

Jefferson Lab Weekly Briefs

July 25, 2007

Major Central Systems outage to take place at 6 a.m. on July 28. The central file servers for home, group, apps, site, wbs, etc., will be taken offline for the installation of new hardware. The process should take about 24 hours. All central computing services will be unavailable, including e-mail, calendar, centrally stored files, printing, web pages, and MIS applications. E-mail sent to JLab addresses during this outage will queue.

12 GeV Upgrade

The design effort on the Hall D Complex (conventional facilities) continues. The A-E was given the notice to proceed with the 100% design on June 18. The independent cost estimate was completed in June and validated the A-E's estimated total cost as reasonable. The A-E will obtain vendor estimates for the 100% design submittal for the two items with disparity with the independent cost estimate, excavation shoring and electrical service equipment.

Physics

Hall B successfully completed the two parts of the g13 experiment using energy-tagged circularly and linearly polarized photon beams scattered off a liquid deuterium target. In addition, three test runs were completed before entering into the long maintenance period. During the down, several drift chamber modules will be subjected to maintenance, broken wire repair, and electronics replacement. Plans call for the installation of the FROST target during the month of September in preparation for the upcoming first run with FROST in October.

In preparation for GEp-III/GEp-2gamma, the BigCal calorimeter and its supporting cable delay and electronics have been moved into Hall C. In preparation for installation of the focal plane polarimeter, the side wall of the High Momentum Spectrometer hut has been removed and some detectors removed from the hut.

Environment, Safety, Health & Quality

JLab workers use utility knives for a wide variety of tasks in many different applications. Lab staff members have had several injuries in recent years when a utility knife was being used rather than a specific tool designed for special tasks, such as cable or wire insulation stripping. Therefore, when approaching any task, first ensure that a utility knife is the best choice. Here are some National Safety Council basic tips for using any utility knife:

- The utility knife blade should be fully retracted when not in use.
 - Always use a sharp blade. Dull blades require more force and are more likely to slip.
 - Protect your eyes. Wear safety eyewear when working with any hand tool.
 - Always keep your free hand away from the line of the cut.
 - Always pull the knife toward you when making a cut on a flat surface.
 - When using a straight edge to guide your cut, clamp it down.
 - The use of cut-resistant gloves (available from the JLab Stockroom) is recommended.
- Additional utility knife and hand tool information can be found in JLab EH&S Manual [Chapter 6120, Hand and Power Tools](#).

• **Power Tool Recalls** - The Consumer Product Safety Commission (CPSC) recently issued two recalls for power tools that some of us may use either at home or at JLab. The [Black and Decker GH1000 Grasshog XP String Trimmer/Edger](#) and the [Milwaukee cordless tool 14.4 and 18 volt 2.4 Ah NiCd battery packs](#) have been recalled. Click the links for more information.

Accelerator

This was the first full week of the July SAD (Scheduled Accelerator Down), and the accelerator is literally a beehive of activity, with all groups taking full advantage of being able to turn off whole systems and remove and repair components normally critical for beam

operations. One major accomplishment this week was the installation of the new load lock gun in the injector. This will allow a cathode wafer to be changed out in about a shift's time vs. the several shifts previously required. The Central Helium Liquefier (CHL), through a fine act of balance and control, successfully raised its operation temperature from 2K to 4K, enabling a significant savings in electrical power. Preparations were made for both the removal of the 2L09 cryomodule from the South Linac scheduled for the end of the week and the installation of a newly refurbished cryomodule nicknamed Renaissance to go into the 1L04 spot in the North Linac.

Free-Electron Laser (FEL)

FEL staff continued to make progress on Gun Test Stand preparations. The high-power resistor mechanism was assembled and made operational, and the resistor itself went through the first firing of the resistive coating. The SF6 system is about 50% assembled.

Theory Center

Dyson-Schwinger equations (DSE) provide an excellent tool for describing hadrons as composites of quarks and gluons. In order to be solved, they require a finite truncation of the infinite tower of coupled equations, and a widely used scheme is the ladder-rainbow truncation. In recent work (arXiv:0706.2393v1 [nucl-th]), JLab theorists have extended this formalism by constructing the quark-gluon vertex from the complete set of diagrams involving only 2-point gluon lines, which provides a better understanding of the limits of applicability and reliability of the DSE.

Announcements

• **Before you connect/move a device to JLab's secure network...** Before plugging a new device into the network or moving a device from one network jack to another, be sure to submit a network service request from the [Computer Center Networks page](#). The Helpdesk will assist you in properly connecting your device to the network. Due to new security protocols for the Lab's networks, attempting to

plug in a new device without notice will automatically disable the network jack.

• **The Safety Shoe Truck** will be at the ARC loading dock on Thursday, July 26, from 2-4 p.m. Get your requisitions in through the [Webstock/Stockroom](#). If you have questions, contact Jill Starling, x7211.

• **TIAA-CREF individual counseling session dates set for September/October.** This is an opportunity to discuss the current status of your account, investment strategy and retirement goals. The dates are: Sept. 28 and Oct. 18 & 19. To sign up for an appointment, go to <http://www.tiaa-cref.org/>, click on Meetings & Counseling and follow the menu. The sessions will be held in the VARC.

• **Performance Appraisal System Training scheduled.** All JSA employees should plan to attend a training session to learn of the performance review timeline and their responsibilities. [View the schedule and sign up online.](#)

• **Bottled drinks on sale.** The Quark Cafe is selling cases of Coca-Cola Company beverages. A case includes 24, 20-ounce bottles for the sale price of \$15. To place your order, notify the Quark Cafe staff member at the register or call Chris Thornhill, x7370.

• **JLab's Safety Numbers (July 25, 2007)**
263 Days since Last Recordable Accident (new JLab Record: 263) Congratulations, everyone!
263 Days since Last Lost Workday Accident (JLab record: 455)

JLab Calendar of Events

Aug. 3: Summer Poster Session
Aug. 6-10: PAC 32
Sept. 3: Labor Day holiday
Sept. 7: United Way Day of Caring
Sept. 13: JSA's Electronic Commerce Small Business Vendor Show