

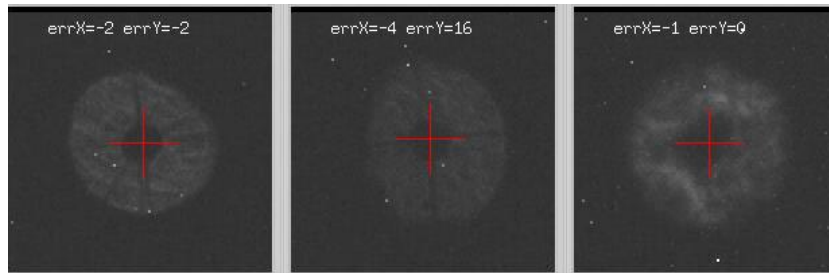
2019-06-12 VEGA observation

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Arrival at UT 3:00, sky is pretty cloudy.

V38, Salsi E2POP3V1 – W2POP5V2 – W1POP1V3 (W1=-300, right – E2=+150, left)

UT03:34: we go on sky. LABAO alignment on HD146051 but clouds are limiting the visibility. NIRO Alignment. E2 pupil is lightly vignettted on the upper-right corner. Pretty thick clouds, just possible to see the glow of the moon... AllSky camera is blocked.



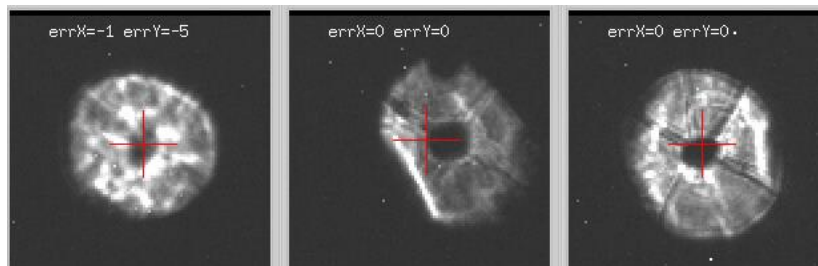
UT04:06: we go on the target for concluding the VEGA alignment and finding fringes with CLIMB. Very little flux for the moment. Carts are rehomed, flux is improving. W1 (newest coating) has 2x the flux of W2 (oldest coating). E2 is closer to W1 but alignment on VEGA is not very good for the moment...r0 around 10cm. W2 cart has some issues with the HOME tracking and therefore it is used as reference cart. Fringes are finally found by CLIMB. W1=-250 μ m, E2=2500 before cophasing. After cophasing: E2=3055, W1=656, B1=7.8, B2=4.82. (Config is W2V2-E2V1-W1V3 but the tracker is not correct with FT1=E2W1, FT2=E2W2 and W2 as fixed).

UT05h50: recording [HD145570.2019.06.12.05.50](#). Seeing data not available. Good fringes on CLIMB. W1W2 fringes ok on VEGA. E2W2 not so obvious. Loss of flux in the middle of the recording. E2 fringes not really seen on CLIMB at the end. Clouds coming again. r0=10cm again.

UT06:00: slew to cal2, HD145607. But still some clouds. Pupils realigned but flux lost again. We put POP1 on E2 to increase the delay. Lot of clouds again. [HD145607.2019.06.12.07.36](#). r0 around 9cm. Photometry is still fluctuating. And after block 12, flux is again very low.

Spectral calibration: [D_CMR720.2019.06.12.07.51](#)

UT07h52: New target: HD152107. HD150997 as LABAO Star for the beginning. E2 flux is much better now. We try with W1 REF to avoid the issues on the tracker. W2 pupil (in the middle below) is vignettted again. r0 around 8cm.



UT08h05: HD149303 as Cal1. Look for fringes but clouds again. E2W1 fringes are found but W2W1 are not. We decided to switch back to W2 as REF because of the issues on the cart. $r_0=9\text{cm}$. Fringes are found now. We continue like this. [HD149303.2019.06.12.09.03](#). $E_2=3350$, $W_1=-90$. $B_1=7.81$, $B_2=4.89$. Nice fringes on CLIMB now, as on VEGA. Shutter B3 closed on the first two blocks (to be removed then). r_0 around 11cm now.

UT09h13: to the target. [HD152107.2019.06.12.09.15](#). Nice fringes on CLIMB and good signal on VEGA also. Third peak E2W1 is also seen correctly.

UT09h25: to cal2, HD150100 now. [HD150100.2019.06.12.09.34](#). Binary star.... The dimmer one should be used. $r_0=9\text{cm}$. The fringes are not so nice as before.

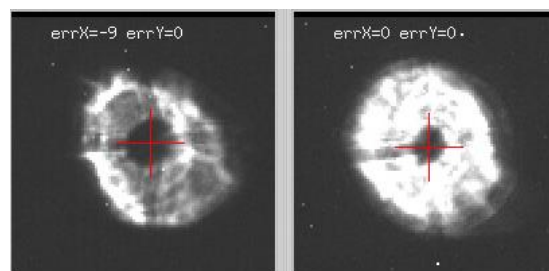
UT09h44: to the target again. [HD152107.2019.06.12.09.47](#). Nice fringes on CLIMB and VEGA. $r_0=8.5\text{cm}$. Three peaks rapidly seen on VEGA.

UT09h55: last point on cal2, HD150100. [HD150100.2019.06.12.09.59](#). CLIMB tracking not so good. VEGA fringes ok for W1W2, seen also on E2W2. Seeing is fluctuating more than before. This last point on the cal is not of great quality. 3 peaks however.

Spectral calibration: [D_CMR720.2019.06.12.10.10](#)

V67, Creevey [W2POP5V2](#) – [W1POP1V3](#) ($W_1=150$, left)

UT10h10: AO star HD176437, also considered for fringes. Alignment of pupils. W2 FLAT after LABAO is not very nice (left one on Beam2). Offset = $60\mu\text{m}$, $B_2=4.64$.



UT10h24: Cal HD174481. [HD174481.2019.06.12.10.30](#). Poor tracking by CLIMB as the star is faint. Fringes ok on VEGA. Offset around $20\mu\text{m}$, r_0 around 8cm.

UT10h39. To the target now. HD175740. The star is bright in K and the fringes are really nice on CLIMB, with a good tracking. [HD175740.2019.06.12.10.41](#). Nice peak on VEGA.

UT10h50: Cal again. [HD174481.2019.06.12.10.53](#). Fringes ok on VEGA, same kind of racking as before on CLIMB, maybe a little bit better. r_0 close to 11cm now.

UT11h03: target. [HD175740.2019.06.12.11.04](#). Offset $90\mu\text{m}$. r_0 down to 8cm. Nice fringes.

UT11h14: Cal. [HD174481.2019.06.12.11.17](#). Fringes ok on VEGA. Tracking not excellent on CLIMB. Offset $120\mu\text{m}$. $R_0=10\text{cm}$...

UT11h26: Target for aligning first. Small issue with the CLIMB server has delayed the start of recording. OPLE has been restarted. New offset is $3000\mu\text{m}$. [HD175740.2019.06.12.11.48](#). $r_0=11\text{cm}$. Good tracking and good fringes. After block 8 fringes are lost because of delay. Fringes back at block 14. More blocks are added. End of sequence, $r_0=12\text{cm}$.

UT12h00. Last point on the calibrator now. . **HD174481.2019.06.12.12.04**. Fringes ok at offset 3320. Tracking is fluctuating because of the magnitude of the star. r0=11cm. Good signal on VEGA.

Spectral calibration: **D_CMR720.2019.06.12.12.14**