Beam Line Update

David Flay
10/5/20
Updated Exit Beam Line in g4sbs

• Thanks to Engineering Division for drawings (Robin Wines, Danny Machie, Chris Soova, Ron Lassiter)

Note: items after target to mid pipe (also updated) did not previously exist

Beam Diffuser
• Plates: 0.125", 0.100" thick
• Based on TN-016-024, Eng. drawings

Beam dump (upstream pipe)
ISO Wall Weldment
Beam dump (downstream pipe)
Mid pipe to dump
Target to mid pipe

3He Target
Beam Line Controls

- Working group: Yves Roblin, Jay Benesch, Brian Freeman, Brad Sawatzky, DF
- Focus: Improvement of communication between Ops & Physics; improve controls to ensure safe beam steering on target

July Milestones
- Ops: Consolidated ion chamber calibration procedures, with specific details for different targets
- Yves: Reviewed Fast Shutdown lock configurations, verified for safe operation in recent run (and minimal risk)
- Starting to think about protective collimator(s) upstream of target

October Tasks
- Investigate protective collimators for SBS targets [DF]
- Work with Instrumentation & Controls regarding frequent BLM trips due to non-RF FSDs [DF]
- Determine range of operational parameters (particularly for long targets) [YR]
- Inquire if beam line after Compton can be changed to improve optics during FY21