

# Town Meeting

August 05, 2015

## Safety Update

- Injuries / Events
- User Ready
- User Training
- TLD's
- Accelerator Safety Workshop; September 22 – 24

# BNL Injuries

## FY 15

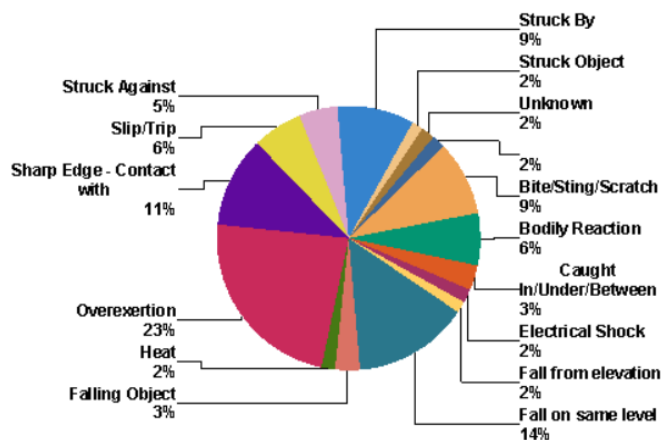
First Aid  
Recordable  
DART

Minor treatment  
More than just first aid  
Days Away, Restricted, or Transferred

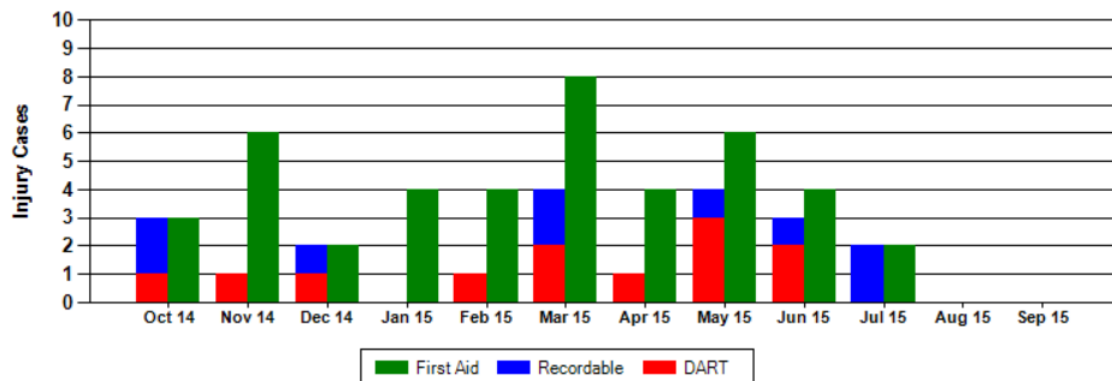
### SHSD Safety Engineering Group - Injury Statistics

#### Injuries by Injury Cause

As of 7/28/2015



#### Fiscal Year 2015 Injury Cases



DART:

YTD Cases

Rates

12

0.59

Recordable:

21

0.94

First Aid:

43

N/A

Total Injuries:

64

Rates As Of:

June 2015

Most Recent Injury:

07/21/2015

# NSLS II Injuries (Staff, Students, & Users)

FY 15

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• Fall; utility stub	Staff	First aid	Nov
• Puncture; finger; wire cutter	Staff	First aid	Dec
• Bump; head; equipment table	User	First aid	Jan
• ‘ <i>Splinter</i> ’; hand; snow plow marker stick	Student	First aid	Feb
• Fall; knee strain	Staff	First aid	Mar
• Strain; elbow; exertion	Staff (BNL)	First aid	April
• Irritation; eye; particle	Staff	First aid	May
• ‘ <i>Cut</i> ’; finger; trimming knife	Student	First aid	July

# User Readiness

# User Ready

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- Process completed for the NSLS II Facility
  - 28 internal criteria
  - DOE designation
- Ongoing process for individual Beamlines and Laboratories
  - 23ID – 01
  - 28ID
  - LOB1 – Rm. L04 (Dry Lab)

Checklists – steps to move to User operations

# User Training

# User Guide Training

**BROOKHAVEN**  
NATIONAL LABORATORY

*National Synchrotron Light Source II*

U.S. DEPARTMENT OF ENERGY

Home About For Users & Staff For Industry Beamlines Research News & Publications People Intranet

**NSLS-II User Guide**

**Introduction**

The NSLS-II User Guide is a step-by-step manual to help you apply for beam time, and—once accepted—how to get ready for your experiment, what to do when you get here, and how to report when you leave.

**User Guide Contents**

User Guide Home

**Before You Arrive**

1. [Register for Site Access](#)
2. [Establish a User Agreement](#)
3. [Prepare Safety Approval Forms](#)
4. [Complete Required Training](#)
5. [Establish a User Account](#)
6. [Verify Site Access Approval](#)
7. [Ship Materials](#)
8. [Bring Required ID](#)

**When You Arrive**

1. [On-site Check-in](#)
2. [Complete Beamline-specific Training](#)
3. [Perform Experiment](#)



## User Training

- 5 courses
  - 4 on the web
  - Beamline specific; in person; at beamline
- GERT reciprocity

### 4 Complete Required Training

Before the experiment may commence at the NSLS-II, User training requirements shall be fulfilled. The general User training modules described in this section can be completed online prior to arrival at BNL, or may be completed upon arrival to NSLS-II. All Users shall complete the following training requirements.

- ▶ [General Employee Radiation Training](#) (GERT)
- ▶ [Cyber Security Training](#) (GE-CYBERSEC)

- ▶ [NSLS-II Safety Module](#) (PS-NSLS-II-USER-MOD)
- ▶ [Guest Site Orientation](#) (TQ-GSO)

# Radiation TLD's



# Radiation Surveys

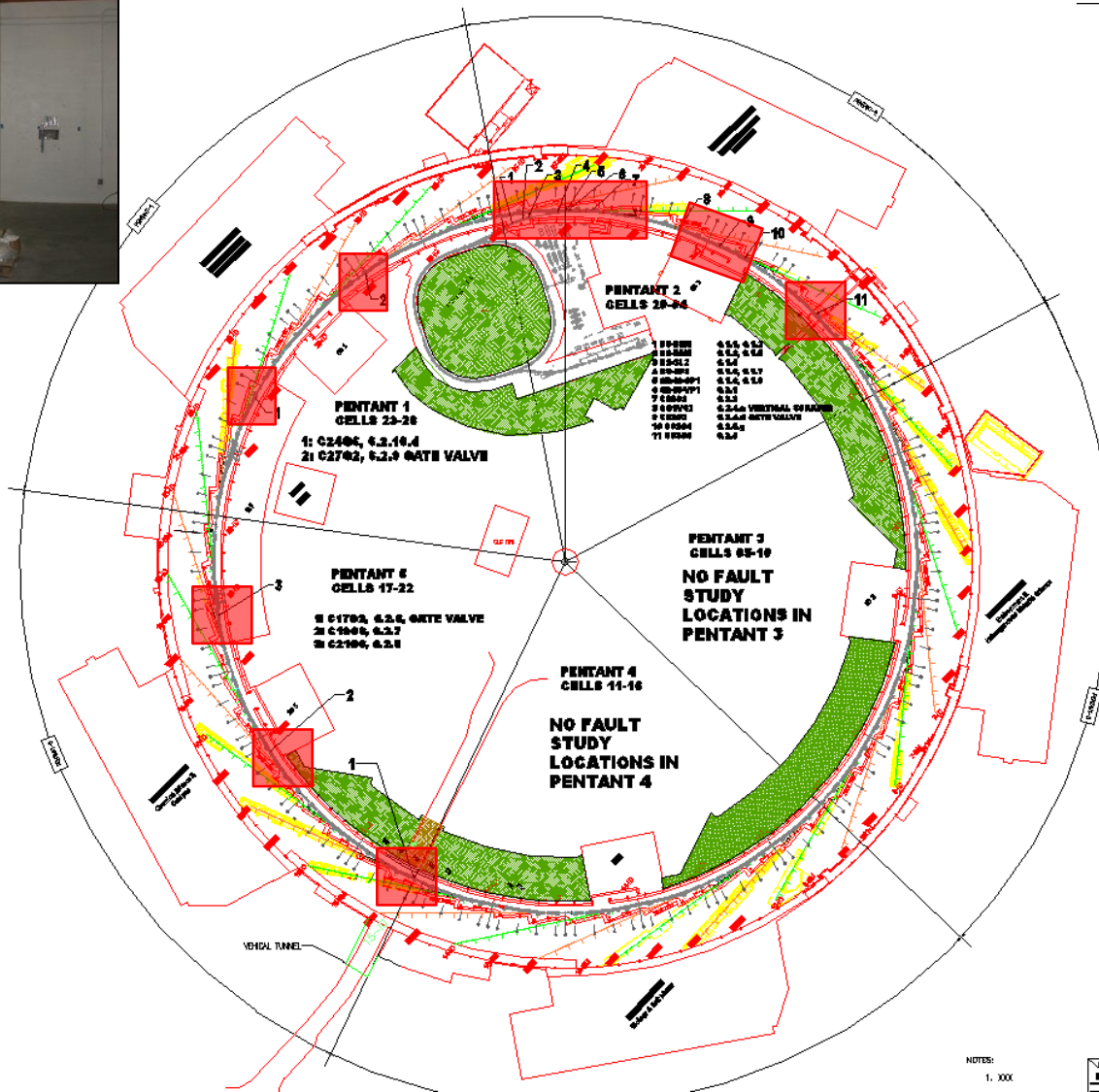
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- Radiation Surveys; [Background measured](#)
  - Occupied areas around storage ring; up to 250 mA (ID's open)
  - At 03, 05 10, 11, 23, & 28
    - Area around saw tooth; beam on front end; 150 mA
    - Area around beamlines; photon scatter conditions; 75 mA
- Several accelerator fault studies; Storage ring included
  - Steer electron beam
  - Measurements in occupied areas

# Map of Storage Ring Fault Studies (measured dose rate values; reduced charge and rate)



~3 mRem/hr



~7 mRem/hr

NOTES:  
1. XXX

# Machine Fault Study Summary

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- Linac
  - Highest levels measured =  $\sim 8.5$  mRem/hr
  - Scaled to ASE limit =  $\sim 70$  mRem/hr
  - Existing monitoring and shielding adequate to meet PS shielding policy
- Booster
  - Highest levels measured =  $\sim 100$  mRem/hr
  - Scaled to ASE limit =  $\sim 1250$  mRem/hr
    - Shielding added; scaled rate =  $\sim 125$  mRem/hr
  - Existing monitoring and shielding adequate to meet PS shielding policy
- Storage Ring
  - Highest levels measured =  $\sim 7$  mRem/hr
  - Scaled to ASE limit =  $\sim 300$  mRem/hr
  - Existing monitoring and shielding adequate to meet PS shielding policy

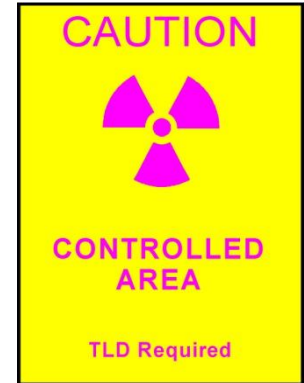
# Radiation

## TLD's

- Controlled Areas are posted
- Everyone working on the experiment floor wears TLD
- Everyone working in the accelerator enclosures wears TLD
- Users (business hour arrival is best)
  - GUV – ID card
  - User Admin – Key card and TLD (Temporary)

Note: Temp TLD – one month duration

Out of hours – prearrange; Flo Co support



# Accelerator Safety Workshop

# DOE Accelerator Safety Workshop

New Frontiers and Operational Challenges

Sponsored by DOE Office of Science  
Held at Brookhaven National Laboratory  
September 22-24, 2015

[Homepage](#)[Registration](#)[Agenda](#)[Contact Us](#)[Workshop Information ▼](#)

## 2015 DOE Accelerator Safety Workshop (ASW) New Frontiers and Operational Challenges

**Workshop Registration** (Deadline: September 1, 2015)

**Additional BNL Guest Registration** (Deadline: August 1, 2015) ⓘ

Please note, this workshop falls under exemption b (a meeting to discuss internal agency matters held in a federal facility) and **is not open** to the public.

[Begin Workshop Registration](#)

### Motivation

The 2015 DOE Accelerator Safety Workshop (ASW) will be held at Brookhaven National Laboratory on September 22-24, 2015. The intent is to share experience and gain consensus on how safety systems are efficiently applied to accelerator facilities. The workshop atmosphere is informal and open discussion is encouraged.

The DOE Accelerator Community has worked every year to encourage and improve communications across the DOE complex, especially across the DOE Accelerator Community. Improved communications has led to the development of a new Order (DOE 420.2C), development of a new Guide (DOE G 420.2-1), and a Draft Technical Standard to address Clearance of Material from Accelerator Facilities.

### Speaker Info (Presentations)

PowerPoint presentations need to be submitted to Darcy Mallon ([mallon@bnl.gov](mailto:mallon@bnl.gov)) no later than Friday, September 18, 2015, and will be available to download at the beginning of the Workshop.

### Evening Events

Registered participants are invited to attend the following events:

### Workshop Organizers

- ▶ Andrew Ackerman (BNL)
- ▶ John Anderson (FNAL)
- ▶ Judith Blackstone (DOE SC)
- ▶ Scott Davis (DOE SC)
- ▶ Amy Ecclesine (LBNL)
- ▶ Ian Evans (SLAC)
- ▶ Harry Fanning (JLab)
- ▶ David Freeman (ORNL)

<https://www.bnl.gov/asw2015/>

### Workshop Dates

September 22-24, 2015

### Workshop Location

Brookhaven National Laboratory  
Upton, NY 11973 USA

Berkner Hall (Bldg. 488)  
Main Lecture Hall

Directions & Maps: [Event](#) | [BNL](#)

### Workshop Coordinator

Darcy Mallon

Bus: 631-344-3362

Fax: 631-344-2038

Email: [mallon@bnl.gov](mailto:mallon@bnl.gov)

### Workshop Poster

[Quick View](#) | [Download](#)



 Add to Calendar





# 2015 DOE Accelerator Safety Workshop

September 22-24, 2015  
Brookhaven National Laboratory  
Berkner Hall • Upton, NY, USA  
<http://www.bnl.gov/asw2015/>

**TUESDAY NO-HOST RECEPTION/EVENING DINNER**  
Hotel Indigo on Tuesday September 22, 2015 at 7:00 PM.  
Cost will be ~\$30 US/pp

**WEDNESDAY TOUR**  
September 23, 2015 at the National Synchrotron  
Light Source (NSLS) II

**THURSDAY TOUR**  
September 24, 2015 at the Relativistic Heavy  
Ion Collider (RHIC)

## WORKSHOP ORGANIZERS

Andrew Ackerman (BNL)	Ian Evans (SLAC)	Darcy Mallon (BNL)
John Anderson (FNAL)	Harry Fanning (JLab)	Gail Mattson (BNL)
Judith Blackstone (DOE)	David Freeman (ORNL)	Robert May (JLab)
Scott Davis (DOE)	Les Hill (BNL)	Chuck Schaefer (BNL)
Amy Ecclesine (LBNL)	Edward Lessard (BNL)	Tim Stirrup (Sandia)



National Synchrotron  
Light Source (NSLS) II



Relativistic Heavy Ion Collider



**END**