

Electrostatic Generator"; and Yale University (F. Hutchinson), "Stopping Power of Water".

Authors, Note!

Addendum for AIP Style Manual

In April, 1951, the American Institute of Physics published a *Style Manual* for the guidance of authors preparing papers for publication in the journals published by the Institute. Since that time, the AIP Publication Board has authorized a few changes in the instructions given in the *Manual*. These changes, together with some symbols which were omitted from the *Manual*, have been printed on a single sheet of paper entitled *Addendum to Style Manual of American Institute of Physics*. Anyone wishing to obtain a copy of this addendum may write to the Publication Manager, American Institute of Physics, 57 East 55th Street, New York 22, N. Y., and it will be sent free of charge.

The complete *Style Manual* is available at a price of \$1.00 per copy. Special rates will be quoted for larger orders on request. Please send orders to the Publication Manager.

Miscellany

During the college year 1953-54, activities of the physics division of the American Society for Engineering Education will be directed by the following officers: R. J. Seeger, National Science Foundation, chairman; J. R. Dunning, vice-chairman; George Burnham, secretary; G. P. Brewington, member of the council for 1955; and C. E. Bennett, Elmer Hutchisson, Donald Loughridge, and J. G. Potter, members of the executive committee. The ASEE eleven-man committee on atomic energy education is headed by P. N. Powers of the Monsanto Chemical Company of St. Louis. It includes representatives of engineering colleges, industry, and government agencies.

A number of well-known foreign investigators in the field of ionospheric research will be working at Pennsylvania State College during the current academic year. Dr. Ashesh P. Mitra, of the Council of Scientific and Industrial Research, Calcutta, India, has been at Penn State since September 1952, and he was joined there this fall by Dr. V. A. Bailey and Dr. J. W. Dungey of the University of Sydney, Australia, Dr. Raman B. Banerji of the University of Calcutta, and Dr. Marcel Nicolet of the Royal Institute of Meteorology, Brussels, Belgium.

Over ten thousand radioisotope shipments are made each year by the Oak Ridge National Laboratory, the great majority of the isotopes being produced by the irradiation of target materials in a reactor. An article by A. F. Rupp and F. T. Binford of Oak Ridge in the September issue of the *Journal of Applied Physics* is devoted to a comprehensive review of reactor radioisotope production, and includes practical as well as theoretical details. An extensive table lists the various isotopes available from Oak Ridge, their half-lives, pro-

Mathematical Foundations of Quantum Mechanics

By **JOHN VON NEUMANN**. A quarter-century of successful development was climaxed in 1925 with the first attempts at a systematic mathematical-physical approach to quantum theory. The resulting transformation theory brought the long-sought universal mechanical concept much closer to hand. In this important work, John von Neumann presents a comprehensive treatment of the mathematical bases of the theory, with emphasis on the general questions. First English translation. \$5.00

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By **EDWIN T. JAYNES**. A general introduction to the relatively new subject of ferroelectricity and guide to the literature, with a review of the various theories of BaTiO_3 that have been published. The electronic theory developed by the writer is treated in more detail than the others because no other easily available account of it has been published. The study inaugurates a new series entitled "Investigations in Physics." Mr. Jaynes is at the Microwave Laboratory of Stanford University.

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duction and purification methods, their specific activities in curies per gram if not carrier-free, and their production status, i.e., whether regularly produced or available on special orders only.

The formula for an "Atomic Fizz" cocktail is reported to have been registered with the Copyright Office of the Library of Congress, and is understood to contain, among other more conventional ingredients, powdered uranium. It is also claimed to cure anything from pneumonia to nostalgia.

The Atomic Energy Commission has approved an agreement with the Duquesne Light Company of Pittsburgh and the Walter Kidde Nuclear Laboratories, Inc., of Garden City, Long Island, governing a nuclear power reactor study. These two companies make up the sixth team from private industry to engage in power studies under the AEC's industrial participation program. The work will include a survey of the feasibility of design, construction, and operation by private industry of power-producing reactors.

The AEC has appointed Major General Kenneth D. Nichols to succeed Marion W. Boyer as AEC general manager. General Nichols headed the Army's research and development program before assuming his new post, and retired from active military service to accept it. He holds a doctorate in hydraulic engineering from Iowa State University, and was previously associated with the Manhattan District as deputy engineer, supervising the design, construction, and operation of the production plants at Hanford and Oak Ridge. Mr. Boyer, who spent three years with the AEC as general manager, returned to the Standard Oil Company of New Jersey, of which he had previously been a vice-president.

A significant increase in the activity of the Federation of American Scientists ("... greater than at any time since the ferment of 1946") has been noted by FAS chairman David L. Hill of Los Alamos Scientific Laboratory in inaugurating an intensified membership drive. New branches are being formed at Los Alamos, the University of Wisconsin, Yale, and Cambridge, according to FAS, and the drive has already doubled the rate of new membership applications. The Federation's "listening post" in Washington (1749 L Street, Northwest), responsible for the prompt dissemination of a great deal of information during the Astin affair, coordinates the activities of the organization's twelve chapters and branches and reports on current public issues of interest to scientists in the *FAS Newsletter* and *Information Bulletins*.

Notes from Abroad

The Royal Greenwich Observatory, which has marked the prime meridian since 1884, has fallen victim to civilization and, early next year, will be moved to a haunted castle at longitude 20°25' East. This step is necessary because of the London smoke and fog, which have become so severe as to limit the observations that

can be made from the old site at Greenwich. Hurstmonceux Castle, the new location, is about sixty miles southeast of London, dates from the fifteenth century, and is complete with moat, ghost, and 45 000 square feet of ground plan. The historic Airy transit, through which zero longitude passes by definition, is to remain on exhibit at Greenwich although all of the other instruments will be moved. A new 100-inch reflecting telescope, scheduled for completion in 1957, will also be installed at Hurstmonceux.

The age of Stonehenge, the prehistoric monument in England, has been studied by a variety of means. Archeological estimates put the date of its construction at the end of the Neolithic period and before the Bronze Age, about 1800 B.C., and this view is supported by the absence of any indication of the use of bronze tools. The suggestion that the monument, a series of large stones in a horseshoe arrangement opening to the northeast, was designed for the celebration of sunrise at the summer solstice was examined by Sir Norman Lockyer in 1901. This event now takes place 1°12' from the axis of the monument, which, from the known rate of change of the angle between the axis of the earth and plane of its orbit, implies that the most recent mid-summer sunrise along the Stonehenge axis would have occurred in 1840 ± 200 B.C. This figure is in complete agreement with the archeological date. The discovery of some charcoal believed to date from the construction or period of use of the monument (the charcoal had apparently been used to cremate several people) made possible a third method of age determination. W. F. Libby found the radio-carbon date of the charcoal to be 1848 ± 275 B.C., in very striking but probably fortuitous agreement with the others. This latter determination is discussed by I. W. Cornwall in the September issue of *Discovery*. The article also contains a description of Stonehenge itself.

The famous iron pillar at Delhi, which dates from the fifth century A.D., has corroded only slightly in the nearly 1500 years of its existence. Surely the ancients were not better metallurgists than the present crop of white-coated savants, whose supreme efforts are still not sufficient to keep an untended Ford from rusting away in considerably less than 1500 years! In an effort to redeem the reputation of his profession, J. C. Hudson of the British Iron and Steel Research Association has made a careful study of the Delhi pillar, and concludes in the September 12th issue of *Nature* that the particularly dry atmosphere there has prevented corrosion. The relative humidity of the air seems to be the controlling factor in rusting, with little or none occurring unless the humidity exceeds 70 percent. This value is seldom reached at Delhi.

Research Notes

Loudness-frequency curves for violins have been studied in detail by F. A. Saunders, professor emeritus of Harvard, and are discussed in the May *Journal of The Acoustical Society of America*. The work was moti-