

# g2p/GEp Beam Transport Meeting Minutes

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**Attendees:** K. Allada, T. Michalski, P. Kjeldsen, E. Folts, R. Lauzé, A. Camsonne, D. Williams, E. Forman, A. Gavalya, T. Dela Cruz, JP Chen, Z. (Vick) Chen, L. Dillon-Townes, S. Wood

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

- The harp on the upside down girder does not support the Moeller for g2p; the Moeller will not be used.
- Action Item 37 - To determine the PS selection for the FZ magnets, the coil resistances must be measured. Vick and the DCP crew will perform this. Ken Baggett is able to support if needed.
- Introduced Vick Chen from the EESDCP group who will be taking the lead on the DC PS activities for g2p. Welcome!
- The harps are planned to be PC104 compatible. Historically, they have been VME or CAMAC. This crates issues with Ops SW resources as it is more work.
- Discussed that the viewer camera will be mounted directly. Should not be an issue, has been done before, and is much less expensive than having a periscope assembly built. Butch will have a backup periscope design, but will not be built.
- Experimental readiness review to be scheduled in the March to April timeframe.
- Make sure Dave Williams gets invited to the g2p 6 month shut down schedule meeting on Wednesday AM.
- Action Item 16 – meeting this afternoon (2/8) to discuss SR action items. Bob Michaels' meeting.
- Action Item 24 – it will be about 2 more weeks to get the magnets out. Need to get in and measure the coil resistance in place.
- BCM meeting between Musson and Ops SW did not take place on 2/7. Follow up after the Tuesday AM meeting, with Musson, found that the issue has been addressed and new screens exist. Verified with Lahti.
- Potential to buy PS cable from collaboration team members – need to get information to JP.
- There is an open issue with backscatter from dump.
- The FZs will be going to Ed in Hall A.
- The FZ magnet supports should come from Hall C. Need to contact Mark Jones (\$15k savings(?))
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## **STATUS:**

### **OPTICS:**

- No status update

### **MAGNETS:**

- Will look into returning BD magnets at the end of the experiment. Can Hall A get reimbursed? Tim to talk to Leigh Harwood.

### **BEAM TRANSPORT:**

- Region 1 support structure due 2/11.
- Region 2 girder is being assembled in vacuum lab, except harp.
- Region 3 FZ1 stand design is almost complete. FZ2 stand will be 2 speed, motorized with articulating arm and supports for arm and viewer.
- BPMs have been ordered through the Machine Shop.

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- Harp designs have been finalized and will be ordered.
- Need window for end of arm. 8 mil aluminum window in target. Ed has 15 mil beryllium window on 4.5" conflats; Butch will adapt. May need aluminum cover because of ablation (per Ed).

## **RAD CON:**

- Nothing new to report.

## **SOFTWARE:**

- Nothing new to report

## **VACUUM:**

- No status update

## **INSTALLATION:**

- No status update

## **ALIGNMENT:**

- Nothing to report.

## **EES – I&C:**

- Finalizing PC104 in Calorimeter chassis then send to Ops SW.

## **EES – OPS:**

- PS cabling – order via JP/collaborators.
- Measure FZ coils soon.

## **EES – SSG:**

- No status update

## **TARGET/DUMP DESIGN ACTIVITIES:**

- Need to interlock position of magnets and septum.

## **PHYSICS**

- Alex to get test plan for BCM from Musson.

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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	By 3/11	
12	9/28/10	Define if instrumentation is required for the low current dump. If so, what should be monitored?	TBD	TRACK to close	CLOSE
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	
23	11/16/10	Verify polarity switch for FZ magnets. We have one spare in house if needed.	R. Lauzé	12/30/10	
24	11/23/10	Get FZ magnets from Physics Storage	T. Michalski	1/15/11	
31	1/4/11	Procure, build, and test 14 Transport style BPM RF Modules	D. Williams / O. Garza	5/14/11	
35	1/4/11	BCM testing at low current, w/ helicity, in January.	J. Musson / O. Garza	Answer by 1/11/11	
36	1/11/11	BPM testing with new electronics and stripline BPM in North Linac	J. Musson / D. Willaims	TBD	
37	2/1/11	Resolve open question on FZ magnet power supplies.	V. Chen	2/15/11	

## 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	<del>M20 BPM's were decided to be used on the transport line exiting the FZ2.</del>
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.