

CoRoT Two: 2010 2012



For the two components of the Core Programme

Double need

-Increase the total duration of an observation

-- Increase and extend the sample





Cooler solar like stars



Ex: 175726 on a long run

Few other candidates in the eyes

Amplitudes are very different

Due to luminosity or metal content ?





Solar like









Subgiants



Ex: HD 57006 A Hare and Hounds target

Several other candidates



Blue supergiants



Evolved massive stars with mass loss Already observed from the ground

HD 52382 B1lb HD 51360 B7 III 5 5 others



Another young open cluster

NGC 2244: a sister of NGC 2264 (Rosetta association)

 $\alpha = 06:31:55$ $\delta = +04 56 30$

diameter: 30 arc minutes

Distance : 1450 pc

Age : 8 10**6

500 stars V<14





Increase the statistics of the classes

Many stellar parameters: Teff, L, Fe/H, age --> large number to map the parameter space

Opacity driven pulsators



Giants





Reobserve promissing objetcs

Analogues solaires

Be star with burst !



L'augmentation de la durée d'observation rend plus fiable le « fit » et l'identification des modes necessaire pour l'interprétation voir HD 49933



IRa01+LRa01



IRa01



The exoplanet hunting

First results on 2 LR and 1 SR ?: Hot jupiters with extreme properties A very small Super-Earth (R~1.7 Rearth) No Neptunes

No Jupiters in faint stars



Increase the statistics in the present domain

Observe new fields, well selected Optimised for solar type stars (FGK dwarfs-



More jupiters, large masses, large radii, different host stars A few more small ones

Neptunes?

Are 150 days needed, or are 80 days sufficient?



Extend the present domain

Reobserve the same field 2 or 3 times



* Increase the number of transits So S/N for very small planets

> * Better sensitivity to longer periods

* Candidates with few transits

* Multiple systems

_ Planets in biaaries

* Timing and TTV



150 or 75 days

1 run of 150 days or 2 runs of 75 days?

Number of candidates : x2

Detection \geq 90%

Total gain 1.8



But detailed analysis needs how many transits?



Optimisation of the signal

Optimisation of the parameters of the onboard software

Improvement of the corrections

-Jitter ?

- Multiplex effects
- imagettes.



Optimisation of the fields

Proposition: keep the two objectives at the same level of priority Does this need a discussion?

Same as before : compromise

Are there still fields sufficiently good for the two objectives? Evaluate <u>for exo</u> the fields around the new proposed sismo targets

•separate optimisation

- some optimised for seismology
- some optimised for exo (ex LRc03)



A possible scenario

Reobserve the same field 2 or 3 times in one eye

Observe new fields in the other eye



To be precisely Documented

For the end of this month!

