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voted to an open discussion of the problems of education in biophysics.

Inquiries regarding the meeting should be addressed to Prof. J. Tonnelat, Laboratoire de Biologie Physico-Chimique, Orsay, Seine-et-Oise, France.

Direct Nuclear Reactions

Argonne National Laboratory will sponsor a symposium on nuclear spectroscopy with direct reactions at the Center for Continuing Education in Chicago, from March 9 to 11, 1964. This meeting has been accepted as an American Physical Society Topical Conference, which means that the abstracts of contributed papers will appear in the *APS Bulletin*, and must conform to the rules for abstracts prescribed therein. The deadline for abstracts of contributions is February 1, 1964. The part of the program devoted to invited papers, including topics and confirmed speakers, is listed below:

1. Introduction: Direct Reactions (N. Austern)
2. Reliability of DWBA in Giving Spectroscopic Factors (G. R. Satchler)
3. Experimental Surveys of Pickup and Stripping Reactions with Deuterons (L. Green)
 - 3a. Nuclear Structure Studies with Deuterons (B. L. Cohen)
 - 3b. Spin Measurements ($d, p\gamma$), Polarization (J. P. Schiffer)
 - 3c. More Complex Single-Nucleon Stripping and Pickup (α, t), (d, He^3), etc.
4. Inelastic Scattering (J. S. Blair)

(Spin Identification and Transition Probabilities)

 - 4a. Inelastic Scattering and Coupled Potentials
 - 4b. High Energy Inelastic Scattering and Nuclear Structure
 - 4c. (p, n) Reactions and Isobar States (J. D. Anderson)
5. Nuclear Model Calculations of Spectroscopic Factors (M. H. Macfarlane)
 - 5a. Several shorter talks on various aspects of spectroscopic factors
6. More Complicated Reactions
 - 6a. Interpretation of More Complicated Reactions (p, α), (d, Li^6), (d, α), etc. (B. Bayman)
 - 6b. Pairwise Stripping and Pickup Reactions (p, t), (He^3, n), etc.

Abstracts and requests for further information should be sent to Dr. F. E. Throw, Argonne National Laboratory, 9700 South Cass Avenue, Argonne, Ill.

Minerals and Metals

Highlighted by sessions on geothermal power sources, lunar geology, laser materials, and mineral resources of the ocean floor, the 1964 Metals and Minerals Conference will take place in Los Angeles on May 14 and 15. Sponsor of the meeting is the Southern California Section, American Institute of Mining, Metallurgical, and

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CONSULTING MATHEMATICIAN—to lead staff of applied mathematicians in solving complex problems in the nuclear reactor field. A wide range of interesting mathematical problems is encountered in the nuclear reactor field.* Independent mathematical research is currently being conducted in numerical analysis with emphasis on partial differential equation solution by means of finite difference techniques and Monte Carlo methods. In the area of physics, typical analysis problems arise in connection with the solution of multigroup neutron diffusion and neutron transport equations, as well as from problems in reactor dynamics. In the area of engineering, diverse problems are encountered in heat transfer, fluid flow, and mechanics; for example, the solution of equations for non-steady state conduction for a variety of boundary conditions, and the solution of elasticity and plasticity problems. Consultation in mathematics is provided throughout the Laboratory and there is opportunity for the mathematicians to work closely with theoretical physicists and analytical engineering specialists on problems of mutual interest. Extensive supporting facilities include digital and analog computers with associated staffs of programmers. Candidate's qualifications should include Ph.D. in Mathematics plus pertinent experience.

THEORETICAL PHYSICIST—to conduct research aimed at a fundamental understanding of the physics of power reactors. Areas of current activity include transport theory, reactor kinetics, neutron thermalization, and resonance capture. An active research program is carried on to develop nuclear models and apply them to the analysis and calculation of neutron cross sections. Besides high energy reactions, this includes the inelastic scattering of thermal neutrons by solid and liquid systems. Among the facilities available are large digital and analog computers, a professional programming staff, and critical assemblies designed specifically for theory evaluation.

Background required is a Ph.D. in theoretical or nuclear physics, or nuclear engineering. Specific experience in reactor physics is desirable though not necessary.

To apply or gain additional information, write fully in strict confidence to Mr. Richard Bouton, Room 51-L.

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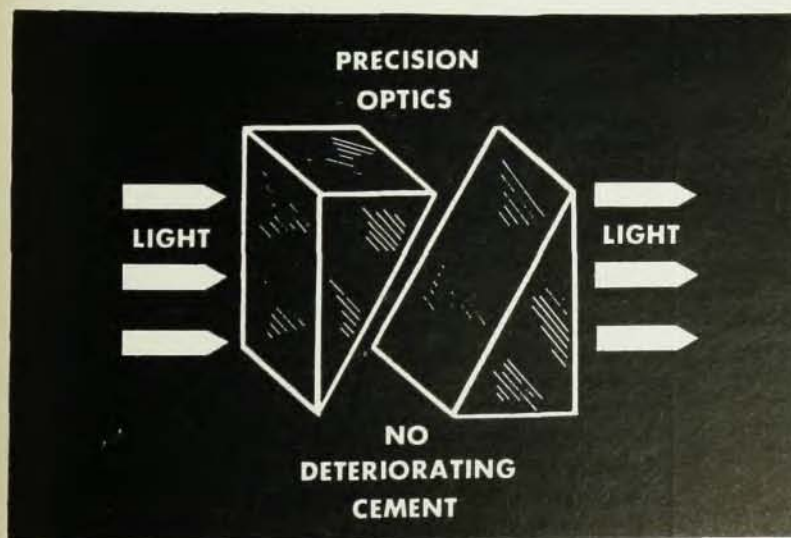
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* See e.g. *Proceedings of Symposia in Applied Math.*, Vol. 11, *Nuclear Reactor Theory*, American Mathematical Society 1961

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Inquiries can be directed to conference headquarters, Rm. 1234, 523 W. Sixth St., Los Angeles, Calif.

Spectroscopy

The 15th annual Mid-America Symposium on Spectroscopy will be held from June 2-5 at the Sheraton-Chicago Hotel in Chicago. Sponsors of the meeting are the Chicago Section of the Society for Applied Spectroscopy. Two-day sessions are planned in the following areas of spectroscopy: emission, flame, atomic absorption; nuclear magnetic resonance; ultraviolet, visible, ultraviolet, x-ray, Raman; and gas chromatography.

Abstracts are due by February 14. All correspondence can be sent to Elwin N. Davis, Sinclair Research Inc., 400 E. Sibley Blvd., Harvey, Ill.

Mass Spectrometry

The twelfth annual Conference on Mass Spectrometry and Allied Topics, arranged by the American Society for Testing and Materials Committee E-14, will take place June 7-12 at McGill University in Montreal. Besides contributed papers, the meeting will include four half-day symposia on basic instrumental advances; mass spectral studies of free radicals, atoms, and excited molecules; analytical developments and problems; and techniques of mass spectroscopy of solids. Papers are solicited in research and development topics pertinent to mass spectrometry, with the deadline for abstracts, February 15.

All correspondence should be sent to N. D. Coggeshall, Gulf Research & Development Company, PO Drawer 2038, Pittsburgh 30, Penn.

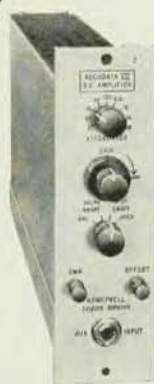
Statistical Mechanics and Thermodynamics

A conference on special topics in statistical mechanics and thermodynamics will be held at the Technische Hochschule in Aachen, Germany, from June 15 to 19, 1964. Sponsored by the International Union of Pure and Applied Physics, the German Physical Society, and the Technische Hochschule, Aachen, the meeting will be devoted to (1) relativistic statistical mechanics and thermodynamics, equilibrium and nonequilibrium; (2) response in linear systems, Kubo relations; and (3) critical phenomena. A number of invited papers will review the field and suggest possible future trends.

Summaries of contributed papers, accompanied by copies of complete manuscripts, are due by March 15. Since it is expected that the summaries will be mimeographed and distributed at the meeting as preprints, it is requested that formulas and figures be carefully drawn, at a scale of 1:1, for immediate use in the mimeographing process.

Summaries and requests for further information

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