

# GMn RC Update

Monday Sept. 27, 2021

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# Progress on all subsystems

- HCal and BBCal essentially ready for beam. Working on documentation and visualizations
- BB GEMs work ongoing
  - All GEMs, except J2 top (INFN closest to GRINCH), are operational and we're taking cosmic data over the weekend. We had a minor hiccup, where we think a cable was not in the right place. It should be fixed now. Plan is to take efficiency runs for the next week so that way we can try to do some gain matching prior to run start.-- Zeke Wertz*
- DAQ took 7e6 event run with all subsystems last week. Will hear from Alex more details
- Software: essentially ready for beam but optimization and improvements ongoing
- Spectrometer magnets and target on hold until solution for beam line vacuum complete (see later discussion)

# Announcements

- Hot checkout of BSY and ARC will happen today. Hall will be locked at 2PM and go to Power Permit. No beam in the Hall so can go immediately back to Restricted when complete but won't be before late tonight.
- Counting House front room needs to be left open for electricians to finish their work tomorrow (Tuesday Sept 28). May require unplugging computers so plan accordingly and stay out of front room until they are done

# Beam line vacuum issue (discussions ongoing)

Large diameter beamline downstream of target is composed of several sections of corrugated pipe welded together. Several leaks on welds and perforations have been patched in the past

Did not survive SAD construction well and vacuum is sitting at  $2e-4$  Torr when we need  $1e-6$  Torr in target chamber

Jessie warns that trying to seal leaks in the pipe could take weeks

Solution suggested using differential pumping as shown. Originally proposed  $\frac{1}{2}$ " diameter holes for beam but Jay thinks this is too tight for operators to maneuver with 4x4mm raster and suggested  $\frac{3}{4}$ "

Still aiming for Oct 4 start of beam but lots of things have to happen so uncertain

Proposed differential pumping solution for downstream beampipe leaks

