Aaron (Northeastern University), who has surveyed the problems of tenure and the assistant professor in his own state, Massachusetts. After the speakers have finished, members of the audience will be able to read prepared five-minute statements, and an open discussion will follow. Minutes of the meeting will be circulated as a Forum Newsletter and presented to the APS Council for their consideration.

AAPT features

Highlights of the AAPT program include a Monday-morning presentation

on "The Computer in Physics Teaching—A Panorama of Uses." A dozen or so teachers will report briefly on their experiences with computer-assisted instruction, and more detailed printed reports will be available as well. A film workshop, sponsored by the Committee on Visual Aids and the University of Nebraska "Film Loop Instructional Course in Physics" (FLIC) will be held Monday evening. At a Tuesday morning session, organized partly by the Committee on Apparatus, teachers can learn—among other things—how to get US Government surplus property for their classrooms. The Wednesday-morning AAPT schedule features a session on "High-school-physics-for-everybody" courses as well as the session on "Keller and Beyond." On Thursday morning, John W. Renner will speak on "The Capacity of College Freshmen for Logical Thought."

"Opportunities and Challenges in Physics-related Fields" will be the topic of a symposium organized jointly by SPS, AAPT and APS for Monday morning. Raymond Sears, Director of AIP's Manpower Division, Herbert Wiser of the US Environmental Protection Agency, John Hale of the Hospital of the University of Pennsylvania, Gerard Volland, an anthropologist at the University of California, Los Angeles, and Arnold Strassenburg, Director of the AIP Education Division will be the speakers. SPS will hold an all-day symposium on Wednesday at the Manhattan Suite of the New York

Sheraton; a featured speaker will be J. Robert Schrieffer. Schrieffer, who shared this year's Nobel Prize in physics for his part in "BCS" theory, will start off the afternoon portion of the symposium with a 2 p.m. talk on how the theory came to exist.

The future of The American Physical Society will be the topic of a panel discussion at which James Krumhansl (Cornell) will preside. Krumhansl, head of the Council Committee on the Future of APS, will be accompanied at this Wednesday afternoon session by Seymour Koenig (IBM), Ronald Geballe (University of Washington) and D. Allan Bromley (Yale). The Maria Goeppert Mayer memorial symposium, honoring the Nobel Prize winning nuclear physicist who died last February, will be concurrent with this panel discussion. Robert Sachs (University of Chicago), Eugene Wigner (Princeton), Elizabeth Baranger (MIT) and David Inglis (University of Massachusetts) will speak.

The Joint Ceremonial Session of AAPT and APS is to be held Tuesday afternoon. Joseph Mayer, incoming APS president, will preside over the first part of the program, during which Philip Morse, this past year's president, will speak. Kenneth Ford, head of AAPT, will preside over the remainder of the program: the presentation of the Oersted Medal by Bailey Donnelly to Arnold Arons of the University of Michigan; Arons's response, and the 1973 Richtmyer Lecture, delivered by Michael Fisher of Cornell. Fisher will

Invited papers

Monday A. M.

- AAPT, APS, SPS Opportunities and challenges in physics-related fields
R. W. Sears, H. G. Wiser, J. Hale, G. S. Volland, A. A. Strassenburg
- APS General interest: Physical science in air quality
S. M. Greenfield, L. B. Kreuzer, R. Weinstock, R. J. H. Voorhoeve
- Chemical physics; Electron and atomic physics:** Tunable lasers in chemistry and physics I
K. W. Nill, S. Harris, C. B. Moore
- Nuclear physics:** High resolution and accurate energy measurements in nuclear physics
G. G. Slaughter, H. G. Blosser, R. G. Helmer, C. P. Browne
- Plasma physics:** General interest
R. Sudan, H. Furth, G. Van Hoven, C. Kennel
- AAPT The computer in physics teaching
R. Ballard, A. Bork, J. R. Brandenberger, A. C. Caggiano, R. J. Goll, T. Kelley, W. Lang, A. Luehrmann, J. R. Merrill, H. Peckham, G. Schwarz, J. M. Shore

Monday P. M.

- APS, SPS Twenty-five years of transistors
J. Bardeen, M. Sparks, C. L. Hogan
- APS **Chemical physics; Electron and atomic physics:** Tunable lasers in chemistry and physics II
K. R. Wilson, C. Lineberger, R. N. Zare
- Nuclear physics:** Tandem Van de Graaff research
G. C. Morrison, J. C. Hardy, A. W. Sunyar, M. Blann
- Plasma physics:** Controlled thermonuclear fusion with lasers
M. Lubin, M. Rosenbluth, R. S. Cooper, J. L. Emmett, J. H. Nuckolls
- Particles and fields:** General interest
R. B. Sutton, G. Steigman, L. W. Jones, G. Yost
- AAPT Audiovisual
R. McKinney and J. Muster, R. G. Fuller and D. L. Albers
- Visual aids:** Monday night with the FLIC's (7:30)
P. Miller Jr, D. I. Boling, E. Zebrowski

Tuesday A. M.

- APS, AAPT **Forum on Physics and Society, AAPT**
 People's physics
J. M. Fowler, C. Hohenemser, A. Z. Hendel, M. Brown
- APS General interest
P. D. Parker, H. W. Koch, K. G. Wilson
- Nuclear physics:** Nuclear chronology
F. Dyson, G. Wasserburg, H. Suess, V. Suomi
- Fluid dynamics:** Air-sea interactions
E. Y. Hsu, O. M. Phillips, E. L. Mollo-Christensen
- AAPT Physics in the two-year colleges
P. DiLavore, L. Fibel, F. J. Rutherford, R. Blum, W. R. Lawrence, J. P. Melhorn

Tuesday P. M.

- AAPT Joint ceremonial session
 APS *P. M. Morse, B. Donnally, A. Arons, M. E. Fisher*
- APS **Forum on Physics and Society:** Physics in China—Evening session
C. N. Yang, M. Goldberger, A. Galston

Wednesday A. M.

- AAPT, APS The National Academy of Sciences reports on public education in physics and physics education for the nonscience student
G. T. Reynolds, E. C. Sherburne, R. Geballe, F. Watson
- APS **Forum on physics and society:** Freedom of Soviet scientists
W. Korey, J. Cohen, P. Morse
- Nuclear physics:** Nuclear physics in medicine
M. L. M. Boone, P. R. Almond, H. L. Atkins, G. A. Cowan, C. A. Mistretta
- Particles and fields:** High-energy neutrino experiments
P. Musset, P. A. Schreiner, E. A. Paschos
- AAPT High-school physics for everybody
D. C. McGuire, J. Reid, E. Lalor

Wednesday P. M.

- APS **Solid state:** Technological perspectives of solid-state physics
S. J. Buchsbaum, R. Landauer, W. D. Compton
- Future of The American Physical Society
J. A. Krumhansl, S. Koenig, R. Geballe, D. A. Bromley
- Maria Goeppert-Mayer memorial session
R. G. Sachs, E. Wigner, E. U. Baranger, D. Inglis
- Particles and fields:** Unified gauge theories of weak and electromagnetic interactions
S. Weinberg, B. W. Lee, S. L. Glashow
- AAPT **Keller and beyond**
J. Kovacs, D. L. Rutledge, P. Signell, T. H. Keil, L. Harrisberger
- APS Business meeting (4:30)
- AAPT, APS Joint banquet (7:30)
R. Revell

Thursday A. M.

- APS **Forum on physics and society:** "Town meeting" on professionalism and employment of physicists
J. Golodner, D. M. Wetstone, R. Aaron
- Solid state:** Selected applications of solid-state physics
J. C. Slonczewski, A. Bobeck, N. Holonyak, J. Mort
- Cosmic physics:** The physics of Galactic x-ray sources
J. N. Bahcall, R. Giacconi, R. Ruffini, I. Novikov
- Particles and fields:** Recent experiments
D. I. Sober, M. A. Abolins, G. Feldman, L. DiLella
- AAPT General interest session
D. Aubrecht, J. W. Renner
- Business meeting (11:30)

Thursday P. M.

- AAPT, APS **AAPT; APS Electron and atomic physics:** Directions in atomic physics
V. J. Ehlers, L. D. Scheerer, H. Metcalf
- APS **Solid state:** Liquid crystals
T. C. Lubensky, R. B. Meyer, P. A. Penz, F. J. Kahn
- Cosmic physics:** Recent advances in astrophysics
J. D. Kurfess, M. M. Shapiro, G. R. Carruthers, D. P. McNutt
- Particles and fields:** Physics at the National Accelerator Laboratory
E. L. Goldwasser, V. Nikitin, R. Engelmann

Physics outside the Hilton

At even the very best of meetings, an occasional registrant finds a few spare hours, when none of the scheduled sessions has a strong appeal. Why not use this time to visit a nearby physics department?

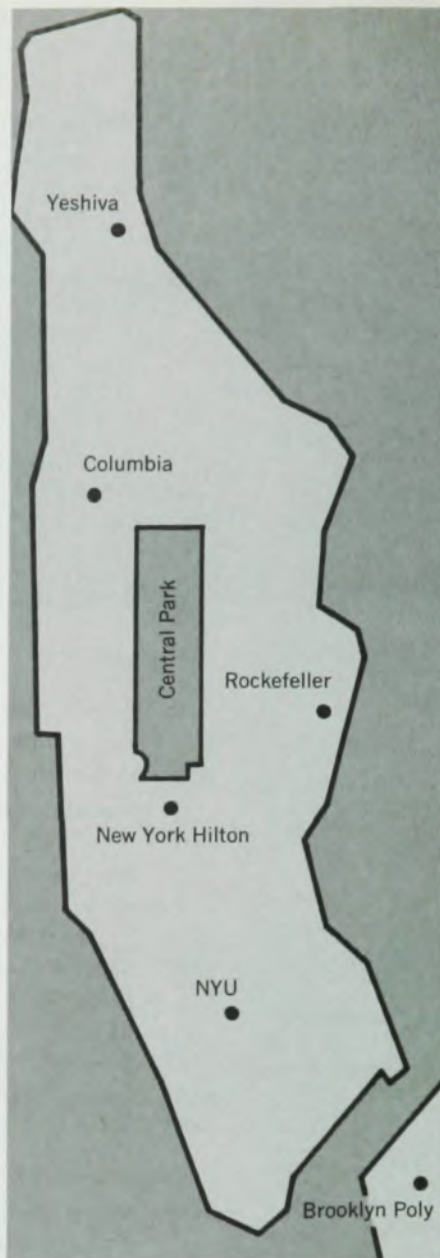
In an informal survey of local physics chairmen (local being within one half hour or so of the Hilton), **PHYSICS TODAY** found that at least five of the departments have members who would welcome visitors. Here is a list of these departments, in geographic order from north to south, with nearest subway stations:

Yeshiva University Belfer Graduate School of Science—186th St and Amsterdam Ave (181st St on the Broadway-7th Ave line): Joel Lebowitz (statistical mechanics) Paul Raccah (solid state, particularly amorphous materials) and Jonathan Wachtel (relativistic plasma physics) will welcome visitors.

Columbia University—Pupin Hall, 116th St and Broadway (116th St on the Broadway-7th Ave line): The Radiation Laboratory (Sven Hartmann), the Low Energy Physics Laboratory (C. S. Wu) and the Astrophysics Laboratory (Robert Novick) will welcome visitors. Chairman Henry Foley suggests that anyone planning a visit should telephone (212-280-3366) or write ahead.

Rockefeller University—York Ave and 66th St (66th St crosstown bus to York Ave): When they are not themselves attending sessions, Rodney Cool, Michael Tannenbaum, Konstantin Goulianos and Orrin Fackler would be pleased to show visitors around. When they are unavailable the chief technician, Edward Morrow, will look after visitors.

New York University—Meyer Hall, 4 Washington Place (8th St on the BMT; Astor Place on the Lexington Ave line; West 4th St on the IND): Those laboratories welcoming visitors are Atomic Beams and Plasmas (Benjamin Beder-son), Radiation and Solid State (Werner Brandt), Radiation and Spectroscopy (Henry Stroke), Low Temperature Physics (S. J. Williamson), Magnetic Resonance (Leonard Yarmus). Visitors should come first to 424 Meyer Hall.



Polytechnic Institute of Brooklyn—just over the bridge in downtown Brooklyn, with physics in the Nichols Building (Jay St-Borough Hall on the IND; Borough Hall on the IRT; Court St on the BMT): The X-ray (Benjamin Post) and Thin Films (Hubert Schleuning) Laboratories will welcome visitors.

talk on "Critical Points and Their Exponents." At the Wednesday-night joint banquet, Kenneth Wilson will be presented with the APS-AIP Heine- man Prize for distinguished work in mathematical physics. The afterdinner speaker will be Roger Revelle, director of the Harvard Center for Population Studies, who will consider the question "How Can Physicists Find Happiness in the World of Tomorrow?" The AAPT Distinguished Service Awards will be presented to Forrest Boley (Dartmouth), Clifford Schwarz (Stony Brook), Guy Forman (University of Southern Florida) and F. E. Christensen (St. Olaf's College) at the AAPT business meeting.

Although the joint meeting officially begins on Monday, the APS Council will meet from 9:30 a.m. and on through the day on Sunday 28 January, and members are welcome to attend. The APS business meeting is scheduled for Monday at 5, and that of AAPT for Thursday at 10:30. The Forum on Physics and Society will have a business meeting at 11:30 a.m. Wednesday at which all APS members will be welcome, and the Division of Particles and Fields will hold its business meeting Wednesday afternoon, after the Division's symposium. The APS Committee on the Status of Women will meet informally on Tuesday, after the ceremonial session, and all interested persons are invited.

AIP services

Throughout the meeting, AIP staff will provide a variety of services. Emily Wolf, Director of Society Services, is the meeting manager. The pressroom will be managed by Audrey Armstrong, Director of Press Relations for AIP. Here "lay-language" abstracts of selected papers, written by the authors, will be distributed, as will general news of the meeting. Science writers will also be able to interview authors of particularly newsworthy papers.

At the 21st Annual Physics Show, located on the mezzanine floor of the Hilton, a wide variety of research equipment (calculators, computers, cryogenic components...), as well as books and teaching aids, will be featured. The show, organized by Edward Greeley of the AIP advertising staff, will be open for three days, from Monday through Wednesday, 9 a.m. to 6 p.m.

The AIP Manpower Division will run a placement register, headed by Margot Breslaw. This year the register, whose function is to arrange interviews between job-seeking physicists and prospective employers, will be located in the Forum Room of the New York Sheraton and will be open from 9 a.m. to 5 p.m. Monday through Wednesday and from 9 to 12 Thursday.



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