up the program of the 11th Annual Symposium on Spectroscopy of the Chicago Section of the Society for Applied Spectroscopy to be held June 20–23 at the Conrad Hilton Hotel in Chicago. The meeting will also feature an exhibit of spectroscopic instruments. Further information may be obtained from the Symposium Coordinator, Mr. Harry Wilson, Continental Can Company, Inc., 7622 South Racine Avenue, Chicago 20, Ill.

Polarization Phenomena of Nucleons

BOTH invited and contributed papers concerning the construction of sources producing polarized particles and polarization studies of nuclear reactions and scattering will be presented at a Symposium on Polarization Phenomena of Nucleons to be held July 4–8 in Basel, Switzerland. The meeting, believed to be the first to deal exclusively with this topic, will be held under the patronage of the International Union of Pure and Applied Physics. P. Huber of the Physics Institute at the University of Basel will serve as its president.

The program will include experimental and theoretical discussion of such topics as the polarization of products from reactions involving the very light nuclei and from stripping reactions, angular distributions of particles from reactions induced with polarized and aligned particles, and polarization produced by scattering from nuclei with interpretations by phase-shift analysis and the optical model. In experimental work the energy region below 40 Mev will be emphasized. Several reports of work on the design and construction of sources of polarized protons and deuterons are to be included, although as yet no experimentally confirmed beam of polarized particles generated in this manner has been reported.

Further information is available from the secretary of the meeting, Dr. K. P. Meyer, Physikalisches Institut der Universität, Klingelbergstrasse 82, Basel, Switzerland.

Rarefied Gas Dynamics

THE Second International Symposium on Rarefied Gas Dynamics will meet August 3-6 on the Berkeley campus of the University of California. The program will be similar in scope and purpose to the first Symposium which met in Nice, France, in July 1958. New developments in upper-atmosphere research and space flight will be discussed along with more basic scientific studies.

Topics for consideration by the Symposium will include the following: (1) continuum fluid mechanics and heat transfer at low Reynolds numbers in compressible fluids, (2) studies of the limits of the continuum theory or the quasi-equilibrium kinetic theory of gases, (3) problems in the kinetic theory of gases, particularly attempts to solve the Boltzmann equation, (4) free-molecule and near-free-molecule flow in neutral and ionized gases, (5) the physics of surface interactions between gases and solids, (6) boundary conditions for rarefied gas equations—slip flow, and (7) ex-

at 3M company



PHYSICIST

just imagine — You have the use of such scientific equipment, with it trained technical assistance, access to excellent library facilities, and an environment which encourages associations with men of recognized stature in related professional fields.

Are you the scientist who can obtain significant research results in this environment?

If so, please contact Burton C. Baker, Technical Employment Manager at the April A.I.P. Meeting or write him c/o 3M Company, 900 Bush Ave., St. Paul 6, Minn.



... WHERE RESEARCH IS THE KEY TO TOMORROW

Lenses, Prisms and Windows of Infrared Transmitting Materials

Frank Cooke, Inc. North Brookfield, Mass.

POSITIONS OPEN

MOLECULAR SPECTROSCOPIST FOR HIGH TEMPERATURE RESEARCH

Physicist with background in the spectra of small molecules is needed to conduct basic research on the spectra of high temperature systems. Current projects include investigation of plasmas, flames, detonations, and heated gases. Working knowledge of vibration-rotation spectra and familiarity with infrared instrumentation is desirable. Salary and specific responsibilities will depend upon the individual. Send resume to Laboratory Manager.

THE WARNER & SWASEY COMPANY CONTROL INSTRUMENT DIVISION 32-16 Downing Street, Flushing 54, N. Y.

Theoretical Physicist

An appointment will be made to the rank of Associate Professor or Assistant Professor, depending on qualifications. The present salary scale in these ranks is \$6600 to \$10,700. Principal duties will be to teach courses at the senior and postgraduate levels and to carry on research. Preference will be given to a candidate whose experience and main interest lie in the field of nuclear theory.

Write to: Head, Department of Mathematical Physics, University of Manitoba, Winnipeg, Canada.

Northern Illinois University has an opening for the headship in the Physics Department. Applicants must have at least five years of post doctoral experience in teaching and research. The department presently offers the Masters degree and plans to further expand the graduate program in the near future. For information please write Dean of the College of Liberal Arts and Sciences, Northern Illinois University, DeKalb, Illinois.

FACULTY POSITION: Associate Professor or Assistant Professor in three-man physics department in liberal arts college of 1000.

Write: Dr. Ivan M. Stone, Dean, Beloit College, Beloit, Wisconsin.

perimental techniques and instrumental developments bearing on the above, whether applied to laboratory or field experiments.

Attendance at the Symposium will be by invitation only. Further information may be obtained by writing to the Engineering and Sciences Extension, University of California, 2451 Bancroft Way, Berkeley 4, Calif.

Cryogenic Engineering

PAPERS dealing with the technical aspects of cryogenic engineering in the field below 150° K, and particularly those covering recent fundamental work, are being solicited for presentation at the 1960 Cryogenic Engineering Conference. The meeting will be held August 23–25 in Boulder, Colo., under the cosponsorship of the University of Colorado and the National Bureau of Standards. Abstracts (under 200 words) and preliminary manuscripts (final data may be added later) must be submitted by May 15. They should be sent to the secretary of the Cryogenic Engineering Conference, K. D. Timmerhaus, Chemical Engineering Department, University of Colorado, Boulder, Colo., from whom preregistration information and a copy of the program may be obtained when it becomes available.

Announcement has also been made that hard-cover editions of the *Proceedings* of the 1954, 1956, 1957, 1958, and 1959 Cryogenic Engineering Conferences are currently being published and will be available at \$13.50 per issue (a set of the four 1954–58 volumes will be priced at \$35). Persons wishing to obtain copies should order them directly from the publisher, Plenum Press, Inc., 227 West 17th Street, New York 11, N. Y.

Nuclear and Radio Chemistry

CHEMICAL and nuclear interactions of excited atoms, including range-energy relations and properties of recoil atoms; experimental studies of the fission process, with emphasis on the division of mass, charge, and energy at low excitation energies; properties of nuclei, including new nuclides and new information on reaction cross sections, half-lives, and decay schemes; and new techniques in nuclear chemistry, particularly in counting methods, are some of the specific topics to be covered at a symposium to be held September 6–8 at the Chalk River Laboratories of Atomic Energy of Canada Limited. The meeting is being planned under the joint auspices of the Inorganic Chemistry Division of The Chemical Institute of Canada and Atomic Energy of Canada.

Participants are asked to submit comprehensive abstracts (up to 1000 words plus figures) by June 15. The abstracts will be reproduced and issued in advance of the meeting to all who are planning to attend. All correspondence should be addressed to Dr. R. H. Betts, Atomic Energy of Canada Limited, Chalk River, Ont., Canada, or Dr. R. D. Heyding, Division of Applied Chemistry, National Research Council, Ottawa, Ont., Canada.