



Télescope Bernard Lyot

Tutorial Phase 2

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Version log

V 2.03

- upgrade of IHMs figs

V 1.03

- minor revisions

V 1.02

- new section on A, B and C time
- few clarifications on the step 5

V 1.01

- add a comment on saving the PH2
- Few clarifications on the step 5

About this document

This document is a practical tutorial written to help you go through the preparation of your program of observations on NeoNarval at the Telescope Bernard Lyot: the Phase 2.

This document is not a technical or reference manual.

In order to start...

At this point, you already went through the Northstar proposal phase, and you were already notified by the TBL that your program was ranked above the line.

All we need: the login and password that TBL sent you.

The login is the program ID: something like **LXXYNZZ**, where **XX** is the year, **Y** the semester number (1 or 2), **N** stands for Narval, **ZZ** is an arbitrary number of program, most probably between 01 and 20.

The password is a complex string that you can request to the software or science team if you forgot it.

Step 1: login

Open your favorite browser (PH2 is written in javascript and uses a client called rialto which have shown to be robust under firefox 3.x, IE, and Safari, if you note bugs, contact the software team cyril.delaigue@obs-mip.fr)

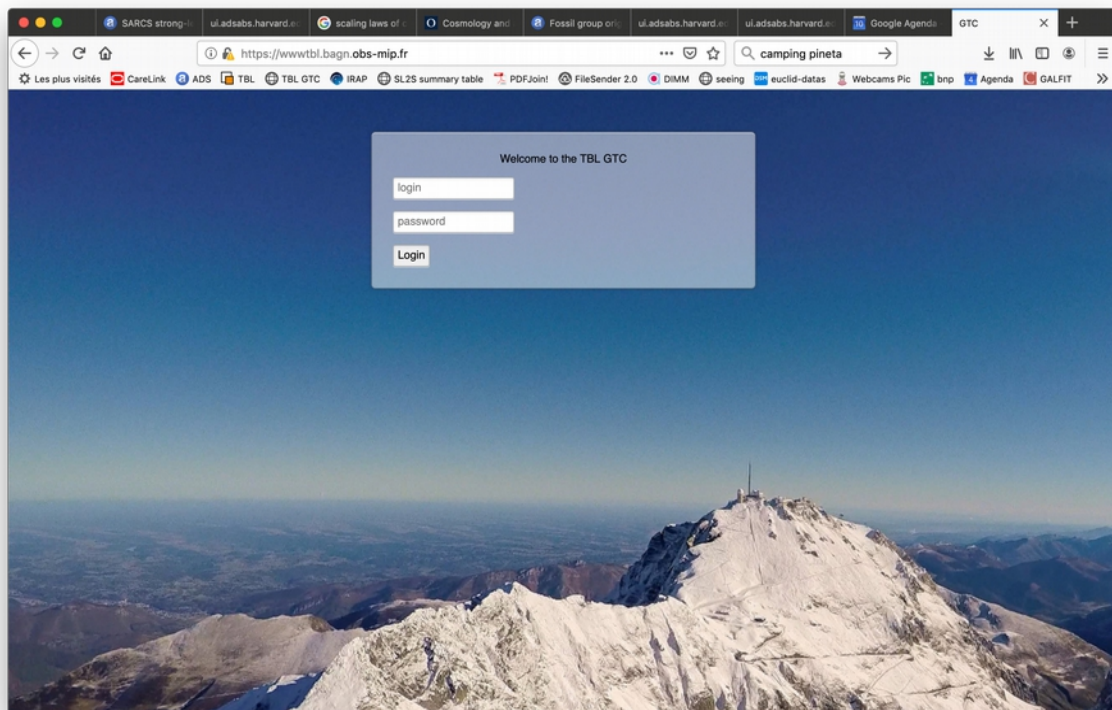
The PH2 link is

<https://wwwtbl.bagn.obs-mip.fr/>

You can also find it from the TBL web page link:

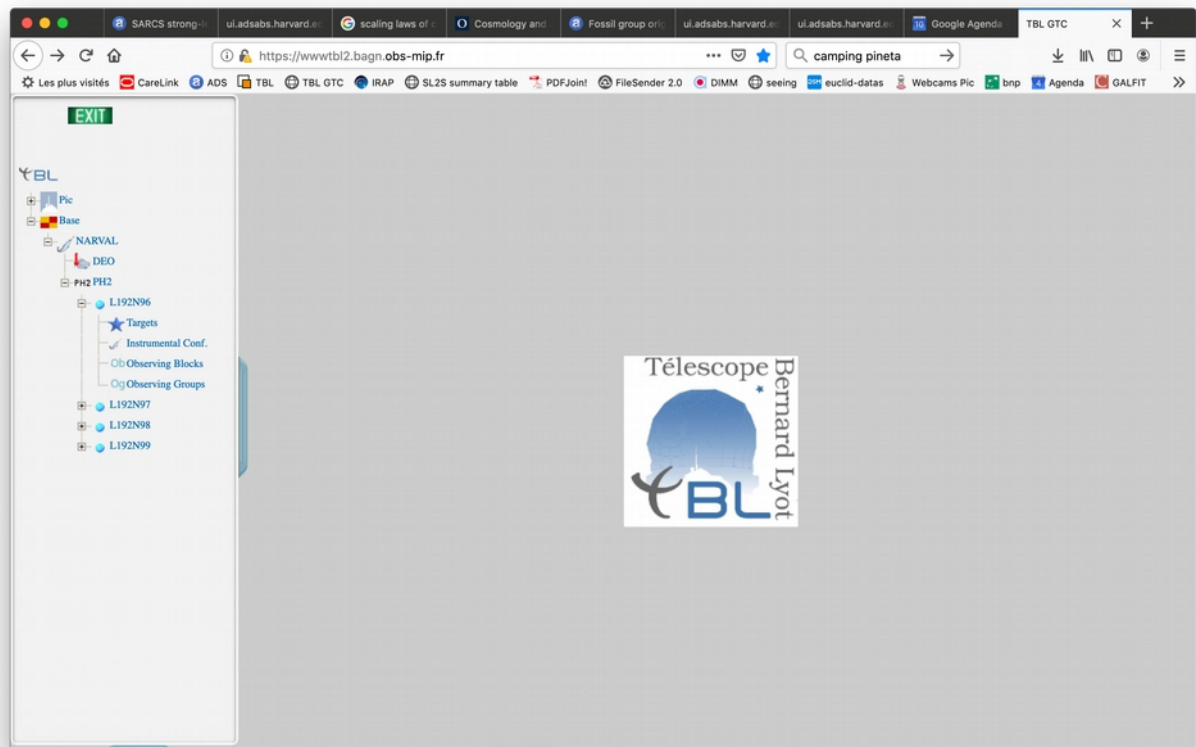
<http://wwwtbl.bagn.obs-mip.fr/> following the menu thread
Observateurs -> Observation de service -> PHASE2

The first window you get is:



Select your mission number from the scrolldown menu and type your password, you should get the opening PH2 window.

Beware, if you enter the wrong login and/or password, you will end up on the public page with no access to your program otherwise you get something like:



The left hand side bar is the Main PH2 Menu. Clicking on any of the links will open the corresponding interface on the right hand side of the screen.

A small digression...

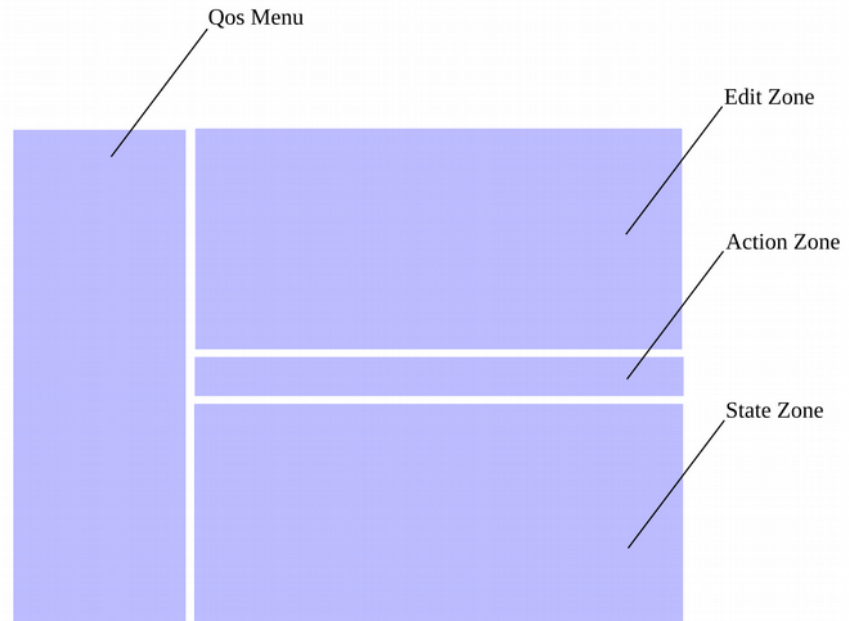
Overall philosophy: The interface is divided into 4 zones:

Qos Menu zone :

allows you to navigate from one step to another at any time.

State Zone: shows you the results of your edition and action (e.g. a list of targets, instrument configuration, etc...)

An orange background means the object is locked.



Edit and action zones:

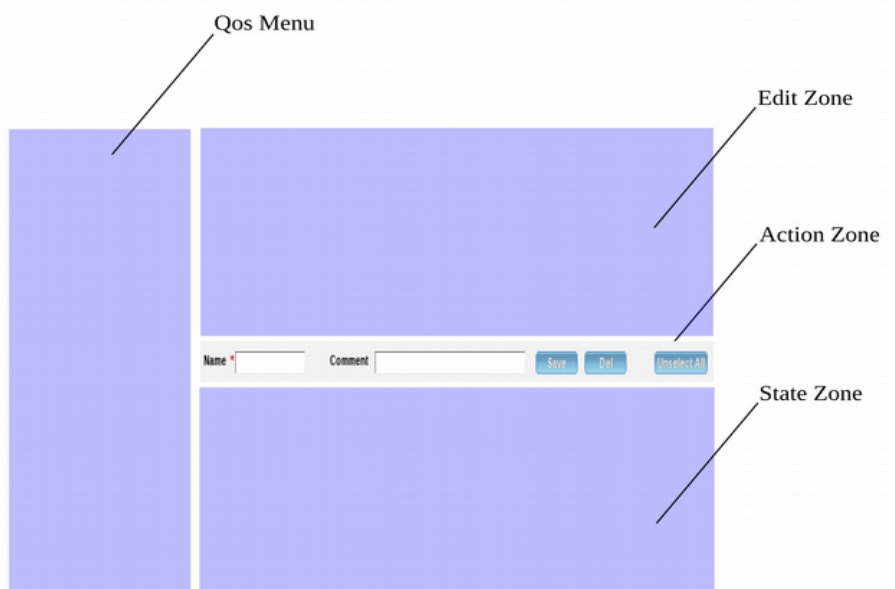
contain boxes and menus with selectable parameters allowing you to build your objects. A Green background color means the field can be edited by double-clicking it.

To create an object and save it, you must use the menu in the Action Zone:

Giving a *Name* to your objects is mandatory (* = mandatory)

If you choose name pre-existing in the database, clicking on *Save* will replace the previous object by the new one (unless the object is locked).

If you want to modify an existing object click on it in the state zone and the parameters will automatically fill the Action zone (Name, Comment) and Edit Zone. If you want to duplicate the object, just change the Name field.



Saving your work: is done automatically every time you add a new objet in the state zone

Step 2: Filling targets

Clicking the targets menu on the PH2 Menu zone will bring the following window.

The screenshot shows the 'Targets' window in the TBL GTC application. The sidebar on the left displays a tree view of the observation plan, with 'PH2 PH2' selected. The main window contains a form for entering star parameters and a table of target data.

Form Fields:

- Name:
- Star Search:
- Mag.V: Mag.B: Spec. Typ:
- Alpha: Delta: Epoch: ☐ Ephemeris
- Buttons:

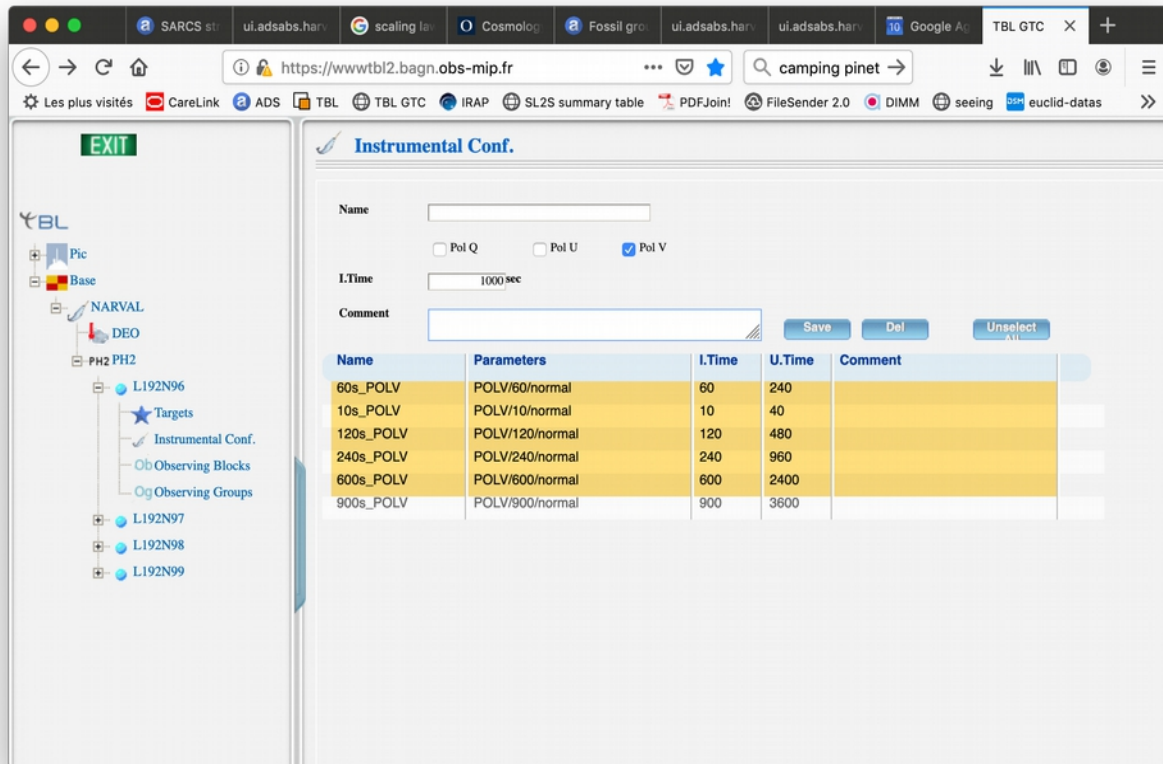
Table of Target Data:

Name	MagV	Alpha	Delta	Epoch	Ephemeris
HD40183	1.90	05 59 31.7229284	+44 56 50.757259	2000	yes
HD50019	3.60	06 52 47.3388710	+33 57 40.517462	2000	yes
HD25642	4.29	04 06 35.0435954	+50 21 04.549959	2000	yes
HD29722	5.30	04 42 54.3398729602	+43 21 54.479515748	2000	yes
HD32188	6.11	05 03 18.6367491032	+41 26 29.935501510	2000	yes
HD59084	6.84	07 30 13.7221611513	+40 50 46.121556956	2000	yes
HD42892	8.51	06 15 35.2509163345	+45 36 37.718520625	2000	yes
SAO41129	9.26	06 29 55.71193	+49 45 49.3162	2000	yes
HD232906	10.38	04 10 19.4681713210	+51 48 48.477363139	2000	yes
GammaEqu	4.68	21 10 20.50005	+10 07 53.6763	2000	yes
BetaCrB	3.68	15 27 49.7315305	+29 06 20.522375	2000	yes
Vega	0.03	18 36 56.33635	+38 47 01.2802	2000	yes
HR1099	5.70	03 36 47.2911034958	+00 35 15.938962144	2000	yes
51Peg	5.46	22 57 27.9804167474	+20 46 07.782240714	2000	yes

Writing the star name and clicking the Simbad Search button will fill the parameters. If a star is not found in Simbad, the user will have to fill the coordinates manually (format is important). Yellow color means the target is locked. Ephemeris is not fully fonctionnal yet, but selecting the button will trigger a menu that can be filled one by one.

Step 3: Instrumental configuration

Clicking on the Instrumental Conf. yields the following:



You can create as many instrumental configuration as you need, in particular the exposure time must be set here. I Time is the duration of one exposure, TTime (total time) is 4 times this number in polarimetric mode. Overheads are not included (yet). (orange background means the IC is locked).

Step 4: building Observation Blocks

The Observation Block (OB) interface is rich, and allows you to make almost all combinations of modes observed consecutively. Maximum execution length of any consecutive sequence is 3h.

Observing Blocks

Targets

Name	Spec.Type	Mag.V
HD40183	A1IV-Vp	1.90
HD50019	A2IV	3.60
HD25642	A0IVn	4.29
HD29722	A1Vn	5.30
HD32188	A3III	6.11
HD59084	A0	6.84
HD42892	A0	8.51
SAO41129	K	9.26

Instrumental Configurations

Name	Parameters	N.Times	Rank	U.Time
60s_POLV	POLV/60/normal	1	0	240
10s_POLV	POLV/10/normal	1	0	40
120s_POLV	POLV/120/normal	1	0	480
240s_POLV	POLV/240/normal	1	0	960
600s_POLV	POLV/600/normal	1	0	2400
900s_POLV	POLV/900/normal	1	0	3600

Targets Table

Name	Target	Ic Parameters	U.Time	Comment
vega	Vega	1(POLV/10/normal)	40	
HD40183	HD40183	1(POLV/10/normal)	40	
BetaCrB	BetaCrB	1(POLV/60/normal)	240	
GamaEqu	GammaEqu	1(POLV/60/normal)	240	
HR1099	HR1099	1(POLV/60/normal)	240	
51Peg	51Peg	1(POLV/60/normal)	240	
HD50019	HD50019	1(POLV/60/normal)	240	
HD25642	HD25642	1(POLV/60/normal)	240	
HD29722	HD29722	1(POLV/60/normal)	240	
HD32188	HD32188	1(POLV/120/normal)	480	
HD59084	HD59084	1(POLV/120/normal)	480	
HD42892	HD42892	1(POLV/240/normal)	960	

Hint: to visualize the mag or Sp in the target window, click on the blue top band and select whatever is needed and available in the scroll-down menu.

A valib OB has **a name, one target only** and **at least one IC**.

The user can use the green entries to select a list of ICs to be observed consecutively, the order in which they will be executed (column rank) is set automatically following the order of selection.

Example : you want to observe Vega twice with 10s_POLV and then once with 60s_POLV (*not a good idea!!*)

- click once on the targets table on Vega
- click once on 10s_POLV
- click once in the column N.Times (a scrolldown menu tells you how many iterations you can select before reaching the max of 3h)

The screenshot shows the TBL GTC web interface. On the left is a sidebar with a tree view of the project structure. The main area is titled 'Observing Blocks'. It contains two tables: 'Targets' and 'Instrumental Configurations'. The 'Targets' table lists various stars with their names and magnitudes. The 'Instrumental Configurations' table lists different observing configurations with their parameters, number of times, rank, and total time. A new observing block named 'vega' has been created and is highlighted in the bottom table.

Name	Mag.V	Vega
HD42892	8.51	
SAC41129	9.26	
HD232906	10.38	
GammaEqu	4.68	
BetaCrB	3.68	
Vega	0.03	<input checked="" type="checkbox"/>
HR1099	5.70	
51Peg	5.46	

Name	Parameters	N.Times	Rank	U.Time
60s_POLV	POLV/60/normal	1	2	240
10s_POLV	POLV/10/normal	2	1	40
120s_POLV	POLV/120/normal	1	0	480
240s_POLV	POLV/240/normal	1	0	960
600s_POLV	POLV/600/normal	1	0	2400
900s_POLV	POLV/900/normal	1	0	3600

Name	Target	Ic Parameters	U.Time	Comment
vega	Vega	1(POLV/10/normal)	40	
HD40183	HD40183	1(POLV/10/normal)	40	
BetaCrB	BetaCrB	1(POLV/60/normal)	240	
GammaEqu	GammaEqu	1(POLV/60/normal)	240	
HR1099	HR1099	1(POLV/60/normal)	240	
51Peg	51Peg	1(POLV/60/normal)	240	
HD50019	HD50019	1(POLV/60/normal)	240	
HD25642	HD25642	1(POLV/60/normal)	240	
HD29722	HD29722	1(POLV/60/normal)	240	
HD32188	HD32188	1(POLV/120/normal)	480	
HD59084	HD59084	1(POLV/120/normal)	480	
HD42892	HD42892	1(POLV/240/normal)	960	

- click once on the 60s_POLV
- type a name in the corresponding field (add a comment if you wish)
- click save button

A new OB is created under the name you typed. In the bottom table, OBs are ordered in the alphabetical order of their names (column 1)

There is no limit to the number of OBs you can create.

Step 5: Creating a strategy, making scenes

Clicking on the scenes menu yields to:

The screenshot shows the TBL GTC web interface. The sidebar on the left contains a tree view of the project structure, including 'Pic', 'Base', 'NARVAL', 'DEO', 'PH2 PH2', and several 'L192N' targets. The main panel displays the 'Observing Groups' page. It features two tables: 'Observing Blocks Constraints Within the Night' and 'Observing Blocks Constraints Within the Semester'. The top table lists targets like Vega, HD40183, BetaCrB, GammaEqu, and HR1099, along with their parameters, U.Time, Iter, and HA. The bottom table lists the same targets with their Rank, U.Time, and Comment. A form for creating a new group is also visible, with fields for Name, Comment, Seeing, Attenuation, Air Mass, N Nights, and a Rank dropdown menu.

An Observing group (OG) is a set made of **at least one OB**, under a given **meteo constraints** (airmass, seeing, attenuation; NB: at this point the seeing constraint set by the user cannot be guaranteed, we don't have a clear knowledge of the seeing statistics.) and **scheduling constraints**.

IMPORTANT: There is no limit to the number of OG you can create, but if you do so only a fraction (allocated time) will be observed, hence be very clear about your priority OG in the **Comment** section.

If you have been allocated A, B and C time, you will have to set to which category your OG should be associated, checking the scroll down menu **Rank** for each OG.

Be very careful. Double-check the RA pressure on TBL www pages and suggested period in the semester where your A and B time should go, otherwise you might end the semester with very little A and B time actually observed because all the time is already taken by another program with higher ranking.

You can select a comprehensive set of observing strategies within a night (upper panel, green column Iter), or within the semester (lower panel).

Example 1: simple case

You want to observe OB-1 just once, any time during the semester, with no or some meteo constraints

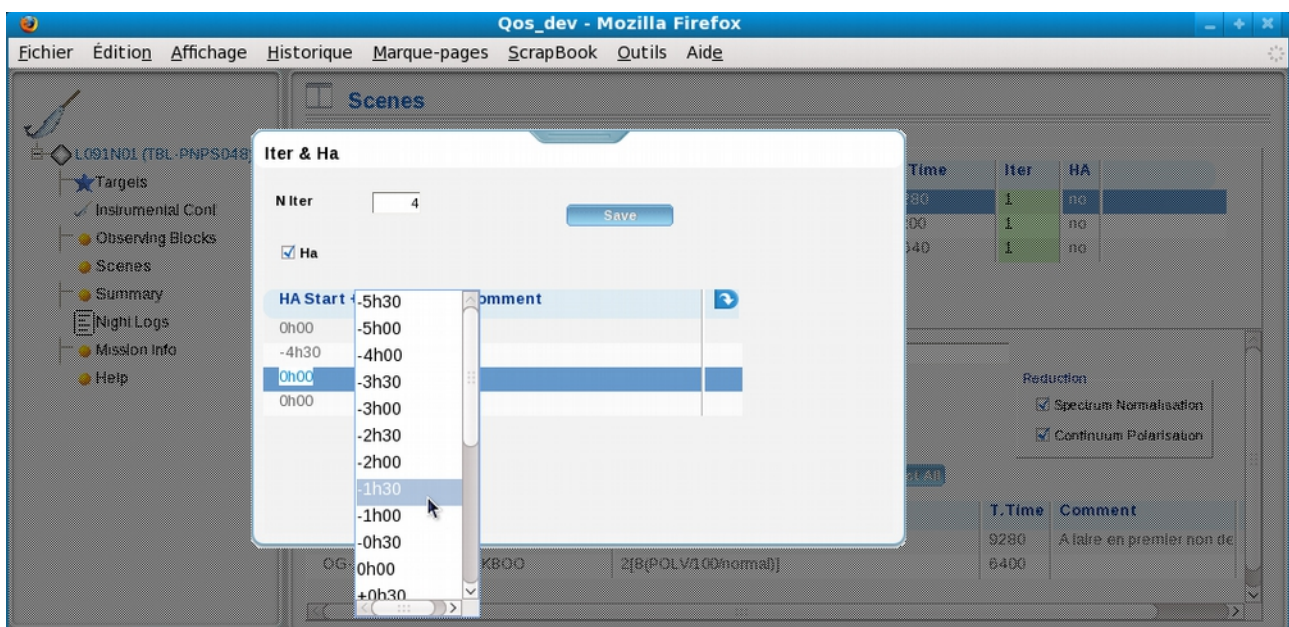
- click once on OB-1
- type a **Name** to your OG (add a comment)
- click the save button

Current meteo constraints are seeing <1,3, <2, any, attenuation (clouds) < 0,05magV, <1magV, any, Airmass <1,3 <1,5, <2, any

Example 2: More than once per night with possible Hour angles constraints

you want to observe OB-1, 4 times during the night at specific Hour Angles

- click on OB-1
 - double-click on the green Iter column (default value 1)
- the following window pops-up



- type the number of observations **per night** in the box **N Iter**,
- click the **Ha** button: a table with Niter lines is created
- select the HA list sequentially (order is not important, it will not be re-ordered in the final summary but will of course be observed in the correct order)
- click save
- type a **Name** to your OG (add a comment)

NB: if you don't want to have HA constraint don't click on the **Ha** button, and the iteration will happen anytime during the night (most probably sequentially)

Example 3: create a monitoring sequence

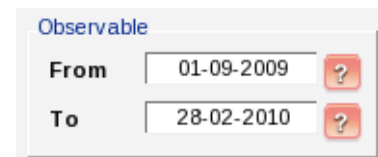
You can set a wide variety of scheduling constraints.

Constraining the overall observation period:

Use the box shown on right

- click on question mark to select the beginning (From) and the end (To). (default in full semester)

IMPORTANT: we will not try to observe outside the selected date range.



Observable

From	01-09-2009	?
To	28-02-2010	?

Making a monitoring:

Use the boxes shown

- Min is the minimum number of nights
- Max is the maximum number of nights

Here = just observe once.



N Nights

1	Min
1	Max

If you set Max = 5, a new window will appear requesting the interval between each night

Here = observe the OB a minimum of 1 night and a maximum of 5 nights with an interval of one night between each observation (hence every night).



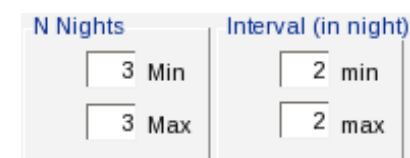
N Nights	Interval (in night)
1 Min	1 min
5 Max	1 max

Here = observe the OB a minimum of 3 nights (max 5) with an interval of one night between each observation (hence every night).



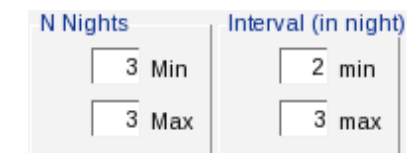
N Nights	Interval (in night)
3 Min	1 min
5 Max	1 max

Here = observe the OB exactly 3 nights, with an interval of two nights between each observations (every second night)



N Nights	Interval (in night)
3 Min	2 min
3 Max	2 max

Here= Observe the OB exactly 3 nights, with an interval of two or three nights between each observations (every second of third night)



N Nights	Interval (in night)
3 Min	2 min
3 Max	3 max

Example 4: Conditional execution

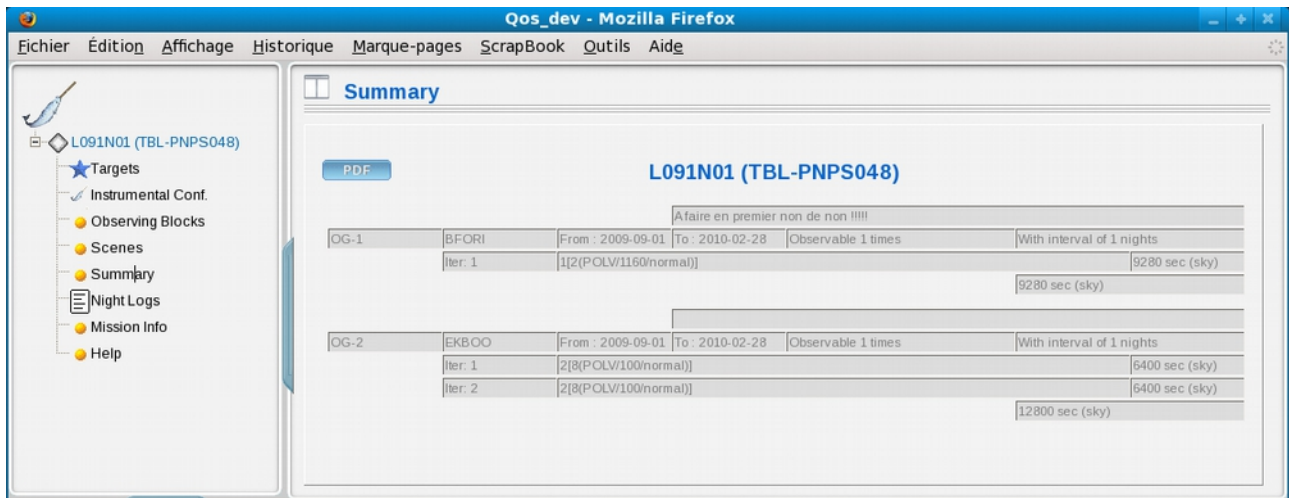
We have not developed yet a conditional execution.

If you wish to make a monitoring starting on a test exposure, the simplest way for now is to separate the test OG and the monitoring OG, and type a clear a

comment relating the two scenes in the comment area.

Summary (soon)

Clicking on the summary yields:



The screenshot shows a web application interface in a Mozilla Firefox browser window titled "Qos_dev - Mozilla Firefox". The left sidebar contains a navigation menu with the following items: "L091N01 (TBL-PNPS048)", "Targets", "Instrumental Conf.", "Observing Blocks", "Scenes", "Summary" (highlighted), "Night Logs", "Mission Info", and "Help". The main content area is titled "Summary" and features a "PDF" button. Below this, the title "L091N01 (TBL-PNPS048)" is displayed. A message "A faire en premier non de non !!!!!" is shown. The data is presented in two tables, one for OG-1 and one for OG-2.

OG	Filter	From	To	Observable	Interval	Duration	
OG-1	BFOR1	2009-09-01	2010-02-28	1 times	With interval of 1 nights		
	Iter: 1	1[2(POLV/1160(normal))]					9280 sec (sky)
OG-2	EKBOO	2009-09-01	2010-02-28	1 times	With interval of 1 nights		
	Iter: 1	2[8(POLV/100(normal))]					6400 sec (sky)
	Iter: 2	2[8(POLV/100(normal))]					6400 sec (sky)
						12800 sec (sky)	

This is rather drab, but all important info on scenes can be found here.

Nightlog (soon)

The nightlog gives you a quick look at the data that has been observed in the semester for you on a nightly basis.

The database is renewed every morning after a science night (if the weather is stormy, all computers of the summit must be turned off, the nightlog might shift by a day or two, until the weather allows computers to be turned on and data to be archived.)