
Compton 6MSD Work Overview

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Hall C Compton Meeting
June 20, 2011

Compton Work Overview

- Laser
 - Measure (old) transfer function
 - Cavity improvements (higher gain, better mounts)
 - Measure (new) transfer function
- Photon detector
 - Get PbWO4 ready for installation
 - LED system for gain/linearity measurements
 - Cooling?
- Electron detector
 - Replace flex cables
 - Replace 1st plane
 - New QWADs
- DAQ and analysis
 - Put repaired crates back in place
 - Move DAQ to more robust machine

Schedule

2011 Hall C work for 6 Month down; Q-weak maintenance, SOS disassembly and HKS dipole removal. Rev 13

| ID | Task Name | % Complete or Cost estimate | Start | Finish | Duration | Hrs | Resource Names | Risk Code # | Task Hazard Analysis | In AtRisk | In HC List | Hot Work Permit | TOSP, RWP, Lift Plan |
|----|---|-----------------------------|--------------|--------------|-----------|-----|-----------------------------|-------------|----------------------|-----------|------------|-----------------|----------------------|
| 1 | 2011 Hall C work in 6 Month down | | Fri 5/13/11 | Wed 11/9/11 | 131 days? | | | | | | | | |
| 2 | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | |
| 4 | Q-weak changes, maintenance and repairs | | Tue 5/31/11 | Thu 11/10/11 | 119 days | | | | | | | | |
| 5 | Q-weak RAD cool down (approx 2 weeks) | | Fri 5/13/11 | Fri 5/27/11 | 12 days | | RAD Cool Down | | | | | | |
| 6 | | | | | | | | | | | | | |
| 7 | Moller Polarimeter: | | Mon 6/6/11 | Fri 7/1/11 | 20 days | | | | | | | | |
| 8 | Miscellaneous shielding (lead bricks on detector tables, near beam line) | | Mon 6/6/11 | Tue 6/7/11 | 2 days? | | Hall C Tech's | 1 | ITHA Req'd | | | | |
| 9 | RADCON support required | | Mon 6/6/11 | Tue 6/7/11 | 2 days | | RADCON | 0 | ITHA Req'd | | | | |
| 10 | Install temperature sensor in Moller 4K supply line | | Wed 6/8/11 | Wed 6/8/11 | 1 day? | | Hall C Tech's | 1 | ITHA Req'd | | | | |
| 11 | Install remote power cycle of collimator controllers | | Thu 6/9/11 | Thu 6/9/11 | 1 day? | | Joe Beaufait | 1 | ITHA Req'd | | | | |
| 12 | | | | | | | | | | | | | |
| 13 | Compton Polarimeter: | | Thu 12/23/10 | Tue 7/26/11 | 42 days? | | | | | | | | |
| 14 | Laser table work ---- | | Thu 6/2/11 | Wed 7/20/11 | 36 days? | | | | | | | | |
| 15 | Let up vacuum (Compton Polarimeter, electron detector and laser table) | | Wed 6/1/11 | Wed 6/1/11 | 1 day? | 8 | Mech Vac Tech 1 | 1 | ITHA Req'd | Req'd | | | |
| 16 | RADCON support required | | Wed 6/1/11 | Wed 6/1/11 | 1 day | | RADCON | 0 | ITHA Req'd | | | | |
| 17 | Check electron detector and laser cavity mirrors to ensure work can be done | | Thu 6/2/11 | Thu 6/2/11 | 1 day? | | Experimenters | 0 | | | | | |
| 18 | Install new mirrors, characterize transfer function, etc. (Hall C Phys) | | Fri 6/3/11 | Tue 6/7/11 | 4 days | | Hall C Tech's / Experiment. | 1 | ITHA Req'd | | | | |
| 19 | Compton Polarimeter Pre-align laser table and as-found of photon detector | | Mon 6/27/11 | Mon 6/27/11 | 1 day? | 16 | Surv & Align Tech 2 | 1 | ITHA Req'd | Req'd | | | |
| 20 | RADCON support required | | Tue 7/26/11 | Tue 7/26/11 | 1 day | | RADCON | 0 | ITHA Req'd | | | | |
| 21 | Remove electron detector top assembly (Hall C Tech and Phys) | | Wed 7/27/11 | Wed 7/27/11 | 1 day? | | Hall C Tech's / Exp. | 2 | ITHA Req'd | | Req'd | | |
| 22 | RADCON support required | | Wed 7/27/11 | Wed 7/27/11 | 1 day | | RADCON | 0 | ITHA Req'd | | | | |
| 23 | Install new flex cables (Hall C Phys) | | Thu 7/28/11 | Thu 7/28/11 | 1 day? | | Hall C Tech's / Exp. | 1 | ITHA Req'd | | | | |
| 24 | Re-install electron detector top assembly (Hall C Tech and Phys) | | Fri 7/29/11 | Fri 7/29/11 | 1 day? | | Hall C Tech's / Exp. | 2 | ITHA Req'd | | | | |
| 25 | Replace Compton electron detector cable, install 4th plane | | Mon 8/1/11 | Thu 8/4/11 | 4 days | | Experimenters | 1 | ITHA Req'd | | Req'd | | |
| 26 | Fiducialize electron detector | | Mon 9/19/11 | Mon 9/19/11 | 1 day? | 16 | Surv & Align Tech 2 | 1 | ITHA Req'd | | Req'd | | |
| 27 | Final alignment of Compton system | | Fri 9/30/11 | Fri 9/30/11 | 1 day? | 48 | Surv & Align Tech 3 | 1 | ITHA Req'd | | Req'd | | |
| 28 | | | | | | | | | | | | | |
| 29 | As build survey: | | Mon 6/6/11 | Fri 7/15/11 | 30 days? | | | | | | | | |
| 30 | Primary collimator | | Mon 6/6/11 | Fri 7/15/11 | 30 days? | 16 | Surv & Align Tech 2 | 1 | ITHA Req'd | | | | |
| 31 | Collimator # 1 | | Mon 6/6/11 | Fri 7/15/11 | 30 days? | 16 | Surv & Align Tech 2 | 1 | ITHA Req'd | | | | |
| 32 | Region 3 Quartz bar | | Mon 6/6/11 | Fri 7/15/11 | 30 days? | 16 | Surv & Align Tech 2 | 1 | ITHA Req'd | | | | |
| 33 | Region 2 detector horizontal position | | Mon 6/6/11 | Fri 7/15/11 | 30 days? | 16 | Surv & Align Tech 2 | 1 | ITHA Req'd | | | | |
| 34 | | | | | | | | | | | | | |

Schedule

1. Laser table pre-survey, photon detector “as found”
 - Originally scheduled for late June. Change requested to early August
2. Electron detector re-fiducialization
 - Week of September 19
3. Compton final alignment (whole system)
 - September 30
4. Pull vacuum bake: must take place between items 2 and 3

Executing “scheduled” work

- For work that requires external groups, it's important that we try to maintain the schedule
- At the same time, be prepared for them to bump us to another date
- When the time for a particular job approaches (like Survey and Alignment of laser table), best to check in with relevant group that we are still on their schedule
 - maybe the week before
 - Discuss the job, make sure we leave system in a state they find acceptable
 - Walk the job with them if concerned about how it will be done