

Cyril, Fred, Sylvain, Denis + Olli 2022-11-06

- UT1h15: arrival in the lab. Windy conditions. STS control on SPICA, MIRCx, MYSTIC
- UT2h00: wind conditions are ok now for opening. 4T, E1E2W1W2 on HD213558
- UT3h20: fringes on MIRCx and MYSTIC. $E1=-0.26$, $E2=0.56$, $W1=-0.67$
- UT4h00 gam Cas. $E1=-0.95$ $E2=0.0$ $W1=-1.17$
- UT5h00 Fringes SPICA-VIS on W1W2 with $DL2=22757$ and $DL3=19848$, so +1366 to STS. LDC, VLDC and DDL active. GD tracking by MIRCx.
- UT5h25: recording W1W2 data
 - 20 files of 1000 frames.
 - Dark
- UT5h50 VLDC2&3 at 6.5 5.0 instead of 5.9 5.7 to try changing the dispersion. DL3 at 20068. So +1586 with respect to STS.
- New recording 20 files of 1000 frames. After file 15 fringes lost. Back at file 18. Foreground at the end.
- UT6h25: new recording of 5 files of 1000 frames. It looks like the dispersion has changed.
- We finally identified that there was an error by a factor 2 in the commands sent to the DL by SPICA-FT... After solving that we finally have W2W1 fringes locked in GD and PD.
- UT7h30 Record on W1W2 with SPICA-FT tracking. Strong dispersion on SPICA. Very strange... 5 files recorded
- UT8h00 new record on W1W2 with the VLDC at their 0 values from STS, $VLDC2=5.9$, $VLDC3=5.7$. Comparison to be done on the data themselves.
- Locking fringes with SPICA-FT on E1E2W2W1. Some telemetry data recorded.
- First attempts to the fringe search function but things are difficult.
 - $R=50 \rightarrow$ coherence of about 25λ . 40 frames * 4ms = 160ms for a measurement of GD. During the frame the motion must not be larger than $L_c/5$, so 5λ . Therefore $\lambda/8$ per frame is fine. Then the direction of motion could change after about 1 L_c , so 5 GD_time so 1s.
- IN fact spica_ople was not correctly set. After reinitialization we obtain very nice undispersed fringes on W1W2. Record and try on E1E2 but not enough time.
- UT 9h00 we move to HD32630
- Fringes immediately found on W1W2 on SPICA. $DL3$ 19888. No dispersion at all.
- $E1=-0.15$, $E2=0.45$, $W1=-0.70$ on MIRCx.
- Work on SPICA-FT now.
- UT9h20 Record 4 beams with W1W2 fringes and tracking by MIRCx. 3 files of 1000 frames
- UT9h20: locking SPICA-FT 0.04/0.6 Record telemetry spica-ft and fringes SPICA-VIS (4 beams but fringes on W1W2 only). $W2$ r0 indicated to 7cm (almost the same for $W1$).
- UT9h25 0.04/1.0 on spica-ft. Record on SPICA. Small drift of OPD. 3 files of 1000 frames + foreground. Telemetry on spica (lost of E2 at the end).
- UT9h30: Fringes $W1$ at 19868
- Reinit the whole sequence on spica_ople. Then the dispersion has disappeared and $DL3=19903$. So something is probably not working correctly in spica_ople. But what?
- The alignment is drifting on the IMG: it means that FTT is out of stroke. Stop Servo, then 5V, then realign with IMG and then relock. Every 10/15mn typically.
- Relock on E2 tried now on spica-ft
- 0.18, 0.73, -0.48 now on SPICA-FT

- After 20mn, fringes are moving on SPICA-VIS and dispersion. Screenshot before and after to be analyzed. After resetting everything fringes are again ok on spicavis. Air path is not correctly calculated. See the big changes in a few seconds when just resending the configuration.
- UT 10h40 E1=0.07, E2=0.81, W1=-0.32.
- Change of star
- UT11h00 HD58715, bet CMi. E1P1E2P3W1P3W2P5.
- E1=-0.415, E2=-0.254, W1=-0.714
- Fringes W2W1 with DL3=19923, Fringes E1E2 with DL6=9660. Record 10 files with W1W2 and E1E2
- UT12h10 E1=-0.29 E2=-0.06 W1=-0.56
- Possible W1W2, E1E2 and E2W2 fringes. Recording 10 files. DL2=24367, DL3=21363, DL6=9630. With mircx gdt. Clearly E2W2 fringes have a huge dispersion. Too bad. This is probably due to the bad behavior of spica_ople. E1W2 and E1W1 fringes also seen
- UT12h30: -0.04, 0.2,-0.27 after reinit of the dispersion correction
- UT12h31: recording with SPICA-FT in GD+PD 0.04/1.00. Fringes lost during file 9.
- Finally 4T fringes obtained with
 - DL2=24267
 - DL3=21403
 - DL6=9640
- E1W1E2 on this star as we do not have enough delay to try the correction of dispersion
- Modification of the dispersion with VLDC1 from 6.3 to 7.2. Record E1W1E2 5 files. Dispersion improved on E1E2 but fringes difficult on E1W1. File 4 E1 out of Delay. DL6 at 9800 after the correction of VLDC.
- Some tests of spica-ft relock function. Success of the new solution installed.
- Fringes E2W1 recorded on telemetry spica-ft and on spica-vis. 5 files. Tracked by spica-ft 0.04/1.00. Nothing obvious on spica-vis in RTD but sometimes it seems that we see the fringes
- New sequence of 10 files to finish the night. Fringes lost and relocked during files 4 and 5. Lost again at file 7 and recovered just after.
- Record of spectral calibration + dark
- STS fringes + record 5 files
 - DL2=22750
 - DL3=18422
 - DL4=13725
 - DL5=11344
 - DL6=6932
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