

THOMAS JEFFERSON NATIONAL ACCELERATOR FACILITY

STUDENT ORIENTATION



WELCOME

Welcome to the U.S. Department of Energy's Thomas Jefferson National Accelerator Facility, a world-leading nuclear physics research facility that seeks to expand our knowledge of the universe by studying the nucleus of the atom.

Jefferson Lab is a user facility, meaning its unique research tools are available to scientists and college students from around the world. Currently, more than 1,300 users are engaged in research at the lab.

Jefferson Lab also has more than 800 employees and contractors, who share work space and research facilities with users on the lab's 206-acre campus.

The lab is managed and operated by Jefferson Science Associates, LLC, a partnership between the Southeastern Universities Research Association (SURA) and Computer Sciences Corporation (CSC).

At Jefferson Lab, the health and safety of employees, users,

contractors, visitors and the general public are our highest priorities. In concert with federal and state regulations, and based on years of experience and benchmarking, the lab has established rules and procedures that protect health and safety, and the environment. All staff, users and contractors receive training to ensure that they know and follow the lab's health, safety and environmental policies and procedures.

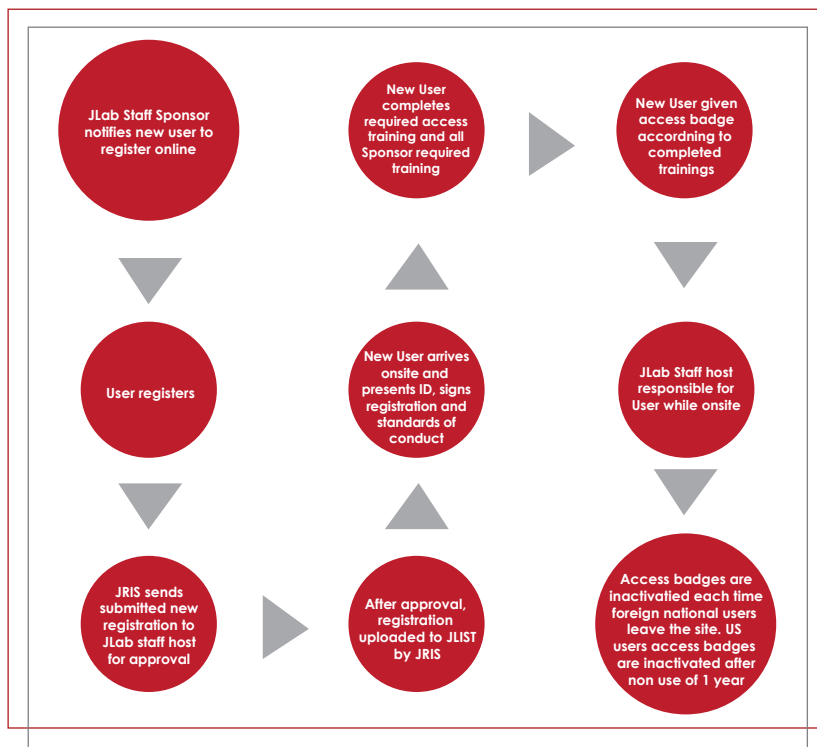
As a visitor to the lab, please take a few minutes to become familiar with this brochure and the basic information it provides. Doing so will enhance your visit. If you have additional questions after reviewing this brochure, please consult with your escort, tour guide or host.

We hope that your stay at Jefferson Lab is enjoyable, productive and safe.



△ Jefferson Lab's Accelerator site and TDF

JEFFERSON LAB



△ Jefferson Lab User Access Process

STUDENT RESPONSIBILITIES

Host

- Your adviser will provide you the name of your Jefferson Lab host.
- This information is needed to register online.
- Your Jefferson Lab host is responsible for ensuring that you are aware of all safety requirements for the areas in which you will be performing research. Your

host is also your contact for all questions regarding your research program at Jefferson Lab.

• Upon arrival, you must meet with your Jefferson Lab host to



discuss your research activities and to set up regular meetings regarding your program.

Registration

- All those requesting access to Jefferson Lab are required to register online.
- Graduate students should register as “User-Active.”
- All high school and undergraduate students must register at least two weeks prior to arrival and should register as “Student.”
- If you are receiving funds from Jefferson Lab, fax a completed tax form to 757-269-7003.
- Upon arrival, all foreign nationals must check in with JRIS (Jefferson Lab Registration/International Services) at the Support Service Center SSC, (Bldg 28, formerly known as the VARC) reception desk for visa/immigration document validation to obtain Jefferson Lab access. See <http://wwwold.jlab.org/hr/jris/id.html> for more details.

• For further details regarding the registration process, please visit the website below:
<http://wwwold.jlab.org/hr/jris/processing.html>

Computer Accounts

- Once your registration has been

DELAYED OPENING/CLOSING

Jefferson Lab has delayed openings or closes for events such as severe weather. If your visit coincides with an event that could impact lab operations, call your host. If you can't reach your host, call the lab's Main Number (757-269-7100), or lab status line (757-234-6236) or check the main webpage for information on the lab's status.

approved you can apply for a Jefferson Lab computer user account. The form can be found here: <https://cc.jlab.org/system/files/UserAccountRequest2010.pdf>

- Make sure your host signs and dates the form before turning it in to the Help Desk in CEBAF Center, F wing, 2nd floor.

Badges

- Once basic required training is completed, you can go to JRIS (SSC Bldg. 28 front desk x7598) to request a badge.

Badge Office Hours:

Monday - Friday:
8:30 a.m. - 12 p.m.
2 p.m. - 4:30 p.m.

JEFFERSON LAB

Contact Information

• For general guidance regarding registration, training or badges please contact the User Liaison Office (CEBAF Center L111) at: x6388 or lcarlson@jlab.org.

Training

• Training is required to access most areas on the campus and the accelerator site.

• Below are the basic training requirements to get a badge for access to CEBAF Center, Support Service Center and the ARC building:

- Environmental, Safety and Health Orientation (SAF100)
- Security Awareness for Users (GEN034U)

These are web-based training courses available at: http://www.wold.jlab.org/div_dept/train/webbasedtraining.html. To receive credit, you must disable your browser's pop-up blocker. If your registration has not been completed when

you take a course, your record will not be updated until it is.

• For access to all other areas, please see your host for required training. If you are assigned to the Physics Division, including any of the experimental halls, you will have additional training requirements:

- Rad Worker 1 Class SAF801C (online)
- Rad Worker 1 Test SAF801T (A proctored, no notes exam in CEBAF Center or SSC 45)
- General Access RWP SAF801kd (pdf document online)
- Rad Worker 1 Practical SAF801P (Radcon: Maya Keller x6021)
- Oxygen Deficiency Hazards (ODH) SAF103 (online open-book test)
- Student Safety Training- SAF009 (Required for high school and under

graduate students.) Each experimental hall also has specific training required for access. Please see your host for further details.

Students Activities and Information

• For details on upcoming seminars, workshops and other activities please visit the Graduate Student and Post-Doc Association Wiki: https://gspda.jlab.org/wiki/index.php/Main_Page

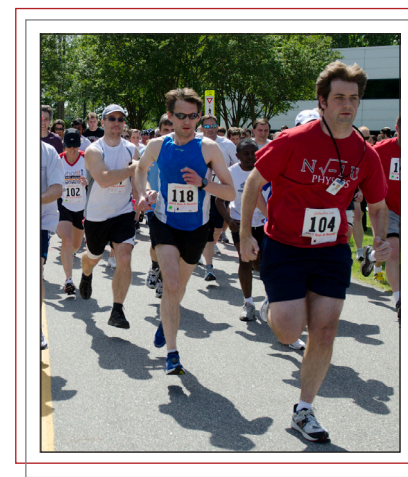
• Most information is sent through email. Please email lcarlson@jlab.org to subscribe to the Student and Post Doc mailer and CUGA.

• Bi-monthly student orientations are available May-August. These are instructor-led seminars about the lab, its history, people, opportunities, policies and culture. You can register for them at <https://misportal.jlab.org/training>. Please contact Bruce Ullman (ullman@jlab.org) for details.

• Those interested in a tour must contact Public Affairs at x7617.

Medical Insurance

Everyone at Jefferson Lab should have medical insurance. If you currently have medical insurance



△ Annual Run-A-Round

please be sure the policy provides coverage while you are at Jefferson Lab. If you are in need of medical insurance while at Jefferson Lab, contact the User Liaison Office at x6388 for information regarding Student/Postdoc Medical Insurance coverage offered by the lab.

What To Do In An Emergency

If you are involved in or see a medical or other type of emergency, report it immediately by calling 911. Then, call Jefferson Lab security at 757-269-5822 (x5822 if using a lab phone) to let security personnel know that you have called 911.



△ SSC - Badging/JRIS



△ CEBAF Center - User Liaison/Training

JEFFERSON LAB

If you have an accident/injury (no matter how small) that occurs during normal business hours, you must report it immediately to your Jefferson Lab staff host and Occupational Medicine at x7539, or by pager at 757-584-7539. If an accident occurs after normal business hours (8 a.m. - 5 p.m.) and you feel you need medical care, these are emergency rooms and urgent care facilities in the area.

or whether the accident/injury can be handled at an urgent care facility.

There are two urgent care facilities near Jefferson Lab:

Medexpress

12997 Warwick Blvd.
Newport News, VA 23602
757-369-9446

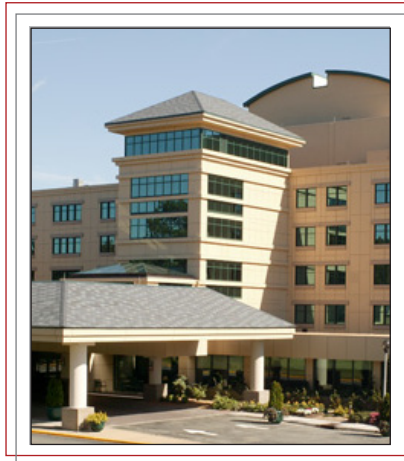
Sentara Medical Group

747 J. Clyde Morris Blvd.
Newport News, VA 23601
757-599-6117

**Port Warwick II
Sentara Emergency Center**
1108 Jefferson Avenue
Newport News, VA 23606
757-736-9800
OPEN 24 Hours

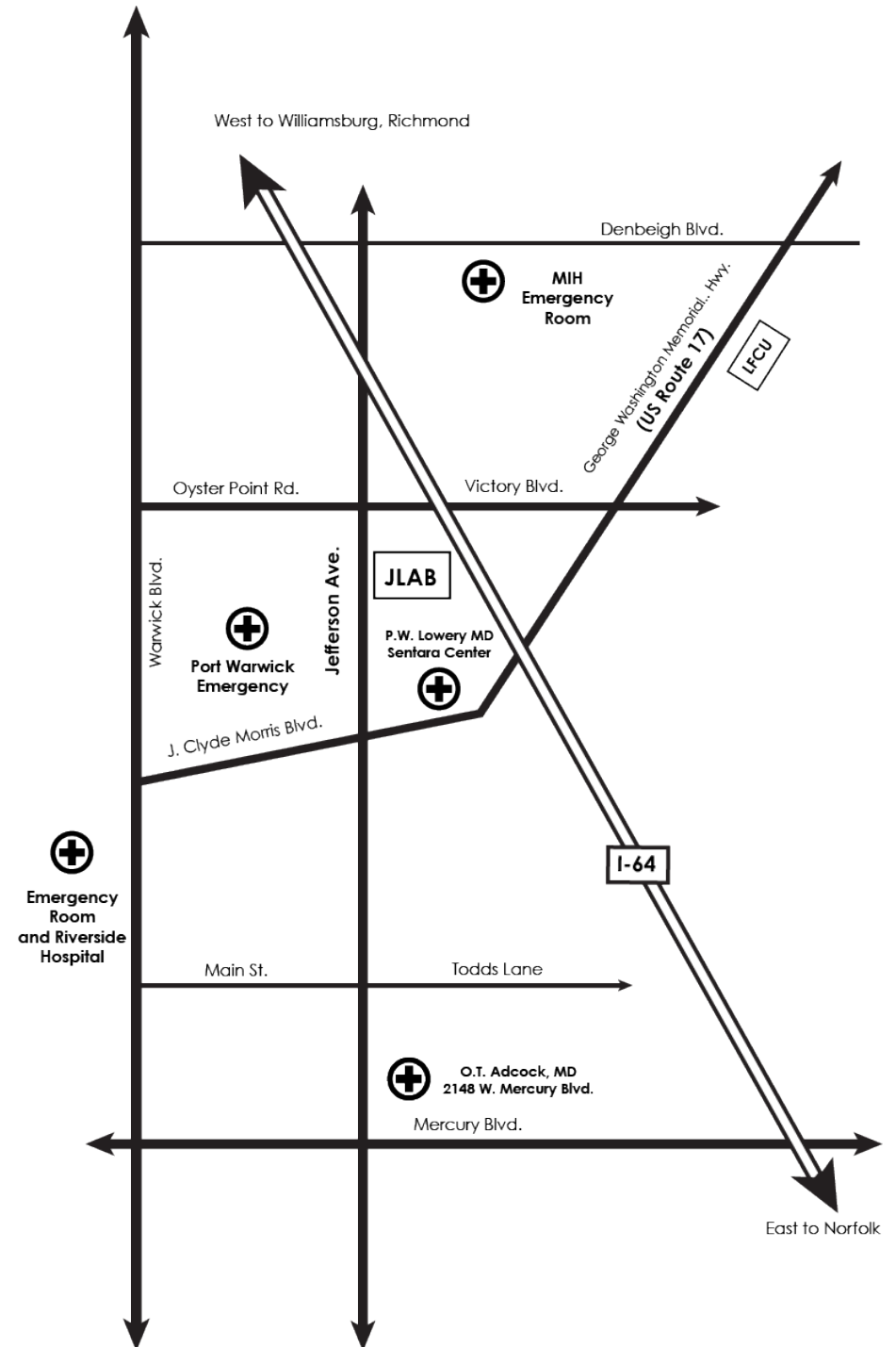
**Riverside Hospital
Emergency Room**
500 J. Clyde Morris Blvd.
Newport News, VA 23601
594-3080

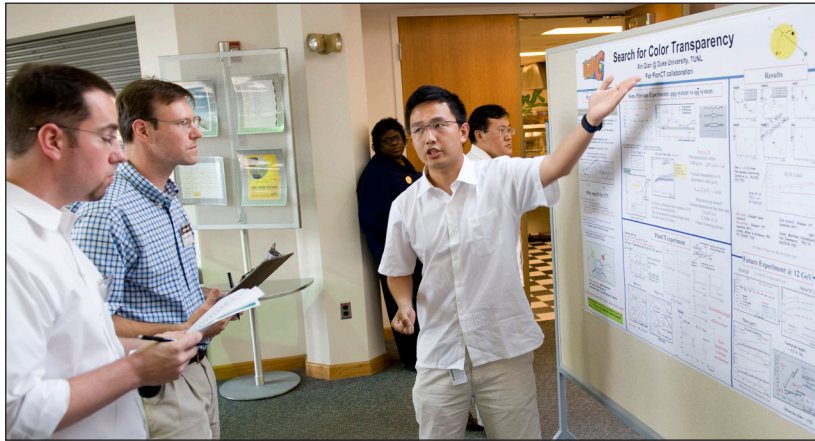
**Mary Immaculate Hospital
(MIH) Emergency Room**
2 Bernadine Dr.
Newport News, VA
886-6000
Emergency Physicians



EMERGENCY ROOMS

An emergency room visit can be expensive, please evaluate the accident/injury to determine whether it is a critical situation





△ Users Group student poster session.

ACCESS TO JEFFERSON LAB

There are several areas and buildings designated as General Access Areas, meaning they are accessible to all personnel and the public (except on federal holidays and during lab shutdown periods). These areas include:

- **CEBAF Center** (Bldg. 12) is the lab's main administration building. The atrium, cafeteria and auditorium are open 8 a.m. to 5 p.m. Monday through Friday.

- The **SSC** (Bldg. 28) and **ARC** buildings are open to the invited public through their main lobby doors from 8 a.m. to 5 p.m. Monday through Friday. The ARC building is owned by the City of Newport

News and is managed by Jefferson Lab.

- The Jefferson Lab campus provides several general access areas and all campus entry roads are open 6:30 a.m. to 6:30 p.m. Monday through Friday. Vehicle entrances and exits are limited during the remaining hours, and during weekends and holidays.

Limited Access Areas

All remaining Jefferson Lab facilities and areas are access limited; students are required to complete the necessary training to access these areas. (See page 4)

SECURITY AT JEFFERSON LAB

- A security badge is required to enter a Jefferson Lab facility without an escort.
- A security badge allows you access to only those areas to which you have been assigned or for which you have received training.
- Visitors without a badge are required to sign a registration log when visiting the ARC and SSC buildings, and in the Computer Center and Test Lab.
- Visitors taking a guided tour do not need a security badge.
- To receive a Jefferson Lab badge, you must complete required training and citizenship or immigration document validation. (See pages 2-4)
- If issued a badge, it is your responsibility to protect it and comply with all rules.
- Keep your badge with you at all times while on site and present it when requested.
- Report lost or stolen badges to your host or escort.
- Do not allow people you do not know to enter Jefferson Lab facilities.
- Access a Jefferson Lab com-

puter only if it has been assigned to you. Computers for general use are located on the second floor atrium at CEBAF Center.

- Wifi service for visitors is available onsite. Passwords may be obtained at the front desk at CEBAF Center.
- No government-owned property or material may be taken offsite without an approved property pass.

PROHIBITED ARTICLES

Weapons, explosives, or other dangerous instruments or materials likely to produce substantial injury or damage to persons or property are prohibited. Only law enforcement officials are permitted to bring or carry firearms at Jefferson Lab.

Also prohibited are:

- Controlled substances, illegal drugs (and associated paraphernalia).
- Open containers of alcoholic beverages.
- Other items prohibited by law.

VEHICLES AT JEFFERSON LAB

- You must have a valid driver's license, vehicle registration, insurance and vehicle safety inspection to drive on the Jefferson Lab campus.
- Follow all traffic signs when driving and park only in designated areas.
- The passing of any vehicle is prohibited.
- Obey posted speed limits.
- Always use seatbelts when driving or riding in vehicles at Jefferson Lab.
- Visitor parking spaces are for visitors only. No one (users, staff, contractors, etc.) with a Jefferson Lab badge is allowed to park in visitor spaces.
- Handicap permits are required to park in handicap spaces.



△ A Jefferson Lab engineer works on a "crab" cavity.

KEY PHONE NUMBERS & EMAIL ADDRESSES

IT Divison Help Desk <i>(Computer Accounts)</i>	757-269-7155	helpdesk@jlab.org
Main Number	757-269-7100	
Medical Services	757-269-7539	jbanks@jlab.org
Radiaton Control <i>(Practical/Dosimeter)</i>	757-269-7236	becky@jlab.org
Security/Emergency	757-269-5822	
Staff Services <i>(Meeting Rooms)</i>	757-269-6368	staffservices@jlab.org
Tours	757-269-7617	lechman@jlab.org
User Liaison/Student Affairs	757-269-6388	lcarlson@jlab.org
SSC Receptionist/JRIS <i>(Foreign Nationals)</i>	757-269-7598	jrjris@jlab.org

JEFFERSON LAB SITE MAP

1 Applied Research Center (ARC)

The ARC is a seven-story office and laboratory building owned by the City of Newport News and operated by Jefferson Lab.

2 Support Service Center (SSC)

The SSC is home to the lab's human resources, finance, procurement, facilities management and science education departments. International services and badging for staff and users are also located here.

3 SURA Residence Facility

Researchers and visitors may rent rooms at the Residence Facility, which is operated by Southeastern Universities Research Association.

4 CEBAF Center

CEBAF Center is Jefferson Lab's main administration building. It provides conference, meeting and office space. A cafeteria serving breakfast and lunch is open Monday through Friday. CEBAF stands for Continuous Electron Beam Accelerator Facility, the lab's original name and the name of its accelerator.

5 Experimental Equipment Lab (EEL)

The EEL is where specialized equipment for experiments is assembled and tested.

6 Test Lab

The Test Lab is home to Jefferson Lab's Superconducting Radiofrequency Institute, a world-leader in superconducting radiofrequency (SRF) accelerator technology and capabilities.

7 Technology and Engineering Development building (TED)

The Technology and Engineering Development building is a state-of-the-art facility where research in nuclear physics, accelerator science, applied nuclear science and technology, and advanced instrumentation is conducted.

8 Guard House

The lab's security staff is based here, and this is the main access point to the accelerator and experimental halls.

9 Hall A

Hall A is the largest of Jefferson Lab's experimental halls. It is 174 feet across and 80 feet tall from the floor to the highest spot on its domed ceiling. The foundation for the hall is 35 feet below ground. The hall is used primarily for experiments that study the structure of the nucleus and the protons and neutrons it contains.

10 Hall B

Hall B is the smallest of Jefferson Lab's three experimental halls. It is 98 feet in diameter and 65 feet from floor to ceiling. Experiments run in Hall B can receive electron beam or a photon beam. A major research program in Hall B has involved the investigation of the quark-gluon structure of the nucleon and a detailed study of its spectrum of excited states.

11 Hall C

Hall C is 150 feet in diameter and 60 feet tall. Hall C houses a High Momentum Spectrometer and provides space for large-installation experiments. The experiments run in Hall C have included the pion form factor, deuteron photodisintegration at high energies, color transparency, kaon production, excitation of the delta resonance in the proton, duality and deep inelastic scattering of nuclei for $x > 1$.

12 Machine Control Center (MCC)

The Machine Control Center is the facility for operating the CEBAF accelerator. From the control center, more than 250,000 accelerator data points are continuously monitored, 24 hours a day.

13 Central Helium Liquefier (CHL)

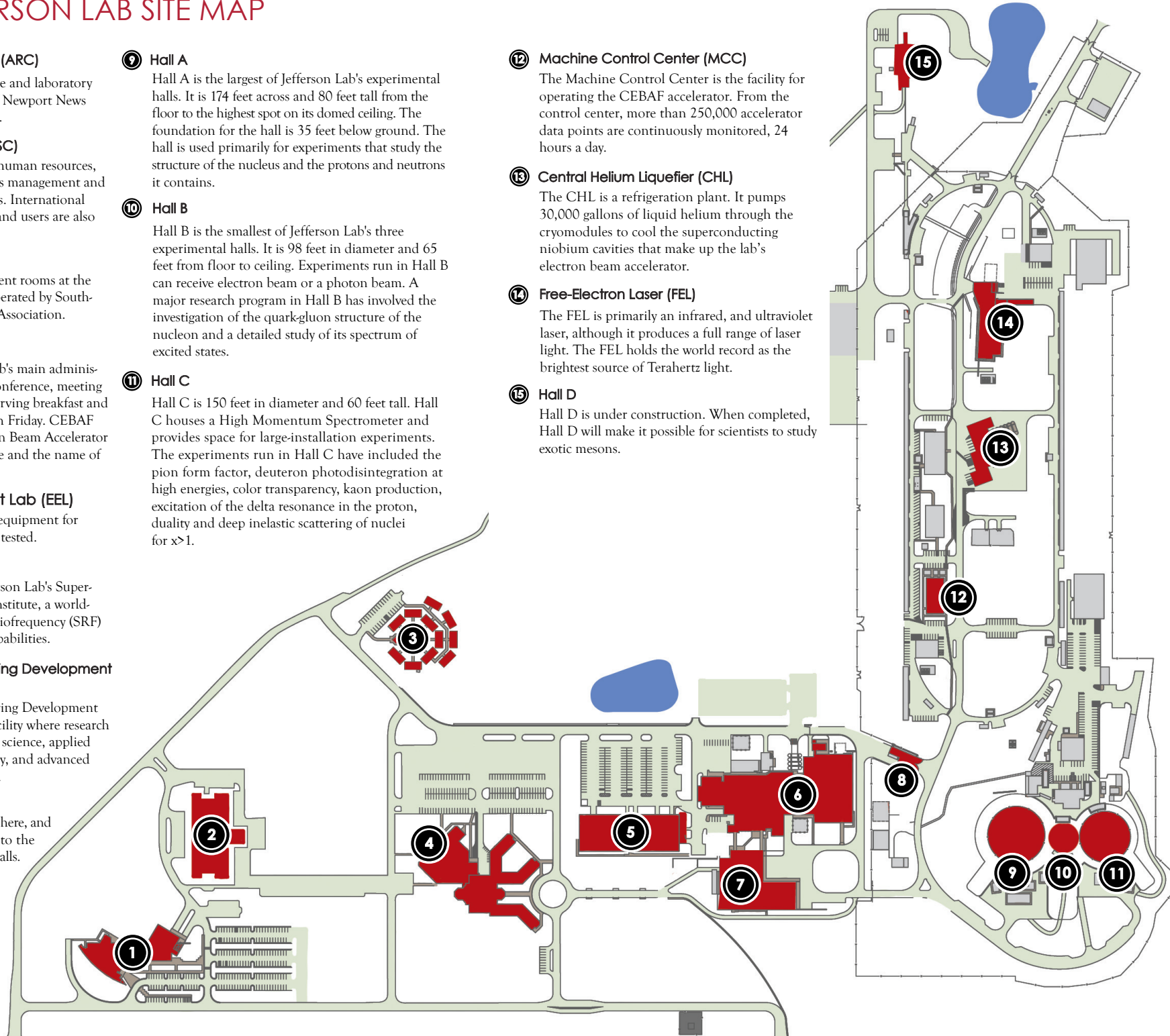
The CHL is a refrigeration plant. It pumps 30,000 gallons of liquid helium through the cryomodules to cool the superconducting niobium cavities that make up the lab's electron beam accelerator.

14 Free-Electron Laser (FEL)

The FEL is primarily an infrared, and ultraviolet laser, although it produces a full range of laser light. The FEL holds the world record as the brightest source of Terahertz light.

15 Hall D

Hall D is under construction. When completed, Hall D will make it possible for scientists to study exotic mesons.



WANT TO KNOW MORE?

Learn more about Jefferson Lab by visiting www.jlab.org, or by sending an email to jlabinfo@jlab.org, or by calling 757-269-7100.



Thomas Jefferson National Accelerator Facility is managed by
Jefferson Science Associates, LLC for the
U.S. Department of Energy's Office of Science

