Physics Today

Awards

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Miscellany

Summer Studies

Of the 1960 National Science Foundation-sponsored summer institutes for high-school and college teachers of science, mathematics, and engineering, the following will emphasize physics or will be concerned with special programs in physics as part of a multiple-purpose institute. Among the institutes for high-school teachers are several organized in whole or in part under the program of the Physical Science Study Committee. Persons interested in attending should write as quickly as possible to the directors of the individual institutes. Unless indicated otherwise, the directors listed below are associated with departments of physics.

For college teachers only

Reed College, Portland, Ore. (Kenneth E. Davis)

Rensselaer Polytechnic Institute, Troy, N. Y. (A. A. K. Booth, Div. of Special Programs)

For high-school and college teachers

Temple University, Philadelphia, Pa. (Elmer L. Offenbacher)

Nebraska Wesleyan University, Lincoln, Nebr. (Walter R. French)

For high-school teachers only

Purdue University, Lafayette, Ind. (R. W. Lefler)

Xavier University, Cincinnati, Ohio (John B. Hart)

University of Vermont, Burlington, Vt. (Nelson L. Walbridge)

University of Wisconsin, Madison, Wisc. (Robert A. Jaggard)

For high-school teachers (PSSC institutes)

Stanford University, Stanford, Calif. (Paul Kirkpatrick)

University of Colorado, Boulder, Colo. (John M. Cleveland)

Princeton University, Princeton, N. J. (J. G. Bradshaw, Office of Dean of the Faculty)

Rutgers University, New Brunswick, N. J. (Robert L. Sells)

Fordham University, New York, N. Y. (Frederick L. Canavan, S.J.)

University of Washington, Seattle, Wash. (L. A. Sanderman)

For high-school teachers (with a PSSC program included as part of the institute)

University of Connecticut, Storrs, Conn. (David J. Blick, Science Education)

University of Minnesota, Minneapolis, Minn. (F. Verbrugge)

Pennsylvania State University, University Park, Pa. (William H. Powers, Arts & Sciences Ext.)

March 1 is the deadline for applications to attend the 1960 session of the University of Grenoble's Summer School of Theoretical Physics, which will be held from July 3 to August 27 in Les Houches, France. This year's program will be devoted to dispersion relations in quantum field theory and the properties of elementary particles. The following courses will be presented:

1. *Introduction to Dispersion Relations* (M. L. Goldberger, Princeton University)
2. *Introduction to the Theory of Functions of Several Complex Variables* and *Introduction to the Theory of Lorentz Group* (A. S. Wightman, Princeton University)
3. *Properties of Vacuum Expectation Values of Field Operators* (A. O. G. Källén, University of Lund)
4. *Démonstration des relations de dispersion* (R. L. Omnes, Commissariat à l'Energie Atomique, France)
5. *Two-Variables Dispersion Relations and Applications* (G. F. Chew, University of California)
6. *Strong Interactions of Elementary Particles* (Y. Yamaguchi, CERN)
7. *Weak Interactions of Elementary Particles* (S. B. Treiman, Princeton University)

Two other courses, bearing on the properties of elementary particles, will be presented by J. Steinberger and F. Gursey, both of the Institute for Advanced Study in Princeton.

Classes are given in French or English and the number of participants is limited to 30. Persons from the United States who are interested in attending should write immediately for application forms to Dr. Cecile DeWitt, Department of Physics, University of North Carolina, Chapel Hill, N. C.

The second in a series of special seminars on applied mathematics and mathematical physics will be conducted during the summer by the American Mathematical Society in cooperation with the University of Colorado. It will take place from July 24 to August 19 on the University's campus in Boulder and will have as its subject "Modern Physical Theories and Associated Mathematical Developments". Sponsoring organizations include the Atomic Energy Commission, the National Science Foundation, the Office of Naval Research, and the Office of Ordnance Research. Included will be a series of courses on classical quantum theory, quantum theory of fields and elementary particles, statistical physics, and related mathematical problems, which will be supplemented by a program of specialized lectures. Applications for attendance at the seminar may be obtained from the chairman of the Program Committee, Prof. K. O. Friedrichs, New York University, 25 Waverly Place, New York 3, N. Y., and should be filed with Prof. Friedrichs by February 15.

Awards

The Atomic Energy Commission has announced the establishment of an Ernest Orlando Lawrence Memorial Award for "recent, especially meritorious contributions to the development, use, or control of atomic energy in areas of all the sciences related to atomic energy, including medicine and engineering". Dr. Lawrence was the director of the University of California's Radiation Laboratory at Berkeley and Livermore, which since his death has been named the

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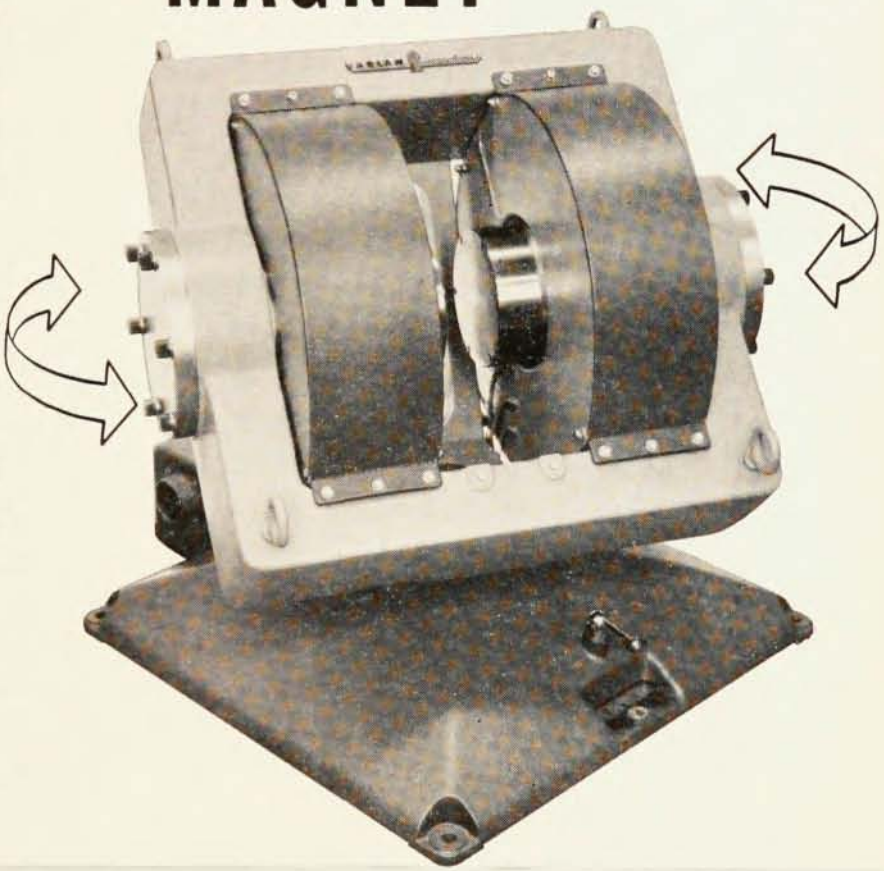
Varian's standard V-4007 fixed-azimuth 6-inch magnet remains in production. It offers continuously adjustable yoke angle, an easily changed air gap, and a somewhat lower cost than the rotating system. Magnetic performance of both 6-inch magnets is essentially the same. In rotating magnets, choice between Varian's 6-inch and 12-inch models is determined by volume, strength and homogeneity of field that your applications require.



Features of the Varian V-4007-1 6-inch rotating magnet

- Rotation of 200° about vertical axis; precisely calibrated scale.
- Yoke fixed at 45° angle.
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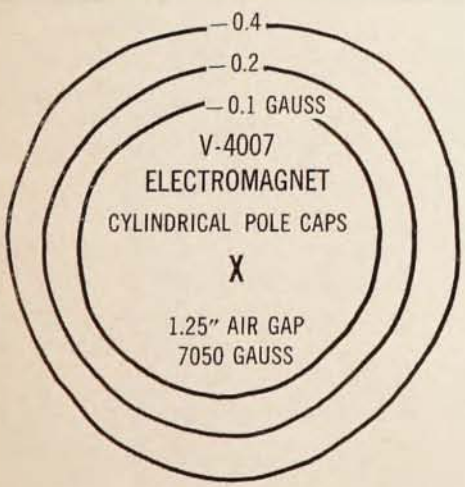
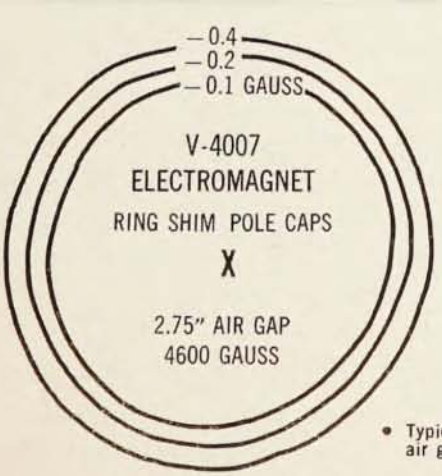
- Maximum air gap:
  4 inches (pole caps of minimum thickness);
  6 inches (pole caps removed)





- Typical full-scale homogeneity plots in median plane of air gap.

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E. O. Lawrence Radiation Laboratory in his honor. The award will be made by the Commission upon the recommendation of its General Advisory Committee and with the approval of the President. It will consist of a medal, a citation, and up to $25 000. It will be made to "not more than five recipients in any one year in amounts of not less than $5000 each, but not necessarily every year, and will be presented in the spring of the year to men or women who are not more than 45 years of age at such specific time and place as is determined by the Commission". The recipients must be US citizens. The Lawrence Memorial Award and the Commission's Enrico Fermi Award are both authorized in a section of the Atomic Energy Act of 1954, but the Lawrence Award is designed especially for the recognition of young scientists who have made recent, especially meritorious contributions to the development, use, or control of atomic energy, while the Fermi Award is based upon the lifetime contributions of theoretical and experimental scientists.

The Gravity Research Foundation's annual essay contest has again been announced. Awards will be made for the best short papers (under 1500 words) on "the possibilities of discovering (a) some partial insulator, reflector, or absorber of gravity, (b) some alloy or other substance the atoms of which can be agitated or rearranged by gravity to throw off heat, or (c) some other reasonable method of harnessing, controlling, or neutralizing gravity". Essays must be submitted in triplicate and must include (on a separate sheet) a title and 100-word summary, and separately, a short biographical sketch. Entries should be submitted before April 15 to the Gravity Research Foundation, New Boston, N. H.

Facilities

A new microscope laboratory has been established by E. Leitz, Inc., in New York City to provide consulting services on new optical techniques and equipment. The laboratory will be under the direction of Peter H. Bartels, a specialist in applied optics from the Ernst Leitz microscope factory in Wetzlar, Germany.

Expanded facilities for Technical Operations, Inc., Burlington, Mass., and its subsidiary Power Sources, Inc., include a new physics and radiation research lab, just completed, and a new ¾-acre, two-story addition, just begun.

Polytechnic Institute of Brooklyn plans to establish a high-speed electronic computing laboratory, built around an IBM 650 computer. It is intended for use in various educational and research programs, including those of the school's Microwave Research Institute. The facility was made possible by a $60 000 grant from the National Science Foundation.

Philco Corporation will build a new Research Center on a 25-acre site in suburban Philadelphia, which will contain laboratories, offices, conference rooms, a symposium room designed to accommodate 150 people, and an 8000-volume technical library. Work at the new facility will be carried out in such fields as space communications, microwave devices and systems, solid-state electronics, and electrovisual devices. Initial planning of the Center's research program is in the hands of an independent Research Division which came into being on January 1.

Programs

Over the next five years, the University of Michigan will receive $500 000 from the General Motors Corporation for continuation of research in industrial health and the peaceful uses of atomic energy. Under the terms of the grant, $350 000 will be allocated to the University's Institute for Industrial Health, a unit created in 1950 with a $1.5 million gift from GM to the Phoenix project (the school's memorial to its dead of World War II, which is devoted entirely to the peaceful applications and implications of atomic energy). The remaining funds will be used for unrestricted studies of the peaceful uses of atomic energy.

Michigan's Department of Astronomy has begun work on instruments for a satellite observatory, under contract to the National Aeronautics and Space Administration. The observatory, scheduled for completion within two years, will be able to measure ultraviolet radiation, x rays, and radio waves from extraterrestrial sources. Terms of the NASA contracts call for preliminary design studies for equipping a satellite as an astronomical observatory.

A temporary Advisory Panel on Radio Telescopes has been appointed by the National Science Foundation for the purpose of (1) studying the present and predictable needs of radio astronomers with regard to improved instrumentation; (2) studying existing and proposed instruments with regard to their capabilities and limitations, and (3) advising the Foundation with regard to the desirability and feasibility of more powerful instruments. The members of the Panel are: chairman, J. R. Pierce (Bell Telephone Laboratories), R. N. Bracewell (Stanford University), P. F. Chenea (Purdue University), L. J. Chu (Massachusetts Institute of Technology), R. M. Emberson (Associated Universities, Inc.), W. E. Gordon (Cornell University), D. S. Heeschen (National Radio Astronomy Observatory), R. Minkowski (Mt. Wilson and Palomar Observatories), G. W. Swenson, Jr. (University of Illinois), and J. H. Trexler (Naval Research Laboratory). Scientists and engineers wishing to bring their ideas to the attention of the Panel are encouraged to write to one of the Panel members or directly to the Astronomy Program, National Science Foundation, Washington 25, D. C.

Registration of radiation sources has been under way in New Jersey for the past three months in accordance with a provision introduced in the public laws of that state in 1958. The New Jersey State Department