

Night of Nov 19, 2016

Fred, Denis, Elisson , Olli

UT0h45: arrival and setup

UT1h15: check star HD209750 for alignment. Fringes CLIMB at 150 μ m

UT1h35: go on the target HD209409 for cophasing

V66 Programme E1POP1B1-E2POP2V2 HD209409 656nm

UT1h40: Fringes VEGA ok. offset=-10 μ m, BC1=-0.0425; BC2=-0.07. **HD209409S1S2.2016.11.19.01.18.** Record, AH=-10mn. r0 around 7-8cm. Piston not very good, Olli indicates that we have some important gust (20kph). (Careful: the name of the folder and data indicates S1S2 where it is in fact correctly E1E2...)

D_R2656.2016.11.19.01.54

V67 Programme E1POP1B1-E2POP2V2 HD6386 700nm

UT2:05: alignment and fringes on Cal1 (HD7804). **HD6386CAL1E2E1.2016.11.19.01.58.** BC1=-0.09 and offset=680 μ m. r0=5-6cm. AH=-3h. First part with high piston then nice fringes.

UT2:20: **HD6386E2E1.2016.11.19.02.18.** Nice fringes on CLIMB. Fringes ok on VEGA. Offset 430 μ m.

UT2:30: back on cal1. **HD6386CAL1E2E1.2016.11.19.02.31.** Offset 530 μ m. r0 around 9cm.

UT2h42: back on the target. **HD6386E2E1.2016.11.19.02.42.** r0=11cm. Nice fringes on CLIMB (target is bright in K) and good piston. Nice fringes on VEGA also. r0=12

UT2:55: back on cal1. **HD6386CAL1E2E1.2016.11.19.02.55.** Offset 348 μ m. CLMB fringes are good (small piston) and VEGA fringes ok.

D_R2700.2016.11.19.03.08

V66 Programme E1POP1B1-E2POP2V2 HD209409 656nm

UT03:10: pupil and NIRO alignment. offset=-600 μ m; BC1 -0.04. AH=+1h20.

HD209409S1S2.2016.11.19.03.14. Very nice fringes. SNR=10 in 1s on VEGA. r0=9cm.

V01 Programme E1POP1B1-E2POP2V2 HD21934

UT03:30: we align NIRO+VEGA on the target, find the fringes here and then start with the cal4 (HD1279, mK=6).

UT03:45: HD1279. **HD219134CAL4.2016.11.19.03.32.** Very faint fringes on CLIMB. But Gust at 30kph. nice fringes on VEGA. offset=-1290.

UT04:00: HD219134. **HD219134.2016.11.19.04.02.** Nice fringes everywhere...Apparently high contrast on VEGA. offset=-1920. r0 around 8cm.

UT04:20: **HD219134CAL4.2016.11.19.04.21.** nice fringes but faint on CLIMB and thus piston. offset - 1490

D_R2720.2016.11.19.04.32

V66 Programme E1POP1B1-E2POP2V2 HD209409 656nm

UT04:35: AH=+3h00. We use the new ICSGUI with the correct pupil alignment tool. It works fine.

HD209409S1S2.2016.11.19.04.37. r0 around 9/10cm but large piston with improvement however. BC1=0, offset=-900.

V67 Programme E1POP1B1-E2POP2V2 HD6386 700nm

UT5:05: alignment and fringes on Cal1 (HD7804). **HD6386CAL1E2E1.2016.11.19.05.04.** BC1=-0.03 and offset=-320 μ m. Nice CLIMB fringes, very good signal on VEGA.

UT05:22: target. [HD6386E2E1.2016.11.19.05.21](#). We forget to use climbgtk -E before. Starting from now this is ok with MaxErr=0, which means that CLIMB does not wait for Err=7.5 μ m to correct the cart. Thus the waterfall is much more centered and the tracking is better. offset=-530.

UT05:40. Back to cal. [HD6386CAL1E2E1.2016.11.19.05.34](#). offset -530. r0 around 7cm. Nice fringes on VEGA, good tracking with CLIMB although some huge piston from time to time + photometry losses.

V01 Programme E1POP1B1-E2POP2V2 HD21934

UT05:50: we align NIRO+VEGA on the target, find the fringes here and then start with the cal4 (HD1279, mK=6). offset -2200.

UT06:05: cal. [HD219134CAL4.2016.11.19.06.07](#). Faint fringes on CLIMB, ok on VEGA. We record.

UT06:18: target. [HD219134.2016.11.19.06.18](#). Huge piston from time to time and very low r0. Mean r0 closer to 6cm now. Piston is awful.

UT06:34: cal again. [HD219134CAL4.2016.11.19.06.34](#). Climb control very difficult. First 15 blocks chaotic with excursions of OPD to control them. CLIMB do not servo... fringes ok on VEGA. 30 blocks.

UT06:50: target again. . [HD219134.2016.11.19.06.51](#). Nice fringes on CLIMB and VEGA. r0 around 7cm.

UT07:07: NIRO alignment on the target, then the cal. [HD219134CAL4.2016.11.19.07.06](#). Better fringes on CLIMB, correctly servo. 30 blocks of recording.

V16 Programme E1POP1B1-E2POP2B2-W1POP1B3 HD42659

UT07:24: we slew to the check (HD41695) for alignment and cophasing. Alignment ok. Cophasing ok. offset E1=1100, W1=2160. BC1=0.34, BC2=0.33. R0 around 10/11cm now.

UT07:56: we slew to cal3 (HD37306). [HD42659CAL3E2E1W1.2016.11.19.07.25](#). offset E1=715, W1=1912. 3 fringes on VEGA (yeah), nice tracking with CLIMB. 40 blocks... thanks Karine, this is breakfast time! r0 around 12/13cm

UT08:25: to the target. [HD42659E2E1W1.2016.11.19.08.26](#). Offset W1=2070, E1=930. Fringes CLIMB ok. E1E2 on VEGA appears rapidly. E2W1 appears (block 10). Probably also the E1W1 appears (block 20). This is confirmed (block 23). Fringes lost on CLIMB at block 38. r0<10cm now.

UT08:50: to cal1, HD43955. [HD42659CAL1E2E1W1.2016.11.19.08.50](#). Fringes CLIMB not very good but present from time to time. E1E2 on E2W1 ok on VEGA after 10 blocks. Improvements on CLIMB. E1W1 is almost not seen on the real time display, very small signal apparently.

UT09:10: target again. But realignment is necessary on the check. Wind gusts approaching 30kph...acquisition images are blurry. This will be really hard for fringes. Finally we got the fringes (very faint on CLIMB). [HD42659E2E1W1.2016.11.19.09.38](#). Flux is lower than before. Data probably very poor. r0 around 5cm or below...W1 out of delay. Stop after 10 blocks.

[D_R2700.2016.11.19.09.44](#)

V43 Programme S2POP5B1-W2POP5B2-W1POP1B3 HD52265

UT09:48: we change the program and open the new telescopes. Check star first: HD53244. Olli can't remove the CC in W2 (probably LABAO-CC: a circular obscuration close to the edge of the pupil)... r0 around 8cm. offset S2=1038, offset W1=1675, BC1=0.18, BC2=0.09

UT10:10 we go on cal1 HD46487. [HD52265CAL1W2S2W1.2016.11.19.10.12](#). Fringes almost ok on CLIMB but tough conditions. S2=1334, W1=1471. S2W2 and W2W1 ok on VEGA, rapidly. Photometric variations... r0 below 5cm. tracking with CLIMB is very poor. Only W1W2 seen on VEGA.

UT10:36: to the target. [HD52265W2S2W1.2016.11.19.10.37](#). MagK is brighter so tracking with CLIMB is better. S2=1310, W1=1545. Fringes hard to see on VEG. W1W2 ok after 4 blocks. S2W2 ok but not really in place (60 μ m of error). CLIMB tracking far from being excellent.

UT10:48: back to cal. [HD52265CAL1W2S2W1.2016.11.19.10.49](#). Fringes almost ok on CLIMB. 1080, 1430. OK also on VEGA. Maybe an improvement of the conditions? Yes, r0 around 7cm.

UT11:02: back to the target. **HD52265W2S2W1.2016.11.19.11.04**. 1000, 1495. We record. Fringes ok on CLIMB. Fringes are pistoned and variable. Poor signal on VEGA. W1W2 ok after 10 blocks... Huge piston excursion on CLIMB tracking windows but after that fringes are stable.

UT11:17: we go to cal2, HD49147. **HD52265CAL2W2S2W1.2016.11.19.11.18**. r0 around 3 or 4cm. Very hard time to (not) find the fringes on S2W2. 500,1500 finally but very large motions. Recording on VEGA but poor quality.
(calibration at 700nm →9.44)

V43 Programme W2POP5B2-W1POP1B3 HD50890

UT11h40: last program for the night. We align on the target, NIRO and our pupils. Fringes ok on CLIMB. We shift to the cal (HD46487) for cophasing. offset=1500, BC1=0.18, BC2=-0.13

UT11:54 we go on the cal. **HD50890CAL1W2W1.2016.11.19.11.43**. Fringes ok on VEGA but not very well controlled by CLIMB. Fringes are jumping around... and disappear because no delay on W1. Lost at block 5. Back at block 22. We record up to 40 blocks. r0 close to 5cm. Very poor signal on VEGA. Fringes almost never controlled by FRIEND.

UT12:15: we try the target. **HD50890W2W1.2016.11.19.12.16**. Fringes ok ok CLIMB, better control. offset=1540. Low signal on VEGA but fringes are seen.

UT12:25: realignment of NIRO on the target. Then **HD50890CAL1W2W1.2016.11.19.12.28**. r0 always around 5cm but hard time to find the fringes with CLIMB. Big jumps on CLIMB, poor signal on VEGA.

'Y'a un pic, dit Fred... dans le bruit!'

D_R2720.2016.11.19.04.12.50