

control the physical basis of tone production in musical instruments which have been rated aesthetically by competent musicians." Dr. Richard E. Grove, chairman of the Department, feels that much fundamental physics can be studied in the context of this type of research project, and that the work can be carried on inexpensively, both important considerations for the private liberal-arts college with a limited research budget.

### Nuclear studies

The National Association of State Universities and Land-Grant Colleges has compiled a booklet describing the facilities and programs in nuclear science and engineering in the public institutions which make up its membership. Designed primarily for students and their guidance counselors, the publication opens with an overall look at nuclear science programs in member institutions, followed by a description of accelerators at some forty-six schools. Also included are listings of institutions with critical as well as subcritical research and training reactors, and degree programs in the field. Copies of *Nuclear Science and Engineering at State Universities and Land-Grant Institutions* are available from the Office of Institutional Research, Association of State Universities and Land-Grant Colleges, 1785 Massachusetts Ave., NW, Washington, D. C. 20036.

### Medical physics

The American Association of Physicists in Medicine has prepared a pamphlet for the benefit of recent graduates in the physical sciences and student advisers on the nature of medical physics as a career. The information provided in the pamphlet was gathered from a survey which the organization conducted in 1960 of its membership to determine the position of the profession. Included are discussions of what medical physics is, what the work entails, the training involved, and income and future demand. Partial lists of programs in medical physics and biophysics as well as traineeship programs in medical

physics are also given. Copies of the pamphlet and more detailed information about the profession can be obtained from Dr. C. S. Simons, Department of Radiology, University of Michigan Hospital, Ann Arbor, Mich.

### Paying for college

The National Science Foundation has recently prepared a short guide for students on the subject of *Financing A College Science Education*. Discussions of what the family's proper role in paying for college should be and how this may affect the choice of school are followed by suggestions on locating financial assistance. Programs of federal support are described for the various agencies and departments of the government as well as nonfederal assistance from schools and state and national scholarship programs. The booklet concludes with a list of some useful references to further information on the subject. Copies of the brochure can be purchased from the Superintendent of Documents, US Government Printing Office, Washington, D. C. 20402, for 15 cents.

### Summer programs

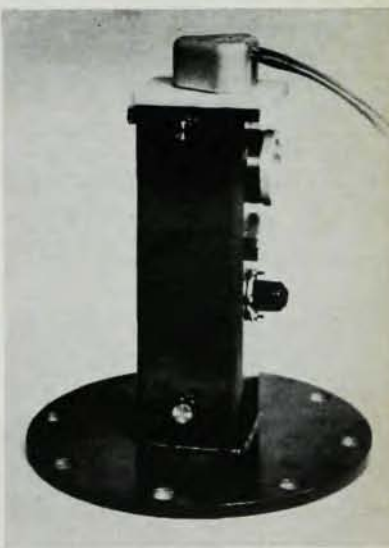
A short course in optical physics and its recent applications will again be conducted at the University of California's campus in Los Angeles during July 12-23. Directed by Max Garbuny, the course is intended for workers in development and research, engineers, teachers, or graduate students interested in optical radiation physics. Interaction processes involved in the generation, propagation, and detection of coherent and incoherent light from the infrared to the ultraviolet will be featured. The fee for this course will be \$250. Additional information and application blanks can be obtained from H. L. Tallman, Physical Sciences Extension, Room 6532 Engineering Building, University of California, Los Angeles, Calif. 90024. Phone: (Area code 213) 272-8911, Ext. 3121.

A two-week program on electromagnetic compatibility is being offered at the Massachusetts Institute of

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Technology during the period August 16-27. Details on the program can be obtained from the Director of the Summer Session, Room E19-356, MIT, Cambridge, Mass. 02139.

A NATO Advanced Study Institute dealing with magnetic properties of solids will be held at the University of Thessaloniki in Greece from August 9 to August 28. The general lectures, covering most major aspects of magnetism, will be at the graduate or postgraduate level and will include recent developments as well as accounts of the lecturers' current work. The official language of the Institute is English, and the number of participants is limited to sixty. Further inquiries can be addressed to Dr. P. J. Rentzeperis, NATO Advanced Study Institute, Aristotle University of Thessaloniki, Thessaloniki, Greece.

### New programs

This September, Lehigh University will introduce a four-year bachelor's program in "Fundamental Sciences" that combines two or more of the traditional science or engineering disciplines into a single undergraduate major. By providing a broad foundation and flexible course with many elective options, the new curriculum is intended to prepare students for careers in such interdisciplinary fields as geophysics, materials science, and bio-engineering.

Beginning with a uniform freshman year, undergraduates will undertake a broad core of basic courses coupled with a required concentration in one of several options, including physics, chemistry, mathematics, and the earth and space sciences. This required concentrated study will include fifteen courses to be undertaken in a single field, with the remaining electives distributed over several other fields, or else applied to a second concentrated area of study.

Indiana University's Departments of Physics and Mathematics have inaugurated an interdisciplinary program leading to the PhD degree in mathematical physics. Doctoral candidates must be enrolled in either of the two Departments and will usually en-

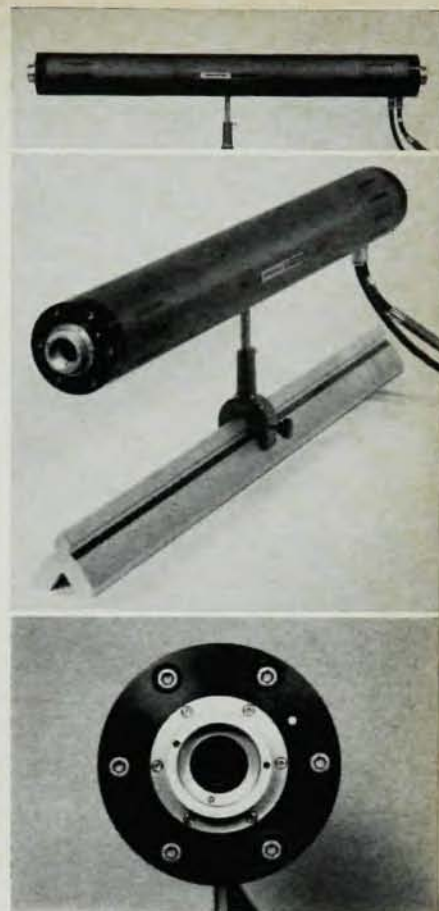
ter the program at the beginning of their second year of graduate study. Teaching assistantships and fellowships are available in the two Departments, and it is hoped that there will be a number of special fellowships available. Inquiries can be addressed to Roger G. Newton, Department of Physics, Indiana University, Bloomington, Ind. 47405.

### Science education abstracts

During the last decade and a half, the US Office of Education and the National Association for Research in Science Teaching have been engaged in a cooperative project of collecting and summarizing research in the teaching of science. For the first six years of the project, the published summaries were issued on an annual basis and thereafter biennially. The most recent publication of *Research In the Teaching Of Science* presents abstracts which were selected from studies known to have been completed between 1959-61. A bibliographic list of studies also includes investigations completed between 1961-63. In preparing the reviews of research, the attempt has been made to obtain complete coverage of all science education research completed during the biennium.

Journals generally publishing research in science teaching were fully screened from July 1959 to July 1961, and following the location of published reports, an inquiry sheet was sent to each author asking for an abstract of the study. Data on unpublished research were obtained from abstract forms that were mailed to the more than 1200 colleges and universities offering advanced courses in science education.

The 152-page volume is divided into studies in elementary-school, secondary-school, and college science, with each section preceded by an analysis and interpretation of the over-all data. A commentary on science research in general is provided in the "Guidelines and Recommendations" section in the latter part of the book. Copies at 60 cents each can be obtained from the Superintendent of Documents, US Government Printing Office, Washington D. C. 20402.



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