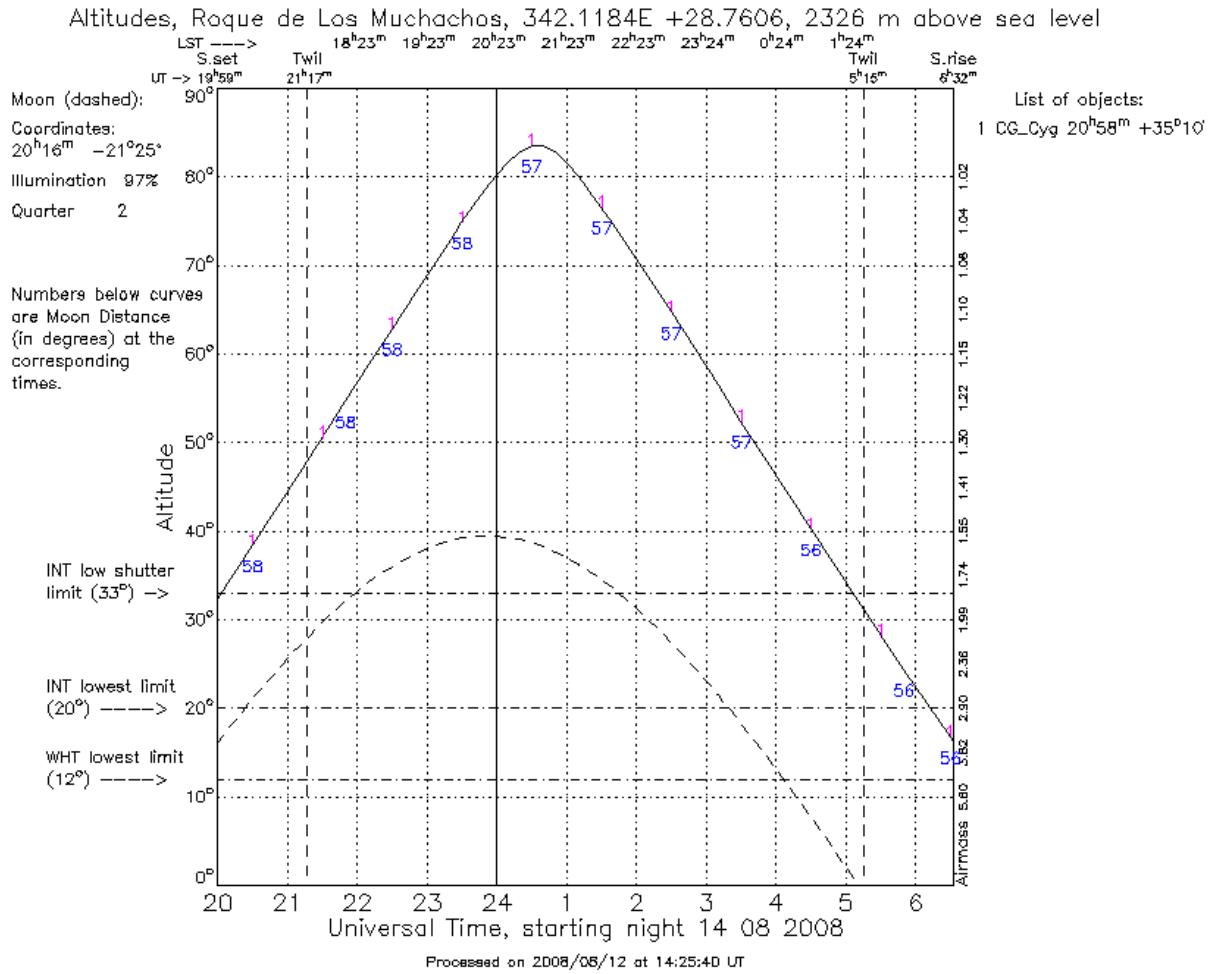
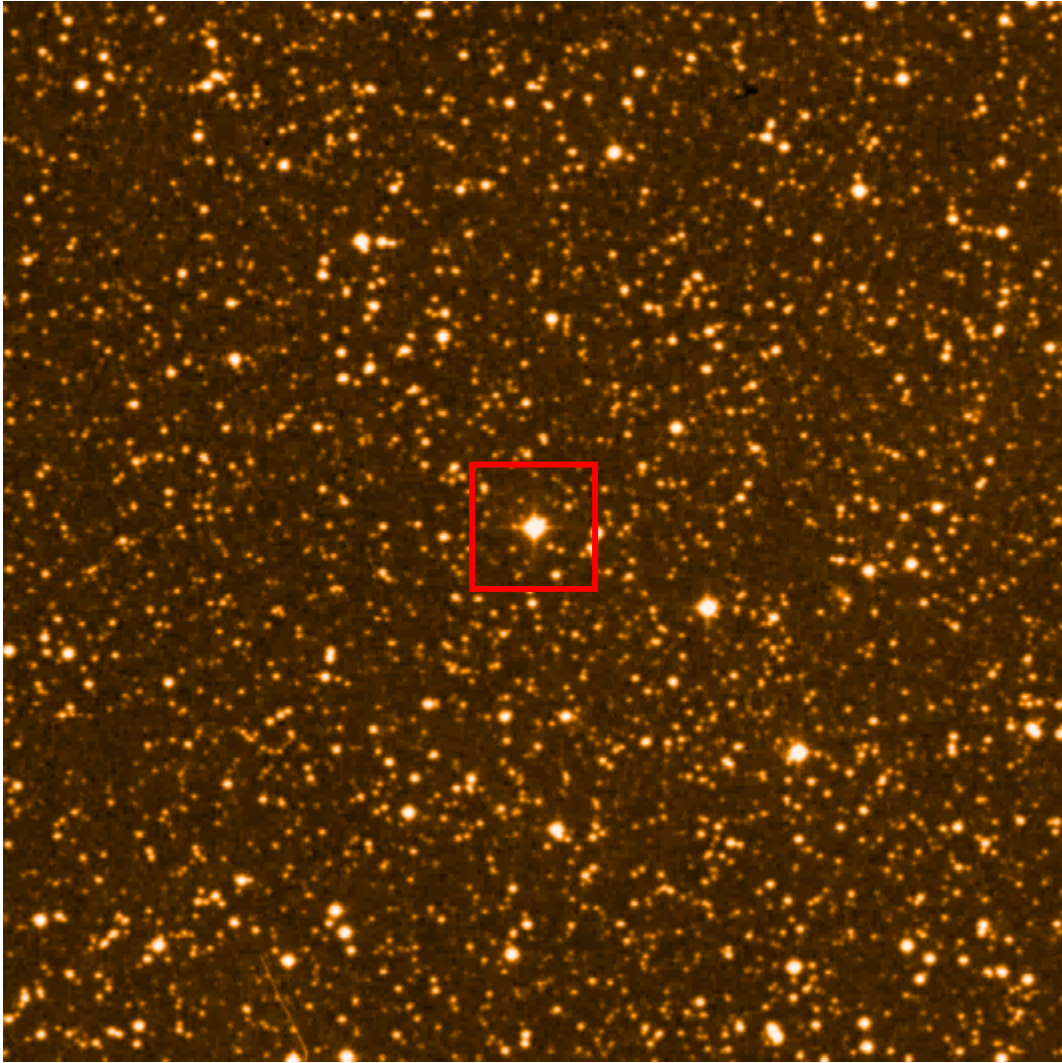


## Proposal 2

**Team:** 3/C  
**Telescope:** NOT  
**Night:** 14<sup>th</sup> of August: 23:00 – 01:00  
**Proposed target:** high-resolution time-series observations of variable star CG Cyg:  
 $V = 9.73$       Period = 0.6311 d;      Amplitude = 1.13 mag  
**Coordinates:**       $\alpha$ : 20 58 13.4525       $\delta$ : +35 10 29.658





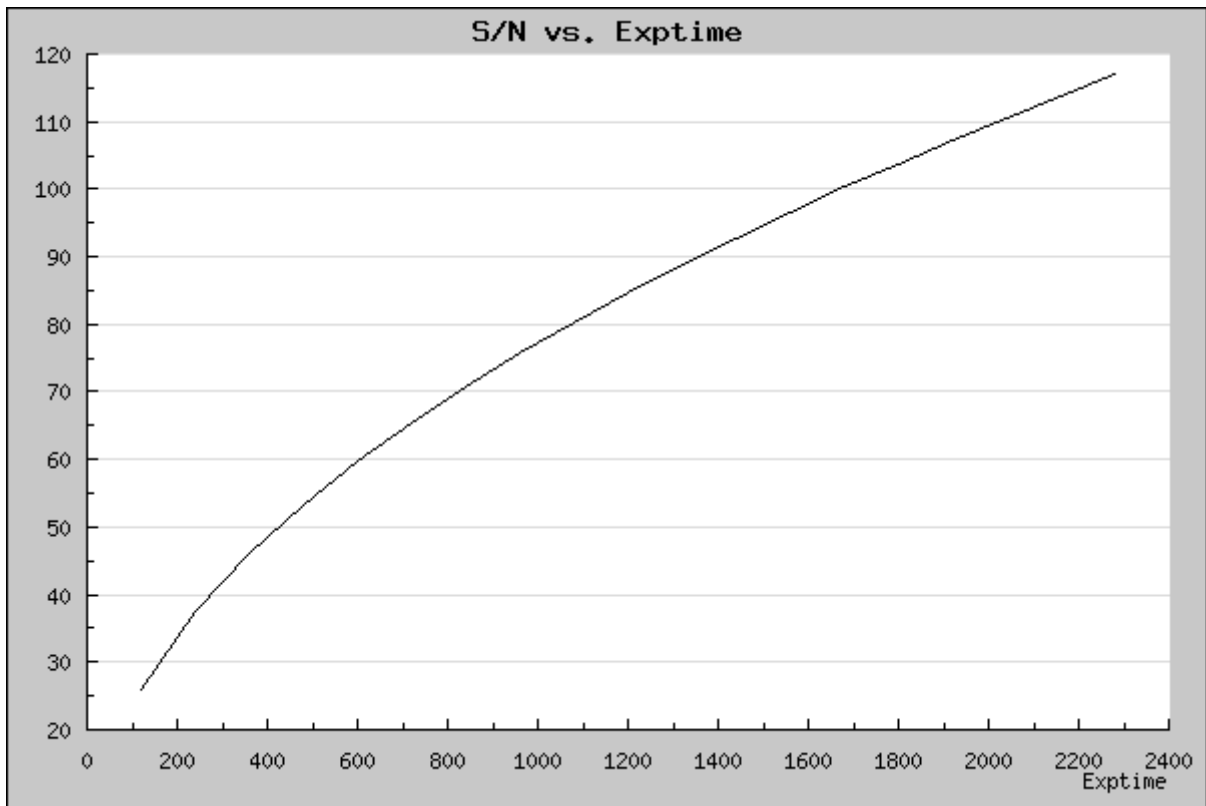
**Window size:** 15" x 15"

S/N ~ 84 @ 1200 sec, FIES high-res spec., V#75 Band

Air mass = 1.4

Extinction = 0.1

Sky brightness G



$\sigma(n) = 0.04$  mag

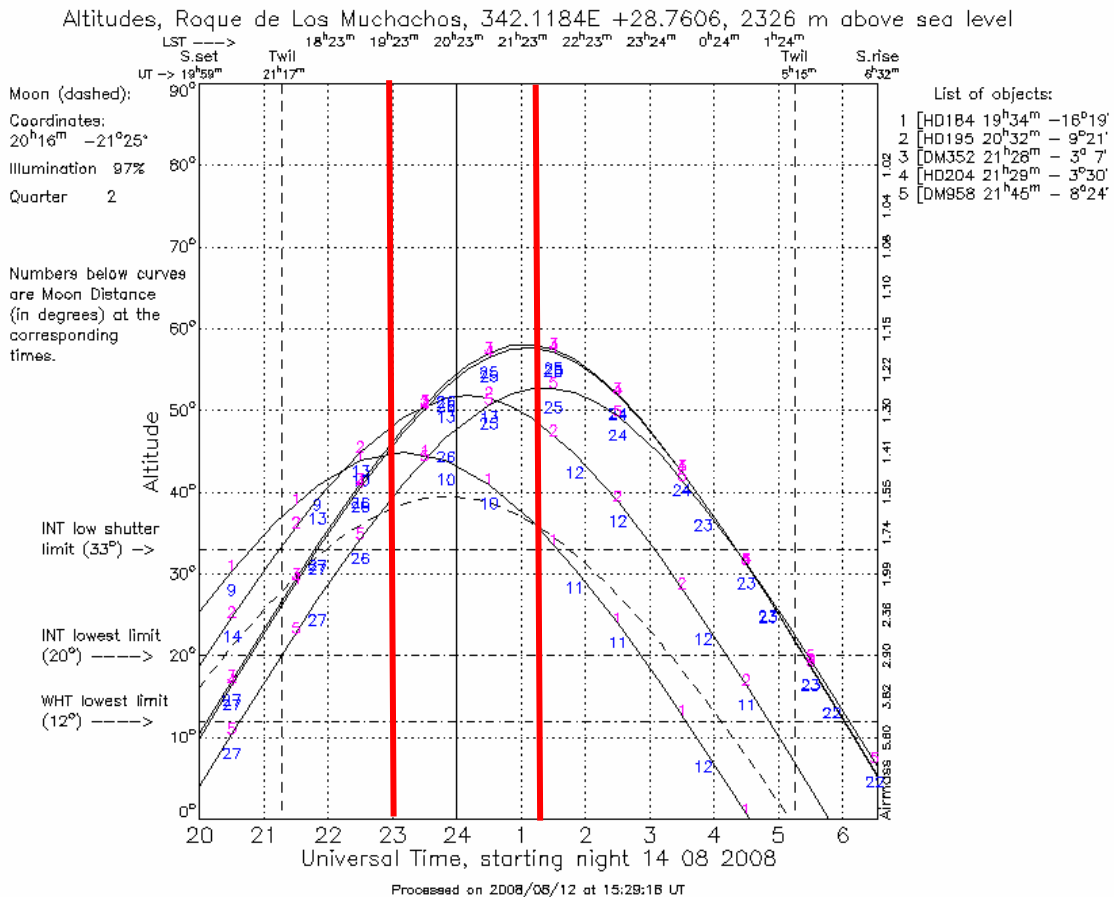
$\sigma(a) = 0.004$  mag

**Team:** 4 / D  
**Telescope:** NOT  
**Night:** August 15, 2008 (23:00 – 2:00 EET)

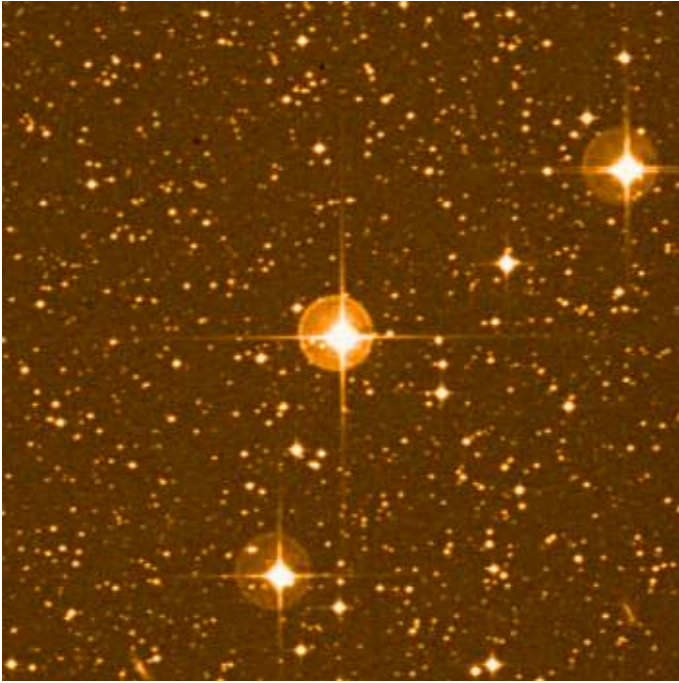
**Proposed targets:** FIES spectroscopy –High dispersion of:  
 [HD184266] V=7.57 exp= 1500 (s) for ~S/N 200  
 [HD195636] V=9.57 exp= 8000 (s) for ~S/N 200  
 [DM-3.5215] V=10.13 exp= 13000 (s) for ~S/N 200  
 [HD204543] V=8.6 exp= 2500 (s) for ~S/N 200  
 [DM95831] V=9.50 exp= 16000 (s) for ~S/N 200

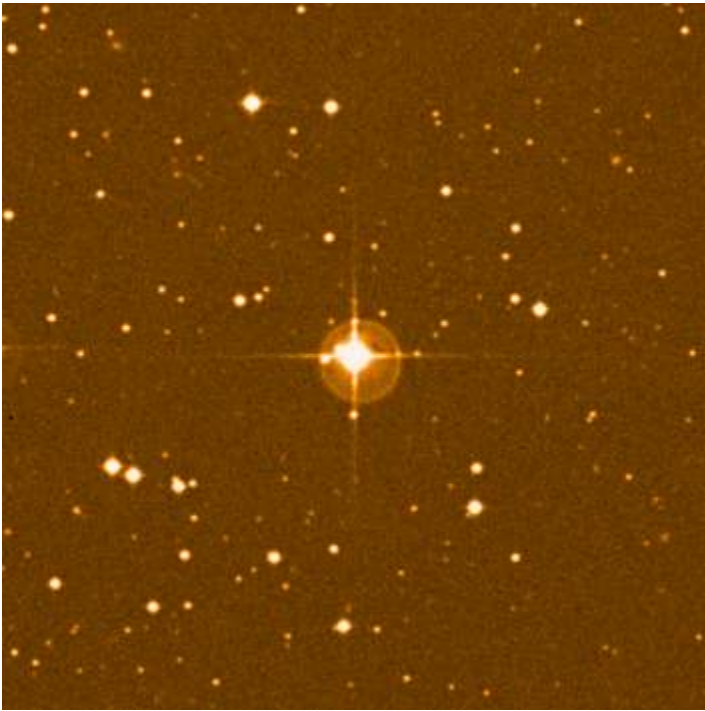
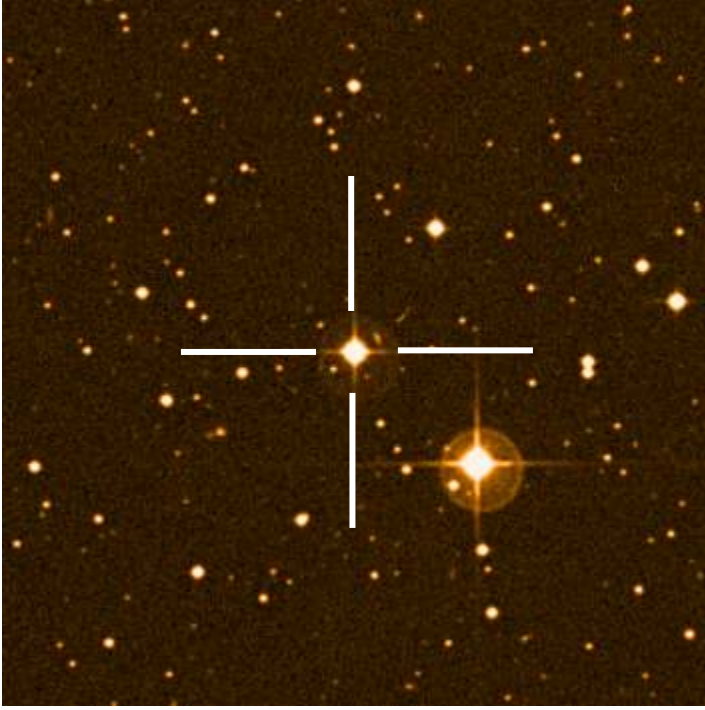
**Coordinates:**  
 19 34 15.3 -16 19 00.2  
 20 32 48.9 -09 21 51.7  
 21 28 01.3 -03 07 40.9  
 21 29 28.2 -03 30 55.3  
 21 45 30.5 -08 24 35.2

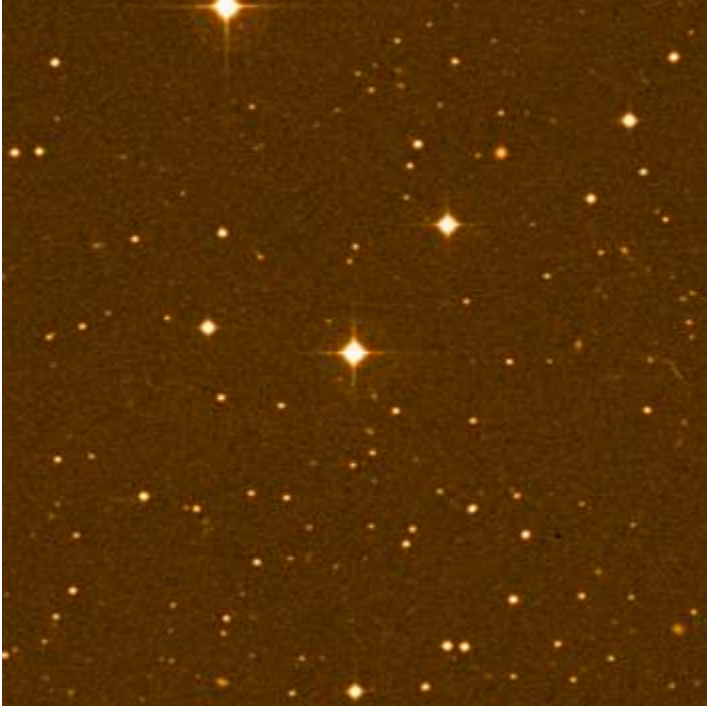
**Visibility chart:**



Finding chart:







Team: 5/E

Telescope: NOT

Night: 15<sup>th</sup> Aug, 23-02

Proposed targets: RHB stars

**BD112998 16 30 16 +10 59 51 V=8.87**

**HD150875 16 43 56 -02 37 51 V=8.22**

**BD173248 17 28 14 +17 30 35 V=9.17**

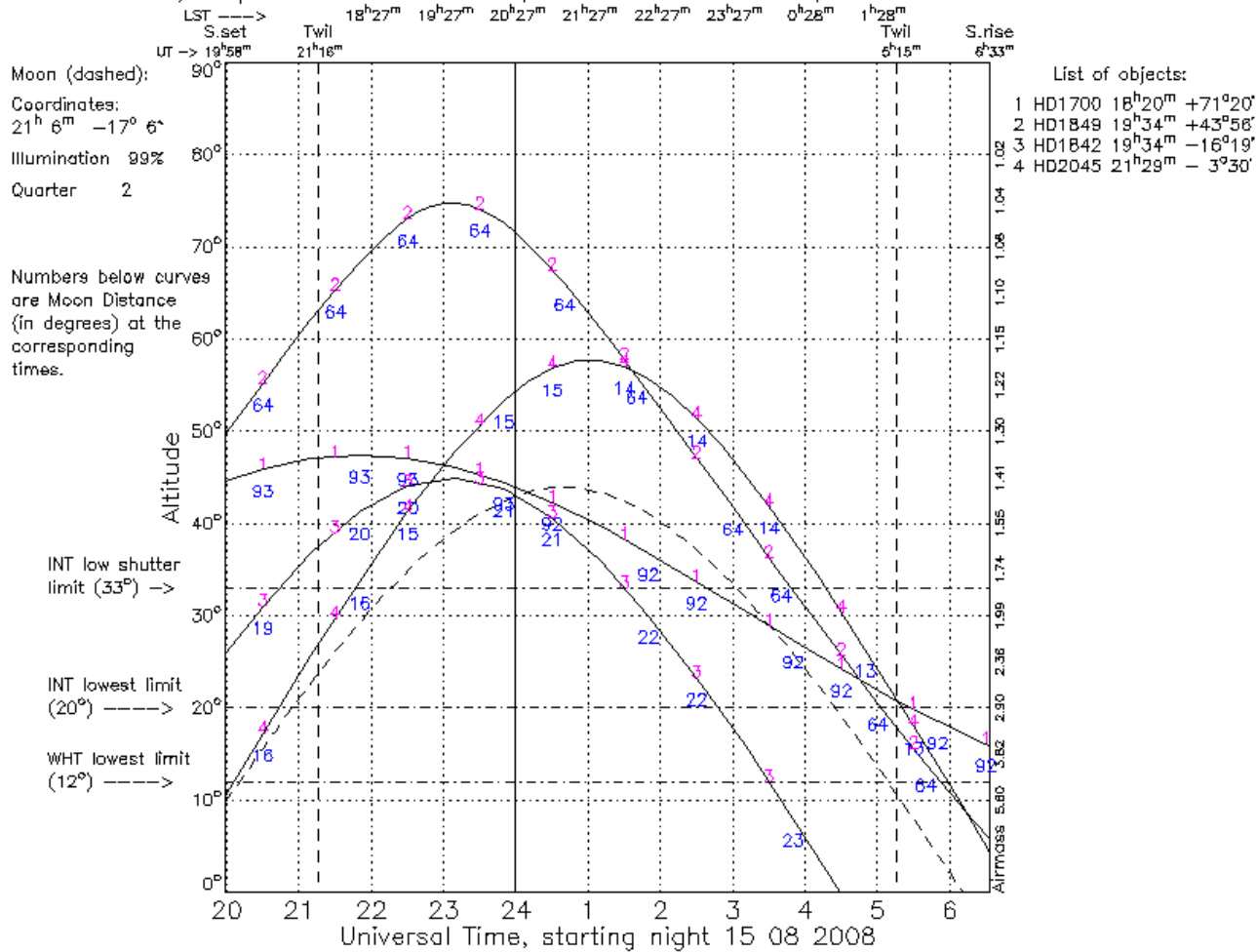
**Team:** 6 / F  
**Telescope:** NOT  
**Night:** 15. August 02:00 - 04:15

**Proposed target:** Doppler imaging of:  
HD 170000 V: 4.22 2min S/N~300  
HD 184905 V: 6.62 10min S/N~ 230

Spectroscopy of RHB & EAGB:  
HD184266 V: 7.59 1600s S/N ~200  
HD204543 V: 8.28 50min S/N ~200

**Coordinates:** HD 170000 18 20 45.4304 +71 20 16.132  
HD 184905 19 34 43.9292 +43 56 45.080  
HD184266 19 34 15.3 -16 19 00.2  
HD204543 21 29 28.2 -03 30 55.3

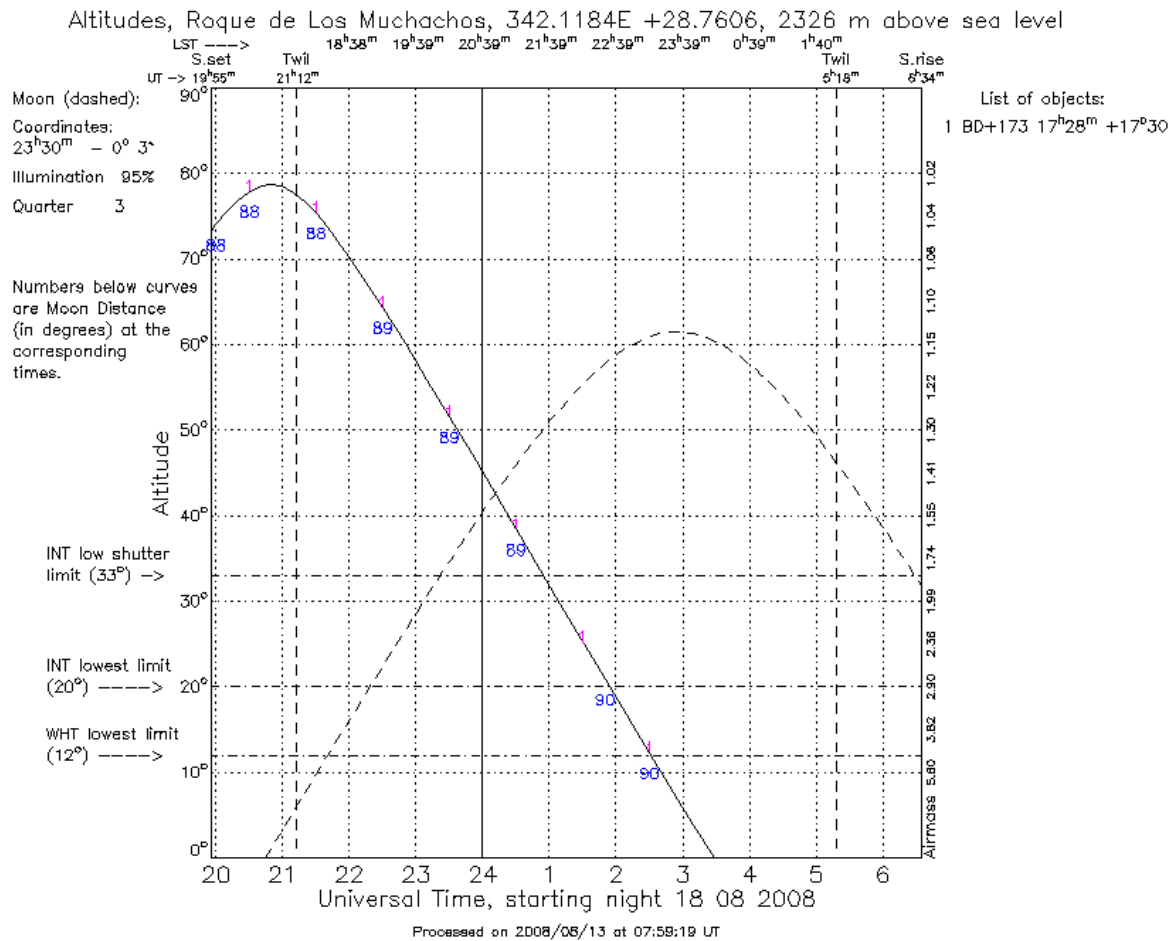
Altitudes, Roque de Los Muchachos, 342.1184E +28.7606, 2326 m above sea level



Team: 7/G  
 Telescope: NOT (Nordic Optical Telescope)  
 Night: August 18, 2008 , 23 – 02 Moletai Local Time  
 Proposed target: BD+17 3248 (HIC 85487)  
 V = 9.37 , Parallax = 3.67 mas , Spectral type = G0  
 $\sigma(a) = 0.009$  , SNR = 150 (with the Exp. Time = 3000 sec in V band)

We proposed to observe the metal-poor halo star BD+17 3248 which has been classified as a Red Horizontal Branch (RHB). Cowan et al. (2002, ApJ, 572, 861) has been noted the large n-capture elements to iron for this star with a large overall [Fe/H] metallicity. High resolution spectroscopy of this star is proposed to re-study of these large n-capture overabundances.

Coordinates of object: R.A.: 17 28 14.4702 , Dec.: +17 30 35.844



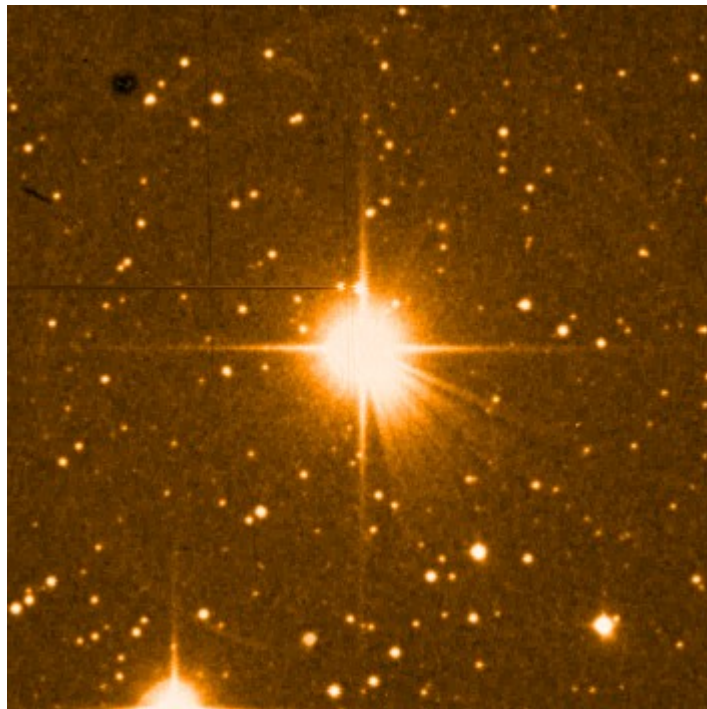
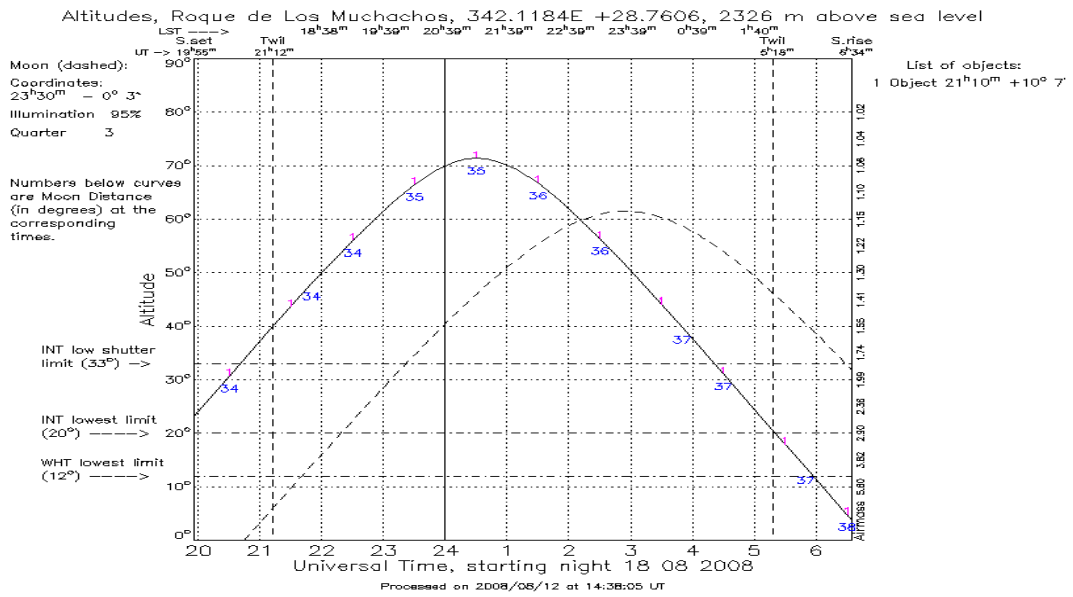
Team: 8/H

Telescope: NOT

Night: 18. august 02-4.15

Proposed target: HR 8097

Coordinates: 20 08 50.4194 +48 54 39.423



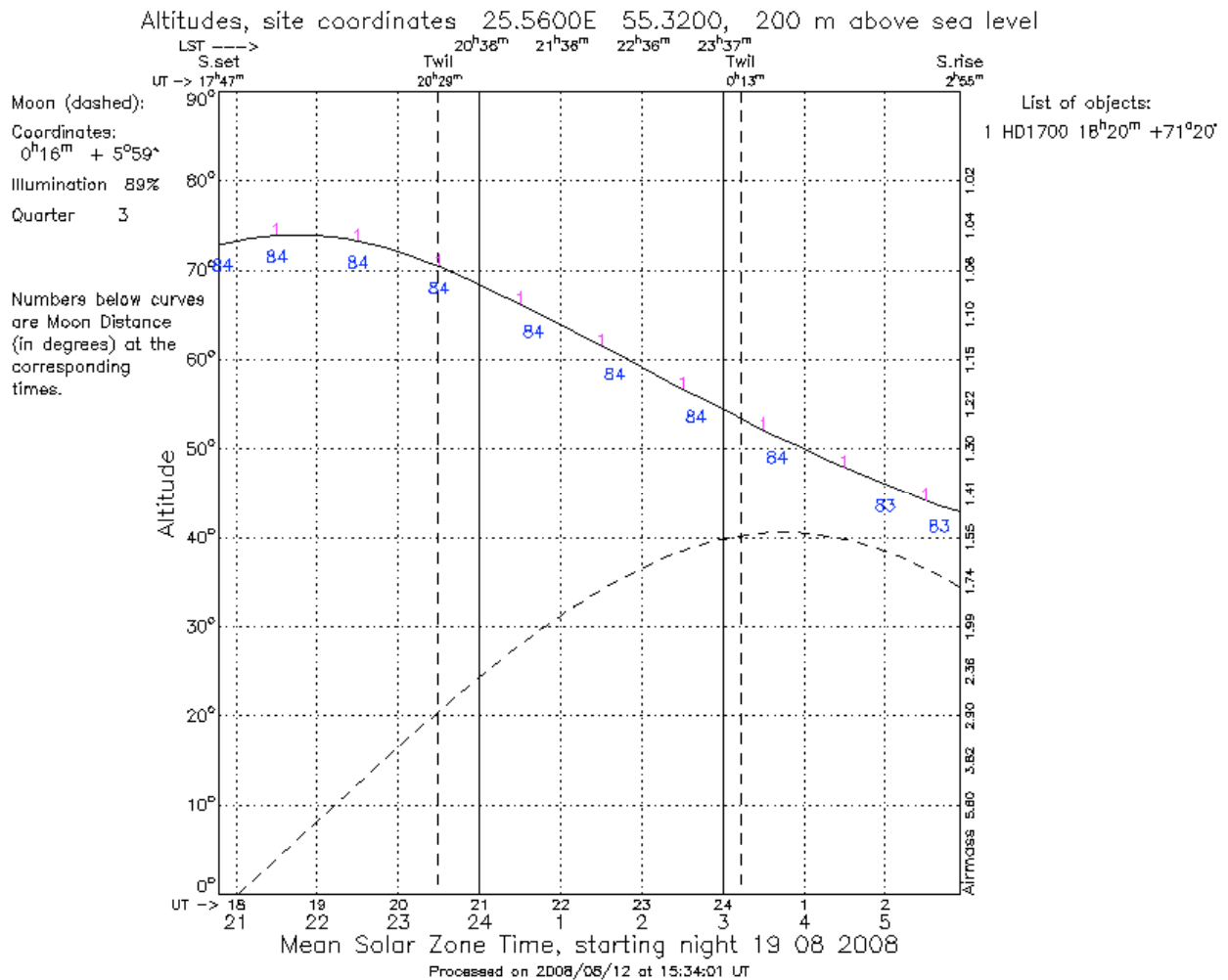
**Team:** 9/I

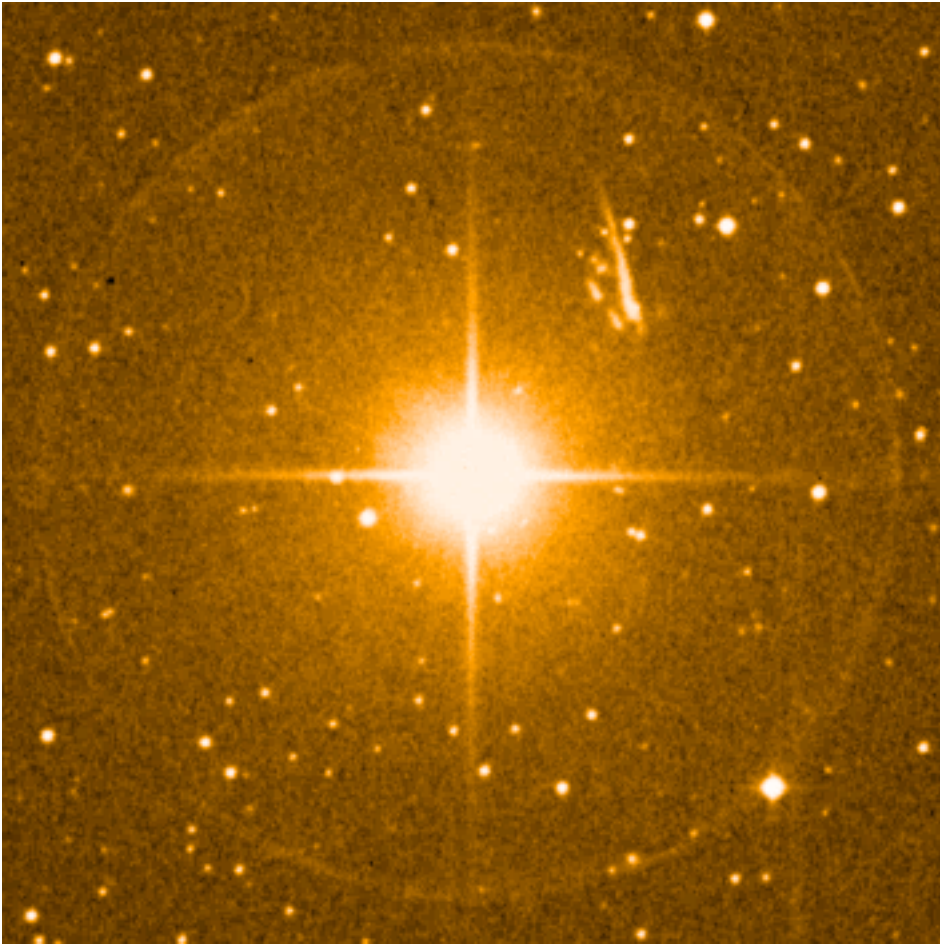
**Telescope:** NOT

**Night:** 19 August: 23:00-02:00

**Proposed target:** Doppler imaging of HD 170000  
V=4.22  
An exposure time of 60 sec gives a SN~200  
in High-res mode

**Coordinates:** 18 20 45.4304 +71 20 16.132





10x10 arcmin

**Team:** 10 / J  
**Telescope:** NOT  
**Night:** 19 August: 02:00 - 04:15  
**1<sup>st</sup> target:** 02:00 - 03:00  
**2<sup>nd</sup> target:** 03:10 - 04:15

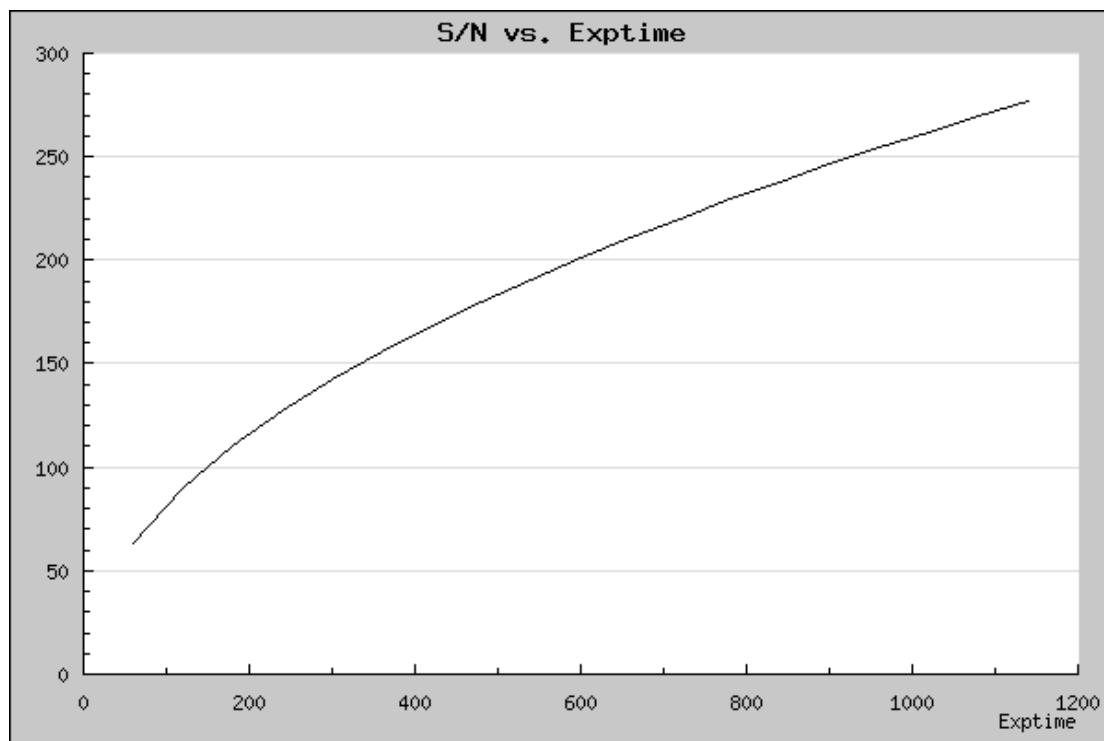
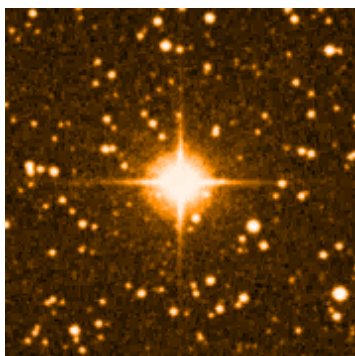
**Proposed target:**

**1<sup>st</sup> target: Doppler Imaging (spots) of Ap stars:**

HD 184905

V = 6.62 mag

$\alpha$ : 19:34:43.9  $\delta$ : +43:56:45.0



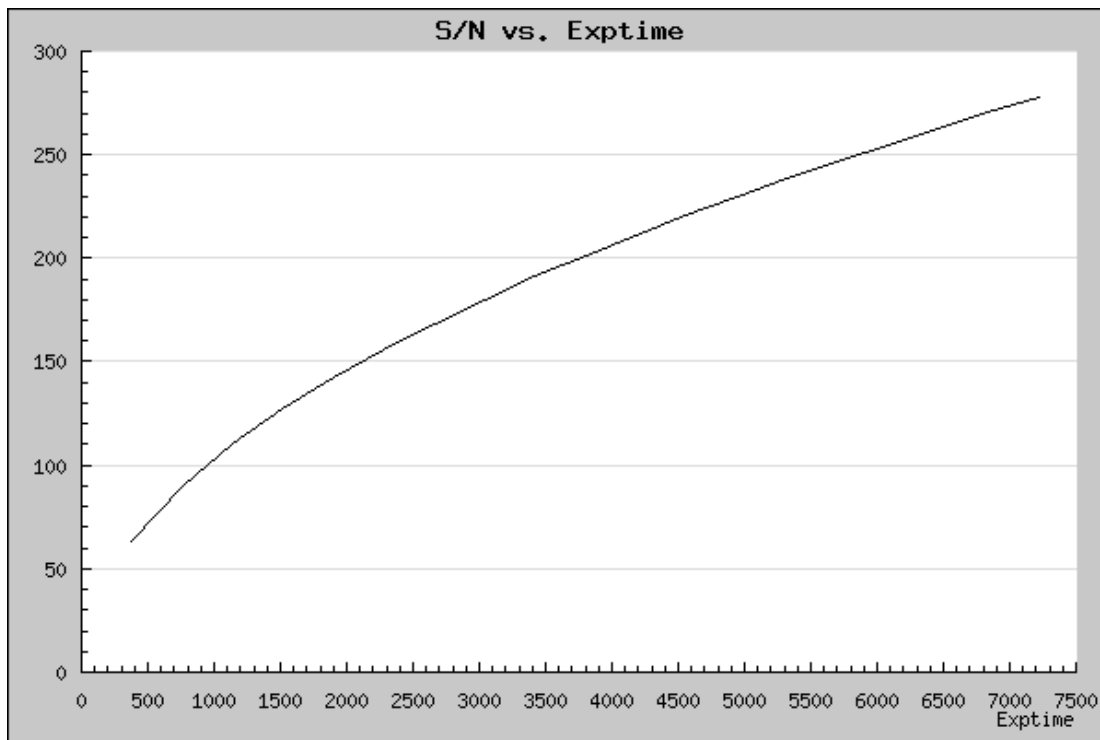
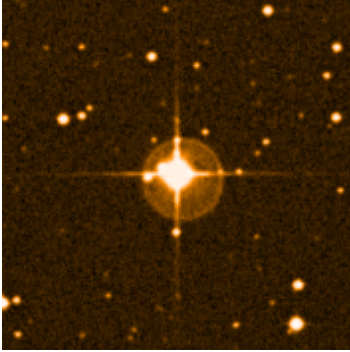
SNR calculator results for 184905.

**2<sup>nd</sup> target: Red Horizontal Branch (RHB) and Early Asymptotic Giant Branch (EAGB) used to study effects of evolution:**

HD 204543

V= 8.60 mag

$\alpha$ : 21:29:28.2  $\delta$ : -03:30:55.3



SNR calculator results for HD 204543

**HD 184905**

Airmass = 1.3

FIES High resolution

Band = R#76 (6500A)

Exposure Time = 600 s

V = 6.6 mag

**HD 204543**

Airmass = 1.3

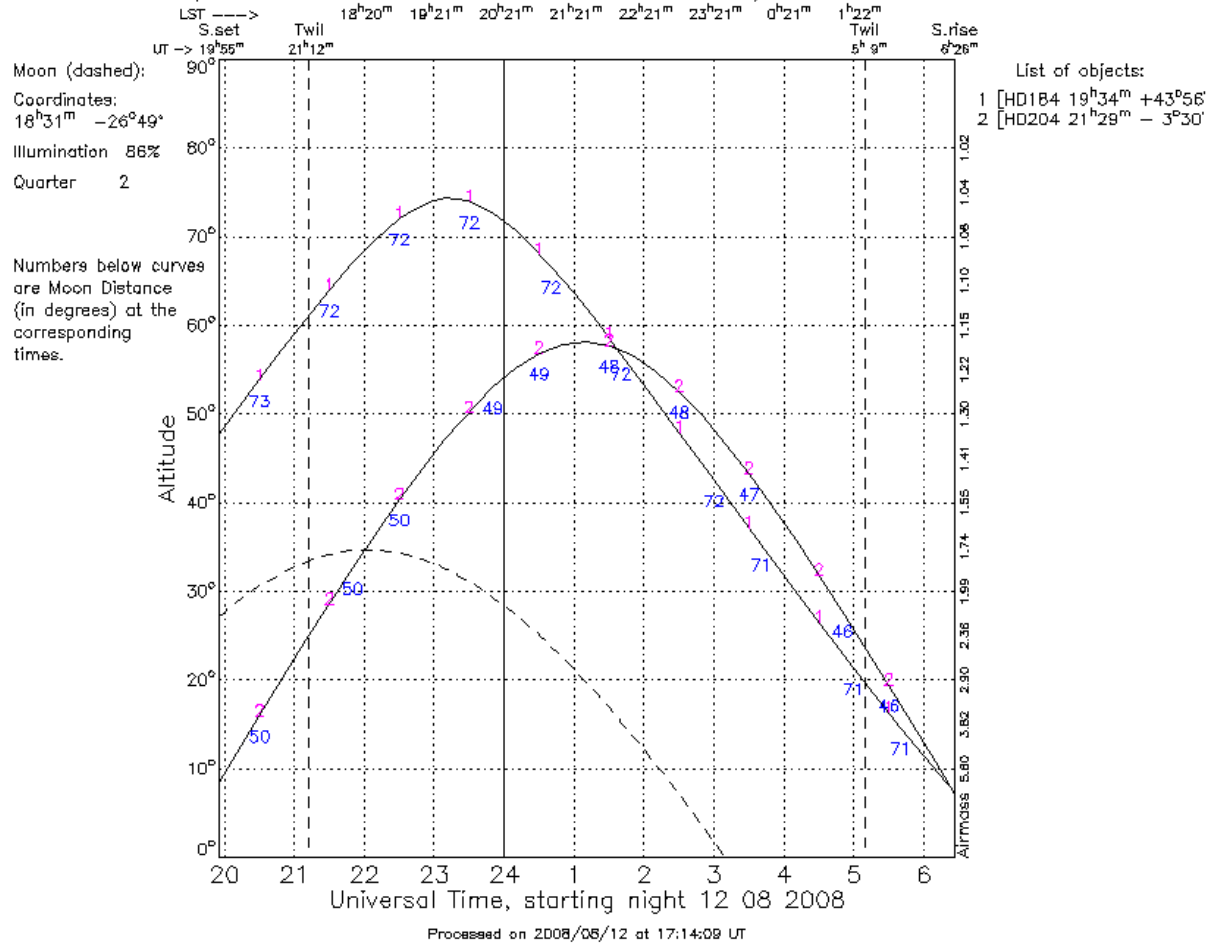
FIES High resolution

Band = R#76 (6500A)

Exposure Time = 3800 s

V = 8.6 mag

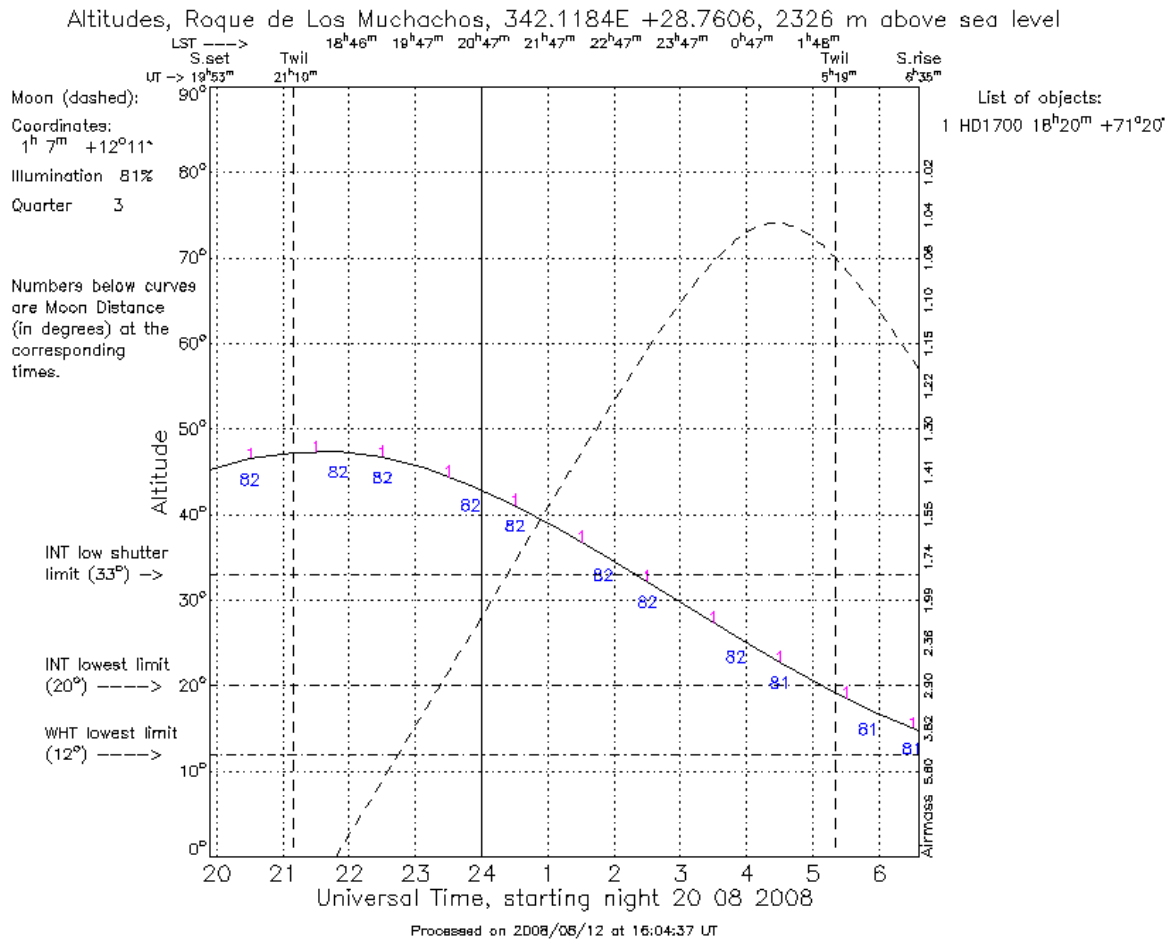
Altitudes, Observatorio de Izaña 343.5033E +28.2917, 2395 m above sea level



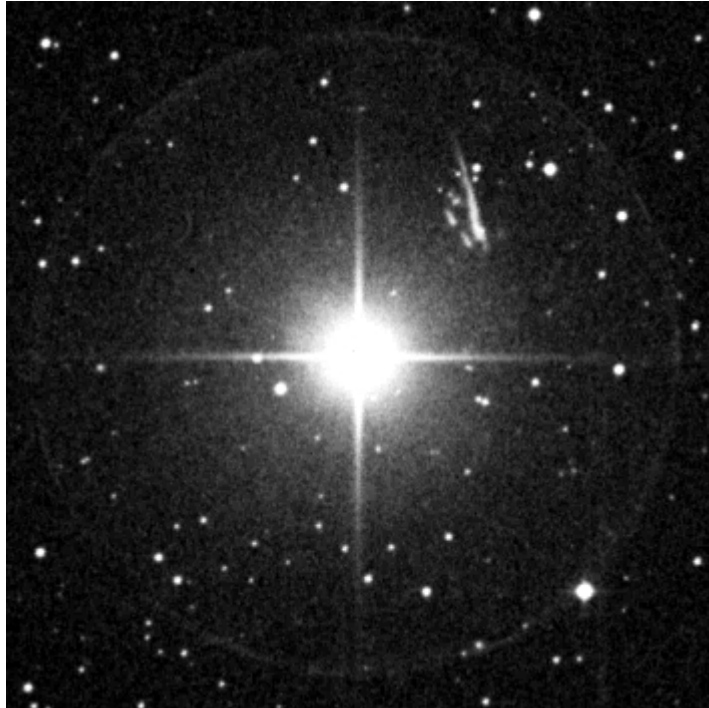
**Team:** 2/B  
**Telescope:** NOT  
**Night:** 20 August: 23:00 - 02:00

**Proposed target:** Doppler imaging of HD170000  
 V=4.2

**Coordinates:** 18 20 45.43 +71 20 16.132



Finding chart: N up, E left



**Group 1:**

**Wednesday 20, 02:00 – 04:15**

**Eclipsing Binaries if possible**

# Proposal for observing time with NOT

Eugene Zakharov and Thomas Amby Ottosen  
– Team: 1/A –

August 13, 2008

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**Telescope:** NOT

**Night:** 20.08.08

**Topic:** Eclipsing Binaries

1. BD And (11.30 [mag])

2. AB And (9.50 [mag])

**Period:**

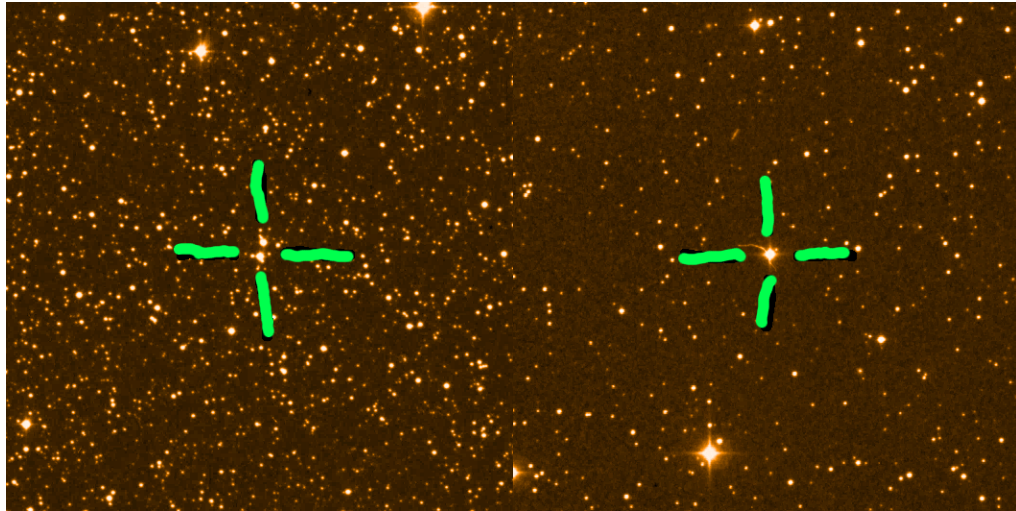
1. 0.4629 d

2. 0.3319 d

**Coordinates:**

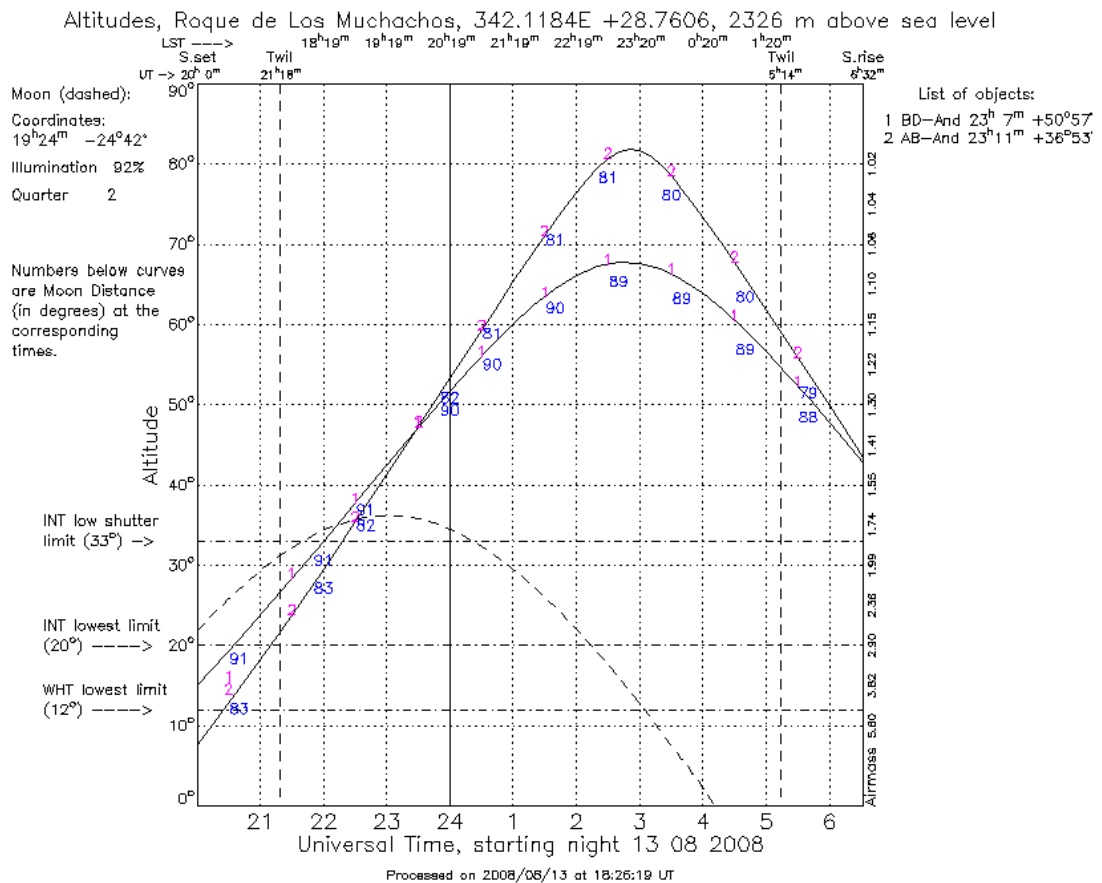
1. **BD And**  $\alpha_{2000} = 23\ 07\ 05$   $\delta_{2000} = +50\ 57\ 31$

2. **AB And**  $\alpha_{2000} = 23\ 11\ 32$   $\delta_{2000} = +36\ 53\ 35$



(a) BD And

(b) AB And



(c) Visibility plot