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Solid State Physics Research

The research division of The Martin Company is expanding its efforts in theoretical and experimental solid state physics on problems related to the transport properties of solids. Successful candidates will be free to follow their own program of basic scientific research. Replies will be held in strict confidence. Include publication record.

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both academic year institute programs can be obtained from the Division of Scientific Personnel and Education, National Science Foundation, Washington 25, D. C.

Another opportunity for advanced training in the sciences currently offered by NSF is the Postdoctoral Fellowship program for study or research at any appropriate nonprofit institution in the US or abroad. Applicants must be US citizens, possess special aptitude for advanced training, and must hold the doctoral degree or have equivalent education and experience. Awards will be made in the physical, biological, mathematical, and engineering sciences, as well as in certain selected social sciences. Selection of the approximately 35 fellows will be based on their ability, as evidenced by letters of recommendation and other indications of scientific attainment. Applicants' qualifications will be evaluated by panels of scientists appointed by the National Academy of Sciences—National Research Council, and final selection will be made by the Science Foundation. Fellows will receive a stipend of $4500 per year and a limited travel allowance, dependency allowance will be made to married Fellows. Application materials may be obtained from the Fellowship Office, National Academy of Sciences—National Research Council, 2101 Constitution Avenue, N.W., Washington 25, D. C. The deadline for the return of completed applications is September 6.

The first five scientists have been selected under a new "Visiting Scholar Program" recently inaugurated by The Robert A. Welch Foundation for the purpose of enhancing chemical research in the State of Texas. Among those so appointed is a physicist, Edward Teller. Dr. Teller, who is associate director of the Livermore Laboratory and professor at large at the University of California, will visit The Rice Institute during the spring of 1961 to conduct theoretical research, advise graduate students, and give a series of special lectures for gifted undergraduates. The visiting scholars, who receive awards ranging from $12 000 to $20 000 per academic year, are selected on the basis of competitive nominations. Additional nominations will be accepted until September 15. Further information can be obtained from the Foundation's director of research, Dr. W. O. Milligan, P. O. Box 1892, Houston 1, Tex.

Wander J. de Haas, who played a leading role in physics in the Netherlands in the period between the two world wars, died on April 26, 1960.

He was born in 1878 in Lisse (north of Leiden) and was a student of Lorentz, Kuenen, and Kamerlingh Onnes. In 1911, after having obtained his doctor's degree with a thesis on the compressibility of hydrogen, especially of hydrogen vapor near the boiling point, he went to Berlin, where he worked in Dubois' Institute, and also collaborated with Einstein. With Drapier he determined an accurate value of the diamagnetic susceptibility of water, while the result of his work with Einstein was the well-known measurement of the Ein-

stein-de Haas effect. The experiments were undertaken in order to demonstrate the existence of Ampère's molecular currents in a ferromagnetic substance such as iron. These first experiments gave for the gyromagnetic ratio a value of about 1; only later was the value 2 obtained. World War I forced de Haas to return to the Netherlands. After a short period as a secondary-school teacher and as a curator in Teyler's Museum at Haarlem, he was appointed as a professor in physics, first in the Technical University in Delft, then in the University of Groningen, and finally (in 1924) in that of Leiden. Together with W. H. Keesom, he occupied the directorship of the physics laboratory at Leiden (later called the Kamerlingh Onnes Laboratory) until the end of World War II. He retired in 1948 at the age of seventy.

In the period from 1924 until 1944, when the work in the laboratory became impossible because of the war, an abundance of very fine physical research work on many low-temperature subjects was carried out under the supervision of de Haas and Keesom. Some of the more important achievements of de Haas and his collaborators may be mentioned: the de Haas-van Alphen effect (1930), which was important for the study of the behavior of electrons in metals; the adiabatic demagnetization (with Wiersma from 1933 on); the separation of the heat conductivity in bismuth into a part due to the electrons and a part due to lattice by eliminating the first with a magnetic field (with Gerritsen and Capel in 1936); the dependence of the heat conductivity from the diameter of crystal rods (with Biermasz in 1938); the penetration of a magnetic field into a superconductor (with Mrs. Casimir-Jonker and Guinau from about 1934 on); the minimum in the electrical resistance of gold (with de Boer and van den Berg in 1934); and many other researches on electrical and thermal conductivity, magnetic susceptibilities, magnetic relaxation, etc.

He was very much interested in the testing of the fundamental laws in physics and very often, with the help of only one technician, he performed his measurements on Sundays or during the evenings when no one disturbed him.

His scientific achievements were honored on many occasions. Of his many awards I only mention here the Baumgärtner prize, co-received with Einstein, the Rumford medal, the Légion d'Honneur, and the Order of the Nederlandse Leeuw.

From 1948 until 1951 he was president of the Conférence Générale of the Institut International du Froid (International Institute of Refrigeration), and after 1951 he was honorary president.

His pupils think not only of his scientific results, but also, and perhaps even more, they remember the kind, human way in which he showed his interest in their private lives. Besides, he had a very strong feeling of responsibility for his collaborators, who feel his death as a personal loss.

J. van den Handel
Kamerlingh Onnes Laboratory

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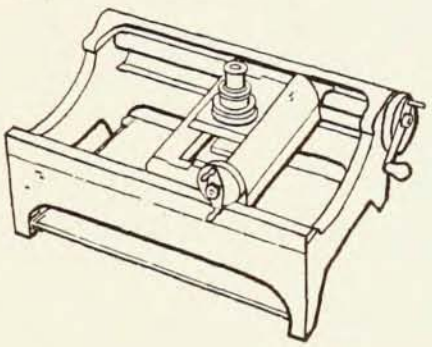

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