

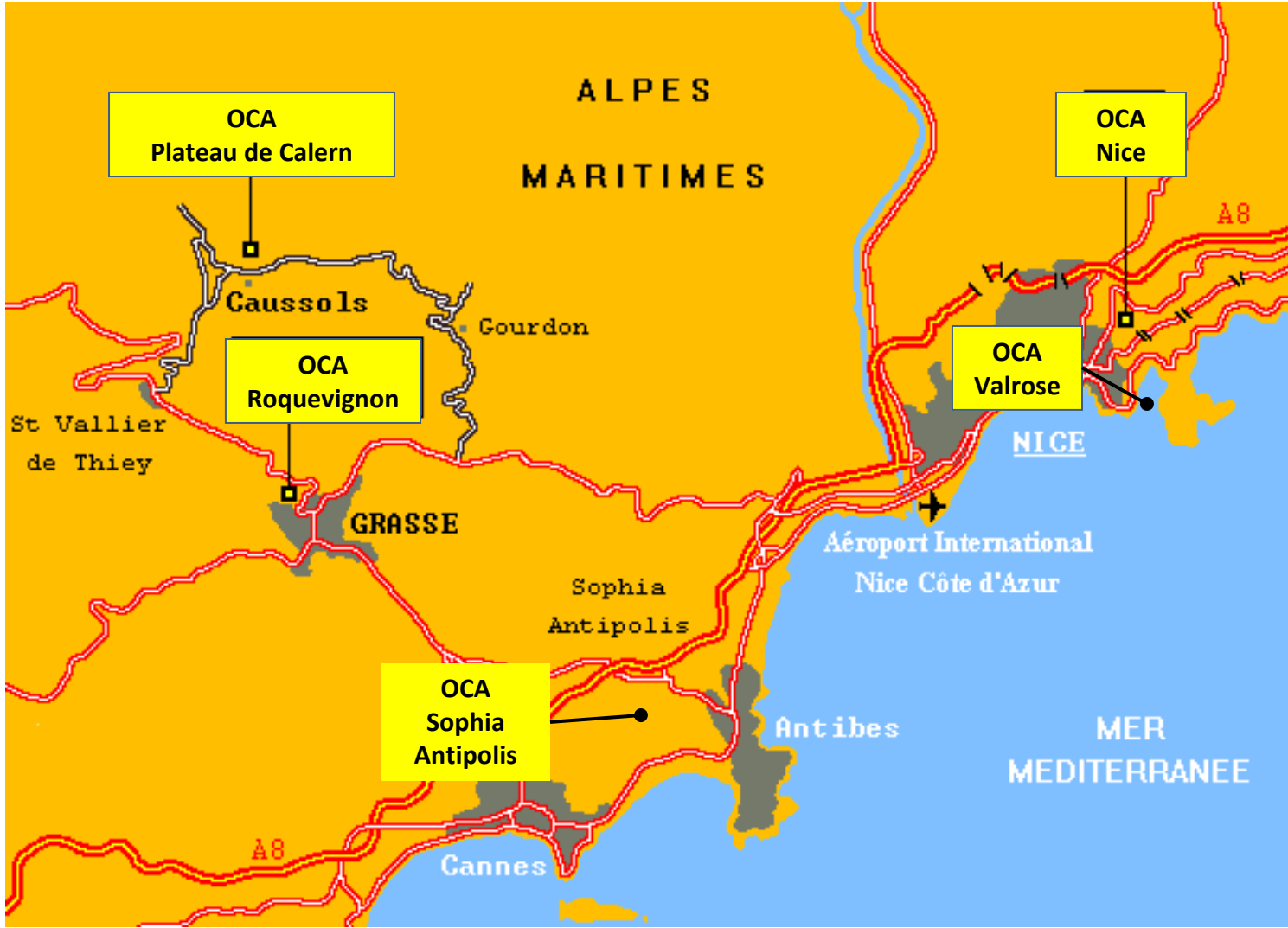
Remote Operation (Control & DRS) VEGA on CHARA "GROC" Jean-Michel Clause



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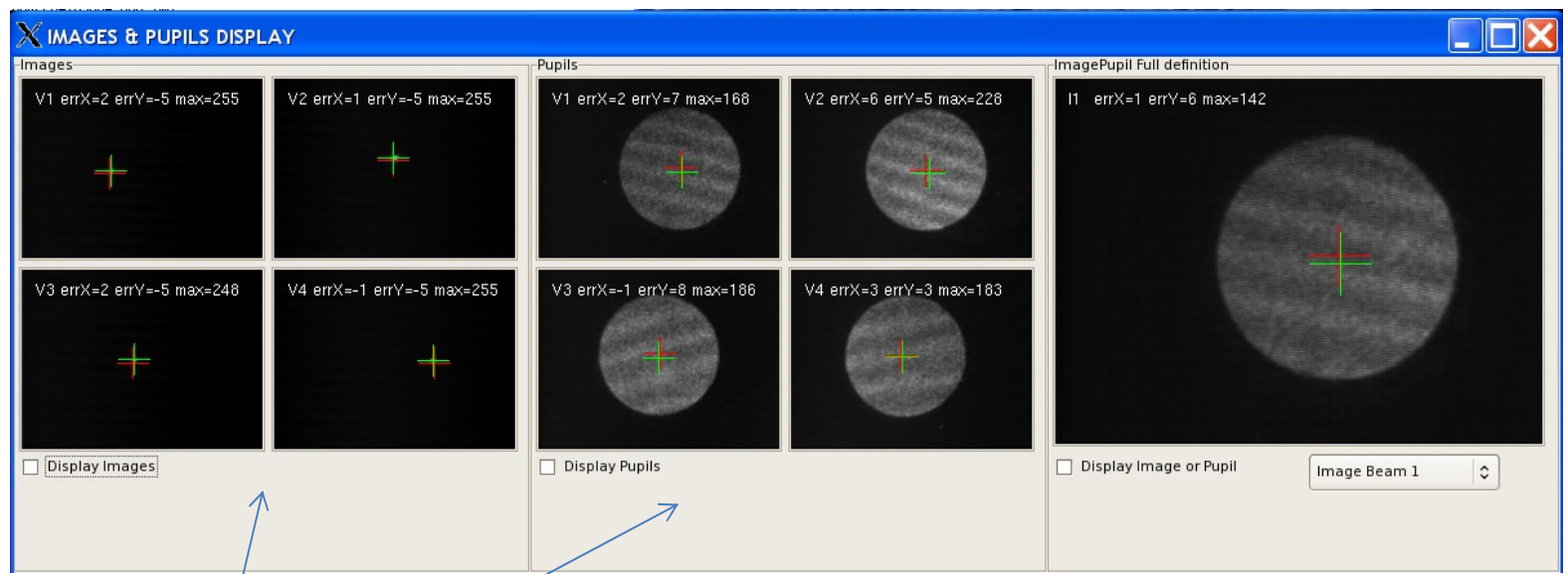
Vega Software Concept

- Vega software was design from the beginning to permit remote observation using the client/server concept based on TCP socket communication.
- We use XP server when we have:
 - Device deliver with a driver
 - When we have old software working well on GI2T
 - We use Visual C++
- We use Linux Fedora server for all others purposes
 - All server softwares are in C
 - All GUI are in C & GTK and are the same for local or remote usages





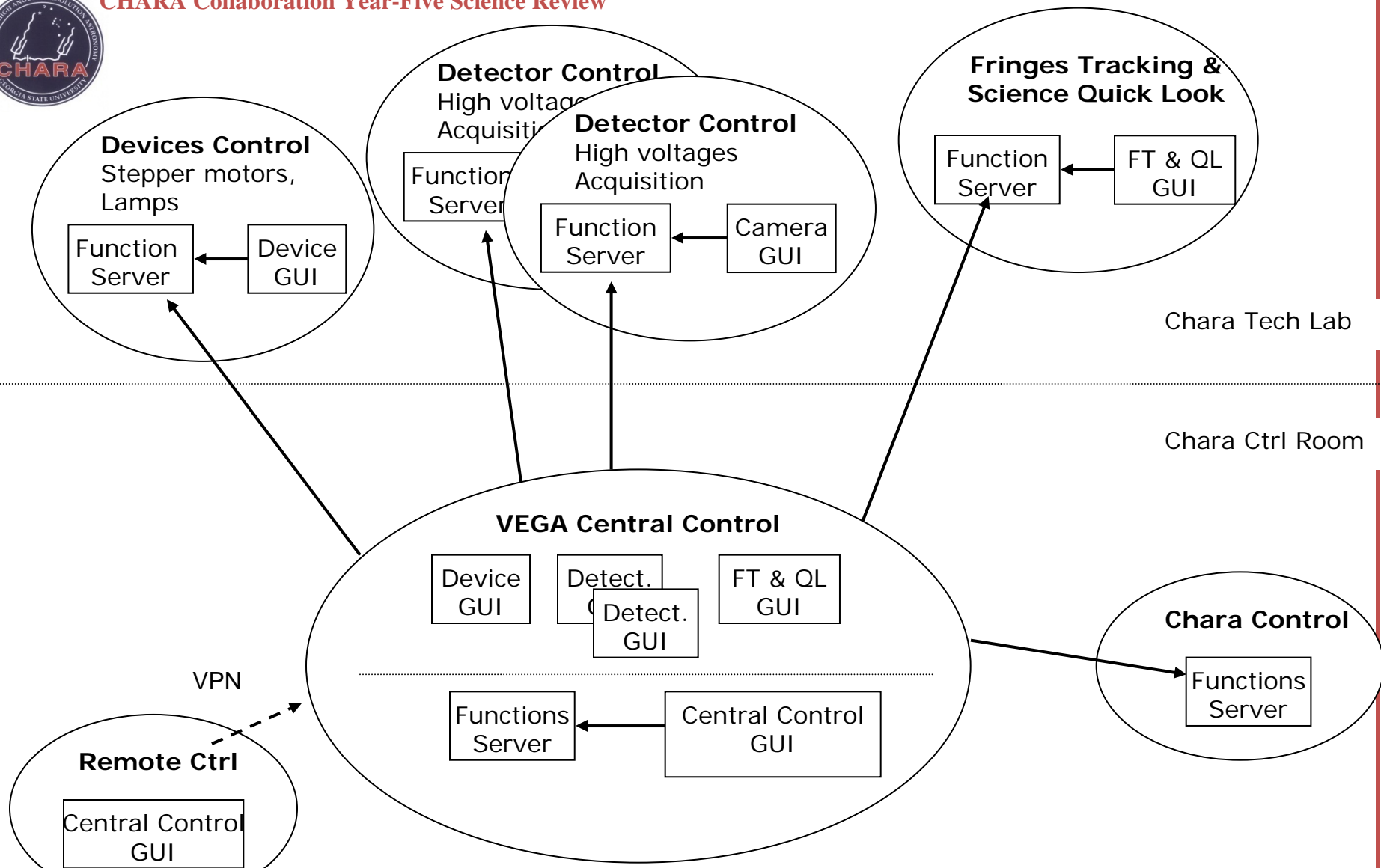
Pupil & Image Display during alignment phase



800*600 binned to 400*300 pixel

Full resolution of the chosen pupil or image





Vega Software Structure



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Vega Grasse Remote Control Room



Working Area



Relax Area





Solutions for dataflow reduction

- The VPN throughput is around 120 Kbytes/sec.
- The client window (in C & GTK) is displayed on the remote side.
- Data come from the server side
- For a graphic (curve or 2D frame) display, values come through the network with the minimum data size & are drawn locally
- To reduce the needed dataflow, we apply a binning method on frames.
- Frame or curve displays could be disabled.





Coming soon new Vega Tools

VegaPlan will evolve to allow 3T or 4T preparations taking advantages of charaplan2 and mircplan softwares.
This tool will permit to see the night schedule in an array form with the possibility of selecting a [time range for each observation](#).

For the next run, a new tool will be tested:

- VegaPlan output is a starlist file with all observations informations (stars, Chara config, Vega config).
- Before observation we have to verify if there are no errors in the starlist file (star & spectral calibration, Night Pop configuration, etc)



Data Reduction Software (DRS)

- Initial data reduction software coming from GI2T:
 - In C & Pv-Wave.
 - A lot of graphical functions.
 - Not really possible to work in remote mode.

- The new software dedicated to Vega:
 - GUI is in IDL connected to a server (where are the data) locally on the computer or on a distant computer.
 - Main functions are in C.
 - The server receives request, computes data, returns a 2D or 1D array as the result.

 - 2T, 3T and 4T operation
 - Application of all the bias corrections
 - FITS and OIFITS for the results
 - More simple use in relation with the observing mode



Structure of Vega DRS (data reduction software)

Observation Data

First automatic preprocessing

Data Reduction pipeline defined through IDL GUI on local or remote computer.

A parameter file is generated

Processing is done in batch by a script using the parameter file generated a step before



Work on main panel & integration frame

Computer:

Data Directory Choice:

Night Data Directory Choice:

Detector:

Working Directory Choice:

Work With Template + Choice

Compute + Display Integration

Compute + Display Spectrum

Select Data Reduce Scenario

Add Observation(s)

Generate Command File

Save As Template

Y Up

Y Down

462

59

0

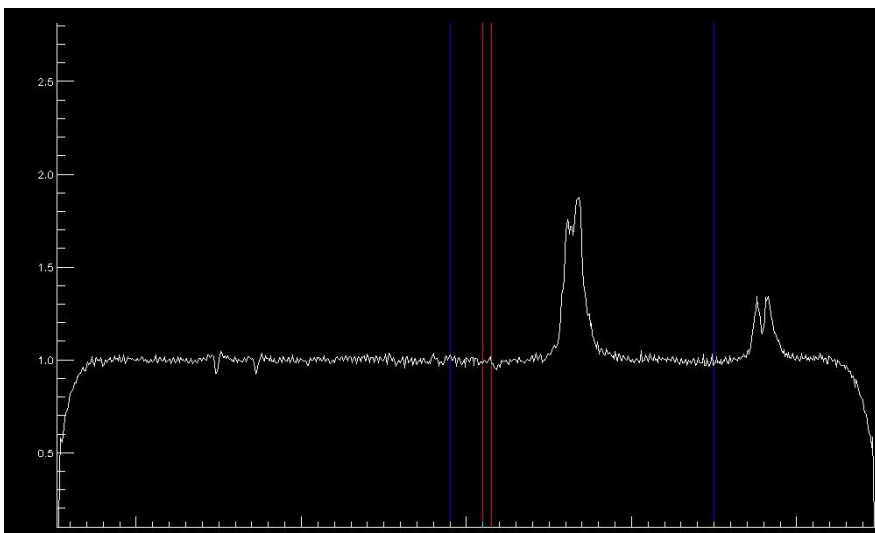
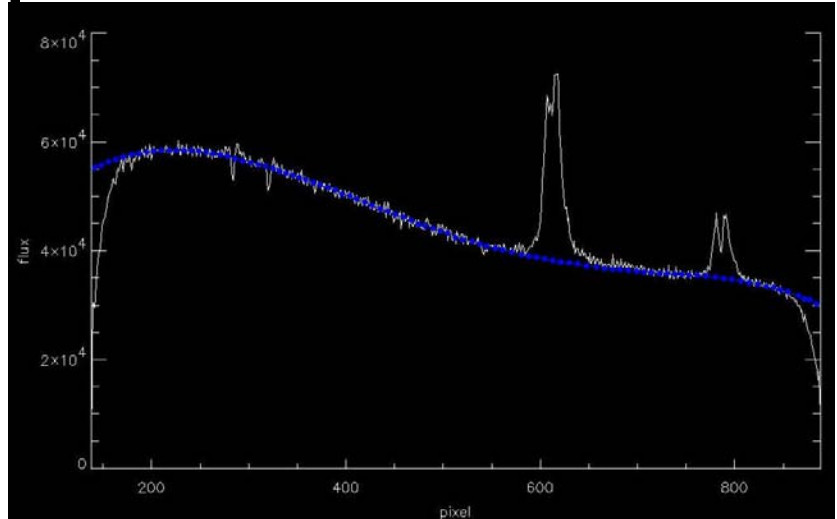
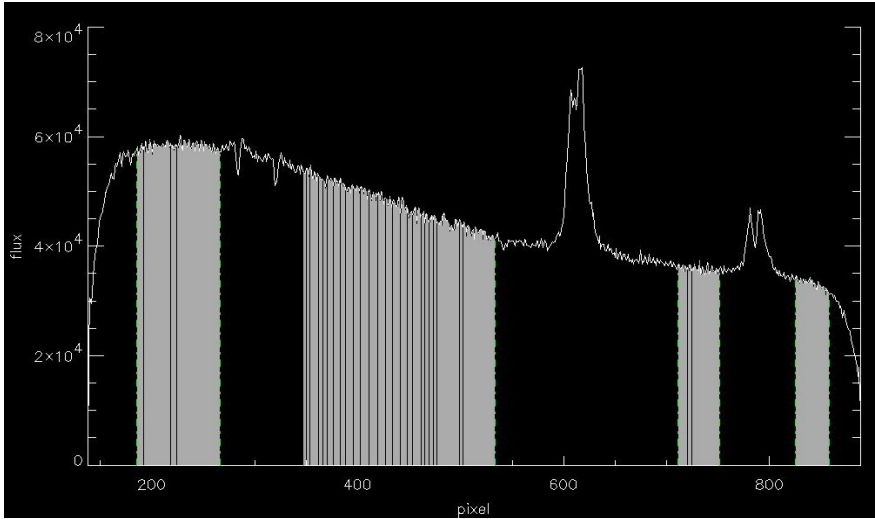
Normalisation Adjustment

Apply + Exit





Work on spectrum



10,000
Left Area 1
100,000
Right Area 1
Valid Area 2 Selection On / Off
400,000
Left Area 2
600,000
Right Area 2
Polynome Degree
2
3
4
5
Show Fit
Display Connected Spectrum
Valid Area 3 Selection On / Off
700,000
Left Area 3
900,000
Right Area 3
Exit



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Remote control

is better for

the planet



Thanks for

your attention





Calern

GI2T in Winter



Grand Interféromètre à 2
Télescopes

GI2T Control Room



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Grasse



Vega team & GROC
place



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Nice Mont Gros



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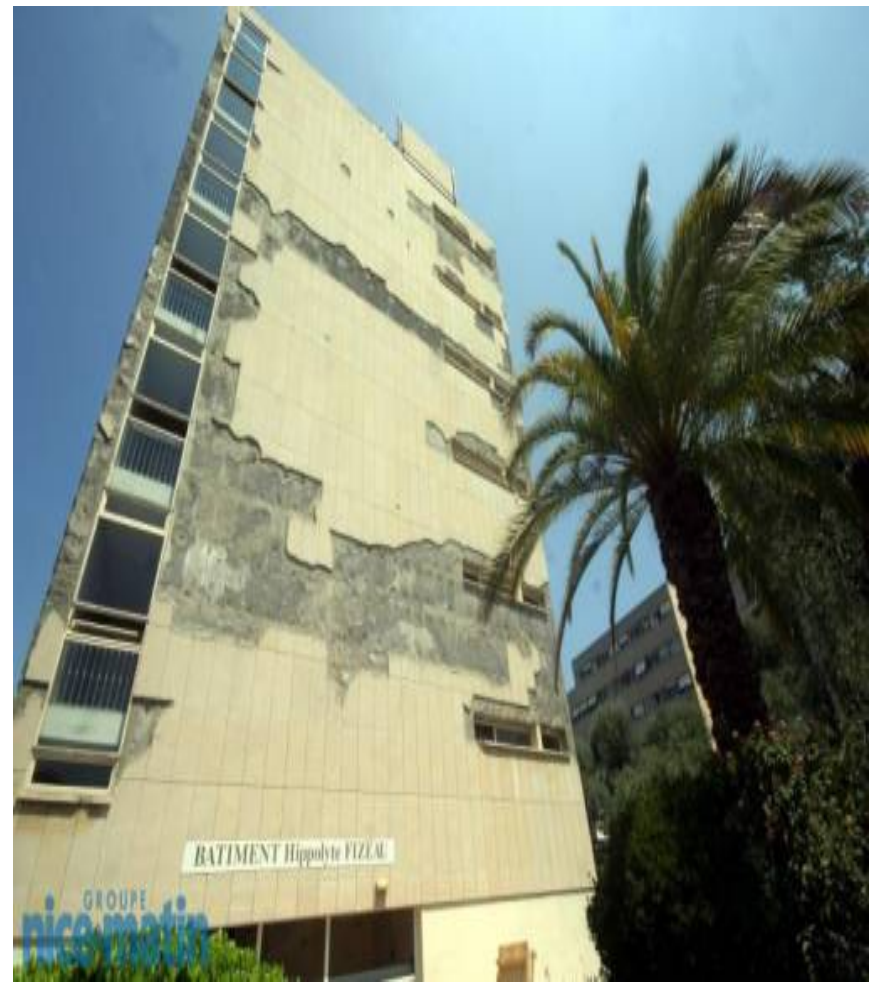


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Nice Valrose Fizeau

Building refurbished in 2011



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CHARA Collaboration Year-Five Science Review

Nuit	05.10.08																		
Prog	Nom	Type	HD	Nom_étoile	Transit	Base	Config	UT 2:00	UT 3:00	UT 4:00	UT 5:00	UT 6:00	UT 7:00	UT 8:00	UT 9:00	UT 10:00	UT 11:00	UT 12:00	
	V1 S2 (5) V2 S1 (4) V3 W2 (5) V4 W1(1)																		
	offset connu : S1S2																		
	offsets à déterminer : W1W2 (+) et S2W2 (si possible)																		
	<i>Recherche des offsets avec CLASSIC</i>																		
V6	13 Cyg	CALIB1	184006		02:25	S1S2 /W1W2	R2645												
		OBJECT	185395	13 Cyg	02:18	S2W2 ?													
		CALIB2	192514		03:01														
V4	gam Cas	CALIB1	4614		07:38	S1S2	R2645												
		OBJECT	5394	gam Cas	07:45														
		CALIB2	6961		08:00														
	<i>Selon le seeing et l'avancement :</i>																		
V3	AB Aur	CALIB1	17573		09:46	S1S2	R3645												
		OBJECT	31293	AB Aur	11:44														
		CALIB2	25867		11:04														
		CALIB1	17573		09:46	W1W2													
		OBJECT	31293	AB Aur	11:44														
		CALIB2	25867		11:04														
V1	gam Cet	CALIB1	21364		10:16	S1S2	R2645												
		OBJECT	16970	gam Cet	09:32														
		CALIB1	21364		10:16	W1W2													
		OBJECT	16970	gam Cet	09:32														
	94 Cet	CALIB1	5448		07:45	S1S2													
		OBJECT	9826	94 Cet	08:25														
		CALIB1	5448		07:45	W1W2													
		OBJECT	9826	94 Cet	08:25														
V5	Sirius	CALIB1	33111		12:04	S1S2	R1656												
		OBJECT	48915	sirius	13:34														
		CALIB2	33904		12:01														
	cali spectrale																		
	W1W2																		
	S1S2																		
	SPIN S1S2																		

[Return](#)



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