

SLAC Press Release

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Stanford to receive \$7.5 million gift for particle astrophysics and cosmology institute
Physicist Fred Kavli and the Kavli Foundation have pledged \$7.5 million to establish an institute that will focus on recent developments in astrophysics, high-energy physics and cosmology. The Kavli Institute for Particle Astrophysics and Cosmology will foster collaboration between faculty from Stanford's Physics and Applied Physics departments, and the Stanford Linear Accelerator Center (SLAC), which is operated by Stanford for the U.S. Department of Energy (DOE). A gift pledged by Pehong and Adele Chen in 2001 will be used to name and endow the directorship of the center.

"The research made possible by the gift of Fred Kavli will put Stanford on the frontier of inquiry in this fascinating area of science," said university President John Hennessy. "The institute will bring together some of the brightest minds in particle astrophysics and cosmology and underscores the long tradition of collaboration between the university and SLAC. Working with the Department of Energy, NASA and the National Science Foundation, we expect great things to happen, and we are grateful to Mr. Kavli for his vision and support."

The institute's focal point, a 25,000 square-foot building on the SLAC site that includes workspace for 90 people, laboratory space and an auditorium, will be completed in 2005. The building will be named for Kavli.

Astrophysicist Roger Blandford will serve as director of the institute and will be the first holder of the Pehong and Adele Chen Chair of Particle Astrophysics and Cosmology. Steven Kahn, a physics professor at Columbia University, will move to Stanford to be the institute's deputy director and will serve as assistant director of research at SLAC. Blandford and Kahn will have joint faculty appointments at SLAC and in Stanford's Department of Physics. Their appointments will be effective in the fall of 2003.

"The Kavli Institute for Particle Astrophysics and Cosmology adds new scope to SLAC's internationally recognized research programs," said SLAC Director Jonathan Dorfan.

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“Roger Blandford and Steve Kahn are the ‘dream team’ to launch Stanford’s Kavli Institute. Their combination of scientific accomplishment and demonstrated leadership within academia and within the field of particle astrophysics and cosmology ensures an exciting and highly productive future for the institute.”

Kavli is the founder, former chairman and chief executive officer of the Moorpark, Calif.-based Kavlico Corp., one of the world’s largest suppliers of sensors for aeronautics, automotive and industrial applications. He led the company to prominence before selling it two years ago. He subsequently established the Oxnard, Calif.-based Kavli Foundation and the Kavli Institute. The Kavli Foundation sponsors research in cosmology, nanoscience and brain science.

“I am very pleased to help sponsor the Kavli Particle Astrophysics and Cosmology Institute since I believe that with the resources of Stanford University and SLAC and under the expert leadership of Roger Blandford and Steven Kahn, we will expand our knowledge and make new discoveries,” said Kavli. “The merging of expertise and resources in particle physics, astrophysics and cosmology has exciting future potential.”

Physics at the smallest scales as studied at particle physics accelerators, at the largest scales as studied using the universe as a laboratory, and in the most extreme environments of Supernovae and Gamma Ray bursts, all seem to coalesce. Particle astrophysics is thus in a pivotal position. Waiting to be explored are questions that could radically change our understanding of the Universe: What powered the Big Bang? What is the role of dark matter in binding the Universe together? What are the dynamics of black holes? Are there hidden space-time dimensions?

“The investment Stanford University is making in this newly developing exciting field, and their decision to locate the new institute at SLAC, will benefit not only the laboratory but all of science,” said Dr. Raymond L. Orbach, director of the U.S. Department of Energy’s Office of Science, which oversees SLAC. “This forefront field is of enormous intellectual and scientific importance, and the Office of Science is privileged to be associated with this initiative. Our thanks go to Stanford University, the Kavli Foundation and the Chen family for making all this happen.”

Blandford earned his doctorate at Cambridge and for more than 25 years has been a professor at Caltech, where he specializes in high-energy astrophysics and cosmology. He is a fellow of the American Academy of Arts and Sciences and a fellow of the Royal Society. He received the Helen B. Warner Prize of the American Astronomical Society in 1982, the Dannie Heineman Prize of the American Astronomical Society in 1998 and the Eddington Medal of the Royal Astronomical Society in 1999. He has been instrumental in designing roadmaps for the future of national astrophysics and cosmology programs.

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“This is an exciting time in cosmology and particle astrophysics. New observational discoveries about the universe are challenging our understanding of basic physics,” Blandford said. “I am very grateful to the Kavli Foundation for its vision and generosity, and I look forward to working with the Stanford community to create an intellectually vibrant center that will bring physicists and astronomers together to address these challenges.”

Kahn earned his doctorate at the University of California-Berkeley and did postdoctoral work at Harvard. He was on the faculty at Berkeley before going to Columbia, where he recently served as chair of the Physics Department. He has a broad range of research experience in observational and in laboratory astrophysics.

“The fields of particle astrophysics and cosmology have yielded remarkable and surprising discoveries over the last few years. It is a perfect time to inaugurate a dedicated institute to capitalize on these advances. The environment at SLAC and Stanford is ideal. The new institute should be well positioned to harness a diverse array of relevant scientific and technical capabilities that are already present at these institutions.”

The current chair of the Stanford Physics Department, Doug Osheroff, and his predecessor, Steve Chu, both Nobel laureates, see the institute as a key step in continuing Stanford’s tradition of groundbreaking research.

“This is the most exciting thing that has happened to physics at Stanford in the past 15 years, and that includes four Nobel Prizes in a row,” said Osheroff. “This new institute will serve as a catalyst, focusing both new and existing expertise at SLAC and on campus to work on some of the most challenging questions of our time. In addition, we could not have attracted two better scientists to lead in this effort.”

“One of the most exciting frontiers of physics lies in the exploration of the very small and the very large,” Chu said. “The Kavli Institute for Particle Astrophysics and Cosmology will provide a fertile environment for our researchers to study how physics at the smallest scales affects the largest scales of the universe. With the generous support of Fred Kavli and the Kavli Foundation, Pehong and Adele Chen, and the recruitment of two stellar physicists, Roger Blandford and Steve Kahn, we are off to a fantastic start. I anticipate this institute will generate extraordinary breakthroughs.”

Relevant Web URLs:

Photos: <http://www.slac.stanford.edu/slac/media-info/20030115/photos.html>

Kavli Foundation:

<http://www.kavlifoundation.org/index.html>

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SLAC:

<http://www.slac.stanford.edu/>

Stanford University Department of Physics:

<http://www.stanford.edu/dept/physics/index.shtml>

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