

Look back and glance ahead

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LSD Resource Meeting

June 13, 2012

Update from last week

- **Peppo** continues running – switched to swing and owl running time to allow work in the NL during the day (3 shifts/day during weekends).

It takes 1-1.5 to get the machine back after the day work – turnover improved by keeping the injector in CA

- **C100-5 installation in 2L23** , hook-up, and cool-down done last week. Commissioning planned for Friday was delayed to Monday because of a PSS problem. Problem solved now, commissioning ongoing
- Installation of **waveguides in 2L22** was challenging: waveguides did not fit (~10mm). Alignment group managed to roll and fix the problem. Understanding of what went wrong in process, I suppose.
- **Girder** rebuilding for 12 GeV going well, ahead of schedule
- Good progress with **S/R work** in 2R and 2S. Crew working in 1R now. 2R not started yet (proximity to injector, Peppo). Walkthrough done on Monday.

Update from last week - FEL

- We are running the UV-FEL, which is a **new FEL** that we commissioned last month using a loaned **undulator from Argonne** with some modifications to our vacuum chambers and diagnostics. This undulator replaced a slightly shorter one we borrowed from Cornell.

Last week we characterized the performance of the FEL, and this week we delivered **beam** to a nuclear physics funded experiment from Argonne/ODU to investigate **ionization of Kr as part of an isotope program** used for dating - **Kr 81** instead of C 12. Clock is 250,000 years instead of 5,000 years.

Next week we switch **back to the IR-FEL** electron beam transport and install a **test target aperture** (no target), to investigate electron beam transport through it.

As far as **resources** are concerned, the installation and survey of this test target aperture should be on the list

Demolition in TestLab

Starting Week of	Demolition Activity
29 May 12	West Wing 2 nd floor office area
4 June 12	West Wing 2 nd floor shop area
11 June 12	West Wing 1 st floor High Bay South Cleanrooms
25 June 12	All Lab activity out of Test Lab; major demolition starts in High Bay.
After 6-8 weeks	Limited use of VTA and Test Cave

Look Ahead

- 8 week look ahead report & 3 month look ahead report available:
 - <https://www.jlab.org/TLSD/SCHEDULES/>
- Major Milestones & Outages:
 - ESR Down 16 July → now June 10th
 - CHL #1 Warm Up Begins & Ends: 1 Aug & 15 Aug

Schedule Progressing

1. Progress to the end of May 2012 – currently implementing progress information and updated schedule available end of this week

8 Week Look Ahead (Major Activities)

- **12GeV Accelerator**
 - Install, Checkout & Commissioning of CM #4 & #5 & Associated RF
 - Box Supply Shuffle
 - Trim Racks (HD and Service Bldgs) & Cables/Support for S/R removal
 - NL & SL Transfer Line Rebuild Work
 - S/R Removal & Upstairs Rework
- **Hall D:** Solenoid Platform Installation & cladding, BCAL light guide gluing, Collimator Cave Shielding Wall, FCAL detector housing infrastructure installation, BCAL rails
- **PEPPo Run** to 10th/11th June (then second shift running until 29 June)
- **Hall A G2P Removal** (upside down girder, FZ1 & FZ2 magnets, slow raster, install upstream beam girder)
- **Hall B:** Cable removal, HDICE removal, Split CLAS (South Clam)
- **Hall C:** Decommission & Removal of QWeak
- **FML Construction Activities:** 40 MVA TO 22 MVA Tie Line; CHL#1 Cooling Towers/Header
- **FEL:** Run (until end of July)
- **ESH&Q:** DOT Training (people off site week of June 11th – tight schedule for RadCon support) & Dosimetry Changeout

Upcoming Changes/Change Requests –

1. Hall A Original Quad & Upside Down Girder Schedule Changes – **page 1 submitted this week**
2. FEL Schedule Updates (Darklight, Admiral, S&A support) – **page 1 will be submitted after Admiral information is known**
3. 12GeV Beam Transport mech & align tech profile smoothing (M. Bevins/L. Harwood) – **page 1 will be submitted after progress collected and processed for May 2012**
4. Baseline Review Recommendation Changes - **Discussions on-going**
5. 12GeV CR for ODH requirements NLinac/Tagger – **Discussions on-going**
6. 12GeV Hall C Schedule Implementation - Note: **July Review (Howard/Glenn)**
7. 12GeV Hall B Schedule Implementation - Note: **Aug Review (Latifa/Glenn)**
8. Bubble Chamber Run (A. Freyberger/M. Poelker) – **Discussion on-going**

Experiment: E11-105 (PEPPo)

Run Coordinator: Riad Suleiman

Reporting Period: June 6 - June 13

Statistics:

- Total Shifts Completed (56) / Shifts Scheduled (81): 69%
- Week Down (1.5) / Shifts Completed (19) = 8%
 1. Vacuum Spike in PEPPo Beamline (9h)
 2. Vacuum Valves won't open (3h)
- Planned Configuration (0.5) / Shifts Completed (19) = 3%
- Beam In Use (17.0) / Shifts Completed (19) = 89.5%

Significant Achievements

- Completed positron polarization measurements at 1 mm and 6.3, 5.5 MeV/c
- Started measurement at 1mm and 4.2 MeV/c

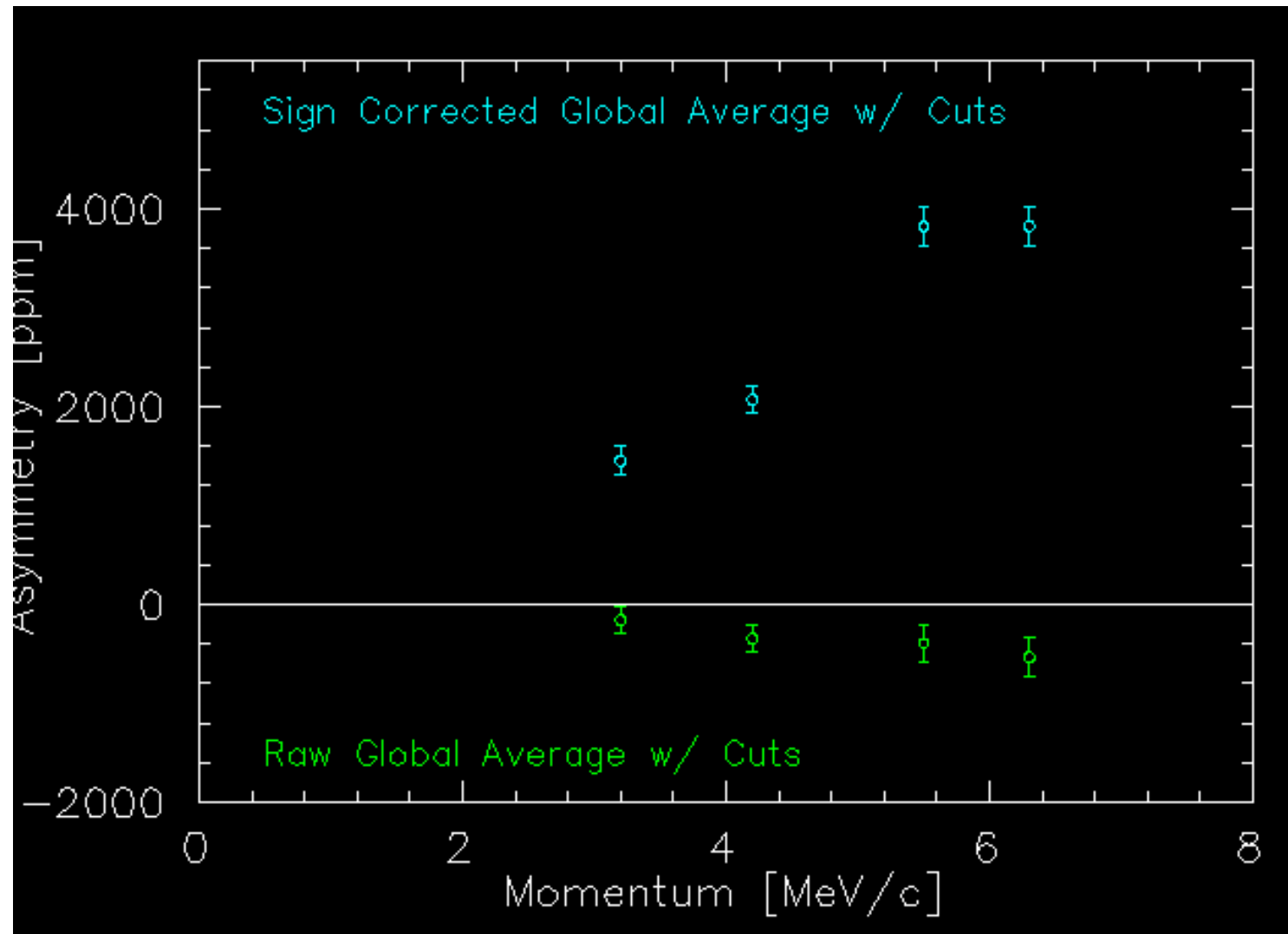
Problems Pending

- Spectrometer Supply current instability

Upcoming Week Goals:

- Finish positron data production on 1mm: 4.2 and 3.2 MeV/c
- Measure: 1.0 mm and 7.2 MeV/c OR 0.1 mm and 3.2 MeV/c
- Measure positron beam profile: momentum and spatial distributions

Positron Asymmetry



Shutdown Work Summary

Organization: Alignment

Name: Chris Curtis

Date: 13 June, 2012

Last Two Weeks

Work That Went Better Than / As Expected:

- Completed sample sections of Step 2A alignment in east and west arcs.
- Hall A Compton detector can fiducialized.
- Continuing Tagger to Hall D tie.
- Adding control to Hall D collimator cave (shielding wall partly built)

Work That Went Slower Than Expected, Delays, and Issues:

- C100-4 re-aligned in SL22.

Ongoing Shutdown Work

Upcoming Work (3-6 weeks from now) (green = no concerns; yellow = some concerns; red = serious concerns)

Project	Status	On Schedule?	Tasks	Comments/Concerns
12 GeV Accel	x 	18 Jun	Full re-survey of all monuments in the accelerator.	Started today.
Hall C – Q Weak	x 	18 Jun	Target, tungsten plug, chamber as-found surveys	Waiting for rad levels to drop.
FEL	x 	26 Jun	Dark Light alignment	
12 GeV S/R	x 	27 Jun	Layout bolt locations of stands	Drawing sign-off on June 20.
12 GeV Arcs	x 	2 Jul	Step 2A (rough) alignment of west arc.	Final copy of beamline positions received this week (Excel). Sign-off?
12 GeV Accel	x 	July?	R100 / OL04 cryomodule shuffle	Details and timing to be determined.

New Work Requests Requiring Schedule Changes:

- None

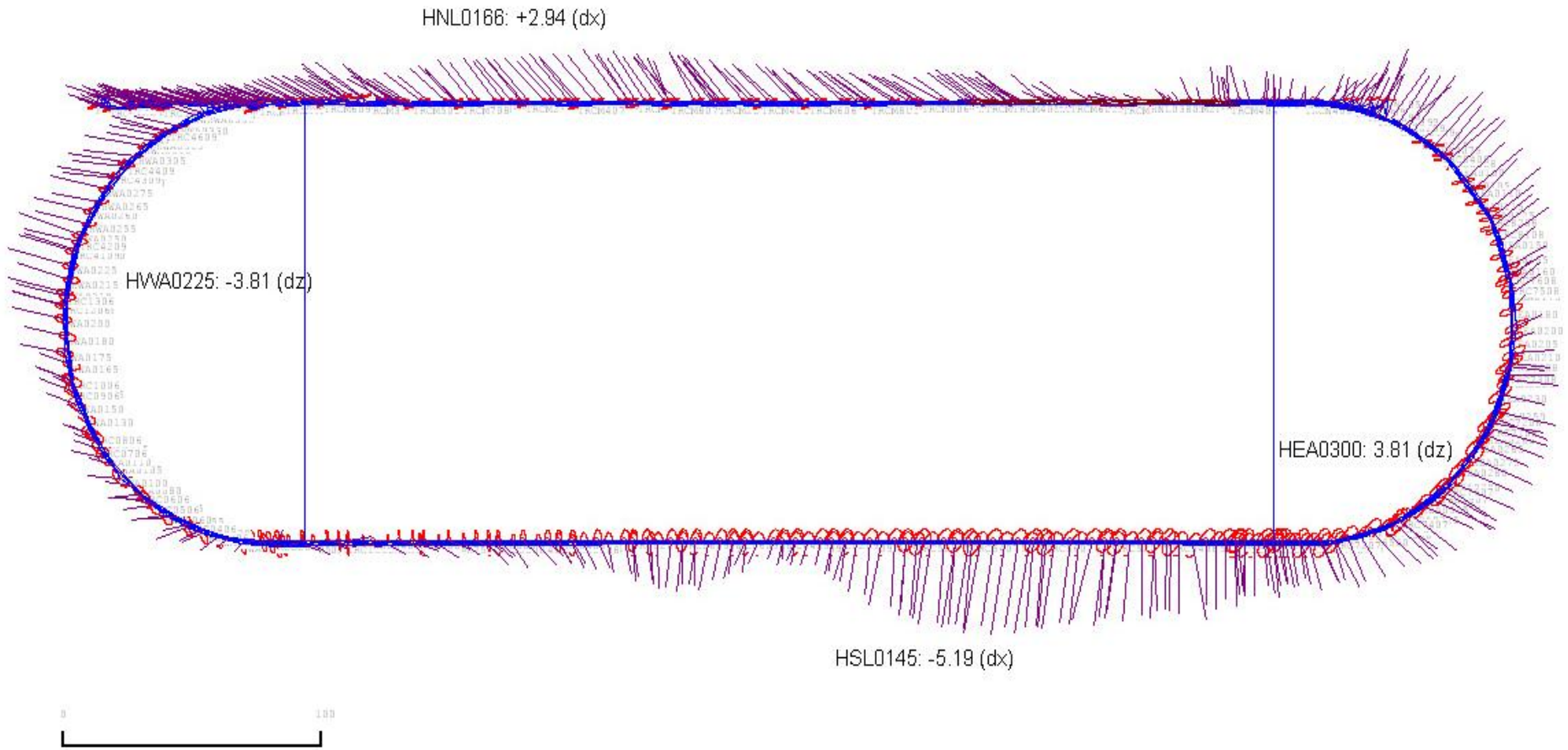
Significant Problems Pending (delays, technical issues, resource issues, scheduling):

- As stated above

Staffing Outlook:

- Good.

Accelerator Network – Monument Differences c.1993 - 2008



Average Movements for Each Pass

Pass	Mon't Diff	Pass Diff	Calc Move	Avg. Move	Diff
E ARC					
3	3.68	0.29	3.39	2.65	0.75
5	3.68	-0.22	3.90	4.37	-0.47
7	3.68	2.18	1.50	2.76	-1.26
9	3.68	4.22	-0.54	0.99	-1.53
W ARC					
2	2.71	4.05	-1.34	-1.60	0.26
4	2.71	0.06	2.65	2.86	-0.21
6	2.71	0.76	1.95	1.81	0.14
8	2.71	3.28	-0.57	-0.16	-0.41
10	2.71	0.00	2.71	2.69	0.02

Shutdown Work Summary

Organization: SRF

Name: John Hogan

Date: 13-june-2012

Last Two Weeks

Work That Went Better Than Expected:

- N/A

Work That Went Slower Than Expected, Delays, and Issues:

- Commissioning SL23 delayed due to PSS concerns; CoolDown SL22 delayed due to installation

Ongoing Shutdown Work

Upcoming Work (3-6 weeks from now) (green = no concerns; yellow = some concerns; red = serious concerns)

Project	Status	On Schedule?	Tasks	Comments/Concerns
Cryomodules	X yellow red		SL23 Commissioning	
Cryomodules	X yellow red		SL22 CoolDown	
Cryomodules	X yellow red		SL22 Commissioning	

New Work Requests Requiring Schedule Changes:

- N/A

Significant Problems Pending (delays, technical issues, resource issues, scheduling):

- N/A

Staffing Outlook:

- Stable

Shutdown Work Summary

Organization: Hall A

Name: Ed Folts

Date: 6/13/12

Last Two Weeks

Work That Went Better Than Expected:

- Removal of the Polarized target.

This work is ahead of schedule because the Physics Target team was able to disconnect the equipment more quickly expected.

Work That Went Slower Than Expected, Delays, and Issues:

- Upside down girder

This work is delayed due to part deliveries. Specifically, beamline support pieces (BPM supports) which are expected to arrive within two weeks. Magnet supports arrived today (Jun 13, 2012).

Ongoing Shutdown Work

Upcoming Work (3-6 weeks from now) (green = no concerns; yellow = some concerns; red = serious concerns)

Project	Status	On Schedule?	Tasks	Comments/Concerns
Moller Polarimeter	X 	Yes	As per schedule	None
Remove G2P	X 	Yes	As per schedule	Awaiting parts
Cryo Work	X 	Yes	As per schedule	None

New Work Requests Requiring Schedule Changes:

- Delay of upside down girder alignment. A change request has been submitted and is awaiting processing.

Significant Problems Pending (delays, technical issues, resource issues, scheduling):

- Upside down girder parts as noted above

Staffing Outlook:

- Three staff members are currently deployed to other Halls to support their early efforts. Staffing is sufficient for current workload, but by December full staffing levels will need to be restored to Hall A (*as per prior agreement*).

Shutdown Work Summary

Organization: Hall B

Name: Doug Tilles

Date: 6/13/2012

Last Two Weeks

Work That Went Better Than Expected:

- Removal of the delay cables on all carriages

Matrixed staff from engineering are performing extraordinarily well and are ahead of schedule.

- HDice transfer to production dewar and transport to Lab
- Removal of clam shell electronic racks
- Gas system removal

Work That Went Slower Than Expected, Delays, and Issues:

- Transport of delay cables to dumpsters, and crane operations due to lack of staff.

Ongoing Shutdown Work

Upcoming Work (3-6 weeks from now) (green = no concerns; yellow = some concerns; red = serious concerns)

Project	Status	On Schedule?	Tasks	Comments/Concerns
HDice removal	x yellow red	Yes	As per schedule	
Delay cable removal	x yellow red	Yes	As per schedule	
Removal of electronics and racks	green x yellow red	No	As per schedule	Work is taking longer than expected because the <i>tele-lifter</i> forklift is being repaired. Once the forklift is returned, it is expected that work will get back on track very quickly.

New Work Requests Requiring Schedule Changes:

- Removal of forward carriage electronics
- 12GeV support outside of Hall B that will require manpower

Significant Problems Pending (delays, technical issues, resource issues, scheduling):

- Lack of manpower to accommodate scheduled work AND unscheduled, operational functions.

Staffing Outlook:

- No change

Shutdown Work Summary

Organization: Hall C

Name: Walter Kellner

Date: 6/13/2012

Last Two Weeks

Work That Went Better Than Expected:

- CRYO system reconfiguration to HMS cancelled
- SHMS power supply tests cancelled

The elimination of this work allowed the ESR to be powered off sooner than scheduled and reduced overall manpower requirements.

Work That Went Slower Than Expected, Delays, and Issues:

- Q-weak electronic hut rack disassembly and cable removal still in progress due to late start.

This work is being conducted by users and was delayed by the user group meeting and a shortage of manpower.

- Removal of QTOR power supply delayed

Because the electronics cables are connected to the power supply, it cannot be removed until the attached cables have been disconnected.

Ongoing Shutdown Work

Upcoming Work (3-6 weeks from now) (green = no concerns; yellow = some concerns; red = serious concerns)

Project	Status	On Schedule?	Tasks	Comments/Concerns
Q-weak disassembly	x green yellow red	Yes	Region III shielding removal	none
Q-weak disassembly	x green yellow red	Yes	Disconnect and remove Target	none
Q-weak disassembly	x green yellow red	Yes	Remove top shielding blocks of region I and II	Possible delays related to radiation issues

New Work Requests Requiring Schedule Changes:

- None

Significant Problems Pending (delays, technical issues, resource issues, scheduling):

- None

Staffing Outlook:

- No Change

Shutdown Work Summary

Organization: Hall D

Name: Tom Carstens

Date: 6/13/2012

Last Two Weeks

Work That Went Better Than Expected:

- Except as noted, work performance was consistent with schedule.

Work That Went Slower Than Expected, Delays, and Issues:

- Assemble FCAL platform

This is due to a delay in the delivery of the platform

- Assemble Collimator Cave Shielding

The time and effort required to position the large blocks was underestimated.

Ongoing Shutdown Work

- Assemble Collimator Cave Shield Wall
- Test Thin Window Material
- Install Pick-up Coil Fixturing in Bore of Solenoid
- Continue Building Solenoid Controls Rack
- Continue building Solenoid Controls cabling

Upcoming Work (3-6 weeks from now) (green = no concerns; yellow = some concerns; red = serious concerns)

Project	Status	On Schedule?	Tasks	Comments/Concerns
Install Solenoid Cladding	x	Yes		Awaiting delivery
Paint Solenoid	x	Yes		Awaiting design decision
Assemble FCAL Platform	x	Yes		Currently delayed as delivery date has moved back. Shouldn't impact overall schedule.
Design/assemble BCAL gluing booth	x	Yes		In progress
Bonding Upstream Platform	x	Yes		Awaiting parts
Start of gluing/testing BCAL light guides (3840 total)	x	Yes		Some initial difficulties are expected because the gluing <i>fixture</i> has never been used to perform this task before.
Start of electrical power installations	x	Yes		Original plan was to use contract labor. Currently planning to use in-house staff to reduce costs.

New Work Requests Requiring Schedule Changes:

- None

Significant Problems Pending (delays, technical issues, resource issues, scheduling):

- None

Staffing Outlook:

- Adequate