

g2p/gep Beam Transport Meeting Minutes

Attendees: J.P. Chen, E. Folts, A. Gavalya, P. Degtiarenko, B. Dillon-Townes, A. Camsonne, K. Allada, D. Williams, R. Lauzé, T. Michalski, S. Wood, P. Kjeldsen

The following is a summary of issues discussed during the g2p/gep Beam Transport Meeting:

- We reviewed the minutes from the previous meeting.
- Butch is chasing down BD magnets which will be the corrector magnets for g2p.
- A request was made that we get a list of all the magnets in the beamline.
- The slow raster has been located but still need to locate the controller and PS. It was noted that the slow raster requires cooling fans.
- Slow raster magnet is currently located in physics storage (Butch).
- Other comments on the slow raster, coming from Oscar Rondon, are:
 - The Hall C SR was maintained by Bill Gunning. During SANE two of the PWM driver amplifiers died, there was only one driver left, I believe there were no spares either. So they need to be refurbished.
 - The SR waveform generators need to be reprogrammed for the g2p/gep beams and corresponding SR to target distance. During SANE we used some scaled factors to set them for our energies and desired sizes, but this should be checked.
 - The Wavetek waveform generators for the SR are long out of production, it took some work to find manuals (there was a copy in the Hall C counting house), etc. There is more material on the SANE wiki. Also, search hclg for additional useful entries about raster.
- Update: Chris Cuevas and Bill Gunning looked around in Hall-C but did not find slow raster power supplies.
 - It is good idea to remove slow raster power supplies from Hall-C before QWEAK starts, if the are in the Hall.
- Update on the FZ1/FZ2 magnets and associated PS's:
 - Dave Gaskell stated in an e-mail that, right now, the only Danfysik power supply that is unused is a 40 V, 480 A supply. The small Moller quad is powered off a 40 V, 320 A supply. If the old supply that was damaged gets repaired, the 320 A supply could be made available.
 - Additionally, Joe Beaufait stated in an e-mail: I have two that would work, one is in for repair but should be available in your time frame. The other is available now.
 - Need someone from Engineering to take ownership of the power supplies.
 - Ed Folts needs power requirements for these power supplies so that he can finalize their placement and get power put in for them.
- RADCON has all the information required to assess this experiment. The action item is closed.
- Meeting regarding PPS, MPS, FSD, etc is set for Wednesday, September 22, 2010 at 8:30 AM in the MCC Conference Room.
- New discussion was raised regarding the 1cm air gap between the articulating arm and the target chamber window. Therefore, the decision has been highlighted in the decision log. The design team(s) will look at using a helium bag or venting the air. RADCON is not thrilled with an air gap – smaller is definitely better – especially at 30 microamps. There is concern about beam scatter and again, smaller air gap is better with helium bag being better still.

g2p/gep Beam Transport Meeting Minutes

- JP stated that there is a need for BPM cross-calibration with harp. Need to put harp close to the BPMs.
 - If a harp channel is required, it was noted that they are hard to come by.
- JP also mentioned about the need to make Hall-A BCMs to work the low currents.
 - BCMs can be cross-calibrated with tungsten calorimeter.
- Need to setup a separate meeting focused on Beam Diagnostics – BPM, BCM.
- Need task lists (schedules if you've got them) and material procurement plans (\$ value) in order to put together the details of the Project Plan. Ed Folts will send task list in Word, but doing his plan in MSPProject. We don't have time to do everything serially and will have to orchestrate plans with others during 6 month down.

STATUS:

OPTICS:

- No status update

MAGNETS:

- No status update

BEAM TRANSPORT:

- No new layouts received re: 80 degree setpoint.
- Plan to review layout next week.
- In discussion with Ed regarding location of vacuum pumps.
- They are designing new vacuum chambers for the FZ1/FZ2 magnets to accommodate the beam trajectory. Need to orchestrate rework of the magnets and mapping the magnetic field with Magnet Measurement. Plan to get chambers as soon as possible to provide flexibility to Magnet Measurement group.
- Butch is working on the schedule.
- They verified the CAD layout versus as-built and it agrees with Al's layout as well. Points that don't match the current DIMAD Deck are being related back to Yves.

RAD CON:

- Nothing new to report.

SOFTWARE:

- Nothing new to report

VACUUM:

- No status update

INSTALLATION:

- No status update

g2p/gep Beam Transport Meeting Minutes

ALIGNMENT:

- No status update

EES – I&C:

- Awaiting testing of stripline prototype this week.

EES – OPS:

- Recommend getting Accelerator Ops representative involved in the weekly meeting. Note that Eric Forman is the Hall A liaison but is on swing shift now.

TARGET/DUMP DESIGN ACTIVITIES:

- Target Irradiation Update:
 - Can be done at FEL.
 - Al G. will support design for integration into the FEL beamline.
 - Details regarding this topic are in last week's target meeting minutes.
http://hallaweb.jlab.org/experiment/g2p/meetings/target/g2p_target_16Sept2010.pdf

g2p/gep Beam Transport Meeting Minutes

Action Items:

Action Item #	Date Added	Action Item	Responsible Individual	Due Date	Date Closed
1	8/31/10	Upside down quad girder to be removed from Region 2 of the layout	LAD-T	9/21/10	
2	8/31/10	Move corrector magnets from eliminated upside down girder in Region 2 to beamline before the FZ1 magnet	Y. Roblin	9/21/10	
3	8/31/10	Contact Mark Jones from Hall C to secure commitment to HALL A for the usage of the FZ1 and FZ2 magnets and their associated power supplies	J.P. Chen	9/21/10	
4	8/31/10	Provide data on target thickness, duration of run times, and energy during those runs, etc. to develop radiation events for the experiment to RADCON	K. Allada	9/21/10	9/21/10
5	9/14/10	Need to setup a separate meeting focused on insuring all Accelerator Ops, Safety, PSS, MPS, FSD, and RADCON issues are addressed for the experimental setup.	T. Michalski	9/21/10	9/20/10
6	9/14/10	We need to get commitments for the hardware required for g2p. Need list of all components, owners, nomenclature.	J.P. Chen T. Michalski	10/5/10	
7	9/14/10	Locate the slow raster from Hall C. Includes controller and PS.	LAD-T	9/28/10	
8	9/21/10	Separate meeting focused on experimental beam diagnostics (BPM, BCM – low current, etc.)	T. Michalski	9/28/10	

Design Decisions:

Date	Decision Item
8/31/10	The transport line exiting the FZ2 will have no vacuum connection to the target chamber. A beryllium window will terminate that line.
8/31/10	M20 BPM's were decided to be used on the transport line exiting the FZ2.
9/14/10	The Target will only be set at 80° and 90°, not 70°, per Al Gavalya.
9/14/10	The gap between the beam tube end and the target window was discussed. It should be minimized – consider 1 cm as a maximum gap. Re-opened during 9/21/10 meeting – look at using helium bag.