

Jefferson Lab Weekly Briefs

June 20, 2007

12 GeV Upgrade

On June 26-28, the DOE Office of Science Office of Project Assessment Independent Project Review (IPR) of the 12 GeV Continuous Electron Beam Accelerator Facility Upgrade Project will take place at Jefferson Lab. The purpose of this review is to assess all aspects of the 12 GeV CEBAF Upgrade Project – technical, costs, schedule, management, and environment, safety, health and quality in support of attaining Critical Decision-2 (CD-2) approval.

Physics

Hall C experiments E04-001/E06-009 had a good week of data taking. Inclusive electron-scattering spectra were obtained on liquid deuterium and solid targets at a variety of beam energies and scattering angles.

Accelerator

All three halls received beam for the entire week. Hall C changed from five-pass to four-pass energy on June 13. Due to the higher energy of the accelerator, there were numerous radiofrequency trips/faults. A high current test plan was run in order to gather more data on the behavior of the RF cavities when stressed by beam loading in the accelerator in a long term effort to improve the performance of the RF system. On June 16, the machine was reconfigured to a lower energy (0.804 GeV per pass) and the RF trip rate went down dramatically. Meanwhile in the MCC (Machine Control Center), the Jupiter wall display controller received a memory upgrade.

- **JLab's Safety Numbers** (June 20, 2007)
228 Days since Last Recordable Accident (JLab Record: 251)
228 Days since Last Lost Workday Accident (JLab record: 455)

Environment, Safety, Health & Quality

This week continues the June theme of National Safety Month. This week's topic is emergency preparedness, featuring hurricane precautions. Please review these basic tips:

- If you have to evacuate, know where to go and how to get there. You should have plenty of warning before a hurricane makes landfall.
- Stay indoors until authorities tell you it's safe to go outside.
- Stay away from windows and exterior doors.
- Seek shelter in a bathroom or other interior room.
- Be prepared to evacuate if necessary.
- Establish an assembly point for family members to meet if separated, and choose one person everyone can contact with their location and status.
- Know how to shut off your home's utilities.
- Secure loose outdoor items like patio furniture, grills, etc.
- Stock emergency supplies, including canned food, bottled water, a battery-operated radio, medications, and personal hygiene items in water-tight storage bins.

JLab staff and physics users who are new to Hampton Roads and are unfamiliar with preparing personal property for hurricanes may consult John Kelly at x7531 or jkelly@jlab.org. Additional hurricane information may also be found at:
http://www.jlab.org/div_dept/train/webbasedtraining.html

Free-Electron Laser (FEL)

FEL staff has made excellent progress in their shutdown tasks. Last week, the new Laser Personnel Safety System interlock system for Lab 6 was completed; cables were installed for testing of the power supply for the Gun Test Stand; and a solenoid and material for tank fabrication were ordered. In addition, the installation of the Office of Naval Research-

funded pulsed laser deposition system is well underway in Lab 5. Work continues on the Gun Test Stand at a heavy pace, while many of the scientists have been finalizing and submitting for review their papers for the 2007 Particle Accelerator Conference.

Theory Center

In a joint effort by the JLab-based Lattice Hadron Physics Collaboration and the MIMD Lattice Computation Collaboration, a comprehensive lattice QCD study of the lowest moments of nucleon generalized parton distributions has been reported in arXiv:0705.4295v1 [hep-lat]. The study used domain wall valence quarks and improved staggered sea quarks for three quark flavors. The investigation included helicity dependent and independent generalized parton distributions for pion masses as low as 350 MeV and volumes as large as $(3.5 \text{ fm})^3$.

Announcements

- **The semi-annual TLD changeout will take place over the weekend of June 29.** If you have a JLab radiation badge, be sure to place your badge in its designated badge rack slot before you leave the Lab that week. This will ensure that your badge isn't missing when the changeout takes place.
- **The Safety Eye Glasses** vendor will be in the VARC lobby at 8 a.m. on Wednesday, June 27, to fill purchase requisitions. Individuals requiring safety glasses in their work areas need to have their purchase requisitions in and signed before seeing the vendor. Individuals must bring their current corrective-vision prescriptions with them in order to be fitted for safety glasses. Contact Jill Starling at x7211 or Estelle Seeley at x7238 with any questions.
- **American Red Cross Blood Drive** to take place 10 a.m.-4 p.m. on Friday, July 6. Give the gift of life at the Summer Blood Drive. To make an appointment, call Johnie Banks at x7539. Walk-ins are also welcome.

JLab Calendar of Events

June 18-20: Annual Users Workshop
June 26-28: DOE SC OPA Independent Project Review of the 12 GeV CEBAF Upgrade Project
July 4: Independence Day holiday
July 6: American Red Cross Blood Drive
July 11: Workers Safety Committee public comment period, 10:30 a.m., CC F326-327
July 23-25: DOE S&T Review

JLab 2007 Summer Education Calendar

May 29: Science Undergraduate Laboratory Internship (SULI) begins
June 18: High School Summer Honors Program (HSSHP) begins
July 9: Academies Creating Teacher Scientists (DOE ACTS) begins
Aug. 3: Summer Poster Session/last day for SULI, HSSHP and DOE ACTS