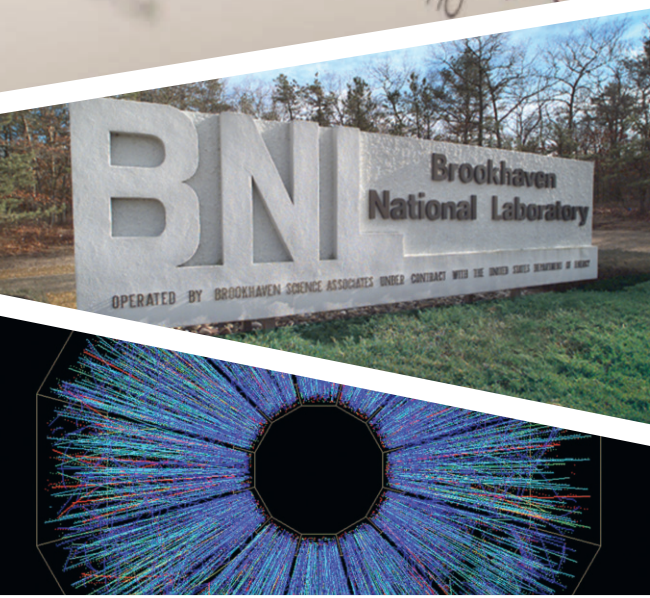
A VERY SPECIAL INVITATION

Exploring Research Opportunities for Stony Brook's Undergraduates at

BROOKHAVEN NATIONAL LABORATORY

FRIDAY, APRIL 4, 2014



Stony Brook University

SPACE IS LIMITED!

RSVP as soon as possible at

stonybrook.edu/admissions/bnl

Registration Deadline
Friday, March 21, 2014

When completing the RSVP for this program, you will be asked to indicate your preference for Tour A, Tour B or Tour C — as well as the number of guests attending with you. The earlier you register, the better able we will be to accommodate your preference. You may be accompanied by no more than two guests (parents or guardians). You also will need to provide your Stony Brook ID number.

We will not be able to accommodate anyone who does not RSVP or who arrives after our buses leave Stony Brook University. Please ensure that you and your guests arrive at Stony Brook University by 10:30 am to board your bus in a timely fashion.

Note: Stony Brook's Admitted Student Day will be held on April 5. You are encouraged to attend Admitted Student Day to learn about all that Stony Brook has to offer.

Photo ID Required

All visitors to BNL age 16 and older (including you and your guests) must bring a photo ID to comply with security requirements. Photo IDs may include a driver's license, photo library card, photo student ID card, passport or other pertinent documents.

Attire Requirements

Guests will tour actual research facilities. For safety, all visitors must wear flat, closed-toe shoes and long pants.

Security Requirements

You are required to travel to BNL with your Stony Brook University tour bus and show your photo ID upon entering.

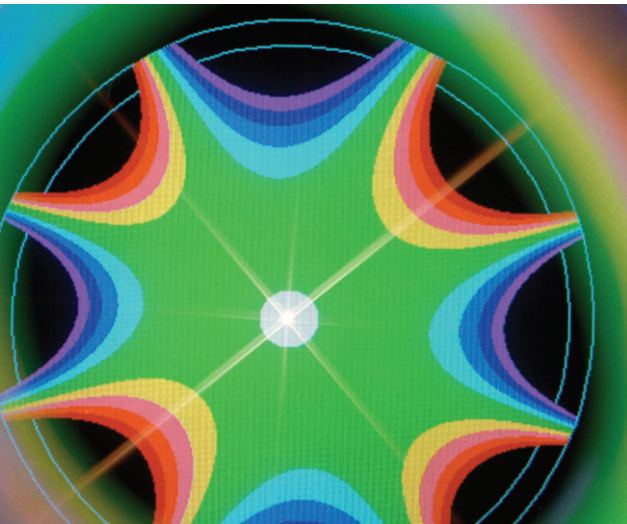
Guests of BNL must comply with security requirements. No one will be allowed into BNL without clearance at the security gate.

DIRECTIONS TO STONY BROOK UNIVERSITY

The program will begin and conclude at Stony Brook University, situated on the North Shore of Long Island. We are approximately 60 miles east of New York City.

By car, take the Long Island Expressway (LIE, I-495) to exit 62 and follow Nicolls Road (Route 97) north for nine miles. The main entrance to the University is on the left. To find the campus via GPS, enter the address "100 Nicolls Road, Stony Brook, NY 11790."

If you will be traveling by train, ferry or air, please visit ***stonybrook.edu/directions***.

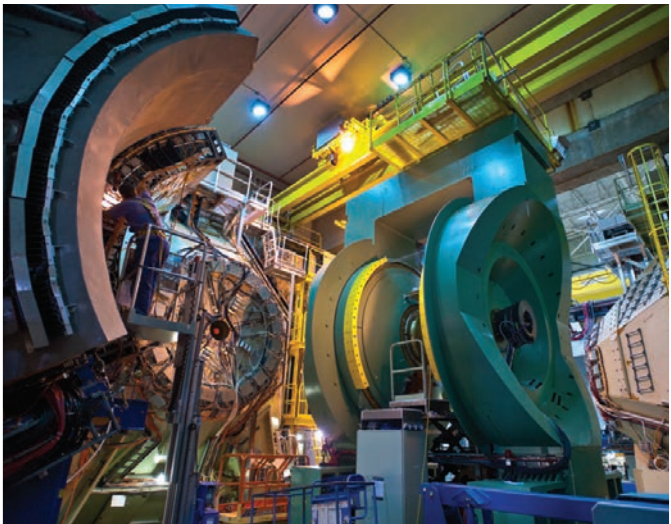


Program Overview: Friday, April 4, 2014

Brookhaven National Laboratory Tour
We are pleased to offer this unique opportunity to a very select group of our admitted students with interests in the sciences, engineering and mathematics. Because of the restricted nature of this event, an RSVP is required. We hope you will be able to join us for what promises to be a rich and rewarding day. **Note: The program will begin and conclude at Stony Brook University.**

10:30 am	Arrive at Stony Brook University's Charles B. Wang Center. Proceed to the Lower Level to register and receive your bus assignment.
10:45 am	Poster presentation. Lunch will be served.
12:00 pm	Depart with your bus group for the trip to Brookhaven National Laboratory (BNL).
12:45 pm	Arrive at Berkner Hall for a welcome.
1:30 pm	Depart with your bus group to tour BNL's labs.
3:40 pm	Refreshments and departure.

To RSVP go to
stonybrook.edu/admissions/bnl



Tour A

Center for Functional Nanomaterials

CFN provides scientists with cutting-edge tools to fabricate new materials and microscopy at the single atom level to study their properties. Nanomaterials (clumps of dozens to hundreds of atoms) offer different chemical and physical properties than bulk materials, and have the potential to form the basis of new technologies. Materials are being produced that have promise for alternative energy technology and next-generation nanoscale electronics.

National Synchrotron Light Source II

NSLS-II is a new state-of-the-art, medium-energy electron storage ring that will produce x-rays more than 10,000 times brighter than the current National Synchrotron Light Source. Research at NSLS-II will focus on some of our most important challenges at the nanoscale, including the National Institutes of Health structural genomics initiative. The facility will be a key resource for analysis of new materials that are expected to transform the nation's energy future.

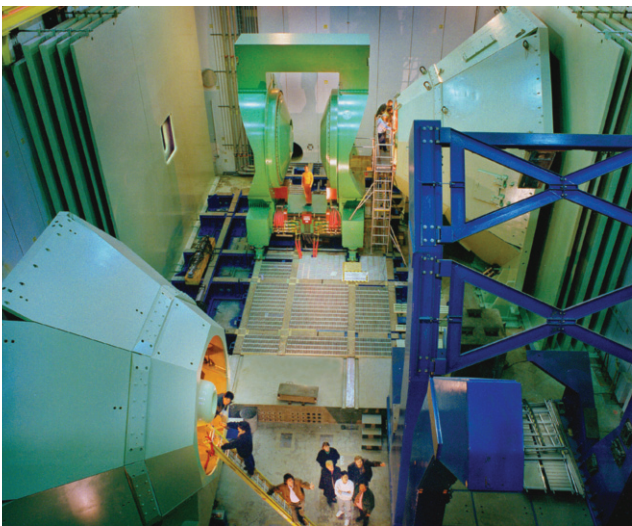
Tour B

PHENIX

The $200 million Pioneering High Energy Nuclear Interaction eXperiment at the Relativistic Heavy Ion Collider — the world's premier facility for studying very high energy collisions of nuclei from hydrogen to gold — is designed specifically to detect subatomic particles such as electrons, muons and photons that emanate from the collisions. The primary goal of PHENIX was to recreate and study the Quark-Gluon Plasma, a state of matter that existed just millionths of a second after the Big Bang. PHENIX is a collaboration of hundreds of physicists from around the world led by Stony Brook Professor Barbara Jacak.

Superconducting Magnet Division

The Superconducting Magnet Division develops superconducting magnets for use in both particle accelerators and experimental facilities. Scientists and engineers provide and develop superconducting technologies. Capabilities include superconductor materials development, magnetic structure design, superconducting magnet fabrication, vertical and horizontal cryogenic testing and magnetic field measurements.



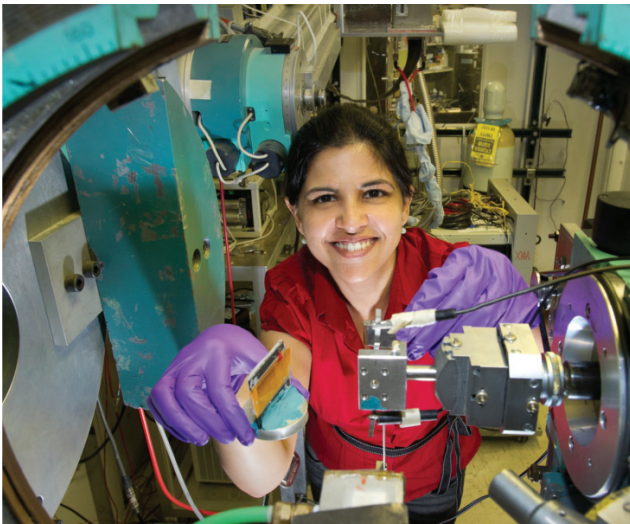
Tour C

National Synchrotron Light Source

NSLS is one of the world's most widely used scientific facilities. It is an accelerator designed specifically to produce synchrotron radiation that can be used to probe the fine structure of matter. Every year 2,100 researchers from 400 universities, government laboratories and companies use its bright beams of x-rays, ultraviolet light and infrared light for research in such diverse fields as biology and medicine, chemistry and environmental sciences, physics and materials science. Three Nobel Prizes have been won recently for work at the NSLS.

Environmental Research and Technology (ERT)

BNL is a world leader in the use of tracer gases to study airflow. A recent team of scientists and interns conducted the largest study ever done to understand the risks posed by airborne contaminants released in a dense, complex urban environment. ERT Division Head Paul Kalb gives an interesting account of the science, technology and manpower used to collect more than 7,500 samples from the busy summer streets and subways of New York City.



Brookhaven National Laboratory

Here are a few of the achievements, discoveries, inventions and innovations of BNL scientists in the past 50 years:

- Seven Nobel Prizes: five in physics and two in chemistry
- Courant-Snyder strong-focusing principle, critical to the design of all modern particle accelerators
- The Green-Chasman lattice, a design for electron storage rings that was first implemented at BNL's National Synchrotron Light Source and since adopted by many of the world's synchrotron radiation facilities
- Theories and experiments to determine the mechanisms underlying high-temperature superconductors
- Study of the effects of radiation on biological systems, important to cancer treatment and prevention and to human space travel
- A way to produce vast quantities of gene products, using a virus known as T7
- Development of fluoro-2-deoxy-D-glucose, or FDG-18, now used in nearly every clinical positron emission tomography scan done in hospitals around the world
- Important studies of the brain, including those uncovering the roots of psychiatric disorders, brain metabolism and drug addiction
- Large-scale studies of the effect of increased carbon dioxide on ecosystems
- At BNL's Relativistic Heavy Ion Collider, discovery of a perfect liquid — a type of matter thought by scientists to have existed microseconds after the Big Bang