

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, P. Degtiarenko, K. Allada, R. Wright, T. Michaelides, S. Wood, A. Camsonne, M. Wehl, R. Taylor, P. Zhu

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

- Making some progress on the beamline. The upside down girder was installed and the BCM reinstalled. The Harp is slated to be reinstalled later in the morning today.
- 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 are getting finalized for powering on. Needs TOSP signed off. All other work appears to be done.

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 – Design is complete. 3 procurements under way.
- Harps – complete.
- Viewer – awaiting girder parts – the delivery of the upstream girder appears to have been pushed to the end of September due to PEPPo parts at the supplier.
- Comment to install SR fans and support bracket before building SR PS bunker.

RAD CON:

- Nothing new to report.

SOFTWARE:

- Needs the Harp Controller chassis. Some mapping information passed to Sue to get the Harp SW going. This is the long pole in the SW tent (and on the entire beamline effort).
- Need to get the final BPM chassis as some of the SW settings will be based on the actual final hardware.
- The viewer is ITV1H05.
- Question raised about the old French harps and if they need to be readdressed from an EPICS point of view.

VACUUM:

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- Awaiting Harp for downstream girder.

INSTALLATION:

- Will get PS bunker built later in the week. Install SR fans first due to accessibility.

ALIGNMENT:

- Upside down girder alignment – actually completed on Wednesday. Concern about BCM clearance was a non-issue.
- Get other harp in alignment queue.

EES – I&C:

- Harp Controller (board and chassis) is complete. Still working on FW. Initial mapping information sent to Sue for SW.
- 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 TOSP for FZ magnets. Beacons are installed. Crash buttons to be installed and wired in.
- Control panel reprogrammed and auxiliary switch installed for beacons. Screens are the only remaining item. Not needed for testing of PS/FZs. Hope to complete test by week's end.
- Once complete, the TOSP should have a copy placed on the Hall's bulletin board.
- Vick is completing the arc flash calculations then will finalize and post the signage.

EES – SSG:

- Ion chamber locations reviewed.
- Pavel asked for a functional description of each chamber.
- Trip level to be set by Ops.
- Make sure there is slack in the cables around the FZ2/chicane as they are movable.
- The lumi location will read failure of the septum.

TARGET/DUMP DESIGN ACTIVITIES:

- Desire to add another circuit to monitor water temp of the dump cooler. This is not an interlock signal, just monitor.
- Interlocks needed for FZs, target, and septum magnet PSs.

PHYSICS

- Review tentatively set for October 7. Will review all safety and final readiness. Will need Yves' and Eric's commissioning plan, list of OSPs, final beamline status, any open issues, etc.

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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.