



HPS User/Staff Training for Operation of Experimental Equipment

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Outline

- HPS collaboration
- Run web-page and documentation
- Run organization
- Organization of shifts
- Getting ready for shift
- Shift takers responsibilities
- Shift leaders and experts
- Summary



HPS Collaboration

71 Physicists from JLAB/SLAC/UCSC/FNAL/IPNO Orsay/INFN Genova, Catania, Torino, Sassari, Roma/Glasgow/Yerevan

Michel	Garcon	CEA	Stephen	Bueltmann	ODU
William	Cooper	FNAL	Holly	Vance	ODU
Bryan	McKinnon	Glasgow U.	Larry	Weistein	ODU
Daria	Sokhan	Glasgow U.	Gabriel	Charles	ORSAY
Ken	Livingston	Glasgow U.	Raphael	Dupre	ORSAY
Mahbub	Khandaker	Idoho U.	Michel	Guidal	ORSAY
Marzio	De Napoli	INFN Catania	Silvia	Niccolai	ORSAY
Emanuele	Leonora	INFN Catania	Philip	Schuster	Perimeter Institute
Nunzio	Randazzo	INFN Catania	Natalia	Toro	Perimeter Institute
Marco	Battaglieri	INFN Genova	Clive	Field	SLAC
Andrea	Celentano	INFN Genova	Norman	Graf	SLAC
Raffaella	DeVita	INFN Genova	Mathew	Graham	SLAC
Michail	Osipenko	INFN Genova	Per (Pelle)	Hansson	SLAC
Gabriele	Simi	INFN Padova	Ryan	Herbst	SLAC
Massimo	Carpinelli	INFN Sassari	John	Jaros	SLAC
Valeria	Sipala	INFN Sassari	Takashi	Mauyama	SLAC
Daniela	Calvo	INFN Torino	Jeremy	McCormick	SLAC
Alessandra	Filippi	INFN Torino	Ken	Moffeit	SLAC
Luca	Colaneri	INFN U. Rome	Tim	Nelson	SLAC
Annalisa	D'Angelo	INFN U. Rome	Al	Odian	SLAC
Alessandro	Rizzo	INFN U. Rome	Marco	Oriunno	SLAC
Nathan	Baltzell	JLAB	Ban	Rees	SLAC
Sergei	Boyarinov	JLAB	Sho	Uemura	SLAC
Volker	Burkert	JLAB	Rouven	Essig	Stony Brook U.
Chris	Cuevas	JLAB	Vitaliy	Fadeyev	UCSC
Alexandre	Deur	JLAB	Alexander	Grillo	UCSC
Hovanes	Egiyan	JLAB	Omar	Moreno	UCSC
Latifa	Elouadrhiri	JLAB	Maurik	Holtrop	UNH
Arne	Freyberger	JLAB	Kyle	McCarty	UNH
Francois-Xavie	Girod	JLAB	Rafayel	Paremuzyan	UNH
Valery	Kubarovsky	JLAB	Keith	Griffioen	W&M
Ben	Raydo	JLAB	Sebouh	Paul	W&M
Youri	Sharabian	JLAB	Natalia	Dashyan	YerPhi
Stepan	Stepanyan	JLAB	Nerses	Gevorgyan	YerPhi
Maurizio	Ungaro	JLAB	Hakop	Voskanyan	YerPhi
Bogdan	Wojtsekhowski	JLAB			

- 60% of collaborators are from Hall-B collaborating institutions, most with substantial experience with running experiments at JLAB and Hall-B
- 80% of collaborators have been involved with month long test run
- ~80% of collaborators are involved in the construction and test of experimental apparatus (beamline, Ecal, SVT, slow controls)



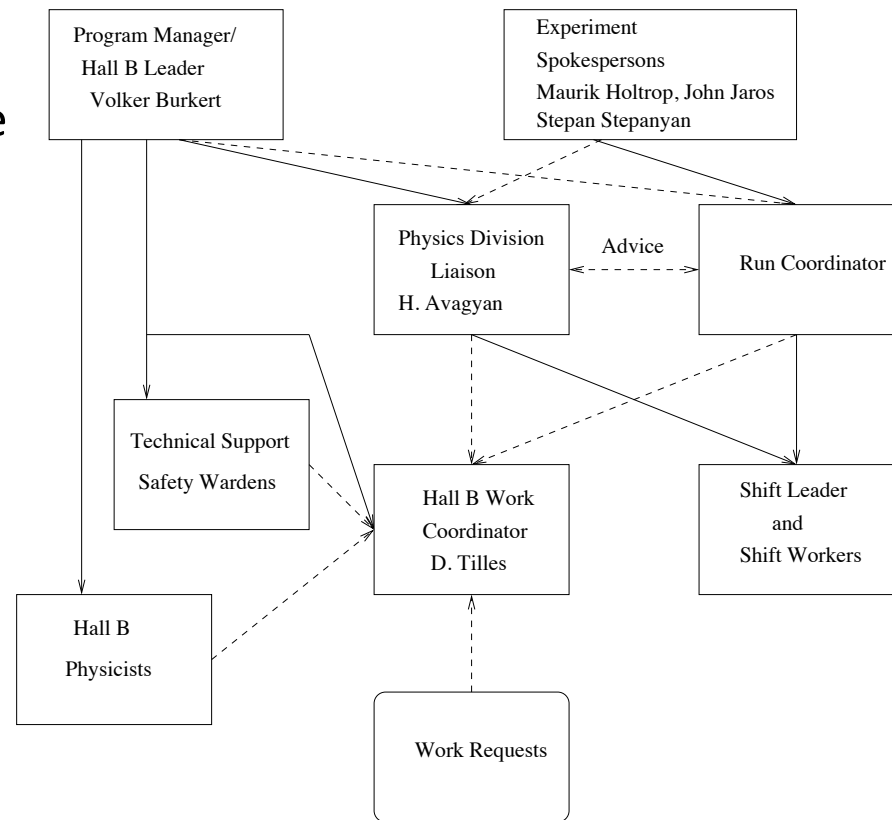
Run web-page and documentation

- ❑ Documentation can be accessed from run page at - <http://www.jlab.org/Hall-B/run-web/>, with links to the current run information:
 - formal documentation
 - information on the collaboration
 - shift schedule (in the process to be generated)
 - logbook entries
 - experiment run page (https://wiki.jlab.org/hps-run/index.php/Main_Page)
- ❑ The formal documentation, COO, ESAD, RSAD, and ERG is ready, including checklists and TOSP for the SVT
- ❑ Experiment wiki has commissioning plans and manuals for detector subsystems
- ❑ Short term and long term run plan tabs will be maintained by the Run Coordinator (RC)



Run organization

- ❑ The operation of the experiment is directed by the Spokespersons and the Hall Leader
- ❑ The Run Coordinator is the immediate on-site manager of the experiment
- ❑ RC is responsible for:
 - daily run plan
 - participates in MCC meetings
 - organizes daily meetings of the run
- ❑ The Physics Division Liaison oversees the hall's interests with respect to personnel and equipment protection
- ❑ RC and PDL are responsible for seeing that all shifts are filled
- ❑ All work in the hall should be coordinated with hall work coordinator and PDL



Organization of Shifts



Today is

Tuesday, August 26, 2014

Current shift status

Time: **21:00 EDT**
 Expert: **none**
 Worker: **none**
 RC:
 PDL:
 Schedule:

Display options

Start:

26 ▾ Aug ▾ 2014 ▾

End:

31 ▾ Dec ▾ 2014 ▾

Narrow search by name:

or by institute:

or by accelerator schedule:

Choose view:

schedule statistics

HPS - Shift Schedule - Log in



Maintained by [B. McKinnon](#)

No shifts in this period (Aug 26, 2014 to Sep 9, 2014)

- ❑ 2 man shifts, leader and worker, 8 hour shift duration with staggered start time for the leader and worker (1 hour) to allow overlap between shifts
- ❑ Shifts are distributed randomly between participating institutions according to the number collaboration members in blocks of 5 shifts (leader or worker)
- ❑ Institutional representative is responsible for assigning shifts



Getting ready for shift

- ❑ All personnel on shift are required to have successfully completed and be current in the following JLab safety training:
 - EH&S Orientation (SAF 100)
 - Radiation Worker Training (SAF 801)
 - Oxygen Deficiency Hazard Training (SAF 103)
 - Hall B Safety Awareness Walk-Through (SAF111) – *everyone must update their training starting on September 2, old training expires October 1*
- ❑ All personnel are required to have radiation badges in their possession during their shifts.
- ❑ The Safety Awareness Walk-Through will emphasize hazards that are typical of normal Hall operations.
- ❑ Shift takers must read COO, ESAD, and RSAD, as well as logbook entries before coming to shift
- ❑ Shift takers are encouraged to spend some time before their shift in counting room to become familiar with the run conditions, procedures, applications...



Shift takers responsibilities

- ❑ Responsibilities of shift leader and worker are clearly explained in COO

Leader

- carry out the scientific program planned for the shift in a safe and efficient manner
- make log entry events and actions which occurred during the shift
- serve as primary contact between the machine control center (MCC) and experiment personnel
- to oversee that hall equipment is operated properly
- ensure the shift checklist is performed every eight hours on operating shifts.

Worker

- carry out the scientific goals of the shift in a safe and efficient manner under direction of the shift leader
- read the logbook to be aware of changes in goals, operating parameters, and new documentation
- monitor the equipment for problems
- maintain adequate records of the progress of the shift



Shift Checklist for HPS

Date:

	— owl —	— day —	— evening —
Time			
Expert			
Worker			
HPS-dipole Current (A)			
Frascati-1&2 Current (A)			
Beam Current Requested/Delivered(nA)			
Beam X(abs)/Y(abs) 2C21A			
Beam X(abs)/Y(abs)2C24A			
Beam X(abs)/Y(abs)2H00			
Beam X(abs)/Y(abs)2H01			
Beam X(abs)/Y(abs)2H02			
Trim magnets 2C21H/2C21V			
Trim magnets 2C22H/2C23V			
Trim magnets 2H00H/2H00V			
Trim magnets 2H02H/2H02V			
Upstream Halo counter rate (Hz)			
Downstream Halo counter rate (Hz)			
Beam stopper temperatures (In/Out)			
Faraday cup temperatures (top/upstream)			
SVT protection collimator state			
Target state			
ECal temperature (F)			
SVT temperature (F)			
DAQ Configuration			
DAQ Trigger File			
Event Rate			
Live-Time			
Check trigger diagnostics ?			
Check ECal diagnostics ?			
Check SVT diagnostics ?			
Shift Summary in Elog/Time Accounting ?			
Send scaler GUI to Elog ?			
Run Summary Checked ?			
IC/Hodoscope scalers checked, send to Rlog ?			
Monitoring histos printed (CLAS and IC) ?			



Experts

- ❑ Detector experts will commission subsystems, train shift personnel, and will be available on-call during the normal running periods to help
- ❑ List of shift leaders and detector subsystem experts is defined: shift leaders have been chosen based on experience, detector subsystem experts have been chosen by detector working groups

Institution	Institutional Rep.	Total	Experts	Beamline	Subsystem Expert Shifts (weeks)				Total
					Slow controls	TDAQ	SVT/SVTDAQ	Ecal	
CEA SACLAY	Michel Garcon	1	1						
Clasgow U	Daria Sokhan	3	3			1			1
FNAL	William Cooper	1	0						
Idoho U	Mahbub Khandaker	1	1						
INFN Catania	Marzio DeNapoli	3	0						
INFN Genova	Marco Battaglieri	4	4					1	1
INFN Padova	Gabriele Simi	1	0						
INFN Sassari	Massimo Carpinelli	2	0						
INFN Torino	Alesandra Filippi	2	0						
INFN U.Rome	Annalisa D'Angelo	3	1						
JLAB	Stepan Stepanyan	15	9	9	3	2			14
ODU	Larry Weinstein	3	2					1	2
ORSAY	Muchel Guidal	4	4					2	2
Perimeter Institute	Natalia Toro	2	0						
SLAC	Takashi Maruyama	14	9	1	3		3		7
Stony Brook U.	Rouven Essig	1	0						
UCSC	Alex Grillo	3	2				1		1
UNH	Maurik Holtrop	3	2						
W&M	Keith Griffioen	2	1						
YerPhi	Nerses Gevorgyan	3	1			3			3



Summary

- ❑ HPS collaboration successfully run 2012 test run
- ❑ Most of collaboration members took shifts for the test run and/or for other Hall-B runs with CLAS detector
- ❑ Shift taker responsibilities, operational procedures, training requirements have not changed much since 6 GeV operations
- ❑ Shift takers manuals and procedures are ready
- ❑ Shift policies are set, training of personnel started
- ❑ Shift schedule will be ready soon
- ❑ Detector subsystem experts are identified
- ❑ Restoration of the Hall-B counting room is in progress

HPS will be ready to take shifts and start beam line commissioning at the beginning of October



Hall B Checklists - Preparing for Beam

System	Contact	Initial
Call list	Hall B PDL	
Beamline and Magnets	S. Stepanyan	
Magnets swept for magnetic material		
All magnets turned on and in remote		
GUIs exercised, IOCs up		
Beam halo PMTs turned on		
FSD system operational		
Radiator, collimator out of beam		
BPMs operational		
Viewer screens on video		
LCW flow rate turned up	D. Tilles	
Valves checked for extraneous lock outs		
Fire Safety Inspection	D. Tilles	
Remove cables above all crates in racks		
Remove all transient trash		
Remove all transient ignition sources		
Test the fire early-warning system		
Final house keeping	D. Tilles	
Grounding straps to fwd carriage and clam shell		
VESDA ok?		
Final walk-through	B. Manzlak	

