Stanford Linear Accelerator Center

XXI International Symposium on Lepton and Photon Interactions at High Energies

SLAC Particle Astrophysics

Astronomers and physicists will be working together increasingly on everything from equations to electronics.

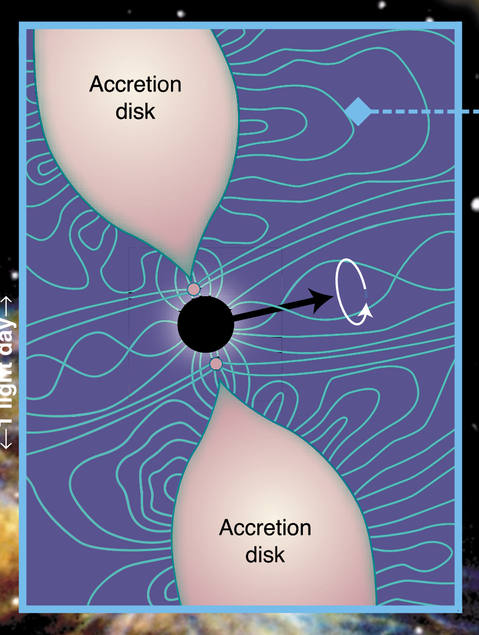
Gamma-ray Large Area Space Telescope

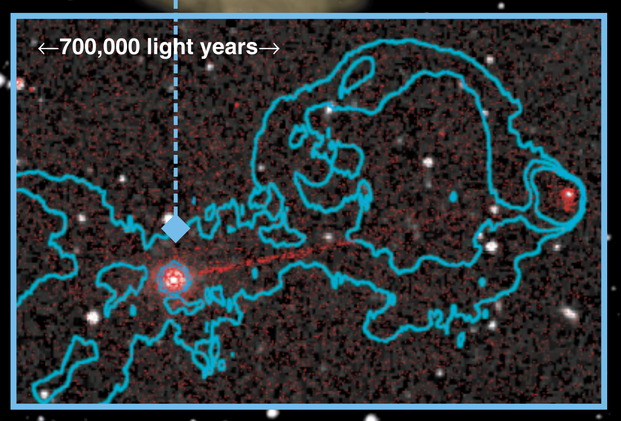
GLAST is a space observatory that will bring unprecedented clarity to a Universe invisible to our eyes yet, quite literally, all around us. The satellite will explore the interplay between gravitation and quantum physics of super massive black holes, neutron stars, and gamma-ray bursts. GLAST will observe gamma-ray quasars, probe the star formation history of the Universe, and explore the physics of dark matter.
Launch date is scheduled for late 2006.

Kavli Institute for Particle Astrophysics and Cosmology

Historically astronomers and physicists have worked in quite different ways. Physicists are used to designing active experiments, while astronomers are used to performing passive observations. The present time represents an extraordinary opportunity to build a facility capitalizing on the rich scientific heritages of astronomy and particle physics, and the complementary strengths that they bring to the emerging science at their interface. The new Kavli Institute for Particle Astrophysics and Cosmology (KIPAC) will be located in a new building at the Stanford Linear Accelerator Center (SLAC), and will open its doors in 2005. The Kavli program will follow a balanced growth plan with theory, computational astrophysics and phenomenology on one hand, and experimental astrophysics and high-energy observing on the other. We will draw upon existing strengths at Stanford in theoretical (especially high-energy) physics and astrophysics, gamma-ray and X-ray astronomy, gravitational physics, microwave background instrumentation and underground physics. Part of the excitement of the field is that it is impossible to predict where it will be in five years' time and what its scientific focus will be. What is clear is that the time is right to build a world-class center.

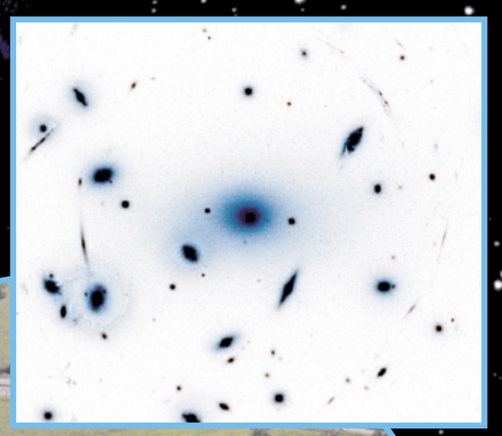
GLAST





At the center of an active galaxy lies a monster: a supermassive black hole. Some black holes can form jets of matter and energy that stream outward like huge linear accelerators in the sky. GLAST will observe thousands of such sources.

Measurements of strong gravitational lenses will yield crucial information on the geometry and expansion of the universe.



KIPAC

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. Completion date scheduled for 2005.

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