ETC-42 for Wish

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- ETC as generic tool

ETC-42 Introduction

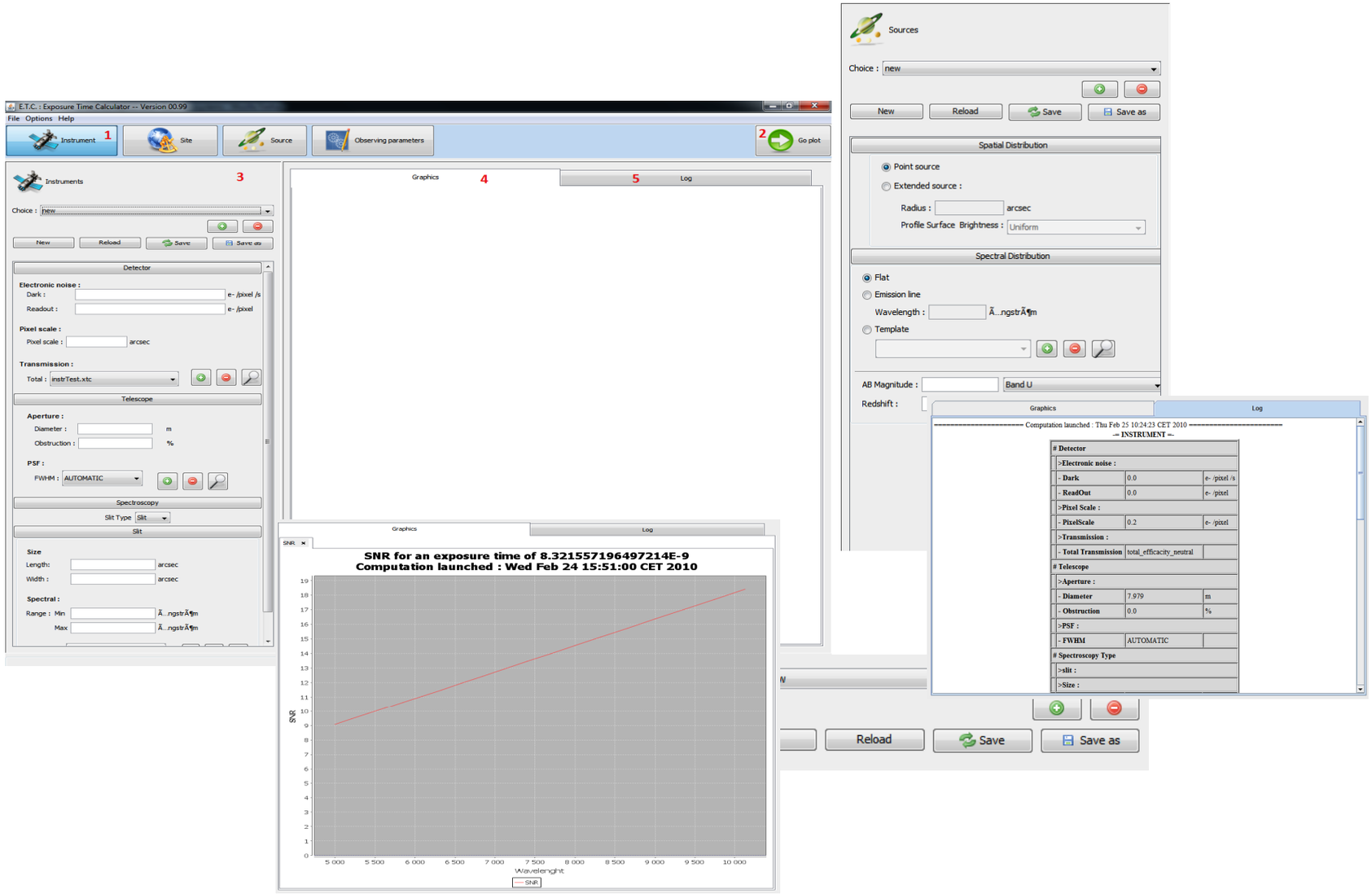
- What is it?
- Don't we have enough of them already?

- ETC-42 is a **generic** ETC
  - Not designed for a specific instrument Very flexible calculation of the SNR
  - Easily extensible to reach any requirements Targets a broader range of users

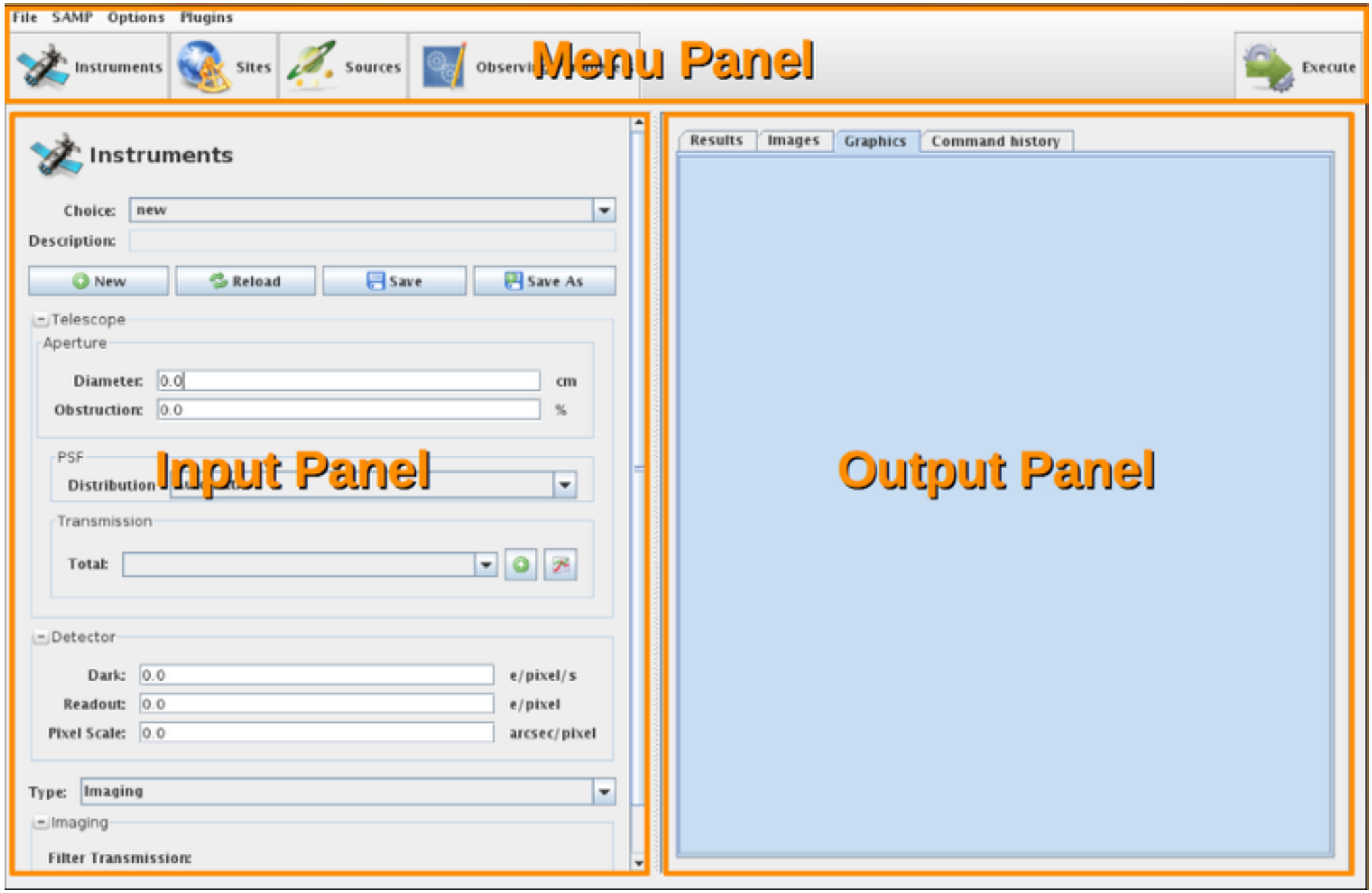
- ETC-42 for wish
  - use the fixture wish :
    - *java -Detc.fixtures=wish -jar ETC.jar*

- Needs for wish
  - extend zodiacal light spectrum
  - characteristics of transmission curve
  - information on filtes
  - information on observational modes

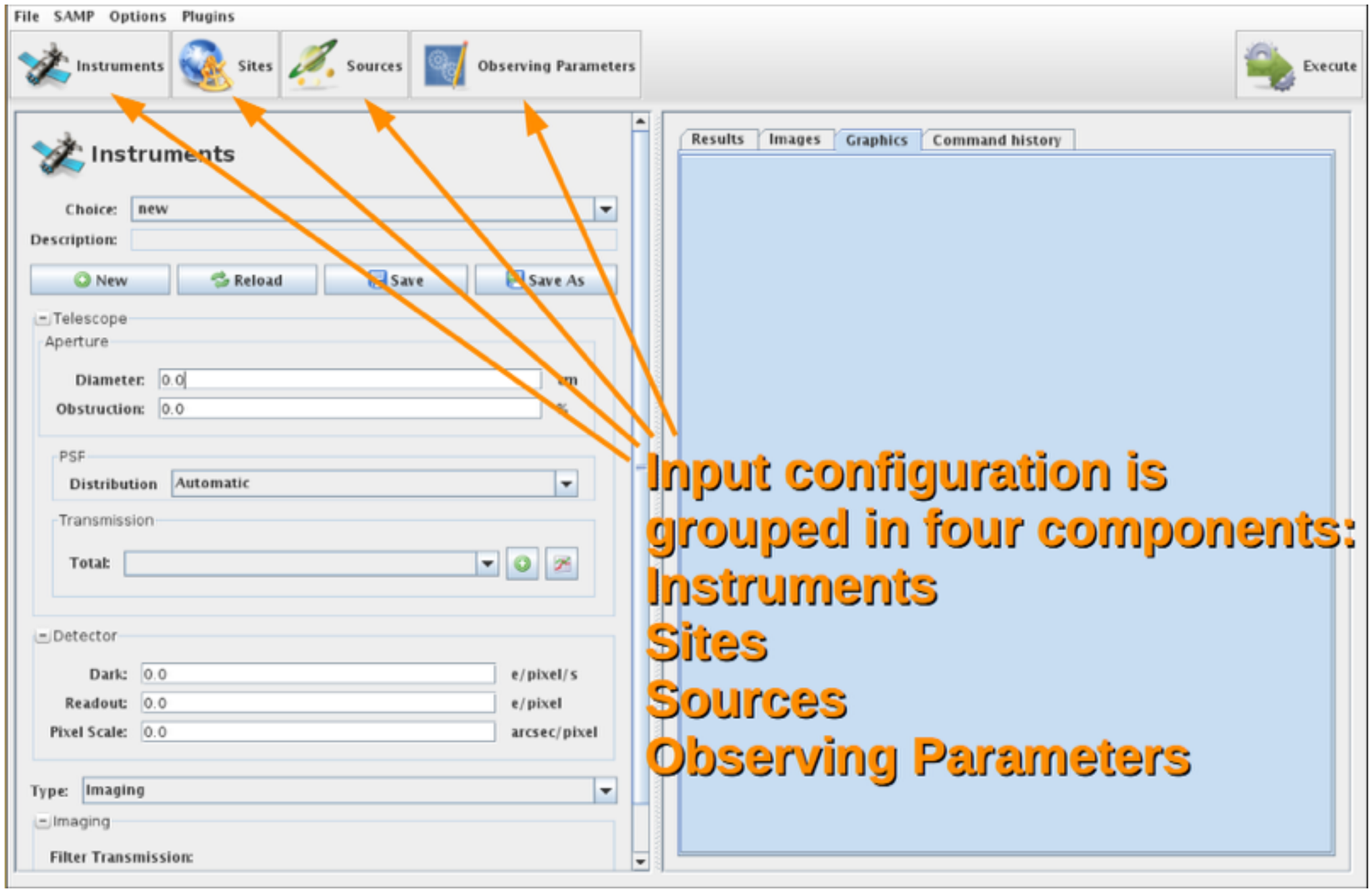
DEMO

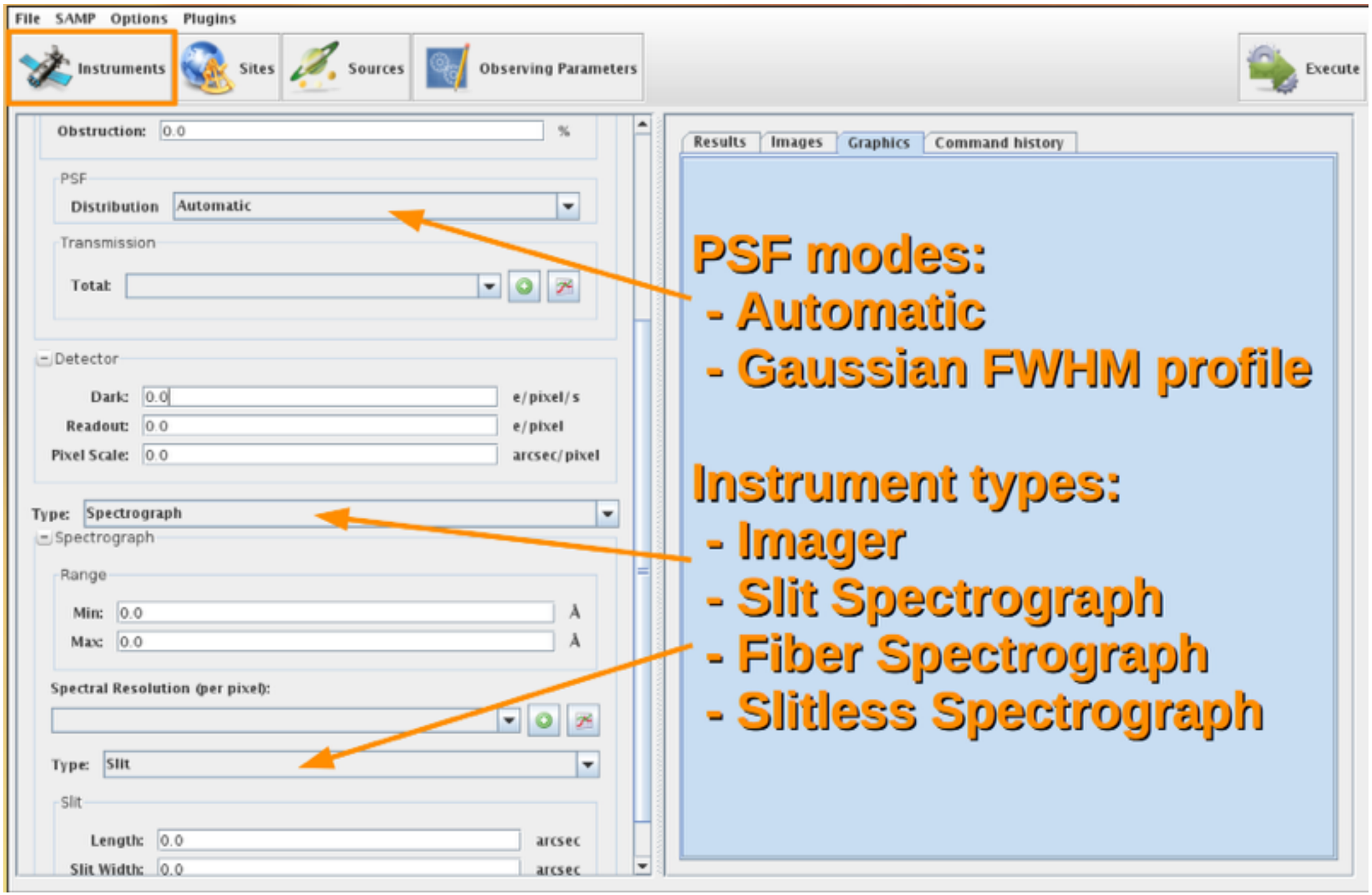

E.T.C. : Exposure Time Calculator -- Version 00.99
File Options Help
Instrument 1
Site
Source
Observing parameters
2 Go plot
Instruments
3
Choice : new
New Reload Save Save as
Detector
Electronic noise :
Dark : e- /pixel /s
Readout : e- /pixel
Pixel scale :
Pixel scale : arcsec
Transmission :
Total : instrTest.xtc
Telescope
Aperture :
Diameter : m
Obstruction : %
PSF :
FWHM : AUTOMATIC
Spectroscopy
Slit Type Slit
Slit
Size
Length: arcsec
Width : arcsec
Spectral :
Range : Min
Max
Graphics 4
5 Log
Sources
Choice : new
New Reload Save Save as
Spatial Distribution
Point source
Extended source :
Radius : arcsec
Profile Surface Brightness : Uniform
Spectral Distribution
Flat
Emission line
Wavelength :
Template
AB Magnitude : Band U
Redshift :
Graphics Log
Computation launched : Thu Feb 25 10:24:23 CET 2010
-- INSTRUMENT --
Detector
>Electronic noise :
- Dark 0.0 e- /pixel /s
- ReadOut 0.0 e- /pixel
>Pixel Scale :
- PixelScale 0.2 e- /pixel
>Transmission :
- Total Transmission total_efficacity_neutral
Telescope
>Aperture :
- Diameter 7.979 m
- Obstruction 0.0 %
>PSF :
- FWHM AUTOMATIC
Spectroscopy Type
>slit :
>Size :
Reload Save Save as
Graphics Log
SNR for an exposure time of 8.32155719649721 4E-9
Computation launched : Wed Feb 24 15:51:00 CET 2010
SNR
Wavelength
SNR

ETC-42 Main Window

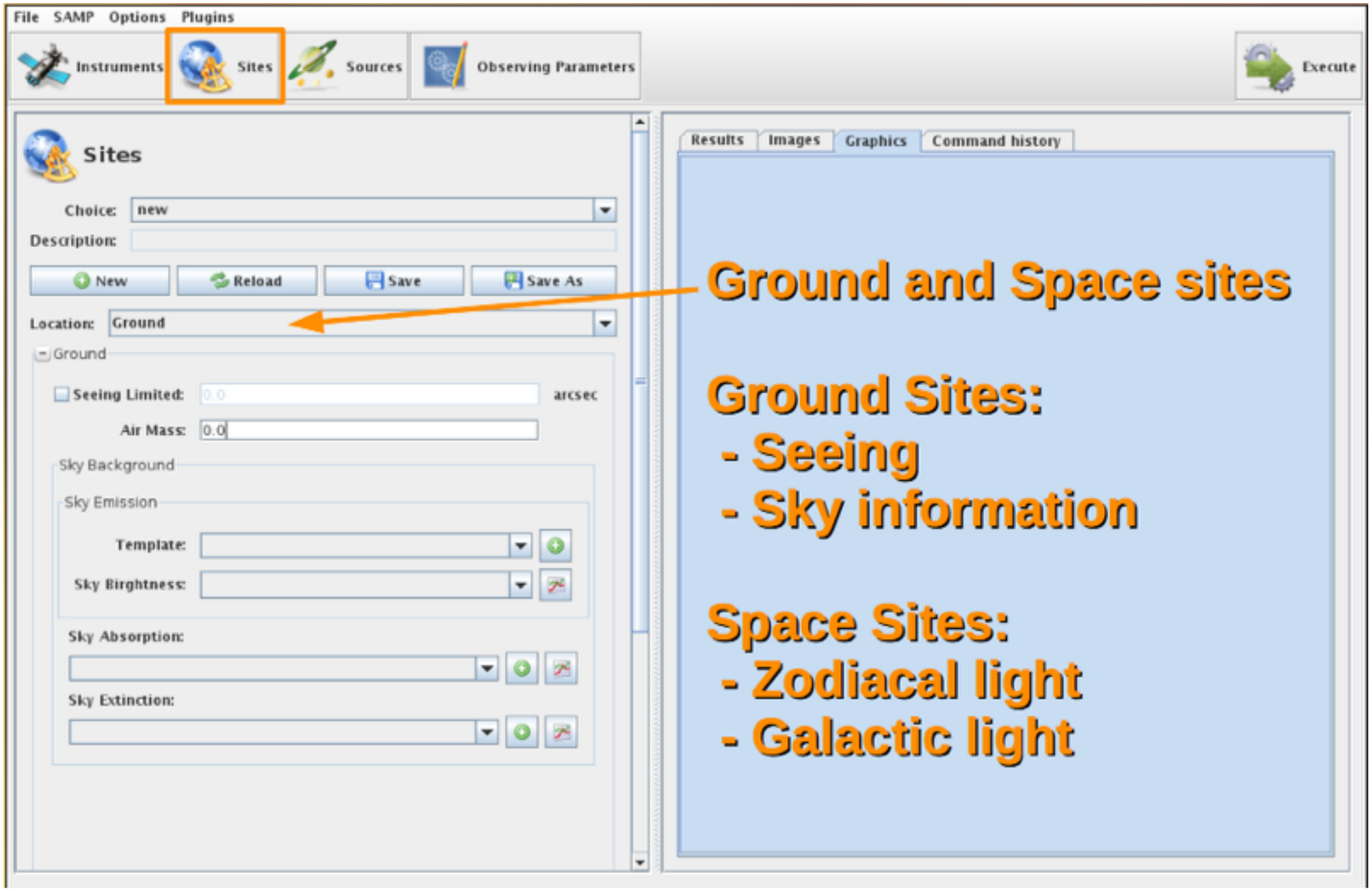


Input configuration

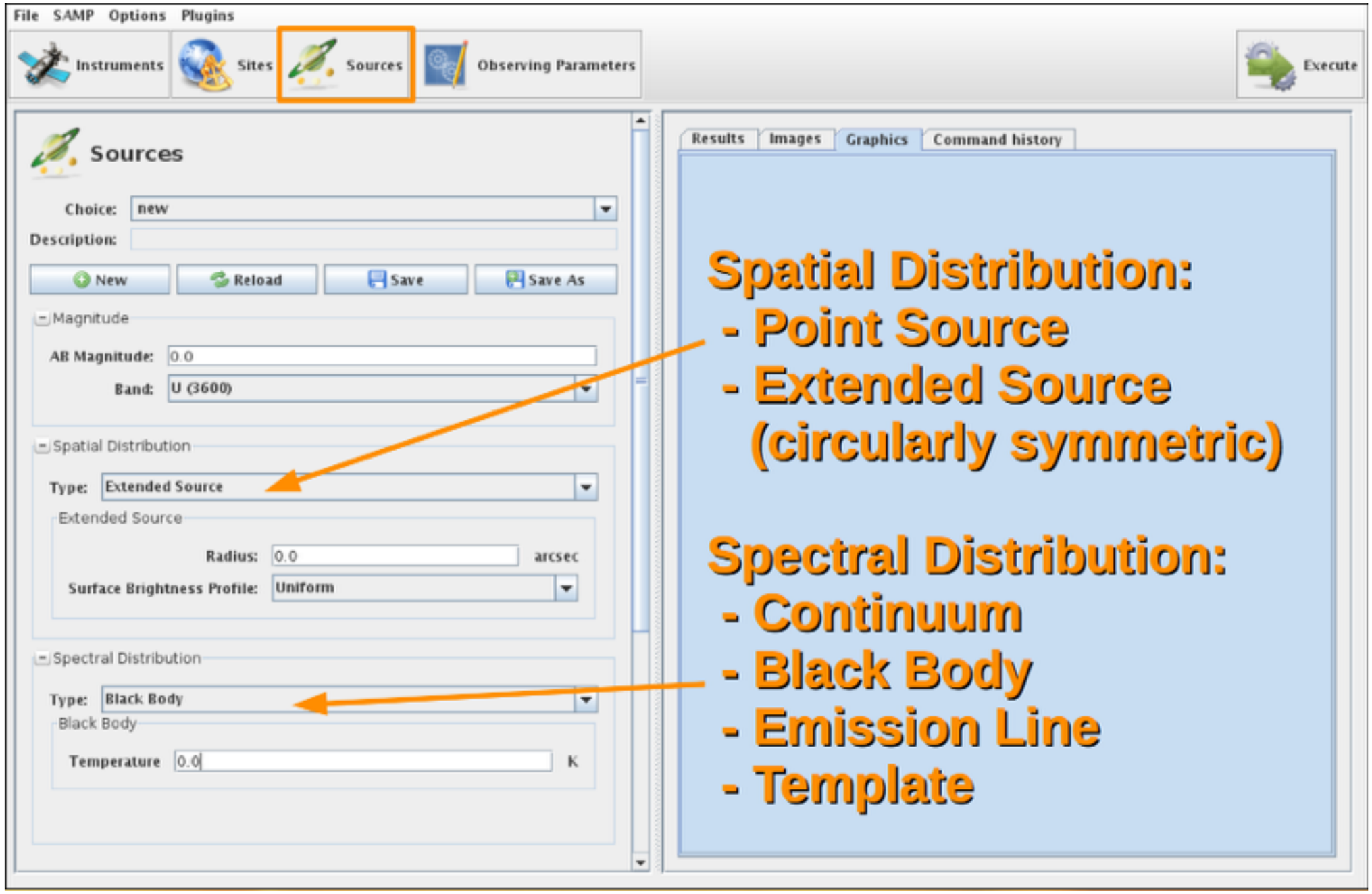



File SAMP Options Plugins
Instruments
Sites
Sources
Observing Parameters
Execute
Obstruction: 0.0 %
PSF
Distribution Automatic
Transmission
Total:
Detector
Dark: 0.0 e/pixel/s
Readout: 0.0 e/pixel
Pixel Scale: 0.0 arcsec/pixel
Type: Spectrograph
Spectrograph
Range
Min: 0.0 Å
Max: 0.0 Å
Spectral Resolution (per pixel):
Type: Slit
Slit
Length: 0.0 arcsec
Slit Width: 0.0 arcsec
Results
Images
Graphics
Command history
PSF modes:
- Automatic
- Gaussian FWHM profile
Instrument types:
- Imager
- Slit Spectrograph
- Fiber Spectrograph
- Slitless Spectrograph

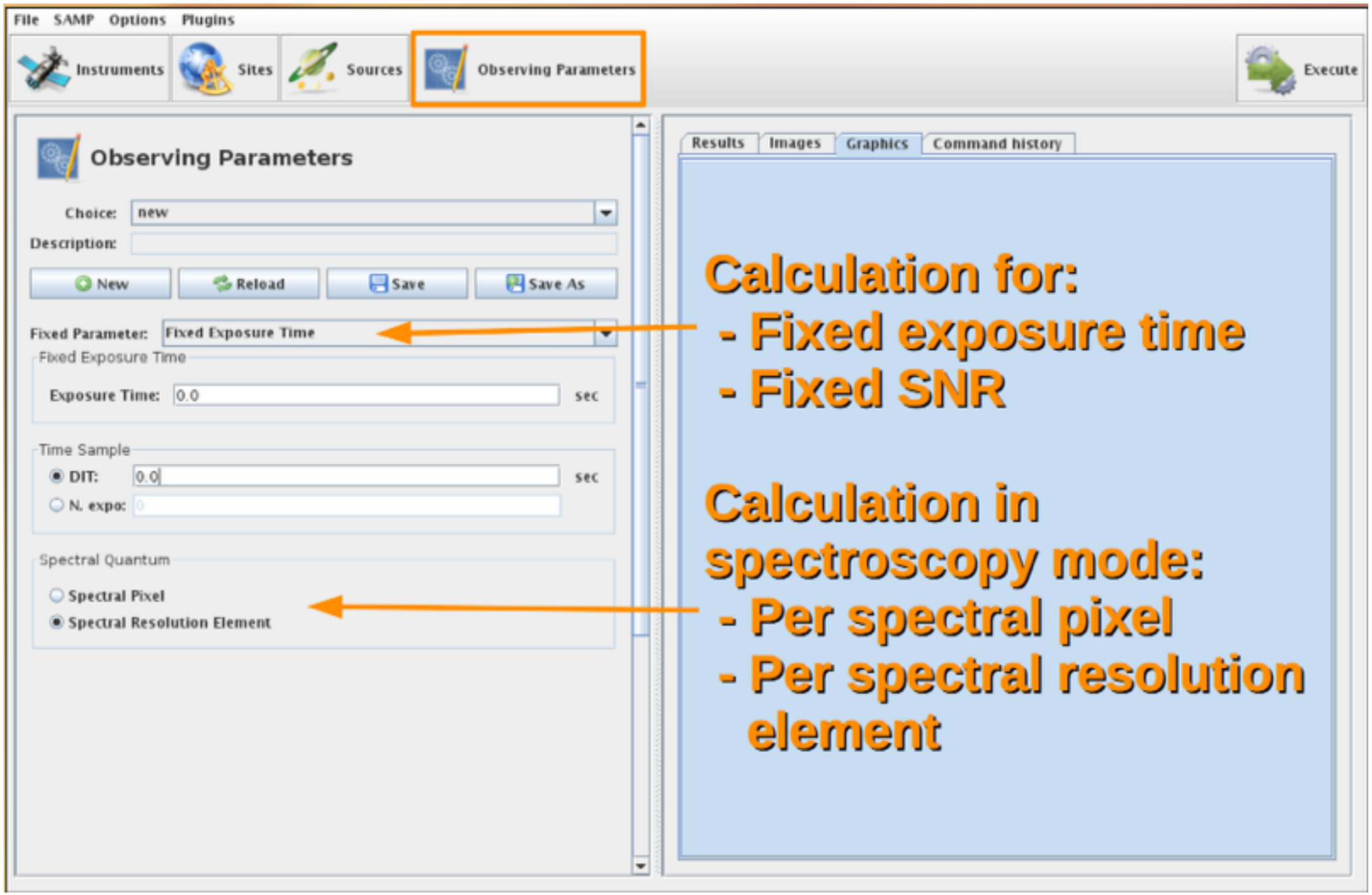
Site Configuration



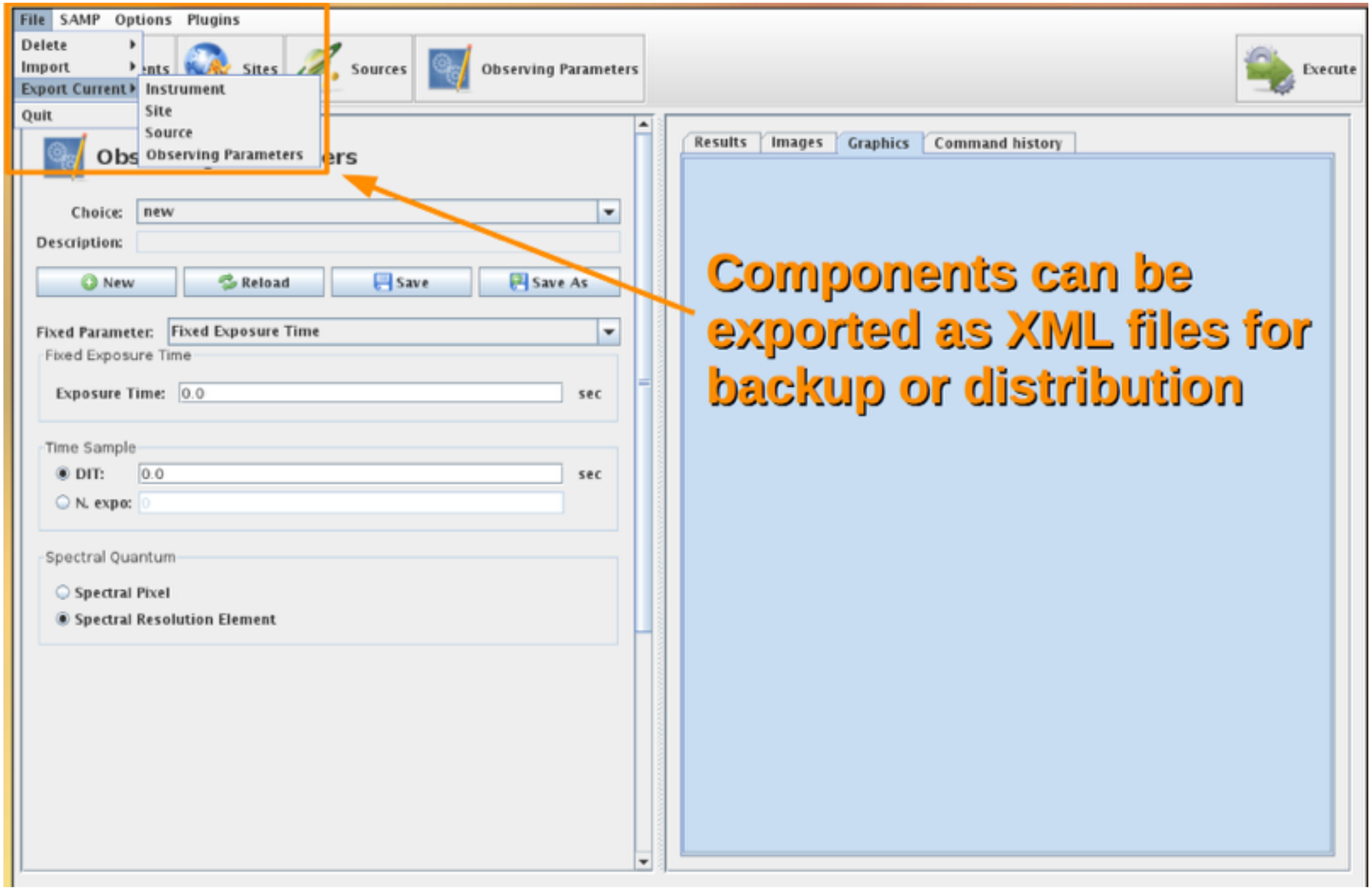
Source configuration



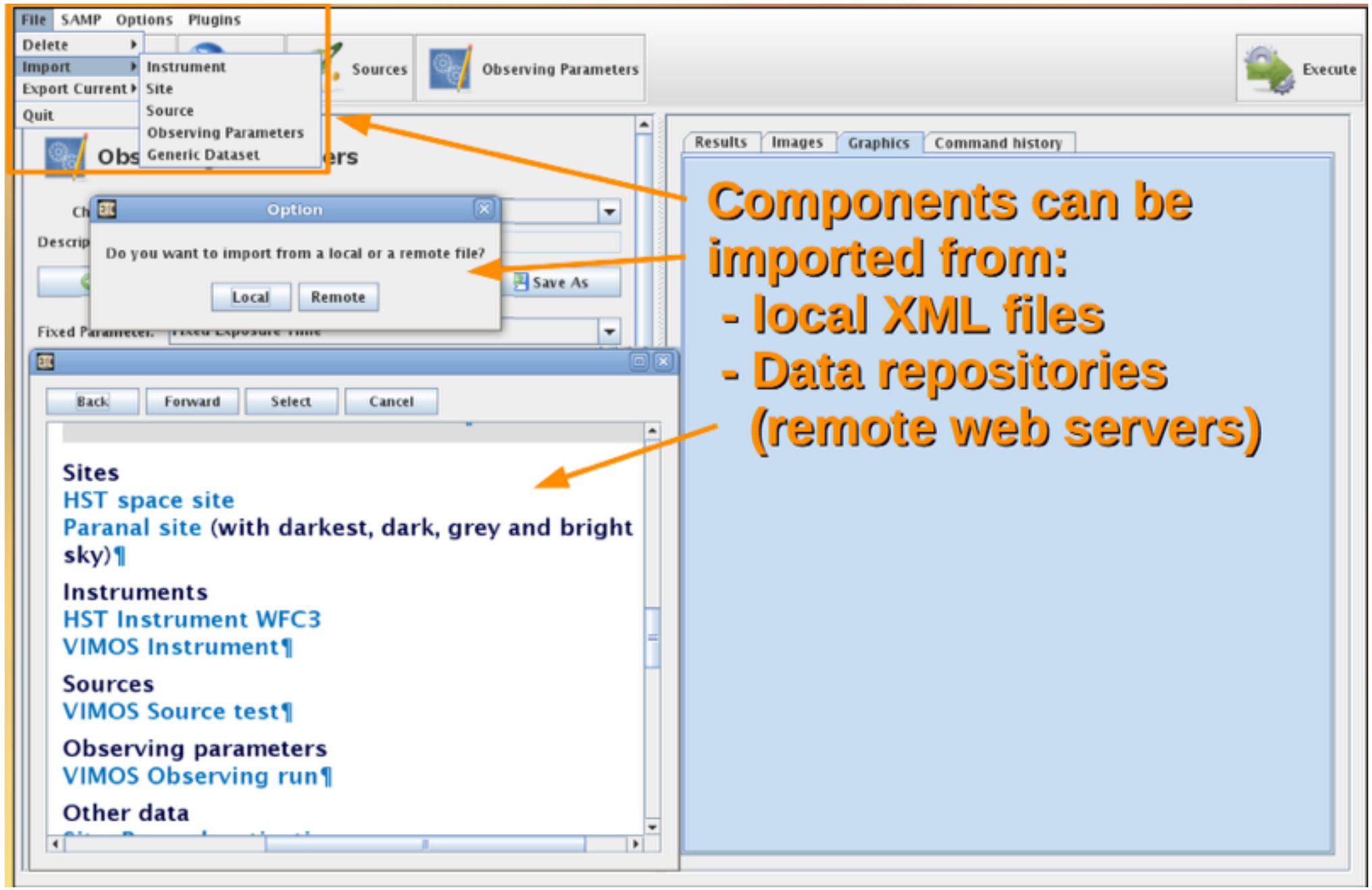
Observing parameters configuration



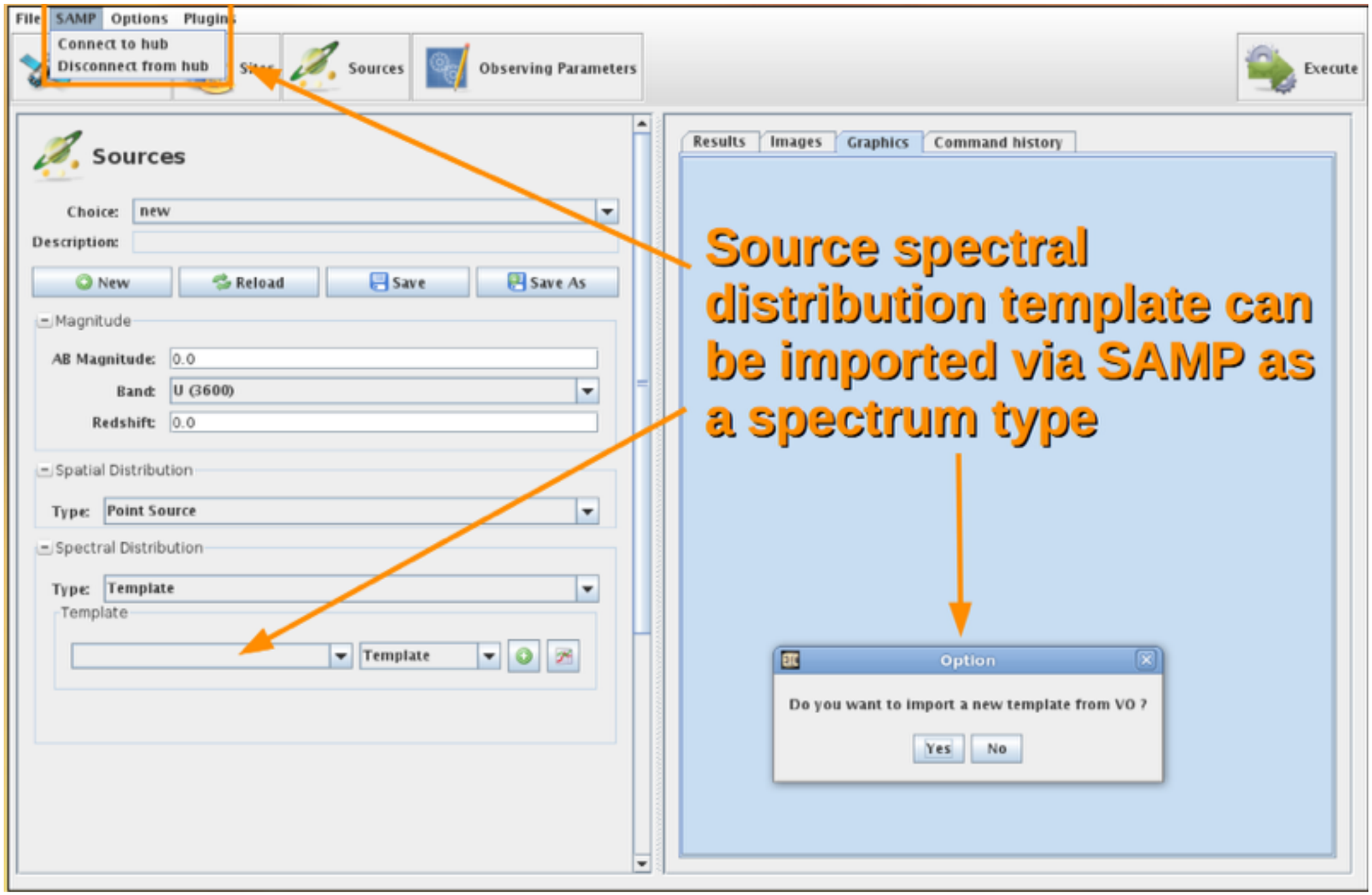
Export functionalities



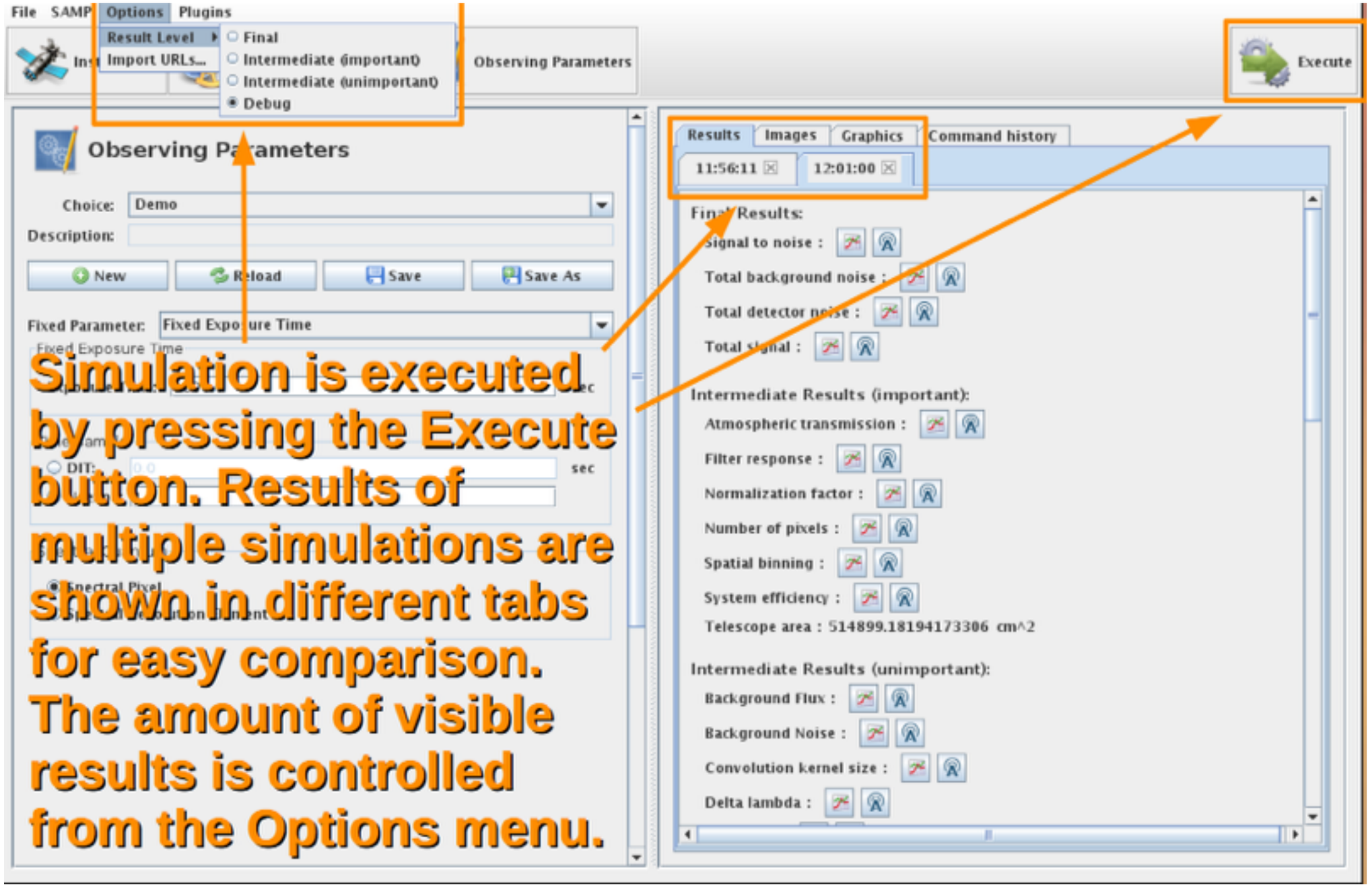
Import functionalities



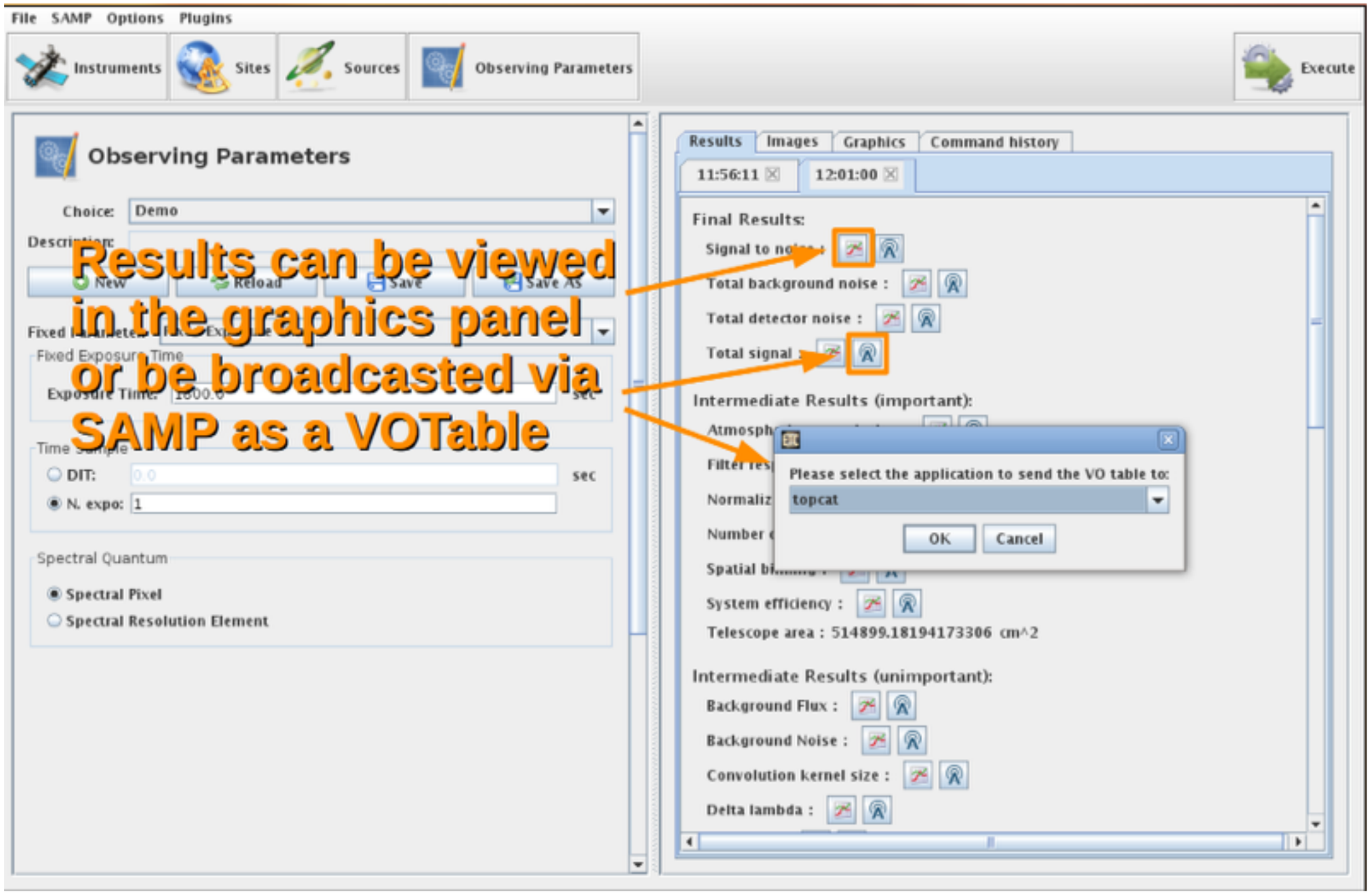
Virtual Observatory import



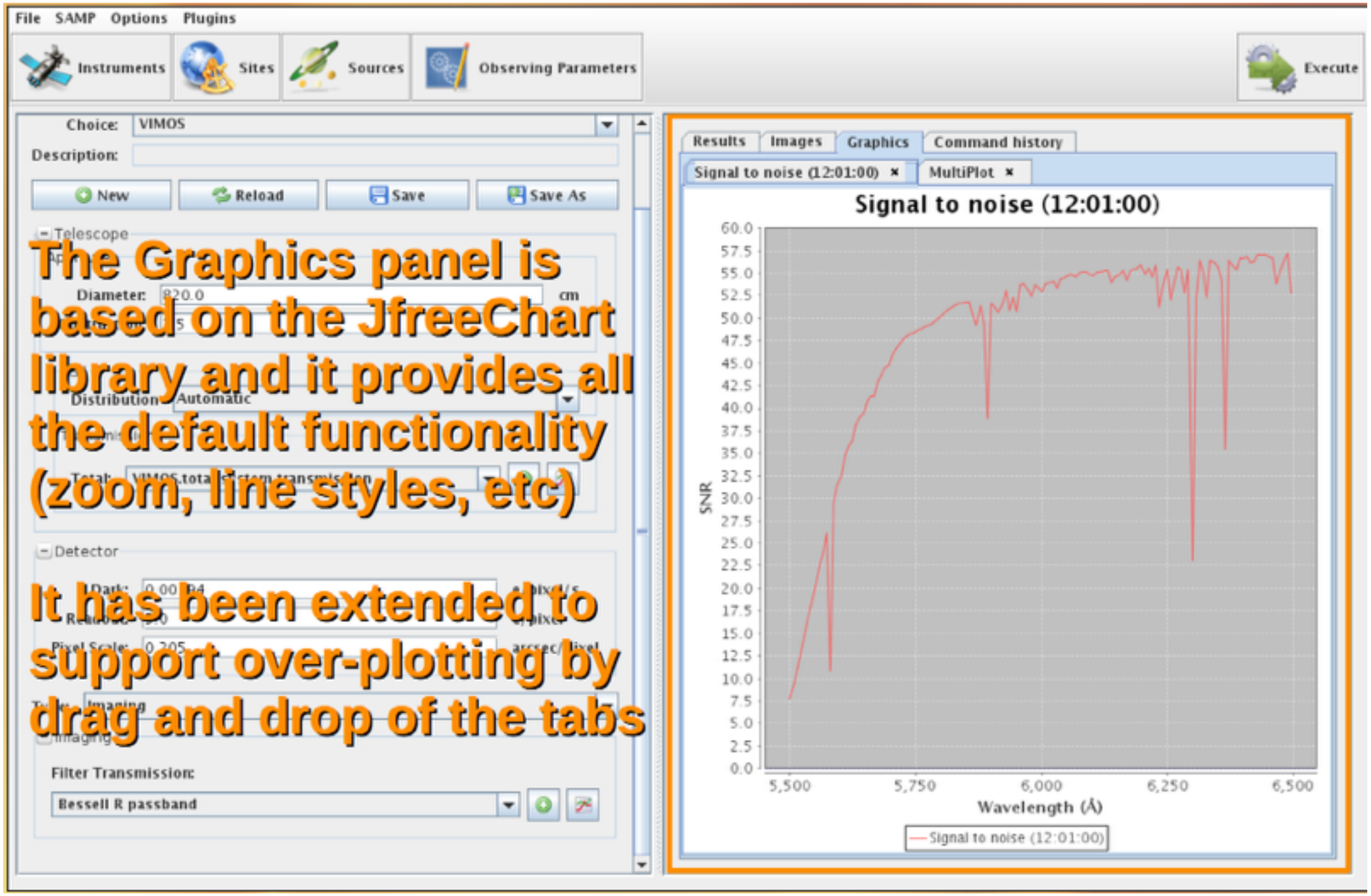
Simulation Results



Simulation results II



Graphic panel



Command Line Mode

```
ETC42 - Command Mode
--------------------

ETC42> help
Available commands:
ls
save
set
calculate
mkdir
list
sh
script
echo
outprefix
exit
help
pwd
current
load
outlevel
cd
ETC42>
```

The command line mode provides several commands for setting the input configuration

```
File  Edit  View  Terminal  Help
ETC42> sh cat script.etc
load instrument VIMOS
load site Paranal
load source Demo
load obsparam Demo
outprefix results/
calculate
ETC42>
```

The command ***sh*** can be used to execute native terminal commands

```
File  Edit  View  Terminal  Help
ETC42> ls
script.etc
ETC42> sctipt script.etc
```

command can be executed from a file as a script, using the « script » command

```
File  Edit  View  Terminal  Help
ETC42> help calculate
Description: Executes a SNR calculation with the current configuration.
Usage: calculate

ETC42> help outprefix
Description: Sets the prefix which will be used for the files where the
results will be saved.
Usage: outprefix <prefix>
where <prefix> is a string consisting of letters, numbers or the underscore (_)

ETC42>
```

The “calculate” command runs the simulation and saves the results in ASCII files. Results of multiple simulations can be distinguished by using the “outprefix” command

More information

ETC-42 web page :

http://projects.lam.fr/projects/etc

Please help yourself :

- Download the ETC-42
- Download documentation
- Download configuration files
- Report bugs
- Request new features
- Stay updated with latest news via Atom feed

Want to contribute

Please:

- Download and use the ETC-42
- Use ETC-42
- Contribute instrument and site configurations
- Suggest new features
- Build and contribute plugins
- Needs for wish
  - extend zodiacal light spectrum
  - characteristics of transmission curve
  - information on filters
  - information on observational modes

For more information please contact:

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Special thanks

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