

2018-06-27, Fred, Denis, Norm

### V16 E1P1V1-S1P4B2 OPD E1=+150 $\mu$ m (left)

UT3:15: Starting everything on site and in Calern. AO star aligned.

UT3h40: slew to the check star HD107966, NIRO alignment and scan for fringes. r0 around 12cm.

VEGA Alignment. Fringes found at -3000 with CLIMB. Looking now on VEGA but contrast is quite low.

UT 4h19: we decide to try on the calibrator HD108765. UT5h05: we try on the target after unsuccessful attempts on the calibrator. Fringes ok on CLIMB.

UT5h31: we give up,. HD166182 (transit 7h30 today) could be a good check star for this E1S1 baseline.

### V74 S2P5V1-S1P4B2 OPD S2=+150 $\mu$ m (left)

UT5h31: AO star=HD177724, check star=HD173880. All alignments as usual. S2=0; BC1=7.2687, BC2=4.608. In fact 3mm of difference of phase on beams 1&2 which could explain that we did not get the fringes on the V16 program. Maybe also yesterday the fringes 12 on the 4T program were not correct. The lesson here is that on a new cophasing it is much better to scan with VEGA without controlling the fringes on CLIMB and accept to go up to +-5mm. And then use the usual way of cophasing after having in hands the offsets for VEGA and CLIMB.

UT06h08: slew to the cal HD189090. S2=-180 $\mu$ m. **HD180090.2018.06.27.06.18**. Decent fringes on CLIMB with a good tracking. r0 around 7cm. Very nice peak on VEGA. Bad tracking of CLIMB around block 14.

UT06h27: ready for the target. **HD190658.2018.06.27.06.29**. S2=-180 $\mu$ m. r0=7-11cm. Modification of the scanning mode of CLIMB because of the huge difference of magnitude in K between the cal and the target. Nice tracking by CLIMB. Fringes ok on VEGA

UT06h38: slew to cal2: HD190993. **HD190993.2018.06.27.06.41**. r0 around 9cm. S2=-53 $\mu$ m. No needs for changing the cophasing. Nice fringes on CLIMB (but faint magK=5.6) and on VEGA.

UT06h50. Target again. **HD190658.2018.06.27.06.52**. S2=-70 $\mu$ m. r0=9-11cm. Nice fringes. Clearly the fringes on VEGA are less contrasted than on the reference stars. Fringes lost at block 7. Back at block 15 (remove blocks 8 to 14). 30 blocks. At the end of blocks 27 and 28, TT switched off automatically. Finally 35 blocks. Central control do not end correctly.

UT07h08: back to cal1. **HD180090.2018.06.27.07.11**. Recording but poor tracking on CLIMB and poor fringes on VEGA. r0 around 5-6cm now. Really poor tracking. Probably an issue with the NIRO alignment or the seeing. During a few seconds the network in Calern was down. the VNC connection was frozen and automatically reactivated.

UT07:20 Spectral calibration. **D\_CMR720.2018.06.27.07.23**.

### V52 E1P1V1-E2P2V2-W2P5B3 OPD E2=-300 $\mu$ m (right), E1=+150 (left)

UT07:21 AO star HD202109, check star HD180163. Cophasing on the check.

UT08h00: slew to the cal1. **HD190993.2018.06.27.08.05**. E1=-2130, E2=-2100. BC1=6.5689, BC2=4.5883. r0 around 7-11. Tracking CLIMB not excellent but ok. VEGA fringes ok but E2W2 fringes (right) not well contrasted.

UT08h15: Target. But NIRO crash. **HD198726.2018.06.27.08.20**. r0 around 10cm. E1=-2140, E2=-2140. Fringes quit OK on CLIMB but with piston. Not so nice on VEGA. E1E2 ok but hard to see E2W2.

UT08h29: cal2, HD196740. **HD196740.2018.06.27.08.35**. We check the cophasing and it is ok on W2E2. Slight adjustment on E2E1. E1=-2130, E2=-2130. BC1=6.5889, BC2=4.5883. r0=10cm. Nice fringes now on VEGA. Tracking ok on CLIMB.

UT08h44: target. **HD198726.2018.06.27.08.46**. r0= 9-11cm. Tracking CLIMB ok. E1E2 ok on VEGA and E2W2 really difficult...

UT08h55: cal2. [HD196740.2018.06.27.08.58](#). r0=10cm. Tracking CLIMB not so good. VEGA ok, both fringes.

UT09h08: [HD198726.2018.06.27.09.10](#). r0=10cm, more stable. Tracing ok on CLIMB. E2W2 fringes quite faint on VEGA. NIRO alignment at the end on the target.

UT09h18: cal2. [HD196740.2018.06.27.09.23](#). r0=10cm. Nice fringes now on the cal with CLIMB after the alignment. 2 peaks seen on VEGA

UT09:32: target. [HD198726.2018.06.27.09.37](#). r0=10cm. E1=-1940, E2=-2040. Nice tracking with CLIMB. Fringes ok on VEGA, even on E2W2. Great! Nice sequence.

UT09h45: cal2. [HD196740.2018.06.27.09.53](#). r0=11cm. Tracking ok. Fringes VEGA ok.

UT10h02: target. [HD198726.2018.06.27.10.07](#). r0=10cm. E1E2 fringes nice on CLIMB but the other are very faint. Probably due to the fact that we are close to the zenith. NIRO alignment before going to the calibrator.

UT10h16: cal2. [HD196740.2018.06.27.10.28](#). r0=10cm. E1=-2010, E2=-2130. CLIMB fringes intermittent. On VEGA E2W2 a little bit too close (error 120 $\mu$ m). We will change for the next star.

UT10h36: target. New alignment of NIRO. [HD198726.2018.06.27.10.46](#). r0=10cm. E1=-1837, E2=-1990. BC1=6.6489, BC2=4.6483. The first 5 blocks are recorded with B3 shutter OFF. So 25 blocks. Nice fringes on CLIMB

UT10h58: New cal, HD208057. New alignment. [HD208057.2018.06.27.11.08](#). r0=11cm, more stable. E1=-1780, E2=-1990. Good on CLIMB and good on VEGA. Nice tracking and fringes on VEGA are very nice.

UT11h17: Target. [HD198726.2018.06.27.11.22](#). r0=11cm. E1=-2120, E2=-2100. Tracking decent on CLIMB. Fringes ok on VEGA, even the E2W2 one. A little bit too close from the centre but still ok.

UT11h31: Cal. [HD208057.2018.06.27.11.37](#). r0=10cm.

UT11h46: Target (shutter B1=E1 close, as no possible delay – so only W2E2 fringes but recorded in 3T mode as the whole sequence. Should be processed/calibrated separately from the previous sequence – Nothing else to do for the 30 remaining minutes). [HD198726.2018.06.27.11.50](#). Fringes ok on VEGA.

UT11h59: Realignment of NIRO and slew to the cal. Same configuration for this last star, without B1=E1 in VEGA. [HD208057.2018.06.27.12.11](#). Some network issues but finally recording.

UT12h20: spectral calibration. [D\\_CMR720.2018.06.27.12.22](#)