

2023-11-16 Meeting notes

Date

16 Nov 2023

Attendees

- [Lauren Elizabeth Alsberg](#)
- [Sebastian C. Aderhold](#)
- [Lisa M Zacarias](#)
- [Porter](#)
- [Andrew L Benwell](#)
- [Janice Nelson](#)
- [Jorge Alberto Diaz-Cruz](#)
- [Chen, Jing X](#)
- [Matt King](#)

Discussion items

- Lisa and Sonya had another test of Auto Setup rework (more controls in IOCs instead of HLA). Full machine took ~5 minutes. Really great!
 - Didn't include the SSAs
 - Need SSA write permissions, which is a large infrastructure change that will take time
 - Not reasonable to squeeze in before the start of the Winter Downtime
 - Andy points out - look out for long delays for the HE SSAs. 1 minute delay from DC enable to RF enable
- Plan for shutoff:
 - Will detune CM02-35 to cold landing on Sunday afternoon
 - Will do field emission characterization + cold landing for CM01 really early Monday morning
- When to do SSA run up, etc.
 - SC machine needs POMMs for 2-3 hours, like NC
 - Should make a list of SSAs for troubleshooting
- Have seen some drifting phases lately
 - CM12-3 and -4, CMH1-7 and -8
 - Andy thinks it's likely the LO that has problems
- Andy thinks that the SSA characterization needs to be dramatically enhanced
 - Wants SSA internal numbers + forward/reverse numbers
 - Thinks this would help diagnose/solve a lot of problems
 - Automate SSA drive level max
 - Get rid of lower bound failure
- Lauren suggested a post-mortem for the helium oscillation that looked like PRL noise
 - Would be an interesting case study to share during the downtime
- Janice says ops are thinking about how to better communicate cavity instabilities causing beam instabilities, how to track down cavity instabilities, etc.
 - Should show up as AOTs, but ops aren't seeing that
 - Check the hierarchy there
 - POTs can be both be reactive and mask other problems on the cavity display
 - Sebastian suggests looking at the amplitudes
 - PRL, PJT, and FBS are higher than AOT and POT
 - PFB is below AOT and POT
 - Make a display with the "four resistor boxes" alone?
 - Look at the rate of change of the fault counters?
- Other downtime prep
 - STCAV0 installation will need valves closed
 - Turn off water-cooled magnets (make sure it's on the downtime script)
 - LO tightening work will need followup calibration
 - Turn off all the superconducting magnets before 4K, but after we care about dark current
 - Close vacuum valves in non-particle free areas
 - Check work in particle-free area to see if we need valves closed
- Cavities that keep getting turned off for UH/DH: CM27-2, CM33-2, CM34-2?
 - Turn down gradients?
 - Try active resonance control?
- Make time to study active resonance control
 - Jorge is very interested in this
- Try on CM07-2, CM19-1 and -2 first
- SC recovery scheduled for January 16th, after the weekend after STCAV0 installation is scheduled to finish

Action items

- ☒ [Lauren Elizabeth Alsberg](#) : check vac valves, magnets for shutdown
- ☐ [Sebastian C. Aderhold](#) : check vac valves for STCAV0 work