Preparations for observations at the summer school

- General introduction

What do you need to prepare / decide before the observations start tonight ?

- Suggestions and description of possible projects to carry out

- 63 cm telescope projects
- 1.65m telescope projects
- SONG projects
- NOT projects

- WORK !

General Considerations

- What do you wish to observe (and why) ?

- the science
- objects ?

- Which instruments are available ?

- observing time applications...

- imaging
    - Filters, Spatial resolution, S/N needed

- spectroscopy
    - Spatial resolution, Spectral resolution, S/N

- remember calibrations... what do you need (bias, flats....)

When and from where can your target be observed ?

- time of year
- time critical (eclipses... outbursts.....)

What should you prepare / investigate for the coming obs.?

CHECK the archives !! (ESO, ... others). Has this been done ?

- Coordinates (Ra, Dec.... proper motion!)

- Finding charts

  Use: **aladin.u-strasbg.fr/aladin.gml**

- Visibility plots

  Use: **www.not.iac.es/observing/forms/visibility**

... where is the Moon ?

How much obseving time do you need ?

- Use Exposure Time Calculator (ETC)

  NOT+FIES:

http://www.not.iac.es/observing/forms/signal/v2.2/index.php

- ESO has an extensive collection of ETCs

- Alternatively:

 Star with V=0 provides

1000 photons per second/cm²/Å outside the atmosphere

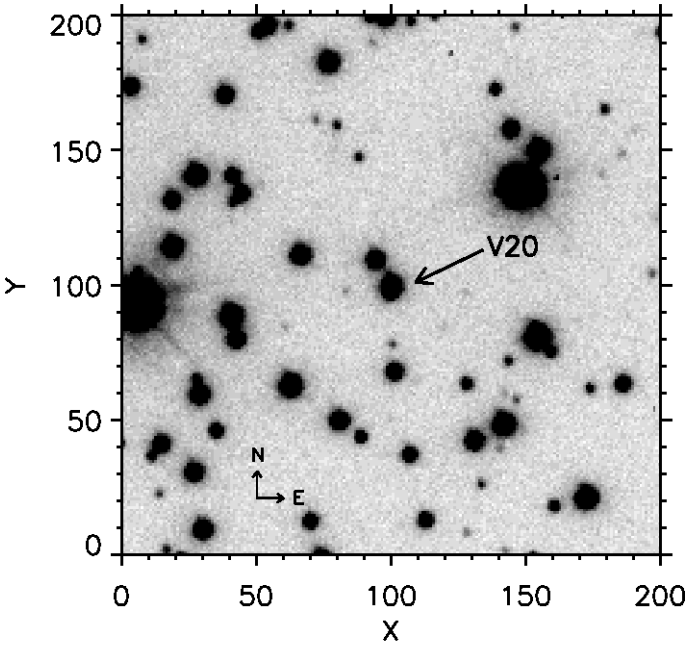
Object: β Aql

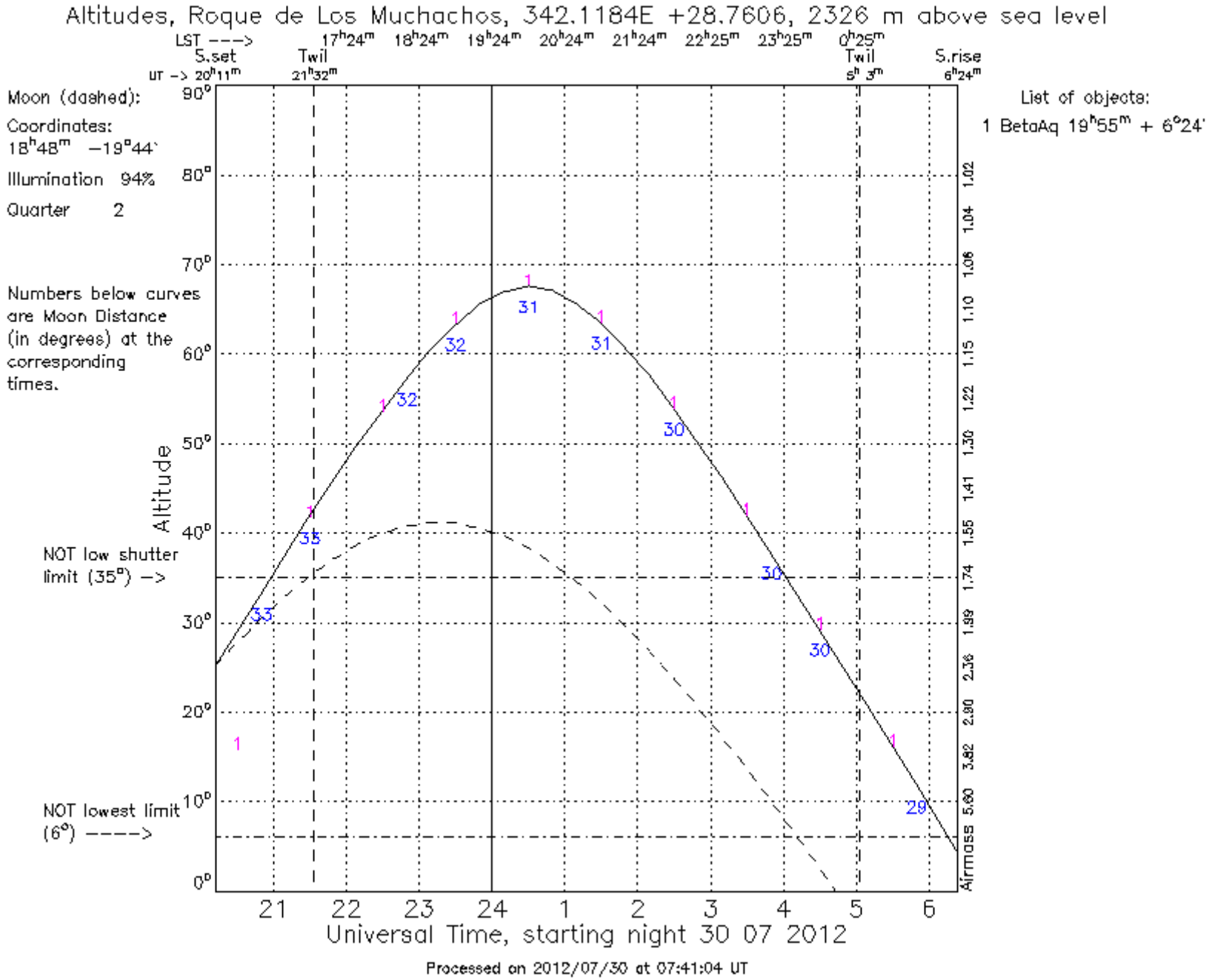
(α, δ) = (19 55 18.8 ; +06 24 24)

Vmag = 3.71

Culmination on July 30, 2012: 00:30 (UT)

Finding chart:




Altitudes, Roque de Los Muchachos, 342.1184E +28.7606, 2326 m above sea level
LST ---> 17h24m 18h24m 19h24m 20h24m 21h24m 22h25m 23h25m 0h25m
S.set Twil Twil S.rise
UT -> 20h11m 21h32m 5h 3m 6h24m
Moon (dashed):
Coordinates:
18h48m −19°44'
Illumination 94%
Quarter 2
Numbers below curves are Moon Distance (in degrees) at the corresponding times.
NOT low shutter limit (35°) ->
NOT lowest limit (6°) ---->
List of objects:
1 BetaAq 19h55m + 6°24'
Altitude
90° 80° 70° 60° 50° 40° 30° 20° 10° 0°
Airmass 1.02 1.04 1.06 1.10 1.15 1.22 1.30 1.41 1.55 1.74 1.99 2.36 2.90 3.82 5.60
21 22 23 24 1 2 3 4 5 6
Universal Time, starting night 30 07 2012
Processed on 2012/07/30 at 07:41:04 UT

Possible SONG projects

1) Abundances of bright stars in the Kepler (and other) fields

2) roAp stars (two possible, γ Equ and β Cor Bor)

3) Exoplanet radial velocity

4) The effects of spectral resolution on abundance determinations

5) Measuring the SONG efficiency

.... we suggest to not use the iodine cell (complex data reduction)