

Magnetic Materials Group, XSD

Sector 6 Orientation

“Safety-first” and “Stop work authority” principles

Safety First

No work we do is so important that it needs to be done without assuring that proper safety measures are in place.

Stop Work Authority

If you see work or actions that appear unsafe, you have the authority and obligation to *stop the work* and bring the situation to the immediate attention of your local contact and/or the floor coordinator.

If you are asked to stop work, you must do so.

Emergencies

- For emergencies, call:
 - **911** (from any ANL phone)
 - **630-252-1911** (from any cell phone)
- Emergencies include Injuries, Fire, Water leaks, Electrical shock, laser exposure
- In the case of a fire, leave the building using the nearest exit. Do NOT attempt to use fire extinguishers unless you have received appropriate training

Safety Equipment

- Eye wash and chemical safety shower are located in the B030 Lab (Wet Lab)



- Fire extinguishers can be located by the identifying signs
- Again, do not use fire extinguishers unless you have received training to do so



Restricted Areas

- You may encounter restricted access areas such as laser and magnet enclosures
- These areas may be entered only if you have the **required training and authorization**. You must adhere to all posted entry requirements.



Enclosures (“Hutches”)

- You are not allowed to be inside an experiment station (“hutch”) with the doors closed.
- If you find yourself inside a locked station you can deactivate shutter permit and open the doors by depressing emergency buttons located along the wall
- When your activities involve significant hazards you are not permitted to work alone.
- If you will be working alone conducting non-hazardous activities, it is good practice to inform your local contact that you will be doing so.



Searching Enclosures

- A "Search and Secure" must be conducted before beam will be allowed into the station.
- Only ONE person can conduct a search and secure at a time.
- You will be taught how to conduct a Search and Secure by a beamline representative.

Radiation Safety

- Configuration controls serve to protect personnel from radiation exposure.
- These components are marked by red tags and MUST NOT be moved or modified.



Personnel Safety System (PSS)

- The PSS is the interface to the beamline x-ray shutters and active shielding components (hutch doors)
- Each experiment station has a PSS screen allowing you to control shutters (open/close) in the Sector's stations.
- Note that accidentally knocking the User enable key out of position will disable shutter operation.
- PSS faults have to be cleared by the Floor coordinator



Electrical Equipment

At the APS you are NOT allowed to use electrical equipment that has not undergone inspection by a Nationally Recognized Testing Laboratory (NRTL) or an ANL/APS Designated Electrical Equipment Inspector (DEEI)

If you plan to bring homemade electronics or electrical equipment that has not been inspected and tagged by an NRTL please send your equipment AHEAD OF YOUR EXPERIMENT and have your local contact coordinate an inspection with an APS/DEEI.

In addition, the following activities are prohibited:

- Rewiring electrical plugs and pre-existing cables
- Connecting and Disconnecting motor cables with power on.

Equipment Protection System (EPS)

- The EPS system monitors beamline vacuum, water flow, temperature, and valve position.
- Vacuum valves are controlled within this system.
- EPS failures such as vacuum or water trips are handled by your local contact.



Gas Cylinders

- Gas cylinders are stored in the gas yard between sectors 4 and 5.
- Please contact a beamline representative for access and replacement of gas cylinders



Liquid Helium

- Users are responsible for liquid helium charges. If your experiment requires liquid helium, please contact the user office to set up an account.

Shipping policy and Transport of Samples

- Users are required to comply with U.S. Department of Energy, Argonne National Laboratory, and APS requirements for inbound and outbound shipping.
- In general, users are not permitted to either transport hazardous material on the Argonne site or arrange for shipment directly to the APS. Hazardous materials must be processed through Argonne's hazardous materials receiving area. Special provisions apply for small-quantity exceptions and biohazards.
- The APS User Experiment Safety Coordinator, Bruce Glagola is available for guidance and assistance (glagola@aps.anl.gov, 630-252-9797)

For more information see:

http://www.aps.anl.gov/Users/Become_A_User/Before_You_Arrive/Arrange_for_shipping.html

Shipping of Samples

- Users are responsible for any shipping charges incurred for the return of equipment or samples. Please provide your preferred carrier and account number to your beamline host. Argonne shipping requires material data safety sheets for any hazardous samples.

Radioactive Samples

The following restrictions apply for **radioactive** samples:

- shipping samples in and out of APS.
- sample containment during experiment
- sample access during experiment
- unattended experiments off hours

For more information see:

http://www.aps.anl.gov/Safety_and_Training/Hazardous_Materials/RadioactiveSamples.html

Lab Safety Policies

- There are two labs available for users:
 - 432\B020 (Dry Lab) and 432\B030 (Wet Lab)
- Users are required to wear safety glasses while in the labs, which are located outside each lab next to the doors
- A Material Safety Data Sheet (MSDS) is located outside of 432\B030, and a complete list can be found at:
http://www.aps.anl.gov/Safety_and_Training/User_Safety/msdsresources.html
- All chemicals/materials must be labeled! Label all beakers/containers with their contents.
- Chemical waste must be disposed of properly. Please do NOT pour chemicals down sinks. Speak with your local contact for proper disposal.



Off-hours Support

- We request that you only call during off-hours (10pm – 6am) if you are in need of urgent support or have an urgent issue that must be resolved immediately

Before you leave...

- Users are responsible to clean up before leaving!
 - Do not leave without your samples; we take no responsibility for samples left behind. If necessary, speak with your local contact to arrange shipments of samples/materials.
 - Please clean up any workspaces used in the laboratories and return any equipment/tools when finished
 - Sector 6 provides users with an office in 432/Boo6. Please be courteous to others and take all food and belongings with you when you leave