g2p/GEp Beam Transport Meeting Minutes

Attendees: T. Michalski, P. Kjeldsen, R. Lauzé, A. Camsonne, Z. (Vick) Chen, E. Folts, N. Wilson, A. Gavalya, JP Chen, S. Wood, P. Zhu

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

- The FZ2 power supply, 19.2 kW, is oscillating. Tested at 82% of capacity. Issue found with damaged components and wiring due to overheating. Capacitor is a long lead item, 38 weeks, and Simon is looking for a suitable replacement with better lead time.
- The Polarity Switch has been received.
- The SR had the same issue with reduced dwell time in the center. Pengjia reported that the control algorithm has been fixed and he provided a plot showing acceptable uniformity (assumed) across the face of a ~25 mm diameter target.
- Raised the issue of not forgetting about the AI magnet. Need to keep Ken in the loop. When is the AI pallet going to be in Hall A, Ed?

STATUS:

OPTICS:

- No status update

MAGNETS:

- Nothing new to report

BEAM TRANSPORT:

- Region 1 – nothing new to report
- Region 2 – nothing new to report
- Region 3 – FZ2 stand – ordered and should be here by end of June. Supplier still confident, but need to push on the movement mechanism to get it to them in time. Shirley working this issue with Temple Univ.
- Harps – ???
- Viewer – ???

RAD CON:

- Presented calculation results at a meeting last week. Recommend changing out some of the lead for stainless steel.

SOFTWARE:

- Brian will be making modification to the BPM control SW – 4-6 week effort.

VACUUM:

- No status update

INSTALLATION:

- No status update

ALIGNMENT:

- Team slated to be in the hall Wednesday or Thursday (layout for holes actually done on Wednesday). Ready for stands.

EES – I&C:

- Harp – control chassis ???

EES – DCP:

- Good progress on testing. Still have to test FZ1 PS and will update later in the week. (received update via e-mail from Vick – FZ1 PS water flow switch is faulty [now fixed], need to install polarity switch, low current board is being replaced, water hoses being replaced, caps being replaced [long lead], transistor Beta testing is ongoing)

EES – SSG:

- No status update

TARGET/DUMP DESIGN ACTIVITIES:

- Need to move racks on the mezzanine. Doesn't appear to be an issue, but not finalized yet.
- Wrapping up helium bag designs.
- Working on 3rd arm design, slight interference gauger rack.

PHYSICS

- Septum PS – agreement to use the PS from HKS experiment. Still need to work out all details re: power and LCW and cable.

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	By 5/6	
16	10/5/10	Understand why there is a hole in the center of the rastered beam that comes from the faster raster/slow raster combination. Stated to be a waveform generator issue. Clarify this. If not HW, then probably SW?	C. Cuevas B. Gunning	TBD	5/31/11
36	1/11/11	BPM testing with new electronics in North Linac – ½ done	J. Musson / D. Willaims	4/5/11	
37	2/1/11	Resolve open question on FZ magnet power supplies.	V. Chen	Ongoing	
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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.
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.