Welcome!

LINAC: Linear Accelerator
It has driven SLAC science for 50 years
DOE pays Stanford $1 per year to lease 426 acres of land

240 Universities worldwide use our resources
1,600 Employees from 36 Countries
  - 205 Postdocs and Grad Students; 3,100 Facility Users & Visiting Scientists
142 Buildings
1,000 Scientific Papers published each year in peer-reviewed journals
6 Scientists awarded the Nobel Prize for work done at SLAC
1st North American Website
$400,000,000 Budget (10% of this goes for energy consumption)
Nobel Prizes

Physics, 1976
Pioneering experimental contributions to lepton physics.
Burton Richter
Samuel C.C. Ting

Richard E. Taylor
Jerome I. Friedman
Henry W. Kendall

Physics, 1990
Deep inelastic scattering of electrons on protons and bound neutrons. Essential for the development of the quark model.
Martin L. Perl
Frederick Reines

Physics, 1995
Discovery of the tau lepton.
Yoichiro Nambu
Makoto Kobayashi
Toshihide Maskawa

Roger Kornberg

Chemistry, 2006
Studies of the molecular basis of eukaryotic transcription.
Ada Yonath

Chemistry, 2009
Studies of the structure and function of the ribosome, foundation studies at SSRL.

Yoichiro Nambu, Makoto Kobayashi, Toshihide Maskawa

Richard E. Taylor
Jerome I. Friedman
Henry W. Kendall

Roger Kornberg
Ada Yonath

Yoichiro Nambu, Makoto Kobayashi, Toshihide Maskawa
Our programs explore the ultimate structure and dynamics of matter and the properties of energy, space and time - at the smallest and largest scales, in the fastest processes and at the highest energies - through robust scientific programs, excellent accelerator based user facilities and valuable partnerships.

- Build and operate world leading Photon Science Facilities-LCLS (LINAC Coherent Light Source) and SSRL (Stanford Synchrotron Radiation Lightsource)
- Perform world leading science at these facilities
- Maintain our position as the premier accelerator laboratory
- Strategic programs in particle physics, particle astrophysics and cosmology
What happened from actualizing this mission.....

- Production: 1999-2008
- ~5 PB raw data
- 1 PB database (in 2002)

BABAR is a particle physics experiment designed to study some of the most fundamental questions about the universe by exploring its basic constituents - elementary particles.

http://www-public.slac.stanford.edu/babar/
The LSST is a new kind of telescope. With a light-gathering power among the largest in the world, it can detect faint objects with short exposures.
Goals for the XLDB Conference
Exchange Information

Identify trends, commonalities and major roadblocks related to building extremely large data stores
Bridges

Bridge the gap between users trying to build extremely large data stores and solution providers worldwide
Development & Growth

Facilitate development and growth of practical technologies for extremely large data stores
PRACTICAL SOLUTIONS: Our Recipe for XLDB Events

• Ingredients
  • Big science
  • Data-intensive industries
  • Vendors
  • Academia

• Directions
  1. Mix together
  2. Repeat yearly