g2p/gep Beam Transport Meeting Minutes

Attendees: J.P. Chen, E. Folts, A. Gavalya, B. Dillon-Townes, K. Allada, D. Williams, T. Michalski, S. Wood, P. Kjeldsen, K. Mahoney, M. Ivanco, C. Curtis

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

- We did not review the minutes from the previous meeting. It is assume that these will be read in advance, with issues, questions, or concerns brought to the weekly meeting.
- Our first order of business was to review the outstanding action items.
    - The experimental definition (layout) drawing is to be sent out for review on Wednesday (this did occur – see Butch if you did not receive a copy and would like one). As a result of this status, action item 1 will be closed out.
    - Regarding action item 2, Butch talked to Ken Baggett who believes he has two MBDs with 1.5" aperture that can be used as the corrector magnets. Ken is still getting things back in order due to their move to the GPB and will verify.
    - Item 3 – we have one committed and the other is out for repair. Therefore, this action is closed. The responsibility now transfers to Simon Wood to take possession of the magnets. The first thing needed is to get powering requirements to Ed Folts.
    - The Master Equipment List for items within Hall A (not including the alcove or the target to dump) has been added to the Design Requirements Document which will be distributed by the end of the week.
    - Ed mentioned the need to make sure the VBV1H04B gets relocated from the long girder assembly to somewhere on the beamline, preferably just before the chicane. Make everyone reviews the Experimental Definition Drawing.
    - Action items from the PSS/MPS meeting will also be added to the action item list. We will need to assign actionees at the next meeting.
    - A meeting is scheduled for Tuesday PM to discuss the requirements for the BPM.
    - The slow raster items have been located and it was confirmed that Chris Cuevas, Bill Gunning, and Bob Michaels will take responsibility for the tasks related to the Slow Raster. Item closed.
- A statement was made to make sure all beam pipe apertures are checked to make sure the rastered beam has the appropriate clearance to all walls. Note that the current CAD layout shows the centerline of the beam for the various runs but it would be helpful to see it with the OD of the beam as well (this comes from another meeting).
- There is a g2p/gep Collaboration Meeting on Thursday.

STATUS:

OPTICS:

- From an e-mail by Yves.
    - Regenerated orbits for the gep option at 80 degrees (transmitted those to ME last week)
    - Double checking the deflection at the target by attempting to use the extended field map that was computed by Seonhon Choi. So far, I am finding that it is within 5 % of what I estimated which should be adequate. To go further, I would need the actual coil specs for the target in order to do a TOSCA. It may not be necessary to go that extra step.

MAGNETS:

- Getting the 2 corrector magnets defined by Ken Baggett. Need to add these to the Master Equipment List along with nomenclature.
- The FZ magnets will have to be modified for a larger vacuum chamber. Therefore, their nomenclature will have to change.

BEAM TRANSPORT:

- The FZ magnet vacuum chambers are being analyzed and designed. The design should be complete by the end of the week and ready for fabrication.
- The Experimental Definition Drawing will be sent out on Wednesday, September, 29th.
- A review of the system vacuum is in process with a goal of 10^{-7}, will get at least 10^{-6}.
- Design has started on the region 1 items – slow raster and calorimeter.
- They are looking at a bolt together construction, rather than weld, for the girder/platform assemblies.
- New designer on board and new engineer to start 10/1.

RAD CON:

- Nothing new to report.

SOFTWARE:

- Nothing new to report

VACUUM:

- No status update

INSTALLATION:

- No status update

ALIGNMENT:

- Let's get as much done before the 6 month down as possible.
- The reworked FZ magnets will have to be realigned/surveyed

EES – I&C:

- The stripline BPM testing is on for this week.
- The calorimeter control chassis is going to be more of a challenge due to undocumented rework (cutting of connectors and wiring in new ones, with no drawings available)
- There is a meeting this afternoon to discuss BPM requirements

EES – OPS:

- No status update

EES – SSG:

- The sieve box is out.

TARGET/DUMP DESIGN ACTIVITIES:

- Continue to work on design. Looking at window materials/thicknesses and helium bag at beamline/target chamber interface.

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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	9/28/10
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	9/28/10
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	9/28/10
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	9/28/10
8	9/21/10	Separate meeting focused on experimental beam diagnostics (BPM, BCM – low current, etc.)	T. Michalski	9/28/10	9/28/10
9	9/28/10	Power requirements for FZ magnets to Ed Folts.	S. Wood	10/8/10	
10	9/28/10	Get a list of targets to Kelly Mahoney. The same info sent to RADCON	J.P. Chen	10/8/10	
11	9/28/10	Define the need and settings for chicane magnet current monitoring.	**TBD**	10/8/10	
12	9/28/10	Define if instrumentation is required for the low current dump. If so, what should be monitored?	**TBD**	10/8/10	
13	9/28/10	Get SANE target screens to Henry Robertson.	**TBD**	10/8/10	

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.
9/30/10	The requirement for BPM accuracy is 0.1mm – per discussion at BPM requirements meeting and subsequent analysis/e-mail from K. Allada.