

To limit the number of ambiguities in planet detection

⇒ A good characterization of the stellar population is needed

Proposition : complete the preparatory observations with multi-fibers spectroscopic observations

Interest :

- ★ Derive star's physical parameters : T_{eff} , $\log g$, $[X/H]$, $v_{\text{sin}i}$, activity, binaries...
- ★ Shorten reaction time lag in the follow-up
- ★ Prepare the grounds for the statistical analysis of planetary systems properties.

HD 49434 & HD49933

Dwarfs : 75 % to 81% - Targets : 60% to 72%

TARGET = a star with contamination $\leq 10\%$

R < 14 targets : 3261 with 2489 dwarfs

14 \leq R < 15 targets : 3057 with 2422 dwarfs

15 \leq R < 16 targets : 4837 with 3829 dwarfs

Total for a typical exo-field (2 CCD) :

6 318 targets with 4911 dwarfs R < 15

11 155 targets with 8740 dwarfs R < 16

HD 181555

Dwarfs : 45% to 60%

Targets : ~30% to ~50%

R < 14 targets : 3316 with 1238 dwarfs

14 \leq R < 15 targets : 3050 with 1332 dwarfs

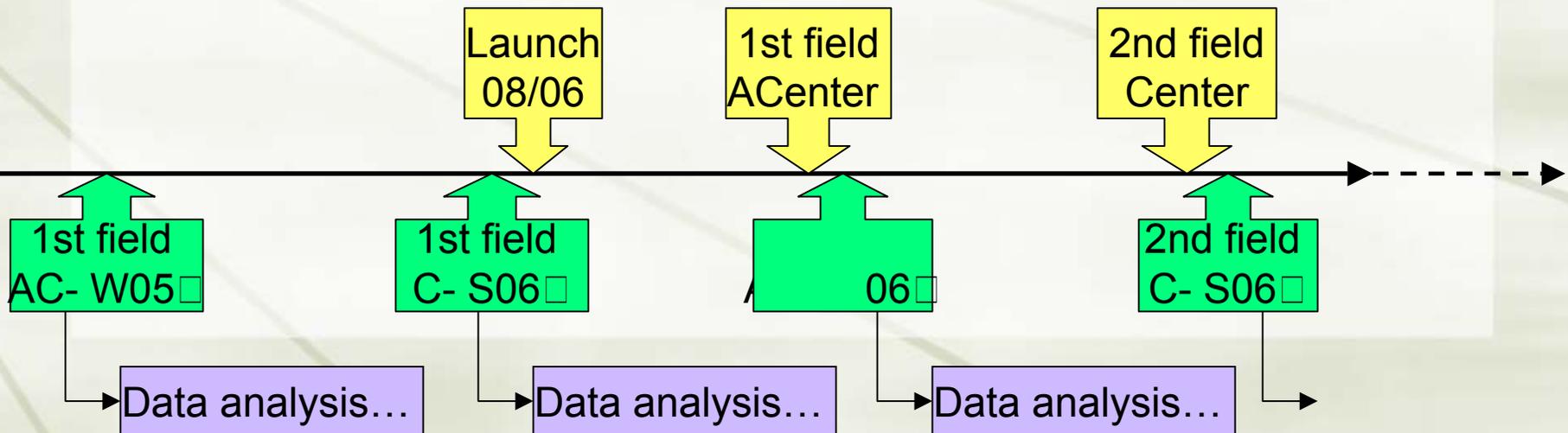
15 \leq R < 16 targets : 3316 with 1744 dwarfs

Total for a typical exo-field (2 CCD) :

9682 targets with 4314 dwarfs R < 16

Multi-fibers observations: proposed strategy

- ★ UVES/VLT medusa mode : 130 fibers - ~30 arcmin
- ★ Pre-selection of **5000** targets ($R < 15$) among the dwarfs
Identified from the photometric spectral classification
5000 stars = 1 exo-field (2 CCD)
- ★ $R \sim 27\,000$ - two spectral windows - binaries identification
5 nights per field: 1 field per semester
- ★ Automatic spectral analysis to derive physical parameters -
under test





An official negotiation with ESO is starting ...

The CoRoT Exoplanet Program will request
at least 5 nights per semester during 2 years 1/2 on
UVES/VLT - Giraffe

Support/coordination with members of the additional
programs who intend to use the exoplanet channel is
welcome !

To be discussed :

- ✦ Who wants to participate to the scientific justification
 - ✦ the number of nights
 - ✦ the spectral range(s)
- > email list



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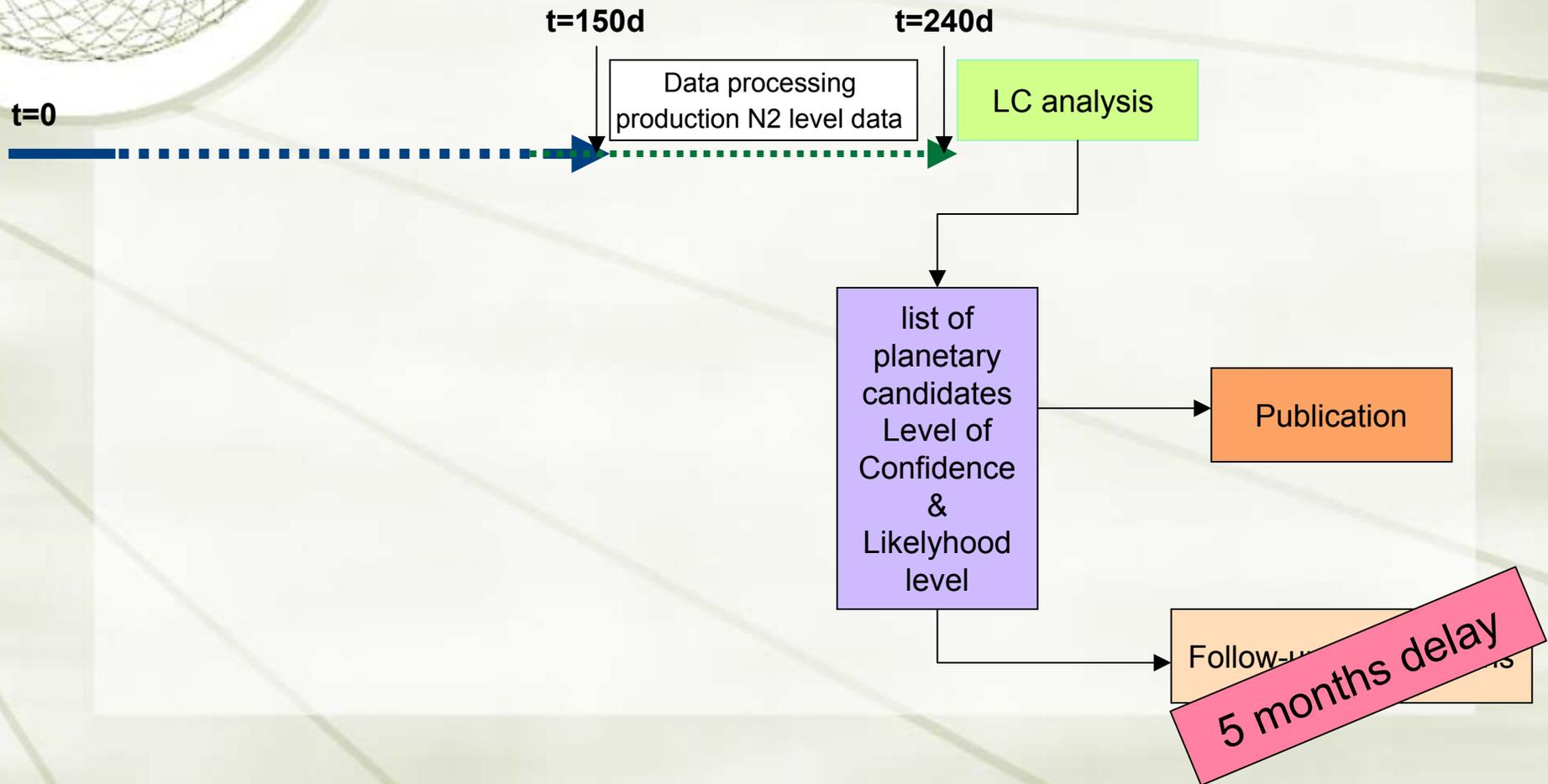
- ★ 5 nights per semester during 2 years 1/2 on UVES/VLT
- Giraffe

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- ★ NAOS observations - DDT
- ★ some additional nights on HARPS after 2008 ?

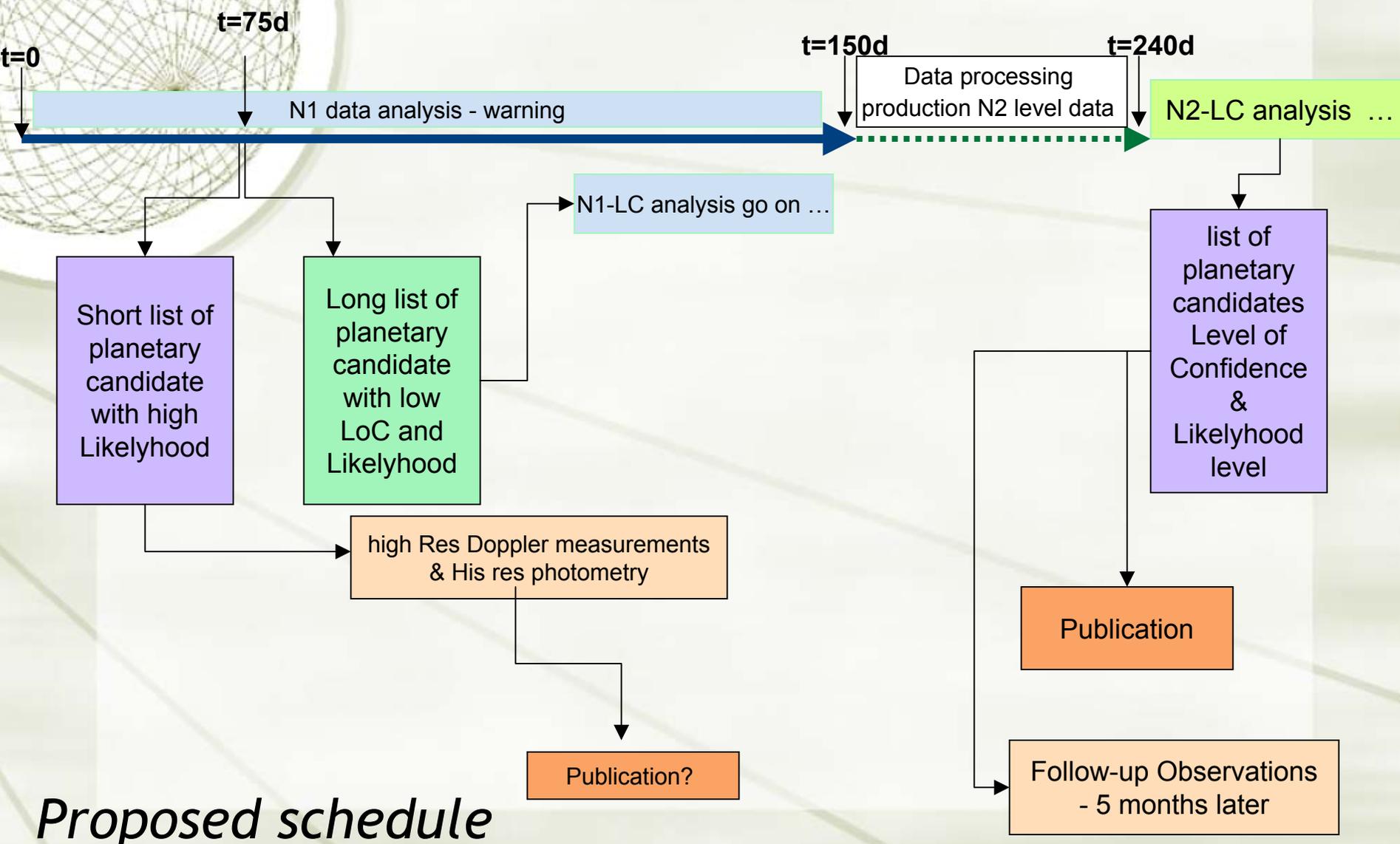
when ?

In principle, data are delivered to CoIs by the end of the 150 days period + 3 months - N2 level data



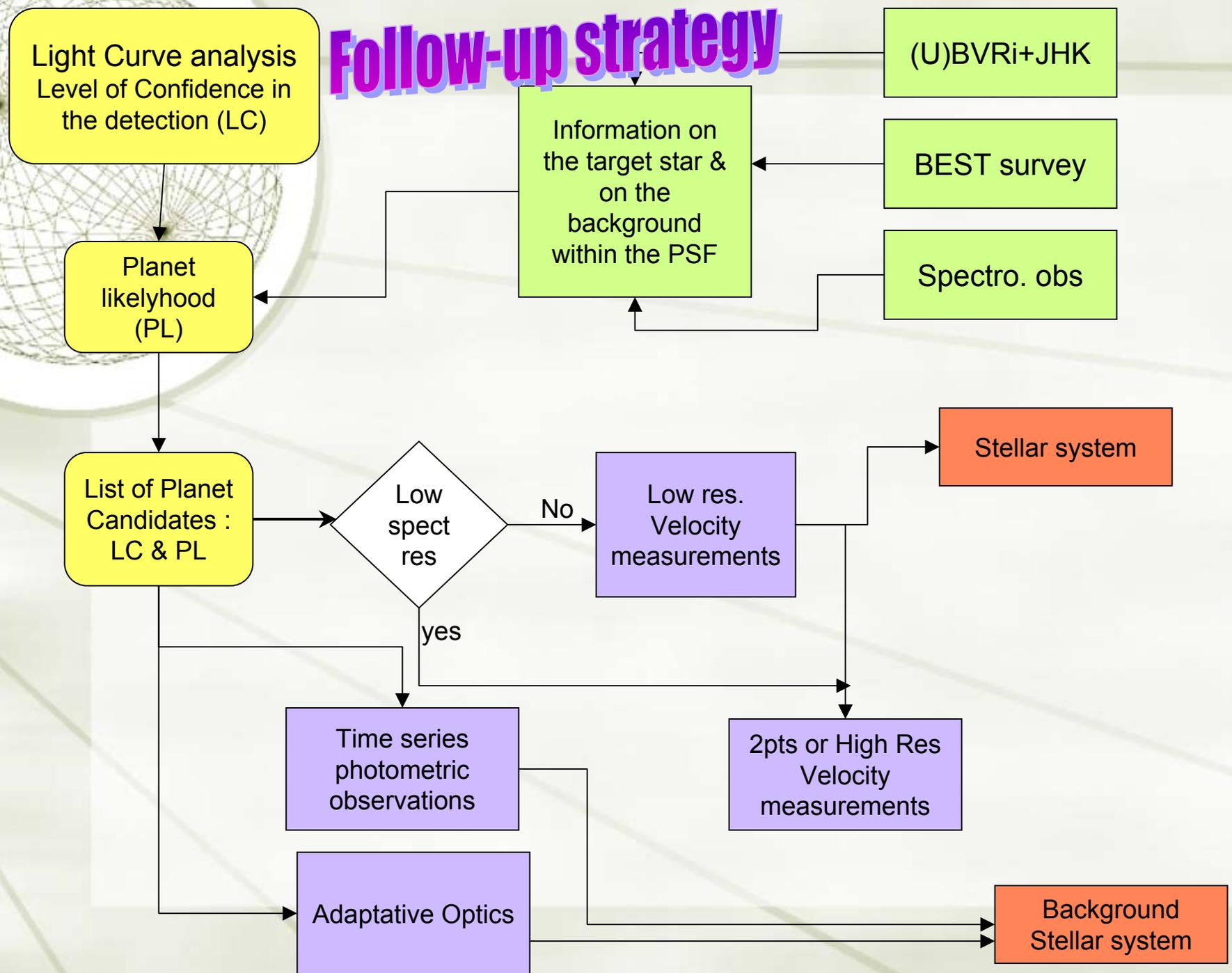
when?

Solution : Take advantage of the alarm mode analysis



Proposed schedule

Follow-up strategy



Which instruments?

Doppler measurements and spectroscopic observations

Spectrograph	mv	Precision (1 hour)	Availability
Coralie (1.2m)	12	10 m/s	20 nights
	14	35 m/s	
SOPHIE (1.93m)	12	3.5 m/s	20 nights
	14	10 m/s	
	16	45 m/s	
CES Tautenburg (2m)	12	50-75 m/s	Weather dependent
UVES+FLAMES (8.2m)	12	25m	Proposal dependent
	14	25m	
	16	30m	
HARPS	12	2 m/s	10 nights
	14	6 m/s	
	16	20 m/2	

Which instruments?

High Spatial Resolution Photometry

- ★ 1.2m OHP
- ★ others ...