

## Jefferson Lab Weekly Briefs

October 17, 2007

### Physics

In Hall B, the Frozen Spin Target is being installed in CLAS for the g9a run, which is scheduled to begin Oct. 23 with FROST commissioning. Various problems have recently been fixed, especially the damaged joint at the current leads for the holding coil, which was replaced with a new superconducting joint. The target will be cooled down in the coming week. The FROST safety review was held Oct. 11.

Hall C is in final preparations for the Gep experiments. The Focal Plane Polarimeter and special trigger detectors have been installed in the High Momentum Spectrometer focal plane hut. With the recent routine cool down of the HMS magnets, reinstallation of the focal plane shielding wall and spectrometer pointing survey, the HMS is ready for operation.

### Accelerator

Work-arounds allowed setup and testing in the injector to proceed, despite the LN1 transformer outage. A blown fuse in LN1 was replaced and new transformer oil was poured in; after further checks, it was brought back online. The Cryo group was able to fill all cryomodules in a timely manner, and cooldown of the experimental halls commenced. Operations shifts began on Thursday, running 24 hours/day for hot checkout of all systems. By Monday, Oct. 15, Operations staff had threaded the beam through most of the passes. CASA staff assisted with beam energy issues. By swing shift on Tuesday, Oct. 16, CEBAF was running with 5-pass continuous wave (CW) beam on the Beam Switch Yard dump. This may be the quickest that CW beam has ever been restored in the accelerator after a major down!

#### • JLab's Safety Numbers (Oct. 17, 2007)

28 Days since Last Recordable Accident  
(JLab Record: 319)

347 Days since Last Lost Workday Accident  
(JLab record: 455)

### Environment, Safety, Health & Quality

As we stack patio equipment and other outdoor summer items in the garage, it's a great time to focus on garage safety. For many of us, it is the largest room in our home and can be the most dangerous. Here are a few garage safety tips that illustrate how even simple steps can prevent an injury:

- Be sure the garage is well lit. Install the highest wattage light bulb that the overhead outlet safely allows.
- Keep children's playthings in one corner within their reach, to discourage kids from exploring potentially dangerous areas.
- Remove items from the floor and store them in cabinets or on shelves, hooks or brackets.
- Don't lean heavy or sharp objects against the walls, such as tires and gardening tools. These can easily fall on feet and small children.
- Store ladders horizontally to prevent tipping and children climbing on them.
- Make sure poisonous products, like automotive fluid, pesticides, paint thinner, turpentine and antifreeze, are stored on high shelves out of reach or in locked cabinets.
- Keep a sturdy step stool nearby to aid in reaching items stored up high.

• **Recent CATS Enhancement** – An “Approval Date” box has been added to the JLab Corrective Action Tracking System (CATS) corrective action screen. This box appears under the “Screened By” name. The approval date will be the date that management approves the completion for significance level 2 or above actions. The completion date box remains and is used to enter the date of completion of work on the corrective action. This date will be used for reporting purposes. For additional CATS system information, contact Bob Doane at x6380 or [bobdoane@jlab.org](mailto:bobdoane@jlab.org).

### Free-Electron Laser (FEL)

The gun vacuum leak reported last week in the gun test stand has been successfully fixed

without having to disassemble or re-bake. The 60-Amp AC power circuit for the drive laser has been installed and is operational. The 16 Tesla superconducting magnet system has been delivered and will be installed in the terahertz lab for performing magneto-optical THz spectroscopy measurements. Also, Lab 6 has been certified for Class IV laser operations.

### Theory Center

The current empirical information on the nucleon and  $N - \Delta(1232)$  electromagnetic form factors has been used in a recent analysis ([arXiv:0710.0835 \[hep-ph\]](https://arxiv.org/abs/0710.0835)) to map out the transverse charge densities in unpolarized and transversely polarized nucleons and for the  $N$  to  $\Delta$  transition. The nucleon charge densities are characterized by a dipole pattern, in addition to the monopole field corresponding with the unpolarized density. The  $N$  to  $\Delta$  transition charge density in a transversely polarized nucleon and  $\Delta$  contains both monopole, dipole and quadrupole patterns, the latter corresponding with a deformation of the hadron's charge distribution.

### Computing and Networking Infrastructure

On Tuesday, Oct. 23, 5-10 p.m., the Central Computing Systems team will run maintenance tasks. These central services will be impacted:

- ☒ Voicemail- The old system will remain online during a short transition period; messages stored there will be lost when the system is decommissioned. For questions, contact Walt Akers, x7669, or Dawn McGinnis, x7206.
- ☒ Calendar Server- the calendar server will be offline for hardware replacement, a software upgrade and an upgrade to the web interface. *In an effort to increase performance and maintainability, all calendar records that predate Jan 1, 2007 will be erased.* For more information, contact Paul Letta, x5106 or [letta@jlab.org](mailto:letta@jlab.org);
- ☒ Printing- print services will be upgraded and all printing will be offline for about two hours;
- ☒ Terminal Servers- centrally available terminal servers will be offline for approximately an hour between 5:30 and 6:30 p.m.;

☒ The dial-up server (RAS) will be unavailable 5 -10 p.m., while hardware is being replaced.

Patches will be pushed to Windows and Linux desktop computers. Please log out of your computer and leave the power on Tuesday evening. If your computer is not managed by the IT Division or by ACE, this is an excellent time to run updates to all operating systems and applications.

### Announcements

#### • [Debra Stitts Memorial Information](#)

Stitts, a longtime JLab employee and Engineering Division staff member, lost her battle with cancer Monday, Oct. 15. In lieu of flowers, the family has requested donations to the [American Cancer Society](#), the [American Lung Association](#), or other charities.

#### • **Walking Path Closed**

The walking path is still closed from the intersection of Canon Blvd. and CEBAF Blvd to the Residence Facility for the construction of a storm water retention pond; it will remain closed until construction is complete.

#### • **Bill Rust Retirement Reception**

A [reception](#) recognizing Bill Rust's 15 years at JLab will take place today at 2 p.m.

#### • **Flu Shots**

Flu vaccine is available at Occupational Medicine. For an appointment, contact Johnie Banks, x7539 or [jbanks@jlab.org](mailto:jbanks@jlab.org).

#### • **Oktoberfest call for volunteers**

Oktoberfest is scheduled for Wednesday, Oct. 24, from 3-6 p.m. Volunteers make this event a success. [Sign up](#) on the JLab website. *Please bring canned foods for donation to our local food bank.*

### JLab Calendar of Events

Oct. 24: JAG Fall Event: Oktoberfest  
Oct. 26-27: Short-Range Structure of Nuclei at 12 GeV Workshop  
Oct. 30: Science Series Lecture: Forensic Dentistry