

## CALENDAR

Information in the calendar is compiled from a file maintained in the PHYSICS TODAY office. Readers are invited to write or telephone for information beyond what we print. The date at the end of each item refers to the issue of PHYSICS TODAY in which the item is listed with more detail than appears in subsequent issues.

**ABBREVIATIONS:** APS, American Physical Society; OSA, Optical Society of America; ASA, Acoustical Society of America; S of R, Society of Rheology; AAPT, American Association of Physics Teachers; ACA, American Crystallographic Association; AAS, American Astronomical Society; AEC, US Atomic Energy Commission; AFCRL, Air Force Cambridge Research Laboratories; IAEA, International Atomic Energy Agency; IEEE, Institute of Electrical and Electronics Engineers; IPPS, The Institute of Physics and The Physical Society; IUPAP, International Union of Pure and Applied Physics; NBS, National Bureau of Standards; ORNL, Oak Ridge National Laboratory.

CODING of each item is as follows: date subject ☐ HOST ☐  
Location (Contact) [submission deadline] PT ref.

• new listing ♦ new information

### JANUARY 1968

- 3-6 Solid-State Physics ☐ IPPS ☐  
Manchester, England (Meetings  
Officer, IPPS) [10/27] 8/67

- 17, 18 ♦ Holography ☐ IPPS ☐ Teddington, England (Meetings Officer, IPPS, 47 Belgrave Sq., London, SW1, England) 1/68

Principles of holography and its applications as a scientific tool will be described.

- 22-26 ♦ Marine Sciences Instrumentation ☐ INSTRUMENT SOCIETY OF AMERICA ☐ Cocoa Beach, Fla. (M. Reed, Instrument Society of America, 530 William Penn Place, Pittsburgh, Pa. 15219) 1/68

This short course will emphasize descriptions of instruments used in dynamic measurements in ocean sciences.

- 24, 25 Health Physics ☐ HEALTH PHYSICS SOCIETY ☐ Augusta, Ga. (J. H. Horton) [10/16] 8/67

- 29-31 Laser Safety ☐ US PUBLIC HEALTH SERVICE-CHILDREN'S HOSPITAL RESEARCH FOUNDATION ☐ Cincinnati, Ohio (Mrs. M. S. Runck) 10/67

- 29-31 Photosensitization in Solids ☐ AFCRL ☐ Tucson, Ariz. (N. F. Yannoni) 10/67

- 29-1 ☐ APS ☐ Chicago (R. G. Sachs) 12/66

- 29-1 ☐ AAPT ☐ Chicago (S. S. Ballard) 2/67

- 29-2 Measurement Engineering ☐ ARIZONA STATE U. ☐ Tempe, Ariz. (P. Stein) [1/19] 10/67

### FEBRUARY 1968

- 1, 2 Spectroscopy ☐ WESTERN SPECTROSCOPY ASSOCIATION ☐ Asilomar, Calif. (H. Brown) 12/67

- 1-3 Solar Astronomy ☐ AAAS ☐ Tucson, Arizona (N. Sheeley) [12/7] 9/67

- 4-7 ☐ ACA ☐ Tucson, Ariz. (D. H. Templeton) 9/67

- 5-7 ☐ S of R ☐ San Diego, Calif. (J. F. Johnson) 9/67

- 6 ♦ Philosophy of Science ☐ BOSTON U. ☐ Boston (R. S. Cohen, Physics Dept., Boston U., Boston, Mass. 02215) 1/68

Topic: Euler and Kant-Concept formation in science and metaphysics.

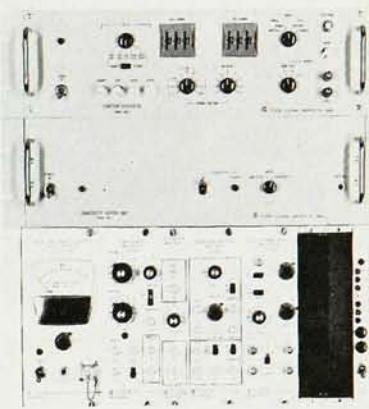
- 13 ♦ Philosophy of Science ☐ BOSTON U. ☐ Boston (R. S. Cohen, Physics Dept., Boston U., Boston, Mass. 02215) 1/68

Topic: Statistical mechanics as a deductive science.

- 14-16 Solid State Circuits ☐ IEEE ☐

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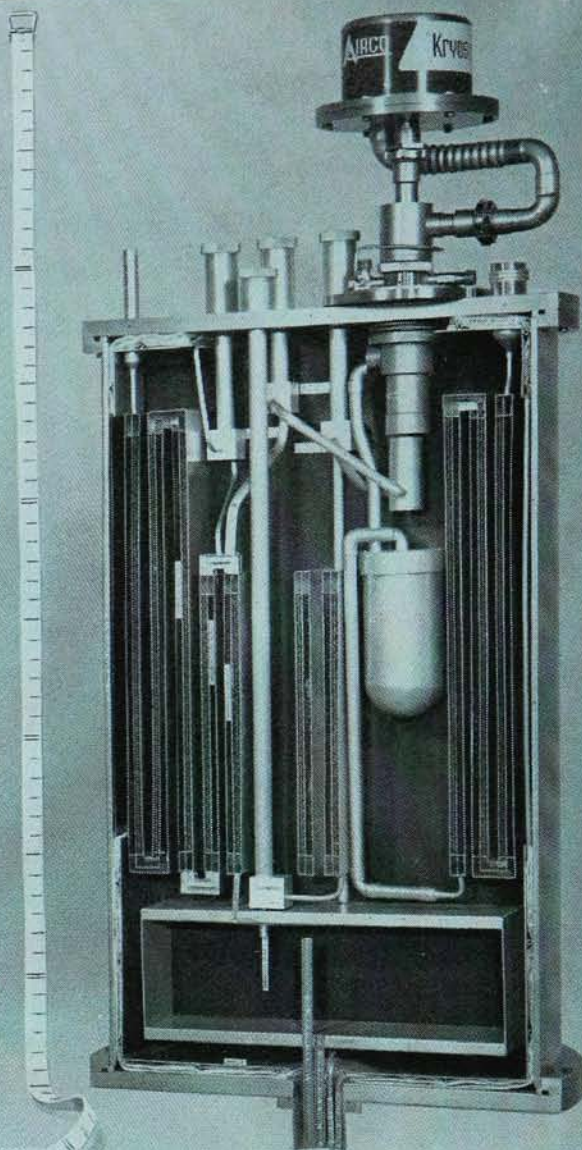


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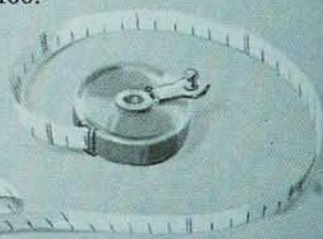
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- U. of Pennsylvania, Philadelphia (R. Webster) [10/23] 10/67
- 19-21 • **Biophysics** □ BIOPHYSICAL SOCIETY □ Pittsburgh (H. C. Mel, Donner Laboratory, U. of California, Berkeley, Calif. 94720) [12/1] 1/68

A placement service will be held at the twelfth annual meeting of the biophysics society.

- 23, 24 **Nuclear Conference** □ U. OF SASKATCHEWAN □ Regina, Saskatchewan, Canada (Physics Dept., U. of Saskatchewan) 11/67
- 26, 27 **Gas Phase Molecular Structure** □ U. OF TEXAS □ Austin, Tex. (H. P. Hanson) [12/15] 11/67
- 26-28 □ APS □ Boston (W. W. Havens Jr.) 9/67
- 26-29 **Elementary Particles** □ INSTITUT FÜR THEORETISCHE PHYSIK DER UNIVERSITÄT GRAZ □ Schladming, Styria, Austria (H. Kühnelt) 10/67
- 26-1 **Lasers and Their Engineering Applications** □ U. OF CALIFORNIA EXTENSION □ Berkeley, Calif. (Head, University extension) 10/67
- 28-1 **Scintillation and Semiconductor Counters** □ AEC-IEEE □ Washington, D. C. (G. A. Morton) [11/7] 8/67

### MARCH 1968

- 4-7 **Neutron Cross Section and Technology** □ APS-AEC-NBS □ Washington, D. C. (D. T. Goldman) [12/1] 8/67
- 5-8 **Nuclear Electronics and Radioprotection** □ CENTRE DE PHYSIQUE ATOMIQUE ET NUCLÉAIRE DE LA FACULTÉ DES SCIENCES □ Toulouse, France (Faculté des Science) [10/15] 10/67
- 13-15 • **Electronics and Light** □ ROCHESTER INSTITUTE OF TECHNOLOGY □ Rochester, N. Y. (A. R. Maurice, Extended Services Division, Rochester Institute of Technology, PO Box 3416, Rochester, N. Y. 14 614) [11/22] 1/68

Topics include optical-electronic packing, solar cell and optical-semiconductor packing, thermal shock problems in packaging, optical techniques in high-density interconnection, laser interconnection techniques.

- 13-15 • **Radiation Therapy** □ MEMORIAL SLOAN-KETTERING CANCER CENTER □ New York (R. Phillips, Memorial Sloan-Kettering Cancer Center, 444 E. 68 St., New York, N. Y. 10021) (by invitation) 1/68

- 13-16 ♦ □ OSA □ Wash., D. C. (M. E. Waga, OSA, 2100 Pennsylvania Ave., Wash., D. C. 20037) [12/15] 1/68

Topics: statistical properties of light, nonlinear interactions with short laser pulses, bioluminescence, spectrometric photometry, retinal image motion, magneto-optics, far infrared sources, holography.

- 18-20 **Physical Electronics** □ APS □ U.

of Minnesota, Minneapolis (W. T. Peria) 12/67

- 18-21 **High-Polymer Physics** □ APS □ Berkeley, Calif. (H. D. Keith) [12/26] 12/67
- 19, 20 **Ocean Sciences and Engineering of the Atlantic Shelf Philadelphia, Pa.** (T. Evans) [11/1] 12/67
- 21-23 **Microwave Power** □ INTERNATIONAL MICROWAVE POWER INSTITUTE □ Boston (1968 Symposium on Microwave Power) [1/1] 12/67
- 25-28 **Organic Solid State Chemistry** □ BROOKHAVEN NATIONAL LABORATORY □ (G. Adler) 12/67
- 28-30 **Low Luminosity Stars** □ NATIONAL SCIENCE FOUNDATION-AAS □ U. of Virginia, Charlottesville, Va. (S. Kumar) 10/67
- 29, 30 • **Theoretical Physics** □ U. OF MICHIGAN □ Ann Arbor (D. Humphrey, 2065 Randall Lab., U. of Michigan, Ann Arbor, Michigan 48104) 1/68

### APRIL 1968

- 1-3 **Heavy Particle Collisions** □ IPPS □ Belfast, Ireland (Meetings Officer, IPPS) [9/29] 9/67
- 1-5 • **Radiation Effects on Cells** □ IAEA □ Monaco (M. Schulman, Division of Life Sciences, IAEA, Kaerntner Ring 11, 1010 Vienna, Austria) [11/15] 1/68

Topics include mechanisms of control of cellular proliferation and differentiation at the molecular level, mechanisms of repair and recovery at the molecular and cellular level, cell renewal systems.

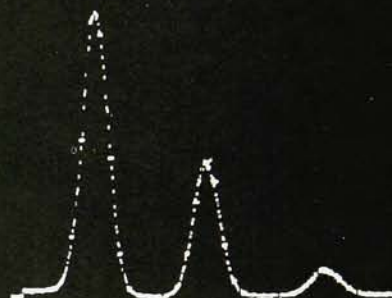
- 2, 3 **Semimetals and Narrow Gap Semiconductors** □ IPPS □ Durham, England (Meetings Officer, IPPS) [1/5] 9/67
- 2-4 □ AAS □ Charlottesville, Va. (P. M. Routly) 9/67
- 3-5 **Magnetics** □ IEEE □ Washington, D. C. (J. M. Lommel) [12/15] 9/67
- 3-5 **Engineering Aspects of Magneto-hydrodynamics** □ U. OF TENNESSEE SPACE INSTITUTE □ Tullahoma, Tenn. (L. E. Ring) [11/27] 11/67
- 5, 6 • **High-Energy Physics** □ APS-NEW ENGLAND SECTION □ Tufts U., Medford, Mass. (J. J. Quinn, Physics Dept., Brown U., Providence, R. I. 02912)
- 8-19 • **Helium** □ AMERICAN U. OF BEIRUT □ Beirut, Lebanon (C. le Pair, Beirut Spring School on Helium, Physics Dept., American U. of Beirut, Beirut Lebanon) 1/68

This spring school will discuss theory of mixtures and experimental work on  $He^3$ - $He^4$ , theory of superfluid He, theory of vortices and rotating He II.

- 17-19 • **Electronics and Electrical Engineering** □ IEEE □ (J. V. Leeds, M.L. 106-SWIEECO, Rice U., Houston, Tex. 77001) [11/1] 1/68

The twentieth annual meeting of the Southwestern Conference of the IEEE will cover new

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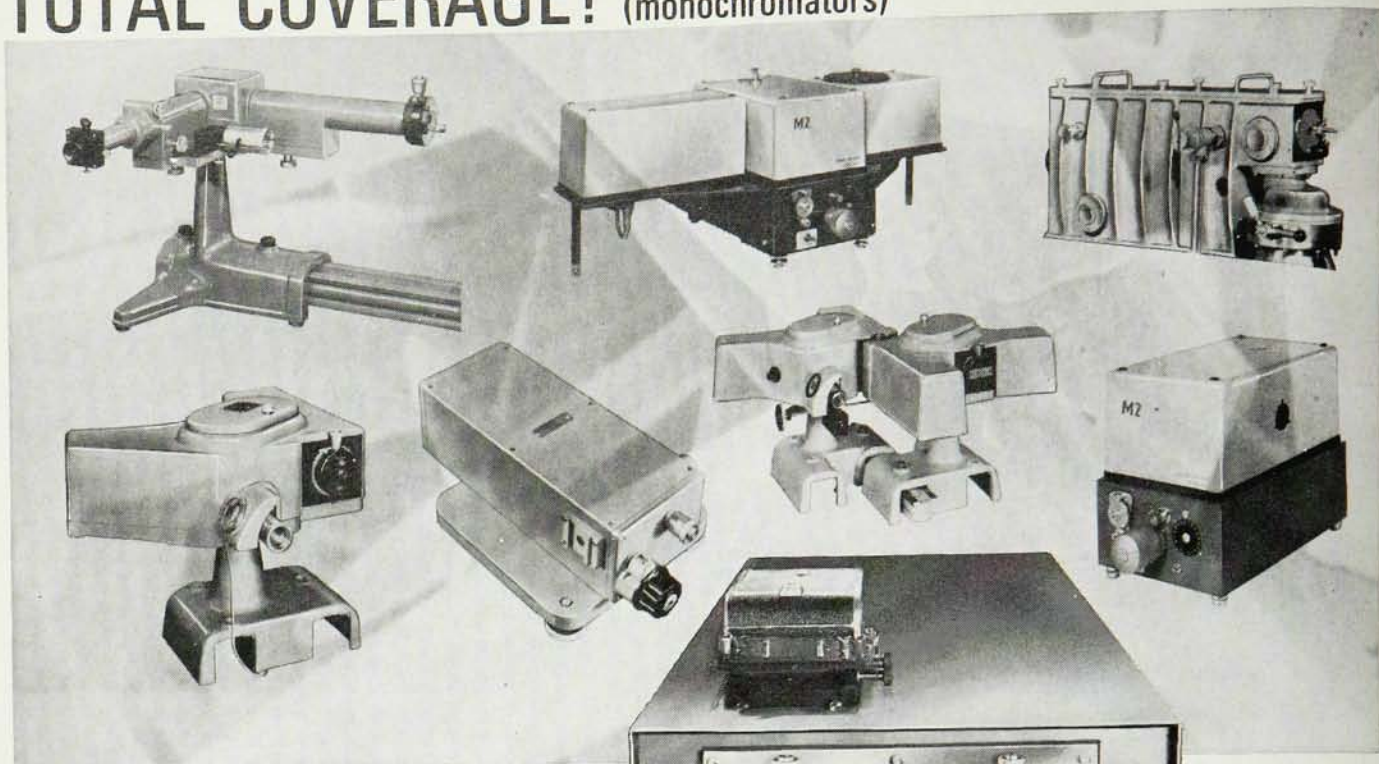
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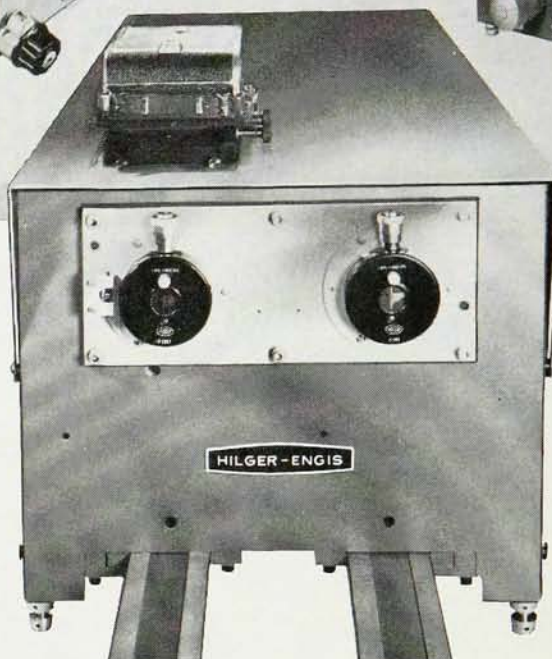
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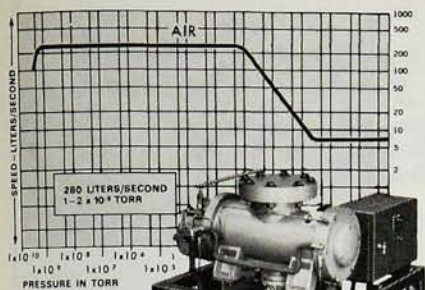
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APRIL 1968

results in electrical engineering, geophysics, bio-engineering, optics, etc.

- 17-19 Structure Analysis ☐ IPPS ☐ U. of York; York, England (*Meetings Officer IPPS*) [1/5] 10/67
- 19, 20 • ☐ AAPT-CENTRAL PENNSYLVANIA SECTION ☐ U. of Delaware, Newark (*C. B. Cooper, Physics Dept., U. of Delaware, Newark, Del. 19711*) 1/68
- 22-24 Thin Films ☐ IPPS ☐ U. of Southampton, England (*Meetings Officer, IPPS*) [1/19] 10/67
- 22-24 Frequency Control ☐ US ARMY ELECTRONICS COMMAND ☐ Atlantic City, N. J. (*M. F. Timm*) [12/15] 10/67
- 22-25 ☐ APS ☐ Washington, D. C. (*W. W. Havens Jr*) 9/67

MAY 1968

- 1-3 Vacuum Science and Technology ☐ AMERICAN VACUUM SOCIETY ☐ Los Angeles (*G. R. Neff*) [12/1] 12/67
  - 5-9 Optical and Microwave Lasers ☐ ELECTROCHEMICAL SOCIETY ☐ Boston (*Electrochemical Society*) 12/67
  - 8-10 Electronic Components ☐ IEEE-ELECTRONIC INDUSTRIES ASSOCIATION ☐ Wash., D. C. (*F. M. Collins*) [10/10] 10/67
  - 8-11 Technical Communications ☐ SOCIETY OF TECHNICAL WRITERS AND PUBLISHERS ☐ Los Angeles (*B. P. Sauer*) 11/67
  - 12-18 Universal Aspects of Atmospheric Electricity ☐ AFCRL ☐ Tokyo (*Capt. J. H. Shock*) 10/67
  - 13-17 Applied Spectroscopy ☐ SOCIETY FOR APPLIED SPECTROSCOPY ☐ Chicago (*E. Lanterman*) [1/15] 10/67
  - 14 Philosophy of Science ☐ BOSTON U. ☐ Boston (*R. S. Cohen*) 12/67
  - 14-17 Quantum Electronics ☐ JOINT COUNCIL ON QUANTUM ELECTRONICS ☐ Miami, Fla. (*R. W. Terhune*) [1/8] 10/67
  - 20-24 Neutron Inelastic Scattering ☐ IAEA ☐ Copenhagen, Denmark (*J. Dolnicar*) [12/20] 12/67
  - 25-31 • Economics of Nuclear Fuels ☐ IAEA ☐ Gottwaldov, Czechoslovakia (*J. H. Kane, Conference Branch, Division of Technical Information, USAEC, Wash., D. C. 20545*) [12/15] 1/68
- Discussion will include methods of estimating nuclear fuel cycle costs, economic prospects of plutonium recycling in thermal reactors, problems of fuel supply and management from the standpoint of electric power utilities.
- 27-31 Thermionic Electrical Power Generation ☐ EUROPEAN NUCLEAR ENERGY AGENCY ☐ Stresa, Italy (*European Nuclear Energy Agency*) [12/15] 10/67

JUNE 1968

- 3-6 Atomic Physics ☐ NEW YORK U ☐

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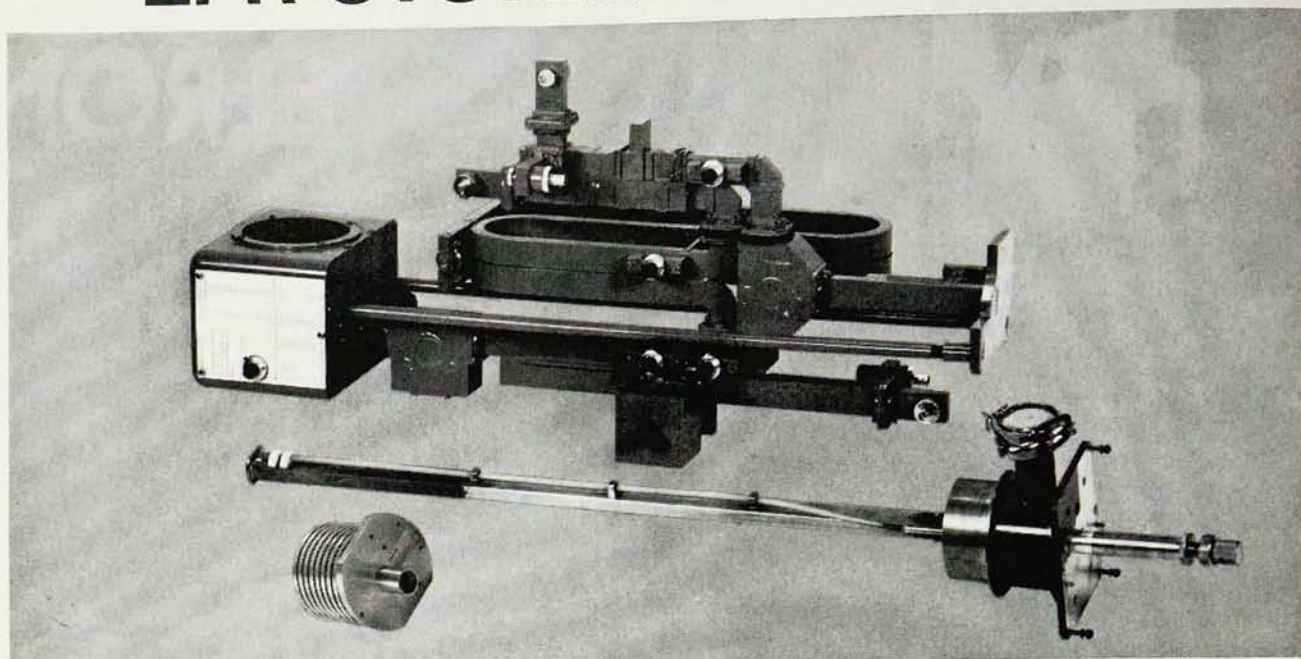


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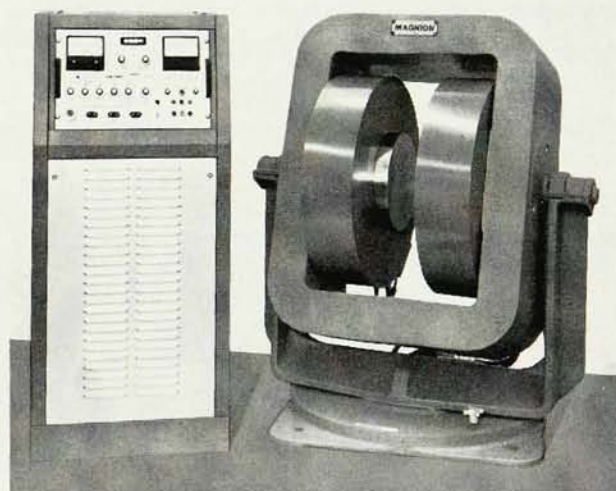


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New York (V. W. Hughes) (by invitation) 11/67

9-13 • **Radioisotopes** □ AMERICAN NUCLEAR SOCIETY □ Toronto (D. G. Hurst, Atomic Energy of Canada Ltd., Chalk River, Ontario, Canada) [1/31] 1/68

Topics: radioisotopes techniques in geology and hydrology, medical biophysics and applications of isotopes, radiation chemical processes, forensic applications of activation analysis.

10-13 **Vacuum Metallurgy** □ AMERICAN VACUUM SOCIETY □ Beverly Hills, Calif. (L. W. Sink) 11/67

11-14 • **Optimization** □ SOCIETY FOR INDUSTRIAL AND APPLIED MATHEMATICS □ Toronto (P. Wolfe, IBM Research, PO Box 218, Yorktown Heights, N. Y. 10598) [4/1] 1/68

Sessions will cover variational methods used in solution of optimization problems in the study of physical systems, control theory, linear, non-linear, discrete and stochastic programming.

12-14 • **Communications** □ IEEE □ Philadelphia (L. Winner, 152 W. 42 St., New York, N. Y. 10036) [1/15] 1/68

16-20 □ HEALTH PHYSICS SOCIETY □ Denver, Colo. (W. R. Hendee) [2/1] 10/67

17-19 □ APS □ Los Alamos, N. M. (W. Whaling) 10/67

19-21 • **Structure and Chemistry of Solid Surfaces** □ LAWRENCE RADIATION LABORATORY □ Berkeley, Calif. (C. V. Peterson, Lawrence Radiation Laboratory, Building 62, Rm. 205, U. of California, Berkeley, Calif. 94720) 1/68

Subject under discussion at this fourth international materials symposium will be theory of lattice dynamics and electronic properties of surface atoms, theory of atomic and electron-beam scattering by surfaces, studies of surface structure and reactions by low-energy electron diffraction, optical-emission studies of surfaces, studies of atomic or ion-beam interactions with solid surfaces.

23-28 • **Power Conference** □ IEEE □ Chicago (J. F. Bracken, IEEE, 345 E. 47 St., New York, N. Y. 10017) [2/9] 1/68

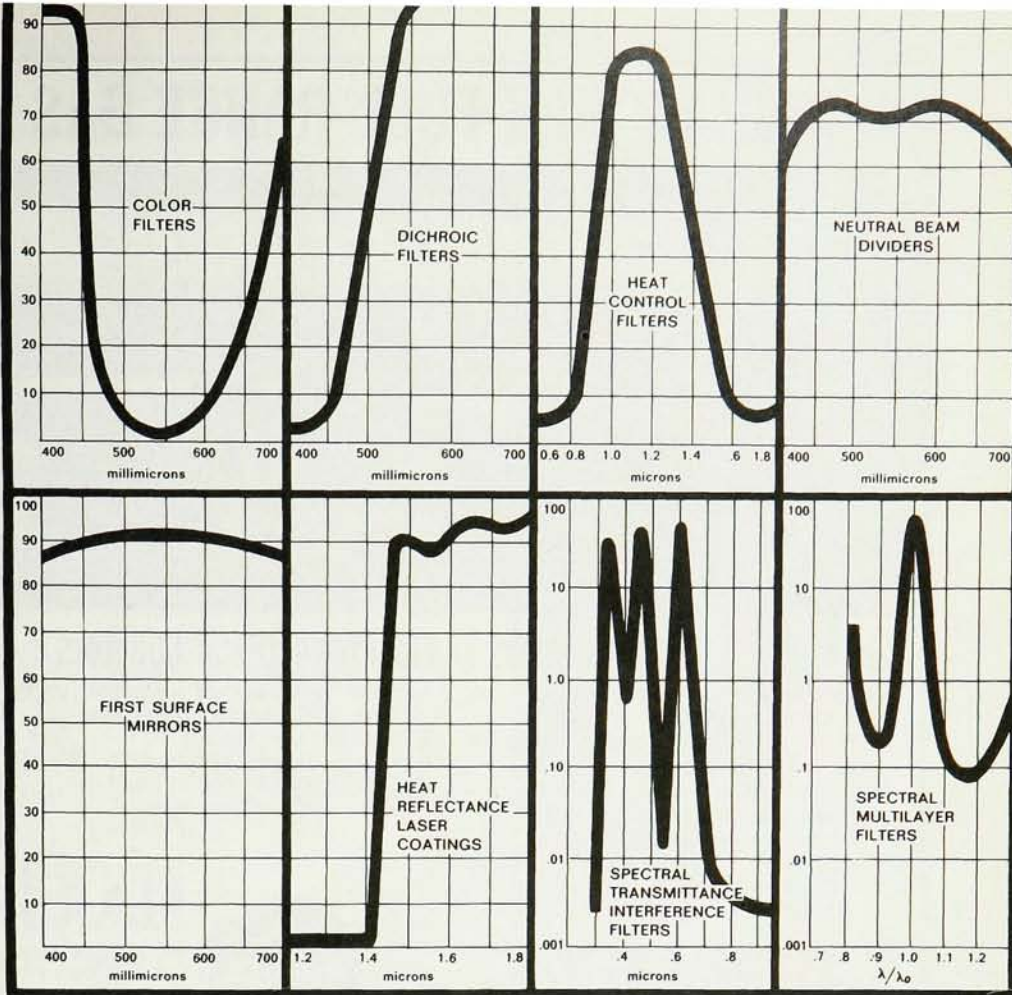
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25-28 **Precision Electromagnetic Measurements** □ IEEE-NBS □ Boulder, Colo. (G. Goulette) [2/12] 12/67

1-31 **Theoretical Biology and Biophysics** □ AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES □ Northwestern Michigan College, Traverse City, Mich. (H. J. Morowitz) [2/15] 12/67

8-10 • **Marine Technology** □ MARINE TECHNOLOGY SOCIETY □ Wash., D. C. (F. Masters, Trade Associates, 5151 Wisconsin Ave., NW, Wash., D. C. 20016) 1/68

8-11 • **Nuclear Magnetic Resonance** □ FORD FOUNDATION-U. OF SÃO PAULO □ São Paulo, Brazil (L. W. Reeves, Physics Dept., U. of São Paulo Caixa Postal 8105,



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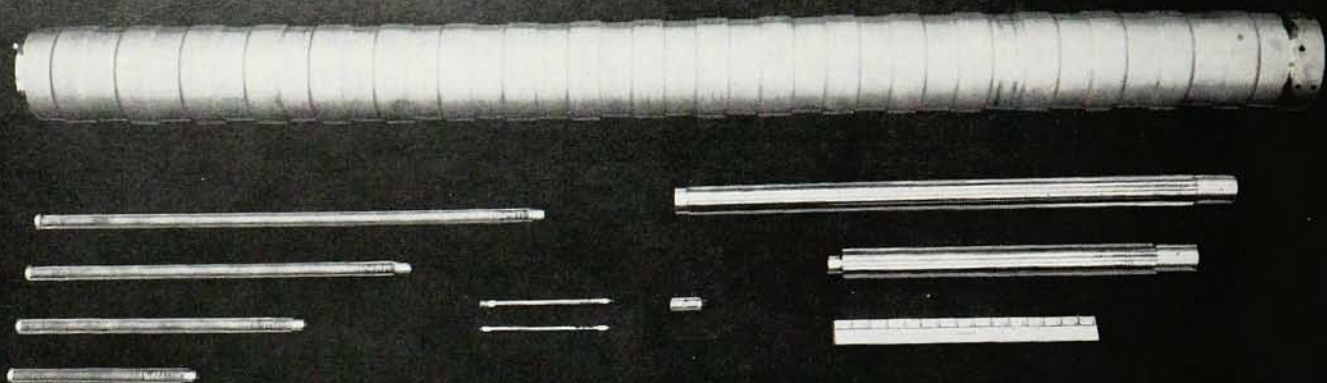
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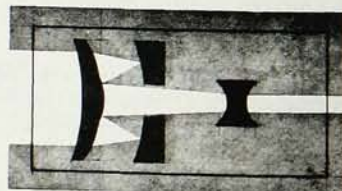
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# Exploration of Mars

Under NASA's Office of Manned Space Flight, Bellcomm is investigating many trajectories for spacecraft flying by Mars. In one of them, the vehicle passes overhead from east to west and reaches a latitude of about 40° N. just before passing the periapsis or point of closest approach.

Periapsis passage takes place about 20 minutes before dawn on a spring day on Mars. These details substantially influence the design of probes that are being deployed from the spacecraft as it approaches Mars.

Where must a probe impact the Martian surface an hour before periapsis passage, if the spacecraft is to pass directly over the impact site? How long can line-of-sight contact be made with the probe? How far from Mars will the spacecraft be when line-of-sight contact is re-established?

Bellcomm invites you to help provide some of the answers. There are immediate openings for qualified specialists in all technical disciplines bearing on analysis of planetary missions—flight mechanics, guidance and navigation, communications, bioastronautics, propulsion and power systems. We also are in need of aeronautical and mechanical engineers broadly experienced in vehicle systems or mission planning.

If you feel you are qualified, send your résumé to Mr. N. W. Smusyn, Personnel Director, Bellcomm, Inc., Room 1600-J, 1100 17th St., N.W., Washington, D.C. 20036. Bellcomm is an equal opportunity employer.



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JULY 1968

Brazil, S.P.) [4/20] 1/68

Topic: intermolecular forces.

- 15 (through Sept. 8) **Nuclear Physics** ☐ U. OF GRENOBLE ☐ Les Houche, Haute-Savoie, (C. Dewitt), U. of N. Carolina, Chapel Hill, N. C. [2/1] 12/67
- 15-18 **Electrical Contact Phenomena** ☐ IPPS ☐ University College of Swansea, Wales (Meetings Officer, IPPS) [2/1] 10/67
- 15-19 **Crystal Growth** ☐ AFCL ☐ Birmingham, England (C. S. Sahagian) 12/67
- 22-26 **Rarefied Gas Dynamics** ☐ MASSACHUSETTS INSTITUTE OF TECHNOLOGY ☐ Cambridge, Mass. (Symposium secretary Rm. 37-412 aeronautics and astronautics dept., Massachusetts Institute of Technology) [12/31] 11/67
- 23-29 **Physics of Semiconductors** ☐ IUPAP ☐ Leningrad, USSR (A. R. Regel) [2/1] 12/67
- 24-30 **Magnetohydrodynamic Production of Electricity** ☐ IAEA ☐ Warsaw, Poland (M. V. Tcherniline) [4/2] 12/67

## AUGUST 1968

- 1-7 • **Plasmas and Controlled Nuclear Fusion** ☐ IAEA ☐ Novosibirsk, USSR (J. H. Kane, Conferences Branch, Div. of Tech. Information, US Atomic Energy Commission, Wash, D.C.) [1/15] 1/68
- 6-15 **Medical Radioisotope Scintigraphy** ☐ IAEA ☐ Salzburg, Austria (G. J. Hine & H. Vetter) [3/1] 11/67
- 7-9 **Ellipsometry** ☐ U. OF NEBRASKA ☐ Lincoln, Neb. (N. M. Bashara) 9/67
- 12-16 ☐ ACA ☐ Buffalo, N. Y. (D. Harker) 10/67
- 21-23 ☐ AAS ☐ University of Victoria, Victoria, B. C., Canada (G. C. McVittie) 11/67
- 21-23 **Applications of X-Ray Analysis** ☐ DENVER RESEARCH INSTITUTE ☐ U. of Denver, Colo. (J. B. Newkirk) 10/67
- 21-28 **Low Temperature Physics** ☐ U. OF ST ANDREWS ☐ St Andrews, Scotland (D. M. Finlayson) 10/67
- 26-31 **Applied Mechanics** ☐ STANFORD U. ☐ Stanford, Calif. (C. R. Steele) [2/2] 10/67
- 26-30 **Reactivity in Solids** ☐ INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY ☐ Schenectady, N. Y. (R. W. Roberts) 10/67
- 27-30 • **Molecular Luminescence** ☐ LOYOLA U. ☐ Chicago (E. C. Lim, Loyola U., Chicago, Ill. 60611) 1/68

## SEPTEMBER 1968

- 3-6 • **Macromolecular Chemistry** ☐ IN-



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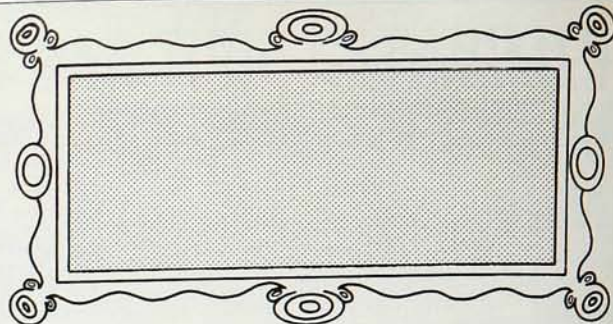
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SEPTEMBER 1968

INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY □ Toronto (Organizing Committee, Box 932, Terminal A, Toronto, Canada) 12/67

The theme of the symposium will be the structure and properties of macromolecular systems, and will embrace synthetic, natural and biological polymers. Topics: crystallization and morphology, properties of macromolecular solutions, structure and physical properties of solid macromolecular compounds and systems, structure and function of biopolymers.

4-6 • Physics and Chemistry of Electrophotography □ INSTITUTE OF OPTICS, U. OF ROCHESTER □ Rochester, N. Y. (W. L. Hyde, Institute of Optics, U. of Rochester, Rochester, N. Y. 14627) [6/1] 1/68

Topics: photoconductors, triboelectricity and charge transfer, corona discharges, development and fusing, image evaluation, less-conventional electrophotographic processes.

9-14 • Statistical Mechanics □ IUPAP □ Tokyo (R. Kubo, Physics Dept., U. of Tokyo, Tokyo, Japan) 12/67

10-15 Magnetic Oxides □ INSTITUTE OF PHYSICS OF THE ACADEMY OF SR ROMANIA □ Bucharest, Romania (M. Rosenberg) 10/67

11-13 • Physical Aspects of Noise in Electronics □ IPPS □ (Meetings Officer, IPPS, 47 Belgrave Sq., London, SW 1, England) [5/31] 1/68

Topics will be noise aspects of grid-controlled valves at very-low frequencies, microwave tubes, measurement techniques, semiconductor devices, flicker and other very-low frequency noise, oscillators, radiation statistics, lasers, masers and parametric amplifiers, particle detectors and photoconductors.

16-21 □ 15TH AMPERE COLLOQUIUM □ St Martin d'Heres, France (P. Averbuch) 9/67

16-18 Laser Measurements □ INTERNATIONAL SCIENTIFIC RADIO UNION □ Warsaw, Poland (S. Hahn) [2/1] 10/67

23-27 Vacancies and Interstitials in Metals □ IUPAP □ Jülich, Germany (W. Schilling) [5/15] 11/67

25-27 • Stresses in Composite Materials □ IPPS □ Cranfield, England (Meetings Officer, IPPS, 47 Belgrave Sq., London, SW 1, England) [12/1] 1/68

## OCTOBER 1968

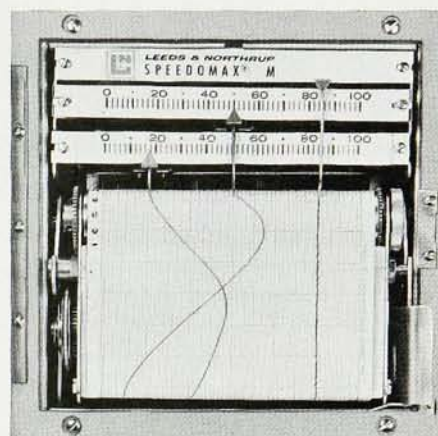
8-11 □ OSA □ Pittsburgh, Pa. (M. E. Wurga) [7/8] 11/67

28-31 • Instrumentation □ INSTRUMENT SOCIETY OF AMERICA □ New York (O. W. Williams, Instrument Society of America, 530 William Penn Place, Pittsburgh, Pa. 15219) [2/1] 1/68

## DECEMBER 1968

16-20 Relativistic Astrophysics □ SOUTHWEST CENTER FOR ADVANCED STUDIES □ Dallas (I. Robinson) 9/67 □

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