

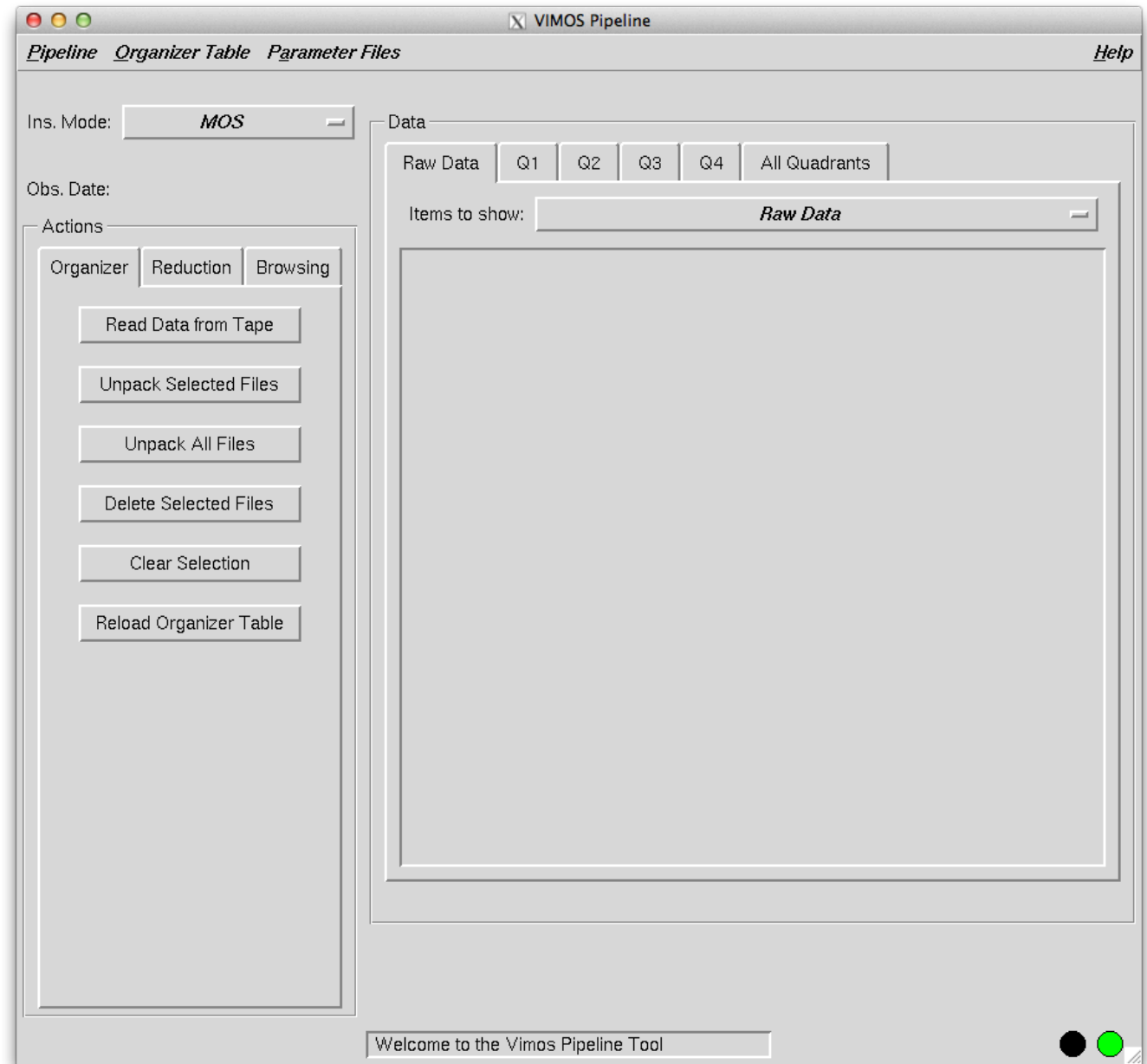
PANDORA

IS BACK !

VIPGI 0.6

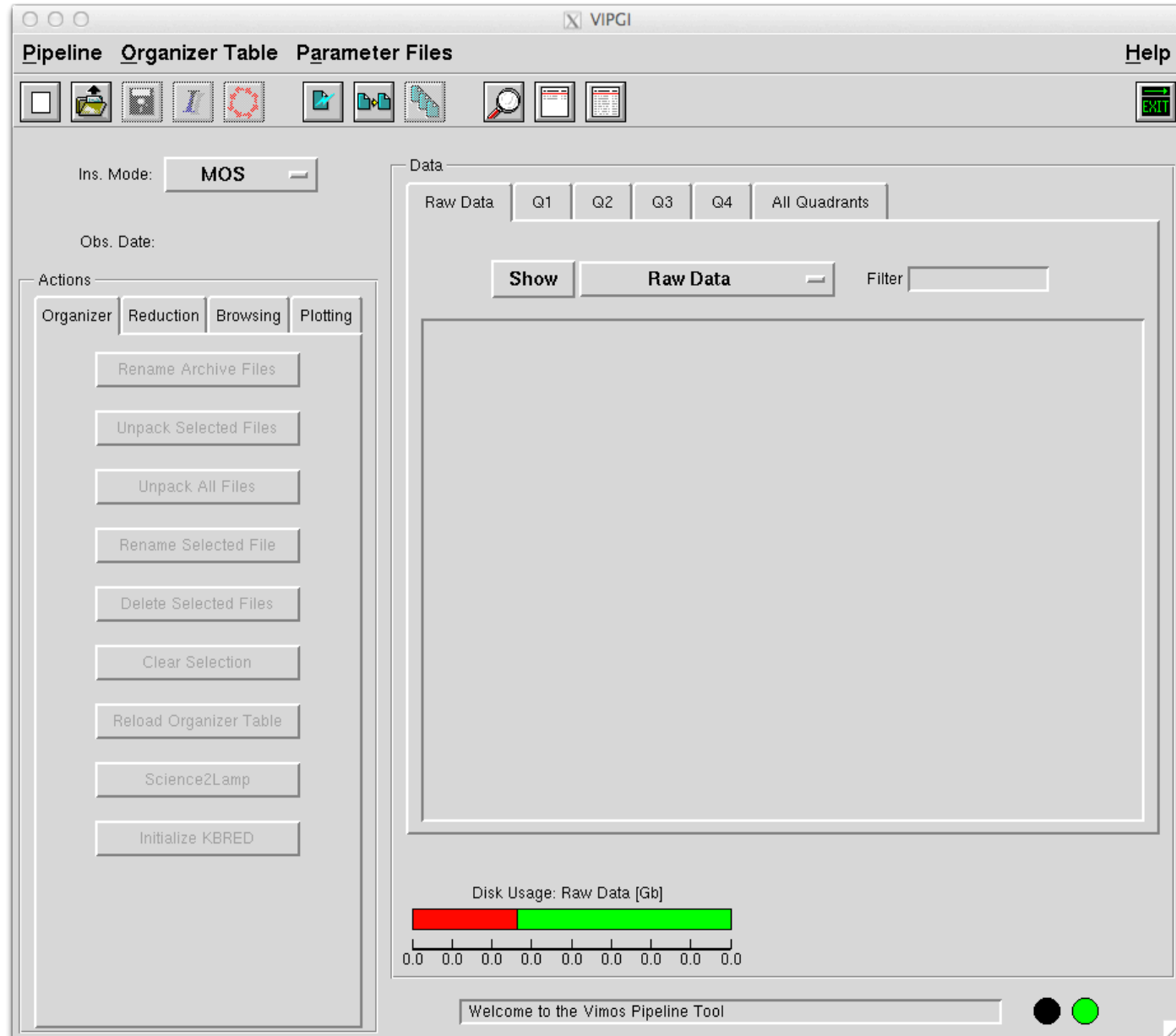
4/9/2002

- **python / tcltk & BLT**
- **C (DRS)**



VIPGI 0.8.5

17/12/2002



Pipeline Organizer Table Parameter Files Help

Ins. Mode: **MOS**

Obs. Date:

Actions

- Organizer
- Reduction
- Browsing
- Plotting

Rename Archive Files

Unpack Selected Files

Unpack All Files

Rename Selected File

Delete Selected Files

Clear Selection

Reload Organizer Table

Science2Lamp

Initialize KBRED

Data

Raw Data Q1 Q2 Q3 Q4 All Quadrants

Show Raw Data Filter

Disk Usage: Raw Data [Gb]

0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

Welcome to the Vimos Pipeline Tool

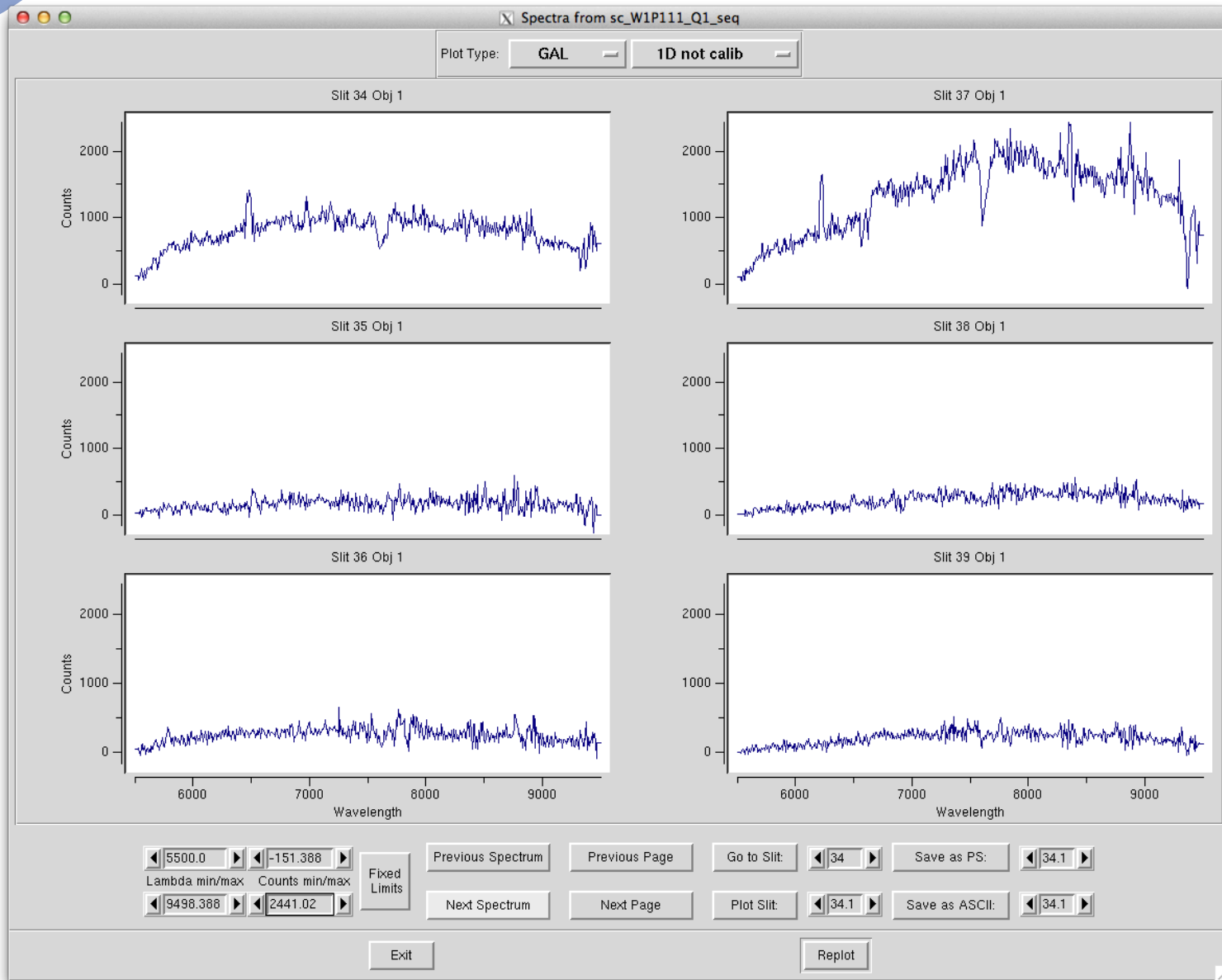
VIPGI 0.9.6

21/4/2004

The screenshot displays the VIPGI software interface with the following components:

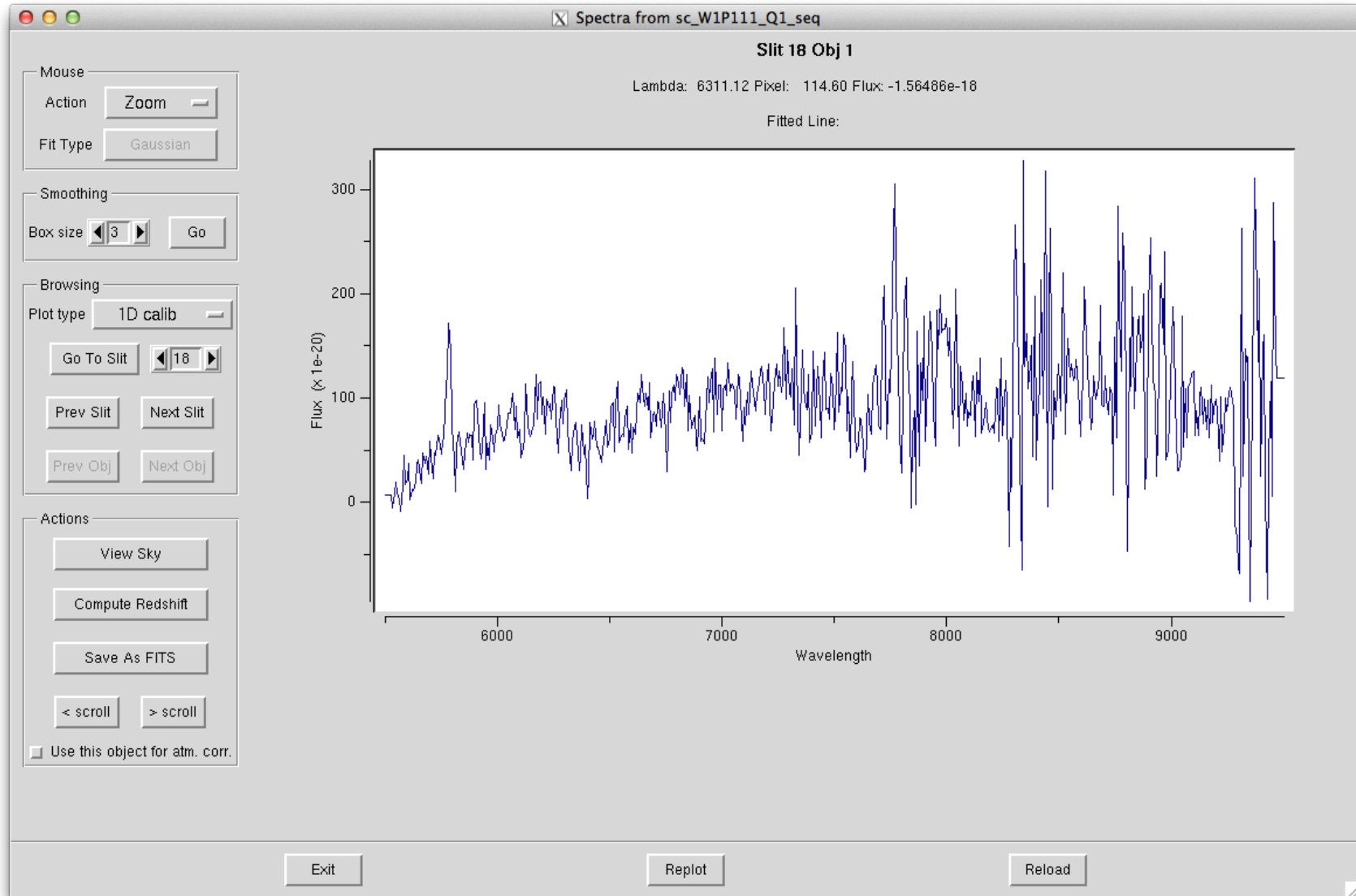
- Window Title:** X VIPGI
- Menu Bar:** Pipeline Organizer Table Parameter Files Help
- Toolbar:** Contains icons for file operations (new, open, save, delete, copy, paste), a search icon, a refresh icon, a lightbulb icon, and a help icon.
- Configuration:**
 - Ins. Mode: **MOS** (dropdown)
 - Obs. Date: **ALL** (dropdown)
- Actions Panel:** Includes tabs for Organizer, Reduction, Browsing, and Plotting. Buttons include: Rename Archive Files, Unpack Selected Files, Unpack All Files, Rename Selected File, Delete Selected Files, Clear Selection, Reload Organizer Table, Science2Lamp, Initialize KBRED, and Run KBRED blindly.
- Data Section:**
 - Quadrant tabs: Raw Data, Q1, Q2, Q3, Q4, All Quadrants
 - Data Categories: STD LR_red, W1P111_M1 LR_red
 - Single Frames List: Frame Type: **science** (dropdown). Data Cat: W1P111_M1 LR_red. Files listed: sc_W1P111_LRred_Q1_1.fits, sc_W1P111_LRred_Q1_1_BF.fits, sc_W1P111_LRred_Q1_2.fits, sc_W1P111_LRred_Q1_2_BF.fits, sc_W1P111_LRred_Q1_3.fits, sc_W1P111_LRred_Q1_3_BF.fits, sc_W1P111_Q1_seq.fits
 - Master Calibration Frames: Data Cat: W1P111_M1 LR_red. Files listed: msFlat_W1P111_Q1.fits, msLamp_W1P111_LRred_Q1.fits
- Disk Usage:** Gauge labeled "Disk Usage: All Data [Gb]" with a scale from 0.0 to 31.7. The bar is mostly red, with a small green segment at the end.
- Bottom Panel:** A button labeled "Plotting Single Spectrum" and two status indicators (black and green circles).

Plot Multi Spectra



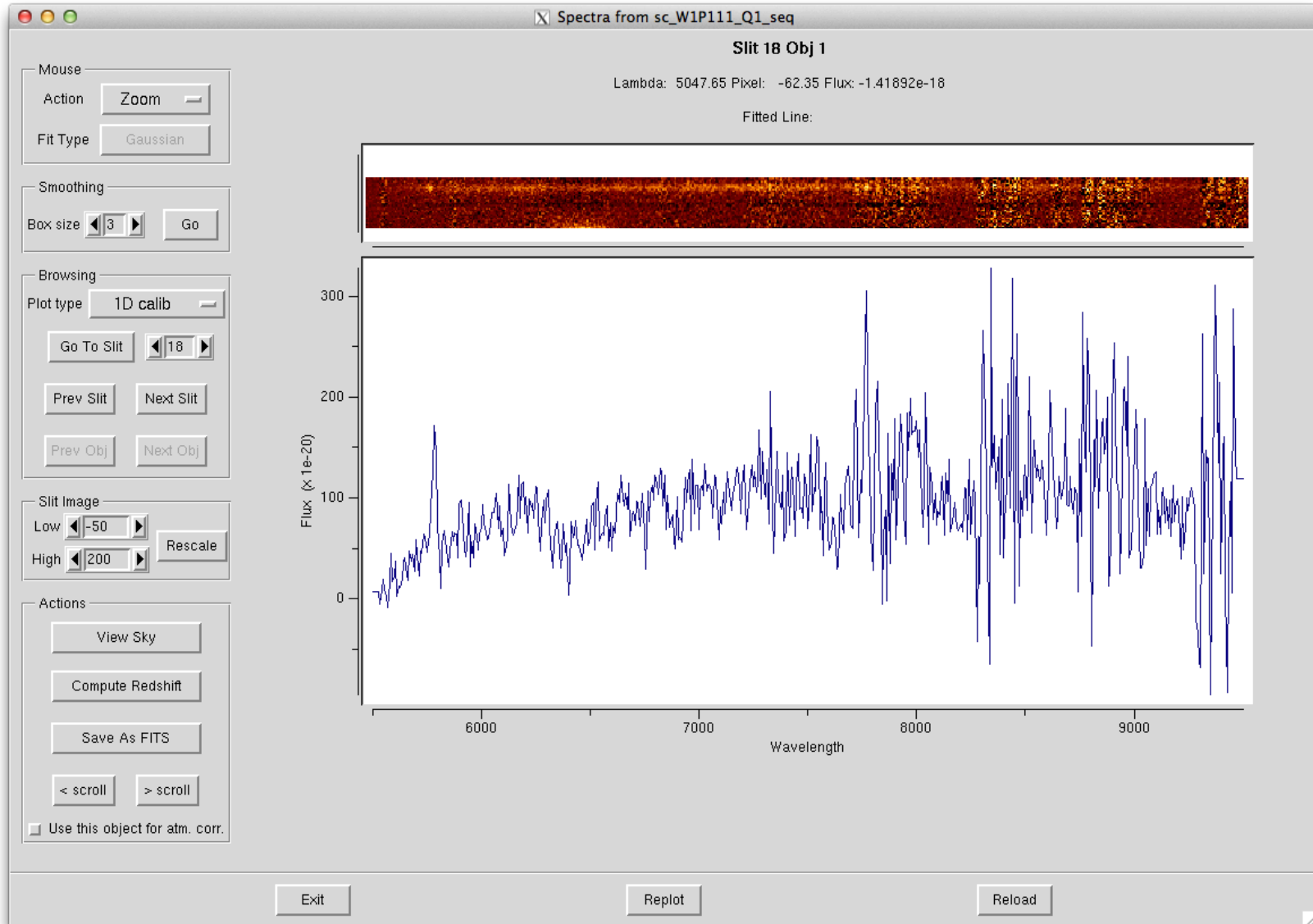
VIPGI 0.9.6
21/4/2004

Plot Single Spectrum



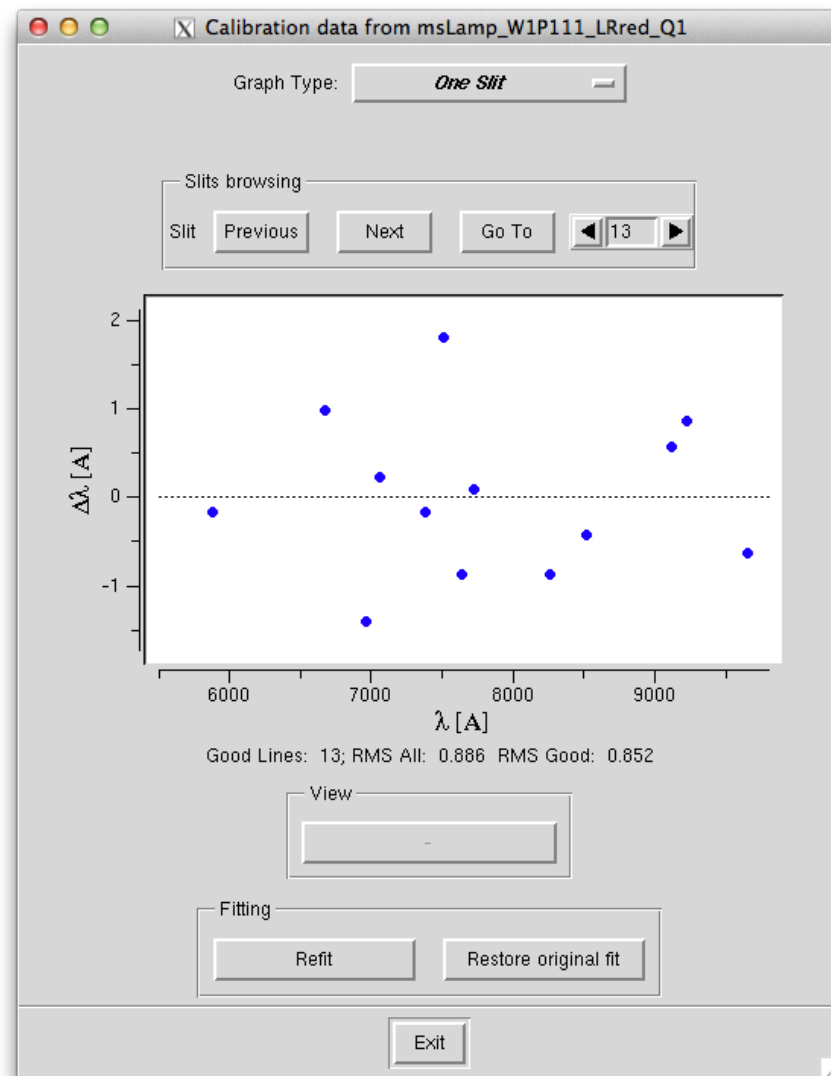
VIPGI 0.9.6
21/4/2004

Plot Single Spectrum



VIPGI 0.9.6
21/4/2004

Check Lambda Calibration



VIPGI 1.4

6/4/2009

The screenshot displays the VIPGI software interface. At the top, the title bar reads "VIPGI" and the menu bar includes "Pipeline", "Organizer Table", "Parameter Files", and "Help". Below the menu bar is a toolbar with icons for file operations and help. The main window is divided into several sections:

- Ins. Mode:** A dropdown menu set to "MOS".
- Actions:** A vertical panel on the left with sub-sections "Organizer", "Reduction", "Browsing", and "Plotting". It contains buttons for "Rename Archive Files", "Unpack Selected Files", "Unpack All Files", "Rename Selected File", "Delete Selected Files", "Clear Selection", "Reload Organizer Table", "Science2Lamp", and "Advanced z tools".
- Data:** A central panel with tabs for "Raw Data", "Q1", "Q2", "Q3", "Q4", and "All Quadrants". The "Q1" tab is active. It contains a "Data Categories" list with "STD LR_red" and "W1P111_M1 LR_red".
- Single Frames List:** A panel on the right showing a "Frame Type" dropdown set to "science" and a list of files under "Data Cat: W1P111_M1 LR_red":
 - sc_W1P111_LRred_Q1_1.fits
 - sc_W1P111_LRred_Q1_1_BF.fits
 - sc_W1P111_LRred_Q1_2.fits
 - sc_W1P111_LRred_Q1_2_BF.fits
 - sc_W1P111_LRred_Q1_3.fits
 - sc_W1P111_LRred_Q1_3_BF.fits
 - sc_W1P111_Q1_seq.fits
- Master Calibration Frames:** A panel on the right showing a list of files under "Data Cat: W1P111_M1 LR_red":
 - msFlat_W1P111_Q1.fits
 - msLamp_W1P111_LRred_Q1.fits
- Disk Usage:** A horizontal bar chart at the bottom showing "All Data [Gb]" usage. The scale ranges from 0.0 to 3731.7 Gb, with a red bar indicating current usage.
- Plotting Single Spectrum:** A status bar at the bottom right with a progress indicator and a green light.

EZ

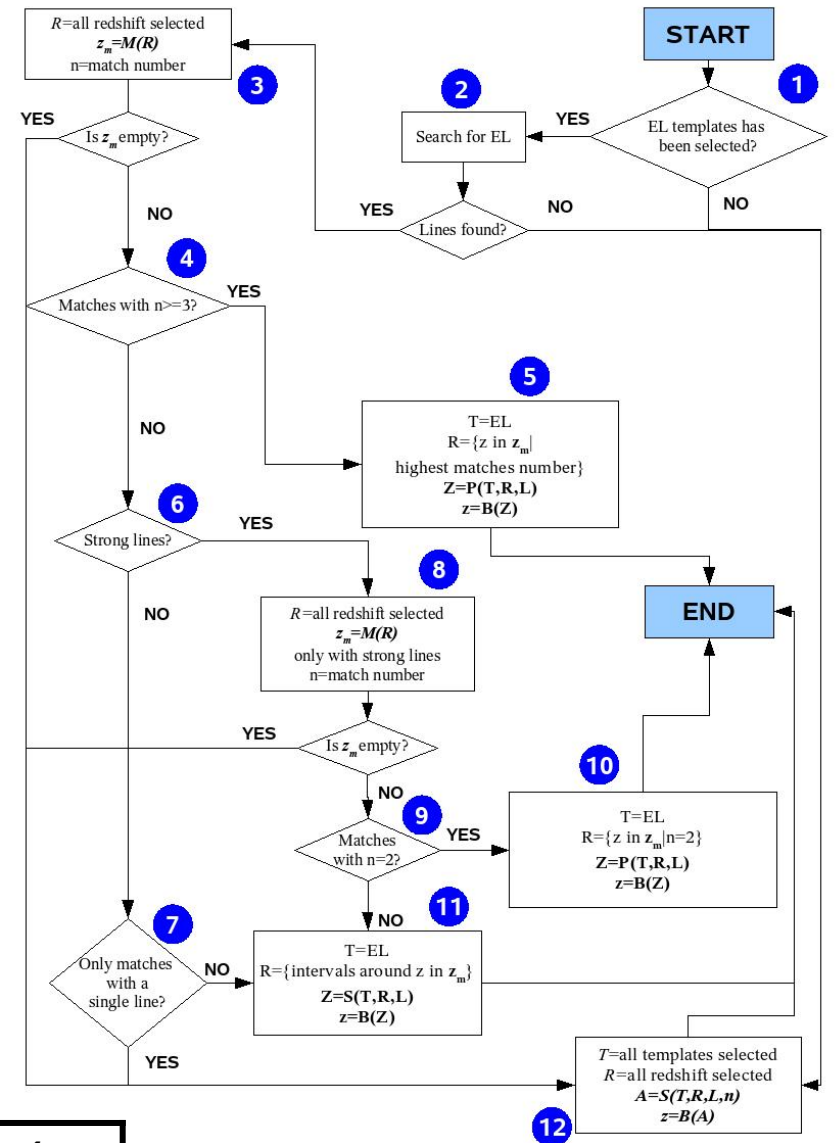
EZ: Easy-Z

(in collaboration with Roberto Scaramella and Stephane Paltani)

EZ satisfies the demand of a tool to measure redshifts in an automatic and reliable way from the huge amount of spectra provided by modern spectroscopic surveys

- ***Written in python/C***
- ***Interactive/Batch mode***
- ***Uses a set of user defined templates and a combination of correlation and fitting algorithms***
- ***Flexible and modular architecture***

Decisional Tree



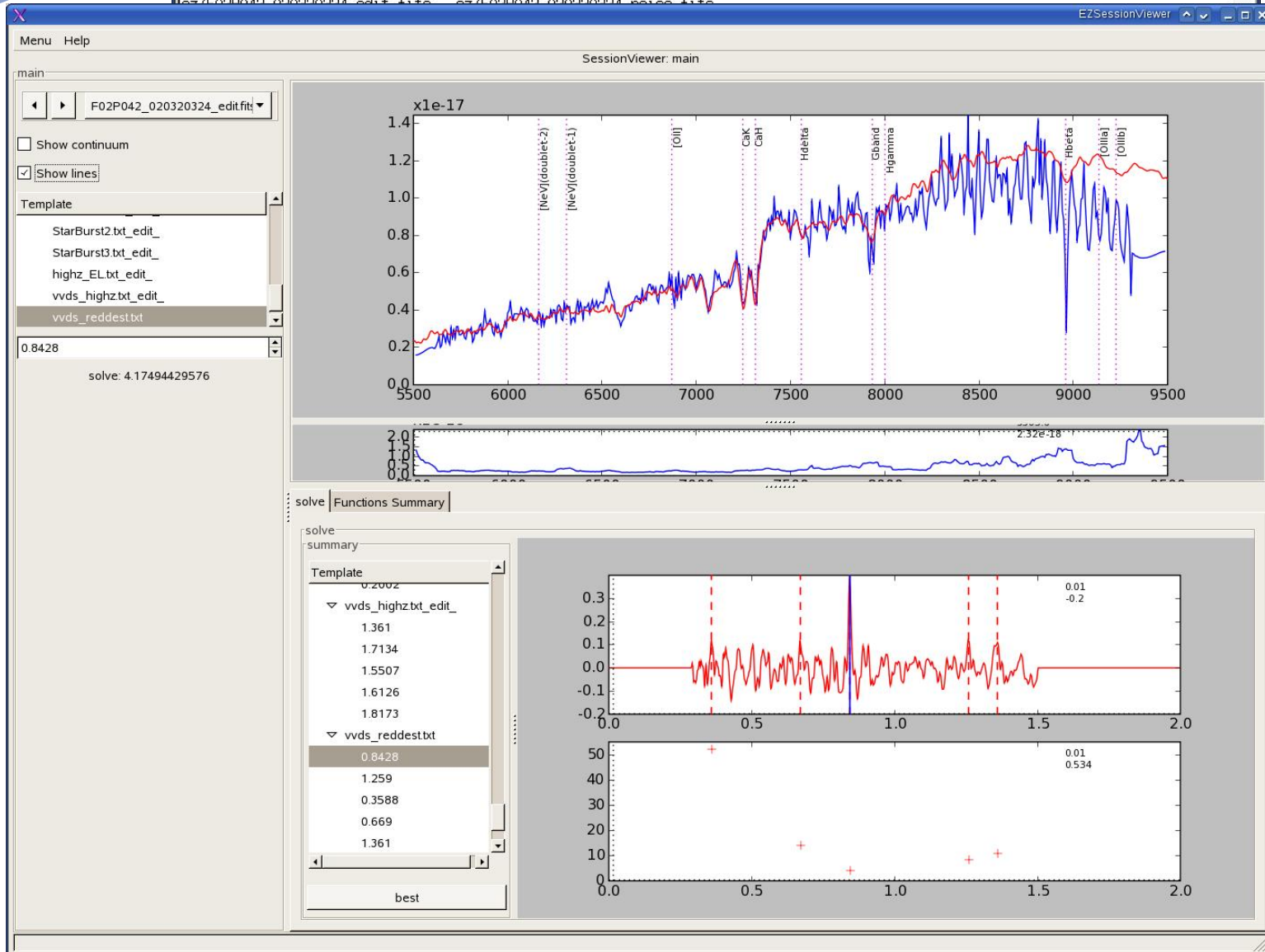
	All	4	3	9	2	1
VVDS	73.0	95.9	89.9	56.4	63.1	23.8
zCosmos	82.4	91.1	85.2	74.3	66.3	45.7

EZ Features

Versione 1.0
13/6/2007

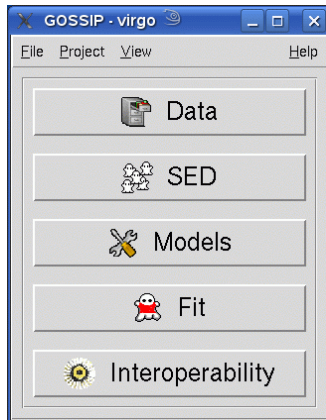
```

Host meg : user paolo on terminal pts/14 - MEG - Konsole
Session Edit View Bookmarks Settings Help
EZ >
EZ >
EZ >
EZ >
EZ >
EZ >
EZ > loadspectra spectrum=ez/F02P042_020320
EZ > /F02P042_020320324_edit_fit
  
```



GOSSIP:

Galaxy Observed Simulated SED Interactive Program



GALAXIES SAMPLE

- BROAD BAND MAGNITUDES
- SPECTRUM
- REDSHIFT

SEDs LIBRARY

χ^2 MINIMIZATION

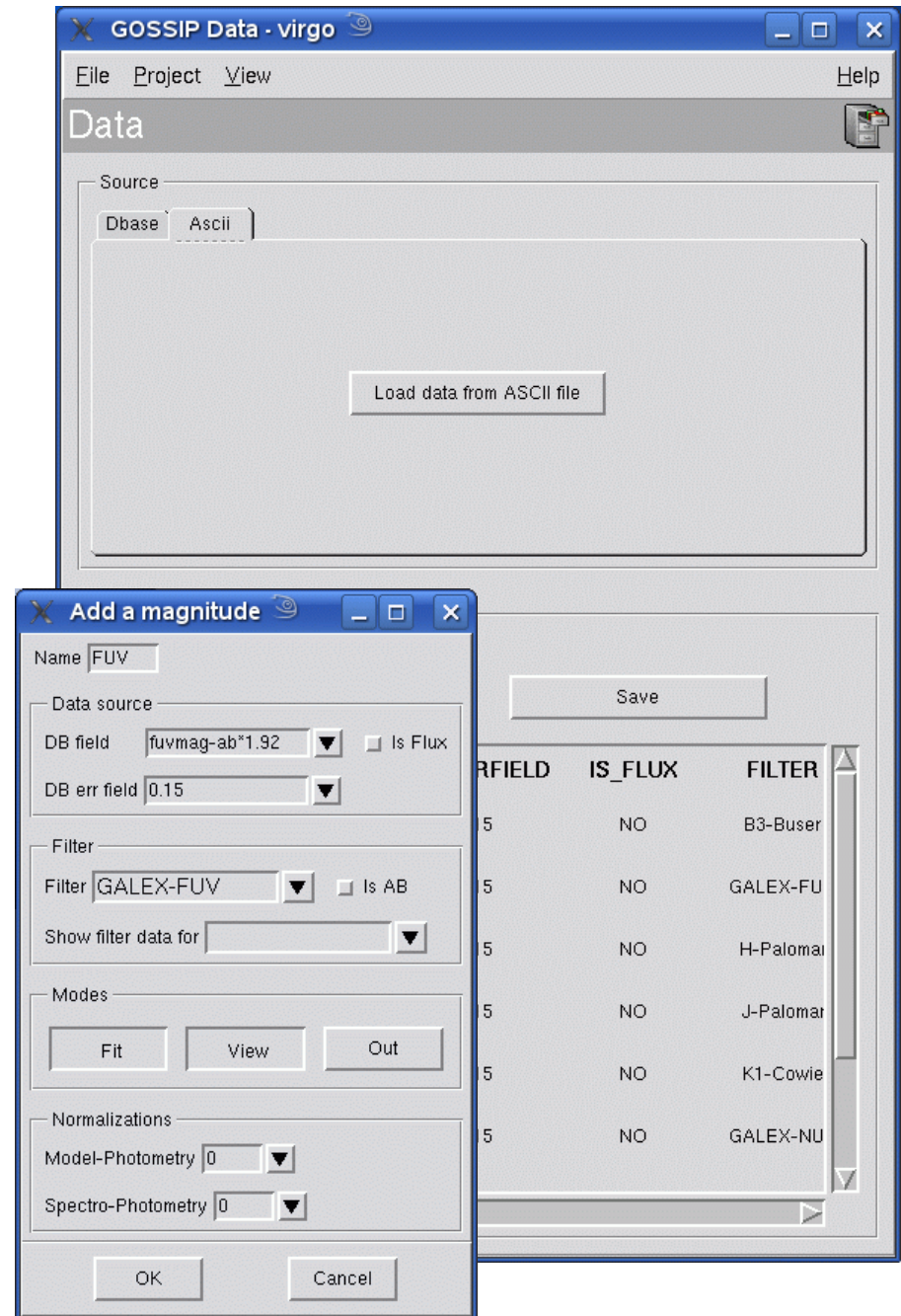
PDFs COMPUTATION

- STAR FORMATION HISTORY
- STAR FORMATION RATE
- STELLAR MASS
- ABSOLUTE MAGNITUDES
- ...

GOSSIP

GALAXIES SAMPLE

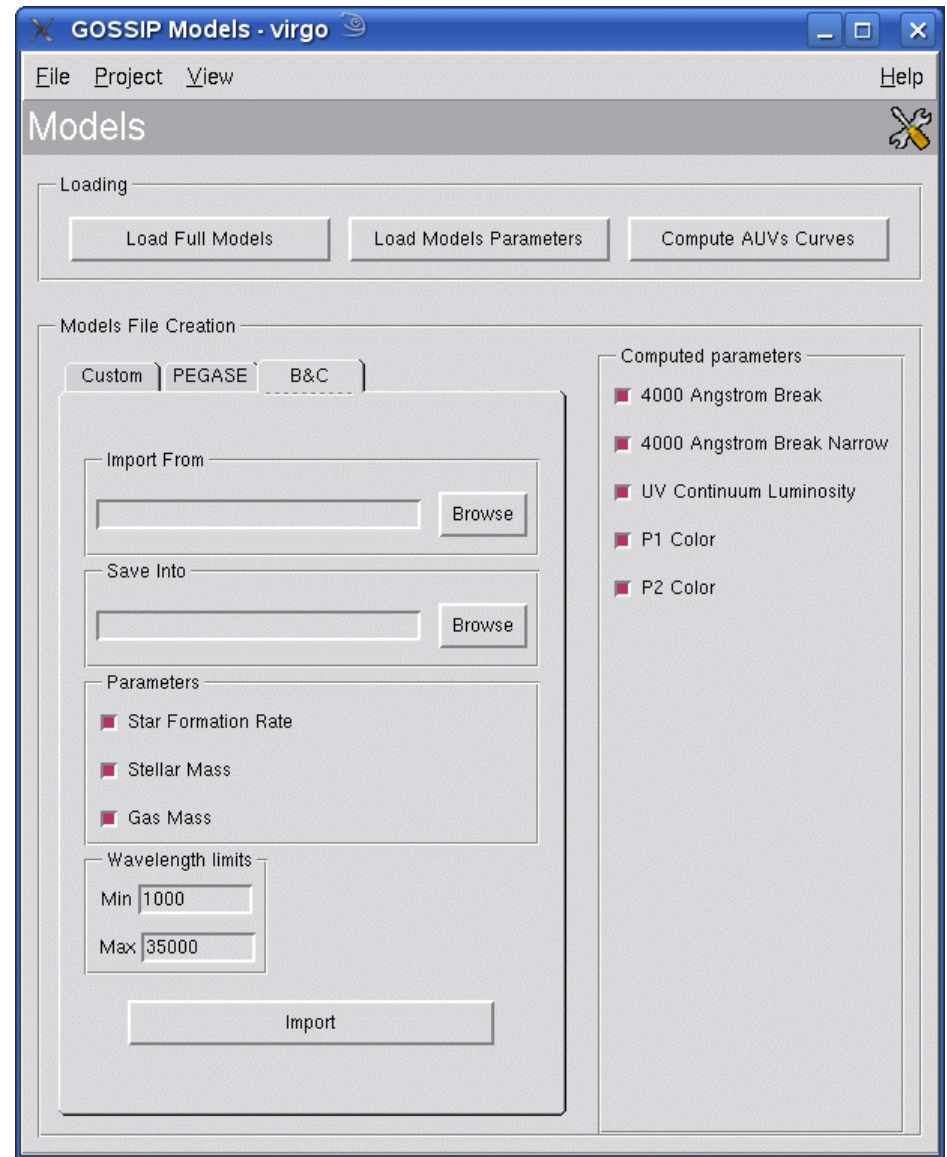
GOSSIP builds-up the observed SED of each object combining magnitudes in different broad bands from different instruments and also a spectrum.



GOSSIP

SEDs LIBRARY

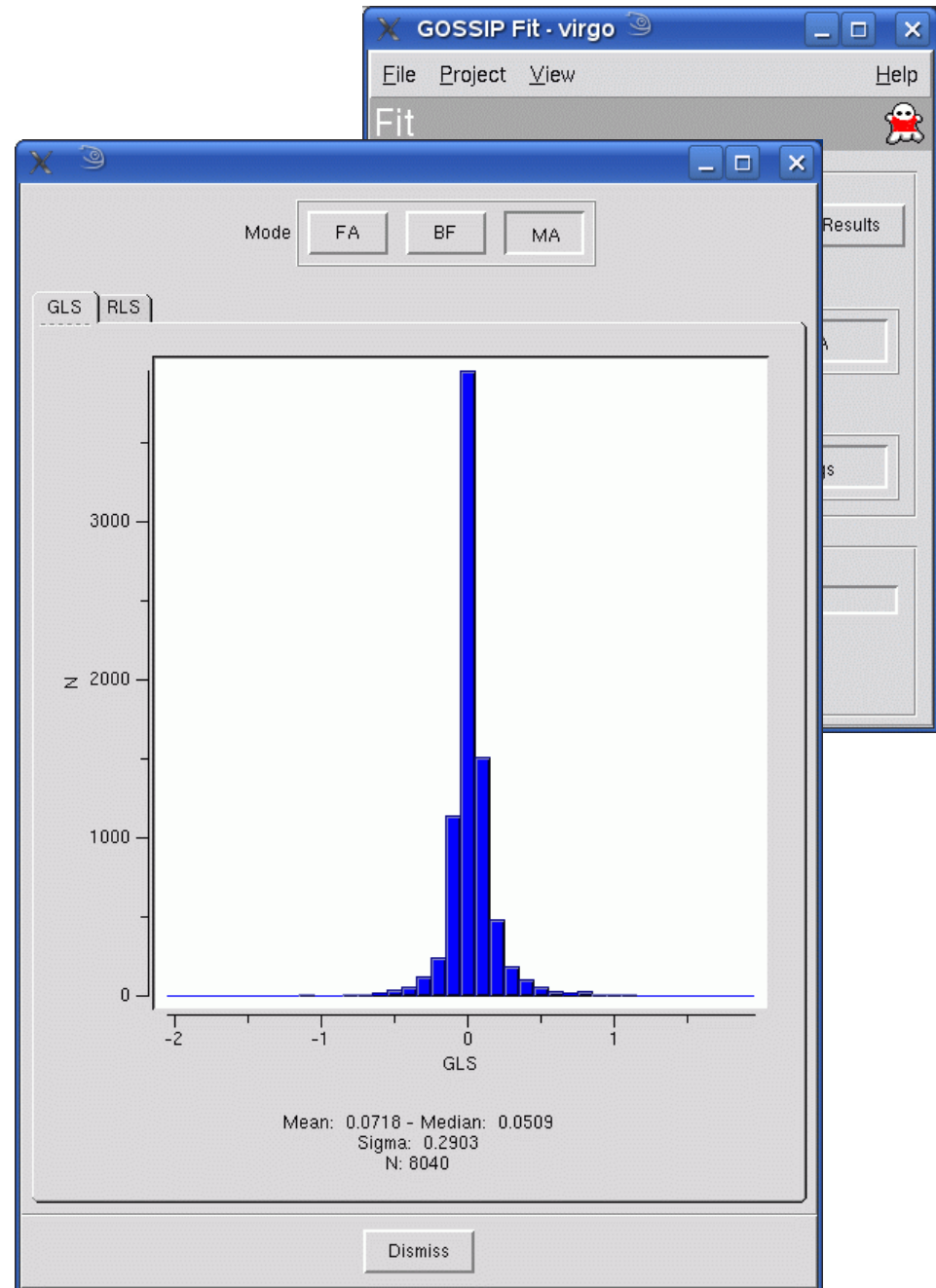
GOSSIP loads sets of user-defined synthetic models, but it is also able to load directly the output data files produced by the PEGASE and Bruzual & Charlot synthesis population codes.



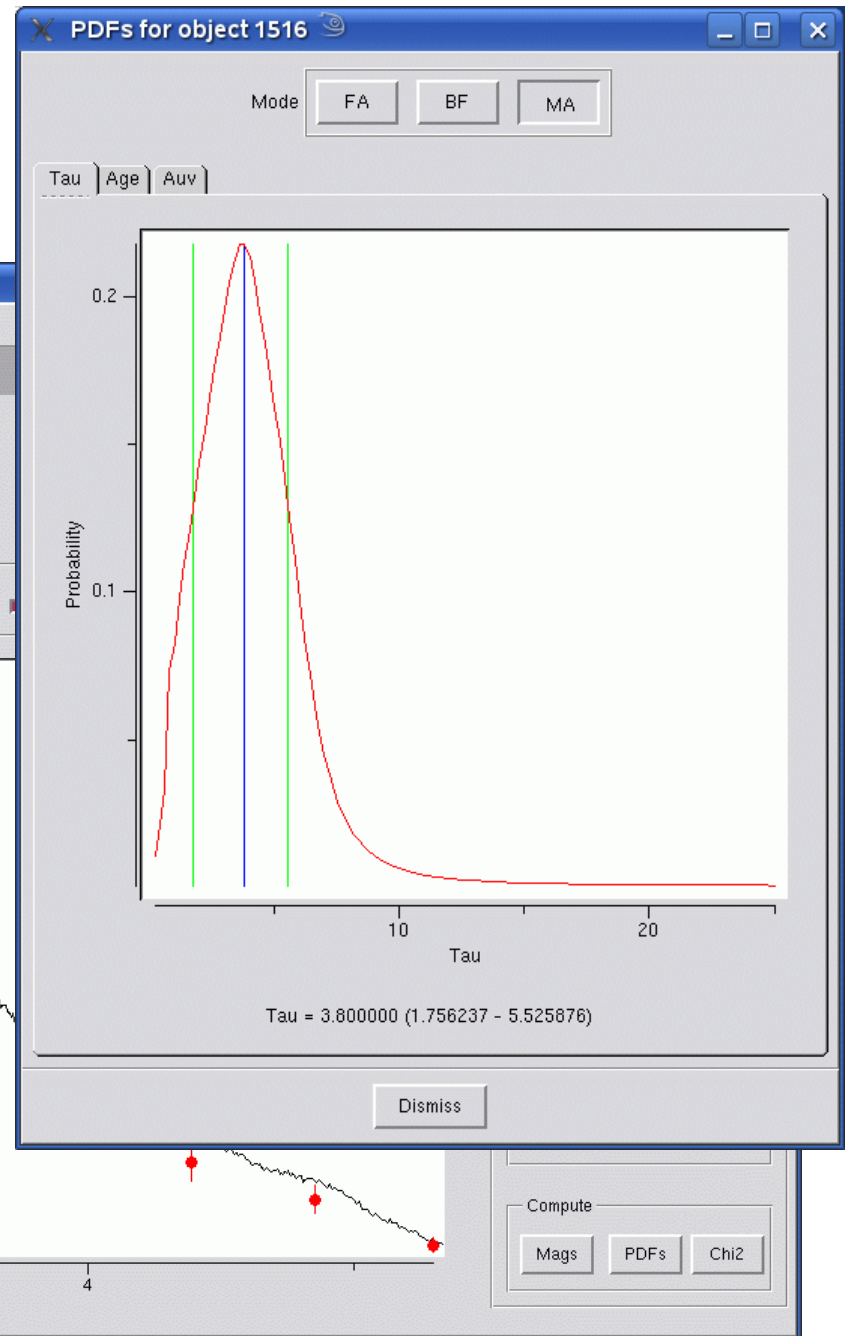
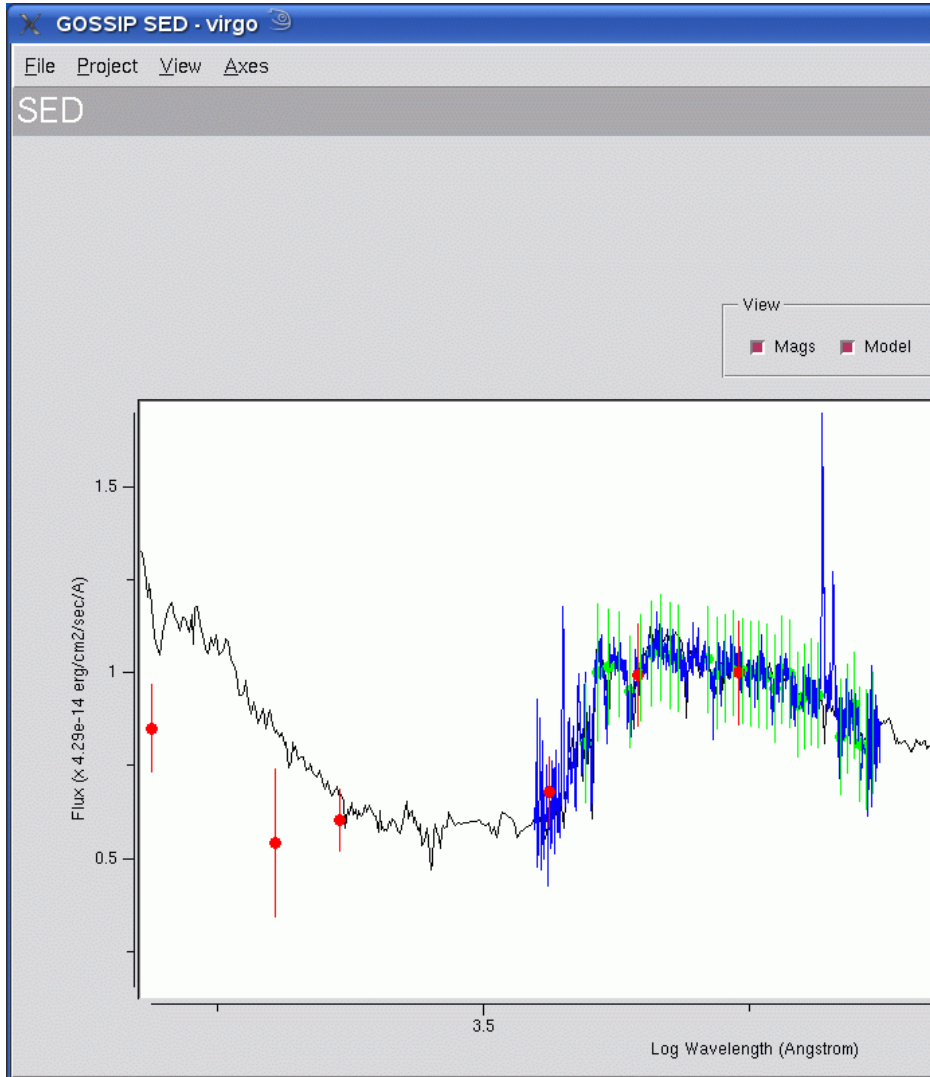
GOSSIP

FITTING

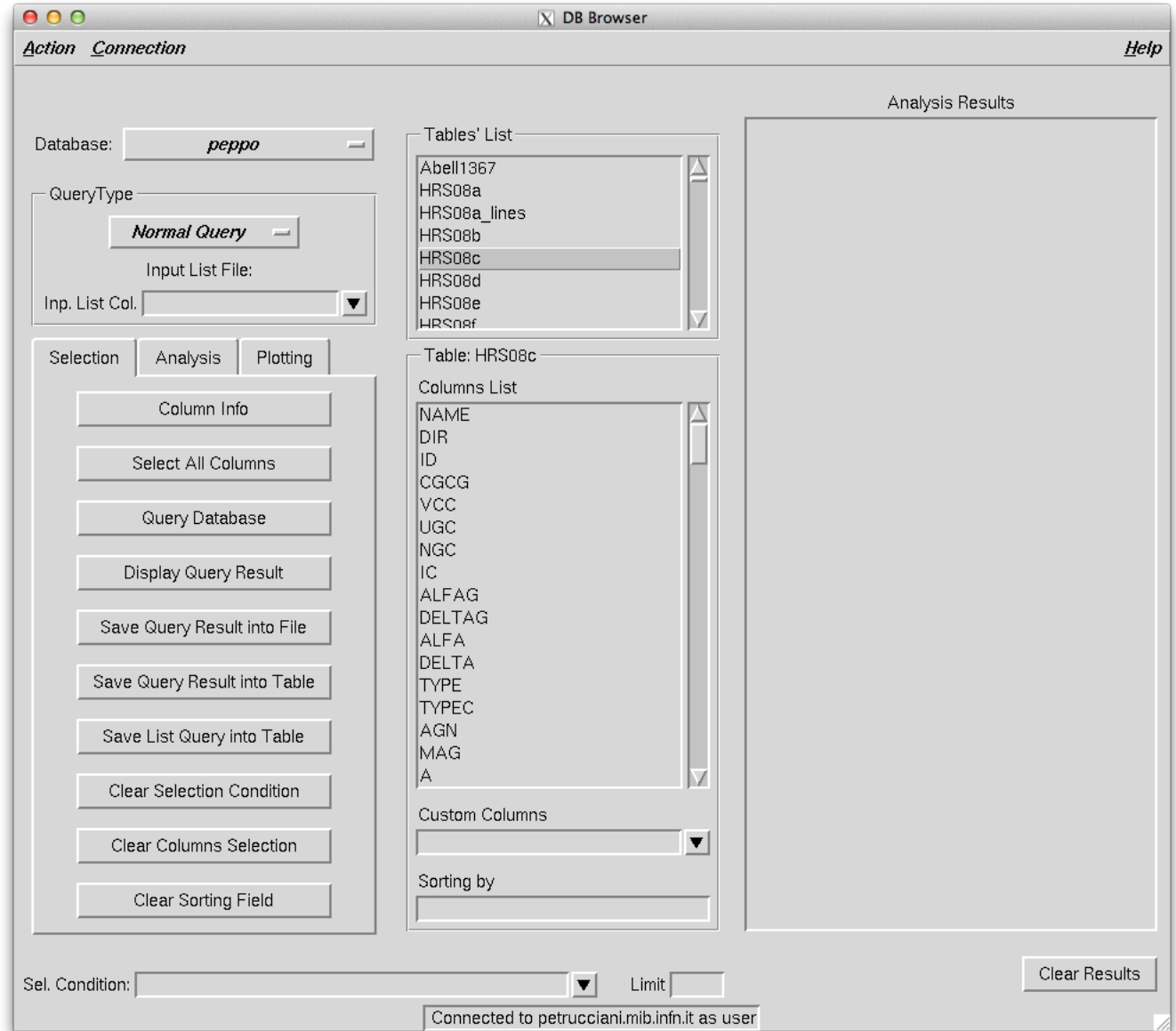
GOSSIP performs the X^2 minimization procedure and the PDFs computation in batch mode on a single CPU or on a BEOWULF cluster. It performs also post-fitting operations like results checking and computation of absolute magnitudes.



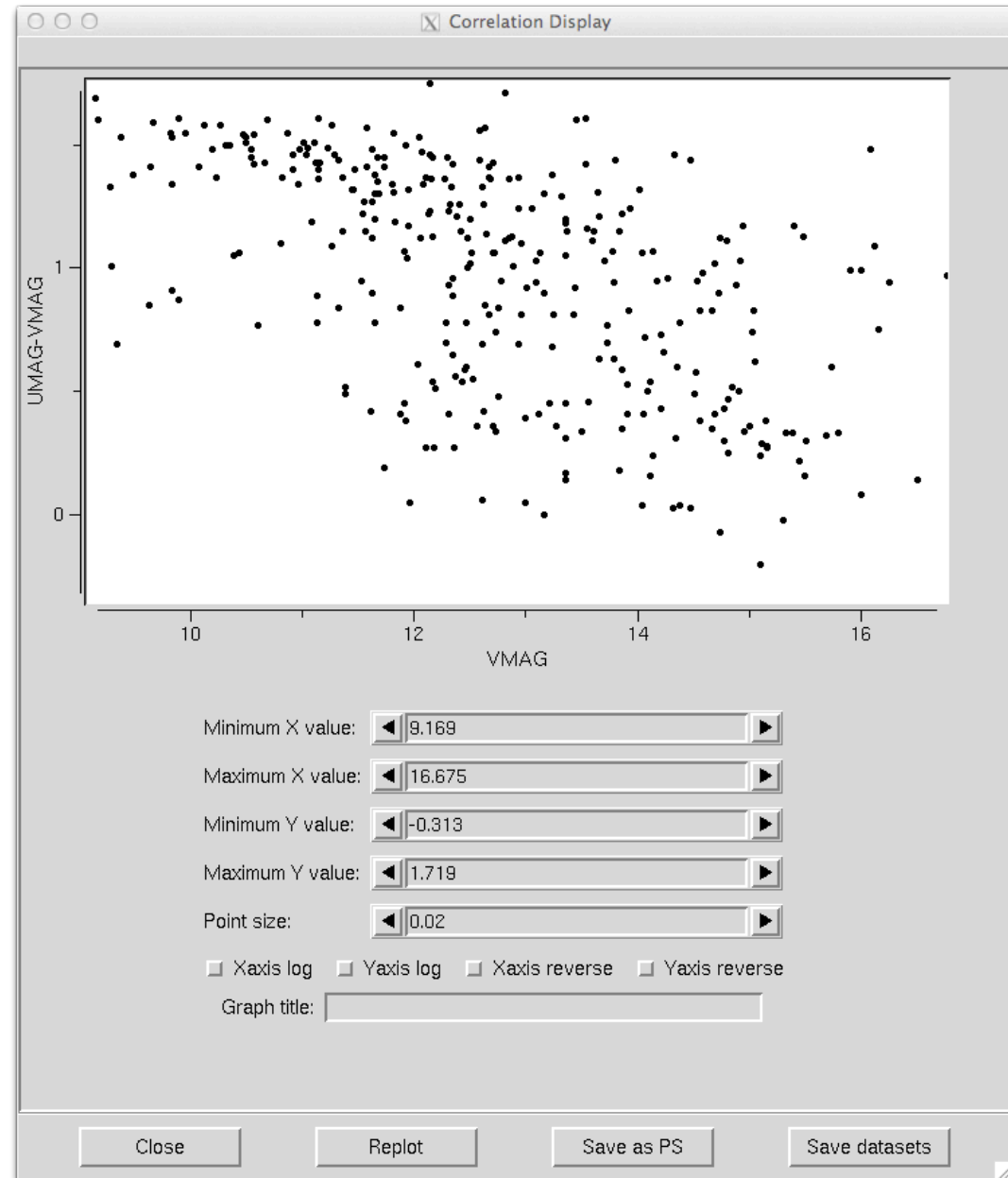
GOSSIP



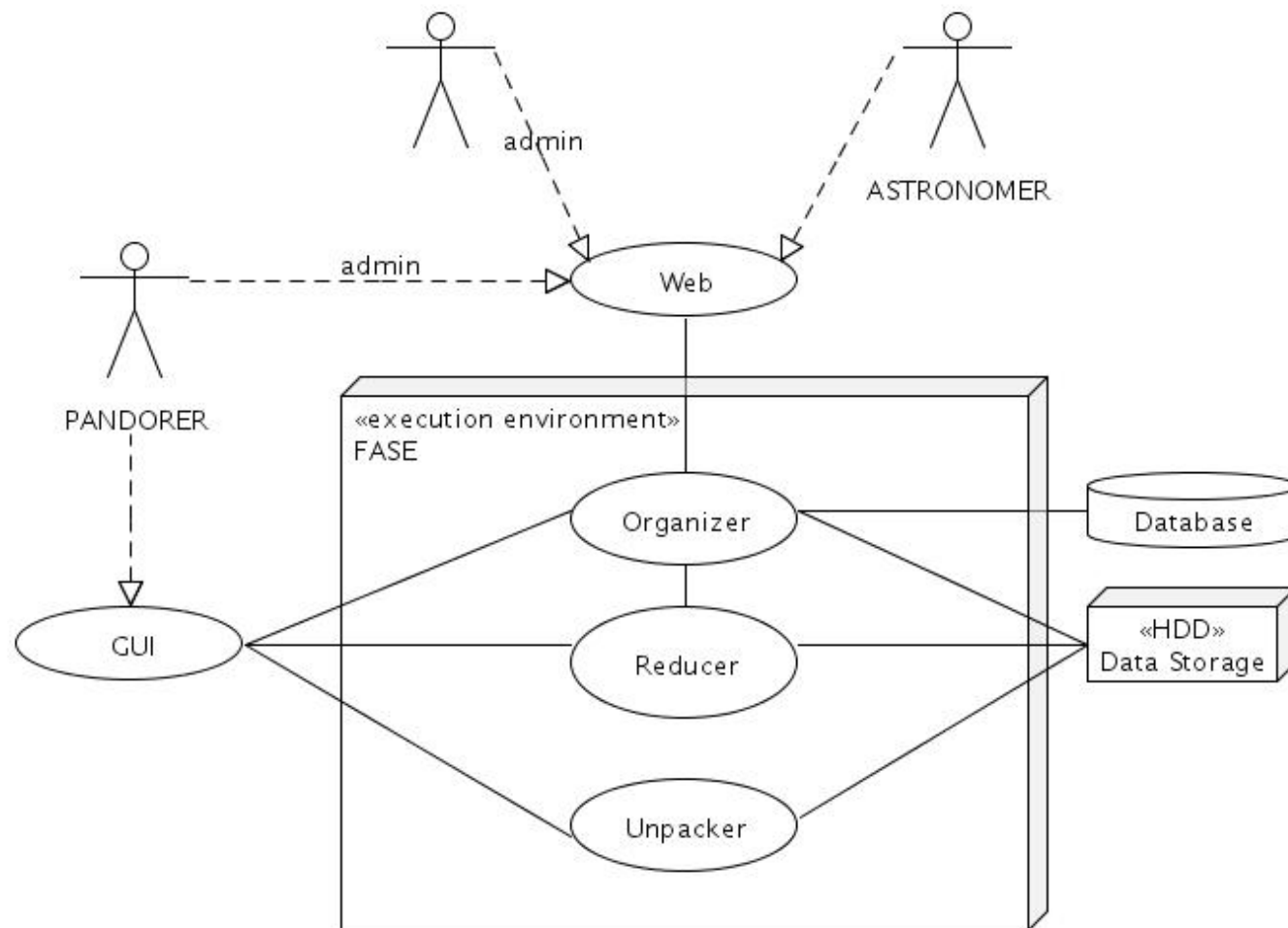
DBBROWSER



DBBROWSER



FASE FRAMEWORK



EasyLife - Log

Log Filters

Level: error

User:

Host:

between
 during the previous

0 second(s)

Pid:

Session:

Message:

Origin:

QUERY

Log View

Change Log Level: info

REMOVE CURRENT QUERY

Exclude recipes log
 Validation Log

Show

time
 level
 origin
 host
 user
 pid
 session

online W1P084-4

time	level	origin	message
2010-09-21 14:16:41.150	INFO	CompleteRed...	Normal Termination
2010-09-21 14:16:40.410	INFO	QualityReport	Store quality paramet...
2010-09-21 14:16:40.360	INFO	QualityReport	-> quality = 111
2010-09-21 14:16:40.300	INFO	QualityReport	Computing quality
2010-09-21 14:16:40.250	INFO	QualityReport	-> sky_quality = 1
2010-09-21 14:16:40.200	INFO	QualityReport	Computing sky_quality
2010-09-21 14:16:40.140	INFO	QualityReport	-> dist_qual = 1
2010-09-21 14:16:40.090	INFO	QualityReport	Computing dist_qual
2010-09-21 14:16:40.040	INFO	QualityReport	-> seeing_qual = 1 (s...
2010-09-21 14:16:39.990	INFO	QualityReport	Computing seeing_qual
2010-09-21 14:16:39.940	INFO	QualityReport	-> expected_failures ...
2010-09-21 14:16:39.890	INFO	QualityReport	Computing expected_...
2010-09-21 14:16:39.830	INFO	QualityReport	-> sky = 436.391770
2010-09-21 14:16:39.770	INFO	QualityReport	Computing sky
2010-09-21 14:16:39.720	INFO	QualityReport	-> dist_left = 14, dist_...
2010-09-21 14:16:39.660	INFO	QualityReport	Computing dist_left a...
2010-09-21 14:16:39.480	INFO	QualityReport	Report of quality para...
2010-09-21 14:16:39.420	INFO	CheckZphot	Photometric redshift c...
2010-09-21 14:16:39.360	INFO	SecondObject	Results summary sav...
2010-09-21 14:16:39.310	INFO	SecondObject	slit 68 obj 1 not in cat...
2010-09-21 14:16:39.150	INFO	SecondObject	slit 66 obj 1 not in cat...
2010-09-21 14:16:38.990	INFO	SecondObject	slit 65 obj 1 not in cat...
2010-09-21 14:15:20.380	INFO	SecondObject	slit 20 obj 1 not in cat...

EasyLife - SeqfileManager

Project: VIPERS
 Instrument: VIMOS
 Instrument Mode: MOS
 Reduction Status: ANY
 Grism: LRred
 Mask: 1

Pointing	Quadrant	Reduction Status	Grism	Mask Number
W4P002	1	VALIDATED	LRred	1
W4P002	2	VALIDATED	LRred	1
W4P002	3	VALIDATED	LRred	1
W4P002	4	VALIDATED	LRred	1
W4P001	1	VALIDATED	LRred	1
W4P001	2	VALIDATED	LRred	1
W4P001	3	VALIDATED	LRred	1
W4P001	4	VALIDATED	LRred	1
W1P086	1	VALIDATED	LRred	1
W1P086	2	VALIDATED	LRred	1
W1P086	3	VALIDATED	LRred	1
W1P086	4	EZ BLIND	LRred	1
W1P084	1	VALIDATED	LRred	1
W1P084	2	VALIDATED	LRred	1
W1P084	3	VALIDATED	LRred	1
W1P084	4	VALIDATED	LRred	1
W1P081	1	VALIDATED	LRred	1
W1P081	2	VALIDATED	LRred	1
W1P081	3	VALIDATED	LRred	1
W1P081	4	VALIDATED	LRred	1
W1P080	1	VALIDATED	LRred	1
W1P080	2	VALIDATED	LRred	1
W1P080	3	VALIDATED	LRred	1
W1P080	4	VALIDATED	LRred	1
W1P079	1	VALIDATED	LRred	1
W1P079	2	VALIDATED	LRred	1
W1P079	3	VALIDATED	LRred	1
W1P079	4	VALIDATED	LRred	1
W1P077	1	VALIDATED	LRred	1
W1P077	2	VALIDATED	LRred	1

VALIDATE SET STATUS VIEW LOG DOWNLOAD FILES UPLOAD FILES BROWSE FILES OPEN WITH SKYCAT

20 aprile 2004

The screenshot shows a Mozilla Firefox browser window displaying the Pandora website. The browser's address bar shows the URL <http://cosmos.iasf-milano.inaf.it/pandora/>. The website features a blue and white color scheme. At the top, the word "PANDORA" is written in a large, stylized font, and the IASF logo is visible in the top right corner. A navigation menu on the left side includes buttons for Home, Software (with sub-items: ASTROMD, DBBROWSER, FITSFILE, PYSTIC, SADIO, SGNAPS, VIPGI, XMM-LSS, and ADD-ONS), About Us, Legal Stuff, Contact Us, and Team Private. The main content area has a blue header that reads "Welcome to the Pandora Web Site" and "Home of the Pandora Group". Below this, a paragraph states: "PANDORA stands for 'Programs for AstroNomical Data Organization Reduction and Analysis'." A list of bullet points follows, describing the group's focus on astronomical software, their use of C and Python, their adherence to the GNU GPL, their Linux/Unix focus, and their affiliation with the IASF and INAF in Milan. At the bottom right, there is a "NEWS" section with three entries: "Mar 12th, 2007 PYSTIC 0.9 released", "Nov 13th, 2006 SADIQ 1.1.0 released", and "Jul 04, 2006 VIPGI 1.1.1 released". A footer at the bottom center of the page reads "You are our guest number 02706". The browser's status bar at the very bottom shows the word "Done".

SETTEMBRE
2009

- Data reduction pipeline
- Various data analysis tools
- Multi-cpu / grid know-how
- Many graphical interfaces
- Mac
- FASE

- Addons / Installation
- Libraries deaths
- Code duplication / management
- Installazione semplice
- Helpdesk

PNGS

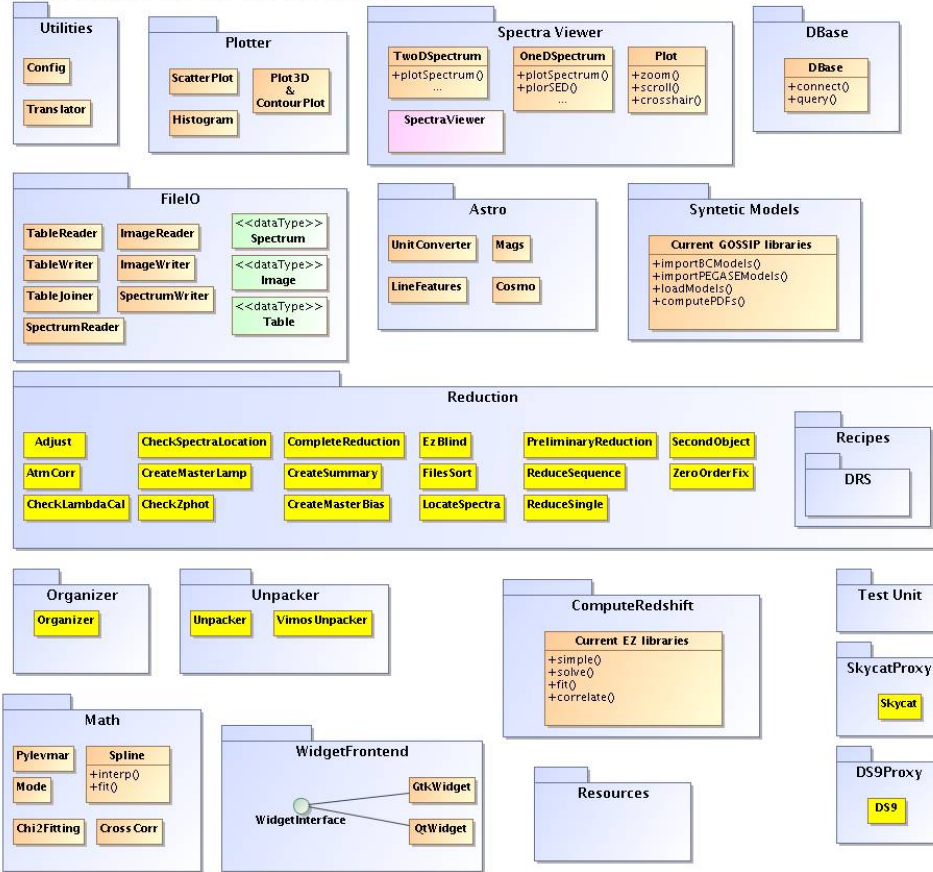
Pandora Next Generation Software

PNGS

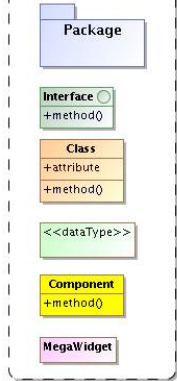
Pandora Applications



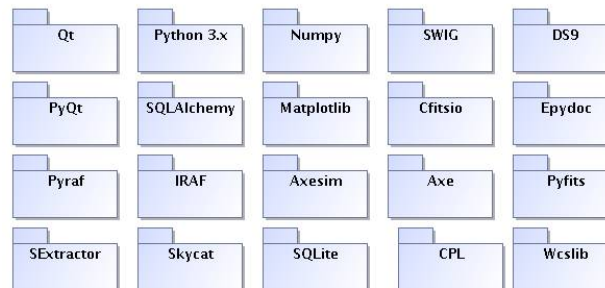
Pandora Packages



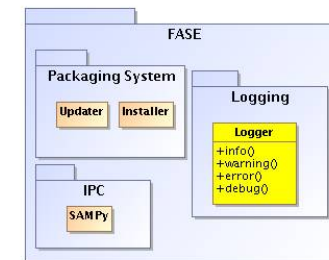
LEGENDA



Third Party Libraries



FASE



PNGS ???

The screenshot shows a web browser window with the address bar displaying "cosmos.iasf-milano.inaf.it/pandora/". The page features the "PANDORA" logo in a stylized, 3D font and the "IASF" logo. A navigation menu on the left includes buttons for "Home", "DBBROWSER", "EZ", "GOSSIP", "SAMPY", "SGNAPS", "VIPGI", "About Us", and "Legal Stuff". A blue banner at the top right reads "Where Man Wins Against The Machine". The main content area has a blue header that says "Welcome to the Pandora Web Site" and "Home of the Pandora Group". Below this, a bold black text block states: "After more than five years, due to lack of manpower and funds, we cannot support the PANDORA programs and help-desk any more. Even the [petition](#) addressed to INAF President and top management in support of PANDORA activity has failed to produce any improvement in the situation." A second bold black text block follows: "Therefore, as of March 2011, the PANDORA project has been terminated." A final bold black text block provides contact information: "People interested in using or upgrading one or more former PANDORA software should contact the package main developer(s) to discuss the possibility of a joint collaboration on the project for which the software package is needed (see the individual package page for the list of names)."

PNGS ???

The screenshot shows a web browser window with the address bar displaying `cosmos.lambrate.inaf.it/pandora/petition.html`. The browser's address bar also shows the text "PANDORA: Programs for A: X". The browser's toolbar includes icons for Google, Android, CORSO, VOCE, CONN STAT, FIT, GOOGLE, PYTHON, PANDORA, ASTRO, IASF, and NEWS. The main content area features the "PANDORA" logo in a stylized, 3D font and the IASF logo. Below the logos is a navigation menu with buttons for "Home", "Home", "Home", "DBROWSER", "EZ", "GOSSIP", "SAMPY", "SGNAPS", "VIPGI", "About Us", and "Legal Stuff". The main text area is titled "To INAF President" and contains the following text:

Where Man Wins Against The Machine

To INAF President

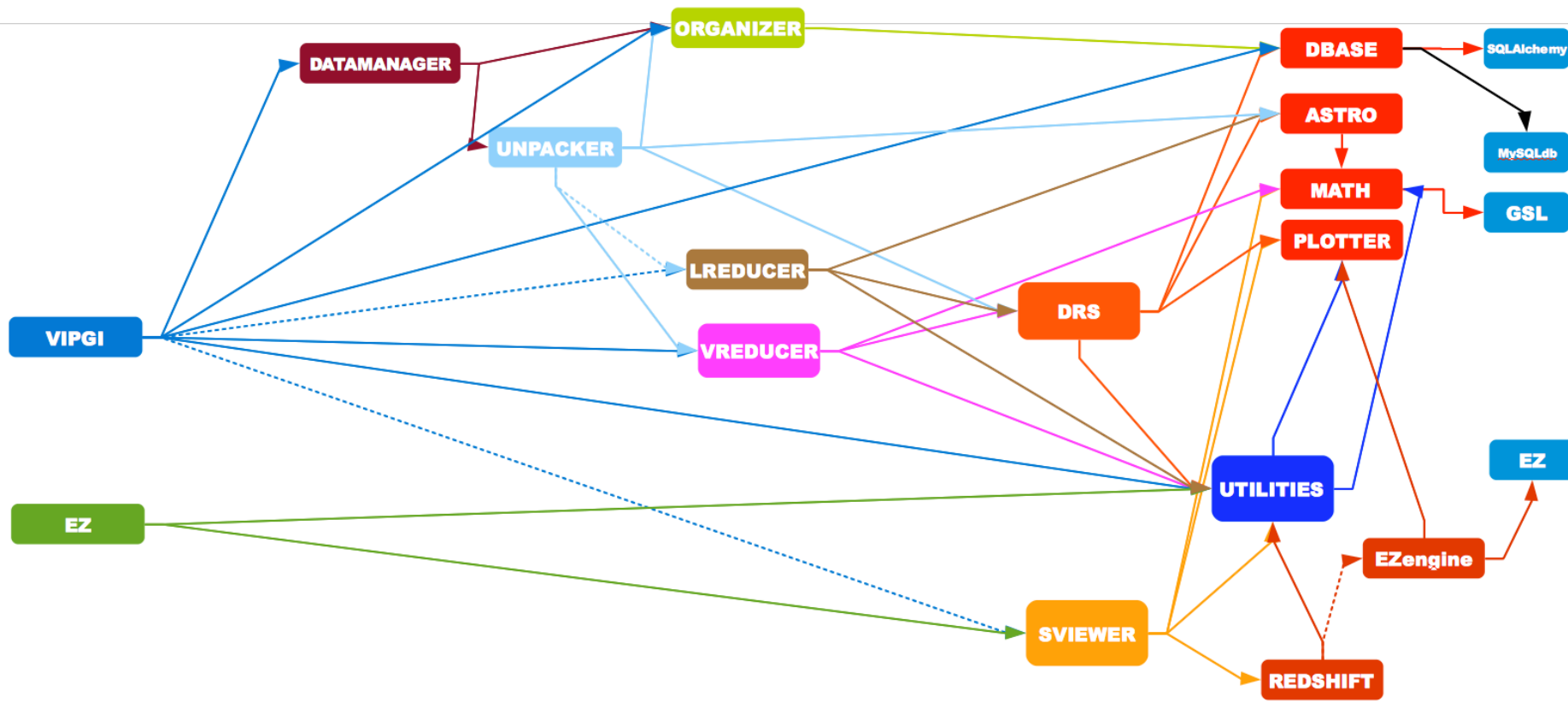
Since 2005 the PANDORA group at IASF has publicly distributed and supported eight different software packages, all devoted to optical spectroscopic data reduction and analysis. The packages have been downloaded and used by 422 people, and the help desk has answered more than 1500 requests. The pandora software has been extensively used for reduction and analysis of the major european spectroscopic surveys (VVDS, zCosmos, VIPERS) as well as for many smaller programs.

We understand that the activity of the Pandora group (help desk support, software maintenance and development of new tools) will be discontinued because of lack of funds (2010 applications have not been accepted) and dedicated manpower.

With this letter, we ask INAF to make every effort for continuing the funding of this service to the community, which constitutes also an important reservoir of knowledge for the new forthcoming projects

The petition has been signed by 121 people from 15 nations and sent to the INAF President on September 28, 2010. We warmly thank all the people who supported our group by signing it.

PNGS



logical workflow

The input catalog, representing the universe, provides the incident spectra, i.e. the spectra as they arrive on the telescope

The instrument model and the observing strategy are used to simulate the spectra on the FoV as they will be observed by the instrument

The reduction pipeline extracts the 1D spectra from the 2D simulated images

The redshift measurement on the 1D spectra obtains the recovered redshifts and an estimate of how much the measure is "reliable" (as it will not be possible to manually check millions of spectra)

The cosmological computations based on the recovered redshifts gives the FoM for the BAO measure

The FoM tells us if the instrument meets the scientific requirements of the EUCLID mission



implementation



Each logical step can be executed using different modules; the user defines at runtime the set of modules to be used for a given simulation run (see below some of the possible use cases).

At the moment the used modules are based on legacy software (like aXe, aXeSIM and EZ) and prototypes developed by us (RESS).

As soon as the OUs codes will be ready they will be easily included in the system for a more realistic simulation chain.

FASE (the Future Astronomical Software Environment) is a project that has been funded by the european community (OPTICON Network 9.2, FP7) to develop a standard interoperable and distributed framework within which integrating the legacy astronomical software and developing the future astronomical software.

It provides:

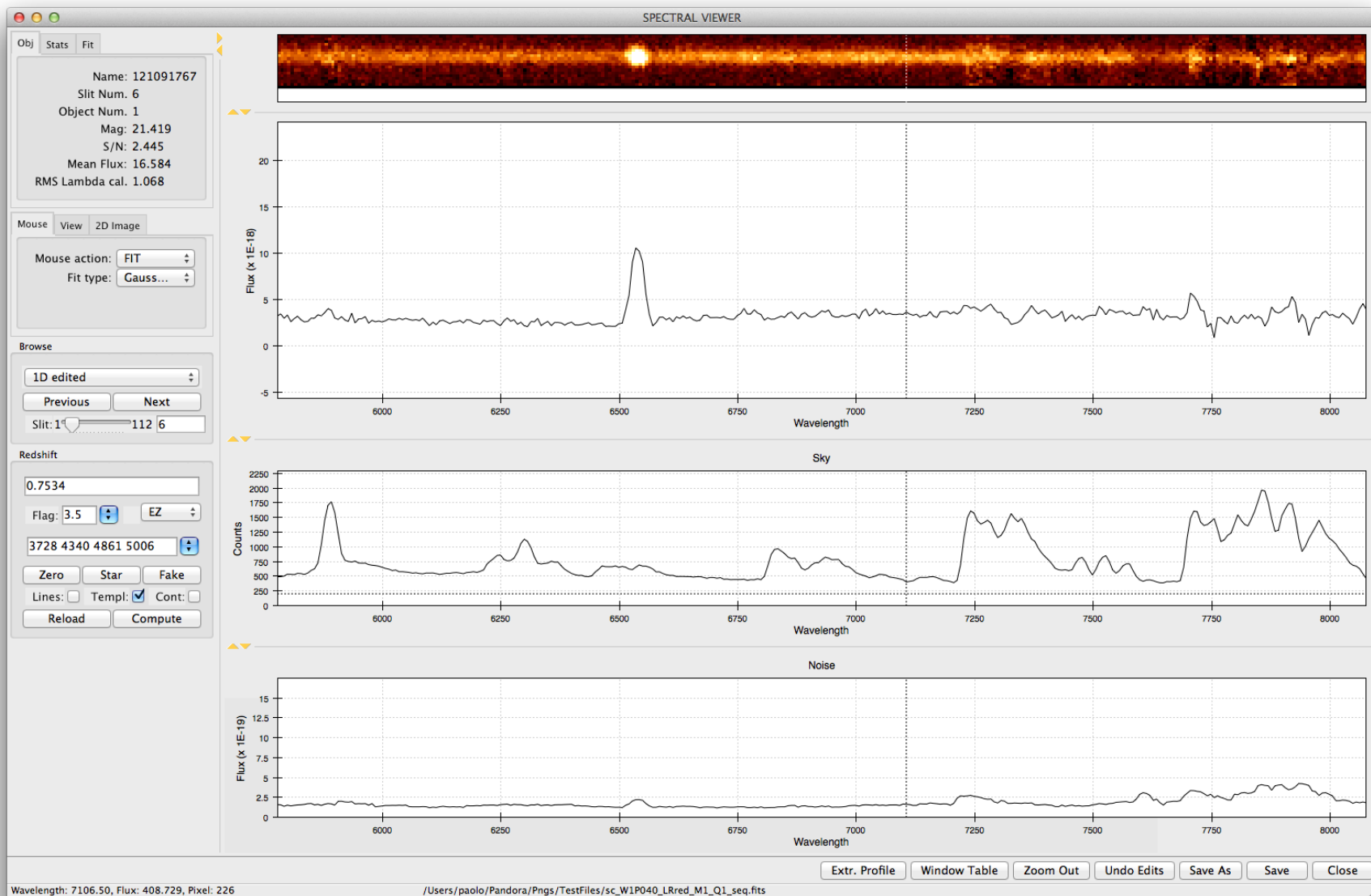
- a set of libraries to exploit the framework resources
- an execution engine to launch the applications on a scalable environment
- a packaging system, to pack the applications and easy their distribution, installation and execution

which simplify the use and development of astronomical applications, managing at run-time their life-cycle and providing a set of facilities to enable a real inter-operation between the different components involved (no matter in what language they are written).

For further details see <http://faserepo.lambrate.inaf.it/media/tutorial/cur/html/main.html>

PNGS

pandora.ez



PNGS

pandora.ez

The screenshot displays the 'COMPUTE REDSHIFT' interface, divided into two main sections: a spectral line list on the left and a configuration panel on the right.

Left Panel: Spectral Line List

Rest-fr. w.	Name	Type	Exp. w.	Comment
10320.0	+ [SII]	E	11352.0	
8863.0	- TiO(*)	A	9749.3	
8430.0	- TiO(*)	A	9273.0	
8195.0	- NaI	A	9014.5	
8183.0	- NaI	A	9001.3	
7590.0	- TiO(*)	A	8349.0	
7065.2	HeI	AE	7771.72	
6725.0	+ [SII]db	E	7397.5	
6562.8	Halpha	AEB	7219.08	
6159.0	- TiO(*)	A	6774.9	
5892.5	- NaD	A	6481.75	
5603.0	- TiO(*)	A	6163.3	
5269.0	- Ca, Fe	A	5795.9	
5175.4	- MgI	A	5692.94	
5006.8	+ [OIII](db-1)	E	5507.48	
4958.9	+ [OIII](db-1/3)	E	5454.79	
4861.3	Hbeta	AEB	5347.43	
4340.4	Hgamma	AE	4774.44	
4304.4	- Gband	A	4734.84	
4216.0	- CN	A	4637.6	
4101.7	Hdelta	AE	4511.87	
4072.0	+ [SII]db	E	4479.2	
3968.5	- CaII_H	A	4365.35	
3933.7	- CaII_K	A	4327.07	
3869.8	+ [NeIII]	E	4256.78	
3889.1	Hksi, CN(H8)	AE	4278.01	
3797.9	Hteta	AE	4177.69	
3770.6	H11	AE	4147.66	
3727.5	+ [OII]	E	4100.25	

Right Panel: Configuration and Results

Configuration:

- Redshift value: 0.1
- Flag: 1.0, EZ
- Comment: 3727
- Buttons: Zero, Star, Fake
- Lines: Zero, EZ lines, Template, Continuum
- RELOAD FROM SUMMARY
- LAMBDA: Min: 11000.0, Max: 20000.0
- Z: Min: 0.7, Max: 2.1, Step: 0.001
- TEMPLATES: Star, Qso, Emission, Galaxy, Custom
- RUN: SOLVE, EXEC
- RESULTS: SOLVE, SUMMARY

File Tree (SOLVE):

- Solve result
- All templates
- star
 - qso
 - SDSS_AGN.txt
 - VVDS_AGN.txt
 - emission
 - Im.txt
 - Sbc.txt
 - Scd.txt
 - StarBurst1.txt
 - StarBurst2.txt
 - StarBurst3.txt
 - highz_EL.txt
 - vvds_highz.txt
 - zcosmos_blue.txt
 - Dustfree_Starburst.dat
 - Dusty_Starburst.dat
 - Early_Sp.dat
 - Late_Sp.dat
 - galaxy
 - E.txt
 - E_red.txt
 - wds_reddest.txt
 - zcosmos_red.txt
 - Ell.dat
 - Im.txt edit
 - Sbc.txt edit

Results (SUMMARY):

- correlation: [Empty plot area]
- redshift: [Empty plot area]
- fit: [Empty plot area]
- redshift: [Empty plot area]

Buttons: BEST, Reset Axis

PNGS

pandora.vipgi

The screenshot shows the Vipgi software interface. At the top, there are window control buttons and a title bar with the name 'Vipgi'. Below the title bar is a toolbar with icons for home, search, refresh, and zoom. The main interface is divided into a left sidebar and a main content area. The sidebar has tabs for 'Reduction', 'Browsing', and 'Plotting'. Under 'Reduction', there is a list of buttons: 'Create Bad Pixels Image', 'Append Bad Pixels Image', 'Adjust First Guess', 'Create Master Dark', 'Create Master Bias', 'Create Image Master Flat', 'Locate Spectra', 'Create Master Lamp', 'Preliminary Reduction', 'Create Sensitivity', 'Reduce Single Observations', 'Reduce Sequence of Obs.', 'Apply Atm. Correction', 'Create Summary File', 'Split 1D Spectra', and 'Measure Redshift'. The main content area has a 'Projects:' dropdown menu set to 'VIMOS_PROJECT'. Below this is a section for 'WIP111-LRred-1-Q1' with a table of observation data. The table has columns for FILETYPE, ORIGIN, and OBSERVING NIGHT. Below the table are two more tables: one for 'msFlat_WIP111_LRred_1_Q1.fits' and 'msLamp_WIP111_LRred_1_Q1.fits', and another for 'FILETYPE' and 'QUADRANT' with columns for FILENAME, FILETYPE, GRISM, VALID FROM, and VALID UPTO. At the bottom right, there are buttons for 'Back', 'Import', 'Rescan', 'Unclassified', and 'Calib. Files'.

Projects: VIMOS_PROJECT

WIP111-LRred-1-Q1

FILETYPE	ORIGIN	OBSERVING NIGHT
ALL	**ALL**	**ALL**
FILENAME	FILETYPE	DATE OBS
ff_WIP111_LRred_1_Q1_1.fits	FLAT	2011-11-16 02:27:52
lp_WIP111_LRred_1_Q1_4.fits	LAMP	2011-11-16 02:30:58
sc_WIP111_LRred_1_Q1_1.fits	SCIENCE	2011-11-16 01:36:05
sc_WIP111_LRred_1_Q1_1_BFCS.fits	SCIENCE	2011-11-16 01:36:05
sc_WIP111_LRred_1_Q1_2.fits	SCIENCE	2011-11-16 01:46:00
sc_WIP111_LRred_1_Q1_2_BFCS.fits	SCIENCE	2011-11-16 01:46:00
sc_WIP111_LRred_1_Q1_3.fits	SCIENCE	2011-11-16 01:55:55
sc_WIP111_LRred_1_Q1_3_BFCS.fits	SCIENCE	2011-11-16 01:55:55

FILENAME	FILETYPE
msFlat_WIP111_LRred_1_Q1.fits	MASTER FLAT
msLamp_WIP111_LRred_1_Q1.fits	MASTER LAMP

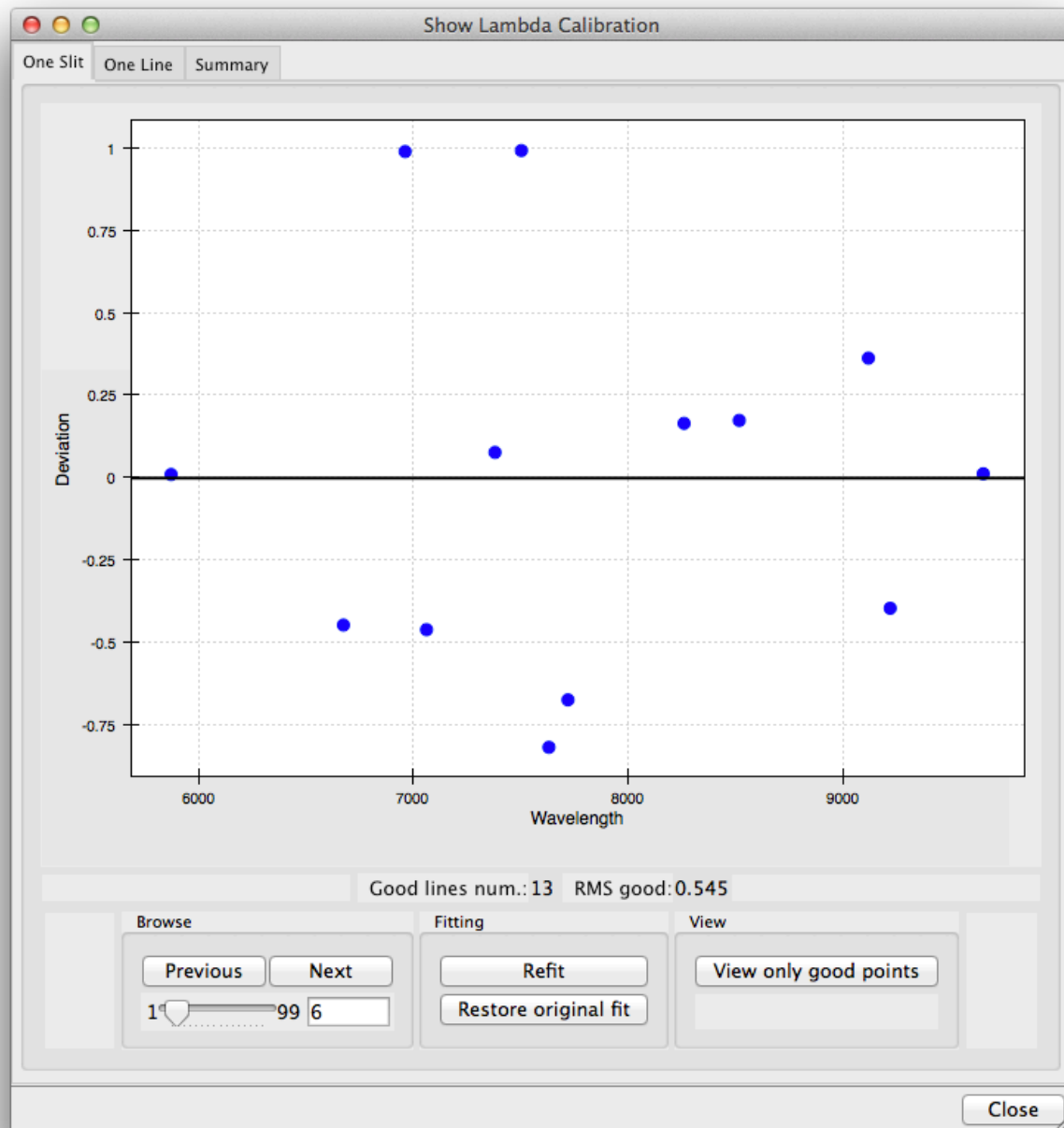
FILETYPE	QUADRANT			
ALL	Q1			
FILENAME	FILETYPE	GRISM	VALID FROM	VALID UPTO
<input type="checkbox"/> Tab_st_LTT-4816_LR_red_mar2	SPEC-PHOT TAB		1900-01-01	2500-01-01
<input type="checkbox"/> msBias_spec_mar2011_Q1.fits	MASTER BIAS		2012-09-25	2012-09-25
<input type="checkbox"/> Tab_st_EG-274_LR_blue_Q1_m	SPEC-PHOT TAB	LRblue	2011-01-30	2014-01-30

WIP111-LRred-1-Q1

Back Import Rescan Unclassified Calib. Files

PNGS

pandora.vipgi



PNGS

pandora.vipgi

