

Turnbull Lecturer Award went to **Robert Wolfgang Cahn**, honorary distinguished research fellow in the department of materials science and metallurgy at the University of Cambridge, UK. He was honored for his “service to the materials science community through writing, editing, mentoring, and fostering of international understanding, as well as for outstanding contributions to the development of physical metallurgy through research on recovery and recrystallization, rapid solidification, and intermetallic compounds.”

Michael Woolfson, emeritus professor of physics at the University of York in the UK, received the sixth

Ewald Prize, which was presented during the International Union of Crystallography Congress held this past August in Geneva, Switzerland. He was honored for his “exceptional contributions in developing the conceptual and theoretical framework of direct methods along with the algorithm design and computer programs for automatic solutions that changed the face of structural science,” according to the award citation. He also was recognized for his “contributions to crystallographic education and international collaboration, which have strengthened the intellectual development of crystallographers worldwide.” The prize included a medal, a certificate, and \$30 000.

clear research had been banned in Germany following World War II, the university was eager to catch up with developments in fundamental physics. Jentschke was intrigued by the prospect of a new beginning in Germany, but he found the state of the physics institute was abominable. In two years of negotiating with Hamburg authorities, he alternatively displayed toughness and charm. Eventually, he was granted nearly 10 million Deutschmarks—an amount unprecedented in Germany—to create a modern nuclear research facility, so he accepted the offer.

Jentschke set out to convince his colleagues at German universities to combine efforts and build a frontier facility. Influential physicists such as Werner Heisenberg supported the idea, and Jentschke mustered support for a machine that was to become, with 7.5-GeV beam energy, the largest electron synchrotron at the time. A national laboratory, DESY, was founded in 1959 to host the project, and Jentschke became the laboratory's first director.

Designing and constructing a world-class research facility was no small endeavor; experience with accelerator techniques and experiments was largely absent in Germany. Jentschke hired young physicists fresh out of university and had them trained in various US labs. He persuaded a number of young German and Swiss researchers who were working in the US or at CERN to join him in Hamburg and recruited many of his physicist friends from the US to help him temporarily. In that way, strongly helped by his enthusiasm and charm, he got the laboratory moving. He created a friendly and open atmosphere that was both encouraging and challenging to young physicists, and made the laboratory attractive for international collaborations, which he highly valued. To further broaden the scientific scope, Jentschke founded a synchrotron radiation research facility in which solid-state physicists and biologists soon became active participants in research at DESY.

Before the accelerator was completed in 1964, Jentschke opened discussion, both with the physicists in the DESY lab and with friends and colleagues worldwide, about the laboratory's future. Many opted for a larger electron synchrotron. In Europe, protons were traditionally the domain of CERN and other national laboratories, whereas storage rings were considered a niche activity with questionable physics prospects. But Jentschke, after wide international

Obituaries

Willibald Jentschke

Willibald Jentschke, founder and the first director of the German Electron Synchrotron (DESY) laboratory and a former director general of CERN, died peacefully on 11 March 2002 in Göttingen, Germany.

Born in Vienna, Austria, on 6 December 1911, Jentschke completed his studies in mathematics and physics at Vienna University in 1935. His PhD thesis, under the guidance of Georg Stetter, was on the ionization curve of α particles. Through this work, he entered the emerging field of nuclear physics.

A fellowship and, later, the position of *hochschul assistant* (university assistant) enabled Jentschke to continue nuclear research at Vienna University until the end of World War II. He conducted scattering experiments of α and γ particles on nuclei, discovered short-range fragments from heavy nuclei, and made an early determination of the neutron mass. When uranium fission was discovered in 1938, he turned to this exciting topic and subsequently published a series of papers on fission, notably about the range and masses of fission fragments.

At the end of the war, the institute was moved to Zell am See, Austria—Vienna was occupied by the Soviets—but the opportunities for research were very limited. So, in 1947, Jentschke accepted an offer to join the US Air Force's Biophysics Laboratory at Wright Field, Ohio, where he worked on infrared spectroscopy. But he was eager to return to a university and, in 1948, took a position as an assistant professor in the electrical engineering department at the Univer-



Willibald Jentschke

sity of Illinois at Urbana-Champaign, where he worked a few years on semiconductors before returning to his original field of nuclear physics.

In 1950, he was entrusted, by the Illinois physics department, with the directorship of the cyclotron division. There, he closely studied accelerator and beam techniques in addition to doing research on nuclear reactions and capitalizing on his knowledge of solid-state physics to pioneer novel methods in nuclear counter technology. In pioneering work, he discovered the ultrafast scintillation signal in thallium-doped alkali halogenides, a discovery that has found many applications.

Jentschke was a full professor at Illinois when, to his great surprise, he received an offer in 1955 to become a professor of physics and to direct the physics institute at the University of Hamburg in Germany. Because nu-

consultations, became a driving force for electron-positron storage rings at DESY, thereby setting the direction for the laboratory's successful future with the DORIS, PETRA, and HERA colliders.

Jentschke fostered close personal and scientific contacts between DESY and CERN. His success with DESY made him a natural candidate for becoming director general of CERN, a position he held from 1971 to 1975. The era of his directorship was marked by the physics performed with the Intersecting Storage Rings, the construction of the Super Proton Synchrotron, and a successful neutrino physics program that culminated in one of CERN's most important results: the discovery of the neutral weak current.

After completing his term at CERN, Jentschke returned to the University of Hamburg as a professor of physics and director of the university's physics institute. In 1977, he took a sabbatical leave to take part in what was probably the most exciting experiment in particle physics at the time: SLAC's polarized electron-deuteron scattering measurements that first established electroweak interference. Named professor emeritus in 1979, Jentschke continued to actively follow the

progress at DESY and elsewhere, participating regularly in seminars, colloquia, and scientific discussions; upholding international connections; and serving on international and national advisory boards.

Jentschke had an immense and contagious enthusiasm for physics. Eager to learn and discuss, he stimulated thoughts and ideas among others. Most important, he had vision and courage. A scientific leader, he granted his colleagues much freedom and responsibility. The atmosphere he created remains preciously present at DESY as his lasting legacy.

**Paul Söding
Albrecht Wagner**

*DESY and University of Hamburg
Hamburg, Germany*



Lyle Benjamin Borst

Lyle Benjamin Borst

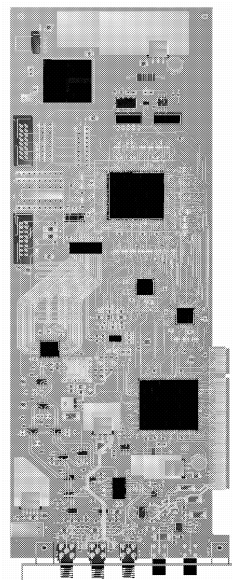
Lyle Benjamin Borst, who led the construction of the graphite reactor at Brookhaven National Laboratory, died on 30 July 2002 at his home in Williamsville, New York.

Lyle was born on 24 November 1912 in Chicago, Illinois. He received both bachelor's and master's degrees in chemistry from the University of Illinois. In 1941, he was awarded a

PhD in chemistry from the University of Chicago. His doctoral dissertation, prepared under William Draper Harkins, was entitled "The Angular Distribution of Recoil Nuclei."

Between 1941 and 1943, Lyle was a research associate at the Metallurgical Laboratory in Chicago. He joined Clinton Laboratories (later Oak Ridge National Laboratory) in Oak Ridge, Tennessee, in 1943; there he worked

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