

g2p/GEp Beam Transport Meeting Minutes

Attendees: T. Michalski, E. Folts, C. Curtis, Z. (Vick) Chen, R. Lauzé, A. Dela Cruz, D. Williams, P. Kjeldsen, JP Chen, K. Allada, R. Wright, T. Michaelides, S. Wood, A. Camsonne, M. Wehl, P. Zhu

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

- The upside down girder was installed and the BCM and harp reinstalled. Preliminary alignment is done. Needs the input side beam pipe installed and can be connected to the FZ1 magnet vacuum chamber on the upstream side. Vacuum group has this scheduled.
- The second harp has been assembled and is ready for fiducialization. Better to get it leak checked and in queue for the survey and alignment folks – can fit it in as filler.
- FZ magnets – OSP to be signed off today. Will be able to test this week.
- Discussed what is required for alignment and accuracy of position of the viewer flag. It will be used for routing the beam and therefore requires “reasonable” accuracy. Agreed that the vertical position within the large cross is required and would use the best reasonable method. Then, the flange of the cross can be aligned at each energy setting – Yves requested within 0.5mm. The position of the beam on the flag can then be captured during the straight through run and extrapolated for running through the chicane.

STATUS:

OPTICS:

- Nothing new to report.

MAGNETS:

- Nothing new to report.

BEAM TRANSPORT:

- Region 1 – nothing new to report.
- Region 2 – nothing new to report.
- Region 3 – awaiting parts.
- Arms and girders – awaiting parts.
- Viewer – awaiting girder parts. Discussion regarding fiducialization of the flag.

RAD CON:

- Nothing new to report.

SOFTWARE:

- Viewer SW is complete.
- Needs the Harp Controller chassis. Some mapping information passed to Sue to get the Harp SW going. At this point, she is waiting for further information from I&C.
- Need to get the final BPM chassis as some of the SW settings will be based on the actual final hardware.

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VACUUM:

- Will perform remaining hookups to the upside down girder.

INSTALLATION:

- Will get PS bunker built. Install SR fans first.

ALIGNMENT:

- Awaiting next steps.

EES – I&C:

- Harp Controller (board and chassis) is complete. Still working on FW; due to Ops SW by the end of the month.
- BPM board is getting a final spin. Expect to have it complete by mid October. Building/testing 2 channel now and will then make 4 channel. No schedule issues since the SW and FW are all but complete.
- Transport BPM modules are on track for installation and test by end of September.

EES – DCP:

- Finishing OSP for FZ magnets. Once signed, ready to test.
- Screens for all magnets are complete.
- BD magnet hookup is complete as well.

EES – SSG:

- Will not capture dump cooling loop temp as it is not an interlock.

TARGET/DUMP DESIGN ACTIVITIES:

- Nothing new to report.

PHYSICS

- Review tentatively set for October 7. Need OSPs for all systems – everything that is not in the Hall base equipment. These may be transferred from application elsewhere on site.

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Action Items:

Action Item #	Date Added	Action Item	Responsible Individual	Due Date	Date Closed
11	9/28/10	Define the settings for chicane magnet current monitoring.	Y. Roblin	TBD	
36	1/11/11	BPM testing with new electronics in North Linac – ½ done	J. Musson / D. Williams	???	
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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. Will use helium bag – issue closed.
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.
12/6/10	Use 5.5" M15 antenna style BPMs in articulating arm!
12/6/10	JP committed to a 2 cm raster, if need be, to accommodate threading the beam through the articulating arm.
1/11/11	Decision to use harps in tune mode rather than low current.
4/5/11	We will not accommodate a special 1.1 GeV run with the target at the pivot. There will be no change to the FZ2 stand design and no need to reposition the chicane. Evaluation of 1.1 GeV beam through 2.2 GeV chicane position to be performed.
4/18/11	It was agreed that we will be moving the target up 9cm for the 1.1, 1.7, and 2.2 GeV runs when the target is in the 87cm upstream location. For the 1.1 and 1.7 GeV runs, the target magnet will be at 2.5 T, versus the 5 T for all other runs. Issue resolved without having to raise the target.
4/26/11	Decision to use 4'x4' platform for Al magnet and address any safety issues – rather than alternative to use existing stand in BSY which requires rework.