

# BNL Physics Dept. Safety Introduction

Achim Franz

ES&H – LEC - Training Coordinator (Erica Lamar)

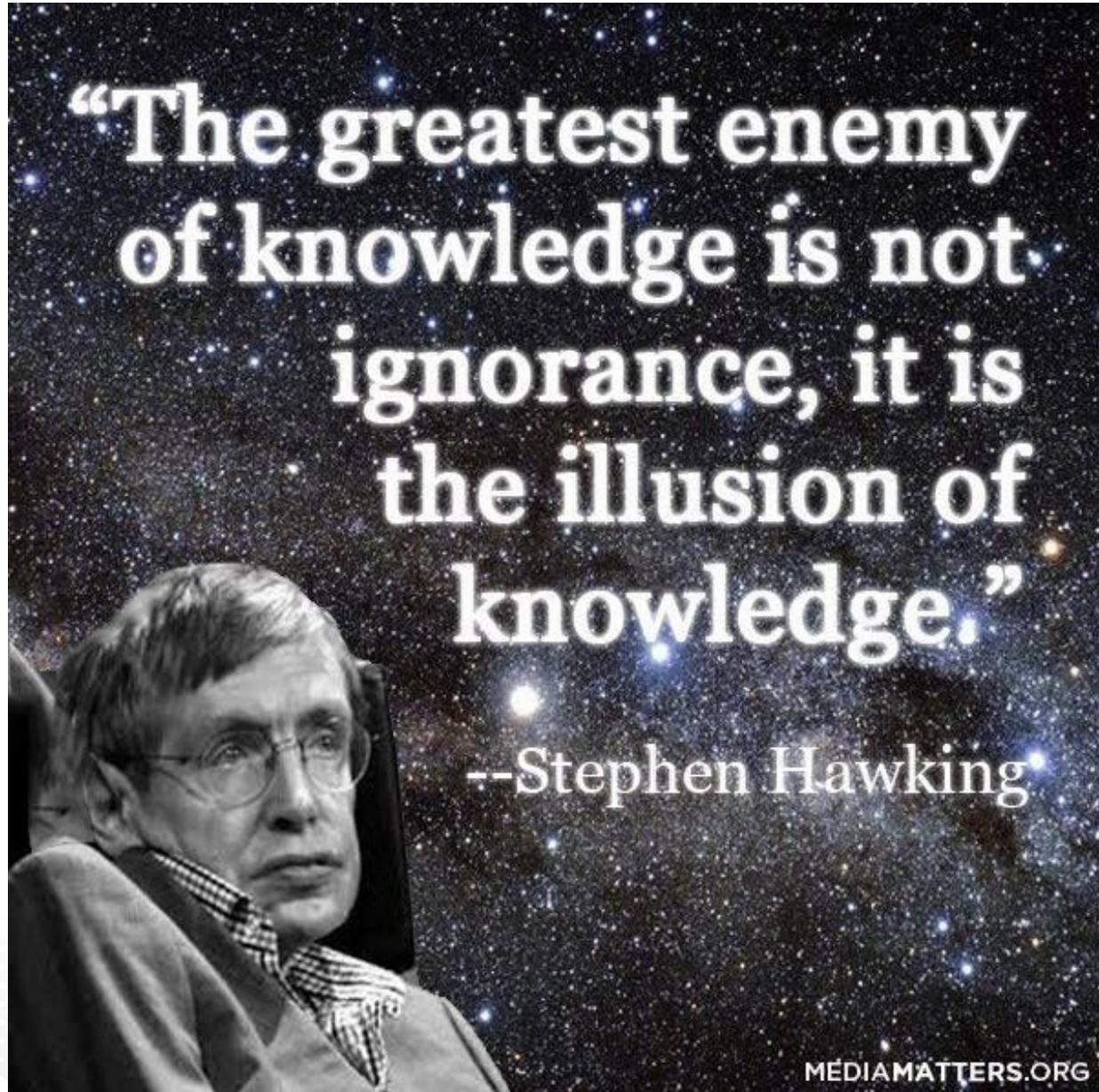
2020

**BROOKHAVEN**  
NATIONAL LABORATORY

 U.S. DEPARTMENT OF  
**ENERGY**

# Welcome

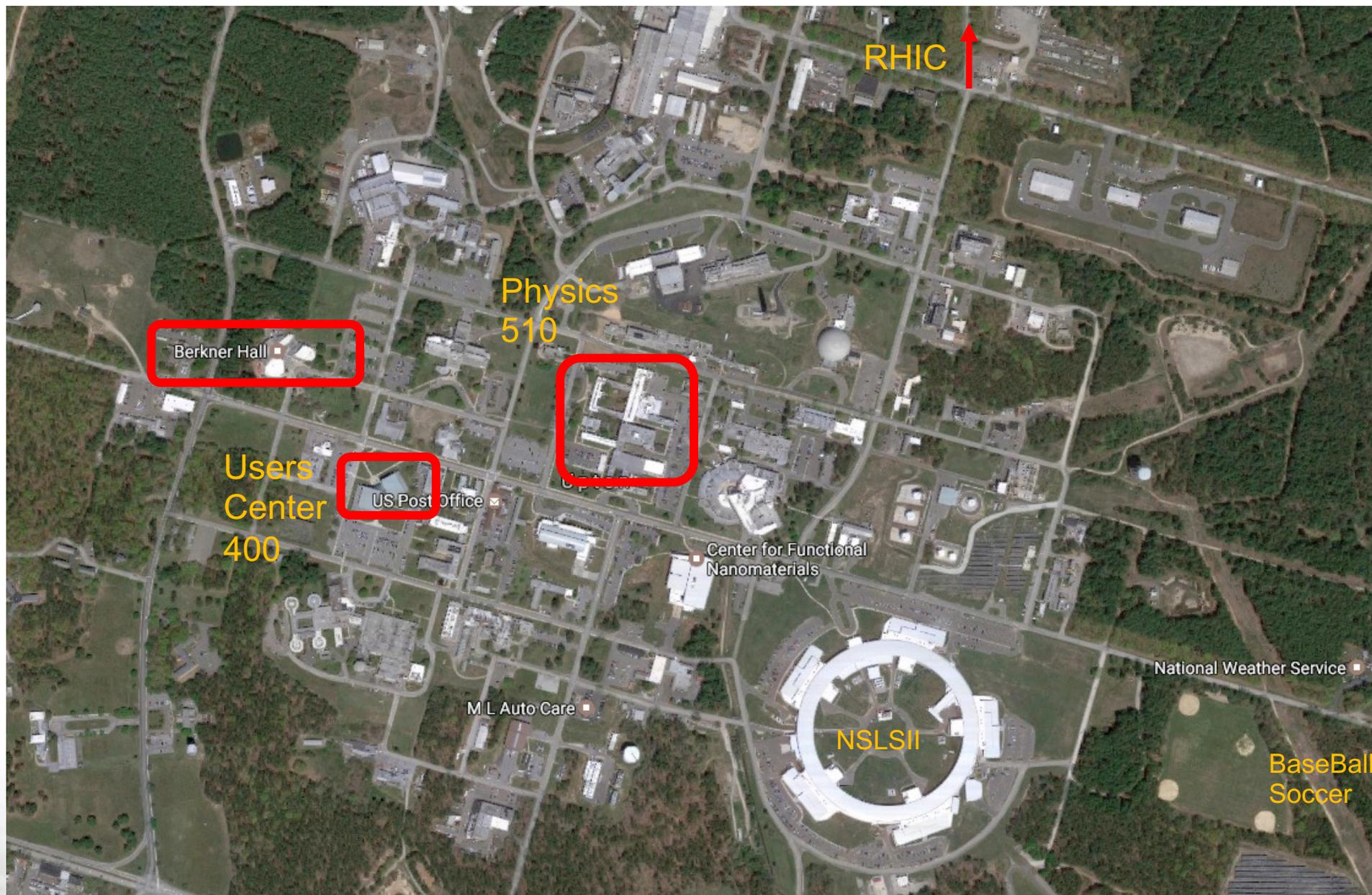
- Learn, meet new people, work, and most of all be safe
- Make yourself familiar with the area, fire alarms, phone, ALL the exits, 510 is a large building ...
- Know what to do in an emergency
  
- There are no stupid questions, only stupid answers
- If you think your question is too stupid to ask, most of the others have the same thought
  
- Always wear the right gear, PPE, training
- Limit work alone, specially off hours, and not in a lab, check with your supervisor



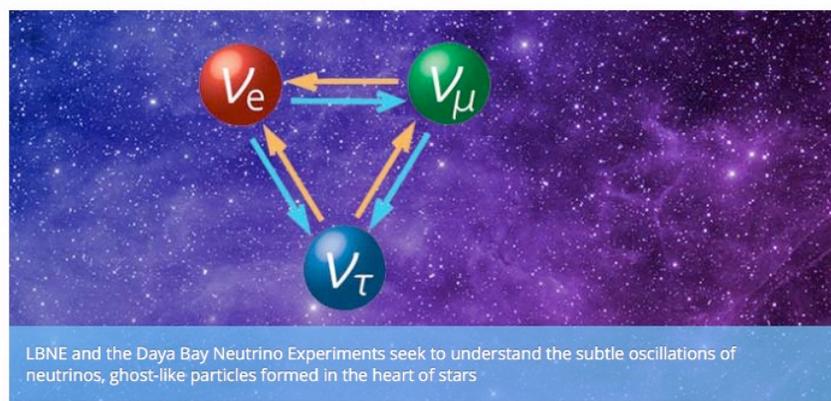
“The greatest enemy  
of knowledge is not  
ignorance, it is  
the illusion of  
knowledge.”

--Stephen Hawking

MEDIAMATTERS.ORG



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- Physics News [See all](#)
- Kick-off for the 2017 LHC physics season
  - Patchogue-Medford High School Student Builds a Remote Sensing System for ATLAS Detector Components
  - Low-Energy RHIC Electron Cooling Gets Green Light, Literally

[Physics Dept.](#)

- Dept. Directory**
- Org Chart (PDF)
- Committee Members
- Event Calendar

Department Groups | **Physics Experiments**

**Nuclear Physics**

[PHENIX](#)

Responsible for the operation and physics exploitation of the PHENIX experiment at RHIC.

[STAR](#)

Responsible for the operation and physics exploitation of the STAR experiment at RHIC.

[RHIC Spin](#)

Leads, supports, and provides for the common

**High-Energy Physics**

[Cosmology & Astrophysics](#)

Solving problems in observational cosmology: how to measure and constrain properties of dark matter, dark energy and the standard cosmological model.

[Electronic Detector](#)

Studies very rare processes at the Intensity Frontier.

**Announcements**

No announcements at this time.

**Seminars & Colloquia**

- Colloquia**
- Nuclear
- High-Energy

**Physics Colloquium**  
 "Science policy in DC - How we got the government we have, and why scientists should care"  
 Presented by Ben Tannenbaum, Sandia  
 3:30 pm, Large Seminar Room, Bldg. 510

[Particle Phys Seminars](#) | [Colloquium Pg](#) | [Archive](#)  
[Nuclear Phys Seminars](#)

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[Home](#)

[New search](#)

## Search the BNL Physics Department Directory

You can search for an individual or for a Group within the Department. To search for an individual, select to search on either the first or last name. Enter all or part of the name (the search is not case sensitive) in the search box and then click on the "Find individual" button.

To search for members of a Group in the Department, select the Group from the menu and then click on the "Find Group" button.

Search on

Last Name 

Include inactive people

[Find individual](#)

Select a Group:

None 

[Find Group](#)

## Physics Building Floorplans

[First floor](#)

[Second floor](#)

[Third floor](#)

[Physics Directory](#)

[Example floorplan](#)

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search  
   
[Find People](#)

[Physics Safety Home](#)

## General Information

[Physics Department Rules Everyone Must Know](#)

[Department Safety Policies](#)

[Local Emergency Plans](#)

## Environmental Management System (EMS)

[EMS Web Pages](#)

[Information & Aspects \(pdf\)](#)

## (ESRs)

[Experiment Safety Review](#)

## Contacts

[Department ESSH Committee](#)

[Group Safety Coordinators](#)

## Other Information

[Work Permits](#)

[Self-Assessment Program](#)

[Ergonomics](#)

[2017 Tier I Schedule \(pdf\)](#)

[Incidents](#)

[Memoranda of Understanding](#)

[New Employee/Guest Form](#)

[Physics OHSAS 18001](#)

[Training for Conference Attendees \(pdf\)](#)

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## Physics Department Safety & Training Office

**Mission Statement** - The Safety & Training Office supports research and operations in the Physics Department by providing assistance and coordination in the implementation of Laboratory policy on:

- Health and Safety Requirements
- Environmental Compliance
- Radiological Protection
- Integrated Safety Management
- Work Planning & Control for Experiments & Operations
- Facility Management
- Self Assessment



This Office is committed to: ensuring that all staff have a safe and healthy working environment; protecting the general public and the environment from unacceptable environmental, safety and health risks; and operating in a manner that protects the environment by applying pollution prevention techniques to Department activities.

For further information contact the Safety & Training Office, Room 1-45, ext. 2585. Specific requirements can be found in the [SBMS web pages](#). Training information and web-based courses are available at the [Training Web Site](#).

[Return to Physics Department](#)



Last Modified: May 31, 2016

Please forward all questions about this site to: [Erica Lamar](#)

All work at BNL is covered by work permits and Experimental Safety Reviews ([ESR](#)). If you work in a lab you need to read and sign the ESR, and take all required training.

## Fire Alarm

**If there is any indication of danger (signs of smoke, flames, etc.) you should evacuate immediately.**

If a fire alarm sounds in your area and you are in imminent danger (visible smoke, flames, etc.) **evacuate immediately.**

If there are no signs of imminent danger:

- Terminate any phone calls or conversations that you are having; they are not more important than your safety.
- Activate the screen saver on your computer(s), e.g. Windows: [Window-key]-L; LINUX: Ctrl-Alt-L.
- Take your keys, cell phone, personal belongings, jacket, laptop, iPad, etc. with you. It may be hours or even days before you can get back into the building.
- Close, but do **not** lock your door.
- Exit the building by the **NEAREST SAFE** exit.
- Proceed to the **outdoor assembly** area and report to the person(s) responsible for personnel accountability (your group admin).
- Do not leave the assembly area until directed to do so by the Local Emergency Coordinator (LEC) or Fire Captain.
- Do not enter any building that has alarms sounding.

**The outdoor assembly area in building 510 is the front lawn west of the main entrance. The alternate location is the lawn further west, between buildings 510 and 555 (Chemistry – up the hill).**

If you can hear a fire alarm, but it is not alarming in your area (hallway), you are not required to evacuate, but check with your colleagues.

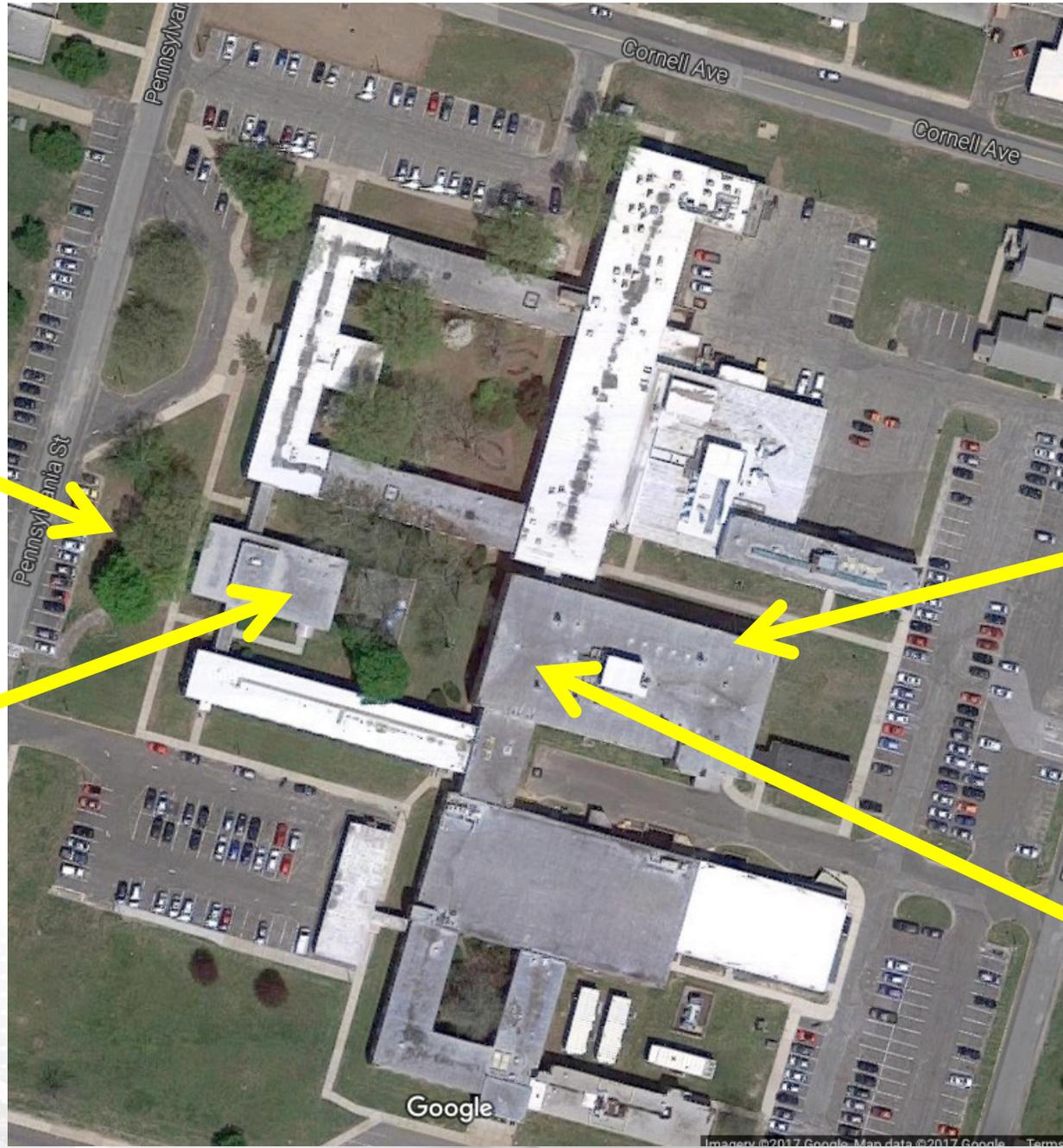
Physics Bldg. 510

Outdoor  
assembly  
area

large  
seminar  
room

3 floor  
Bldg

3.Floor  
assembly  
area



## BNL Sirens

If a **continuous site siren** sounds, report to one of the indoor assembly areas: the **Large Seminar Room or 510-3-209B**.

If you are not in a building, go to the nearest building. [Emergency information](#) is communicated through the IP telephone system ([PENS](#)).

If an **intermittent site siren** sounds, evacuate the site.

The site siren is tested each Monday around noon. PENS is tested on the first Monday of each month.

### More:

- **An Automatic External Defibrillator (AED) is located at the main entrance.**
- The LEC is: A. Franz (x4750) with M. Lenz (x5423) and R. Burns(x3745) as the alternates. In their absence, the highest-level Department manager serves as the LEC.
- A [one-page summary of the Local Emergency Plan](#) is posted throughout the building.
- The full [Local Emergency Plan](#) is available on the Physics Department web pages.
- **Remember: 510 is in the BNL - GREEN ZONE ([Protective Action Zone](#)).**
- The [Everbridge Emergency Mass Notification System](#) will allow Office of Emergency Management (OEM) to distribute emergency and non-emergency messages via email, text, cell, home, and office phones, and is similar to the "reverse 911" systems used by many local communities and school districts.

See also: [What to do in an emergency](#)

### Wi-Fi

BNL offers apart from "Corus" also "[EduRoam](#)". With Corus you have to register your device and the network is not encrypted. EduRoam will not require registration and is available at many other Universities and airports.

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**LOCAL EMERGENCY PLAN – BUILDING #** 510, Rev. 12.0

**Zone and Complex:** GREEN ZONE, CENTRAL COMPLEX

Position	Name	Extension	Cell Phone
LEC	A. Franz	4750	631-816-0348
Alt. LEC	M. Lenz	5423	631-645-4769
Alt. LEC	R. Bums	3745	N/A
Facility Project Manager	T. Doyle	7556	516-779-3119
Facility Complex Manager	M. Davis	2165	631-831-5498
ES&H Coordinator	A. Franz	4750	631-816-0348
RSM	A. Franz	4750	631-816-0348

To Report a fire, spill, medical or other emergency,  
**DIAL EXT. 2222 or 911**

If using a cell phone,  
**DIAL 631-344-2222**

If a telephone is not available,  
**USE A FIRE ALARM BOX**

For after-hours building issues, call the Site Supervisor: x4174

**BUILDING INDOOR ASSEMBLY AREA**

LOCATION: **Building 510 Auditorium (LSR)**

**BUILDING SHELTER IN PLACE AREA**

LOCATION: **Building 510 Auditorium (LSR) or Building 510 3-209B Conference Room**

**BUILDING OUTDOOR ASSEMBLY AREA**

LOCATION: **Front Lawn West of Building 510**

**ALTERNATE BUILDING OUTDOOR ASSEMBLY AREA**

LOCATION: **Lawn West of 510, Between Buildings 510 and 555**

**Closest AED's**

LOCATION: **Lobby at the main entrance of Building 510**

[one-page summary of the Local Emergency Plan](#)

The full [Local Emergency Plan](#) is available on the Physics Department web pages.

**510 is in the BNL - GREEN ZONE (Protective Action Zone).**

## Environmental Management System

BNL is registered to the ISO 14001 Environmental Management System ([EMS](#)). Everyone should be aware of this and should understand what they can do to help the Department maintain its registration. For most of us it means reducing waste, disposing of waste properly, recycling, wise use of resources, and being aware of our impact on the environment. More detailed information is on the [Department's EMS web page](#).

One waste disposal issue that impacts nearly everyone is the disposal of spent batteries. Alkaline and Carbon-Zinc batteries should be disposed of by placing them in the regular trash. Other batteries (**Ni-Cd, Li-ion, Lead-Acid, NiMH, Silver-Oxide, etc.**) with hazardous components are disposed of by taking them to the Universal Waste Area in the stockroom (510-1-147).

Waste batteries **MUST** be placed in a closed container that is labeled for the type of battery that you are disposing. If there is no container for your battery type, **bring it to the ESH Coordinator**. Do NOT leave the battery in the area; this is a violation of BNL policy and NYSDEC regulations and can result in a fine to the Department.

## Chemicals

Even if you do not work in a laboratory, you may use chemicals that are tracked by the BNL Chemical Management System ([CMS](#)). A tracked chemical will have a CMS bar code attached to it. If the chemical is used up or otherwise disposed of, a CMS manager must be notified so that the chemical can be removed from the database. **Contact the ESH Coordinator for assistance.**

## **Security:**

The Physics Building (building 510) is unlocked to allow for 24-7 access. Always close and lock your office door at the end of the day, or if you will be away from your office for a length of time. When you are attending a seminar you must lock your door. Your computer(s) must also be password locked when you leave your office. We encourage to label your personal equipment (laptops, disks, radios, ... ) with your name, property verifications are done regularly.

## **Working in Laboratories and Shops**

Any work in laboratories, shops or tech areas requires work planning. For simple tasks, worker planned work is sufficient, but most lab work is covered by an Experiment Safety Review ([ESR](#)) or a Work Permit. Before beginning work, you must read and sign the work document. If there is no document for the proposed work, contact the ESH Coordinator to get the appropriate ESR or Work Permit started. ESRs are maintained, and signed, electronically. There are standing Work Permits for electrical and electronic troubleshooting, crane operation, and use of the machine shop. Before you can perform any work covered by these permits, you must be on the authorized personnel list for the permit.

If your work involves hazards or equipment that is not already listed on the ESR or Work Permit, **contact the ESH Coordinator** before beginning work. The new hazard may require changes to the ESR or Work Permit, and additional controls to maintain a safe work environment.

## **Ergonomics:**

Repetitive stress injuries are a concern for all workers in the Physics Department. There is a link on the Physics Home Page to ergonomic information and a computer workstation evaluation tool. You are encouraged to use this tool as a self-evaluation and to follow up by requesting a personal assessment by one of BNL's experts.

## **Moving furniture:**

Desks and other heavy furniture cannot be moved by Physics personnel. Contact the stockroom manager for help moving furniture.

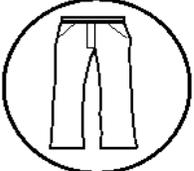
# Injury Precursors

- Distraction/“Multi-tasking” (cell phone use)
- Time pressure (deadlines)
- Fatigue
- Working alone in the lab
- Lack of familiarity with laboratory equipment
- Incomplete understanding of procedures, Experimental Safety Review, or Work Permit
- Incomplete training

➤ ***If in doubt, ask your supervisor***



# Hazard Validation Tool (HVT)

HAZARD INFORMATION PLACARD				
Bldg: 0510.12	Room: 1-142 High Bay	Emergency Contact #:631-344-2222		
Dept: PO Physics Department	NO FOOD OR DRINK ALLOWED NO OPEN FLAME NO SMOKING			
Print Date: 11/13/19 2:31 PM				
PROTECTIVE EQUIPMENT REQUIRED FOR AREA				
Area Designation: Multiple Purpose Laboratory				
 SAFETY GLASSES	 LONG PANTS	 FULLY ENCLOSED SHOE		
CHEMICAL HAZARDS OF THE AREA				
 FLAMMABLE WATER REACTIVE	 CARCINOGEN RESPIRATORY SENSITIZER REPRODUCTIVE TOXICITY	 DERMAL SENSITIZER	 CORROSIVE	 GAS UNDER PRESSURE
 STARTLE HAZARD				
ADDITIONAL HAZARD INFORMATION				
ESR / SWP / RWP / PI: PO-030-2016, PO-042-2015, PO-054-2015 PO-073-2018				
Utility Isolation: Electric: Circuit breakers on all walls Steam: Shut offs above each Trane heater - 12' above floor Master steam shutoff located inside Machine Shop (1-141) on South Wall, East end.				
ADDITIONAL INFORMATION PLACARD				
(Optional Placard provided for line organizations to add information applicable to their operations)				
Primary Contact: Franz, Achim	Work: 4750	Home/Cell: 631-816-0348		
Alternate Contact #1: Doyle, Thomas	Work: 7556	Home/Cell: 516/779-3119		
authorized personnel for electrical work and crane operation is listed on the entrance door				

← Minimum PPE required for entry into the area.

← Hazard symbols for the chemicals in the area.

← Additional information for entry and work.

# Personal Protective Equipment (PPE)

- **ALL** staff members and students are **required** to wear posted PPE, such as safety glasses, lab coats, long pants, and enclosed shoes.
- **Check** HVT placards outside of your work area for Area-based PPE requirements.
- Follow the **Experimental Safety Review(ESR)** requirements for Task-Specific PPE.

ACCEPTABLE	UNACCEPTABLE	WHY?
		Openings in front and back
 <i>Leather or plastic, no cloth fabric surfaces</i>		Openings in front and back
		Openings in front and back
		Heel too high and insufficient coverage in front
		Heel too high and not a closed toe

# PPE Demo Room

The room is located in Building 30  
(Brookhaven Center).

[Short video on the content of the room.]



## **Glasses**

### **Open Wednesday ONLY**

9 a.m.—12:30 p.m., 1:30 p.m.—4:30 p.m.

CLOSED Monday, Tuesday, Thursday, Friday

Prescription safety glasses can be obtained by having your Department or Division Safety Coordinator complete [BNL Form #2211B](#). The signed form must then be submitted to the Safety Glass Representative in Building 30.

A new eye prescription must be submitted every two years. A maximum of one pair of glasses will be issued per year.



## **Shoes**

### **Open Tuesday & Thursday ONLY**

9 a.m.—12:30 p.m., 1:30 p.m.—4:30 p.m.

CLOSED Monday, Wednesday, Friday

Employees requiring safety shoes must have an approved [E-Procurement](#) safety shoe voucher to purchase shoes in the program at no cost. The safety shoe voucher must then be submitted to the Safety Shoe Representative in Building 30. Other shoes are available outside the standard program which may be purchased at the employee's expense.

A maximum of two pairs of shoes will be issued per year.

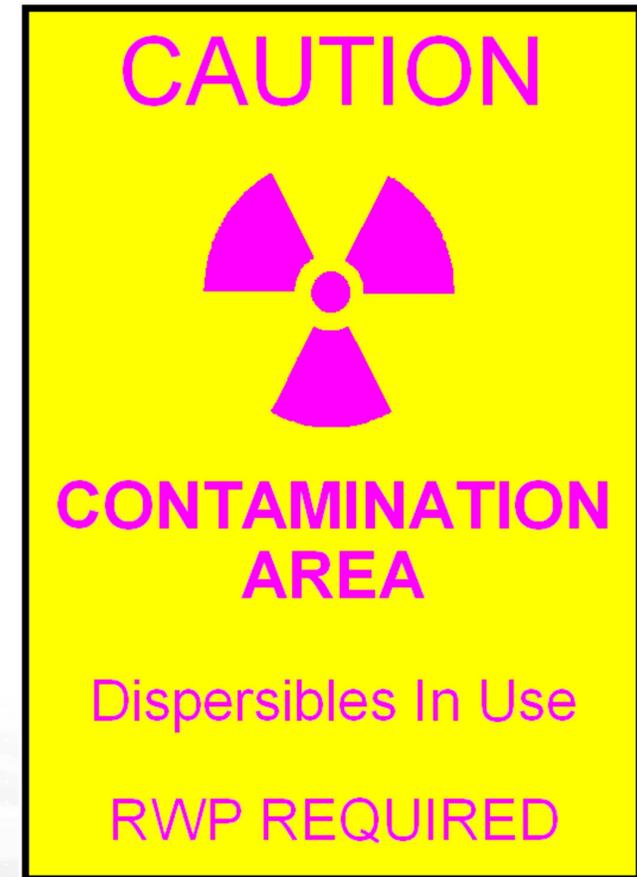
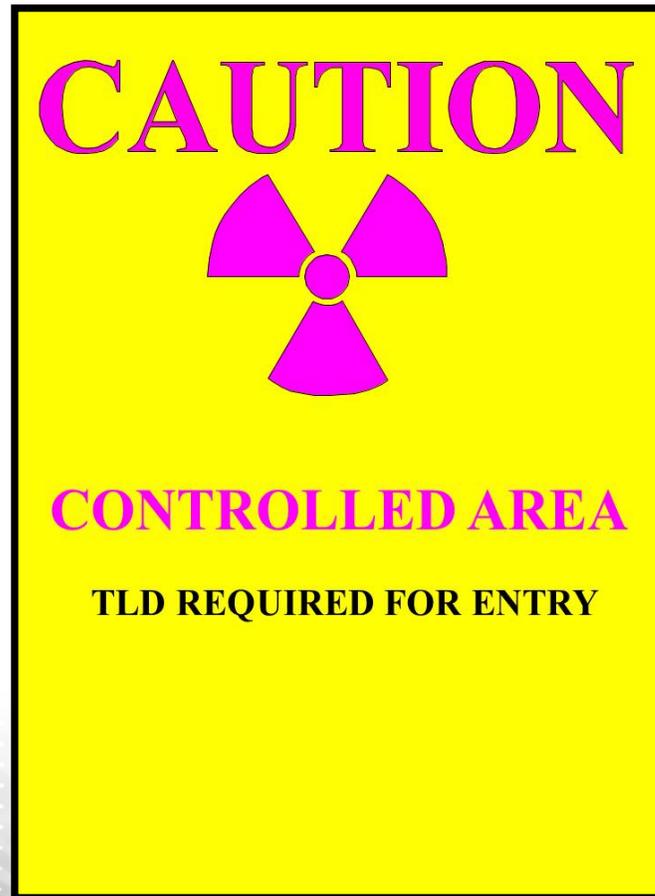
# Barricades & Hazard Postings

- **Do not** cross barricades (tapes, chains, fencing, etc.).
- **Observe** hazard signs for high noise areas, radiation areas, and construction zones.
- **Training** is required for entry into certain areas.
- **Avoid** areas with “Wet Floor” placards; walk carefully when necessary.
- **Stay** out of construction areas.



# Radiological Postings

In order to enter any area with this type of radiological posting, additional training is required:



# Driving at Brookhaven

Brookhaven Lab observes

NYS traffic laws:

- Obey the speed limit: **30 MPH**.
- Come to a **full stop** at stop signs.
- **Slow** down or for slow-moving vehicles (e.g., Kubotas, site maintenance vehicles).
- **Yield** to emergency vehicles.
- **Stop** for pedestrians in crosswalks.
- Use **hands-free** electronic devices.
- ***You could get a ticket for violations.***



# Pedestrian Safety

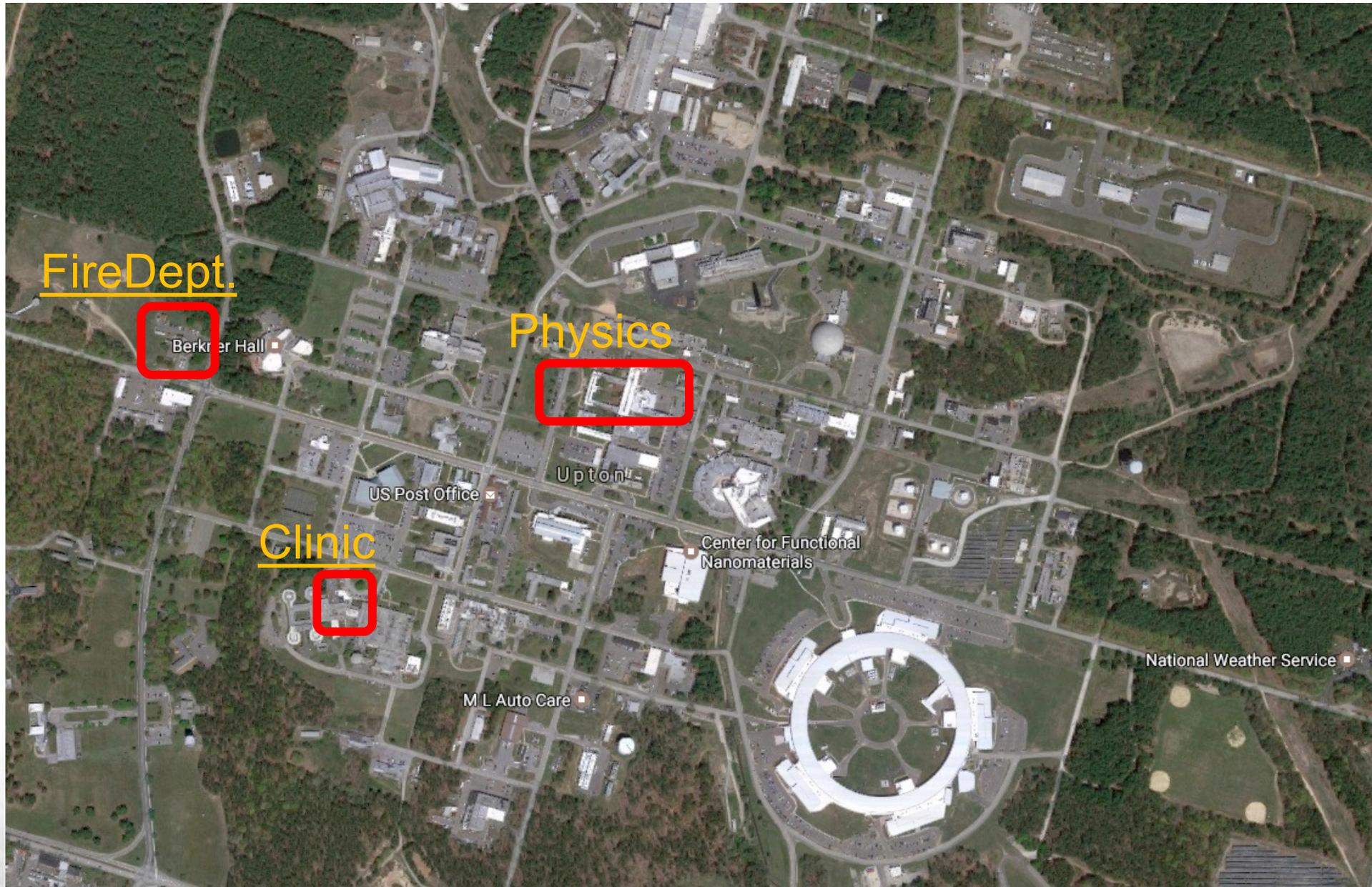
- **Cross** street at marked crosswalks and observe traffic-control signals.
- **Before** crossing in a crosswalk, make sure cars come to a complete stop.
- If you have to cross the street where there is no crosswalk, **yield** to oncoming traffic.
- **Use** the sidewalk when available.
- If no sidewalk is available, **always** walk or jog facing traffic.
- In darkness, at dawn or dusk, wear **reflective gear or bright clothing**.
- **Don't text or email** while you are walking.



# Biking Safety

- **Helmets** are **required** while biking onsite.
  - Order a helmet through your department.
- **Cyclists** are required to obey the same rules as drivers:
  - Follow traffic.
  - Stop at stop signs.
  - Obey red lights.
  - Observe right-of-way rules.
  - No texting or talking on a cell phone while riding.
  - Don't wear headphones in both ears.
- **Use** a light, head lights, and tail lights (NY State Law) and reflective clothing when riding in dusk or darkness.
  - These items are also available through your Department or call [Safety and Health Services](#) at Ext. 4056.
- **Give** pedestrians the right of way in crosswalks.
- **Don't** ride on sidewalks.
- **Be alert** for road hazards such as potholes, drains, and construction sites.





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# Recreational Activities

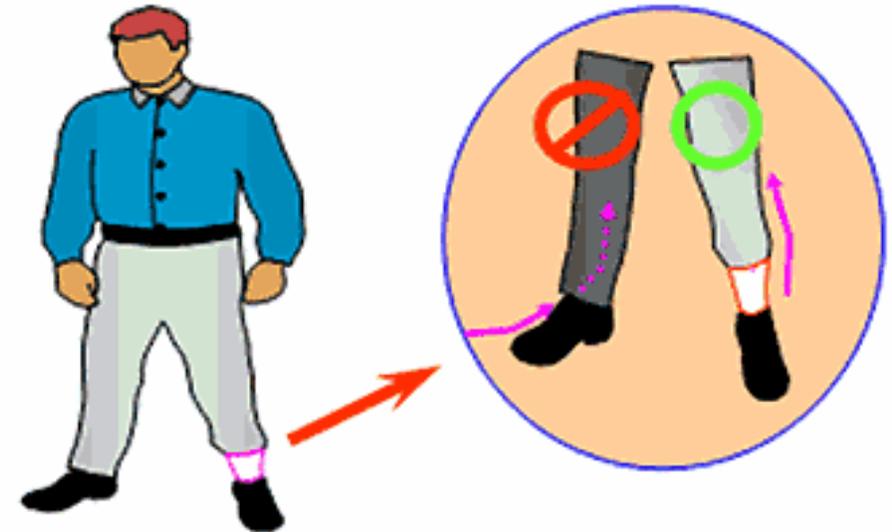
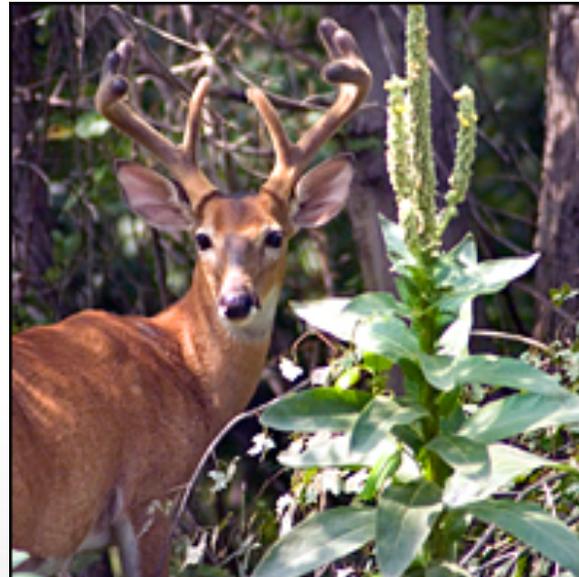
- Brookhaven has over 5 thousand acres of trails and woods...
- When running, walking, or biking in wooded areas, follow these precautions:
  - Stay on trails
  - Tell someone where you are going
  - Bring a cell phone with you
  - Study a site map
  - Go with a friend
  - Do not smoke/use open flame
- If injured, report to the Clinic (or to Fire/Rescue during after-work hours).



# Natural Hazards

- To avoid **ticks**, avoid grassy or wooded areas and wear protective clothing (i.e., long pants).
  - If you have a tick or suspicious rash, go to the Medicine Clinic (Bldg. 490).
- **Watch out** for wildlife, especially deer, when walking, bicycling, and driving.

[Lyme Disease & Tick-borne Disease Awareness TQ-LYME1](#)



Questions ?

Work, learn, be safe