

Minutes of SOUL Punch List Meeting

November 07, 2023

Attendees: Enrico, Sam, Al

1. Zero Slopes (L_01AB)
 - a. Analysis of October 12 dump file
 - i. Not yet able to find source of the problem from the dump file.
 - ii. Arcetri/MicroGate meeting planned for later this week.
 - b. Rewrite_gopt + Monitor
 - i. Planned for release on Nov. 23.
 - ii. But gopt_rewrite may be enabled only selectively (at least to start).
 - iii. Monitor
 1. False positives are a concern.
 2. It's OK for Fabio to work with Brandon to try to address fales positives before Nov 23. (Fabio is visiting Tucson to work on a GMT project starting Nov 7.)
2. Negative Intensity (L_01C)
 - a. First Light suspects that induced EM is the source of the problem.
 - b. Inducing EM interference intentionally in the lab to see if the problem can be duplicated is a possible path forward.
 - c. Improving the shielding on the operational system is another.
 - d. If it is EMI causing this problem, one would think only one system could be 'the unlucky one'.
 - e. It seems to be more common on LBTI systems. Maybe the arrangement of electrical components that generate EM interference on those systems is somehow closer to the relevant SOUL cables.
3. Perform flux calibration on sky (L_05)
 - a. Planned for Nov 23.
 - b. EP/Arcetri will support (and EP is willing to lead if LBT prefers).
 - c. Need 10-15 targets + Gaia magnitudes. EP: Can Jenny provide this?
 - d. Enrico/Arcetri will reset the coefficients to be 1.0 or 1E... for ND¹
 - e. LBTI or LUCI? Choosing one or the other would reduce the overhead needed to reconfig during the night.
4. Other plans for Nov 23 commissioning night.
 - a. NCPA correction on sky²
 - b. Sam will set up a Nov 21 pre-run meeting for that night.
5. Measure the Strehl ratio at H-band on LMIRCam (L_02)
 - a. Problem with the data transfer mechanism needed for real-time Strehl calculation.
 - b. Requires Alfio (who is not available until December at the earliest) and daytime testing.

¹ This is the 'clean' solution (see #4 of [review slides](#))

² See Enrico's slide for details.

- c. Could Brandon possibly fix this? Sam will check.
- 6. Other punch list items
 - a. VM_DX_LUCI_053: Share the AO simulations tools
 - i. On GitHub.
 - ii. Sam will check if LBT staff are able to run the simulation code.
 - iii. After that confirmation it can be closed.
 - b. CR_DX_LBTI_098: Bin4 delay
 - i. GitHub pull request has been accepted and is now in the master branch.
 - ii. Does not require night testing, day only.
 - iii. Sam will assign an AO scientist to perform that test.
 - iv. After that confirmation it can be closed.
 - c. VM_DX_LBTI_30: Create a GitHub PR for reset_gopt* scripts
 - i. Closed
 - d. VM_DX_LBTI_39: Implement and test permanent fix for the slopes 0 error
 - i. Duplicate entry.
 - ii. Closed.
 - e. CR_DX_LBTI_096: Debug OCAM bad frame impact on center pupil procedure
 - i. Hard to confirm this is really a problem (need to happen to get a bad frame during center pupil).
 - ii. LBT will continue to monitor for such an event.
 - f. About 10 documentation entries (CR)
 - i. Changes have been made in the CR, but we cannot close these until the document has been released.
 - ii. Al requests that Enrico send a list of these and then he will color them yellow and move them to the end, just above green closed items.
- 7. Next meeting
 - a. Tuesday, Sep 21 pre-run as above
 - b. Tuesday, Nov 5 punch list