Log CHARA/VEGA 2019-08-16

Observers: Fred (VEGA), Nicolas (Report and Coffee**S**) Norm (Mt Wilson)

UTC time:

02:40 Starting Observing Night

S2 POP2 B1, S1 POP1 B2, W2 POP5 B3 (ref) V65 (D. Mourard) – V1143 Cyg

OPD offset: $+150\mu m$ (left), $-300\mu m$ (right)

Target is HD185912 (Prog: V65; PI: D. Mourard)
Cal1 = HD177003
LABAO = HD181276; Check = HD192696

02:11 On the LABAO star

02:15 "I need to run to the lab, back quick, I'll not use lights"

02:21 On the check star

02:44 Fringes locked on CLIMB

02:53 We have S1S2 fringes on VEGA, but not W2S1. We slew to the second check provided (HD147394).

03:11 No fringes at first scan.

03:21 Fringes on CLIMB but "inconsistent". Horrible. We check anyway on W2S1 with VEGA. They probably appear on the "Aigrette", but impossible to move them probably as we lose them with CLIMB.

03:38 Fringes found on Cal 1 but again very weak. CLIMB waterfall is not stable. Cophasing is difficult. Actually, fringes on CLIMB and VEGA are hardly seen. The weather conditions are extremely bad. Seeing dropped from 10 to 5 cm in 2 hours.

03:58 We redo LABAO

04:04 We go again on the check, and indeed we have the fringes after a long time of integration. Fringes are extremely bad. We decide to move to a bright object of V38.

S2 POP2 B1, S1 POP1 B2, W2 POP5 B3 (ref) <u>V38 (A. Salsi)</u>

OPD offset: +150μm (left), -300μm (right)

target = HD 148112 cal = HD152614

HD152614.2019.08.15.05.32

 $S2 = -650 \mu m$

 $S1 = -2420 \mu m$

CLIMB B1 = 7.53

CLIMB B2 = 4.51

20 blocs.

Fringes are nice. The seeing increase suddenly to 8-9 cm!

HD148112.2019.08.15.05.46

 $S2 = -500 \mu m$

 $S1 = -2190 \mu m$

Correct fringes. The third peak is not seen (or in negative!).

HD152614.2019.08.15.05.58

 $S2 = -530 \mu m$

 $S1 = -12260 \mu m$

HD148112.2019.08.15.06.13

 $S2 = -430 \mu m$

 $S1 = -2020 \mu m$

CLIMB_B1 = 7.55

 $CLIMB_B2 = 4.54$

Seeing is not excellent again.

HD152614.2019.08.15.06.27

 $S2 = -400 \mu m$

S1 = -2000µm CLIMB_B1 = 7.53 CLIMB_B2 = 4.52

HD148112.2019.08.15.06.52

 $S2 = -310 \mu m$

 $S1 = -1670 \mu m$

CLIMB B1 = 7.55

CLIMB B2 = 4.55

30 blocs because the fringes are hardly seen.

HD152614.2019.08.15.07.08

 $S2 = -290 \mu m$

 $S1 = -1660 \mu m$

Seeing is better; r0=8cm

D_CMR720.2019.08.15.07.19

Target = HD192640

cal 1 = HD193369

cal 2 = HD191610

labao = HD194093

check = HD198639

07:46 cophasing between CLIMB and VEGA done. To cal 2. 07:50 We find it difficult to find and cophase franges, because of weather conditions? Whatelse?

HD191610.2019.08.15.07.51

 $S2 = -820 \mu m$

 $S1 = -2620 \mu m$

 $CLIMB_B1 = 7.54$

CLIMB B2 = 4.54

CLIMB waterfall is not stable. VEGA fringes (2-3) are not so nice.

"A breeze has come up" . It might explain our problems tonight...

HD192640.2019.08.15.08.03

 $S2 = -780 \mu m$

 $S1 = -2610 \mu m$

30 blocks because the peak 2-3 is extremely weak.

HD193369.2019.08.15.08.22

 $S2 = -770 \mu m$

 $S1 = -2660 \mu m$

30 blocks because the peak 2-3 is extremely weak.

HD192640.2019.08.15.08.37

 $S2 = -650 \mu m$

 $S1 = -2550 \mu m$

30 blocks because the peak 2-3 is extremely weak.

HD191610.2019.08.15.08.54

 $S2 = -470 \mu m$

 $S1 = -2400 \mu m$

CLIMB B1 = 7.58

CLIMB_B2 = 4.58

30 blocks because the peak 2-3 is extremely weak.

D_CMR720.2019.08.15.09.09

Target = HD3360 cal1=HD1976 cal2=HD6676

HD3360.2019.08.15.09.25

 $S2 = -1280 \mu m$

 $S1 = -3300 \mu m$

CLIMB B1 = 7.58

CLIMB B2 = 4.58

Excellent fringes. 3 peaks.

HD1976.2019.08.15.09.46

 $S2 = -1260 \mu m$

 $S1 = -3200 \mu m$

CLIMB B1 = 7.56

CLIMB B2 = 4.56

Fringes are seen. Seeing around 8 cm.

Warning, Chris said that HD1976 is a spectroscopic binary! Be careful when selecting calibrator with SearchCal.

HD6676.2019.08.15.09.58

3 first blocks should be removed. 23 blocks in total.

 $S2 = -1260 \mu m$

 $S1 = -3360 \mu m$

HD3360.2019.08.15.10.11

 $S2 = -1170 \mu m$

 $S1 = -3160 \mu m$

CLIMB B1 = 7.58

CLIMB B2 = 4.58

HD6676.2019.08.15.10.24

 $S2 = -1170 \mu m$

 $S1 = -3260 \mu m$ $CLIMB_B1 = 7.58$ $CLIMB_B2 = 4.58$ 30 blocs because the 2-3 fringes are not so clear

D_CMR720.2019.08.15.10.39

S2 POP5 B1, S1 POP4 B2 (ref) V27 (D. Mourard) OPD offset:

Target is HD 31964 cal = HD32630

HD32630.2019.08.15.10.59

 $S1 = 1690 \mu m$ $CLIMB_B1 = 7.58$ $CLIMB_B2 = 4.58$ Seeing of 8 cm. Nice fringes.

HD31964.2019.08.15.11.10

S1 = 1760µm CLIMB_B1 = 7.58 CLIMB_B2 = 4.58

HD32630.2019.08.15.11.32

 $S1 = 1750 \mu m$

HD31964.2019.08.15.11.43

S1 = $1790\mu m$ 11:23 S1 has reached its limit.

HD32630.2019.08.15.11.54

 $S1 = 1810 \mu m$

HD31964.2019.08.15.12.05

 $S1 = 1830 \mu m$

HD32630.2019.08.15.12.16

 $S1 = 1820 \mu m$

HD31964.2019.08.15.12.27

 $S1 = 1820 \mu m$

HD32630.2019.08.15.12.38

 $S1 = 1800 \mu m$

Good quality for this end of night in general.

D_CMR656.2019.08.15.12.48