CLAS12 Engineering run

S. Stepanyan (JLAB)

CLAS Collaboration meeting

October 3-6, 2017

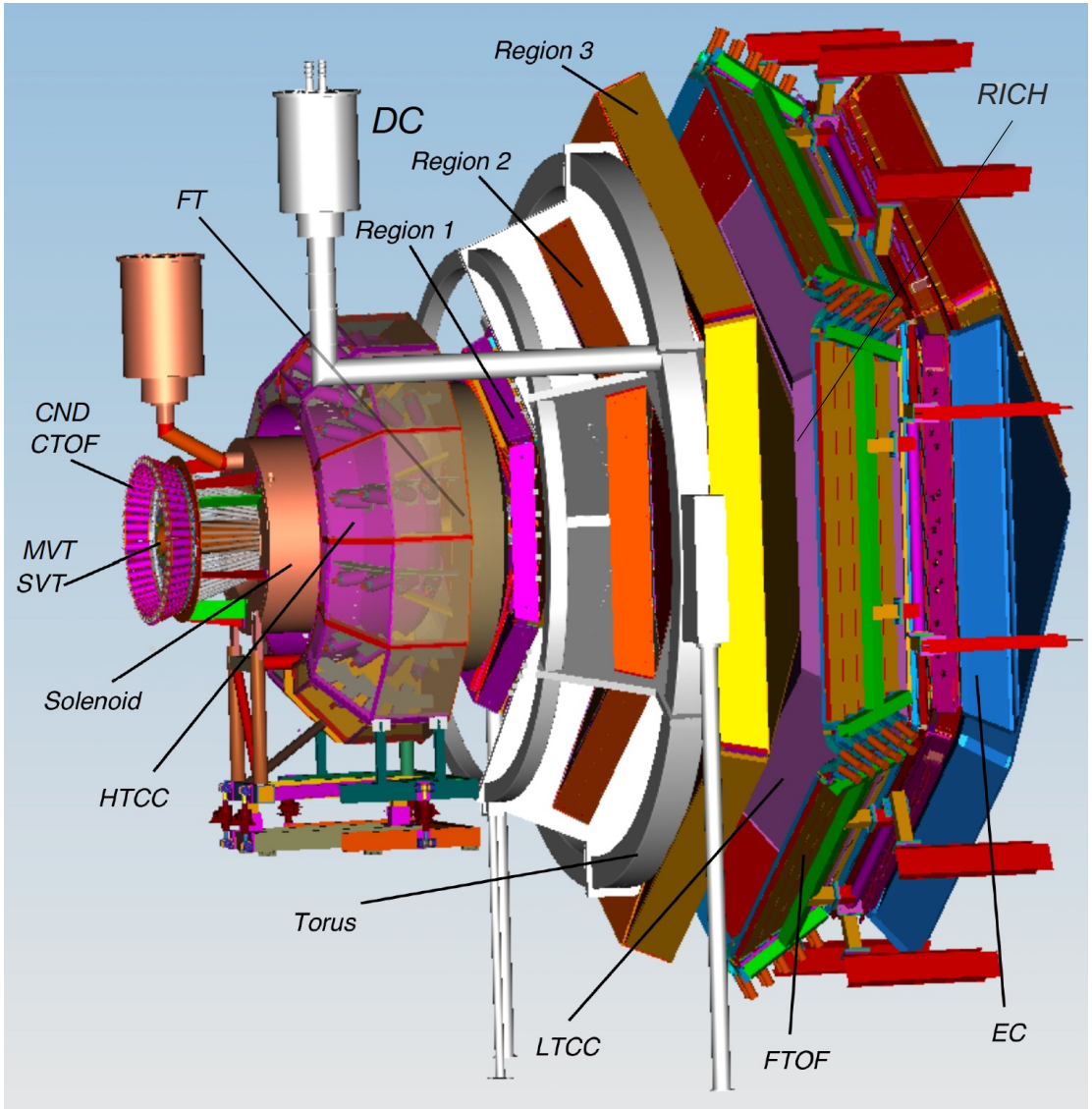
RC summary of KPP run

- Very successful run – everything worked almost as designed
- Machine, Hall-B beamline, the CLAS12 detectors and DAQ performed beautifully. In one weekend we managed:
  - to commission beam line, CLAS12, and trigger/DAQ
  - take data at both torus polarities, at different luminosities, for trigger studies and for straight track alignment
- Excellent work by offline group, very fast turnaround, quick calibration, bug fixes – first π^0 peak was shown within minutes of data taking

Our goal is to have similarly successful engineering run, this time with the full CLAS12 detector system and, of course, with the full support of the CLAS collaboration.

Get engaged!

Hall-B CAS12 detector



Torus – Six-coil superconducting toroidal magnet

HTCC – High Threshold Cherenkov Counter

DC – Drift Chambers

LTCC – Low threshold Cherenkov Counter

RICH – Ring Imaging Cherenkov Counter

FTOF – Forward Time-of-Flight system

EC – Electromagnetic Calorimeter

FT – Forward Tagger system

Solenoid – 5T superconducting solenoid magnet

SVT – Silicon Vertex Tracker

MVT – Micro-mega Vertex Tracker systems

CTOF – Central Time-of-Flight system

CND – Central Neutron Detector

Hall-B beamline

Hall-B cryo target

Experiment schedule

CLAS12 commissioning starts on December 4th (*Monday!*)

Date	Weekday	(GeV/pass)	Operations Status	Hall A Experiment	Hall A GeV/μA/Pol/MHz	Hall B Experiment	Hall B GeV/nA/Pol/MHz	Hall C Experiment	Hall C GeV/μA/Pol/MHz	Hall D Experiment	Hall D GeV/nA/Pol/MHz	Priority Hall	Pass A/B/C/D	Notes
10/01/17	Sunday													FY18 BEGINS
11/27/17	Monday		RESTORE											
11/28/17	Tuesday		RESTORE											
11/29/17	Wednesday		RESTORE											
11/30/17	Thursday		RESTORE											
12/01/17	Friday		RESTORE											
12/02/17	Saturday		RESTORE											
12/03/17	Sunday		RESTORE											
12/04/17	Monday	2.1	PHYSICS	E12-11-112	4.3/20/-/500	Engineering Run	10.6/100/p/250 (NOTE)	SHMS commissioning	2.2, 6.4/20/-/500	E12-06-102	11.7/200/-/250	D/A/B/C	2/5/1,3/5,5	
12/05/17	Tuesday	2.1	PHYSICS	E12-11-112	4.3/20/-/500	Engineering Run	10.6/100/p/250	SHMS commissioning	2.2, 6.4/20/-/500	E12-06-102	11.7/200/-/250	D/A/B/C	2/5/1,3/5,5	
12/06/17	Wednesday	2.1	PHYSICS	E12-11-112	4.3/20/-/500	Engineering Run	10.6/100/p/250	SHMS commissioning	2.2, 6.4/20/-/500	E12-06-102	11.7/200/-/250	D/A/B/C	2/5/1,3/5,5	
12/07/17	Thursday	2.1	PHYSICS	E12-11-112	4.3/20/-/500	Engineering Run	10.6/100/p/250	SHMS commissioning	2.2, 6.4/20/-/500	E12-06-102	11.7/200/-/250	A/B/C/D	2/5/1,3/5,5	
12/08/17	Friday	2.1	PHYSICS	E12-11-112	4.3/20/-/500	Engineering Run	10.6/100/p/250	SHMS commissioning	2.2, 6.4/20/-/500	E12-06-102	11.7/200/-/250	A/B/C/D	2/5/1,3/5,5	
12/09/17	Saturday	2.1	PHYSICS	E12-11-112	4.3/20/-/500	Engineering Run	10.6/100/p/250	SHMS commissioning	2.2, 6.4/20/-/500	E12-06-102	11.7/200/-/250	A/B/C/D	2/5/1,3/5,5	
12/10/17	Sunday	2.1	PHYSICS	E12-11-112	4.3/20/-/500	Engineering Run	10.6/100/p/250	SHMS commissioning	2.2, 6.4/20/-/500	E12-06-102	11.7/200/-/250	B/C/D/A	2/5/1,3/5,5	
12/11/17	Monday	2.1	PHYSICS	E12-11-112	4.3/20/-/500	Engineering Run	10.6/100/p/250	SHMS commissioning	2.2, 6.4/20/-/500	E12-06-102	11.7/200/-/250	B/C/D/A	2/5/1,3/5,5	
12/12/17	Tuesday	2.1	PHYSICS	E12-11-112	4.3/20/-/500	Engineering Run	10.6/100/p/250	SHMS Comm./E12-10-002	6.4/20/-/500	E12-06-102	11.7/200/-/250	B/C/D/A	2/5/3/5.5	
12/13/17	Wednesday	2.1	PHYSICS	E12-11-112	4.3/20/-/500	Engineering Run	10.6/100/p/250	SHMS Comm./E12-10-002	6.4/20/-/500	E12-06-102	11.7/200/-/250	C/D/A/B	2/5/3/5.5	
12/14/17	Thursday	2.1	PHYSICS	E12-11-112	4.3/20/-/500	Pass change (12hrs)		Pass change (12hrs)		E12-06-102	11.7/200/-/250	C/D/A/B	2/3/4/5.5	
12/15/17	Friday	2.1	PHYSICS	E12-11-112	4.3/20/-/500	Engineering Run	6.4/100/p/500	E12-06-107	8.5/80/-/500	E12-06-102	11.7/200/-/250	C/D/A/B	2/3/4/5.5	
12/16/17	Saturday	2.1	PHYSICS	E12-11-112	4.3/20/-/500	Engineering Run	6.4/100/p/500	E12-06-107	8.5/80/-/500	E12-06-102	11.7/200/-/250	D/A/B/C	2/3/4/5.5	
12/17/17	Sunday	2.1	PHYSICS	E12-11-112	4.3/20/-/500	Engineering Run	6.4/100/p/500	E12-06-107	8.5/80/-/500	E12-06-102	11.7/200/-/250	D/A/B/C	2/3/4/5.5	
12/18/17	Monday		OFF											
12/19/17	Tuesday													
12/20/17	Wednesday													
12/21/17	Thursday													
12/22/17	Friday													
12/23/17	Saturday													
12/24/17	Sunday													
12/25/17	Monday													
12/26/17	Tuesday													
12/27/17	Wednesday													

5 pass, 10.6 GeV

Short pause for fun, and a hard work for analysis/calibration teams!
We must have 5-star ideas what to do next.

Date	Weekday	(GeV/pass)	Operations Status	Hall A Experiment	Hall A GeV/μA/Pol/MHz	Hall B Experiment	Hall B GeV/nA/Pol/MHz	Hall C Experiment	Hall C GeV/μA/Pol/MHz	Hall D Experiment	Hall D GeV/nA/Pol/MHz	Priority Hall	Pass A/B/C/D	Notes
01/04/18	Thursday													
01/05/18	Friday													
01/06/18	Saturday													
01/07/18	Sunday													
01/08/18	Monday													
01/09/18	Tuesday		RESTORE											
01/10/18	Wednesday		RESTORE											
01/11/18	Thursday		RESTORE											
01/12/18	Friday	2.1	PHYSICS	E12-10-103	10.6/20/-/250	Engineering Run	10.6/100/p/250	E12-06-107	8.5/80/-/500	E12-06-102	11.7/200/-/250	D/A/B/C	5/5/4/5.5	
01/13/18	Saturday	2.1	PHYSICS	E12-10-103	10.6/20/-/250	Engineering Run	10.6/100/p/250	E12-06-107	8.5/80/-/500	E12-06-102	11.7/200/-/250	C/D/A/B	5/5/4/5.5	
01/14/18	Sunday	2.1	PHYSICS	E12-10-103	10.6/20/-/250	Engineering Run	10.6/100/p/250	Pass change (12hrs)		E12-06-102	11.7/200/-/250	C/D/A/B	5/5/5/5.5	
01/15/18	Monday	2.1	PHYSICS	E12-10-103	10.6/20/-/250	Engineering Run	10.6/100/p/250	E12-06-107	10.6/65/-/250	E12-06-102	11.7/200/-/250	C/D/A/B	5/5/5/5.5	
01/16/18	Tuesday	2.1	PHYSICS	E12-10-103	10.6/20/-/250	Engineering Run	10.6/100/p/250	E12-06-107	10.6/65/-/250	E12-06-102	11.7/200/-/250	B/C/D/A	5/5/5/5.5	
01/17/18	Wednesday	2.1	PHYSICS	E12-10-103	10.6/20/-/250	Engineering Run	10.6/100/p/250	E12-06-107	10.6/65/-/250	E12-06-102	11.7/200/-/250	B/C/D/A	5/5/5/5.5	
01/18/18	Thursday	2.1	PHYSICS	E12-10-103	10.6/20/-/250	Engineering Run	10.6/100/p/250	E12-06-107	10.6/65/-/250	E12-06-102	11.7/200/-/250	B/C/D/A	5/5/5/5.5	
01/19/18	Friday	2.1	PHYSICS	E12-10-103	10.6/20/-/250	Engineering Run	10.6/100/p/250	E12-06-107	10.6/65/-/250	E12-06-102	11.7/200/-/250	A/B/C/D	5/5/5/5.5	
01/20/18	Saturday	2.1	PHYSICS	E12-10-103	10.6/20/-/250	Engineering Run	10.6/100/p/250	E12-06-107	10.6/65/-/250	E12-06-102	11.7/200/-/250	A/B/C/D	5/5/5/5.5	
01/21/18	Sunday	2.1	PHYSICS	E12-10-103	10.6/20/-/250	Engineering Run	10.6/100/p/250	E12-06-107	10.6/65/-/250	E12-06-102	11.7/200/-/250	A/B/C/D	5/5/5/5.5	
01/22/18	Monday	2.1	PHYSICS	E12-10-103	10.6/20/-/250	Engineering Run	10.6/100/p/250	E12-06-107	10.6/65/-/250	E12-06-102	11.7/200/-/250	D/A/B/C	5/5/5/5.5	
01/23/18	Tuesday	2.1	PHYSICS	E12-10-103	10.6/20/-/250	Engineering Run	10.6/100/p/250	E12-06-107	10.6/65/-/250	E12-06-102	11.7/200/-/250	D/A/B/C	5/5/5/5.5	
01/24/18	Wednesday	2.1	PHYSICS	E12-10-103	10.6/20/-/250	Engineering Run	10.6/100/p/250	E12-06-107	10.6/65/-/250	E12-06-102	11.7/200/-/250	D/A/B/C	5/5/5/5.5	
01/25/18	Thursday	2.1	PHYSICS	E12-10-103	10.6/20/-/250	Engineering Run	10.6/100/p/250	E12-06-107	10.6/65/-/250	E12-06-102	11.7/200/-/250	D/A/B/C	5/5/5/5.5	
01/26/18	Friday	2.1	PHYSICS	E12-10-103	10.6/20/-/250	Engineering Run	10.6/100/p/250	E12-06-107	10.6/65/-/250	E12-06-102	11.7/200/-/250	D/A/B/C	5/5/5/5.5	
01/27/18	Saturday	2.1	PHYSICS	E12-10-103	10.6/20/-/250	Engineering Run (30 days)	10.6/100/p/250	E12-06-107	10.6/65/-/250	E12-06-102	11.7/200/-/250	D/A/B/C	5/5/5/5.5	
01/28/18	Sunday	2.1	PHYSICS	E12-10-103	10.6/20/-/250	CLAS12 changes/improvements		E12-06-107	10.6/65/-/250	E12-06-102	11.7/200/-/250	D/A/B/C	5/-/5/5.5	
01/29/18	Monday	2.1	PHYSICS	E12-10-103	10.6/20/-/250	CLAS12 changes/improvements		E12-06-107	10.6/65/-/250	E12-06-102	11.7/200/-/250	C/D/A/B	5/-/5/5.5	
01/30/18	Tuesday	2.1	PHYSICS	E12-10-103	10.6/20/-/250	CLAS12 changes/improvements		E12-10-002/E12-10-008	10.6/65/-/250	E12-06-102	11.7/200/-/250	C/D/A/B	5/-/5/5.5	
01/31/18	Wednesday	2.1	PHYSICS	E12-10-103	10.6/20/-/250	CLAS12 changes/improvements		E12-10-002/E12-10-008	10.6/65/-/250	E12-06-102	11.7/200/-/250	C/D/A/B	5/-/5/5.5	
02/01/18	Thursday	2.1	PHYSICS	E12-10-103	10.6/20/-/250	CLAS12 changes/improvements		E12-10-002/E12-10-008	10.6/65/-/250	E12-06-102	11.7/200/-/250	C/D/A/B	5/-/5/5.5	
02/02/18	Friday	2.1	PHYSICS	E12-10-103	10.6/20/-/250	CLAS12 changes/improvements		E12-10-002/E12-10-008	10.6/65/-/250	E12-06-102	11.7/200/-/250	C/D/A/B	5/-/5/5.5	
02/03/18	Saturday	2.1	PHYSICS	E12-10-103	10.6/20/-/250	CLAS12 changes/improvements		E12-10-002/E12-10-008	10.6/65/-/250	E12-06-102	11.7/200/-/250	C/D/A/B	5/-/5/5.5	
02/04/18	Sunday	2.1	PHYSICS	E12-10-103	10.6/20/-/250	CLAS12 changes/improvements		E12-10-002/E12-10-008	10.6/65/-/250	E12-06-102	11.7/200/-/250	C/D/A/B	5/-/5/5.5	
02/05/18	Monday	2.1	PHYSICS	E12-10-103	10.6/20/-/250	Run Group A	10.6/100/p/250	E12-10-002/E12-10-008	10.6/65/-/250	E12-06-102	11.7/200/-/250	B/C/D/A	5/5/5/5.5	

Go to 3-pass, 6.4 GeV, if needed

Find time to run with FT-OFF, tentative.

and then 1st physics run, RG-A, 10.6 GeV with LH_2 target, ends on March 22, 2018

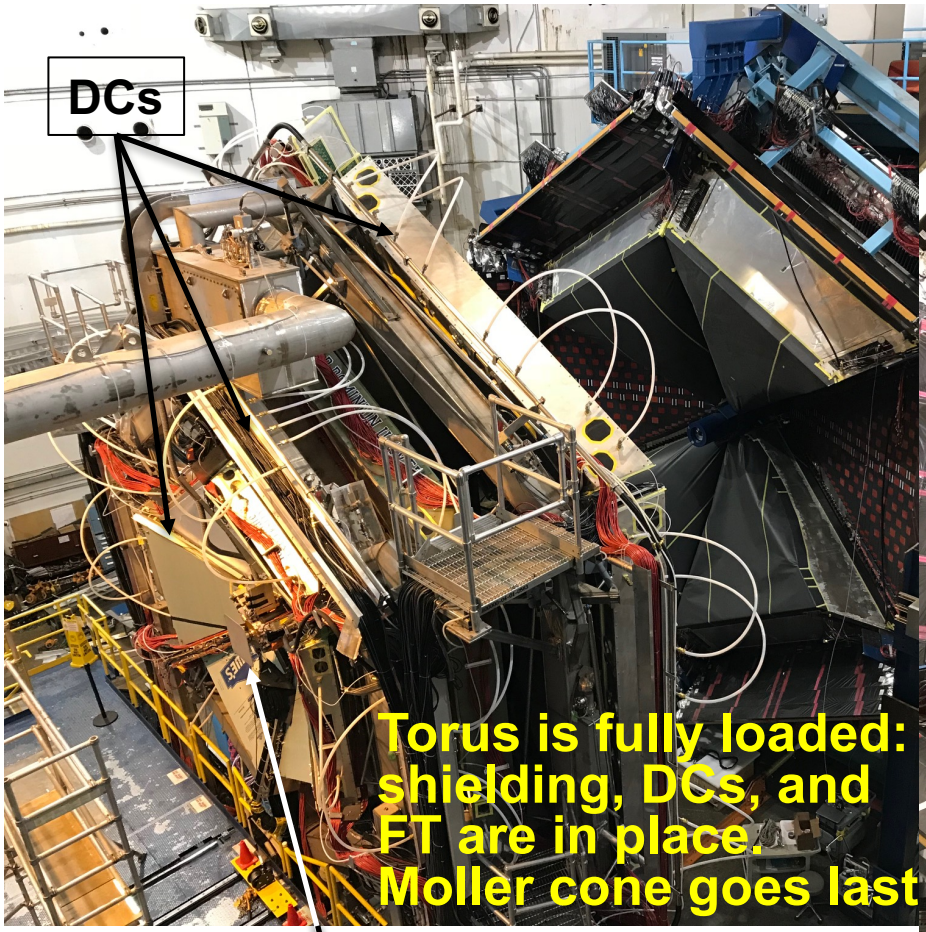
Where are we with the run preparations

- Calibration and commissioning task-force prepared a detail commissioning plan for the CLAS12 and beamline (R. De Vita/D. Carman). Optimization is in progress that includes
  - prioritization of the commissioning tasks
  - studies of different run conditions with simulated data
- The run documentation (operations manuals and procedures) is ready and available on the run web pages
- Sub-system experts for *on-call* services are identified
- Shifts are assigned to the institutions
- Slow controls, DAQ/trigger, on-line and offline software have been extensively tested during KPP run and post KPP tests
- Continue work on improving and upgrading existing tolls, and finishing new tools for on-line, off-line, and trigger monitoring.

More hands and heads are welcome!

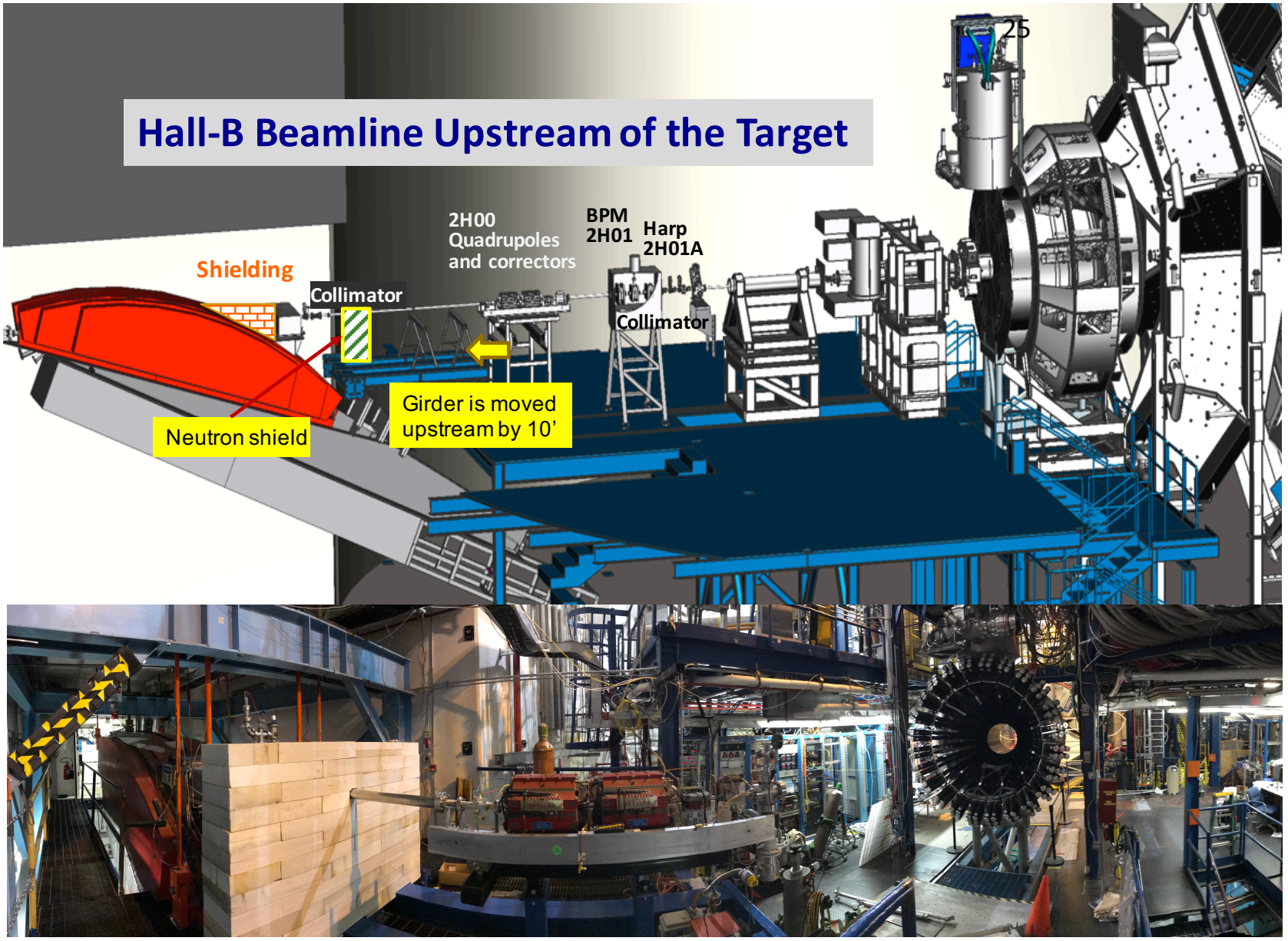
Run preparations (cont.)

- The Hall-B engineering team puts the finishing touches in the Hall:
  - installation of the CTOF is in progress, then
  - CVT (SVT + MMs)
  - cryo target
  - upstream and downstream beamline
  - HTCC and Moller cone
  - RICH will likely be the last to go in sector 4)
- We expect to have CLAS12 buttoned-up, ready to go before Thanksgiving
- The goal is to have at least 2 weeks to bring detectors up, do the basic functionality checks and cosmic runs before December 4.
- This will allow to fully test DAQ/trigger, slow controls, on-line and off-line data processing, includ*ing* logistics of transferring files from counting house to CC, running ET ring(s), check the run info in RCDB and in data stream …

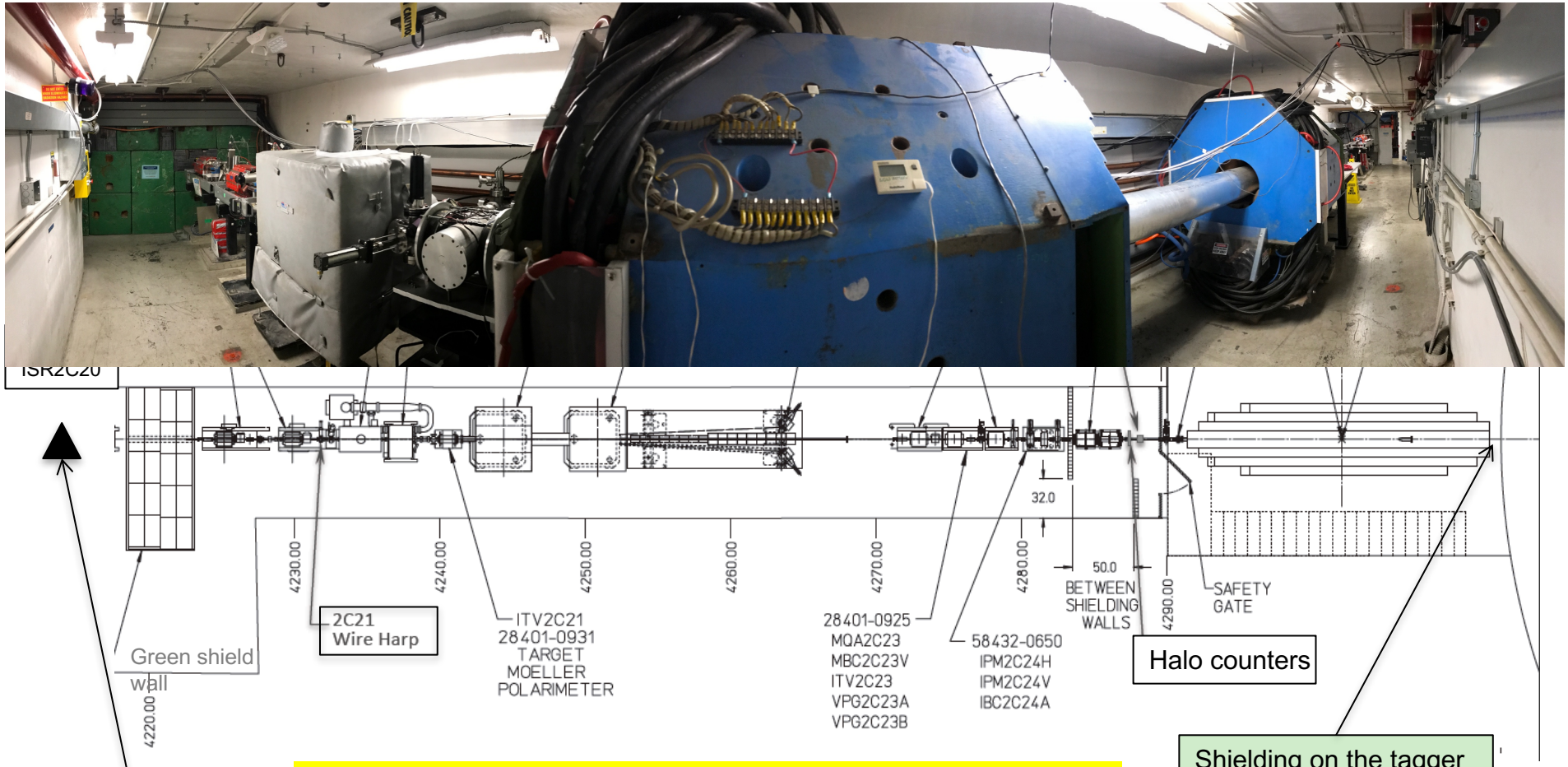

DCs
Torus is fully loaded: shielding, DCs, and FT are in place. Moller cone goes last
FT system and Moller cone


RICH
Forward Carriage is ready for RICH

Hall-B Beamline Upstream of the Target

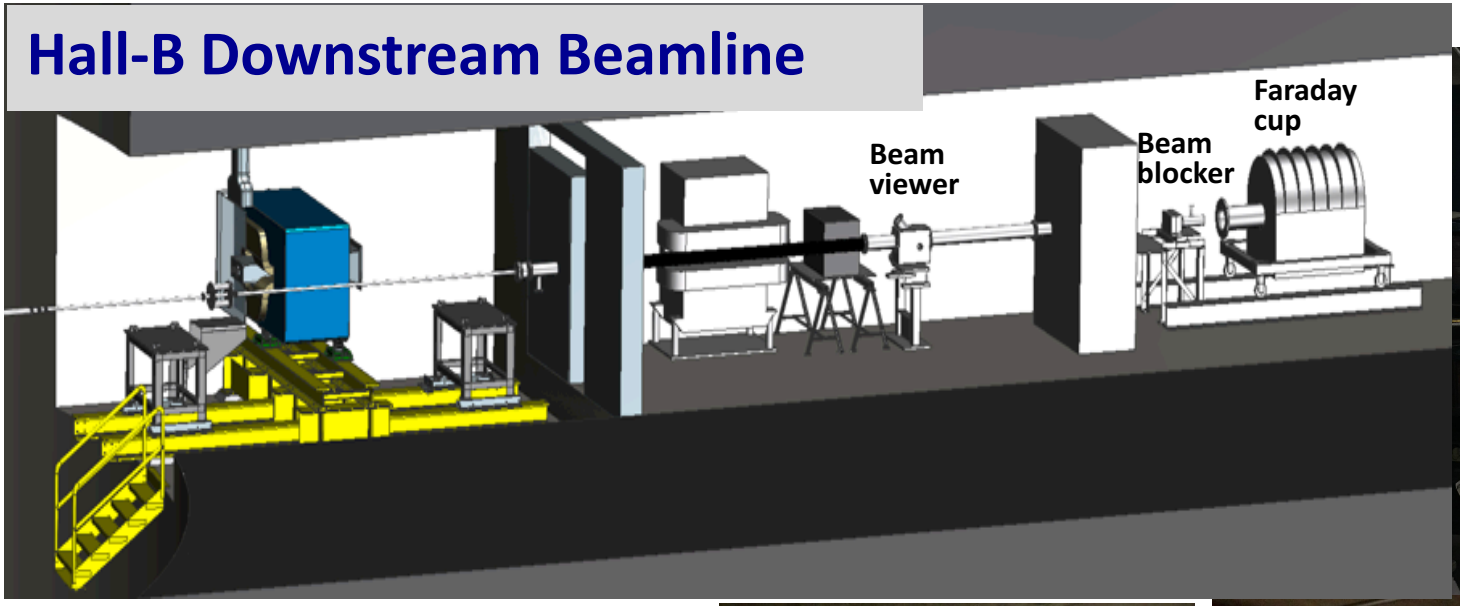


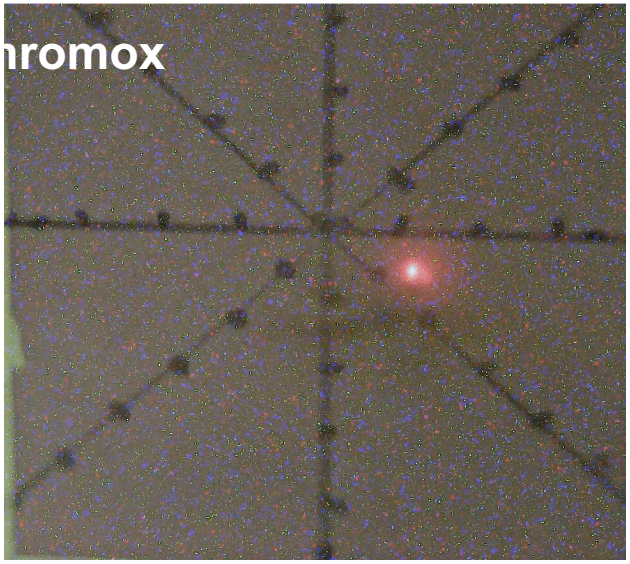
Hall-B beamline: 2C-line (upstream tunnel)



The 2C line will be the same as for the KPP demonstration run. The only additional device that needs commissioning is the Moller polarimeter.

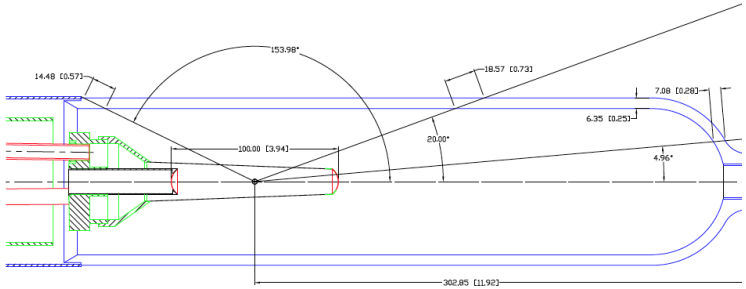
Hall-B Downstream Beamline

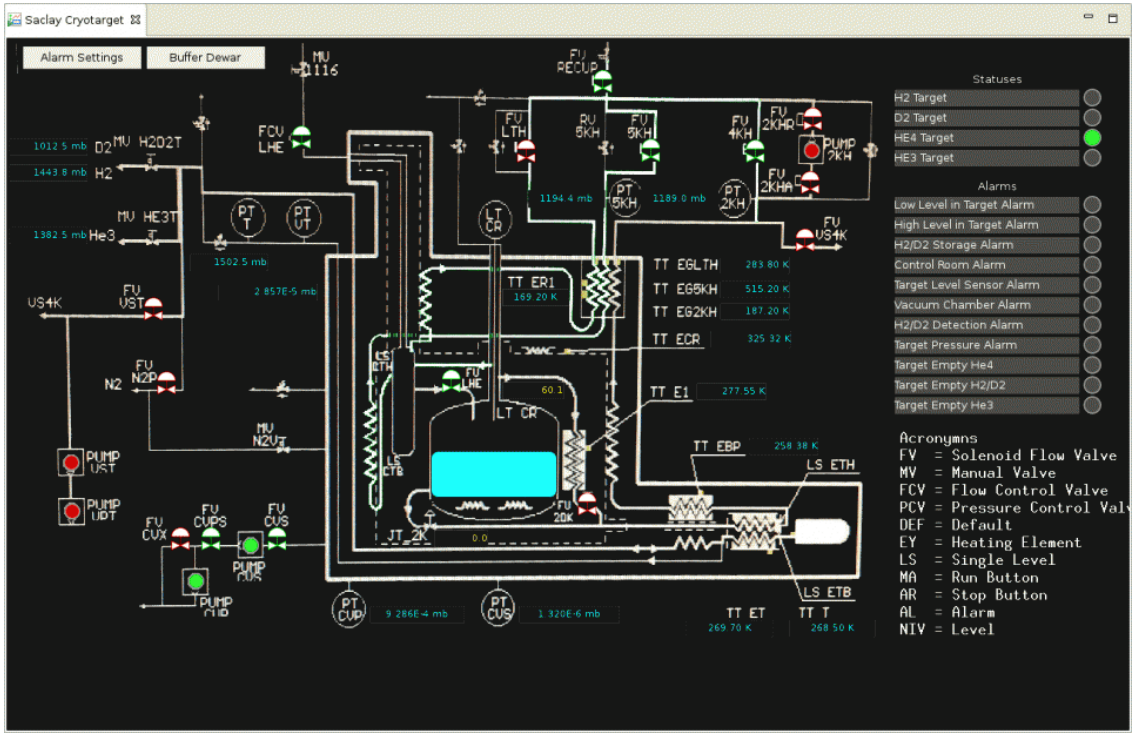




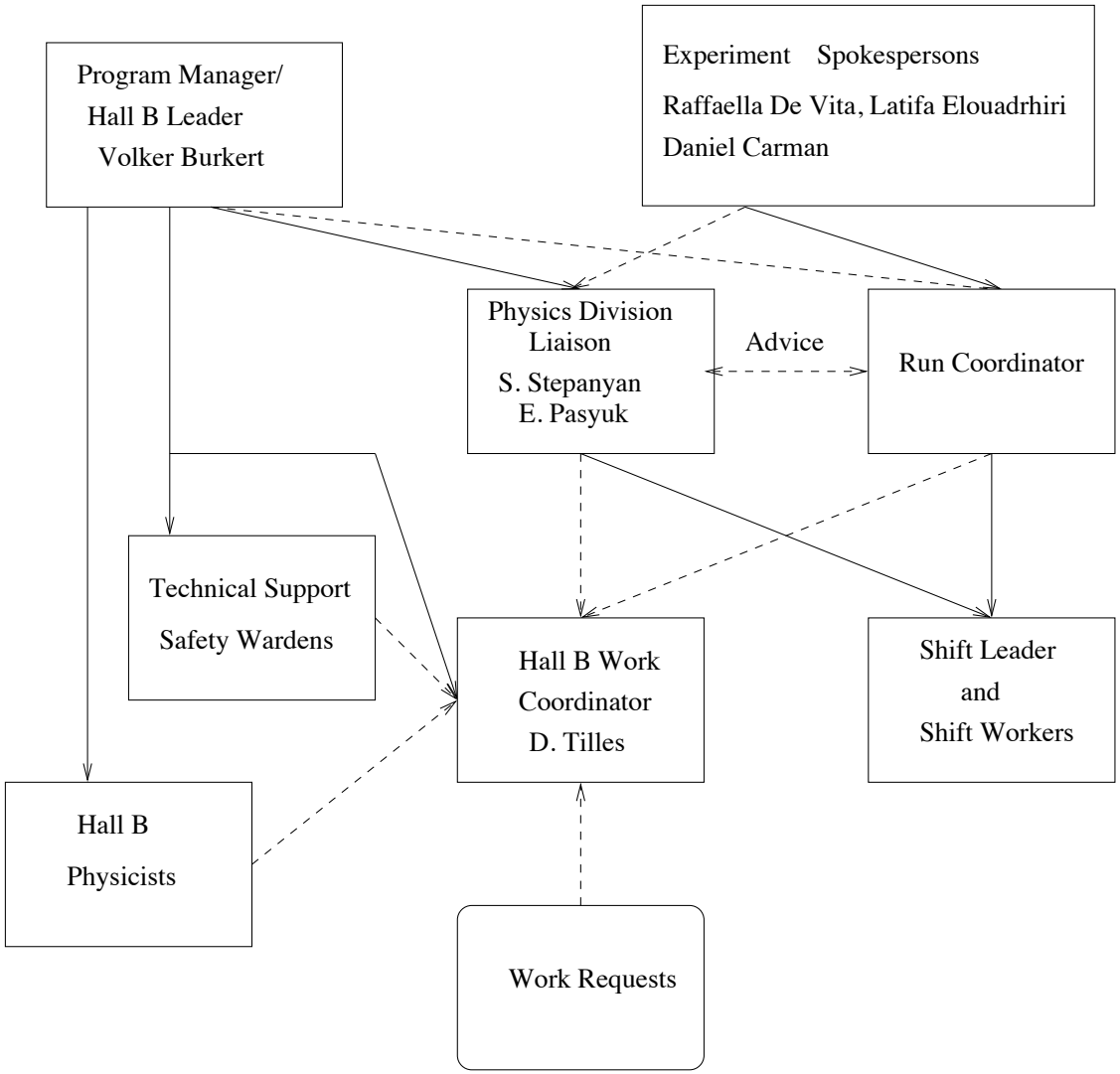
Scattering chamber and cryo. target

- The target controls are functioning, ^{4}He has been liquefied in a CLAS cell, which was stable for a few hours.
- The work on OSP and checking the flammable gas detection system to run hydrogen is in progress.
- The new scattering chamber assembly will finish this week, setting up for the test with external pressure.
- The 12GeV cell assembly continues, expecting 2 cells be completed and tested next week.



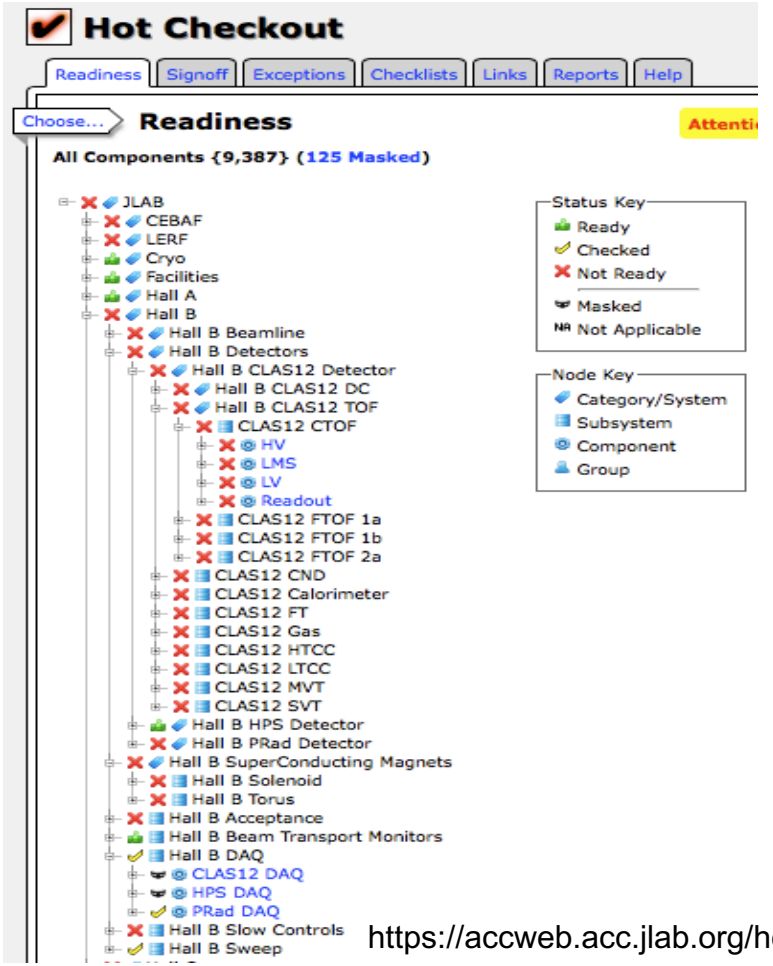


Run management (from the COO)



Preparing Hall for Run: Hot Checkout System

Physics Division Liaison (PDL) and the Hall Work Coordinator, D. Tilles, will oversee readiness of the Hall for beam



https://accweb.acc.jlab.org/hco

- System checkout and readiness tool developed for CEBAF will be used to prepare Hall-B systems for beam
- Components in the system may have multiple groups assigned to check and sign off
- The system owner is responsible for the final approval
- Systems not participating in the run can be masked or marked as N/A
- The final “go” will be given by the hall leader or his designee by checking “Hall B Accept”

Everything should be checked-off, ready to go on Friday, December 1

Assignment of shifts (B. McKinnon)

- Shift allocation proportional to the number of active collaboration members at an institute (term & full)
- The shift scheduler takes into account number of experts and novices
- Expert status of collaborators has been determined by *three wise men* based on the following criteria:
  1. has experience with CLAS/HPS/PRad
  2. has been involved in running CLAS12 detectors for long time
  3. not a manager
- On-call list has been generated with input from detector leads.
- On-call person must be on site and cannot take shifts while on-call duty

Institute	Members	Blocks in Period	Expected Blocks	Allocated Blocks
		132		
ANL	3		2.289017341	3
ASU	2		1.5260115607	2
CANISIUS	1		0.7630057803	1
CNU	2		1.5260115607	2
CSUDH	1		0.7630057803	1
EDINBURGH	5		3.8150289017	5
FIU	4		3.0520231214	4
FSU	3		2.289017341	3
FU	1		0.7630057803	1
GLASGOW	10		7.6300578035	8
GWUI	3		2.289017341	3
INFNFE	7		5.3410404624	4
INFNFR	3		2.289017341	3
INFNGE	6		4.5780346821	4
INFNRO	3		2.289017341	3
INFNTUR	1		0.7630057803	1
ISU	3		2.289017341	3
ITEP	3		2.289017341	3
JLAB	32		24.4161849711	12
JMU	2		1.5260115607	2
JUELICH	3		2.289017341	3
KNU	2		1.5260115607	2
MISS	2		1.5260115607	2
MSU	3		2.289017341	2
NSU	1		0.7630057803	1
ODU	15		11.4450867052	11
OHIOU	3		2.289017341	3
ORSAY	6		4.5780346821	4
SACLAY	5		3.8150289017	4
SCAROLINA	7		5.3410404624	6
TEMPLE	6		4.5780346821	5
UCONN	8		6.1040462428	7
UNH	2		1.5260115607	2
URICH	1		0.7630057803	1
UTFSM	5		3.8150289017	3
VIRGINIA	3		2.289017341	3
WM	2		1.5260115607	2
YEREVAN	4		3.0520231214	3
Totals	173			132

1st official CLAS shifts in a new era

https://www.jlab.org/Hall-B/shifts/

Date	Expert Owl (00:00-08:00)	Expert Day (08:00-16:00)	Expert Swing (16:00-24:00)	Worker Day (07:00-15:00)	Worker Swing (15:00-23:00)	Worker Owl (23:00-07:00)	Accelerator Schedule/ Hall B Program
3-Dec-2017 Sunday	INFNFR	SCAROLINA	URICH	ODU	ANL	ORSAY	CLAS12 Eng
4-Dec-2017 Monday	INFNFR	SCAROLINA	URICH	ODU	ANL	ORSAY	CLAS12 Eng
5-Dec-2017 Tuesday	INFNFR	SCAROLINA	URICH	ODU	ANL	ORSAY	CLAS12 Eng
6-Dec-2017 Wednesday	INFNFR	SCAROLINA	URICH	ODU	ANL	ORSAY	CLAS12 Eng
7-Dec-2017 Thursday	OHIOU	MISS	INFNTUR	FSU	GWUI	GLASGOW	CLAS12 Eng
8-Dec-2017 Friday	OHIOU	MISS	INFNTUR	FSU	GWUI	GLASGOW	CLAS12 Eng
9-Dec-2017 Saturday	OHIOU	MISS	INFNTUR	FSU	GWUI	GLASGOW	CLAS12 Eng
10-Dec-2017 Sunday	OHIOU	MISS	INFNTUR	FSU	GWUI	GLASGOW	CLAS12 Eng
11-Dec-2017 Monday	NSU	OHIOU	FU	ODU	SCAROLINA	JUELICH	CLAS12 Eng
12-Dec-2017 Tuesday	NSU	OHIOU	FU	ODU	SCAROLINA	JUELICH	CLAS12 Eng
13-Dec-2017 Wednesday	NSU	OHIOU	FU	ODU	SCAROLINA	JUELICH	CLAS12 Eng
14-Dec-2017 Thursday	NSU	OHIOU	FU	ODU	SCAROLINA	JUELICH	CLAS12 Eng
15-Dec-2017 Friday	INFNGE	ISU	VIRGINIA	CSUDH	TEMPLE	YEREVAN	CLAS12 Eng
16-Dec-2017 Saturday	INFNGE	ISU	VIRGINIA	CSUDH	TEMPLE	YEREVAN	CLAS12 Eng
17-Dec-2017 Sunday	INFNGE	ISU	VIRGINIA	CSUDH	TEMPLE	YEREVAN	CLAS12 Eng
18-Dec-2017 Monday	INFNGE	ISU	VIRGINIA	CSUDH	TEMPLE	YEREVAN	CLAS12 Eng

By-lawed (June 2015) new start times: Expert 00:00, 08:00 and 16:00
Worker 07:00, 15:00 and 23:00

Name should be assigned to the blocks in advance of the shifts, any immediate changes, e.g. last minute cancellation of shifts, is the decision of RC/PDL and communicated by them

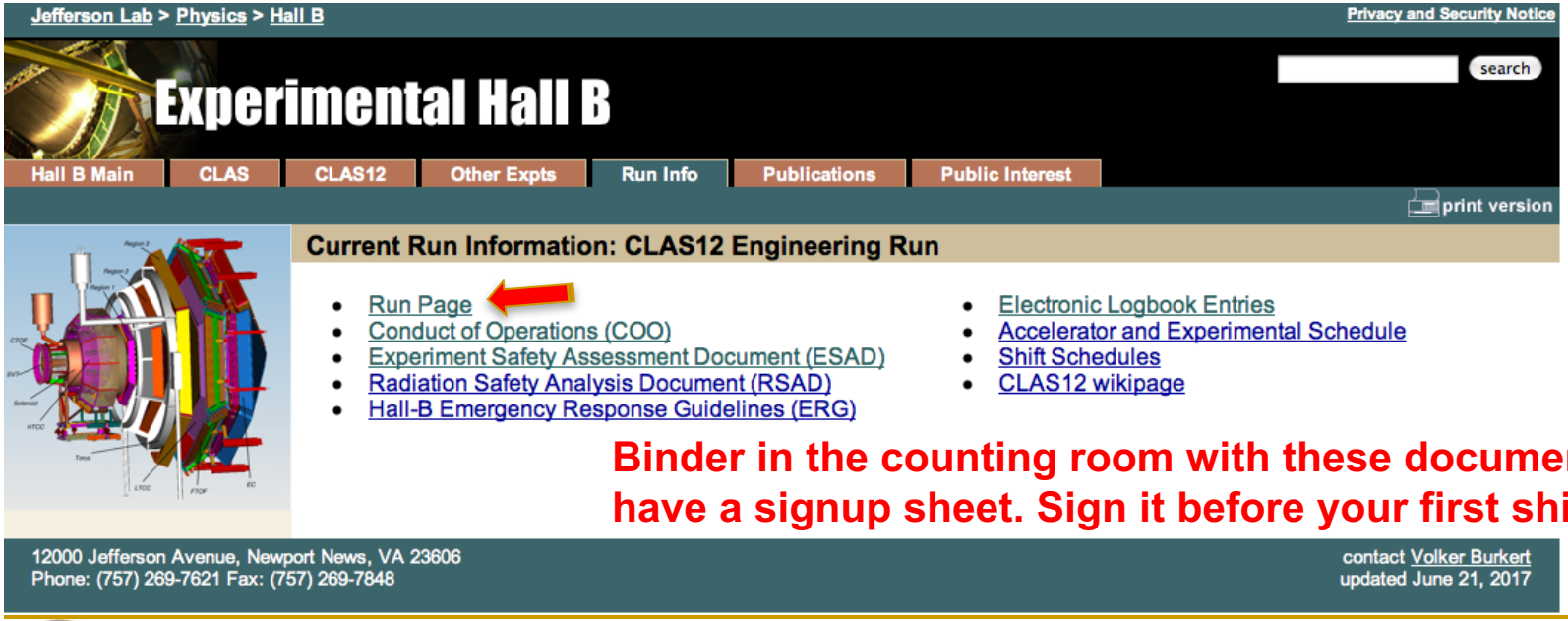
Documents you have to read at least once

ESAD (Experimental Safety Assessment Document): Identifies potential hazards and measures to mitigate them

RSAD (Radiation Safety Assessment Document): Identifies radiation budget for experiment & controls for staying within budget

COO (Conduct of Operations): Outline how to conduct experiments in safe and effective manner, Describes shift worker training requirements, defines key roles

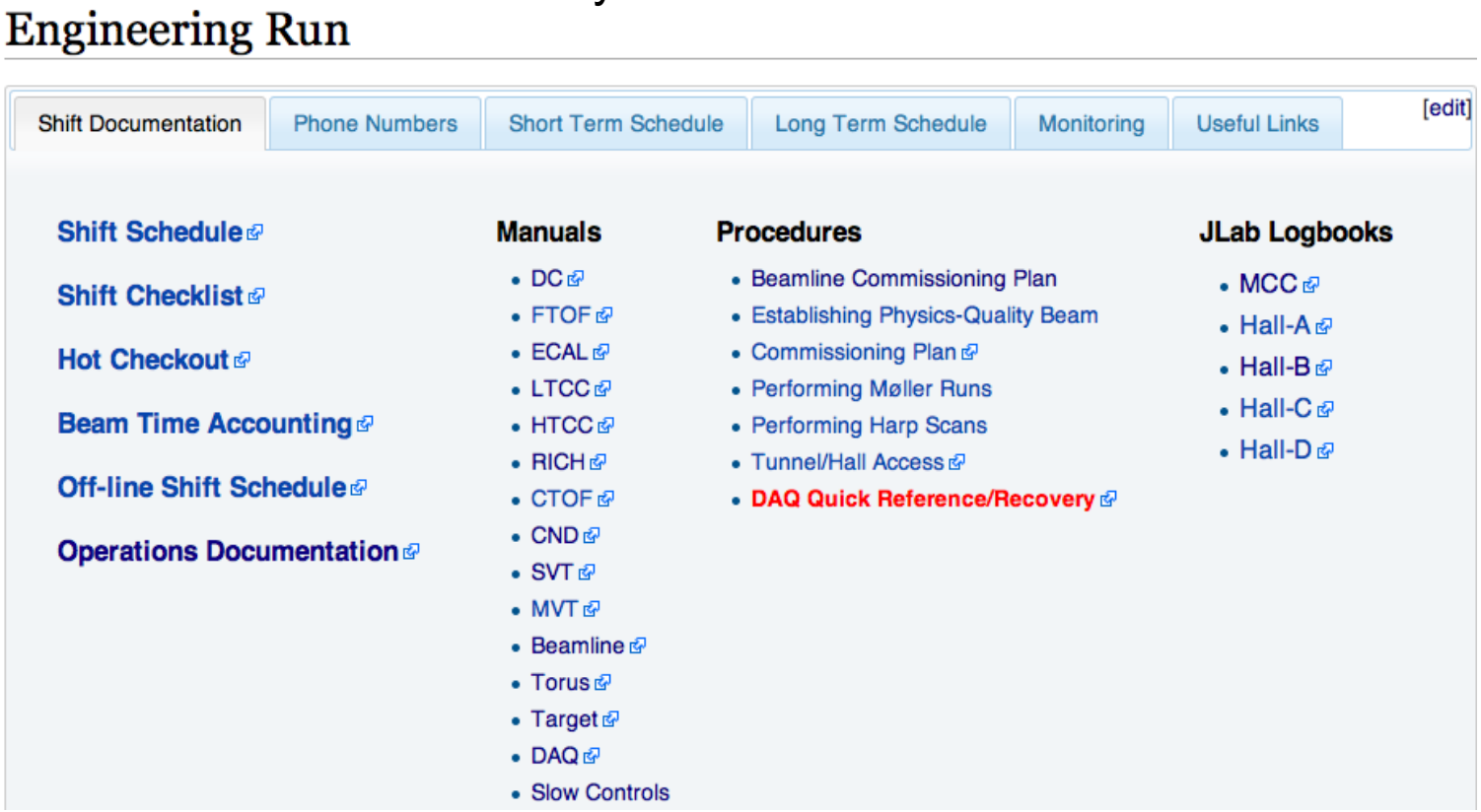
ERG (Emergency Response Guidelines): Part of SAF111 training (a.k.a. walkthrough), outlines hazards and mitigations in the experimental Hall-B



Binder in the counting room with these documents will have a signup sheet. Sign it before your first shift!

Documents for your daily reading and continuous education

Operation Manuals and Procedures (Documentation for shifters): Contain guidance for shift personnel to monitor and control detector components, procedures to conduct necessary tasks.



Engineering Run

Shift Documentation | Phone Numbers | Short Term Schedule | Long Term Schedule | Monitoring | Useful Links [edit]

Shift Schedule
Shift Checklist
Hot Checkout
Beam Time Accounting
Off-line Shift Schedule
Operations Documentation

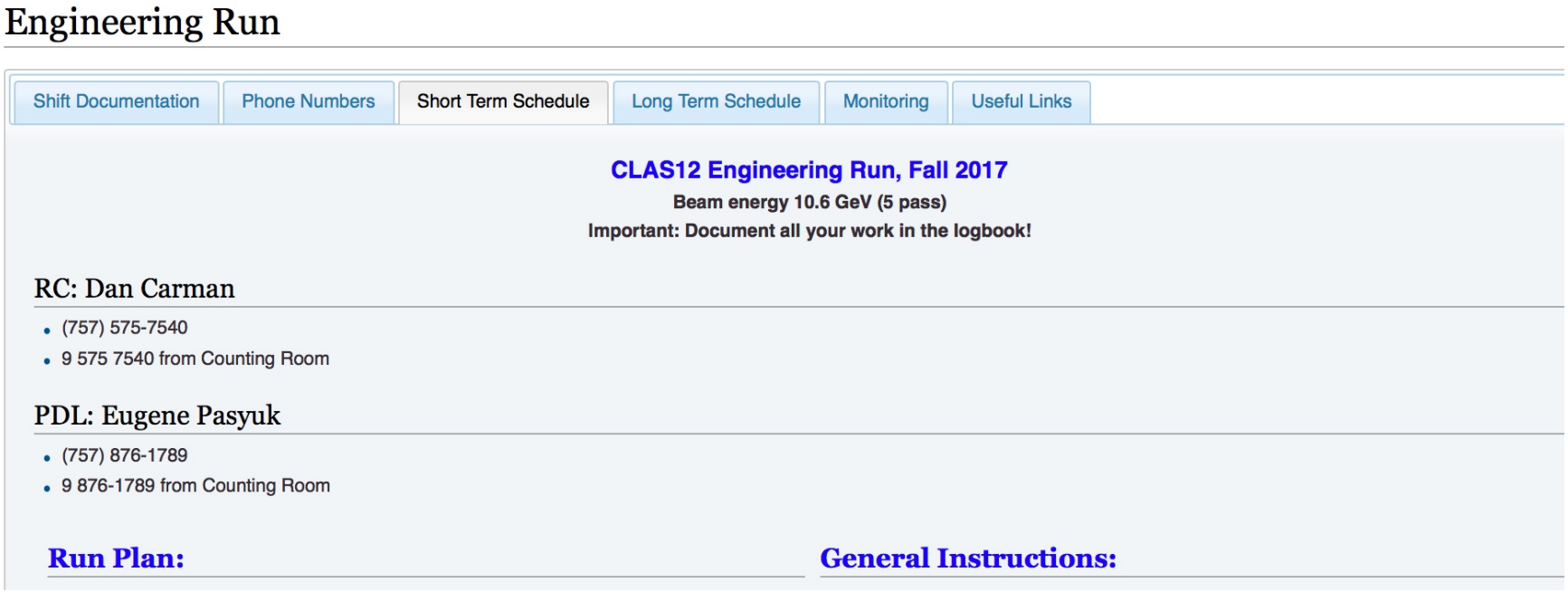
Manuals
- DC
- FTOF
- ECAL
- LTCC
- HTCC
- RICH
- CTOF
- CND
- SVT
- MVT
- Beamline
- Torus
- Target
- DAQ
- Slow Controls

Procedures
- Beamline Commissioning Plan
- Establishing Physics-Quality Beam
- Commissioning Plan
- Performing Møller Runs
- Performing Harp Scans
- Tunnel/Hall Access
- **DAQ Quick Reference/Recovery**

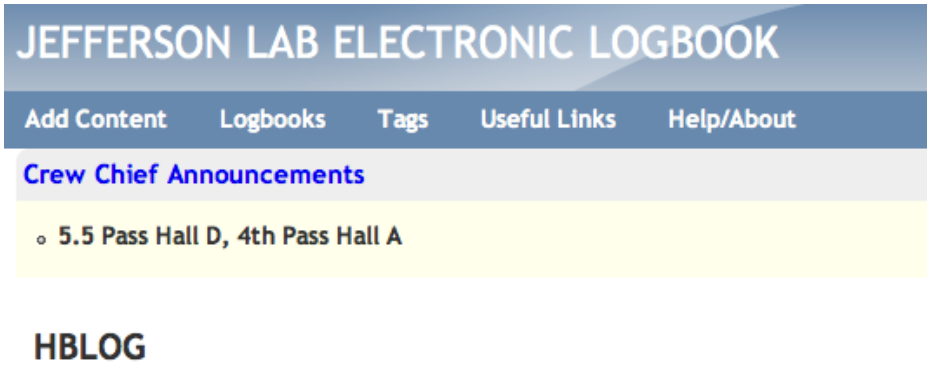
JLab Logbooks
- MCC
- Hall-A
- Hall-B
- Hall-C
- Hall-D

Daily management of shifts

- RC will oversee daily operations. He/she will make sure that the shift takers get up-to-date information on run (through the run wiki, and white board if needed)
- RC also is responsible for the daily briefing-meetings, usually in afternoon at the counting house second floor conference room (will have bluejeans conferencing)



Operation of Shifts

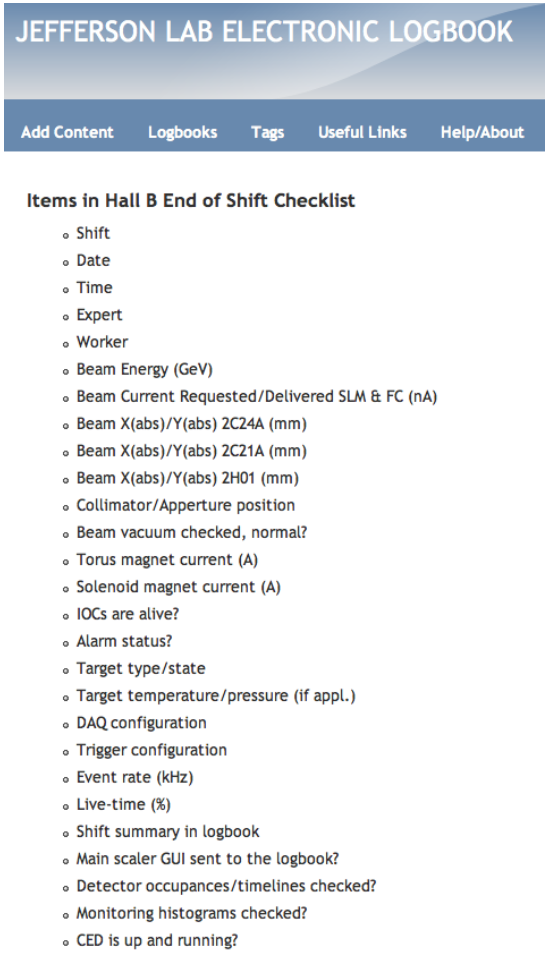


JLAB e-log is used for documenting activities during the shift, keep shift summaries.

Logbook is used to post results of key measurements in form of histograms or screen shots (beam profile, scaler readouts, GUIs …).

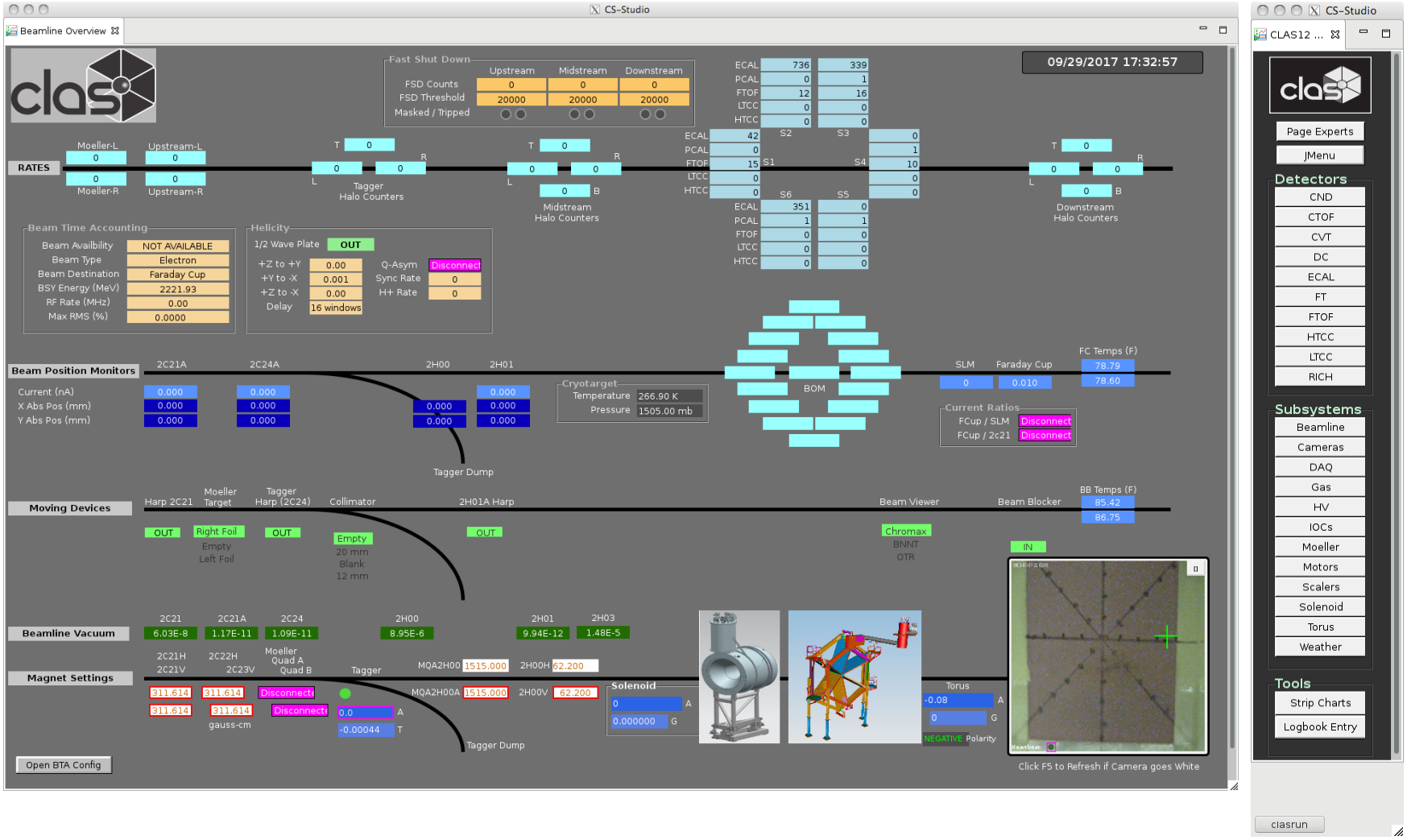
There is a logbook based shift checklist with key parameters of the run that shift personnel must fill at least once per shift and submit to logbook.

Each shift has to fill-out the checklist and submit to the logbook

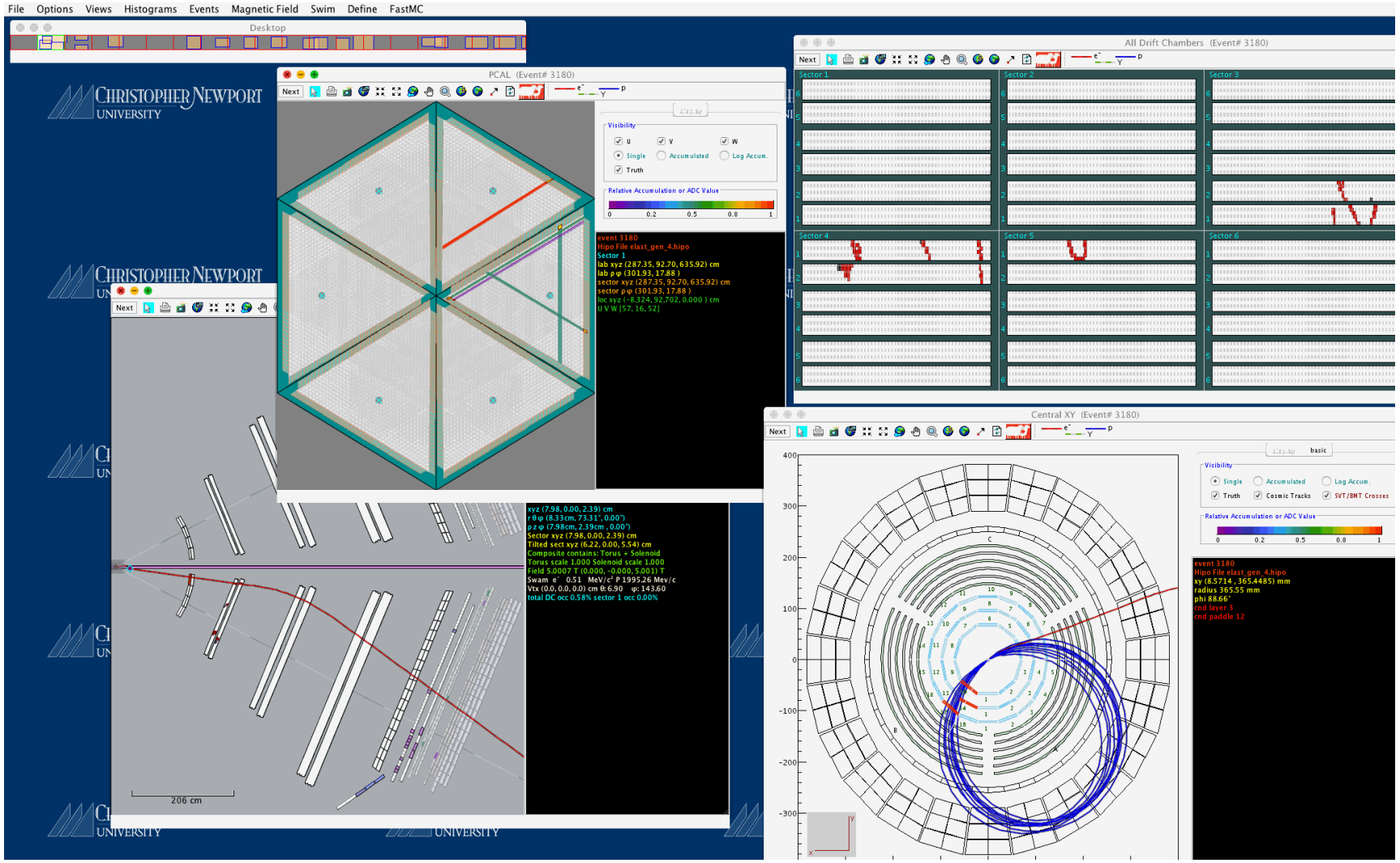


https://logbooks.jlab.org/checklists/151

CSstudio for controls and monitoring



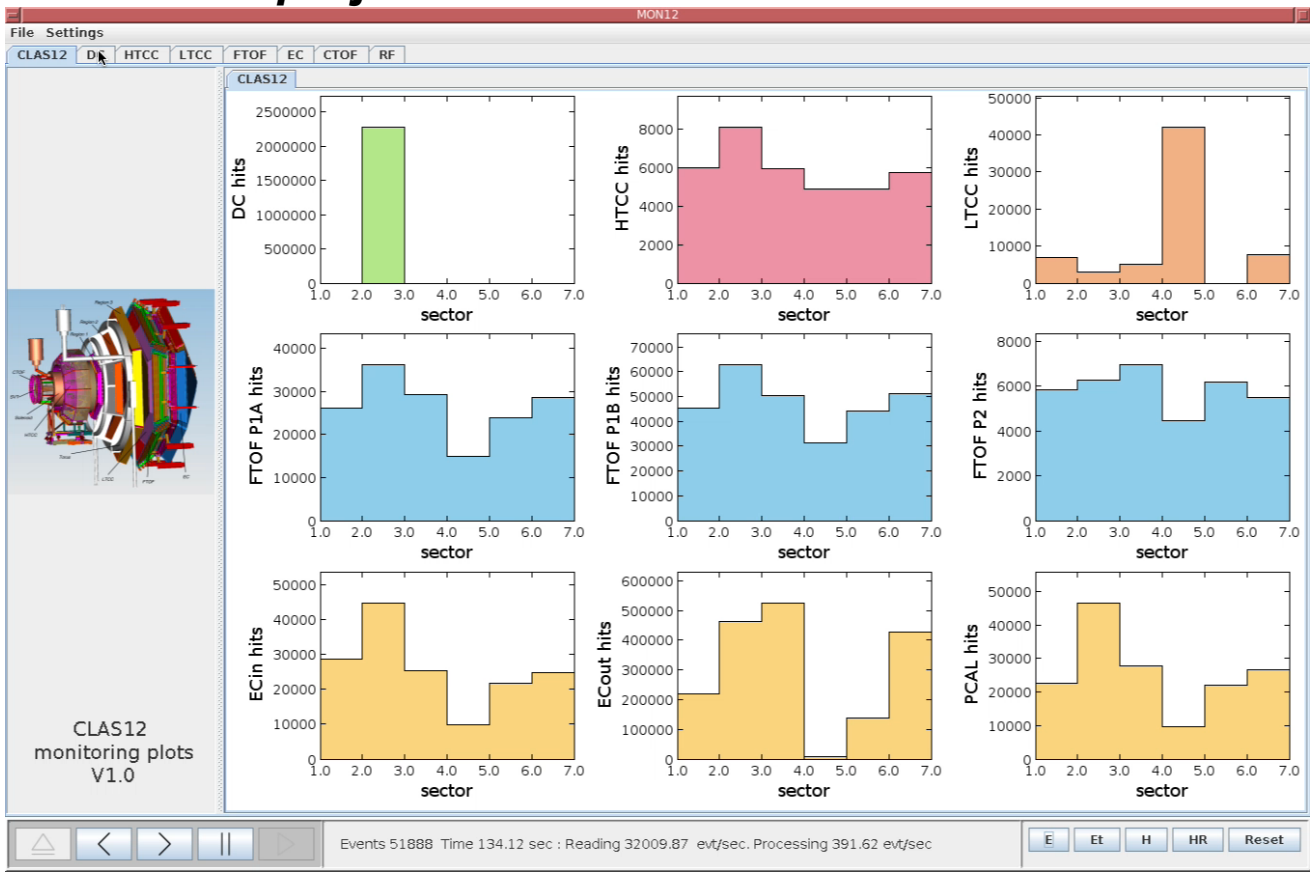
CLAS12 event display (CED)



CLAS12 on-line monitoring (mon12)

Prototype used in KPP. Development continues to make robust and to implement full CLAS12 detector, automation, occupancy monitoring, CCDB/RCDB interface, etc.

Nice project to work on!



Summary

- After the successful KPP run we are now preparing for the commissioning of the whole CLAS12 detector system
- There is a detailed commissioning plan for each detector subsystem starting from the detector checkout, data taking, to the calibration and performance studies
- Hall-B beam line has been used for KPP and is almost ready – the only big-ticket item that remains to be commissioned is the Möller polarimeter
- Much was learned from KPP run and a lot has been done since then, but, we still will have a lot to do, only two months before run starts
- KPP run in February was a success, but was largely run by experts supported by volunteers. The commissioning run will be the first beam run with full support of the collaboration
- ***If you are not fully engaged in preparations for the engineering run and/or the first physics run, ask subsystem leads, RC, and PDL how you can help***
- Clearly we have much to learn on how to operate the new detector. The best way to learn and understand it is to get involved in all aspects – checkout, commissioning, calibration, software …