

## Log CHARA/VEGA 2019-02-26

Observers: Fred (vegatonaute), Nicolas (co-vegatonaute), Norm  
(charatonaute)

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en UTC:

01:54 We enter the VEGA room.

Initial setting :

- E1 B1 P1
- E2 B2 P2 (ref)
- Target: HD 58715, Program= V72, PI=Klement
- Target is possible as AO and check star
- cal1=HD60357, cal2=HD55185

Additional setting

- S1 B2 P4
- S2 B1 P5
- W2 B3 P5

VEGA configuration

- Bare glass for the tel WFS
- 13% BS for the lab tip/tilt
- LDC on and active
- Pico6 box ON
- CLIMB123 as group delay tracker

02:21 All set

02:30 Alignment on the target

02:40 S slew to cal1

**Program= V72, PI=Klement**  
**E1 B1 P1 E2 B2 P2 (ref) in MR**

Note about first program:

- 2T calibrated V2 measurements in MR spectral mode:
  - S1S2, E1E2
- 2T differential measurements in HR spectral mode (no calibrator):
  - S1S2, E1E2

HD 58715 (bet cmi)  
cal1\_1 - HD 60357 (0.21 mas)  
sci1 - HD 58715 (0.68 mas)  
cal1\_2 - HD 55185 (0.51 mas)

CLIMB\_B1=6.60  
CLIMB\_B2=4.59  
Cons. OPD=+150um

HD60357.2019.02.26.02.50 (cal 1)

E1 3060um

Fringes are very weak on CLIMB, waterfall ugly. But fringes are here. Tracking CLIMB transient (or intermittent). We lost 1/3 of photons between the beginning of recording and the end.

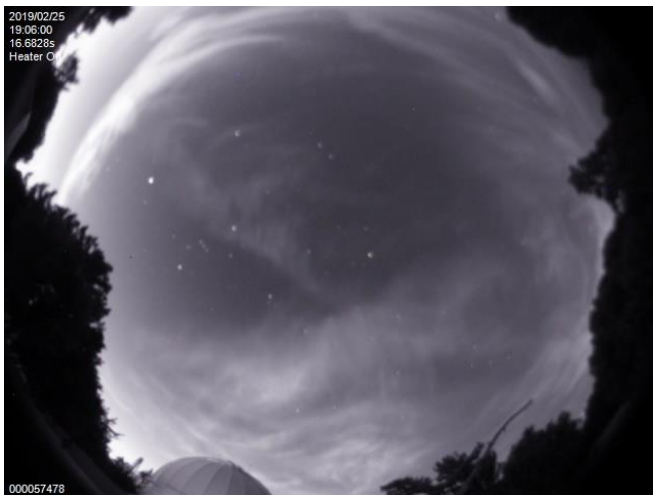
HD58715.2019.02.26.03.03

E1 2950um

Nice CLIMB and VEGA fringes...

R0=8cm

Slew to cal2 HD55185. Thin clouds



HD55185.2019.02.26.03.16 (cal2)

E1 2940um

CLIMB waterfall is nice, VEGA peak is strong.

**HD58715.2019.02.26.03.29**

E1 2920um

Waterfall, very stable. High S/N for VEGA.

03:45 CHARA issue. "E1 cart has stopped, maybe the cable has fouled". Oups!

04:00 "The ribbon was badly fouled"

**HD55185.2019.02.26.04.03 (cal2)**

E1 2890um

CLIMB\_B1 6.63

AH=-0h30

CLIMB rather good. VEGA, good S/N = 28 after 15 blocs.

Crash Control central

**HD58715.2019.02.26.04.18**

E1 2940um

We slew to cal 1, but not way to find fringes with CLIMB. This is probably due to conditions (thin clouds).

**HD55185.2019.02.26.04.46 (cal2)**

E1 2900um

Crash Control central

**HD58715.2019.02.26.05.01**

E1 2950um

**HD55185.2019.02.26.05.12 (cal2)**

E1 2920um

Conditions are still fine for such bright stars in MR.

**D\_CM656.2019.02.26.05.24**

## E1 B1 P1 E2 B2 P2 (ref) in HR

05:25 We are on the target for High spectral resolution.

Checking for fringes.

Cophasing VEGA. Conditions are a bit difficult in HR. But we see the fringes.

**HD58715.2019.02.26.05.44**

E1 2600um

CLIMB\_B1 = 6.30

CONS OPD = 750um

**D\_CHR656.2019.02.26.06.03**

## S2 B1 P5 S1 B2 P4 (ref) in MR

06:15 Alignment with VEGA

06:23 OPLE issue

06:37 Searching fringes with CLIMB.

**HD55185.2019.02.26.06.41 (cal2)**

S2 -580um

CLIMB\_B1=7.28

CLIMB\_B2=4.59

We find out that this cal is replaced by another one in the S1S2 asprox (HD 65900, but we prefer to keep this bright one (HD55185) because of thin clouds.

Fringes with CLIMB are not stable. VEGA fringes are nice.

**HD58715.2019.02.26.06.53**

S2 -640um

Good fringes...

**HD55185.2019.02.26.07.08 (cal2)**

Clouds coming again...

HD58715.2019.02.26.07.22

S2 -700um

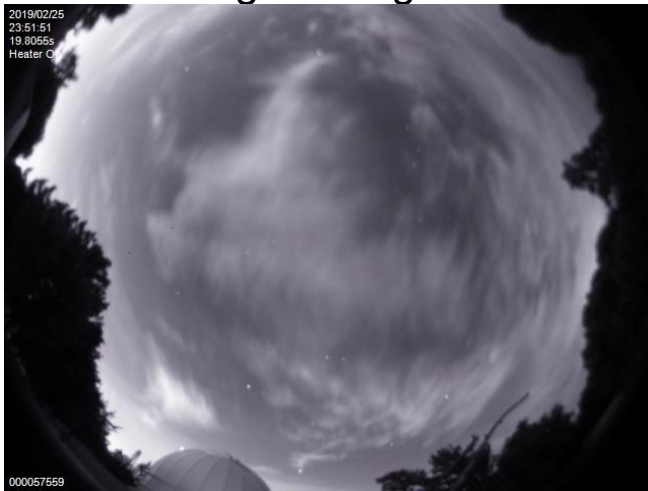
CLIMB\_B1=7.26

HD55185.2019.02.26.07.35 (cal2)

S2 -810um

07:46 zoot have crashed and reboot itself.

08:10 looking for fringes with CLIMB...



HD58715.2019.02.26.08.11

S2 -510um

Nice fringes with CLIMB and VEGA. Thin clouds still. And r0 is variable, around 8-10 cm.

Norm: "We are using the default flats since everything was restarted."

HD55185.2019.02.26.08.25 (cal2)

S2 -730um

D\_CM656.2019.02.26.08.37

## S2 B1 P5 S1 B2 P4 (ref) in HR (at 656nm)

HD58715.2019.02.26.08.46

S2 -1040um

CLIMB\_B1=6.92

Fringes are fine and at the right position CONS OPD 750um.

We put 40 blocs, and the S/N is excellent. CLIMB tracking stable. R0=8cm

D\_CHR656.2019.02.26.09.05

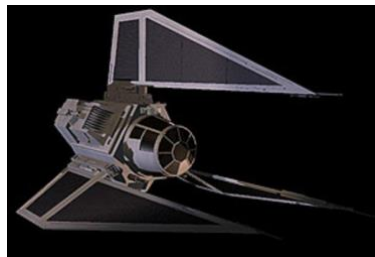
09:51 change of config and program

## V38 - Salsi

E1B1P1- E2B2P2 - W2B3P5

*NB : we wish a good recovery to Anthony and a good V38:*

[https://swfanon.fandom.com/wiki/V38\\_Assault\\_Fighter](https://swfanon.fandom.com/wiki/V38_Assault_Fighter)



Target=89021

Cal1=85795

Check is the target

09:19 aligning NIRO and VEGA

HD89021.2019.02.26.09.35

E1 -1750

E2 -5190

CLIMB\_B1 6.69

CLIMB\_B2 4.66

Good quality, Top Toupet. Good S/N.

HD85795.2019.02.26.09.54

E1 -1960

E2 -5500

Fringes of CLIMB are quite stable.  $R_0=9\text{cm}$ .

HD89021.2019.02.26.10.05

E1 -1980

E2 -5390

We are very short in delay.

Bloc >14 we lost fringes.

We stop on the target.

HD85795.2019.02.26.10.18

E1 -2100

E2 -5590

D\_CM720.2019.02.26.10.2

## V67 - Creevey

E1 B1 P1 E2 B2 P2 (ref)

Target=HD175740, cal1=HD174481, cal2=HD181069

Warning: two calibrators in the asprox are faint with  $K \sim 6.2-6.5$ , which is difficult for CLIMB. Cal1 is fine. We made the mistake to take a check for cal2. But actually cal2 (one observation below), should be quite fine as a calibrator, its angular diameter is *slightly lower than the target's one* (to be confirmed when reducing the data).

HD181069.2019.02.26.10.56

E1 4600

CLIMB\_B1=6.56

CLIMB\_B2=4.59

Warning, this star was not in the original aspro file.

HD175740.2019.02.26.11.07

E1 4240 um

HD174481.2019.02.26.11.22

E1 4020

The waterfall of CLIMB is bad... but the VEGA fringes are here.

11:36 CHARA issue. The servo is stuck... fringes are shifted on CLIMB. Strange. We wait 1-2 minutes and it works again. Norm restarts NIRO computer.

11:45 "climb keeps crashing, blames ople"

HD175740.2019.02.26.11.56

E1 3840 um

HD174481.2019.02.26.12.10

E1 3740 um

The waterfall of CLIMB is bad... but the VEGA fringes are here.

HD175740.2019.02.26.12.22

E1 3670 um

CLIMB fringes stable. VEGA fringes strong. And  $r_0=6\text{cm}$ .

HD174481.2019.02.26.12.42

E1 3620 um

HD175740.2019.02.26.12.54

E1 3500 um

13:05 VEGA issues. Gui frozen

HD174481.2019.02.26.13.12

E1 3490 um

Seeing is dropping a bit  $r_0=5-6\text{cm}$

HD175740.2019.02.26.13.25

E1 3420 um

CLIMB fringes quite unstable. VEGA fringes not so nice.

HD174481.2019.02.26.13.38

E1 3430 um



**D\_CMR720.2019.02.26.13.49**