

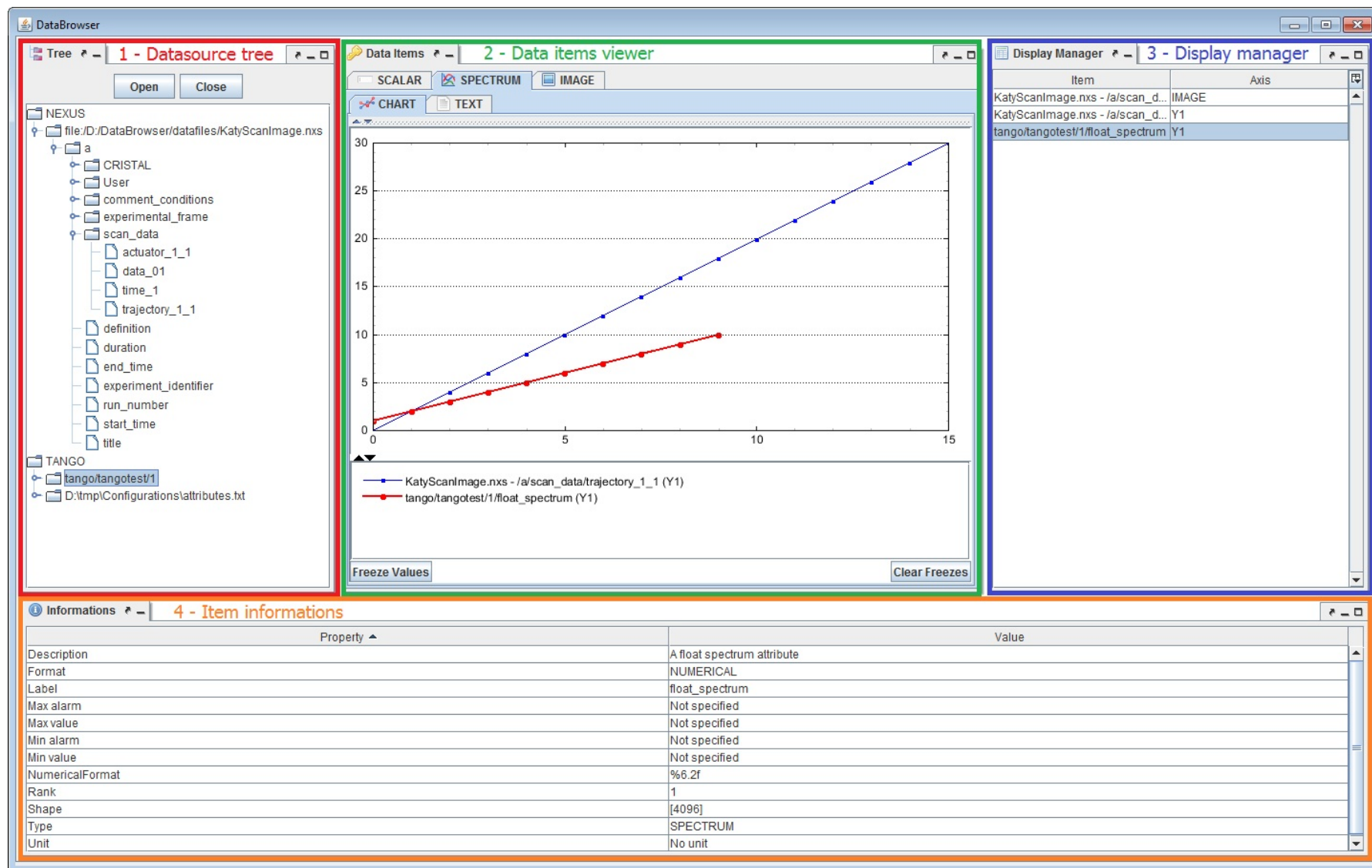
# Data browser Manual User

Katy Saintin

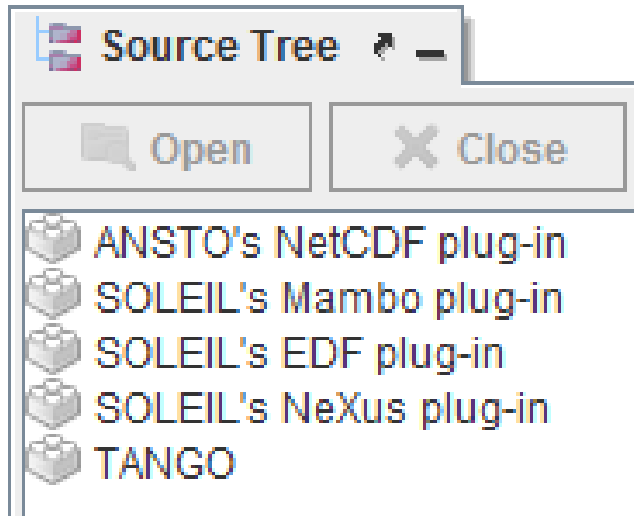
Last update October 2014



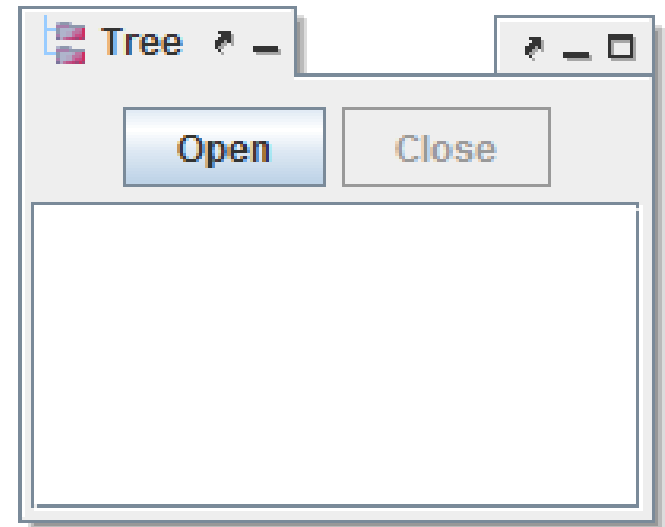
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- Logical view (not available yet)



- The tree will display all the existing and available data sources.  
Example : Tango is visible if a TANGO database is reachable.
- If only one source is available, the data source tree will display no source node.
- A Open, Close button are used to open or close a data source.

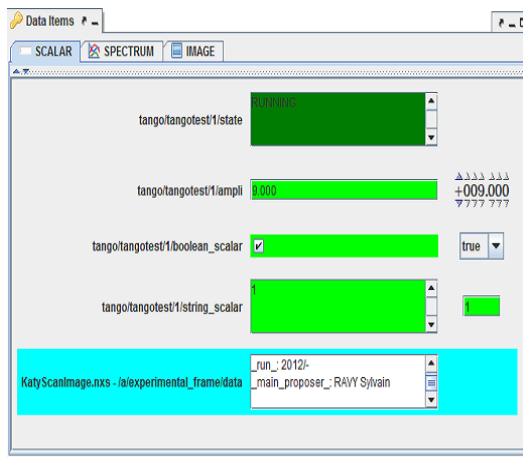


2 data sources available : Nexus, Tango  
**Open button will be enable**  
**If at least one of the Node is selected**

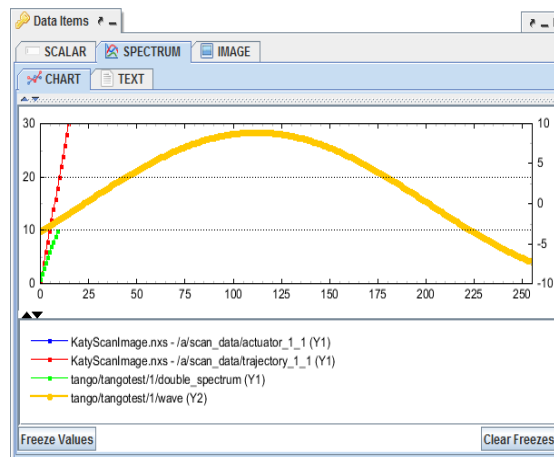


1 data source available : NetCDF  
**Open button is always enable**

- The viewer will display all the data item node selected in the data source tree. According to shape and the type of the data, the data item will be displayed in :
- A Scalar viewer, for a single scalar value.
- A Spectrum viewer, for an array of value.
- A Image viewer, for a 2 dimensional value.
- Then if we have a stack of data a player component will be displayed in order to navigate inside.



Scalar viewer



Spectrum viewer

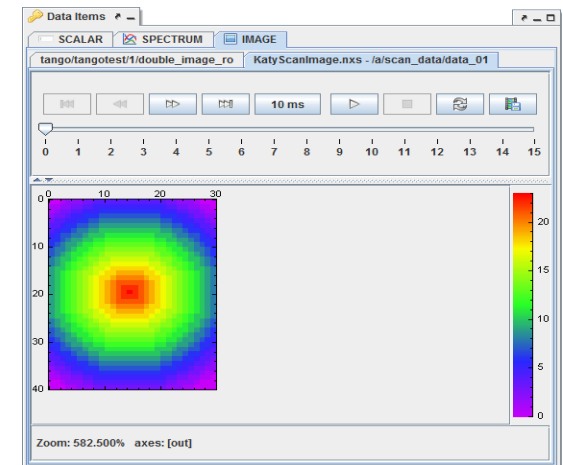
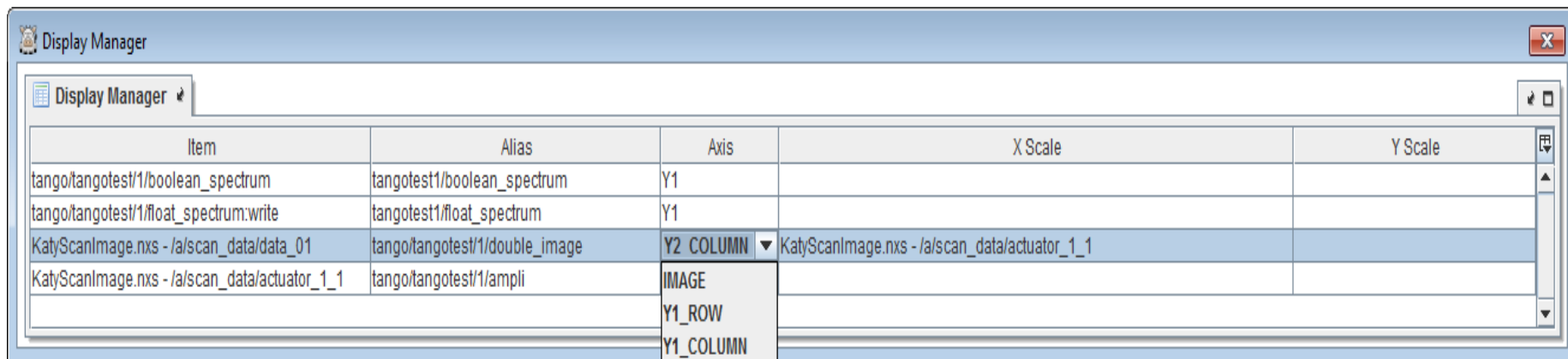


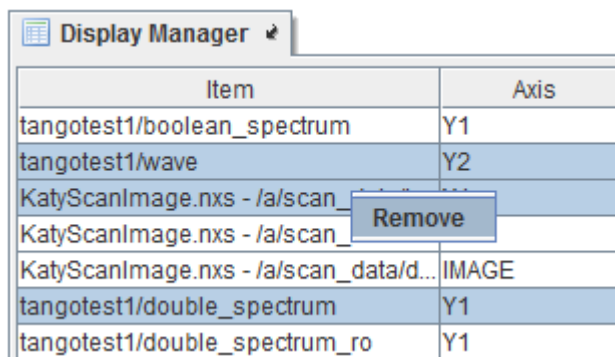
Image viewer

- The display manager configure the axis setting of a Spectrum or Image data item.
- It is also possible to remove a data item visualization from this viewer.



Display Manager

Item	Alias	Axis	X Scale	Y Scale
tango/tangotest1/boolean_spectrum	tangotest1/boolean_spectrum	Y1		
tango/tangotest1/float_spectrum.write	tangotest1/float_spectrum	Y1		
KatyScanImage.nxs - /a/scan_data/data_01	tango/tangotest1/double_image	Y2 COLUMN	KatyScanImage.nxs - /a/scan_data/actuator_1_1	
KatyScanImage.nxs - /a/scan_data/actuator_1_1	tango/tangotest1/ampli	IMAGE		
		Y1_ROW		
		Y1_COLUMN		



Display Manager

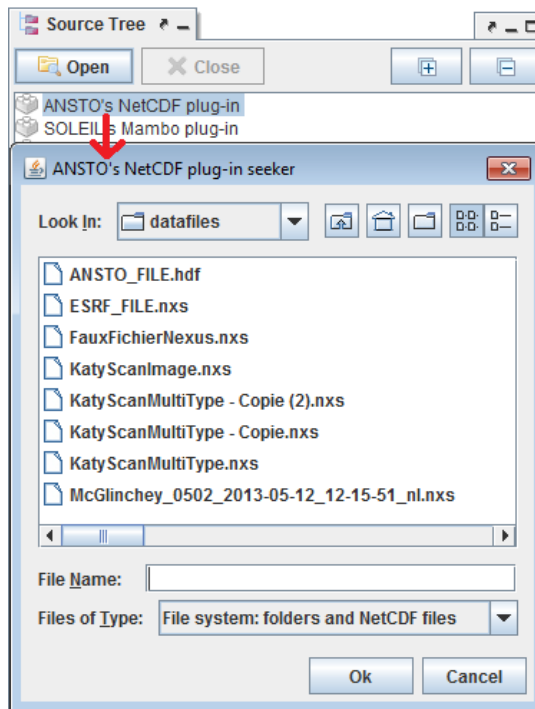
Item	Axis
tangotest1/boolean_spectrum	Y1
tangotest1/wave	Y2
KatyScanImage.nxs - /a/scan_data/data_01	Y2 COLUMN
KatyScanImage.nxs - /a/scan_data/actuator_1_1	IMAGE
KatyScanImage.nxs - /a/scan_data/data_01	Y1_ROW
KatyScanImage.nxs - /a/scan_data/data_01	Y1_COLUMN
tangotest1/double_spectrum	Y1
tangotest1/double_spectrum_ro	Y1

- It display all the information corresponding to a selected data item.
  - Format : NUMERICAL, TEXT or BOOLEAN
  - Type : SCALAR, SPECTRUM or IMAGE
  - Shape : The dimension of the data
  - And other meta data : Units, Label, numerical format ...
- For Nexus or NetCDF plugin you can select the type of data.

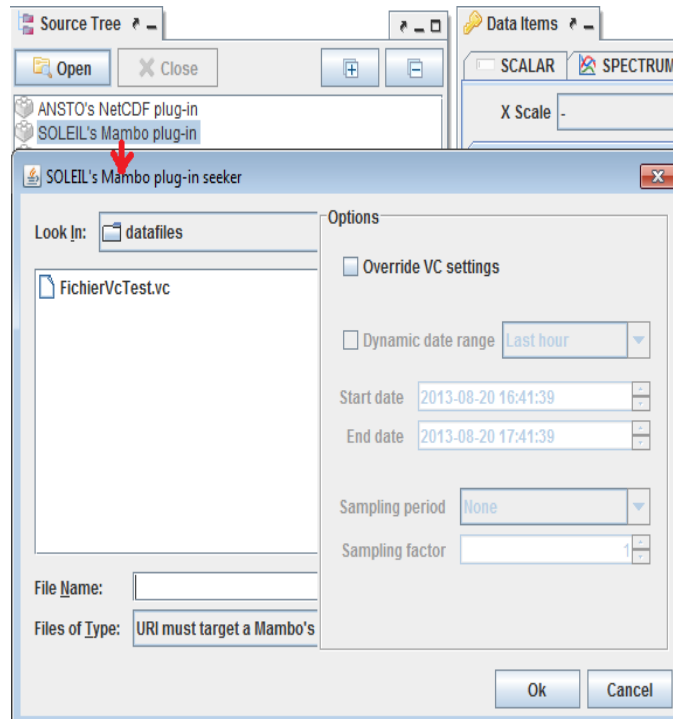
i Informations	
Property ▲	Value
ATTR : _lastModified	2012-04-19T10:03:25Z
ATTR : description	No description
ATTR : format	%6.2f
ATTR : long_name	tango/tangotest/1/double_image
ATTR : signal	1
ATTR : timestamp	2012-04-19T12:03:25.758
ATTR : units	No unit
INFO : Format	NUMERICAL
INFO : Rank	3
INFO : Shape	[16, 40, 30]
INFO : Type	SPECTRUM ▼
	SPECTRUM
	IMAGE

## 1/ With Open button

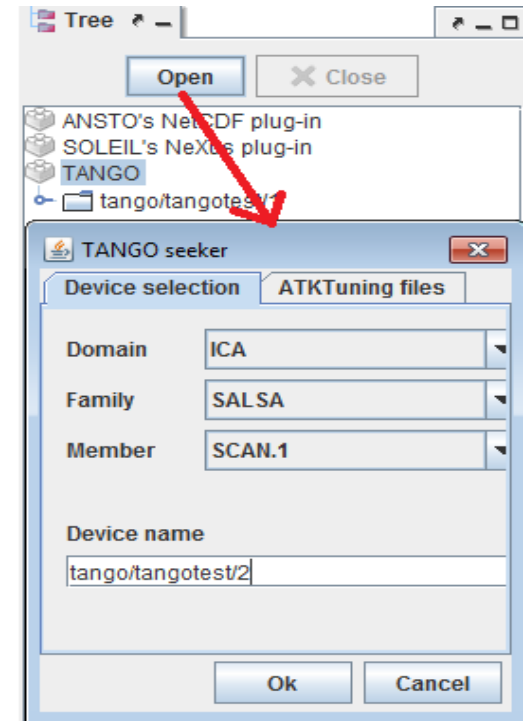
- If several sources are available, **first select a source node in order to enable** Open button.
- Click on Open button, according to the selected source, an adapted searching dialog will be displayed to selected the source.



Open a Nexus or HDF file



Open a Mambo VC file

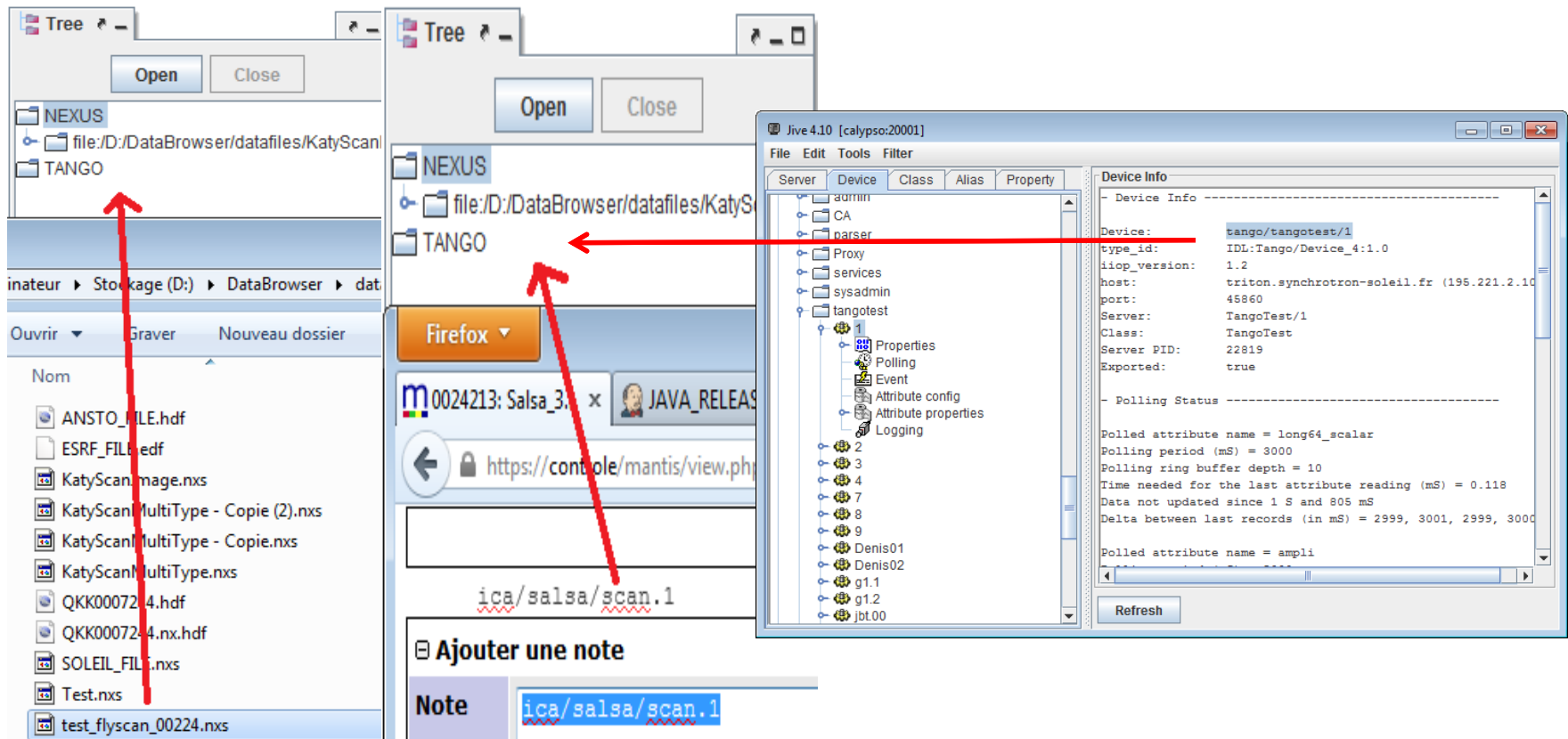


Open a Tango source

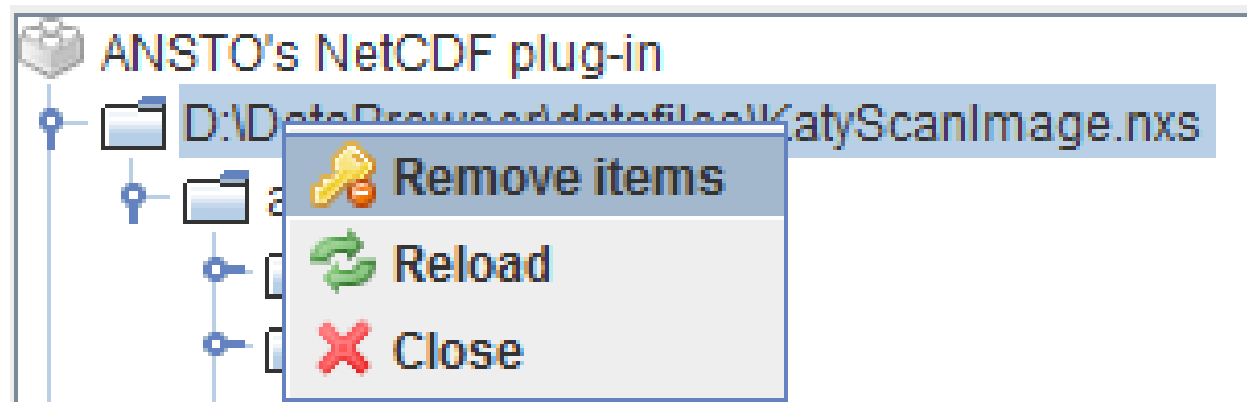


## 2/ By drag and drop

- Select a file or a text (can now be done from Jive)
- Drop the selection in the Tree (anywhere, you don't need to select the node, it will be detected automatically).

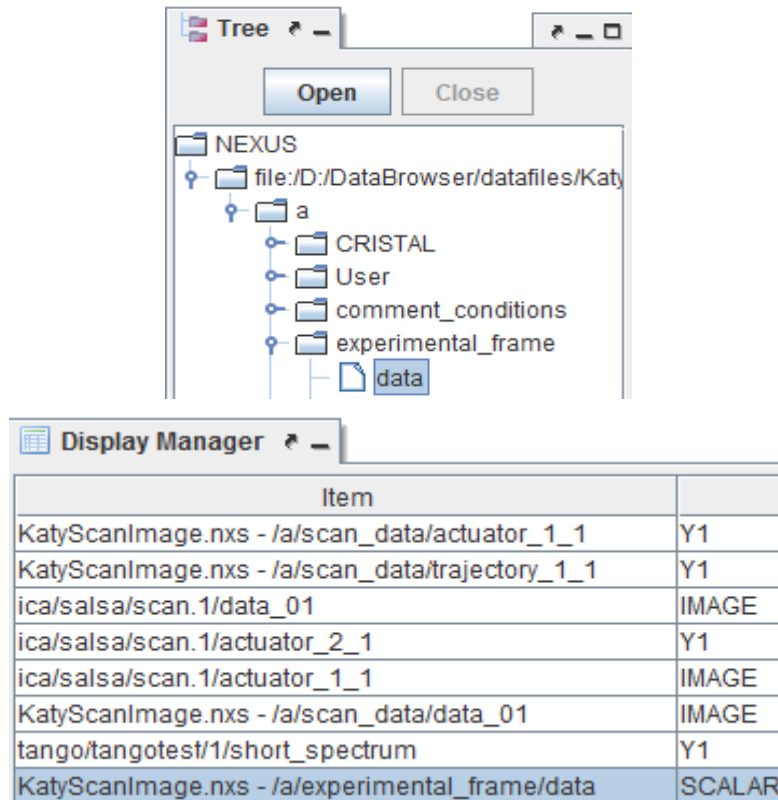


- Select a source to close.
- Right click and Close the source
- Or click on Close button
- To reload a data source, right click and Reload menu

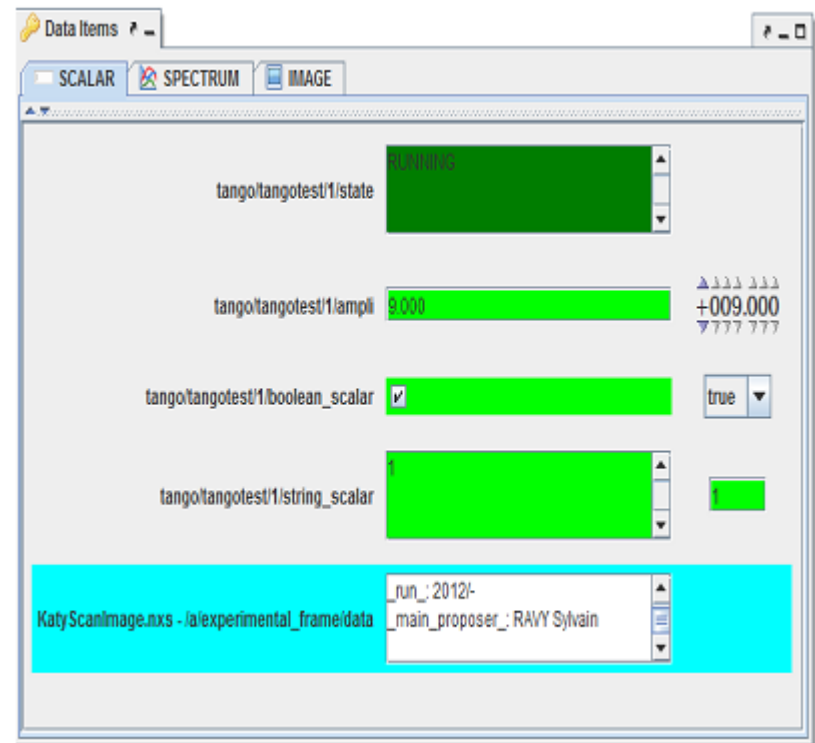


## For a scalar data item (rank=0)

- Click on a scalar data item in an open source in the tree.
- Or click in the display manager the scalar data item to visualize
- The selected data item will be highlighted in the scalar tabbed



Item	Type
KatyScanImage.nxs - /a/scan_data/actuator_1_1	Y1
KatyScanImage.nxs - /a/scan_data/trajectory_1_1	Y1
ica/salsa/scan.1/data_01	IMAGE
ica/salsa/scan.1/actuator_2_1	Y1
ica/salsa/scan.1/actuator_1_1	IMAGE
KatyScanImage.nxs - /a/scan_data/data_01	IMAGE
tango/tangotest/1/short_spectrum	Y1
KatyScanImage.nxs - /a/experimental_frame/data	SCALAR



Data Items

SCALAR | SPECTRUM | IMAGE

tango/tangotest/1/state: 0.0000

tango/tangotest/1/ampli: 8.000 +009.000

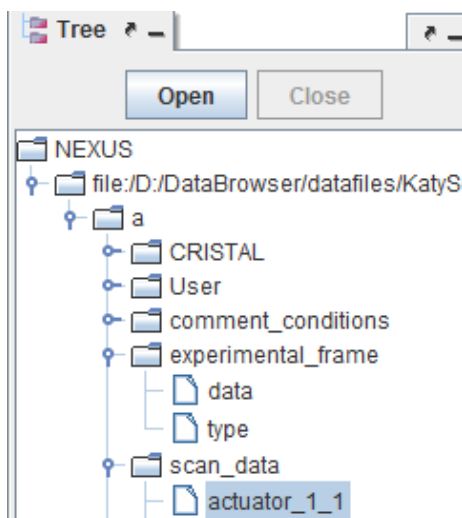
tango/tangotest/1/boolean\_scalar: ☒ true

tango/tangotest/1/string\_scalar: 1

KatyScanImage.nxs - /a/experimental\_frame/data: \_run\_: 2012-  
\_main\_proposer\_: RAVY Sylvain

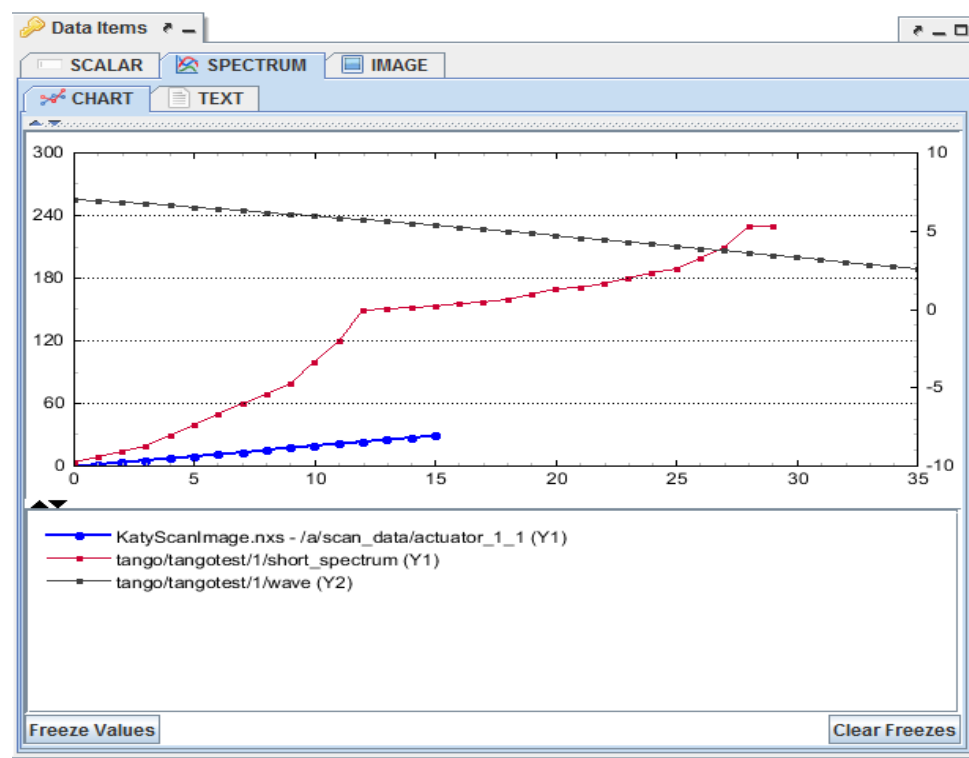
## For a spectrum data item (rank=1)

- Click on a spectrum data item in an open source in the tree.
- Or click in the display manager the spectrum data item to visualize
- The selected data item will be highlighted in the chart viewer.



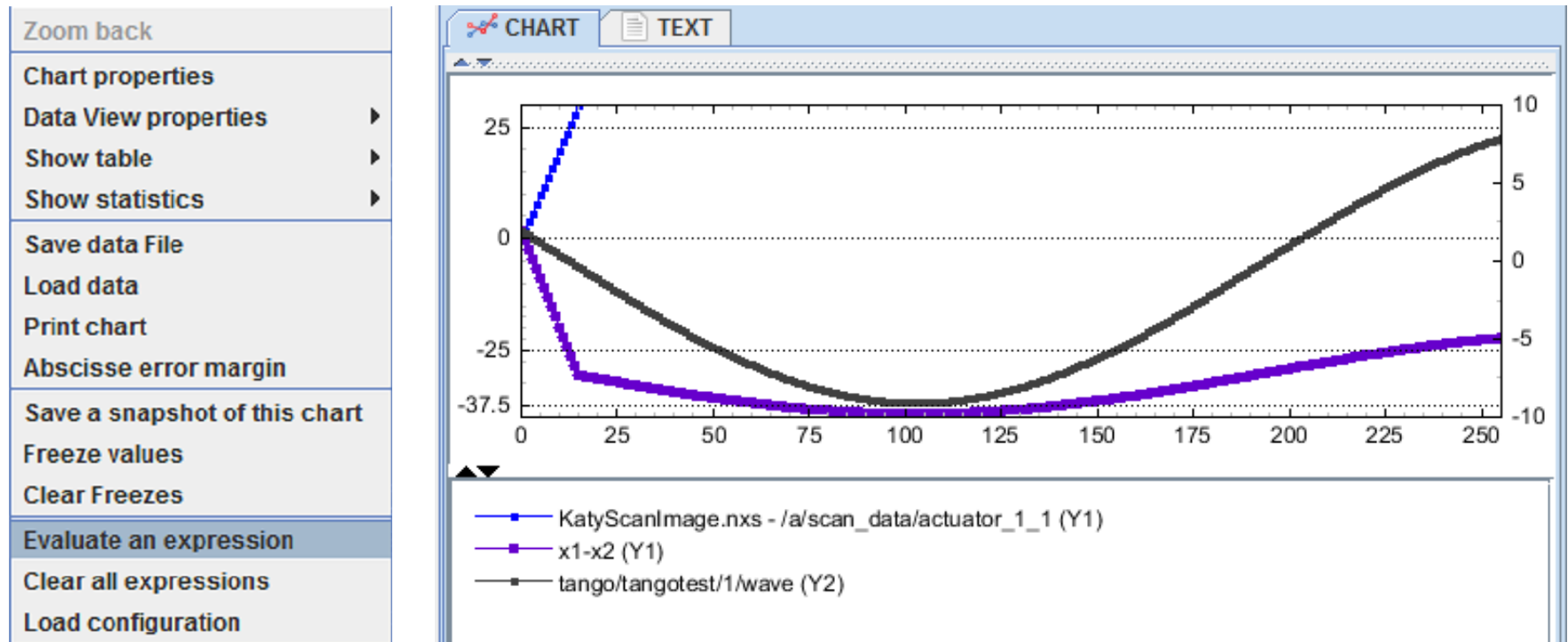
Display Manager

Item	
KatyScanImage.nxs - /a/scan_data/actuator_1_1	Y1
tango/tangotest/1/wave	Y1

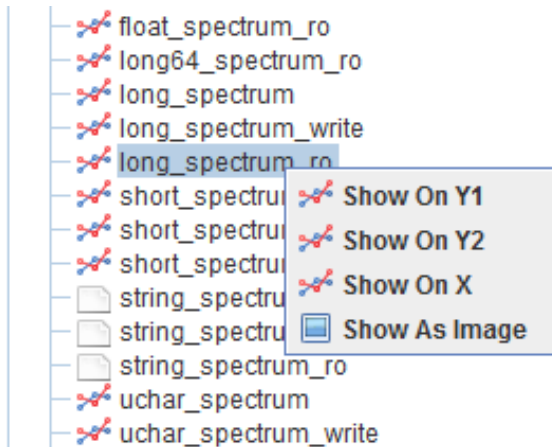


## Samples of chart functionalities

- Comparison between 2 spectrums - menu “Evaluate an expression”
- Save a snapshot - menu “Save a snapshot of this chart”
- Save a data file - menu “Save data File”
- Load a saved data file – menu “Load data”



## Right click on item Spectrum and Image



- Right click opens a menu that lets you choose which axes to display the curve .
- It is possible to see a spectrum as a picture.

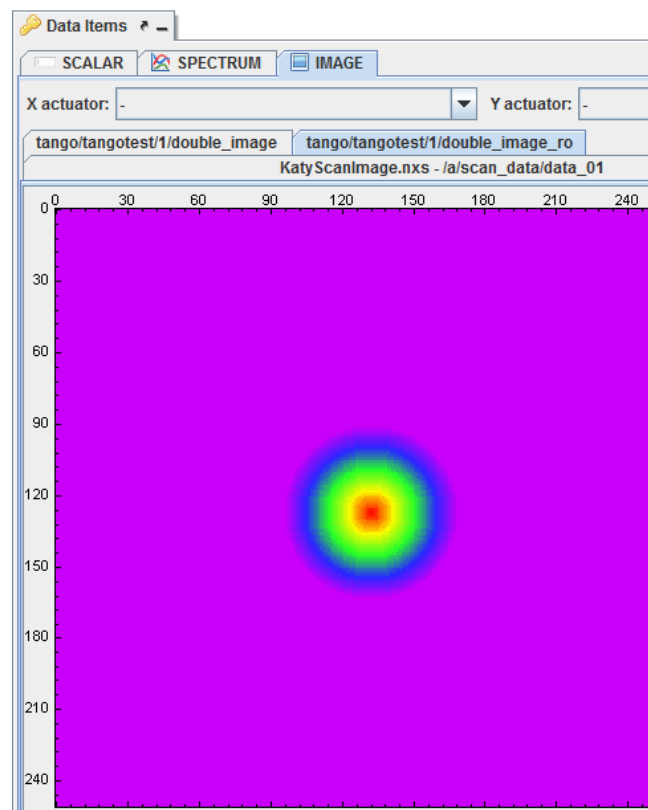
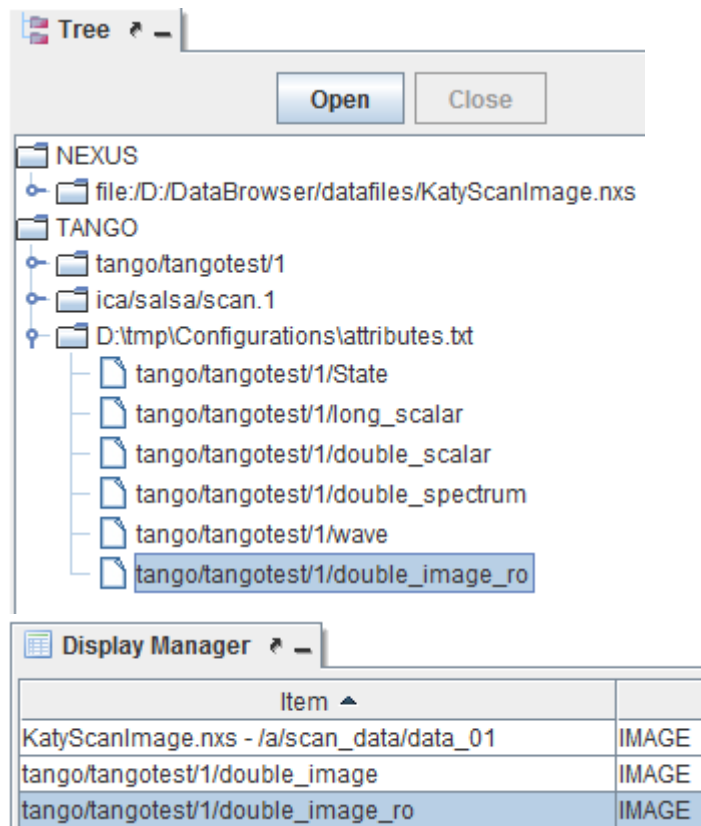
## Show in new Chart one or several data views

- Right click on the Chart and select “Show In new Chart” menu
- Select data views to display.
- Enter a title and select an icon of the new Chart.
- You can see the data views previously selected.

The screenshot illustrates the process of creating a new chart from selected data views in the Ansto software. On the left, a context menu is open with 'Show in new Chart' highlighted. The 'Show in selection' dialog box is open, displaying a list of data views (KatyScanImage.nxs - /a/scan\_data/data\_01\_0 to data\_01\_29) and buttons to add or remove them. The 'Chart Option' dialog box is also open, showing the title 'My New Chart' and a selected icon. On the right, the 'My New Chart' plot is displayed, showing multiple data series (Y1) as colored lines with markers. The plot includes a legend, 'Freeze Values' and 'Clear Freezes' buttons, and fields for 'Visible data views' and 'Hidden data views'.

## For a image data item (rank=2)

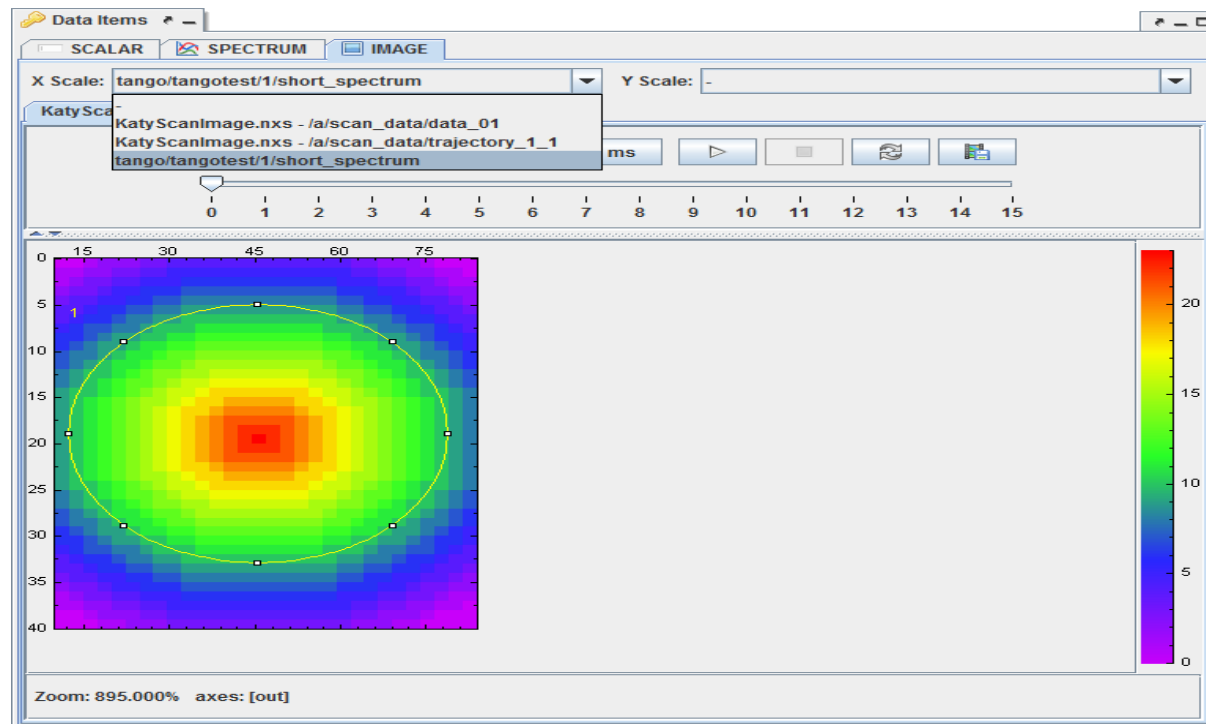
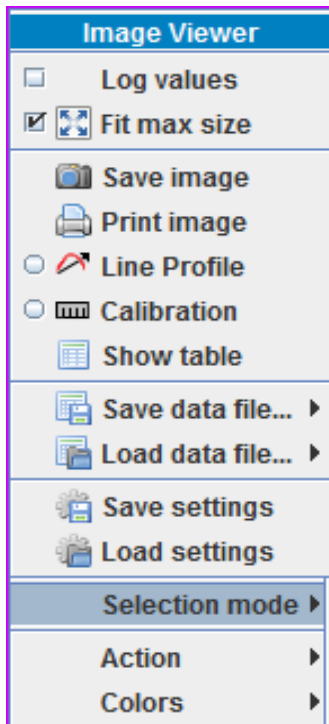
- Click on a image data item in an open source in the tree.
- Or click in the display manager the image data item to visualize
- The selected data item will be displayed to the front.





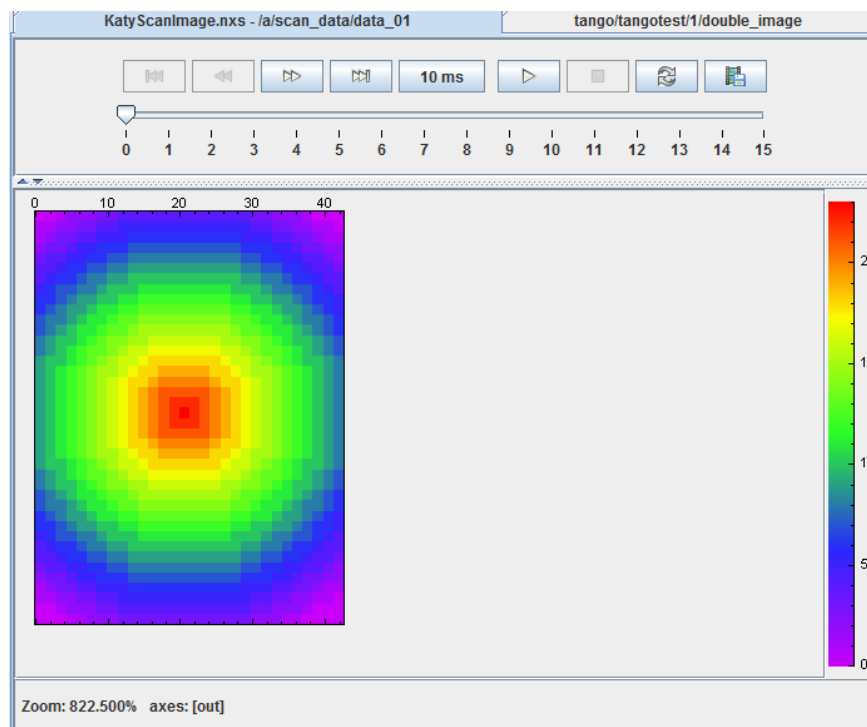
## Samples of image functionalities

- Save a snapshot - menu “Save image”
- Save a data file - menu “Save data File”
- Select a X and a Y Scale – Use the combo box X and Y



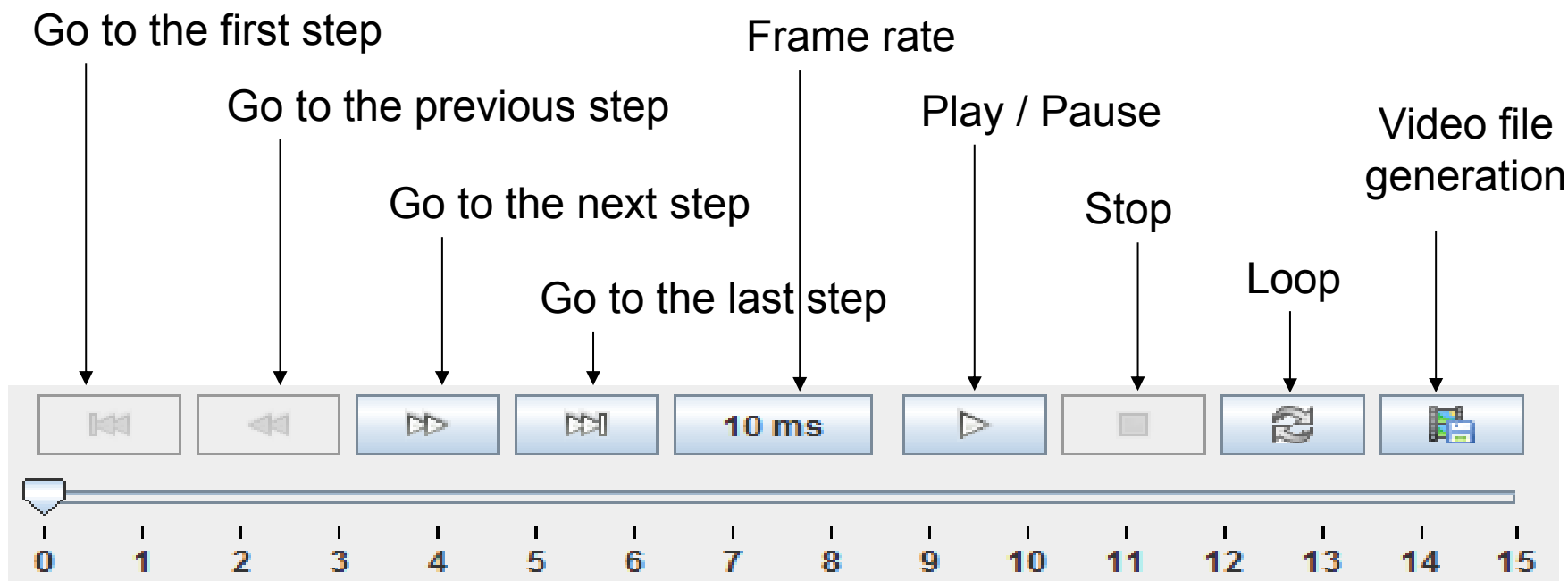
For a stack navigation rank > data type rank

- Click on a stack data item in an open source in the tree.
- Or click in the display manager the stack data item to visualize
- The selected data item will be displayed to the front or highlighted.
- There will be stack component as necessary according to the dimension



## Samples of stack functionalities

- Play, Pause, Stop, Next, Previous, Go First, and Go Last
- Loop
- Frame rate
- Video file generation (avi, animated gif, mov)



- **Axis configuration** (Change the axis of a data item)
- **Displayed information** (Click on  button in top right corner )
- **Remove data item** (Select lines and right click to remove)

Display Manager	
Item ▼	
tango/tangotest/1/string_scalar	SCALAR
tango/tangotest/1/short_spectrum	Y2
tango/tangotest/1/double_spectrum_ro	Y1
tango/tangotest/1/double_spectrum	Y1
tango/tangotest/1/double_image_ro	IMAGE
KatyScanImage.nxs - /a/scan_data/trajectory_1_1	X
KatyScanImage.nxs - /a/scan_data/data_01	IMAGE
KatyScanImage.nxs - /a/experimental_frame/data	IMAGE
	Y1_ROW
	Y1_COLUMN
	Y2_ROW
	Y2_COLUMN
	X

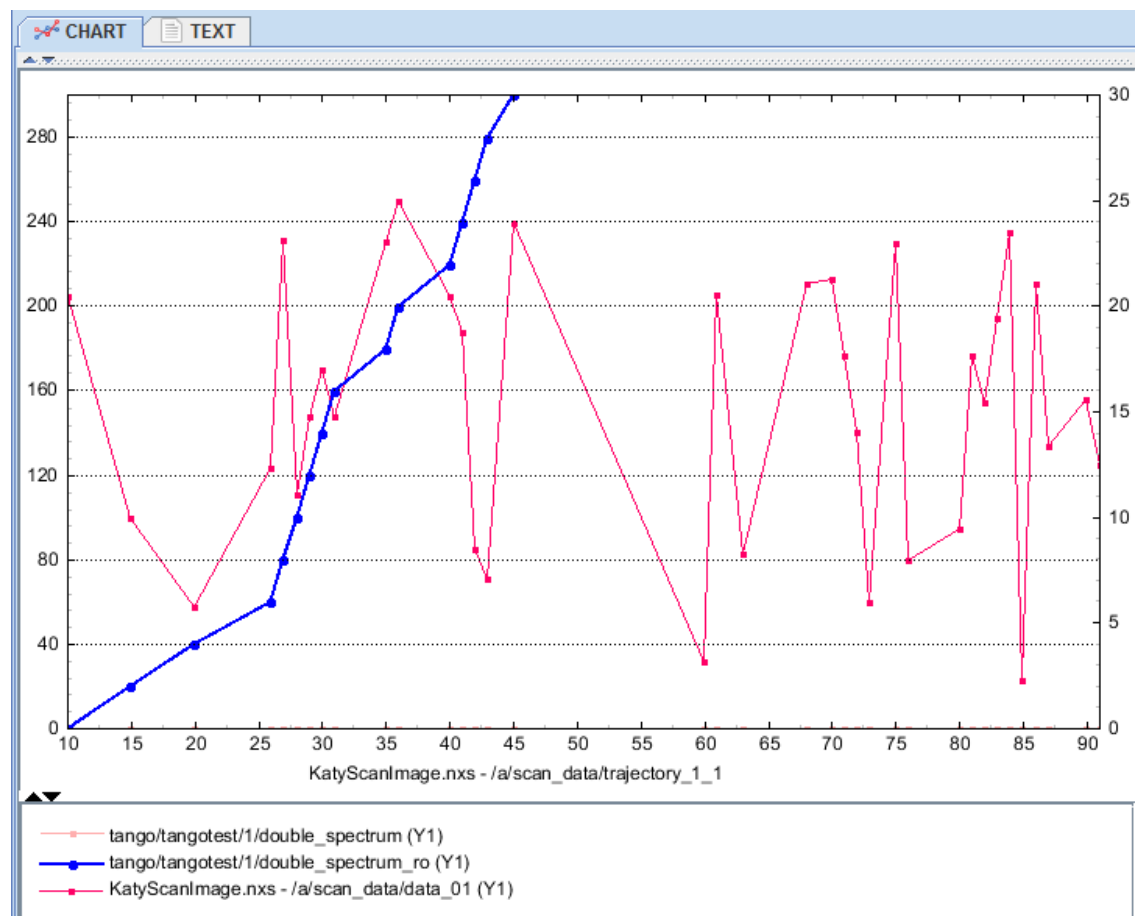
Display Manager	
Item ▼	
tango/tangotest/1/string_scalar	
tango/tangotest/1/short_spectrum	
tango/tangotest/1/double_spectrum_ro	
tango/tangotest/1/double_spectrum	
tango/tangotest/1/double_image	
KatyScanImage.nxs - /a/scan_data/trajectory_1_1	
KatyScanImage.nxs - /a/scan_data/data_01	
KatyScanImage.nxs - /a/experimental_frame/data	

Display Manager				
Item ▼	Type	Format	Axis	
tango/tangotest/1/string_scalar	SCALAR	TEXT	SCALAR	<input checked="" type="checkbox"/> Item
tango/tangotest/1/short_spectrum	SPECTRUM	NUMERICAL	Y2	<input checked="" type="checkbox"/> Type
tango/tangotest/1/double_spectrum_ro	SPECTRUM	NUMERICAL	Y1	<input checked="" type="checkbox"/> Format
tango/tangotest/1/double_spectrum	SPECTRUM	NUMERICAL	Y1	<input checked="" type="checkbox"/> Axis
tango/tangotest/1/double_image_ro	IMAGE	NUMERICAL	IMAGE	<input type="checkbox"/> Défilement horizontal
KatyScanImage.nxs - /a/scan_data/trajectory_1_1	SPECTRUM	NUMERICAL	X	<input type="checkbox"/> Compacter toutes les colonnes
KatyScanImage.nxs - /a/scan_data/data_01	IMAGE	NUMERICAL	IMAGE	<input type="checkbox"/> Compacter la colonne sélectionnée
KatyScanImage.nxs - /a/experimental_frame/data	SCALAR	TEXT	SCALAR	

## Samples of axis configuration

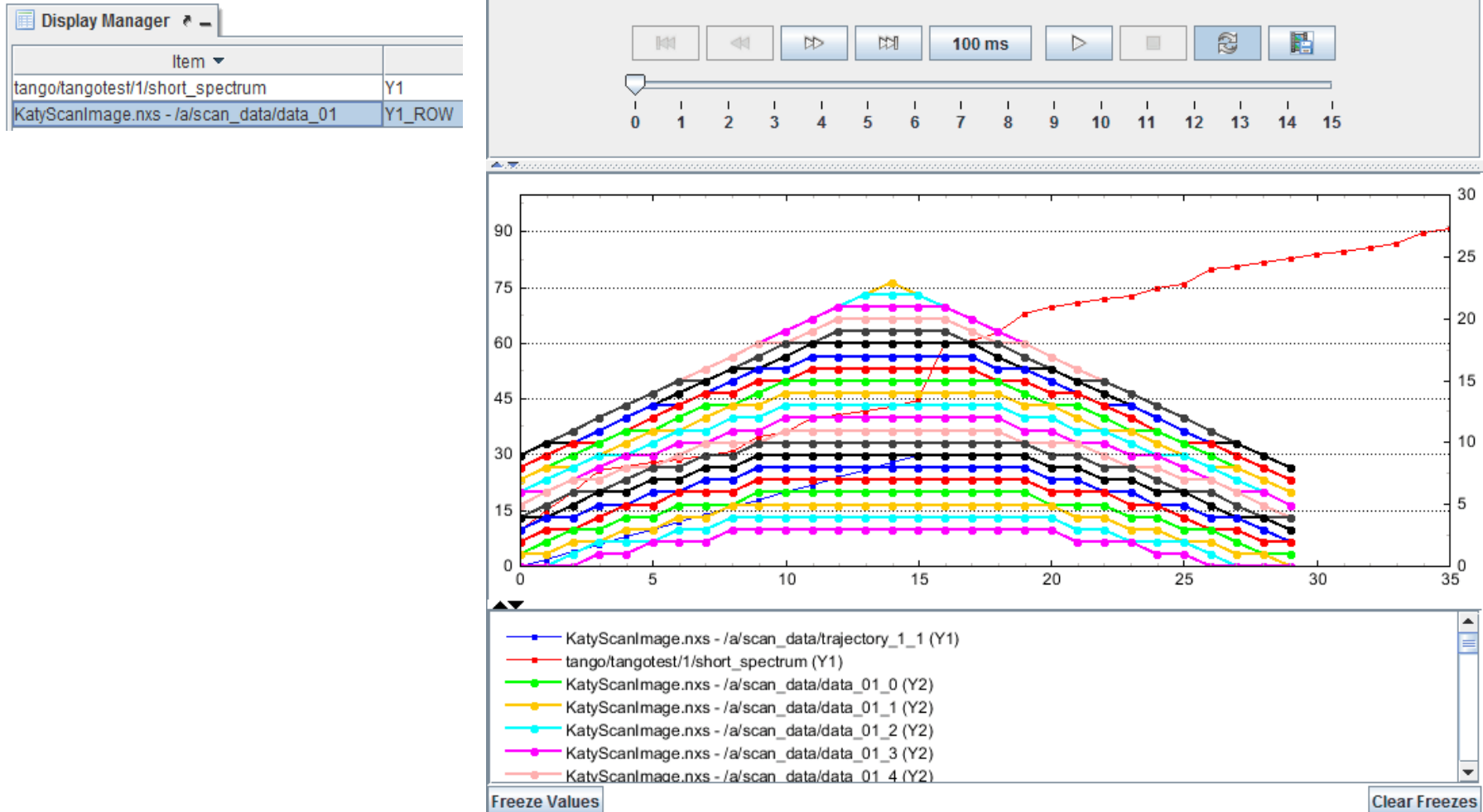
- Set a spectrum or an image on X axis in the Chart

Display Manager	
Item	
tango/tangotest/1/string_scalar	SCALAR
tango/tangotest/1/short_spectrum	X
tango/tangotest/1/double_spectrum_ro	Y1
tango/tangotest/1/double_spectrum	Y1
tango/tangotest/1/double_image_ro	IMAGE
KatyScanImage.nxs - /a/scan_data/trajectory_1_1	X
KatyScanImage.nxs - /a/scan_data/data_01	Y1
KatyScanImage.nxs - /a/experimental_frame/data	SCALAR

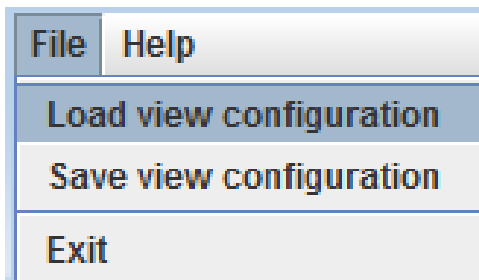


## Samples of axis configuration

- See an image or stack image as N spectrum (n lines or n columns)



- Open all the wanted data item to visualize
- Configure the axis selection thanks to the display manager
- Configure the data view line properties (Thickness, color, marker...)
- Configure the image properties (axes scale, ROI, zoom, color map...)
- Save this configuration from the menu File-> Save configuration.
- Load this configuration from the menu File-> Load configuration.



Display command line help

`databrowser -? Or -help`

Open a Nexus source at launch

`databrowser /path/file.nxs`

Open a Tango source at launch

`databrowser tango/device/name`

`databrowser /path/atktunning_attributes.tx`

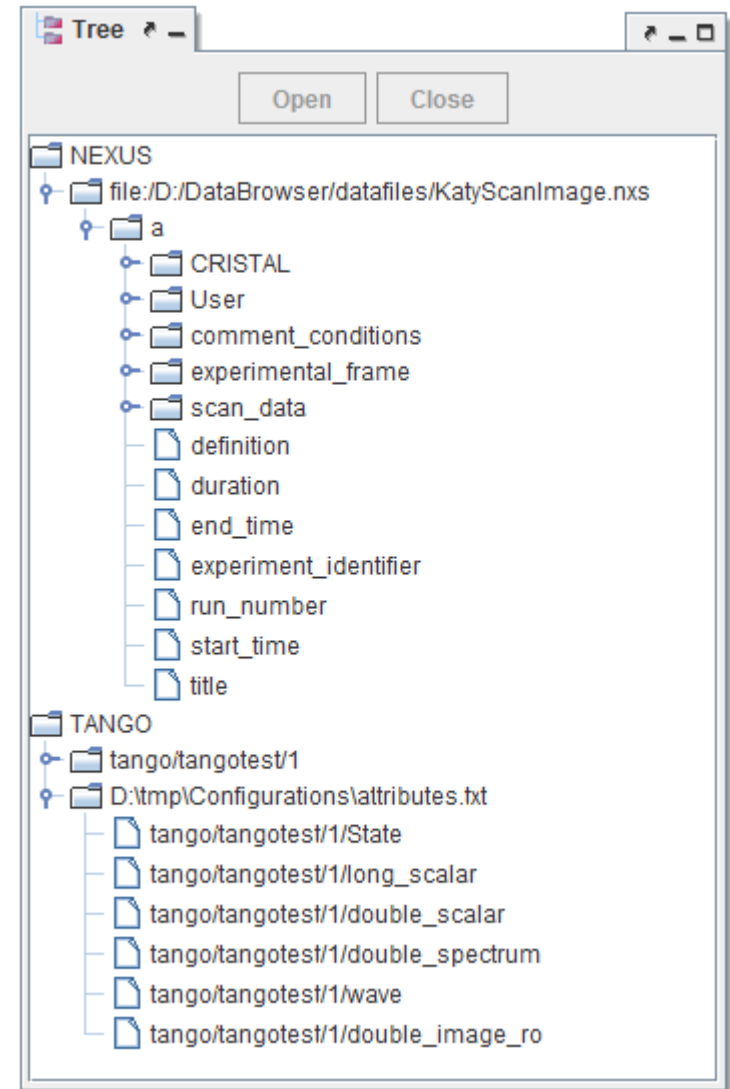
Open a HDB/TDB source at launch

`databrowser /path/hdb.vc`

`databrowser /path/tdb.vc`

Load a configuration file at launch

`databrowser -v /path/myconfiguration.xml`

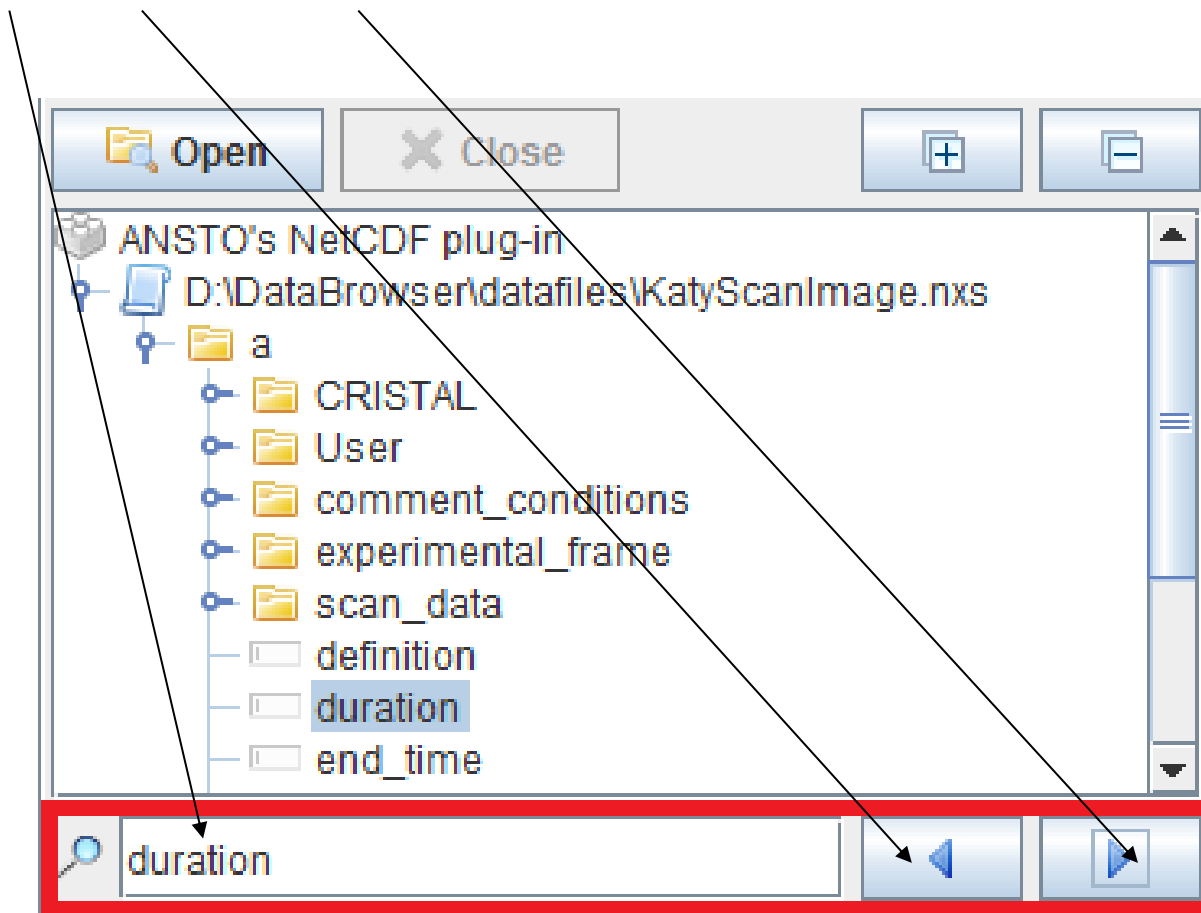




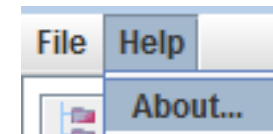
At each data browser closed action, the following information are saved :

- The view disposition (docking)
- The size and the windows position on the screen.
- The general chart properties :
  - Title
  - The chart background
  - The axis scale, and name
  - The auto highlighting option
- The general image properties (not available yet)
  - The added ROI
  - Monochrome option
- The path of different files
  - The path of saved data files from the Chart and the Image viewer.
  - The path of the snapshot of the Chart and the Image viewer.
  - The path of the movies from the Player component.
  - The path of the open data source from Open button
- The preference file is defined on a system property :
  - -DDATABROWSER\_CONFIGFILE=/path/uiconfig.xml
- The refreshing of CDMA plugin data is configured in a system property:
  - -DDB\_REFRESHING\_ENABLE=true

- Type a text to find in the search text field
- Click on previous or next button to find a item that contains the typed text.



- This documentation is available clicking on Help menu



- A plugin detail information is available on this same menu.

