

Night 2022-10-10, Cyprien-Jeremy, Denis- Pierre

E1W2W1S2S1E2 (351214)

- UT2h00: Check with STS. It should be noted that these last days, MIRCX was OFF with respect to STS for its internal offsets.... 23586 17953 13270 10316 6144
- UT2h15: slew to HD177724 for AO PSIM tests.
 - All TELAO (except W2)
 - All LABAO on blue beacon (except E1 which is on star)
 - R0 around 10 cm
 - CONTROL: dark
 - SCIENCE: dark
 - CONTROL & SCIENCE: 1mn of record (Default reconstructor)
 - S2 PSIM loaded. The loop could be closed. So now loading PSIM on S1 E1 E2 W1.
 - CONTROL+SCIENCE+PSIM: 1mn of record
 - Default reconstructors loaded
 - CONTROL & SCIENCE: 1mn of record (Default reconstructor)
 - PSIM loaded
 - CONTROL+SCIENCE+PSIM: 1mn of record
 - Default reconstructors loaded
 - CONTROL & SCIENCE: 1mn of record (Default reconstructor)
 - Default setting
 - Telemetry close loop on S2
 - Telemetry open loop on S2
 - PSIM setting
 - Telemetry close loop on S2
 - Telemetry open loop on S2
- UT3h20 slew to gam Cas for S2W2. LDCs set, 'useldc on' in OPLE. Issue with mircx computer. Fringes MIRCX at -1.191 which is normal. So it means that the useldc on is doing its job. Start with SPICA around STS+3300. Fringes found a 16758 (expected value 16570). Fringes are not very bright, with an important residual dispersion however. We can reduce the dispersion by moving VLDC4 to 7.5 instead of 5.36 but the signal to noise ratio is really poor. The tracking by MIRCX is not very good... Offset final at 16342. 75° for the PDC seems to be the best value. May be 74.95 is a little bit better.
- UT5h00 new alignment of scopes but no big changes.
- UT5h15: we move now to W2E2. With a check on STS first. Necessary to reinit DL5...
- Fringes locked by MIRCX at -0.6. Fringes found on SPICA exactly at the expected position. Not so much dispersion. Offset at 9772 (expected was 9760). Contrast is very low.
- It is very critical to implement the correction of fringe spacing because of this very high band
- We must be careful with the saturation of the FTT.
- UT6h20: W2W1. LDC+VLDC+DDL. Fringes at DL3=21600 (so 3600 with respect to STS).

First sequence of data to validate the whole process.

- UT6h40 gam CAS SCI
 - Gam Cas DARK
 - Gam Cas 10 files of 3000 frames (10mn)

- Foreground, 1 file of 10000 frames.
- UT7h00 HD3360 CAL (starting here we have MIRCX data in //)
 - HD3360 10 files of 3000 frames (10mn). Be careful with the fact that after a foreground the DL stays at the foreground position.... Should be automatized.
 - Fringes exactly at the same position on SPICA. Locked by MIRCX and correction of chromatism by the server.
 - Foreground
- UT7h24 HD5394 SCI
 - Fiber map MIRCX after slewing + fringe lock
 - 10 files with a small drift
 - Foreground
- UT7h53 HD11415 CAL
 - Recording. Very cool to see the fringes coming without doing anything and always well centered. Last file, fringes were unlocked by error by MITRCX
 - Foreground
 - At the end of the recording the MIRCX SKY takes several minutes.
- UT8h16 HD5394 SCI
 - Fringes locked and start recording. It's hard to not forget to come back from the foreground and to set correctly the recording. This should be simplified.
 - Foreground (mais 1mm not sent...) . Ok after frames 7000....
- UT8h45 HD3360.
 - Lock by MIRCX, fringes in position. Recording 10 mn.
 - Foreground (first 15s not good)
- UT9h10 HD432 (diameter 1.8 mas, well resolved on W1W2, V^2 expected at 0.006)
 - Fringes locked and start the recording in blind.
 - Peak is seen on the RTD but the tracking is probably not good enough.
 - Fringes lost by MIRCX during a part of the recording.
 - foreground
- UT09h45 HD3360
 - Because of LDC settings, the first 2 files are corrupted
 - 10 files recorded but bad keyword (foreground instead of calib-raw)
 - Foreground after that.

Tests of the Sensitivity of the FTT

- All TELAO (but W2) and all LABAO with beacon (except E1, locked on star)
- We start with alpha Per, mV=1.79, HD20902, DARK and DATA (Control 3000f & Science 3000f).
- HD19373 mV=3.45 DATA Control & Science
- HD20365 mV=5.00 DTA Control & Science but the FTT has difficulties for locking. The RTDisplay shows however well-defined images. The threshold should be clarified..
- HD18155 mV=6.05 recording. Nice images but FTT locked only on B5. Strange.
- HD18040 mV 7.00 (E1 LABAO unlocked, no beacon). 2 sequences. 20ms on the Control.
- DARK 20ms
- (control: 6+2 darks science 6 + 1 dark)
- It looks like the threshold for locking the FTT is not well defined. A more accurate threshold should be defined.
- Science: files T03:28:21 à T04:26:08 (first Dark + 6 files)
- Control : files T032755 to T042630 (first Dark + 6 files + 1 dark)

Check on STS

- DL3 and DL5 are OFF. One init for DL3 is ok
- 23586 17961 13262 10348 6144

Program on beta Tri (with MIRCX)

- Calibrator first HD23408, fringes ok at 21592
 - Dark 1000f
 - 10 files of 3000 images
 - Foreground, 1 file of 10000 images (first 2000 images with the fringes, sorry)
 - Sky for MIRCX
- Target bet Tri, HD13161
 - 10 files of 3000 images
 - Foreground
- Calibrator HD23408, fringes ok at 21560.
 - 10 files of 3000 images
 - Foreground

Calibrations of the night

- Spectral calibration LR + Dark (gain=1)
- DL3 and LD6 again not at their correct positions
- Kappa LR (Gain=1000) (beam 3 with bad injection)
- Fringes 6T
- Foreground
- Dark (Gain =1000)