

EBERLIGHT ORIENTATION

Part 1 of 2



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**Advanced
Photon Source**

eBERlight Orientation: Introduction

- This is part one of your two-part sector orientation. Please read through the following slides carefully. They contain valuable information about the rules and safety features you need to be aware of at the APS.
- At the conclusion, you will be asked to verify that you have read and understood all of this material.
- Part two of your orientation will include a tour of the lab(s) and verification with eBERlight staff. Feel free to ask any questions regarding this material at any time.
- You must complete both parts of the orientation before starting any work at APS.

eBERlight Orientation: Emergencies

Stay informed and connected to Argonne via the [Argonne mobile app](https://www.anl.gov/argonne-mobile-app) (https://www.anl.gov/argonne-mobile-app).

The Argonne mobile app is available for Argonne employees, facility users, and visitors on both Apple and Android devices. Search for “Argonne” to locate and install.

You can use the app for the following:

- On-site 911 call
- Report a safety concern or non-urgent concern
- Follow a two-minute, pre-work safety drill
- Contact the Service Desk
- Access a heat stress forecast/report unsafe ice or snow (seasonal) and more.

911

If you encounter an emergency of any kind, dial 911 from a land line, or 630-252-1911 from a cell phone (note if you dial 911 directly from a cell phone it will contact external emergency outside of Argonne).

eBERlight Orientation: Fires and TORNADOS

Fire Extinguishers

- You will see fire extinguishers in several locations around APS. These are only to be used by the firemen, and others who have received credit for the official ANL fire extinguisher training. Do not fight fires yourself. Call 911 in a fire situation.

Fire Alarms

- APS has a two-stage fire alarm system. If you hear a fire alarm in experiment hall, proceed to the LOM (Lab-Office Module) areas. If the fire alarms are also ringing in these areas, proceed to the nearest emergency exit, and calmly make your way to the designated assembly area.
- Bldg. 446: If evacuation alarms sound, all building occupants must assemble at: the South East Corner of the Building 446 main parking lot (by Building 435).
- Bldg. 435: If evacuation alarms sound, all building occupants must assemble at: the front parking lot of building 444 LBB (Long Beamline Building). Additionally, APS building occupants should familiarize themselves with all evacuation locations for the various APS buildings listed in the ESH108 Courses for the APS.
- Building evacuation maps are posted in occupied buildings. Be aware of at least two evacuation routes from your work area(s) to your assembly area in case one exit is blocked.

Tornado Alarms

- When a tornado warning is announced, over the public address system (indoors) or a siren is sounded (outdoors), all occupants should go to the shelter(s) which can be found in the Bldg. 435 Restrooms, Women's (C003) and Men's (C006), Bldg. 446 at the Central Restrooms, Women's (B131) and Men's (B133).

eBERlight Orientation: Electrical Safety

Device Inspections

- All electrical devices brought onsite are subject to the ANL electrical safety and inspection policy. This means your devices cannot be connected to power until they are approved by an ANL Designated Electrical Equipment Inspector (DEEI). Consult a member of the eBERlight staff or an APS Floor Coordinator before powering up any electrical device.

Electrical Work

- Users are not permitted to perform unsupervised electrical work. You may connect approved devices to power, and use them as intended by the manufacturer. Any work outside this scope must be supervised by an ANL DEEI or Qualified Electrical Worker (QEW).

Extension Cords

- If an extension cord is needed, use only a single cord that is long enough. Extension cords are not to be daisy-chained (one connected to another), or used with a multiple outlet power tap.

eBERlight Orientation: Safe Conduct of Work

Experiment Safety Guidelines

- Experimental Safety Assessment Form (ESAF): An approved ESAF is required for users to access beamlines and laboratories at the APS. All experimenters must read and abide by the rules of your ESAF and APS required training. Your ESAF must be posted by the Floor Coordinator before you are permitted to start any work at APS.
- Work Control Document (WCD)s and Standard Operating Procedure (SOP)s: 435 and 446 lab WCDs and SOPs are posted in the lab. Rules specified for your experiment in any WCDs and SOPs must be followed.
- Stop Work Policy: If at any time you encounter a potentially hazardous situation, or if you're not comfortable performing a task, stop what you're doing and ask a member of the eBERlight staff for assistance.
- Additionally, if you see someone else doing something that is potentially unsafe to them or others nearby, it is your right and your obligation to speak up and ask them to stop. If you're not comfortable speaking to them directly, seek assistance from a member of the eBERlight staff or a Floor Coordinator, or dial 911.

eBERlight Orientation: Laboratory Space

General Rules for Use of the Wet Lab

- Like all of your work at APS, your use of the eBERlight facilities is subject to the rules and guidelines in your ESAF and any applicable SOPs.
- Chemical vials and sample containers must be clearly labeled with your name, contact information, and date, to be properly-stored.
- Hazardous materials cannot be open to air at any time. Work with such items must be done within containment. For example, a fume hood, glove box, or a glove bag.
- Do not leave open chemicals or sample materials unattended. Keep vials, bottles and other chemical containers closed when not in immediate use.
- Label all your chemicals with your name, contents, and date.
- Keep your work areas neat and organized at all times.

eBERlight Orientation: Laboratory Space

Personal Protective Equipment (PPE)

- Chemical protective eyewear with side shields is required for all personnel present in the wet lab. Safety goggles are available in acrylic holders just outside the lab entrance.
- Impervious gloves are required when working with chemicals. Nitrile gloves are available in various sizes in acrylic holders on either side of the two main work stations near the fume hood. The gloves you use must be resistant to the chemicals you are working with.

Chemical Eye Wash and Shower

- A chemical shower and eye wash station is readily available in the wet lab in case of chemical exposure. Make note of its location before you start work.

eBERlight Orientation Laboratory Space

Sharps

- When working with sharps (i.e. razor blades, syringes, etc.), do not leave them loose on a counter when not in immediate use. Instead, keep them on a spill tray toward the back of the counter.
- When your work is complete, dispose of sharps in one of the containers marked for sharps disposal in the lab.

Chemical Waste

- If you are generating chemical waste that you intend to leave behind, it must be properly packaged and documented on a waste form before you depart APS. Never store incompatible chemicals in the same container. See a member of the eBERlight staff for guidance before you start working with chemicals and sample materials.

Shipping

- See a member of the eBERlight staff for guidance on shipping if you are unsure.
- Detailed information on shipping can be found here: <https://eberlight.aps.anl.gov/eberlight-user-program>

eBERlight Orientation: Laboratory Space Cont.

When Your Work is Complete

- Sanitize your work areas with a disinfectant wipe available at the workstations.
- Clean any hardware and glassware you've used. Brushes and dish washing liquid are available at the sink. Clean glassware and hardware may be left on the drying rack.
- Don't forget to see your host or a member of the staff if you are leaving chemical waste behind, or if you need assistance with an outgoing shipment.

eBERlight Orientation: General Safety

Areas Outlined in Yellow Tape

Yellow tape is used on the floor to indicate controlled-access areas. For example, the space in front of an emergency electrical shutoff, or an emergency exit aisle. Do not leave anything (chairs, equipment, etc.) inside a yellow-taped-off area, and do not block the pathway into it.



eBERlight Orientation: General Safety Cont.

Liquid Nitrogen Safety

When working with liquid nitrogen, you must wear waterproof cryogenic gloves, a cryogenic apron, safety goggles, and a full-face shield.

If you are not comfortable performing this task, do not proceed. Instead, ask for assistance from a member of the eBERlight staff.

Compressed Gas Cylinders

Compressed gas cylinders can present many hazards if handled improperly. Cylinders in use must be secured to a rigid surface to prevent tipping over, and fitted with a proper regulator when needed. When not in use, cylinders must be capped. Use of hazardous gases is allowed only within the guidelines specified in your ESAF.

Consult a member of the eBERlight staff for assistance.



eBERlight Orientation: General Safety Cont.

Tricycle usage

Each tricycle at the APS belongs to a specific sector or group. Please do not use tricycles that belong to others, and be sure to return the tricycle to its home sector when you are finished. Your speed while riding should not exceed a fast walking pace.

Pedestrian Safety

Pedestrians in the experimental hall share the walkways with a variety of motorized/moving vehicles, such as forklifts, scissor lifts, and tricycles. Please exercise caution, and look both ways before stepping into a walkway from the labs, offices, or beamline areas.

Food and Drinks

Food and drink are prohibited in the laboratory spaces.

More information on Safety at the APS can found here: <https://www.aps.anl.gov/Safety-and-Training>

eBERlight Orientation: Conclusion

Acknowledgements

We kindly ask that you include the following acknowledgment statement (example below) and the beam time award [DOI](#) number(s) as hyperlinks (e.g., <https://doi.org/10.1000/182>) in any in any publications resulting from APS research. DOIs can be found under the "My DOI" tab in the [APS User Portal](#).

Ex: Results in this report are derived from research conducted through the eBERlight program (*add Beamline/Sector here*), funded by the U.S. Department of Energy (DOE) Office of Biological and Environmental Research (BER) and supported by the Advanced Photon Source (APS), (*add DOIs: <https://doi.org/10.1000/182> here*), a DOE, Office of Science, user facility operated by Argonne National Laboratory under Contract No. DE-AC02-06CH11357.

eBERlight users may also need to include an additional statement on the funding for beamlines, sectors, and resources used, examples below.

Ex: The use of the LS-CAT Sector 21 beamlines was supported by the Michigan Economic Development Corporation and the Michigan Technology Tri-Corridor Grant 085P1000817.

Access to eBERlight at Sector 84 was possible through funding provided by DOE contract DE-AC02-06CH11357.

Detailed information on acknowledgments can be found here: <https://eberlight.aps.anl.gov/eberlight-user-program>.

eBERlight Orientation: Conclusion

- This completes part 1 of the orientation.
- To confirm you have completed this task click here: [Orientation confirmation](#).
- Be sure to click submit the form and start part 2 of the orientation with your eBERlight staff/host.

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