# The Nobel Prize
## Brookhaven National Laboratory

U.S. DEPARTMENT OF ENERGY

Brookhaven National Laboratory is home to world-class research facilities and scientific departments which attract resident and visiting scientists in many fields. This outstanding mix of machine- and mind-power has on seven occasions produced research deemed worthy of the greatest honor in science: the Nobel Prize.

2009 Steitz, Ramakrishnan

### 2009 Nobel Prize in Chemistry

Venkatraman Ramakrishnan of the Medical Research Council Laboratory of Molecular Biology in Cambridge, United Kingdom, a former employee in Brookhaven's Biology Department, and a long-time user of Brookhaven's National Synchrotron Light Source (NSLS), and Thomas A. Steitz of Yale University, also a long-time NSLS user, shared the prize with Ada E. Yonath of the Weizmann Institute of Science for studying the structure and function of the ribosome.

2003 Roderick MacKinnon

Roderick MacKinnon, M.D., a visiting researcher at Brookhaven National Laboratory, won one half of the 2003 Nobel Prize in Chemistry for work explaining how a class of proteins helps to generate nerve impulses—the electrical activity that underlies all movement, sensation, and perhaps even thought.

2002 Raymond Davis Jr.

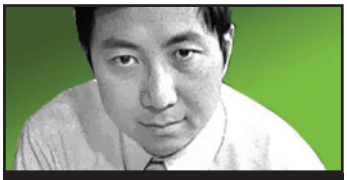
Raymond Davis Jr., a chemist at Brookhaven National Laboratory, won the 2002 Nobel Prize in Physics for detecting solar neutrinos—ghostlike particles produced in the nuclear reactions that power the sun. Davis shared the prize with Masatoshi Koshiba of Japan, and Riccardo Giacconi of the U.S.

1988
Lederman, Schwartz, Steinberger

Leon Lederman, Melvin Schwartz and Jack Steinberger received the 1988 Physics prize for their 1962 discovery of the muon-neutrino. At the time, only the electron-neutrino was known. Using Brookhaven's Alternating Gradient Synchrotron, they detected a new type of the ghostlike particles that pass through everything.

1980 Fitch and Cronin

The 1980 Physics Nobel Prize was awarded to James W. Cronin and Val L. Fitch, both then of Princeton University, whose 1963 experiment at Brookhaven's Alternating Gradient Synchrotron discovered a flaw in physics' central belief that the universe is symmetrical. They discovered the phenomenon known as "CP violation."



1976 Samuel C.C. Ting

The 1976 Nobel Prize in Physics was shared by a Massachusetts Institute of Technology researcher who used Brookhaven's Alternating Gradient Synchrotron to discover a new particle and confirm the existence of the charmed quark. Samuel C.C. Ting was credited for finding what he called the "J" particle, the same particle as the "psi" found at nearly the same time by Burton Richter.

1957 C.N. Yang, T.D. Lee

In 1957, T. D. Lee, of Columbia University, and C. N. Yang, then of Brookhaven, interpreted results of particle decay experiments at Brookhaven's Cosmotron Particle Accelerator. They discovered particles that had the same masses, lifetimes, and scattering behaviors, but decayed differently, proving that the fundamental and supposedly absolute law of parity conservation can be violated.

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