

Log CHARA/VEGA 2018-06-28

Observateurs: Fred, Elisson et Norm

UT03h15: we arrived at the control room. Sky is clear and the humidity is about 20%

V16 E1POP1B1-S1POP4B2:

We use HD 108281 for LABAO and HD 107966 as check star. The target is HD 108662 with CAL1 = HD 108765 and CAL2 = HD 125658.

UT03h25: LABAO.

UT03h40: NIRO alignment .

UT03h44: we slew on the checkc star.

UT03h55: issues with the rouge camera, solved. We still slew on the check star.

UT03h58: check star, looking for fringes on VEGA.

UT04h02: we still do not find fringes on VEGA. Fringes on CLIMB are lost.

UT04h19: we still have nothing on CLIMB and VEGA.

UT04h30: we found fringes but they are lost again. No fringes.

UT04h51: we give up with HD 107966. No fringes. We try CAL1 now.

UT04h55: looking for fringes on CAL1.

UT05h45: no fringes...we give up the program.

V73 S2POP2B1-E2POP4B2-W1POP5B3-W2POP1B5:

UT05h59: we try the program V73, starting with HD 190603. HD 181276 for LABAO. Target as check star.

UT06h20: some issues with S2 pupil, solved. We slew on the target. VEGA aligement.

UT06h30: fringes on CLIMB. We look for it on VEGA.

UT06h37: pics found on VEGA. We record with 20 blocks. **HD181276.2018.06.28.06.36.** Seeing around 10 cm. Offset S2 = -2080 microns, E2=-2000 microns, W2 = 3470 microns, B1=6.719 mm, B2 = 4.548 mm . Good pics on VEGA.

PS: the file name above says HD181276, but this record is indeed on the target HD 190603!

UT06h46: we slew on the target HD 187983 (HD 187982). Recording **HD187983.2018.06.28.06.55.** S2=-2050 microns, E2=-2080 microns, W2 = 3410 microns, B1=6.6489 mm, B2=4.6483 mm. SNR ~ 4-5 on VEGA for W2E2, W2W1. SNR ~ 1.5 for E2S2. Good tracking on CLIMB.

UT07h05: target HD 193237. We record with 20 blocks. **HD193237.2018.06.28.07.08.** SNR ~ 4-6 on VEGA for W2E2, W2W1. SNR ~ 1.1 for E2S2. Good on CLIMB.

Spectral calibration: D_CMR656.2018.06.28.07.20

V65 S2POP2B1-E2POP4B2-W1POP5B3-W2POP1B5:

UT07h18: we change to the program V65 target V1143 Cyg (HD 185912) with 4T, using HD 181276 for LABAO and HD 192696 for check.

UT07h37: we slew on calibrator 1 (HD 177003). Recording with 20 blocks on the calibrator. **HD177003.2018.06.28.07.42.** Seeing about 10 cm. Good pic fringe on VEGA: SNR ~ 10 for W2W1 and W2E2. Stable tracking on CLIMB.

UT07h50: to the target. Recording with 40 blocks. **HD185912.2018.06.28.07.56.** Seeing about 12 cm. Pic SNR ~ 5 on VEGA in W2W1. Crash of the central control.

UT08h15: we change W1 to POP3 and go to cal1. Contact problem with NIRO (crash). We record with 20 blocks. **HD177003.2018.06.28.08.34.** S2=-2020 microns, E2=-2090 microns, W2=3000 microns, B1=6.6489 mm, B2=4.6483 mm. Pic SNR about 6-7 in W2E2. Seeing about 13 cm.

UT08h45: to the target HD 185912. Recording with 40 blocks.

HD185912.2018.06.28.08.50. S2=-2020 microns, E2=-2070 microns, W2=3060 microns, B1=6.6489 mm, B2=4.6483 mm. SNR on VEGA W2E2 ~ 16-17. r0 ~ 15 cm.

UT09h10: we slew on the calibration star. **HD177003.2018.06.28.09.13.** RERecording with 20 blocks. S2=-1970 microns, E2=-2120 microns, W2=3063 microns, B1=6.7690 mm, B2=4.6184 mm. SNR on VEGA W2E2 ~ 5. Fringes are not stable on CLIMB.

Spectral calibration: D_CMR720.2018.06.28.09.26

V01 W2POP5B3-S1POP3B2

UT09h30: we go to the program V01. HD 186791 for LABAO and HD 195810 as check star. Target HD 189733 with cal1 = HD 190993 and cal2 = HD 196740.

UT09h43: slew on the check star. VEGA alignment. We find fringe on CLIMB and VEGA, necessary to cophase. .

UT10h00: we slew on cal1. Recording with 30 blocks. **HD190993.2018.06.28.10.06.** Offset S1 = -3060 microns, B1=6.759 mm, B2=3.718 mm. Seeing about 7 cm. CLIMB tracking is not very stable during all the record. Pic SNR on VEGA ~ 18.

UT10h20: target. Recording with 40 blocks. **HD189733.2018.06.28.10.22.** Offset S1 = -3130 microns. Around the block 12: bad tracking on CLIMB, fringes are not stable We are

not able to see fringe pic on VEGA. Bad seeing, $r_0 \sim 5$ cm.

UT10h35: around the block 30: low flux ~ 60 photons, Olli informs that there are patchy cloud passing now. Not sure if there are fringes on CLIMB/VEGA.

UT10h40: we stoped to record in block number 34. Waiting for a better sky without clouds. Flux is null.

UT10h53: we realign on cal1 and it much better now. Average number of photons $\sim 250\text{-}300$. Fringes are stable on CLIMB. Recording again but with 20 blocks, it was not possible to put 30 blocks. **HD190993.2018.06.28.10.53.** SNR on VEGA is about 5-8. Stable pic on VEGA.

UT11h05: we go back to target. Recording with 40 blocks. **HD189733.2018.06.28.11.04.** Offset S2=-3010 microns, B1=6.7590 mm, B2=4.6184 mm. Seeing around 4-5 cm. No fringes on VEGA. Low flux. Very stable fringes on CLIMB. It appears to have fringes on VEGA since the block ~ 30 to 40.

UT11h25: to cal2 now. We record with 30 blocks. **HD196740.2018.06.28.11.27.** Offset S2 = -2960 microns. Very stable fringes on CLIMB, despite the not so good seeing around 5 cm. Intense pic on VEGA, we have SNR ~ 20 . Very good recording.

UT11h41: to target now. Recording. **HD189733.2018.06.28.11.42.** Offset S2 = -3070 microns. Fringes on CLIMB are stables as in the last recording, but we are not sure if we see a pic on VEGA (probably there are not fringes there). In the block 18, it appears to have fringes on VEGA (not sure).

UT11h52: it was not possible to request 40 blocks in the last record (20 blocks), so we do this second recording (+ 20 blocks). We record. **HD189733.2018.06.28.11.54.** Offset S2 = -3060 microns. We have the same here, very stable fringe on CLIMB and maybe a pic on VEGA. Seeing ~ 5 cm.

UT12h04: to cal1. Recording with 30 blocks on the calibrator.

HD190993.2018.06.28.12.05. Intense pic on VEGA, CLIMB is stable. Seeing keeps not very good, $r_0 \sim 5$ cm. The night is finished.

Spectral calibration: D_CMR720.2018.06.28.12.20