

12-10-2019 VEGA Observation

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Config: B

Start at UT01:00

Humidity too high (80%). Waiting for opening telescopes.

UT03:05: Opening of the telescopes S1 S2 W2. Humidity ratio below 65%.

UT03:27: CHARA aligned on Deneb. Flux high. Starting VEGA alignment. Alignment pupils done. Alignment spectrograph slit done. Atmospheric disturbance high. R0 = 4.5cm.

V70, Robert, 3x S1S2 (high resolution, offset +660 μ m) POP45

UT03:36: target [HD197345.2019.12.10.03.36](#). R0=5cm. Aspro shows no observability for Deneb but we are observing... Fringes high but big piston jumps.

UT03:50: Obscuration of S2, then S1 by trees. We can't observe so we'll change target. Aspro might have taken the trees into account and it explains why it showed no observability.

UT04:11: Spectral calibration [D_CHR6562019.12.10.04.11](#)

V27, Denis, 2x S1S2 (60 blocks)

UT04:21: Target Epsilon Aurigae HD31964. Locked on W2 for realignment of CLIMB.

UT04:24: Fringes locked on VEGA. Waiting for CLIMB.

UT04:29: target [HD31964.2019.12.10.04.29](#). Fringes high but still big piston jumps. Stopped at 20 blocks, don't know why. Next block will complete. R0=7cm

UT04:43: target [HD31964.2019.12.10.04.43](#). R0=7cm. Fringes high but still big piston jumps. 40 blocks

UT05:02: spectral calibration [D_CHR656.2019.12.10.05.02](#)

V67, Orlagh/Tim, W1W2 (beam 2 – beam 3) (high resolution, fringe position=-2600 μ m, BC2=4.65 μ m, offset=150 μ m)

C1-T-C2-T-C1-T-C2

UT05:13: Alignment on HD11415. CLIMB aligned. Fringes immediately seen on VEGA. Cophasing succeed.

UT05:26: cal1 [HD3924.2019.12.10.05.26](#). r0=9cm

UT05:38: target [HD5015.2019.12.10.05.38](#) r0=7cm. HR below 50%. Good fringes but still big piston jumps.

UT05:53: cal2 [HD10587.2019.12.10.05.53](#) r0=6cm. Piston jumps get higher and higher.

UT06:05: target [HD5015.2019.12.10.06.05](#) r0=7-8cm.

UT06:15: looking for fringes on cal1. The target is going down. Misalignment problem. Fringes found.

UT06:30: cal1 **HD3924.2019.12.10.06.30** r0=7cm

UT06:44: target **HD5015.2019.12.10.06.44** r0=8cm

UT07:00: cal2 **HD10587.2019.12.10.07.00** r0=9cm

UT07:11: Spectral calibration **D_CMR720.2019.12.10.07.11**

NOAO, Shultz – E1W1 (without dispersion compensator, medium resolution 656nm around H-alpha, offset CLIMB 2380 μ m (transit) et BC1=6.46 μ m (POP52))

Target very faint. Not very sure of getting something.

UT07:32: flat on E1.

UT08:07: fringes locked on CLIMB after a long time looking for it. Don't find immediately fringes on VEGA. As LDC was removed, OPD is shifted by about 2mm.

Change of POP → POP14 (E1W1) offset=2026 μ m, BC1=6.04 μ m

With this new POP we gain 1 hour on target.

UT08:45: fringes found on VEGA for target HD37479. 1000 photons on VEGA. Looks high for a 6.6mag in R. This part of sky is crowded. Apparently we mistook the star.

UT08:58: target **HD37479.2019.12.10.08.58** Fringe not visible on VEGA but on CLIMB (big piston though) so we'll see at data reduction. We save 60 blocks. We lost fringes at block 35. Come back at block 45.

UT09:26: spectral calibration **D_CMR656.2019.12.10.09.26**

V27, Denis, 2x S1S2 (60 blocks), CLIMB=2640 μ m, BC1=7,24 μ m, VEGA=750 μ m

We switch back to S1S2 for targeting Epsilon Aurigae HD31964 with a new orientation of the base.

UT09:53: target **HD31964.2019.12.10.09.53**. r0=9cm. Fringes better than before.

UT10:30: spectral calibration **D_CHR656.2019.12.10.10.30**

V72, Klément, W1W2, POP45, W2=ref, fringe position -2100 μ m, BC2=4.73 μ m, VEGA=150 μ m

8 POINTS TAKEN

Target: Beta CMI (HD58715), cal1=HD58187, cal2=HD65900

UT10:45: target **HD58715.2019.12.10.10.45** r0=10cm

UT10:58: cal1 **HD58187.2019.12.10.10.58** r0=10cm

UT11:09: target **HD58715.2019.12.10.11.09** r0=10cm

UT11:23: cal2 **HD65900.2019.12.10.11.23** r0=10cm. Setup camera changed. R0=7cm from block 15. Tracking worse.

UT11:37: target [HD58715.2019.12.10.11.37](#) r0=7cm. disturbance better than just before but worse than UT10:45

UT11:50: cal1 [HD58187.2019.12.10.11.50](#) r0=6-7cm

UT12:04: target [HD58715.2019.12.10.12.04](#) r0=6-7cm.

UT12:21: cal2 [HD65900.2019.12.10.12.21](#) r0=10cm. Lost tracking in blocks 5 to 8.

UT12:33: target [HD58715.2019.12.10.12.33](#) r0=8-9cm. Good tracking

UT12:45: cal1 [HD58187.2019.12.10.12.45](#) r0=6-7cm

UT12:56: target [HD58715.2019.12.10.12.56](#) r0=9-12cm.

UT13:08: cal2 [HD65900.2019.12.10.13.08](#) r0=7-12cm.

UT13:20: target [HD58715.2019.12.10.13.20](#) r0=9-12cm.

UT13:31: cal1 [HD58187.2019.12.10.13.31](#) r0=6-7cm

UT13:42: target [HD58715.2019.12.10.13.42](#) r0=9-12cm.

UT13:55: → tentative of observing cal2 but clouds joined the party. Game over

UT14:10: Spectral calibration [D_CM656.2019.12.10.14.10](#)