

# g2p/GEp Beam Transport Meeting Minutes

**Attendees:** T. Michalski, C. Curtis, D. Williams, P. Kjeldsen, JP Chen, A. Camsonne, L. Dillon-Townes, G. Kharashvili, K. Slifer, J. Heckman, R. Taylor, M. Weihl, M. Ahmad, A. Freyberger, Z. Chen, S. Wood, Y. Roblin

The following is a summary of issues discussed during the g2p/GEp Beam Transport Meeting. The format has changed slightly as we are focusing on the punch list of items required to be prepared for beamline commissioning. Target date for completion is the end of the day on Friday, 12/9/11.

<u>System</u>	<u>Activity</u>	<u>Status</u>	<u>Owner</u>	<u>Comments</u>
<b>REGION 1</b>				
<b>BCM</b>	Build Receiver	Not ready	Chris Norris/Keith Cole	Same device as for the BPM - 4 channel receiver 11/22 – D. Williams reports using 2 channel (same as Qweak) versus 4 channel. Need to confirm.
<b>BCM</b>	Test Receiver	Not ready	Chris Norris/Keith Cole	
<b>BCM</b>	Old BCM Receiver Hardware Removal	Not ready	Chris Norris/Keith Cole	
<b>BCM</b>	New BCM Receiver Hardware Installation	Not ready	Chris Norris/Keith Cole	
<b>BCM</b>	Finalize BCM Software / EPICS Screens	Not ready	Pam Kjeldsen / George Lahti	
<b>BCM</b>	Field Testing Hardware & Software	Not ready	Chris Norris/Keith Cole	
<b>BCM</b>	BCM data to Hall A DAQ	Not ready	Chris Norris/Keith Cole	11/22 – confirm it is DAQ only, with monitoring by ops via EPICS (no tune to the BCM)
<b>BCM</b>	BCM Final System Checkout	Not ready	Chris Norris/Keith Cole	
<b>Slow Raster</b>	Close up the SR bunker	Not ready	Neil Wilson	
<b>Slow Raster</b>	Install and test the blower	Not ready	Neil Wilson	
<b>Slow Raster</b>	Align the fans to the shroud	Not ready	Neil Wilson	
<b>Slow Raster</b>	Check out the cooling fans	Not ready	Neil Wilson	
<b>Slow Raster</b>	Hot Checkout	Not ready	Bill Gunning	
<b>Slow Raster</b>	OSP for Hall A	Not ready	Chris Cuevas	
<b>Slow Raster</b>	Beacon????	Not ready	Bill Gunning	There is a sign on the shroud which mentions a beacon. No beacon is installed. 11/22 – Need to confirm with Bill Gunning.
<b>Slow Raster</b>	Field map of SR to Yves Roblin	Not ready	Alexandre Camsonne	
<b>Calorimeter</b>	Re-instating the FSD interlocks	Not ready	Rich Wright / Tommy Michaelides	11/22 - Get Scott Windham involved. Set up a meeting to review all

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				FSD/Interlocks – action Tim Michalski
<b>Calorimeter</b>	Remove PS used for testing	<b>Not ready</b>	Mahmoud Ahmad	
<b>Calorimeter</b>	Calibrating the F-cup circuit	<b>Not ready</b>	Mahmoud Ahmad	
<b>Calorimeter</b>	Writing beam test plans	<b>Not ready</b>	Mahmoud Ahmad	11/22 – Will be complete for 12/9.
<b>Calorimeter</b>	Executing beam tests	<b>READY – post beam startup</b>	Mahmoud Ahmad	11/22 - Will occur post 12/9. No further testing is required prior to start of beam.
<b>Vacuum</b>	Vacuum Checkout	<b>Not ready</b>	John Heckman	
<b>Alignment</b>	2B Alignment	<b>Not ready</b>	Chris Curtis	11/22 – All 2B alignment to be done at one time.
<b><u>REGION 2</u></b>				
<b>Beam Pipe</b>	Install Lead on new Beam Pipe	<b>READY</b>	Ed Folts	
<b>Vacuum I&amp;C</b>	Install Vacuum Instrumentation	<b>Not ready</b>	Dave Williams / Rick Gonzales	
<b>Vacuum I&amp;C</b>	Final Vacuum Instrumentation Checkout	<b>Not ready</b>	Dave Williams / Rick Gonzales	
<b>Superharp</b>	Install Harp Controller	<b>Not ready</b>	Tony Dela Cruz	
<b>Superharp</b>	Field Testing HW and SW for Harp Controller	<b>Not ready</b>	Tony Dela Cruz	
<b>Superharp</b>	Final Harp System Checkout	<b>Not ready</b>	Tony Dela Cruz	
<b>BD Magnets</b>	Hot Checkout	<b>Not ready</b>	Simon Wood	11/22 – Need to perform polarity check.
<b>BLM</b>	Hot Checkout	<b>Not ready</b>	Rich Wright / Tommy Michaelides	
<b>Vacuum</b>	Vacuum Checkout	<b>Not ready</b>	John Heckman	
<b>Alignment</b>	2B Alignment	<b>Not ready</b>	Chris Curtis	
<b><u>REGION 3</u></b>				

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<b>Chicane</b>	Install Arms and Supports	Not ready	Neil Wilson	11/22 – 1 more hole to drill. Arms and support should be up by 11/23.
<b>Viewer</b>	Install YAG crystal	Not ready	Tony Dela Cruz	11/22 – Must be done prior to installing girder in hall.
<b>Chicane</b>	Install Viewer Girder	Not ready	Neil Wilson	11/22 – Awaiting camera holder – due 11/28. Awaiting flange from MS.
<b>Superharp</b>	Restrung harp fork	Not ready	Tony Dela Cruz	11/22 – John H. to get harp delivered back to Tony.
<b>Chicane</b>	Assemble Diagnostics Girder	Not ready	John Heckman	11/22 – Harp needs to be restrung.
<b>Chicane</b>	Pre-align Diagnostics Girder	Not ready	Chris Curtis	
<b>Chicane</b>	Install Diagnostics Girder	Not ready	Neil Wilson	
<b>Chicane</b>	Camera Holder	Not ready	Butch Dillon-Townes	11/22 – Due 11/28.
<b>Chicane</b>	Vacuum Window	Not ready	Butch Dillon-Townes	11/22 – Due 11/28.
<b>Alignment</b>	2A Alignment on Straight Through position	Not ready	Chris Curtis	Alignment at other positions will be done later. 11/22 – will be done after girders are installed, before vacuum work.
<b>Vacuum</b>	Install bellows and vacuum hookup	Not ready	John Heckman	
<b>Vacuum</b>	Pump Down Chicane	Not ready	John Heckman	
<b>Alignment</b>	2B Alignment on Straight Through position	Not ready	Chris Curtis	Alignment at other positions will be done later.
<b>Chicane</b>	Straight through spacers	Not ready	Butch Dillon-Townes	
<b>Viewer</b>	Install Viewer System w/ Camera	Not ready	Tony Dela Cruz	
<b>Viewer</b>	Field Testing HW and SW for Viewer	Not ready	Tony Dela Cruz	
<b>Viewer</b>	Final Viewer System Checkout	Not ready	Tony Dela Cruz	
<b>BPM – 4 Ch</b>	Build Receiver	Not ready	Chris Norris/Keith Cole	11/22 – This activity is for the 4 channel receiver
<b>BPM – 4 Ch</b>	Test Receiver	Not ready	Chris Norris/Keith Cole	11/22 – This activity is for the 4 channel receiver
<b>BPM – 4 Ch</b>	Finalize BPM Software / EPICS Screens	Not ready	Pam Kjeldsen / Brian Bevins	11/22 – This activity is expected to take 3 weeks. Therefore, it was decided that we can use the SEE Transport electronics for the commissioning.
<b>BPM – SEE</b>	Verify we have spare SEE Transport modules	Not ready	Dave Williams/Pete Francis	11/22 – Need to channels for 2 BPMs on diagnostics girder.
<b>BPM</b>	Old BPM Receiver Hardware Removal	Not ready	Pete Francis	
<b>BPM – SEE</b>	New BPM Receiver Hardware Installation	Not ready	Pete Francis	

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<b>BPM – SEE</b>	Finalize BPM Software / EPICS Screens	Not ready	Pam Kjeldsen / Brian Bevins	11/22 – This should take minimal effort as it is consistent with previous methods. Using M15 antenna style BPMs.
<b>BPM – SEE</b>	Field Testing Hardware & Software	Not ready	Pete Francis	
<b>BPM – SEE</b>	BPM data to Hall A DAQ	Not ready	Pete Francis	
<b>BPM - SEE</b>	BPM Final System Checkout	Not ready	Pete Francis	
<b>FZ Magnets</b>	Install Klixon on AI magnet	Not ready	Simon Wood	
<b>FZ Magnets</b>	Verify FZ polarity	Not ready	Simon Wood	
<b>FZ Magnets</b>	Run full power tests on the FZ magnets	Not ready	Vick Chen / Simon Wood	
<b>FZ Magnets</b>	Install signage for the magnets and power supplies	Not ready	Vick Chen	
<b>FZ Magnets</b>	Install beacon on AI Magnet	Not ready	Ed Folts	
<b><u>HALL A</u></b>				
<b>PSS</b>	Update FSD Screens	Not ready	Rich Wright	
<b>PSS</b>	Install Ion Chambers	Not ready	Tommy Michaelides	Cables pulled but not terminated. 11/22 – Currently short 2 ion chambers – lent to Hall C. Will refurbish 2 ion chambers from Hall C dump for use in Hall A on g2p.
<b>PSS</b>	Hot Checkout - No Beam	Not ready	Rich Wright / Tommy Michaelides	
<b>PSS</b>	Update Gold Masks	Not ready	Rich Wright / Tommy Michaelides	
<b>PSS</b>	Update MPS Documentation	Not ready	Rich Wright / Tommy Michaelides	
<b>PSS</b>	FSD for Target Beam Pipe	Not ready	Rich Wright	Verify that this is not a pressure system (<15 psi)
<b>PSS</b>	Implement all Interlocks	Not ready	Rich Wright	Rich has a separate list for g2p/Hall A. 11/22 – No radiator, Sniffer, UPS SW Crash required for g2p. Add SR, target pressure, target mechanism FSD. No target, local dump, active chicane for g2p beamline commissioning in December; will need for experiment after target is installed.
<b>Hall Dump Viewer</b>	Verify that the viewer is functional	Not ready	Tony Dela Cruz	
<b>Compton</b>	Hot checkout	READY	Alexandre Camsonne	No detector in place, therefore it will not be used during g2p.
<b>CASA</b>	Commissioning Plan	Not ready	Yves Roblin / Eric Forman	

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<b>Physics</b>	Final Run Plan	Not ready	JP Chen / Karl Slifer	Will be running at 0, 90, and 7 degrees target angle.
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## Other Notes:

- The calorimeter can take up to between 1 and 2 microamps. There should be no issue with levels used for commissioning.
- The calorimeter will require 3 hours to cool down between tests.
- The FZ1 is expected to perform between 300 G and 8 kG. Vick verified that Bill Merz has reviewed the PS selection and it will function acceptably for the range of performance required.
- The SEE Transport style BPM electronics will be used for commissioning the beamline since the HW/SW for the new 4 channel BPM receiver does not appear to have a chance of finishing by 12/9. It is designed to work down to 100 nA of beam current and has been known to work down to 75 nA. We can perform commissioning at a current in the range of the SEE Transport electronics.
- Weekly meetings reinstated until the beamline is complete and commissioned.