

## Jefferson Lab Weekly Briefs

August 22, 2007

### 12 GeV Upgrade

Preparations continue for the External Independent Review (EIR) of the 12 GeV Upgrade Project, which will be conducted by DOE's Office of Engineering and Construction Management (OECM). This review is the final review of the project leading to approval of Critical Decision 2. DOE has selected a company to carry out the review and has confirmed that the dates will be Sept. 10-14.

### Physics

Hall A is performing preventive maintenance, mainly on the cryo-supplies of the two High Resolution Spectrometers. But a spare power supply is also being installed for use on any of the six HRS quadrupole magnets.

Maintenance and repair work on the CLAS drift chamber system was completed, and the chambers have been energized. Cosmic ray tracking will begin this week. The time-of-flight upgrade is well underway; all cables have been manufactured, and half have been pulled. The testup needed for the magnetic field test of the GlueX drift chamber prototype is well underway. The frozen spin target, FROST, has not yet achieved significant levels of polarization, for currently unknown reasons.

### Theory Center

In a new Theory Center paper, arXiv:0708.0324 [hep-ph], the flavor dependence of chiral-odd transverse momentum-dependent parton distributions was investigated in a diquark spectator model. In particular, the time reversal-odd Boer-Mulders function was found to be negative for both up- and down-quarks. The chiral-odd parton distributions for up and down quarks were then used as input to give predictions for the azimuthal  $\cos(2\phi)$  asymmetry in 12 GeV JLab kinematics, as well as for the  $\sin(2\phi)$  single-spin asymmetry for a longitudinally polarized target.

### Environment, Safety, Health & Quality

As we are now in the tropical storm season, it is important to keep in mind the hazards of downed power lines. The National Safety Council recommends extreme caution when encountering a downed line. If you see a downed line, you should report it immediately to the police/sheriff's department and the local electric utility.

Here are some tips to help you and your family stay safe around downed lines:

- If you see a downed power line, move away from the line and anything touching it. If you see someone in direct or indirect contact with the downed line, do not touch that person. You could be the next victim. Call 911 instead.
- Do not attempt to move a downed power line or anything in contact with the line by using another object such as a broom or a stick. Even non-conductive materials, like wood or cloth if slightly wet, can conduct electricity and electrocute you.
- If you are in your car and it is in contact with the downed line, stay in the car. Honk your horn for help and tell others to stay away from your vehicle.
- Do not drive over downed power lines.

• **CPSC Skil Circular Saw Recall** - The Consumer Product Safety Commission (CPSC) recently recalled over 800,000 Skil Circular saws due to trigger switch problems. More information can be found on the [CPSC site](#).

### Accelerator

The planned power outages for maintenance continued around the accelerator site, and the End Station Refrigerator shut down and warm-up was begun. After all the changes being made to the injector, the early part of the injector was tuned up with beam and the beam was centered on apertures A3 & A4, then an all-save was done with beam to the 1D00 Spectrometer. The JLab alignment team found that Cryomodule NL04 was slightly rotated. It was loosened in

place and successfully rotated to the correct position and a Helium purge was begun to condition the internal components. The installation of new lighting in the Injector was completed. In software, a new Archiver process was tested by successfully saving 75,000 signals; plans are in the works to save all 200,000 accelerator signals. Acid flushing was done on a number of magnet and other device cooling water lines to remove contamination buildup. This type of maintenance will move from one area to the next as needed. A lightning storm was the cause of several Oxygen Deficiency Hazard system component failures. Repairs are underway.

### **Free-Electron Laser (FEL)**

Good progress continued on the gun test stand and optical transport system. The optical transport system is back under vacuum after installation of many new components. The advanced drive laser is ready to install in the clean room. The gun chamber is now fully assembled on its new stand, and welding with new ASME and DOE approved procedures has started on the gun tank. Work with the open source optics code OPC is successfully modeling optical cavities and can include FEL gain. The final assembly of the design documentation of the Florida State BigLight FEL is underway.

### **Announcements**

- **Maximo Outage Planned.** On Aug. 24 at 5 p.m., MIS will upgrade the Maximo Enterprise Application. The upgrade is expected to take less than an hour. The following applications will be affected and will be down/unavailable during the time of the upgrade: Maximo, Requisitions and Service Requests. For more information, contact Kari Heffner, x5814.
- **Firewall Changes Ahead.** Additional network firewall changes will be put in place for the EEL, Test Lab, trailers near the test lab, ARC, radcon, jlab\_secure wireless, and some parts of the VARC on Aug. 28 at 7:30 a.m. Most users will see no change in network service. The purpose of this change is to limit incoming

connections to these networks except for ssh (Unix secure shell) and RDP (Windows remote desktop).

NOTE: If you are responsible for a machine on one of these networks and it accepts incoming network connections to provide some network service, it is important to obtain CIO approval to avoid being blocked; instructions are available on the [Computer Center Web site](#). Similar firewall changes will be made to other networks in subsequent weeks. If you have questions, contact the helpdesk, x7155.

- **Tee up for the JLab 2007 Fall Golf Tournament!** The tournament will be held Sept. 27 at the Williamsburg Country Club. The four-person teams will be handicapped and must include at least two JLab employees. Cost is \$45 for JLab and \$60 for non-employees. Sign up by Sept. 21 with Mike Zarecky (x7609).

- **United Way School Tools Drive underway.** Disadvantaged youth in Hampton Roads need your help as they prepare to head back to school. Collection boxes for donations of new school supplies have been placed in Building 85, VARC, CEBAF Center, and ARC lobbies. Supplies may be placed in the boxes by COB Sept. 6. Appropriate items include: pens, pencils, student scissors, crayons, spiral notebooks, 3-ring binders, binder paper, pocket folders, rulers, protractor/compass sets, etc. For more information, call Tina Johnson, x7611.

- **JLab's Safety Numbers** (August 22, 2007)  
291 Days since Last Recordable Accident (JLab Record: 291) Congratulations, everyone!  
291 Days since Last Lost Workday Accident (JLab record: 455)

### **JLab Calendar of Events**

Sept. 3: Labor Day holiday  
[Sept. 6: American Red Cross Blood Drive](#)  
Sept. 7: United Way Day of Caring  
Sept. 10-14: 12 GeV Upgrade: OEMC EIR Review  
[Sept. 13: JSA's Electronic Commerce Small Business Vendor Show](#)