

GMp/DVCS RC Report



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Quick Overview

- Accelerator running in one hall configuration (Hall A)
- GMp was running exclusively up until last Thursday
- DVCS/GMp has been running side by side since 10/29
- Chokes for accelerator on their way, and expecting to have two hall operation by late November (Hall A and D)
- In the meantime, Hall A gets **good** beam.

Daily Summary

- Tuesday 10/25: GMp production running
 - DAY: Had an issue with Left HRS DAQ (ROC31) and had to do a controlled access to fix.
 - DAY: Had a raster power supply issue -> Bob Michaels was on shift, and so was able to quickly provide help.
 - Moved spectrometers for different kinematics (K3-6 to K3-8) with tech support.
- Wednesday 10/26: Last day of GMp exclusive production running
 - Made two spectrometer moves with tech support.
 - Second move was on the evening (~9:30, thanks again Jesse and crew!)

Daily Overview

- Thursday 10/27: GMP to DVCS Transition (Lots of activity planned)
 - DVCS Will conduct a ~1day long elastic calibration.
 - Needs Left-HRS in positive polarity for protons.
 - Beam taken away beginning of DAY shift -> RadCon enters shortly to conduct rad survey.
 - Survey team comes in to measure RHRS first, then LHRS
 - While LHRS is being surveyed a team of 4 begins the setup of the DVCS Calorimeter
 - Stacking finishes mid afternoon
 - All other tests and setup finish by 9:30 PM
 - However, a problem was found by mid day.
 - The Left Dipole will not come back up
 - May be the same problem that Right Dipole experienced before
 - Jack was tired and out of ideas by 9:30 PM, so we cancelled the SWING and OWL shift (no hope of running without that dipole).

Daily Overview

- Friday 10/28:
 - Left Dipole still. Ops is anxious to find out what we will do and has offered manpower to help diagnose the issue.
 - If we are to be down for a few days, Ops has a plan they'd like to carry out that requires 2-3 days of no beam to the hall.
 - Lots of people try to help Jack, but the PCL on the Left Dipole is much older than what they are used to.
 - While we debate our options, Jack calls me by 1:30 to tell me the Dipole is up!!!! (How many beers do we owe him now?)
 - Quickly lockup the hall and ask for beam
 - Ops wants to run a 1 (somehow up to 2) hour test of the Dump Diffuser
 - They wanted 30 μA (rastered) beam on Dump, but Operational Restrictions limit current to 5 μA
 - Doug paged and he gave them the okay to run 30 μA for their test.

Left Dipole Fixed (?)

- To quote Jack:

While it is not fixed, it is functional. It seems that for some reason removing the jumper to connect the backup capacitor allowed us to communicate with the PLC. We then cleared the fault, loaded the program, and started it running.

Daily Overview

- Saturday 10/29:
 - Program continued from yesterday:
 - Move calorimeter to three angles with two hour runs in between.
 - Repeat procedure to check the calibration.
 - Completed the DVCS Elastic Calibration by 1:30 PM
 - Asked for energy change to 4pass
 - Meanwhile, entered the hall to move calorimeter to highest angle needed in 4pass running.
 - Then moved the RHRS to the smallest angle possible.
 - Then tried to move the calorimeter to angle for first 4pass DVCS kinematic.
 - We encountered a problem: There is some interference with a pipe at the beamline
 - When calorimeter moved, it caused the front right rail to become dislodged.
 - With the help of Jack, Jesse and Heidi, managed to “quickly” fix it
 - This interference still has to be evaluated and understood as we expect to move the calorimeter again tomorrow.

Daily Overview

- Sunday 10/30: A relatively Quiet Production Running
 - DVCS and GMp both run smoothly in production mode with only a few bleeps:
 - RHRS ROC6 stopped responding, asked for Control Access to manually reset.
 - Documentation a bit unclear as to how to reset from counting house, but Alex has explained how we should be able to reset it. Need to confirm that crate can be brought up from the counting house also.
 - Experienced problem with Central Computing's Lustre
 - Did not seem to affect adaq machines but did hinder replay/analysis on the aonl machines.
 - Asked Guard to page the Computer Center support on call -> Sandy fixed the issue and online replay continued.
 - Note from Sandy: remind Hall A that Lustre needs to come out of their critical path for online systems

Daily Overview

- Monday 10/31
 - Took a Moller measurement in the morning.
 - Process was very fast! Maybe all the issues from Spring have been resolved.
 - Polarization measured ~87%
 - Decided not to do a mini-spin dance as polarization was already good for DVCS
 - No trick-or-treaters came to the Counting House :(
- Tuesday 11/01
 - Compton setup started in the morning. Expected it to take a long time (as usual) but finished relatively quickly.
 - Signal to noise is about 30:1 which is really good!