g2p/GEp Beam Transport Meeting Minutes

Attendees: T. Michalski, P. Kjeldsen, R. Lauzé, Z. (Vick) Chen, E. Folts, A. Gavalya, JP Chen, S. Wood, J. Heckman, P. Degtiarenko, B. Freeman, T. DelaCruz, K. Allada, D. Williams, B. Dillon-Townes

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

- Reviewed the status of the PSs for the FZs. They are going to do an acid flush to get the flow up, use caps from the Moller quad PS (and replace) due to 14 week lead time on capacitors. Expect to have them in the hall in 2 weeks.
- Tim to check with Bill Gunning regarding readiness of the SR. All work seems complete.
- The plan for the AI magnet is to get the FZ PSs in place, then get the septum magnet PS in place (HKS out of storage container), place the pallet, and then bring in the AI.
- The BPM receiver board should be in and assembled on Friday. JP would like to get a report on test results when they are available.

STATUS:

OPTICS:

- 2 runs were revised to remove the need for the target ladder to be "elevated" 1 cm. These two runs have been sent to Stephanie and Alan.

MAGNETS:

- Nothing new to report

BEAM TRANSPORT:

- Region 1 – nothing new to report
- Region 2 – nothing new to report
- Region 3 – The FZ2 stand is on track. Butch to visit supplier at the end of the month. Need to make sure the movement mechanism will be there and installed. Shirley is negotiating getting it shipped directly to from supplier to supplier (take Temple and JLab out of the sequence). Latest word is the movement mechanism is to ship next week.
- Need to get an update on schedule for the articulating arm and viewer girder as well as the supporting arms.
- Harps – parts coming in. Screws are the long lead item – 4 weeks. Need to revamp the schedule dates. Communicate change to timing for alignment of harp on the girder.
- Viewer – The flag for the viewer is done. A new spring has been ordered and will be in in 2 weeks. The stroke, with Hall air, will be retested.

RAD CON:

- Last week's statement, "Recommend changing out some of the lead for stainless steel" is no longer valid. Lead will remain.
- Opportunity to test electronics in a high radiation area during the experiment. Check for damage. Will be using detectors in order to quantify the dose.

SOFTWARE:

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

VACUUM:

- John Heckman stated that the BLA BCM will be installed on the upside down girder today.

INSTALLATION:

- The SR stand will be installed by week's end and the FZ1 stand should be installed late next week (starting Tues or Wed).

ALIGNMENT:

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

EES – I&C:

- The BPM receiver board should be in and assembled on Friday.
- Harp – control chassis board should be out by end of this week. Due to Chad being at USPAS, assembly and test won't be complete until mid July. Need to check and see impact on schedule.

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:

- Last week's statement, "Need to move racks on the mezzanine" doesn't appear to resolve the issue, therefore no change will occur.
- Need to figure out a good place to store the tungsten inserts in the hall. Ed will look to see if there old Radcon storage box is acceptable. If not, will need an owner for this item.

PHYSICS

- HKS PS will be used. Ed has submitted a change request to support the electricians to cable it. LCW is fine and the cable has been ordered. Will need to interface on the controls (Pam/Ed).
- The target magnet has been powered to full field without any quenches. Great news!

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	
49	6/7/11	Address potential schedule issues with shifts in Harp controller chassis and Harp assembly completion dates	T. Michalski	6/21/11	
50	6/7/11	See if Hall A Radcon box is acceptable for storing tungsten inserts for the dump.	E. Folts	6/14/11	
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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.