

# 2019-10-09 VEGA observation

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Arrival at UT1:30. Good sky conditions.

## V70, Klement S2POP2B1 – E2POP2B2 – W2POP5-ref (offset +150, 300)

UT02:27: LABAO aligned on HD194093. NIRO and VEGA aligned. R0 around 7cm.

UT02:46: Target close to zenith, W2 has trouble tracking.

UT02:55: Aligning LABAO again on HD 183914. CLIMB tracking is good.

UT03:24: Recording on target HD 190603 – 60 blocks. **HD190603.2019.10.09.03.23**. CLIMB tracking is good, r0 around 9 cm. CLIMB offset: S2 = -1040 um, E2 = -2309 um. BC1 offset: CLIMB\_B1 = 7.54, CLIMB\_B2 = 5.41.

Spectral calibration **D\_CNR656.2019.10.09.03.51**

## V67, Creevey S2POP2B1 – E2POP4B2-ref (offset +150)

UT04:00: LABAO star HD 184006

UT04:18: Recording 20 blocks cal1 HD 177003 - **HD177003.2019.10.09.04.18**. r0 around 10 cm. CLIMB tracking good. CLIMB offset: S2 = 1285 um, E2 ref. BC1 offset: CLIMB\_B1 = 7.54.

UT04:31: 30 blocks on the target: **HD187217.2019.10.09.04.31**. r0 around 10 cm. CLIMB offset: S2 = 1440 um. Fringe very faint on VEGA.

UT04:47: 20 blocks on cal2 HD 183534 – **HD183534.2019.10.09.04.47**. CLIMB tracking good. R0 around 10 cm.

UT04:57: Back to the target – 30 blocks - **HD187217.2019.10.09.04.59**. CLIMB offset: S2 = 1360 um. CLIMB tracking very good.

UT05:14: 20 blocks on cal1 – **HD177003.2019.10.09.05.14**. Seeing improving, now around 11 cm. CLIMB tracking good.

UT05:27: 30 blocks on target – **HD187217.2019.10.09.05.26**. R0 ~ 11 cm. Good CLIMB tracking. CLIMB offset: S2 = 1300 um.

UT05:40: Slewing to cal 2, recording 20 blocks. CLIMB offset: S2 = 1160 um. **HD183534.2019.10.09.05.43**.

Spectral calibration **D\_CMR720.2019.10.09.05.53**

**FINISHED C1-T-C2-T-C1-T-C2 bracket on the target HD 187217**

## V67, Creevey E2POP2B2 – W2POP5B3-ref (offset +150)

UT05:56: Aligning beacons, getting sky flats on check star HD 186882. Aligning VEGA. CLIMB offset: S2 = -1400 um. VEGA cophased. BC1 offset: CLIMB\_B2 = 5.21

UT06:14: Going to cal1. Seeing lower around 8 cm now. Recording 20 blocks: [HD183534.2019.10.09.06.16](#). CLIMB tracking is good. Clear fringes on VEGA.

UT06:27: 20 blocks on target – [HD188853.2019.10.09.06.27](#). R0 ~ 7-8 cm. Good CLIMB tracking. Good peak on VEGA. CLIMB offset: S2 = -1440 um.

UT06:37: 20 blocks on cal2 – [HD187235.2019.10.09.06.40](#). R0 ~ 6 cm. Good CLIMB tracking. Clear peak on VEGA. CLIMB offset: S2 = -980 um.

UT06:59: CLIMB hang-up caused some delay. 20 blocks on target – [HD188853.2019.10.09.07.03](#). R0 ~ 6 cm. Good CLIMB tracking. Faint peak on VEGA. CLIMB offset: S2 = -1100 um.

UT07:12: 20 blocks on cal1 – [HD183534.2019.10.09.07.15](#). R0 ~ 4 cm. Still good CLIMB tracking. Good peak on VEGA.

UT07:25: Aligning NIRO. 20 blocks on target – [HD188853.2019.10.09.07.28](#). Seeing now poor with R0 ~ 3-5 cm. Still good CLIMB tracking. Faint peak on VEGA. CLIMB offset: S2 = -1030 um.

UT06:27: 20 blocks on cal2 – [HD187235.2019.10.09.07.45](#). R0 ~ 3-4 cm. CLIMB tracking not great. Fringes are a bit jumpy, low target. CLIMB offset: S2 = -530 um.

**Spectral calibration D\_CMR720.2019.10.09.07.56**

**FINISHED C1-T-C2-T-C1-T-C2 bracket on the target HD 188853**

[V01, Ligi S1POP1B2 – W1POP5B3-ref](#) (offset +150)

UT08:00: Going to check star HD 196867. LABAO flats etc.

UT08:41: Continuing problems with CLIMB hanging up. Chris is diagnosing. Too much time lost, going on to the next program.

[V38, Salsi S2POP5B1 – E2POP2B2-ref](#) (offset +150)

UT09:31: Going to LABAO star, taking flats, aligning... Aligned. CLIMB offset: 1920 um. BC1 offset: CLIMB\_B1 = 7.62. R0 is jumping around between ~7 and ~11 cm.

UT09:38: Going to the target/check star, everything is fine, seeing back up to R0 ~11 cm. Recording 20 blocks on cal2: [HD25202.2019.10.09.09.49](#).

UT10:00: 20 blocks on target – [HD27819.2019.10.09.10.01](#). R0 ~ 12 cm. Good CLIMB tracking. Clear peak on VEGA.

UT10:13: 20 blocks on cal2 – [HD25202.2019.10.09.10.12](#). R0 ~ 12 cm. Good CLIMB tracking. CLIMB offset: 1770 um.

UT10:23: 20 blocks on target – [HD27819.2019.10.09.10.24](#). R0 ~ 8 cm. Good CLIMB tracking. Clear peak on VEGA.

UT10:35: 20 blocks on cal1 – [HD28226.2019.10.09.10.36](#). R0 ~ 8 cm – variable in the 7-11 cm interval. Good CLIMB tracking. CLIMB offset: S2 = 1730 um.

UT10:46: 20 blocks on target – [HD27819.2019.10.09.10.47](#). R0 ~ 8 cm. Good CLIMB tracking. Clear peak on VEGA.

UT10:59: Realigning NIRO. 20 blocks on cal2 – [HD25202.2019.10.09.11.04](#). R0 ~ 7-8 cm. Good CLIMB tracking. CLIMB offset: 1770 um.

UT11:15: 20 blocks on target – [HD27819.2019.10.09.11.17](#). Reported r0 ranges from 5 to 15 over less than half an hour. Good CLIMB tracking. Clear peak on VEGA.

UT11:28: 20 blocks on cal1 – [HD28226.2019.10.09.11.29](#). R0 ~ 7-8 cm. Good CLIMB tracking.

#### **Spectral calibration D\_CMR720.2019.10.09.11.39**

#### **FINISHED C2-T-C2-T-C1-T-C2-T-C1 bracket on the target HD 27819**

UT11:43: Going to LABAO/check/target star, taking flats, aligning... Aligned. CLIMB offset: 1670 um. BC1 offset: CLIMB\_B1 = 7.50. R0 is jumping around between ~7 and ~11 cm.

UT11:58: 20 blocks on cal1 – [HD32309.2019.10.09.11.58](#). R0 ~ 9 cm. Good CLIMB tracking.

UT12:08: 20 blocks on target – [HD33904.2019.10.09.12.09](#). R0 ~ 8 cm. Good CLIMB tracking. Clear peak on VEGA.

UT12:18: 20 blocks on cal2 – [HD35505.2019.10.09.12.20](#). R0 ~ 7 cm. CLIMB tracking a little worse on this faint target.

UT12:30: 20 blocks on target – [HD33904.2019.10.09.12.31](#). R0 ~ 9 cm. CLIMB tracking not great. Fringes are transient and jumpy.

UT12:55: 20 blocks on cal1 – [HD32309.2019.10.09.12.56](#). R0 ~ 9 cm. CLIMB tracking not great. No fringes on blocks 8-11 (maybe 7 too) and 16-20 (roughly) because we ran out of delay. 10 extra blocks added.

UT13:11: 20 blocks on target – [HD33904.2019.10.09.13.13](#). R0 ~ 9-10 cm. CLIMB tracking not great. CLIMB fringe power spectrum peak very weak.

UT13:24: 20 blocks on cal2 – [HD35505.2019.10.09.13.24](#). R0 ~ 8-14 cm. CLIMB tracking jumpy.

#### **Spectral calibration D\_CMR720.2019.10.09.13.34**

#### **FINISHED C1-T-C2-T-C1-T-C2 bracket on the target HD 33904**