

Salsa

Manual User

Katy Saintin

Last update December 2013

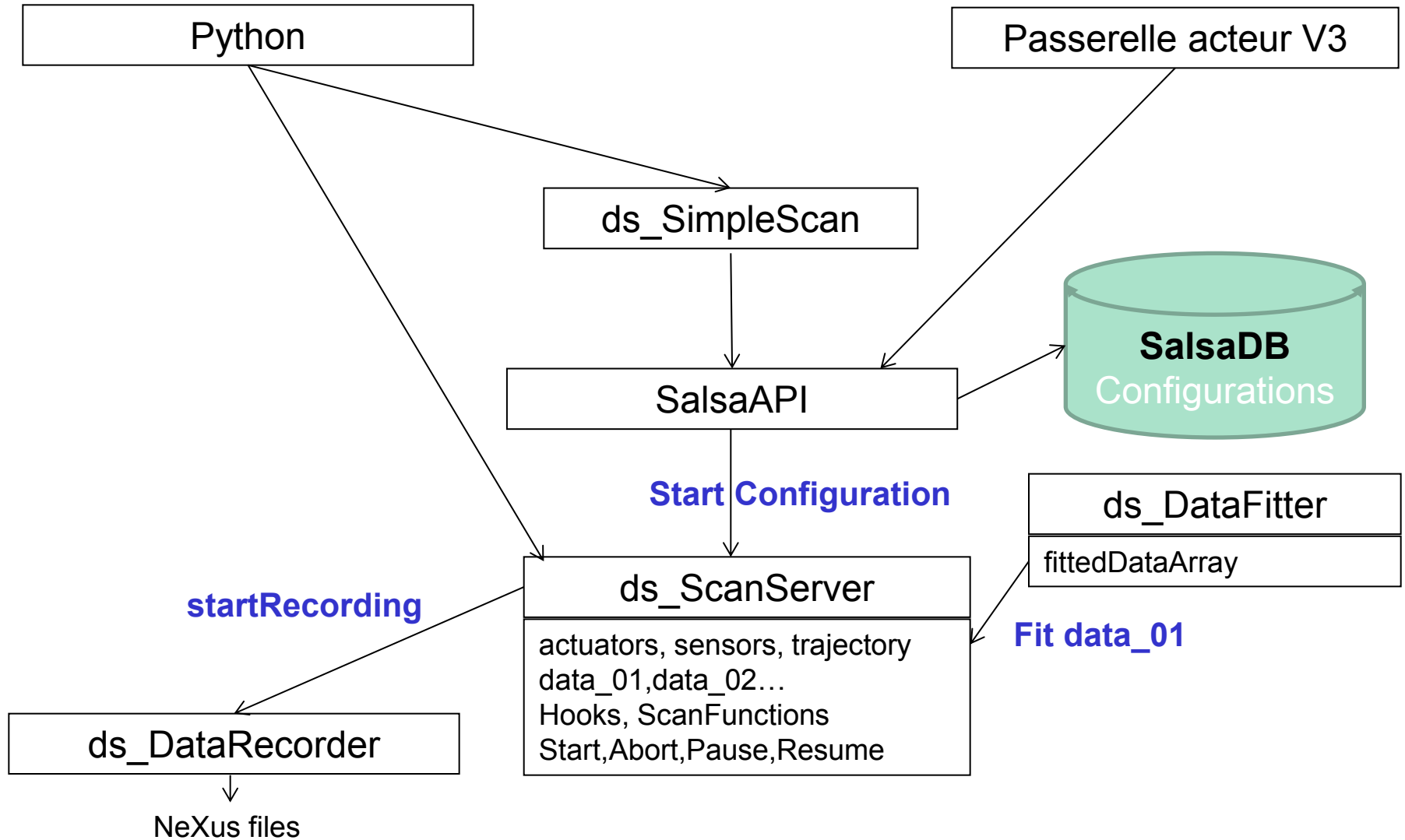
- Software architecture
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- Salsa description

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 - Data fitter device settings
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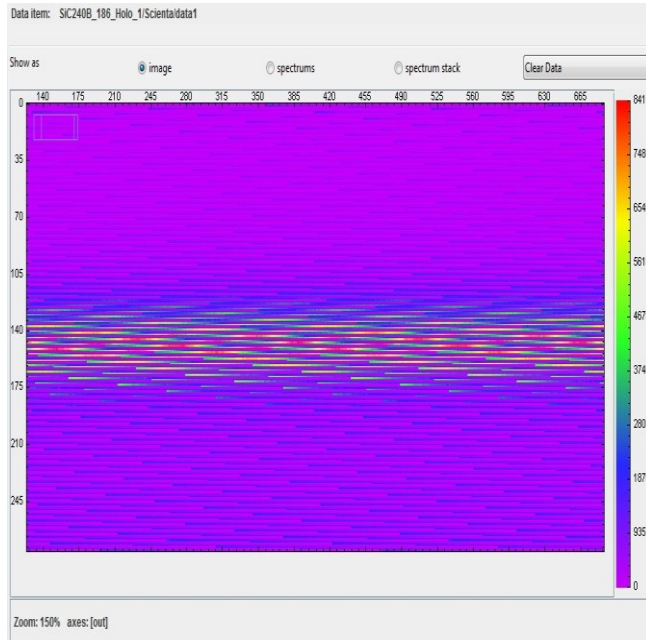
- Create a new configuration
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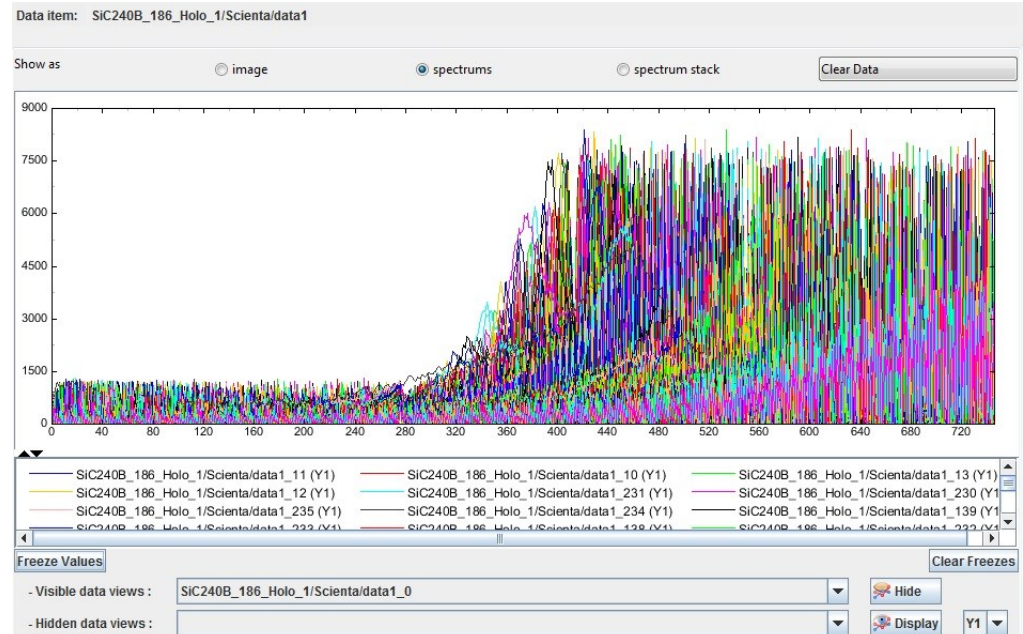


Librairie graphique COMETE



20,00 No unit

NEXUS



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+030.00
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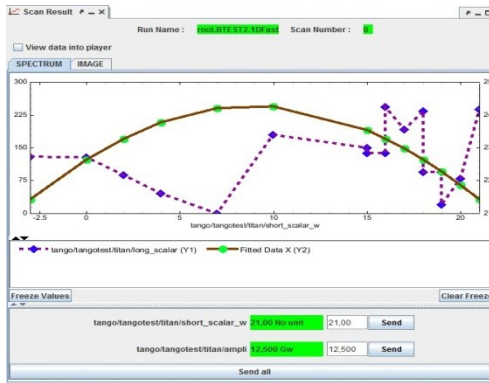
TANGO

Archivage

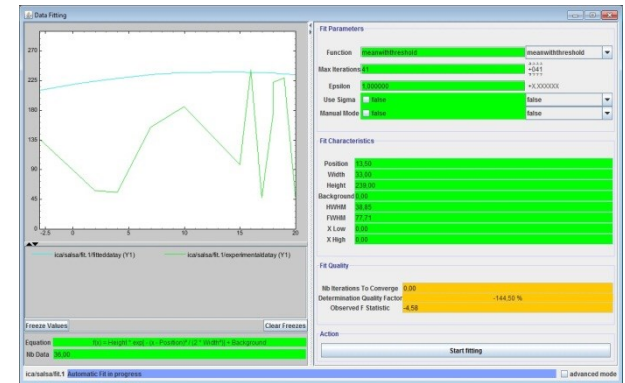
DataRecorderBean



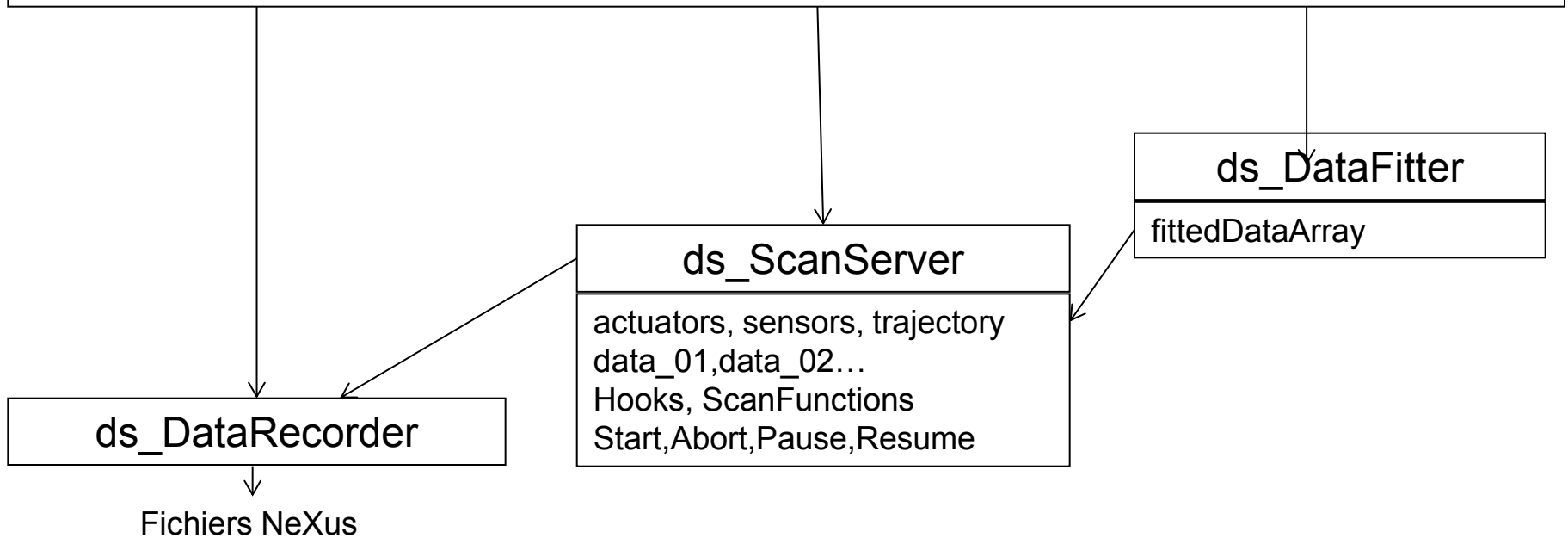
CurrentScanResultBean

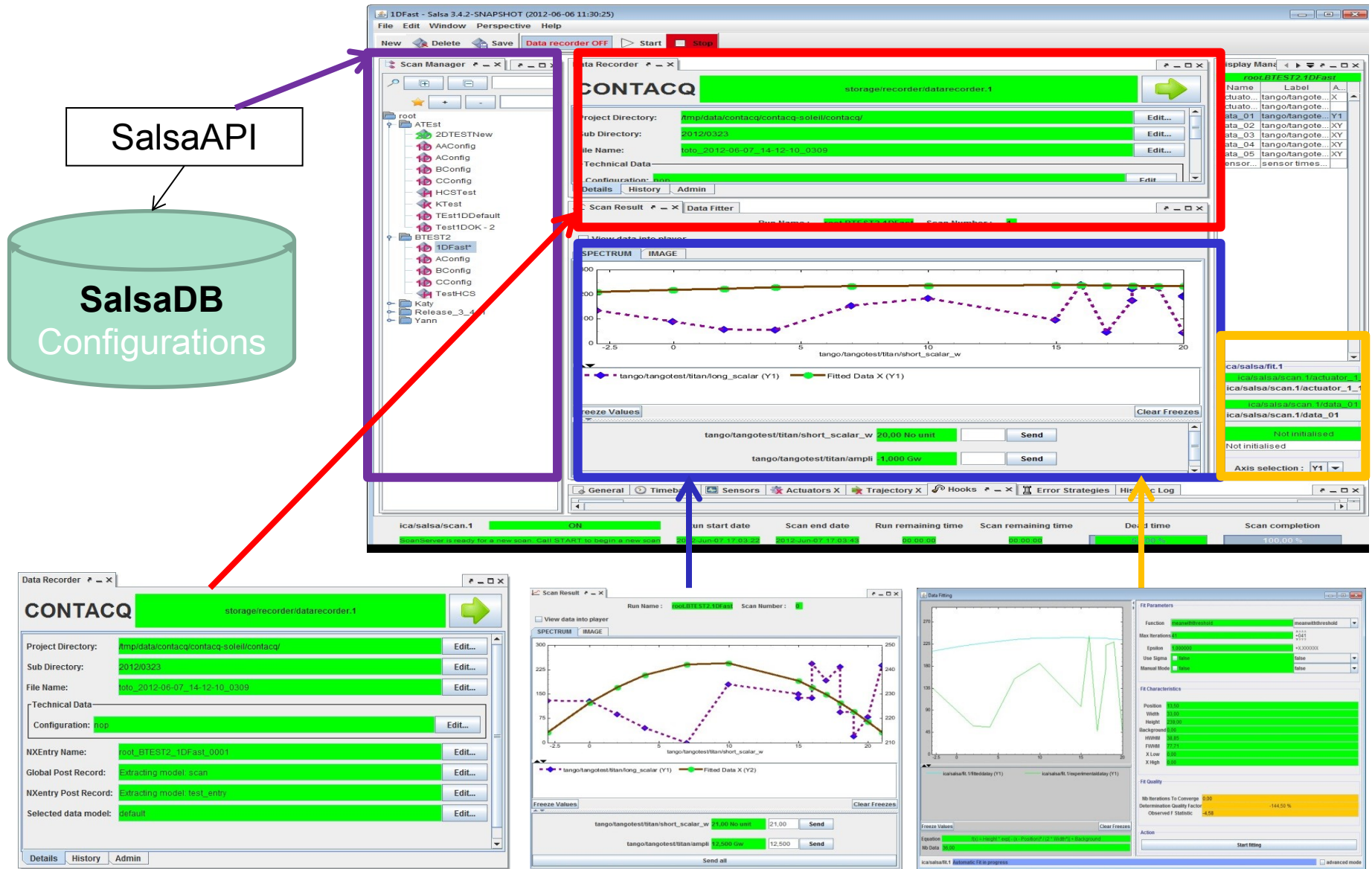


DataFitterBean



COMETE Graphical library





PASSERELLE_ROOT

Bossanova

Passerelle

SalsaAPI (Duplication)

LIVE_ROOT

SALSA

DataRecorderBean

ScanResultBean

DataFitterBean

Comete

SalsaAPI

DEVICE_ROOT

ds_DataRecorder

ds_ScanServer

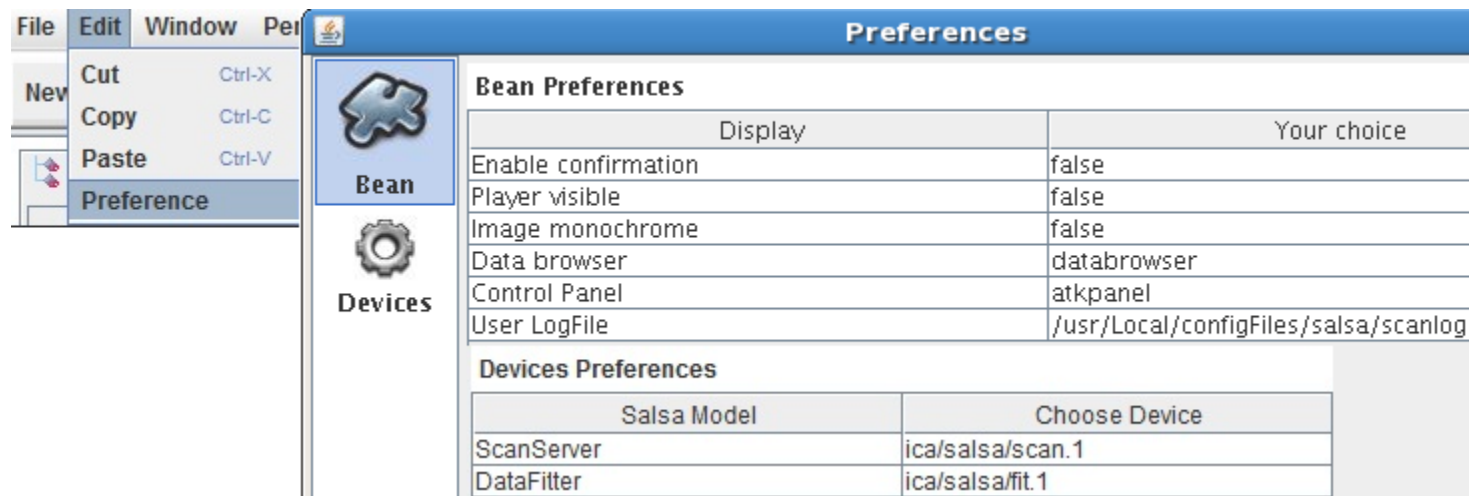
ds_DataFitter

- TANGO : The control system of SOLEIL
- Device : A TANGO programme for remoting a equipment or processing.
- Attribute : An equipment or a process parameter (eg : position or integration time).
- Command : A equipment or a process action (eg : Move or Count)
- Scan server device : TheTango device server for processing scan.
- Nexus : Format of files of SOLEIL.
- Sensor : listened Tango parameter
- Actuator : moved Tango parameter
- Hook : A simple Tango command (no argument as Start, Close...)
- Perspective : A custom view disposition.

Salsa needs for several environment variables to be set.

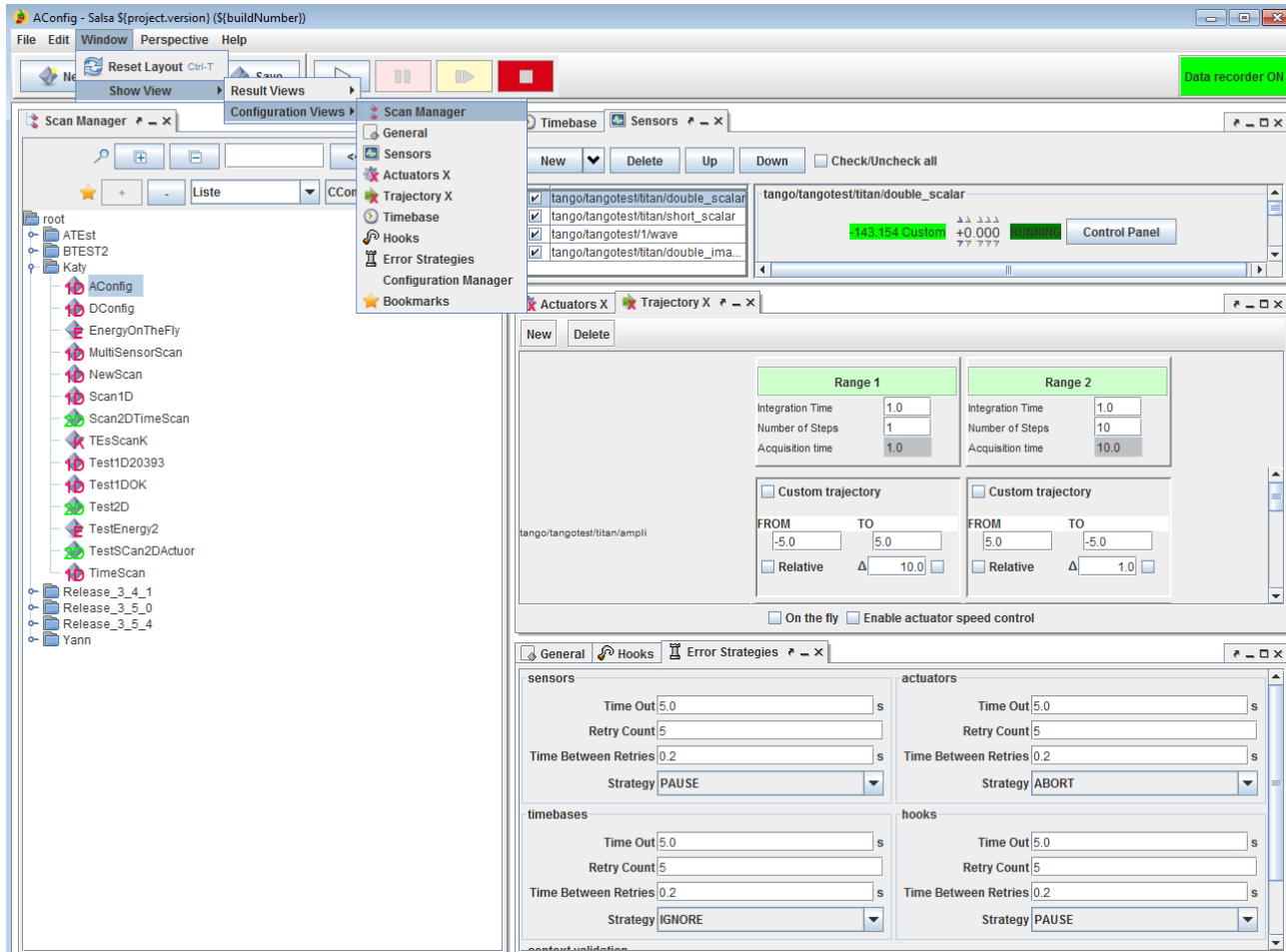
- TANGO_HOST
Host of the tango database (localhost:20001)
- SALSA_SERVER_URL
Url of the salsa database (jdbc:mysql://localhost/salsa)
- SALSA_LOGIN
The login of the user connected on Salsa database
- SALSA_PERSPECTIVES_DIRECTORY
The folder for the perspectives files
- SALSA_DEVICE_PREFERENCES
The file for the device configurations
- SALSA_UI_PREFERENCES
The file for the user interface configurations

- Log file setting
- Scan server device setting
- Data Fitter device setting
- Nexus file browser application



Configuration mode : (“salsa” command)

In this mode you can create, modify and remove a scan configuration.
All the configuration edition views are available in the Menu
Window > Show View > Configuration Views



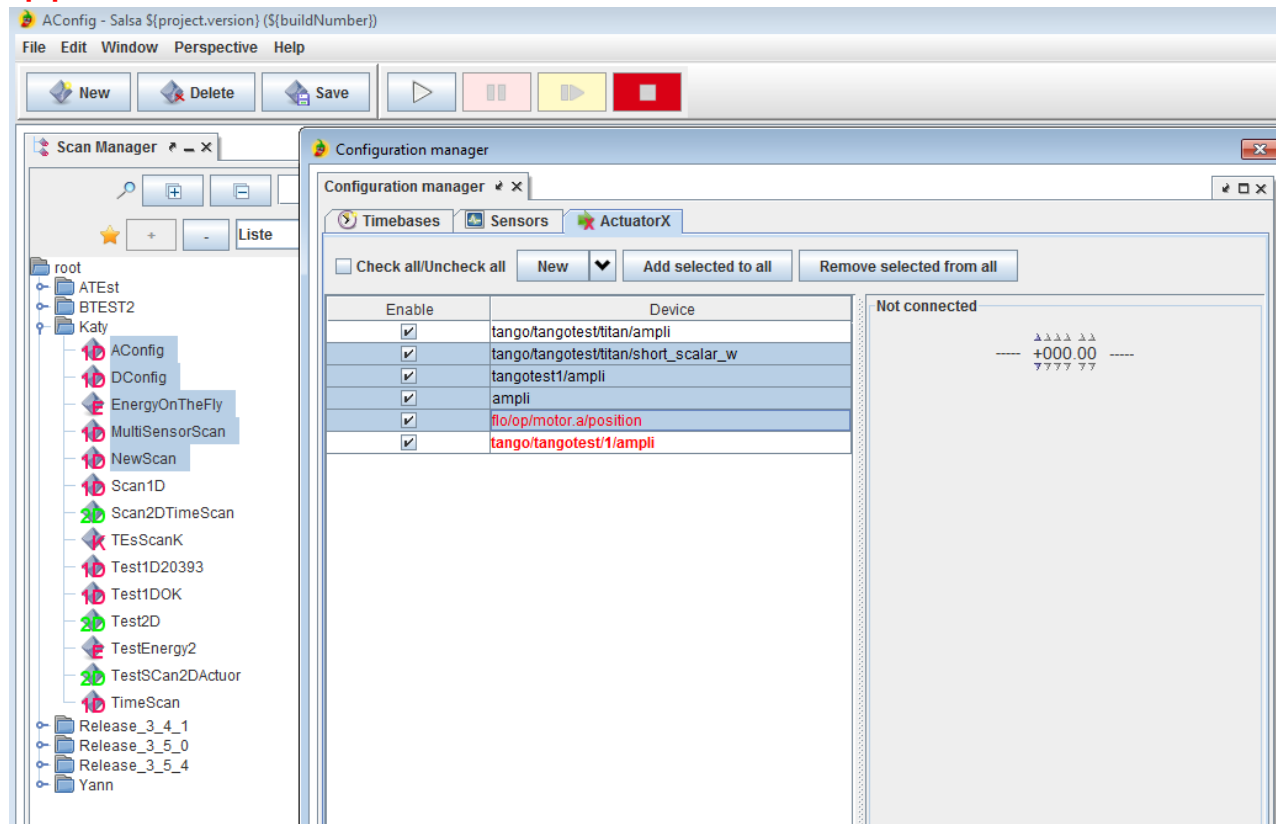
Configuration manager (New !)

The management of several configurations is possible now.

You can Add, Remove, Enable/Disable a TimeBase, Sensor or Actuator on several configurations.

Select several configuration in the Scan Manager Tree.

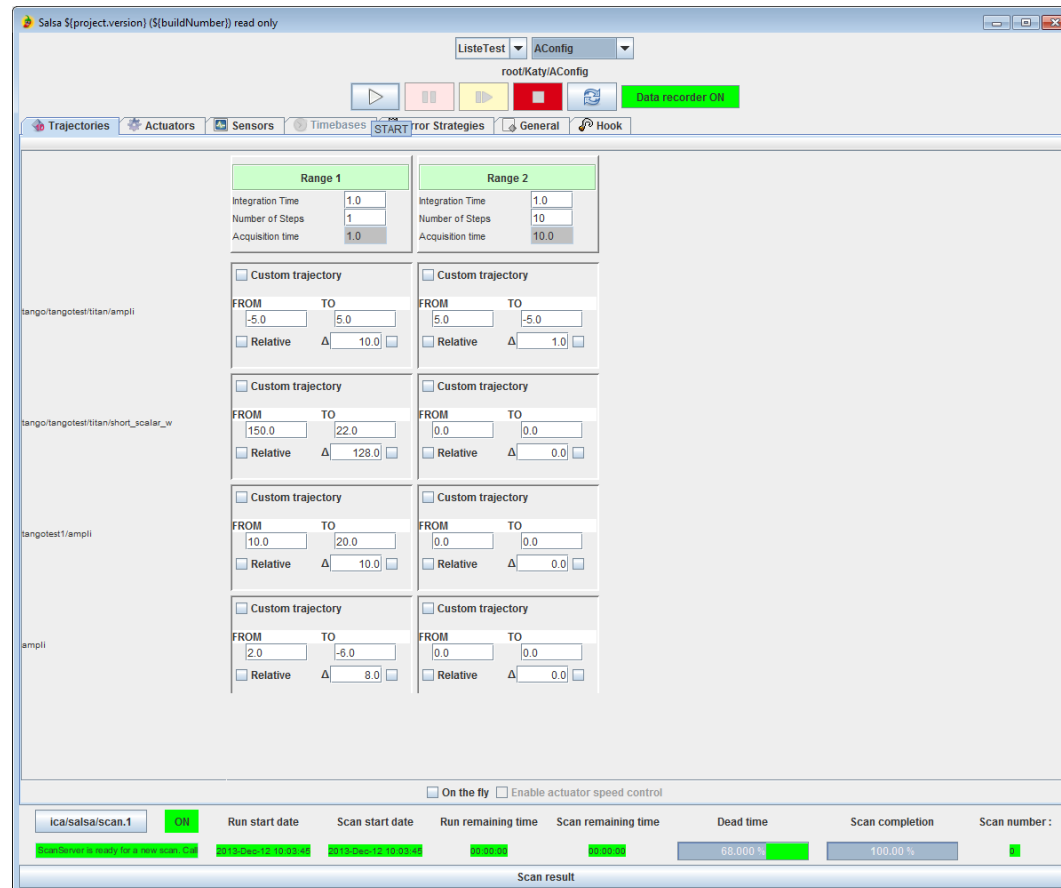
The **devices appear in red color**, are the uncommon devices.



Salsa read only: (“salsa_ro” command)

In this mode you can only select a Scan configuration from the bookmark, modify the scan configuration (delete or add devices, or hook is not possible).

And you can play the configuration.



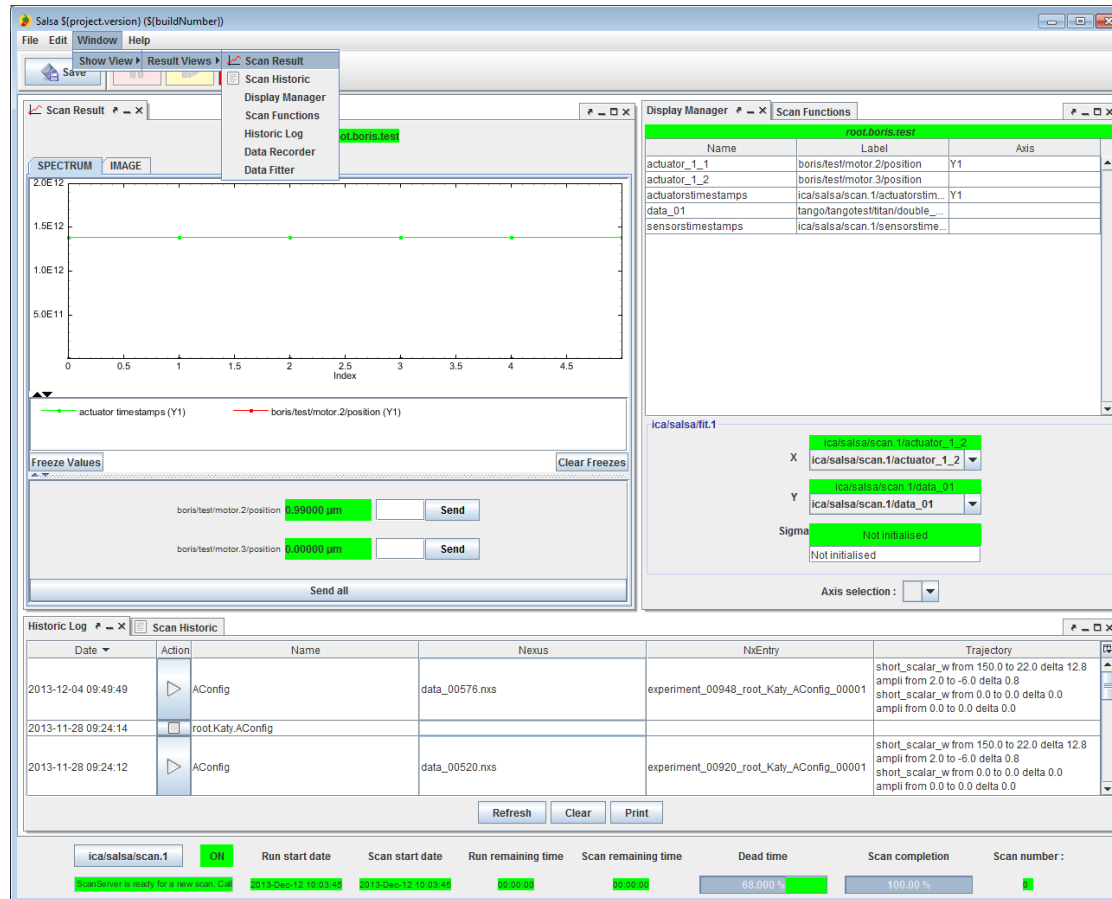
The screenshot shows the Salsa Mode software interface. At the top, there's a title bar with the text "Salsa \$(project.version) (\$(buildNumber)) read only". Below the title bar, there are tabs for "Trajectories", "Actuators", "Sensors", "Timebases", "START", "Error Strategies", "General", and "Hook". The "START" tab is active. The main area is divided into two columns, "Range 1" and "Range 2", each with input fields for "Integration Time", "Number of Steps", and "Acquisition time". Below these, there are checkboxes for "Custom trajectory" and input fields for "FROM", "TO", and "Relative" values. The bottom status bar shows the current scan configuration "lca/salsa/scan.1" and various status indicators like "Run start date", "Scan start date", "Run remaining time", "Scan remaining time", "Dead time", "Scan completion", and "Scan number".

Salsa result : (“salsa_result” command)

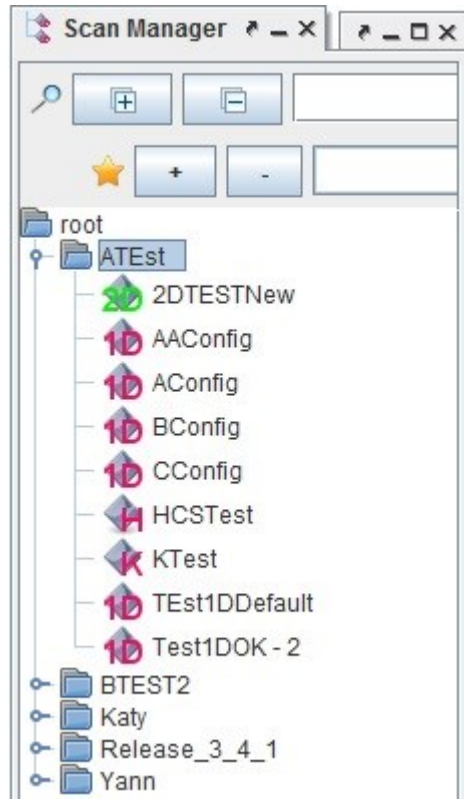
In this mode you can only visualize the current scan result.

All the views for the visualization are available in the Menu :

Window > Show View > Result Views



- New scan configuration. It exist several kind of scan



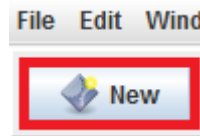
1D = dimension X

2D = dimension X et dimension Y

HCS = 1D continu hardware with a time base

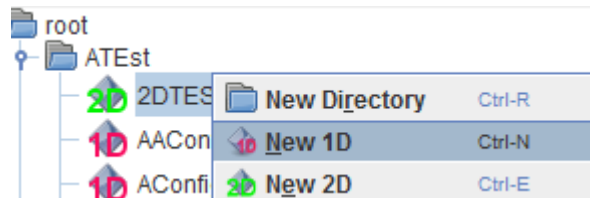
K = 1D specific trajectory in 3 phases

E = 1D trajectory visualized differently in a table



Click on the New button

Or right click on the tree to make appears the configuration management menu.



- LIGNE/EX/SCAN.1/scanNumber
- LIGNE/EX/SCAN.1/ actuatorsDelay
- LIGNE/EX/SCAN.1/ zigzag
- LIGNE/EX/SCAN.1/ onTheFly
- LIGNE/EX/SCAN.1/ enableScanSpeed
- LIGNE/EX/SCAN.1/ afterRunActionType

*scanserver
attributes*

The screenshot shows a software window titled 'General' with several tabs: 'General', 'Timebase', 'Sensors', 'Trajectory X, Actuators X', 'Hooks', and 'Error Stra'. The 'General' tab is active. It contains the following controls:

- ScanNumber**: A text input field with the value '1'.
- Actuator delay**: A text input field with the value '0.0'.
- zigzag**: A checkbox, currently unchecked.
- on the fly**: A checkbox, currently unchecked.
- enable actuator speed**: A checkbox, currently unchecked.
- Post Scan Behaviour**: A section containing three dropdown menus:
 - The first dropdown is set to 'No operation'.
 - The second dropdown is set to 'tango/tangotest/titan/double_scalar'.
 - The third dropdown is set to 'samba/mono/b1/position'.
- Nothing to do**: A text label at the bottom of the Post Scan Behaviour section.

- LIGNE/EX/SCAN.1/sensors
- LIGNE/EX/SCAN.1/timebases
- LIGNE/EX/SCAN.1/actuators
- LIGNE/EX/SCAN.1/trajectories

*scanserver
attributes*

- Predefined values defined in the device properties :
 - ActuatorsFile,
 - SensorsFile,
 - TimebasesFile

Device properties [ICA/SALSA/SCAN.1]

Property name	Value
ActuatorsFile	menu::TangoTest Titan::null submenu::ampli::tango/tangotest/titan/ampli submenu::short_scalar_w::tango/tangotest/titan/short_scalar_w
SensorsFile	menu::TangoTest Titan::null submenu::double_scalar::tango/tangotest/titan/double_scalar submenu::short_scalar::tango/tangotest/titan/short_scalar
SynchronizeData	false
TimebasesFile	menu::Simulated Counter::null submenu::NI6602::test/ni6602/simuled

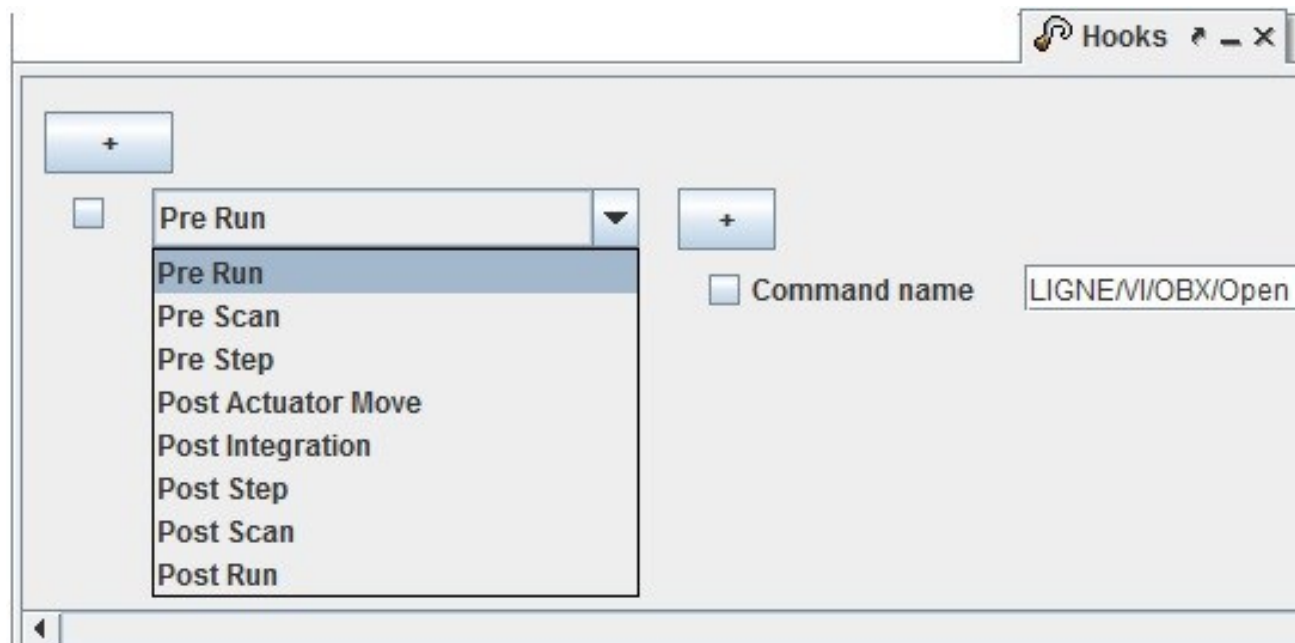
General Timebase

New Delete Up Down

Simulated Counter ▶ NI6602

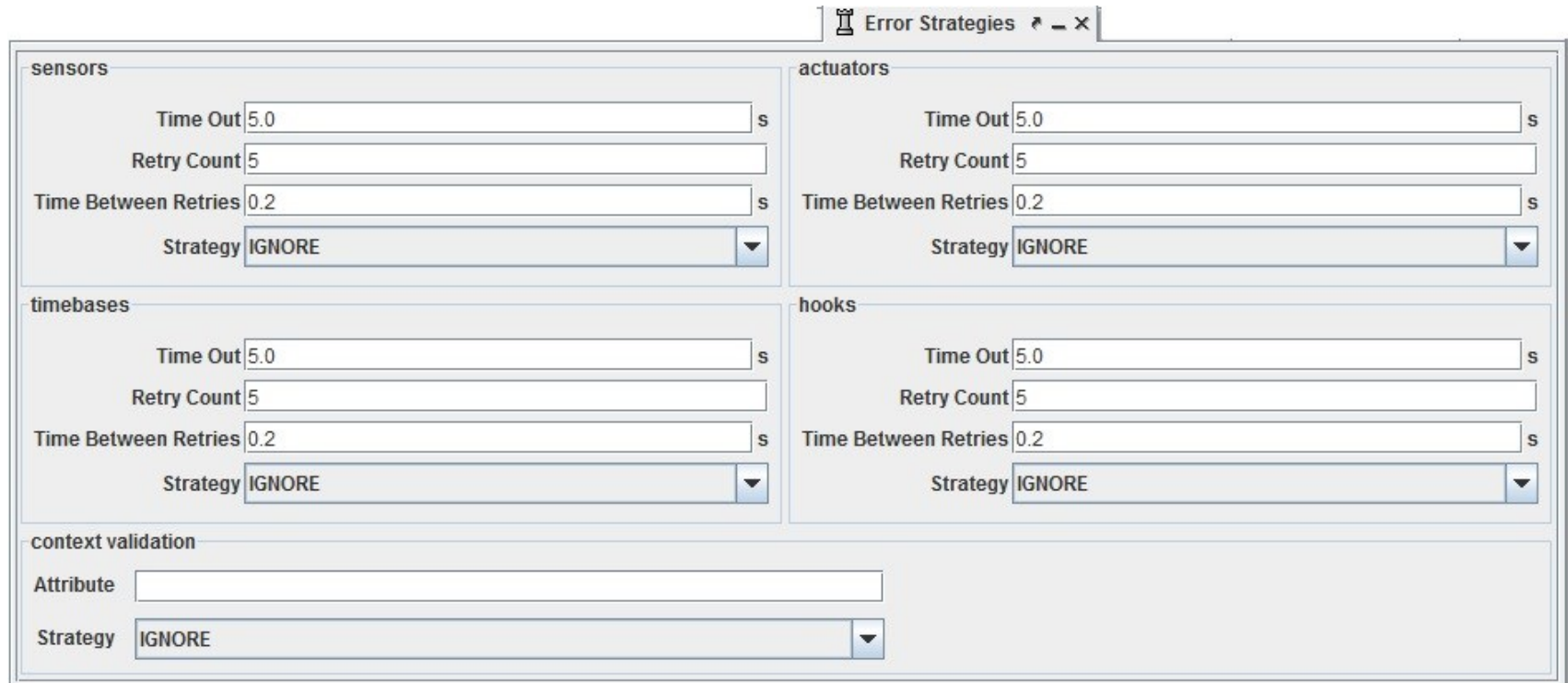
- LIGNE/EX/SCAN.1/postActuatorMoveHooks
- LIGNE/EX/SCAN.1/postIntegrationHooks
- LIGNE/EX/SCAN.1/postRunHooks
- LIGNE/EX/SCAN.1/postScanHooks
- LIGNE/EX/SCAN.1/postStepHooks
- ...

*scanserver
attributes*



- LIGNE/EX/SCAN.1/sensorsErrorStrategy
- LIGNE/EX/SCAN.1/sensorsRetryCount
- LIGNE/EX/SCAN.1/contextValidation

*scanserver
attributes*



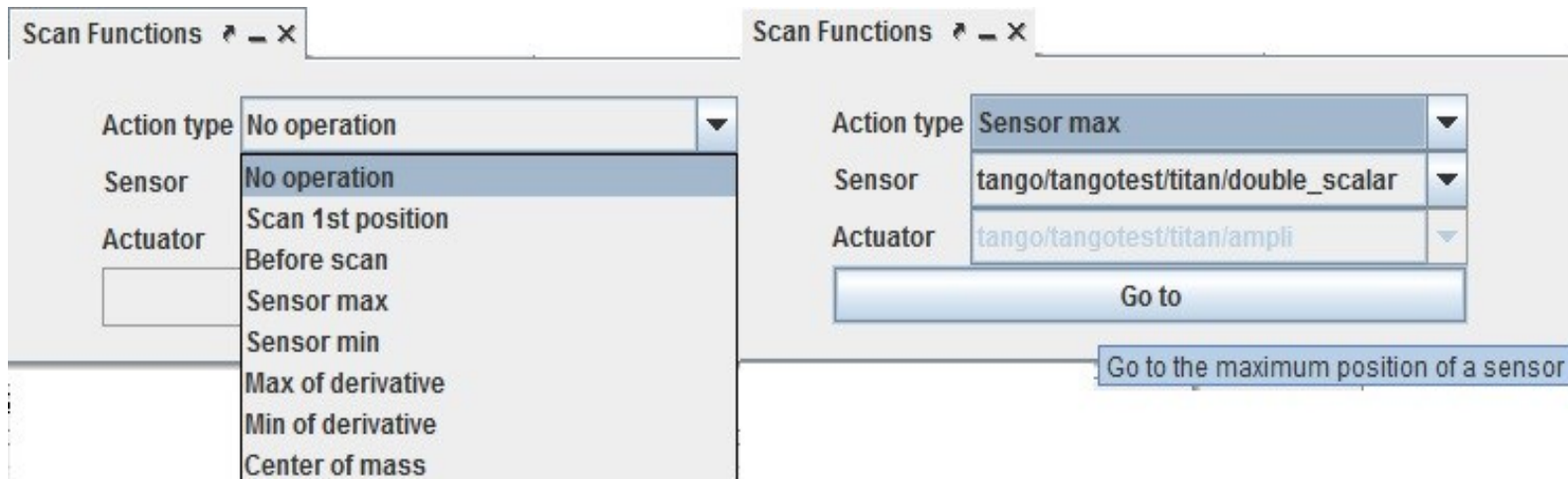
The screenshot shows the 'Error Strategies' configuration window. It is divided into five main sections:

- sensors**: Time Out: 5.0 s, Retry Count: 5, Time Between Retries: 0.2 s, Strategy: IGNORE.
- actuators**: Time Out: 5.0 s, Retry Count: 5, Time Between Retries: 0.2 s, Strategy: IGNORE.
- timebases**: Time Out: 5.0 s, Retry Count: 5, Time Between Retries: 0.2 s, Strategy: IGNORE.
- hooks**: Time Out: 5.0 s, Retry Count: 5, Time Between Retries: 0.2 s, Strategy: IGNORE.
- context validation**: Attribute: (empty field), Strategy: IGNORE.

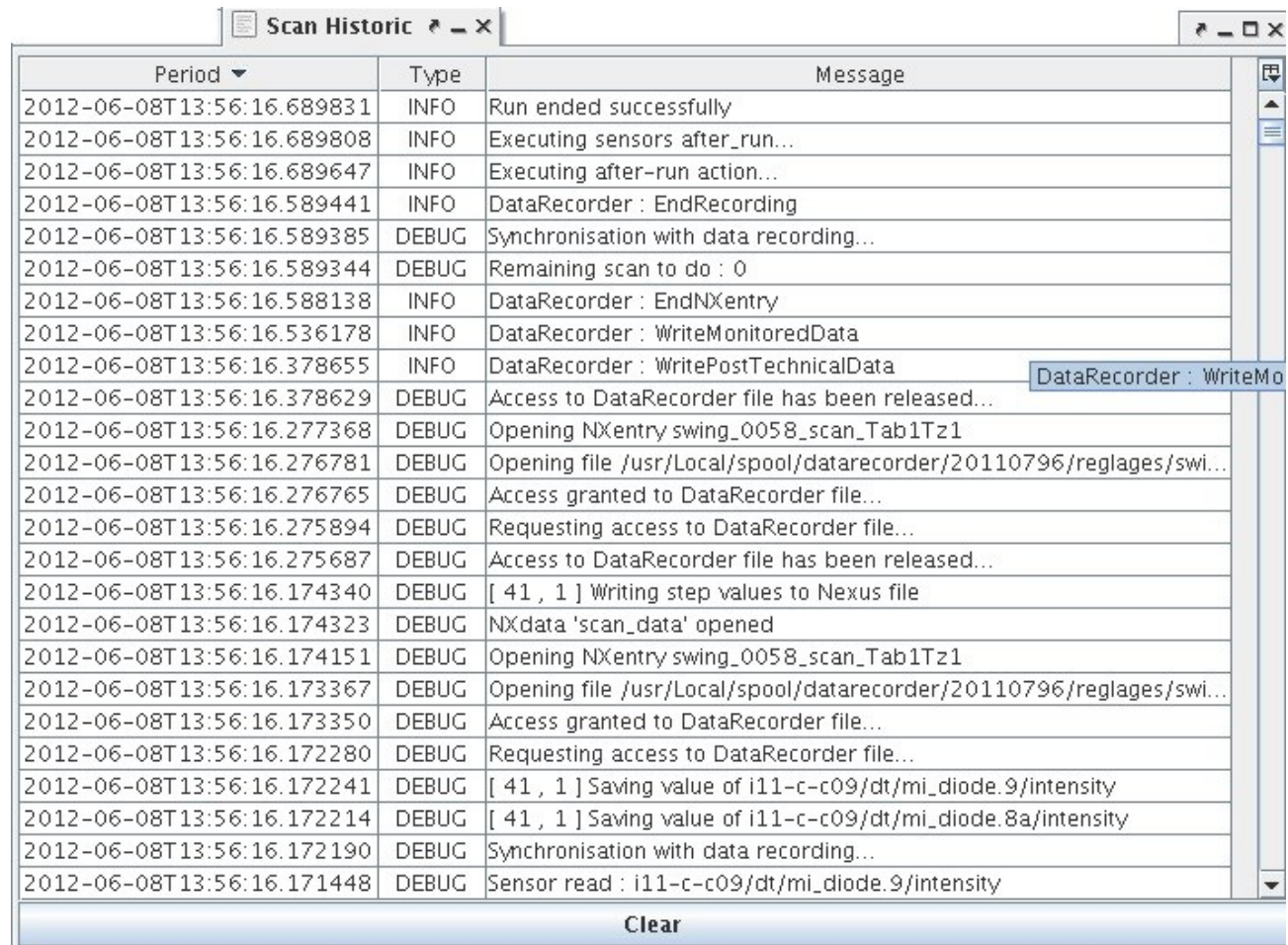
- Executed by the user on demand (except in Abort case) !

- LIGNE/EX/SCAN.1/afterRunActionType
- LIGNE/EX/SCAN.1/afterRunActionSensor
- LIGNE/EX/SCAN.1/afterRunActionActuator
- LIGNE/EX/SCAN.1/afterRunActionActuatorValue
- Commande LIGNE/EX/SCAN.1/ExecuteAction

*scanserver
attributes*



- Current scan historic (can be very useful for debugging !)
 - LIGNE/EX/SCAN.1/historic *scanserver attribute*

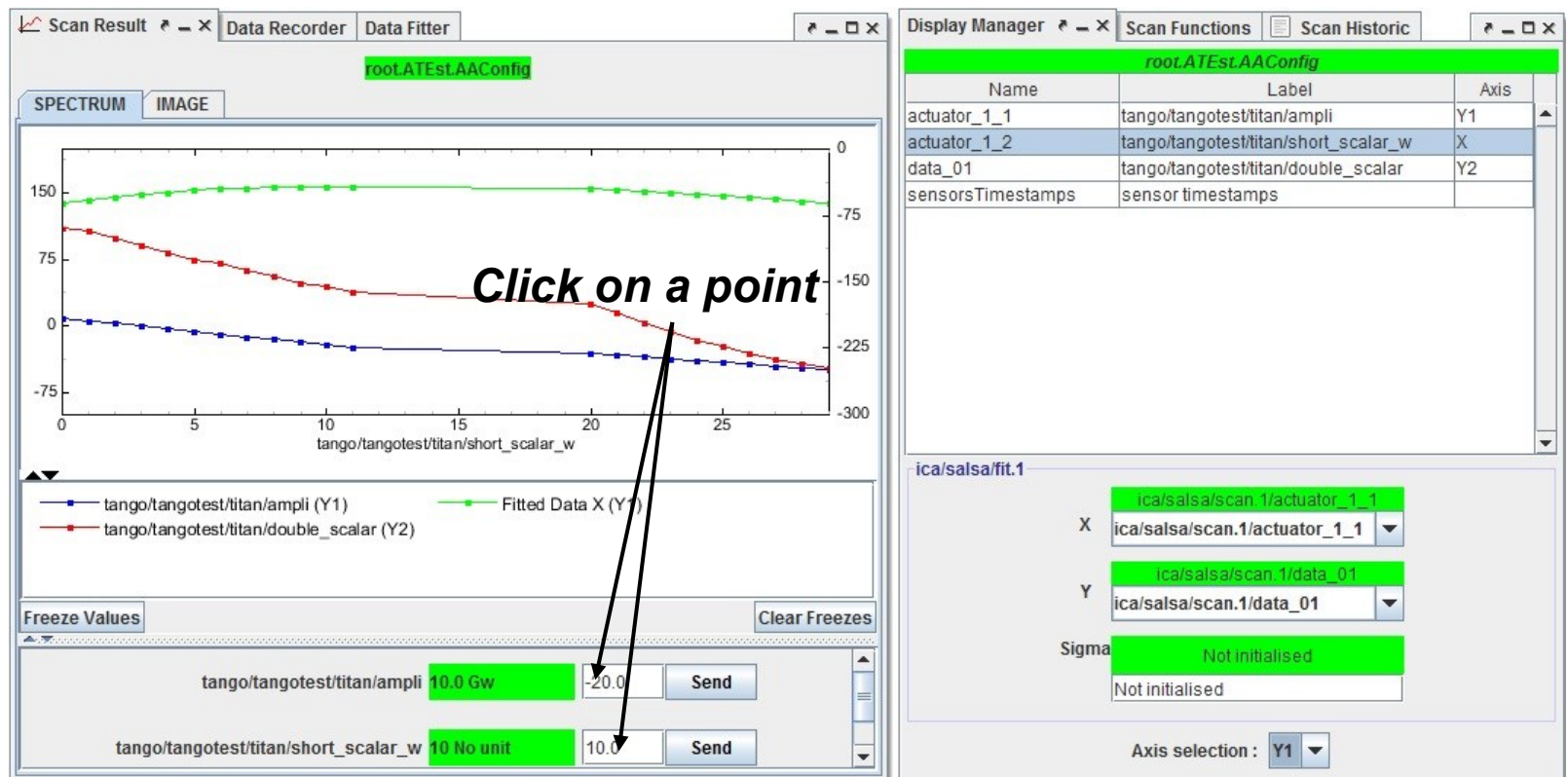


The screenshot shows a window titled 'Scan Historic' with a table of log entries. The table has three columns: 'Period', 'Type', and 'Message'. The entries are sorted by time, starting from 2012-06-08T13:56:16.689831. The log includes various messages such as 'Run ended successfully', 'Executing sensors after_run...', 'DataRecorder : EndRecording', 'Synchronisation with data recording...', 'Remaining scan to do : 0', 'DataRecorder : EndNXentry', 'DataRecorder : WriteMonitoredData', 'DataRecorder : WritePostTechnicalData', 'Access to DataRecorder file has been released...', 'Opening NXentry swing_0058_scan_Tab1Tz1', 'Opening file /usr/Local/spool/datarecorder/20110796/reglages/swi...', 'Access granted to DataRecorder file...', 'Requesting access to DataRecorder file...', 'Access to DataRecorder file has been released...', '[41 , 1] Writing step values to Nexus file', 'NXdata 'scan_data' opened', 'Opening NXentry swing_0058_scan_Tab1Tz1', 'Opening file /usr/Local/spool/datarecorder/20110796/reglages/swi...', 'Access granted to DataRecorder file...', 'Requesting access to DataRecorder file...', '[41 , 1] Saving value of i11-c-c09/dt/mi_diode.9/intensity', '[41 , 1] Saving value of i11-c-c09/dt/mi_diode.8a/intensity', 'Synchronisation with data recording...', and 'Sensor read : i11-c-c09/dt/mi_diode.9/intensity'. A 'Clear' button is located at the bottom of the window.

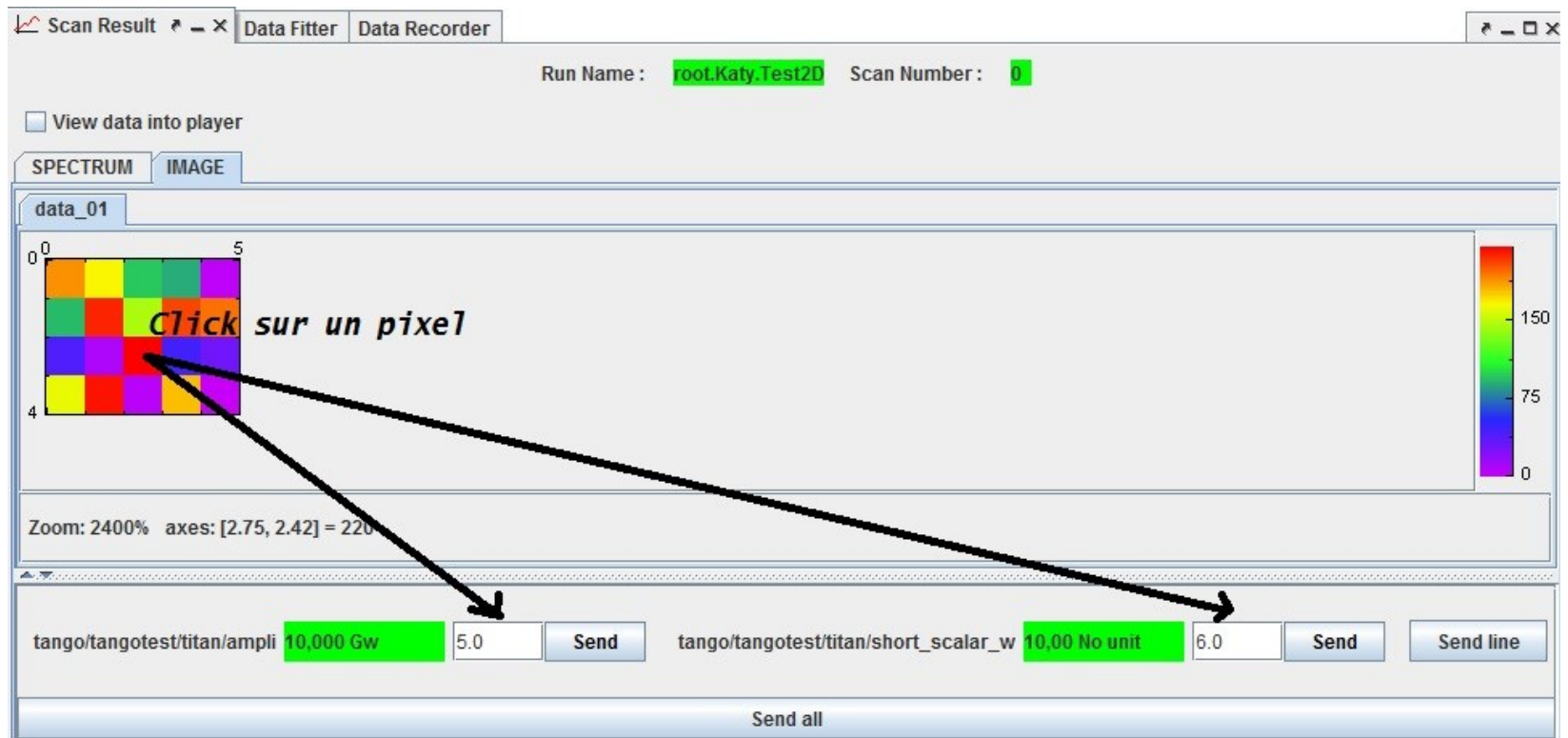
Period ▼	Type	Message
2012-06-08T13:56:16.689831	INFO	Run ended successfully
2012-06-08T13:56:16.689808	INFO	Executing sensors after_run...
2012-06-08T13:56:16.689647	INFO	Executing after-run action...
2012-06-08T13:56:16.589441	INFO	DataRecorder : EndRecording
2012-06-08T13:56:16.589385	DEBUG	Synchronisation with data recording...
2012-06-08T13:56:16.589344	DEBUG	Remaining scan to do : 0
2012-06-08T13:56:16.588138	INFO	DataRecorder : EndNXentry
2012-06-08T13:56:16.536178	INFO	DataRecorder : WriteMonitoredData
2012-06-08T13:56:16.378655	INFO	DataRecorder : WritePostTechnicalData
2012-06-08T13:56:16.378629	DEBUG	Access to DataRecorder file has been released...
2012-06-08T13:56:16.277368	DEBUG	Opening NXentry swing_0058_scan_Tab1Tz1
2012-06-08T13:56:16.276781	DEBUG	Opening file /usr/Local/spool/datarecorder/20110796/reglages/swi...
2012-06-08T13:56:16.276765	DEBUG	Access granted to DataRecorder file...
2012-06-08T13:56:16.275894	DEBUG	Requesting access to DataRecorder file...
2012-06-08T13:56:16.275687	DEBUG	Access to DataRecorder file has been released...
2012-06-08T13:56:16.174340	DEBUG	[41 , 1] Writing step values to Nexus file
2012-06-08T13:56:16.174323	DEBUG	NXdata 'scan_data' opened
2012-06-08T13:56:16.174151	DEBUG	Opening NXentry swing_0058_scan_Tab1Tz1
2012-06-08T13:56:16.173367	DEBUG	Opening file /usr/Local/spool/datarecorder/20110796/reglages/swi...
2012-06-08T13:56:16.173350	DEBUG	Access granted to DataRecorder file...
2012-06-08T13:56:16.172280	DEBUG	Requesting access to DataRecorder file...
2012-06-08T13:56:16.172241	DEBUG	[41 , 1] Saving value of i11-c-c09/dt/mi_diode.9/intensity
2012-06-08T13:56:16.172214	DEBUG	[41 , 1] Saving value of i11-c-c09/dt/mi_diode.8a/intensity
2012-06-08T13:56:16.172190	DEBUG	Synchronisation with data recording...
2012-06-08T13:56:16.171448	DEBUG	Sensor read : i11-c-c09/dt/mi_diode.9/intensity

Clear

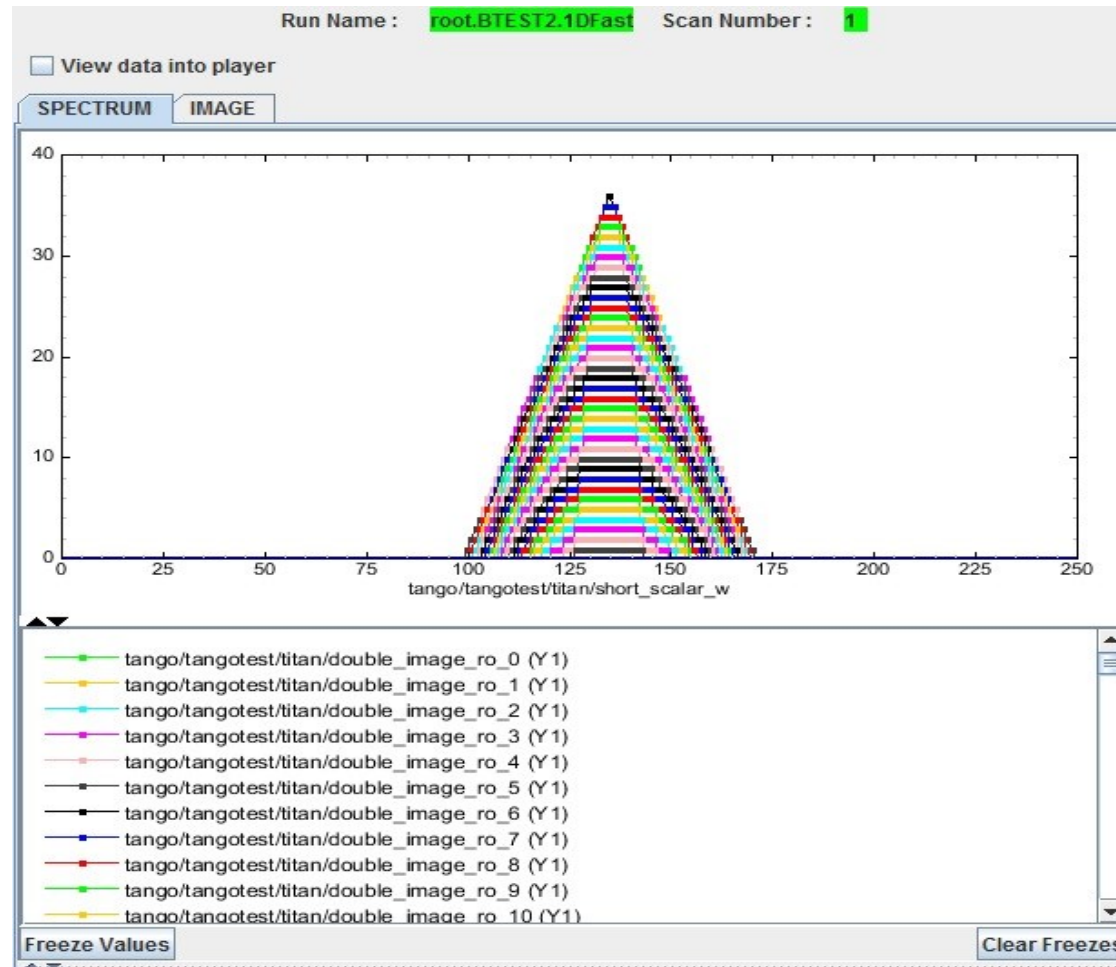
- LIGNE/EX/SCAN.1/data_XX *scanserver attribute*
- Send the actuator to the selected point.



- LIGNE/EX/SCAN.1/data_XX *scanserver attribute*
- Send the actuator to the selected point.



- Display a 2D Image in N Spectrum in Chart
 - LIGNE/EX/SCAN.1/data_XX *scanserver attribute*

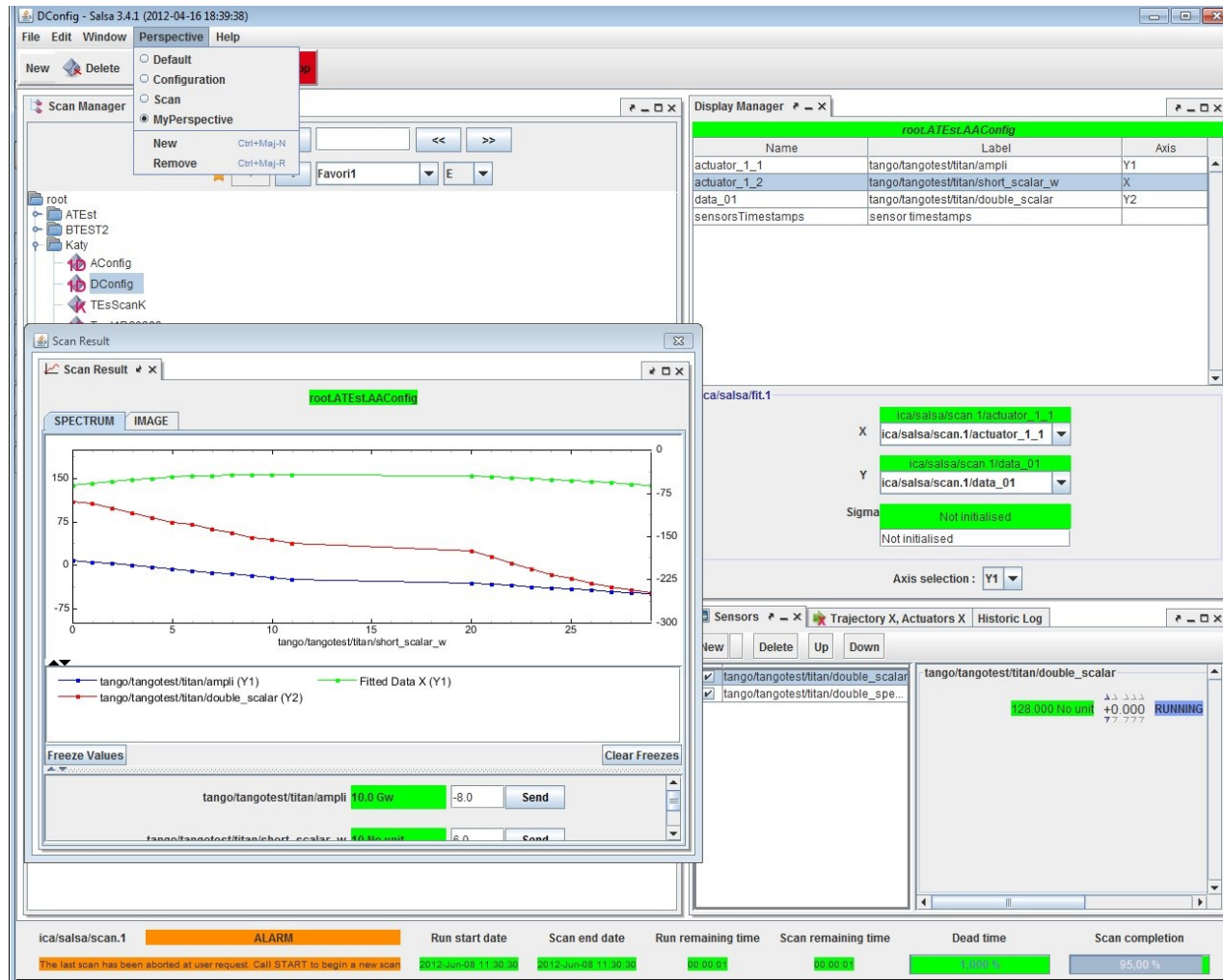


- Scans executed actions via SalsaAPI historic (historic file)
 - ds_simpleScan, passerelle and Salsa.
 - Replay (exactly) a scan via Play button
 - Click on the nexus file name to open it a nexus file browser application

Historic Log				
Date ▼	Action	Name	Nexus	Trajectory
2012-06-08 11:29:45	▶	1DFast	/tmp/data/contacq/contacq-soleil/contacq/2012/0323/toto_2012-06-08_09-37-19_0	short_scalar_w from -3.0 to 10.0 delta 2.6 ampli from 30.0 to 25.0 delta 1.0 short_scalar_w from 15.0 to 22.0 delta 0.4375 ampli from 20.0 to 12.0 delta 0.5
			/tmp/data/contacq/contacq-soleil/contacq/2012/0323/toto_2012-06-08_09-37-19_0309.nxs	
2012-06-07 17:03:21	▶	1DFast	/tmp/data/contacq/contacq-soleil/contacq/2012/0323/toto_2012-06-07_14-12-10_0	short_scalar_w from -3.0 to 10.0 delta 2.6 ampli from 30.0 to 25.0 delta 1.0 short_scalar_w from 15.0 to 22.0 delta 0.4375 ampli from 20.0 to 12.0 delta 0.5 short_scalar_w from 30.0 to 20.0 delta 0.8333333333333334
2012-06-07 14:12:28	☐	root.BTEST2.1DFast	/tmp/data/contacq/contacq-soleil/contacq/2012/0323/toto_2012-06-07_14-12-10_0	
2012-06-07 14:12:17	▶	1DFast	/tmp/data/contacq/contacq-soleil/contacq/2012/0323/toto_2012-06-07_14-12-10_0	short_scalar_w from -3.0 to 10.0 delta 2.6 ampli from 30.0 to 25.0 delta 1.0 short_scalar_w from 15.0 to 22.0 delta 0.4375 ampli from 20.0 to 12.0 delta 0.5 short_scalar_w from 30.0 to 20.0 delta 0.8333333333333334
2012-06-07 14:12:09	☐	root.BTEST2.1DFast	/tmp/data/contacq/contacq-soleil/contacq/2012/0322/toto_2012-06-07_14-11-57_0	
2012-06-07 14:11:56	▶	1DFast	/tmp/data/contacq/contacq-soleil/contacq/2012/0322/toto_2012-06-07_14-11-57_0	short_scalar_w from -3.0 to 10.0 delta 2.6 ampli from 30.0 to 25.0 delta 1.0 short_scalar_w from 15.0 to 22.0 delta 0.4375 ampli from 20.0 to 12.0 delta 0.5 short_scalar_w from 30.0 to 20.0 delta 0.8333333333333334
2012-06-07 10:07:05	☐	root.BTEST2.1DFast	/tmp/data/contacq/contacq-soleil/contacq/2012/0322/toto_2012-06-07_10-06-53_0	
2012-06-07 10:06:53	▶	1DFast	/tmp/data/contacq/contacq-soleil/contacq/2012/0322/toto_2012-06-07_10-06-53_0	short_scalar_w from -3.0 to 10.0 delta 2.6 ampli from 30.0 to 25.0 delta 1.0 short_scalar_w from 15.0 to 22.0 delta 0.4375

Refresh Clear Print

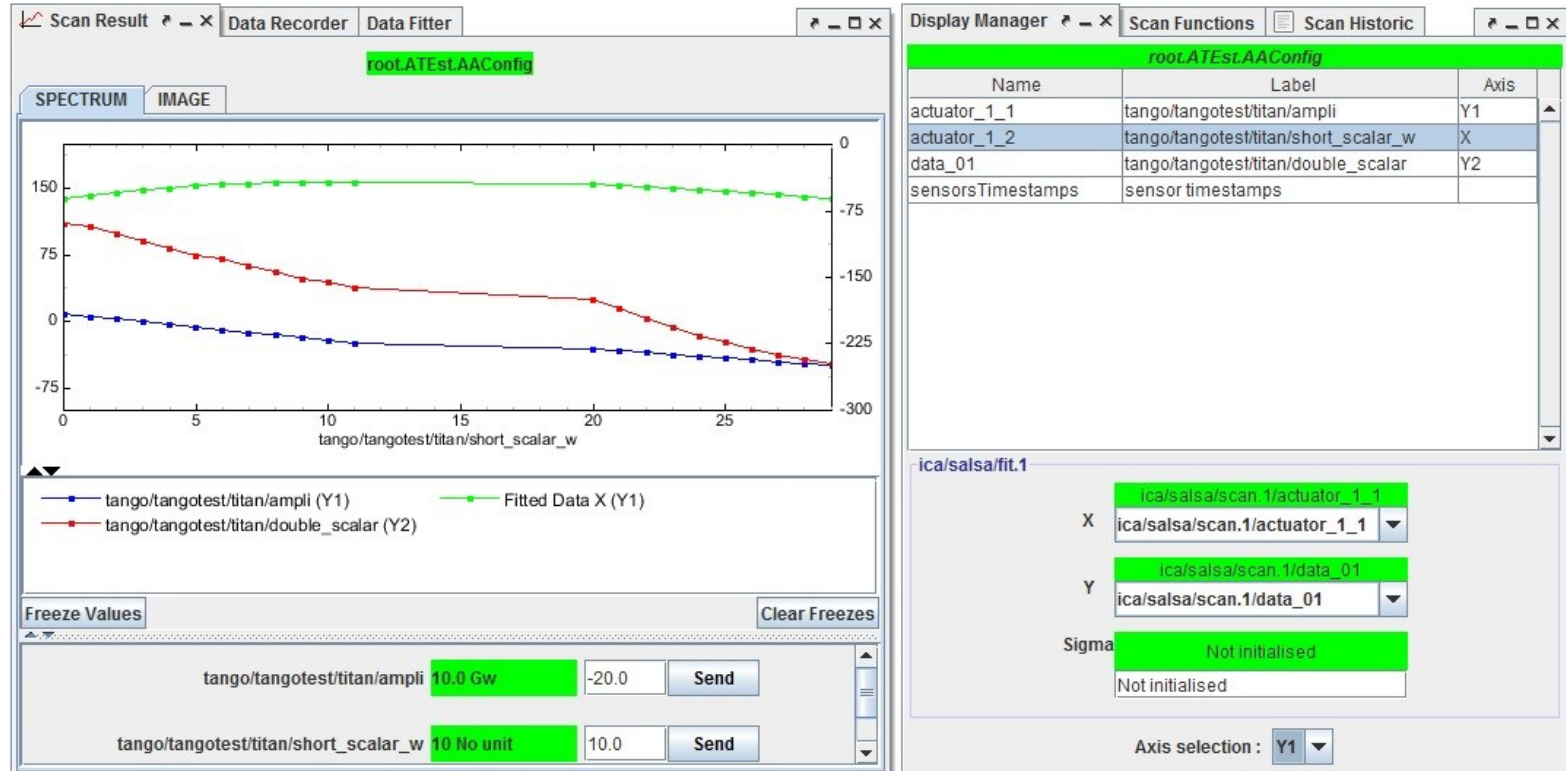
- Perspectives



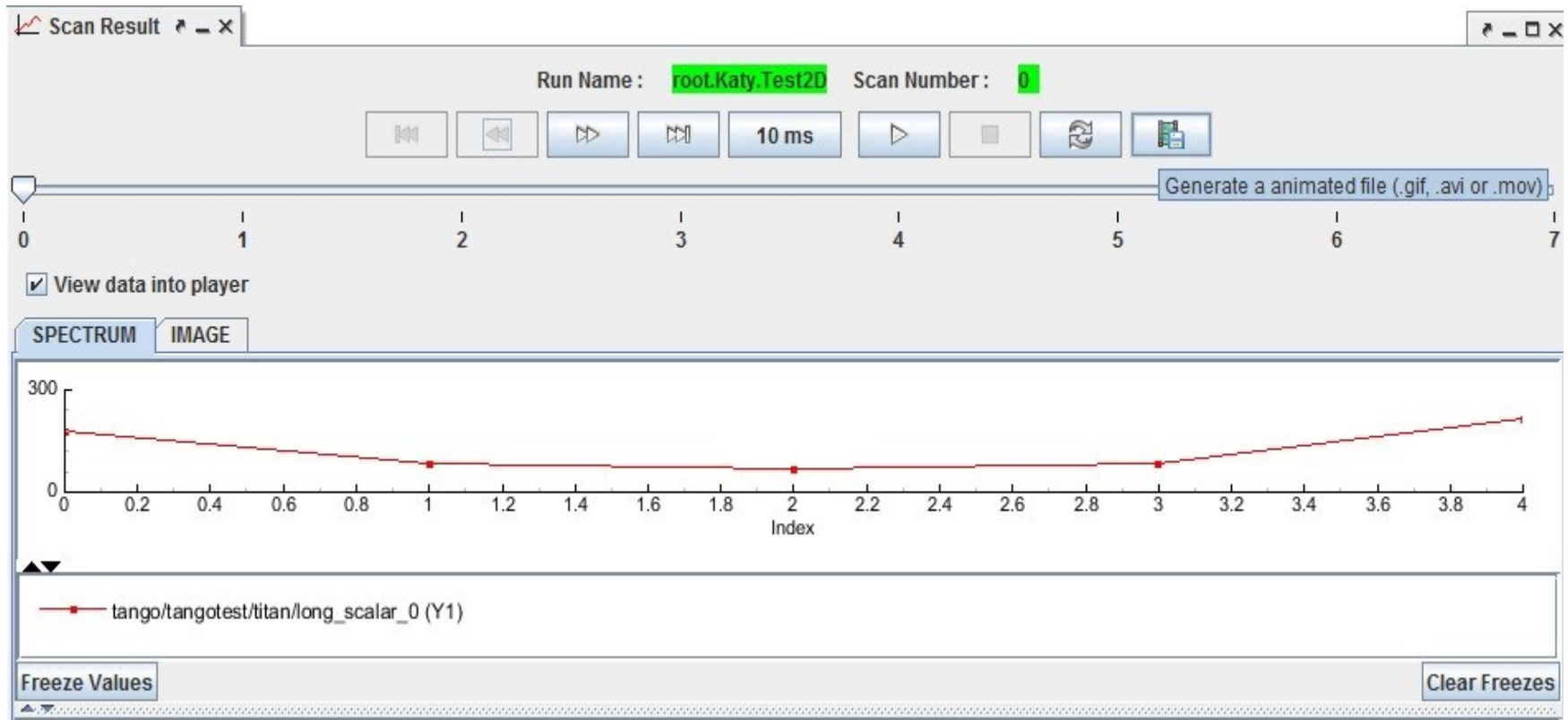
- DataFitter integration in the scan chart result

- LIGNE/EX/FIT.1/fittedDataY
- LIGNE/EX/FIT.1/deviceAttributeNameX
- LIGNE/EX/FIT.1/deviceAttributeNameY

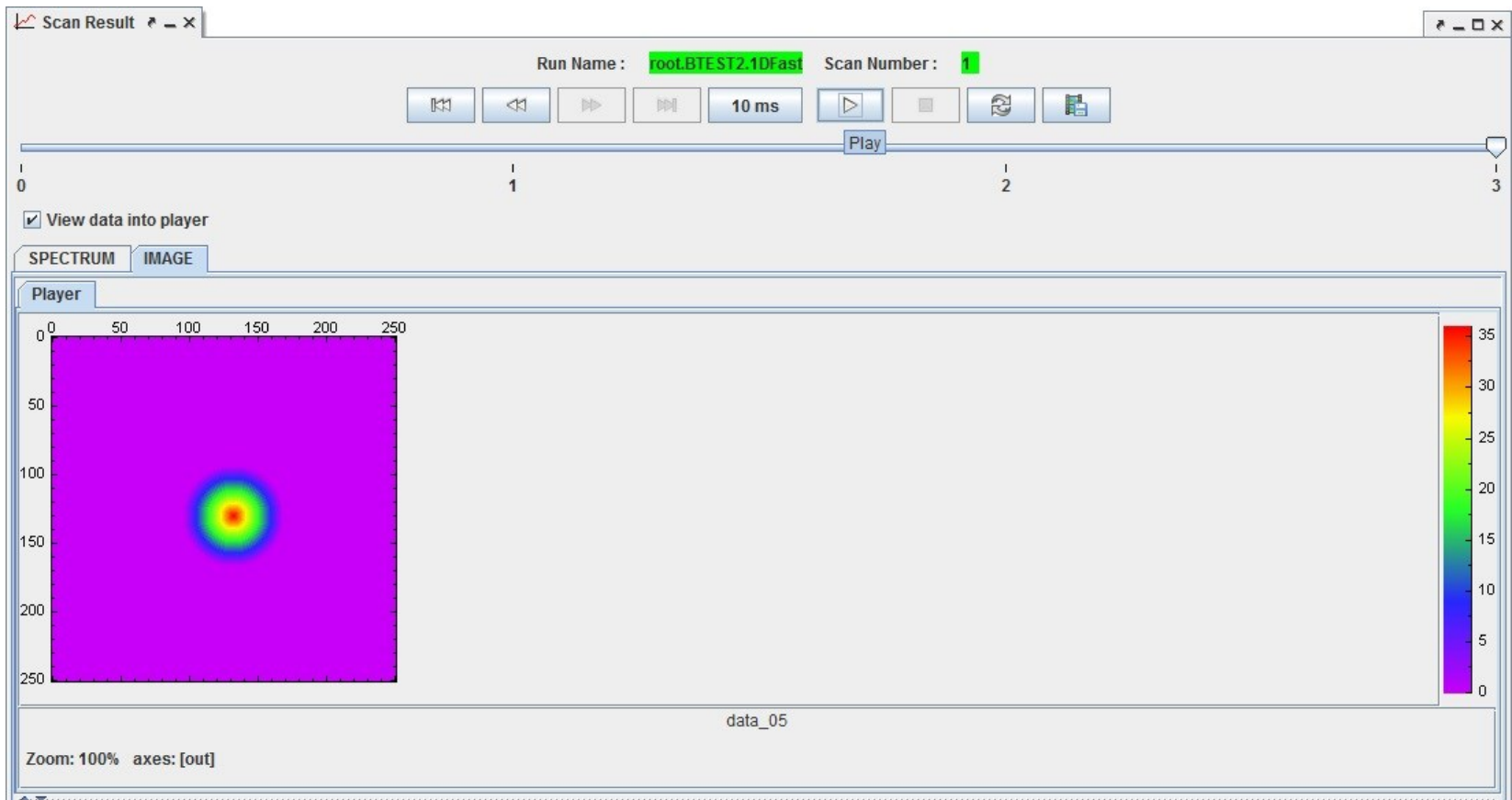
*Scanserver
attributes*



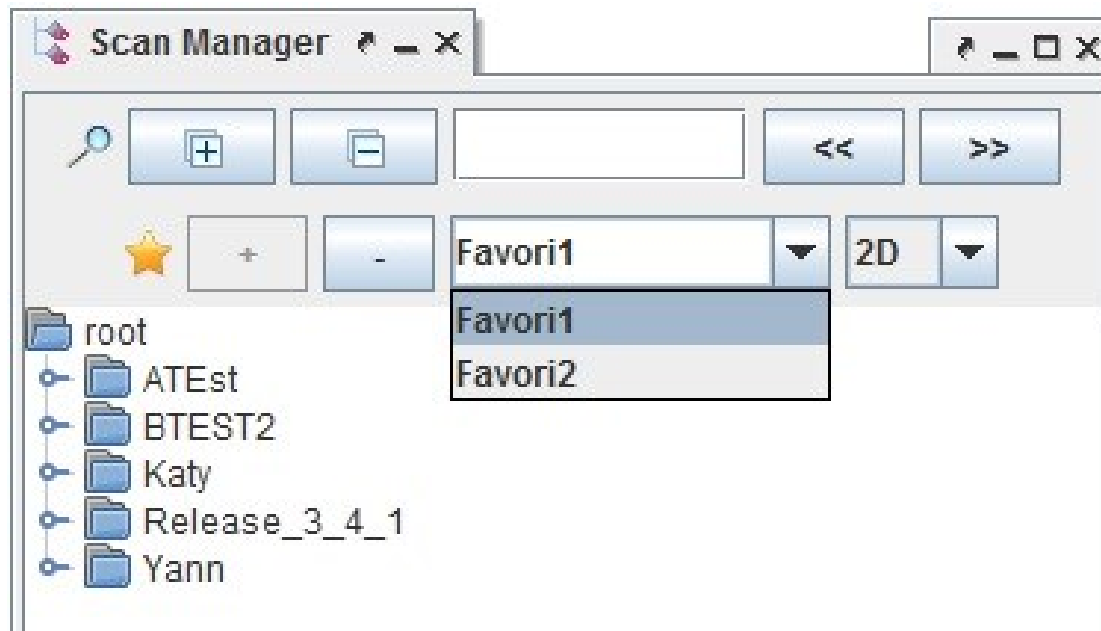
- Display a stack of spectrum in a player
- Video files generation
- LIGNE/EX/SCAN.1/data_XX *scanserver attribute*

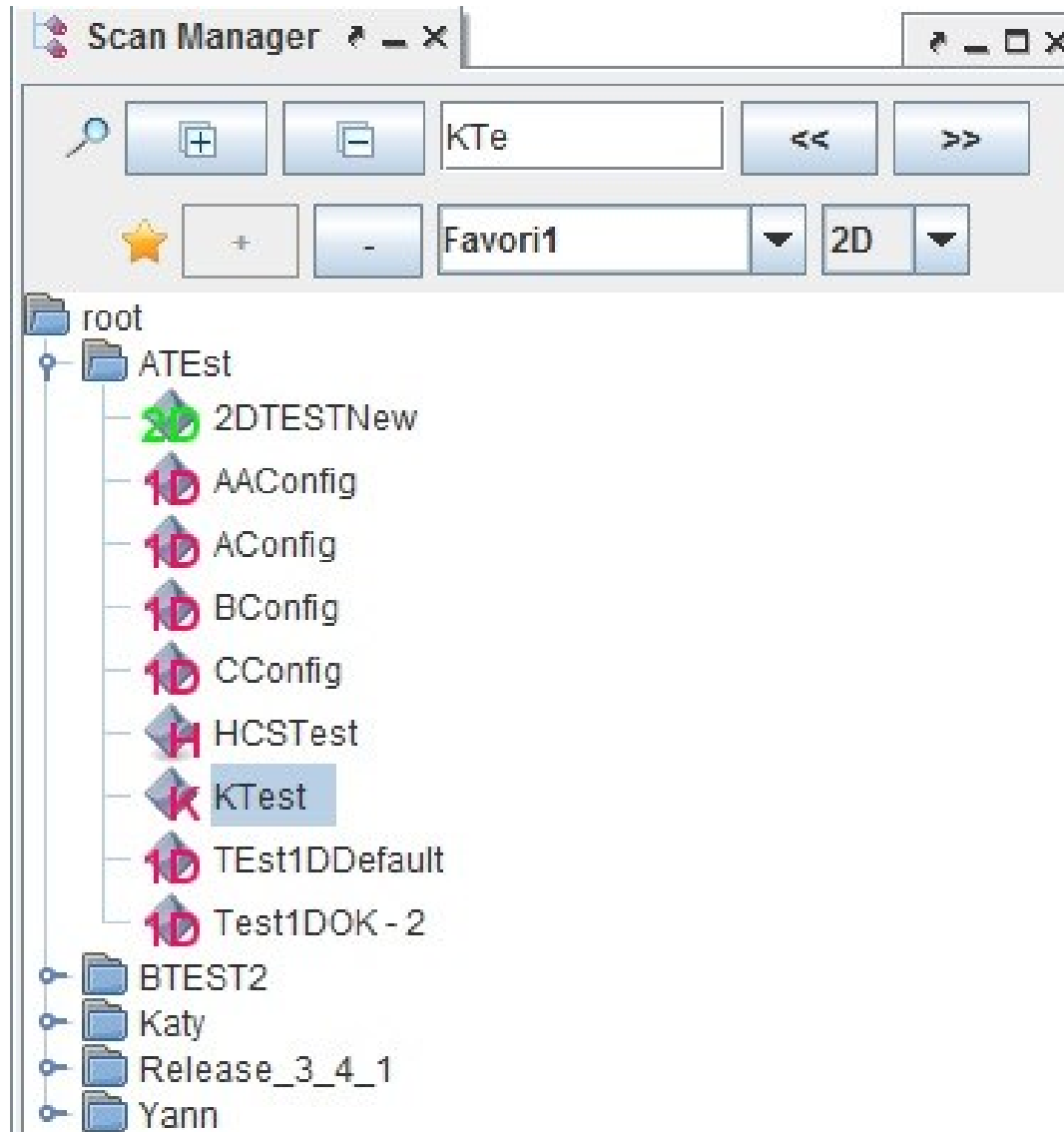


- Display several images as a image player
- Video files generation
 - LIGNE/EX/SCAN.1/data_XX *scanserver attribute*

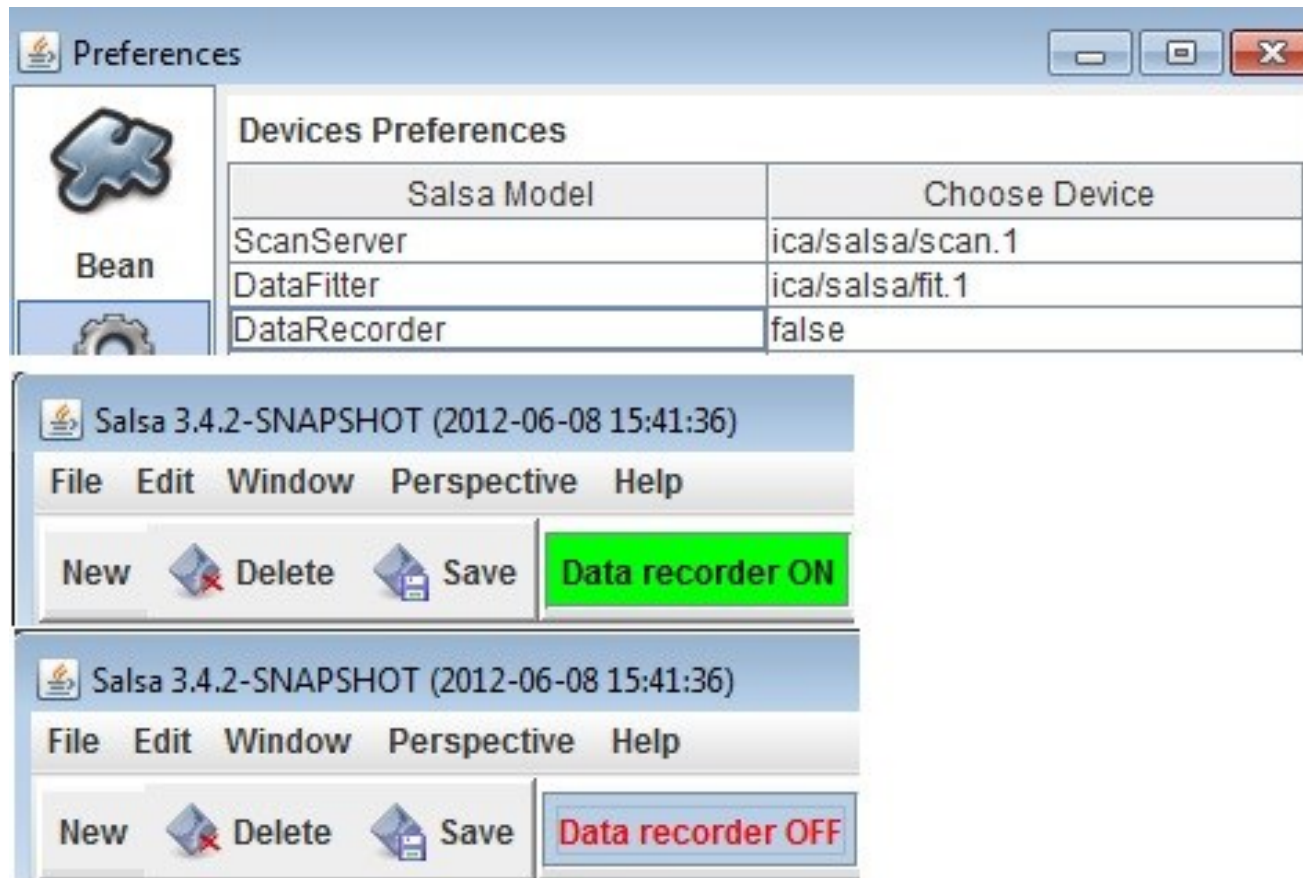


- Bookmarks creation





- Disable of data recording
 - LIGNE/EX/SCAN.1/recordData *scanserver attribute*



- Open a nexus file in the databrowser
Click on a nexus file name to open it in the databrowser.

Historic Log				
Date ▼	Action	Name	Nexus	Trajectory
2012-06-08 11:29:45	▶	1DFast	/tmp/data/contacq/contacq-soleil/contacq/2012/0323/toto_2012-06-08_09-37-19_0	short_scalar_w from -3.0 to 10.0 delta 2.6 ampli from 30.0 to 25.0 delta 1.0 short_scalar_w from 15.0 to 22.0 delta 0.4375 ampli from 20.0 to 12.0 delta 0.5
			<u>/tmp/data/contacq/contacq-soleil/contacq/2012/0323/toto_2012-06-08_09-37-19_0309.nxs</u>	
2012-06-07 17:03:21	▶	1DFast	/tmp/data/contacq/contacq-soleil/contacq/2012/0323/toto_2012-06-07_14-12-10_0	short_scalar_w from -3.0 to 10.0 delta 2.6 ampli from 30.0 to 25.0 delta 1.0 short_scalar_w from 15.0 to 22.0 delta 0.4375 ampli from 20.0 to 12.0 delta 0.5 short_scalar_w from 30.0 to 20.0 delta 0.8333333333333334
2012-06-07 14:12:28	☐	root.BTEST2.1DFast	/tmp/data/contacq/contacq-soleil/contacq/2012/0323/toto_2012-06-07_14-12-10_0	
2012-06-07 14:12:17	▶	1DFast	/tmp/data/contacq/contacq-soleil/contacq/2012/0323/toto_2012-06-07_14-12-10_0	short_scalar_w from -3.0 to 10.0 delta 2.6 ampli from 30.0 to 25.0 delta 1.0 short_scalar_w from 15.0 to 22.0 delta 0.4375 ampli from 20.0 to 12.0 delta 0.5 short_scalar_w from 30.0 to 20.0 delta 0.8333333333333334
2012-06-07 14:12:09	☐	root.BTEST2.1DFast	/tmp/data/contacq/contacq-soleil/contacq/2012/0322/toto_2012-06-07_14-11-57_0	
2012-06-07 14:11:56	▶	1DFast	/tmp/data/contacq/contacq-soleil/contacq/2012/0322/toto_2012-06-07_14-11-57_0	short_scalar_w from -3.0 to 10.0 delta 2.6 ampli from 30.0 to 25.0 delta 1.0 short_scalar_w from 15.0 to 22.0 delta 0.4375 ampli from 20.0 to 12.0 delta 0.5 short_scalar_w from 30.0 to 20.0 delta 0.8333333333333334
2012-06-07 10:07:05	☐	root.BTEST2.1DFast	/tmp/data/contacq/contacq-soleil/contacq/2012/0322/toto_2012-06-07_10-06-53_0	
2012-06-07 10:06:53	▶	1DFast	/tmp/data/contacq/contacq-soleil/contacq/2012/0322/toto_2012-06-07_10-06-53_0	short_scalar_w from -3.0 to 10.0 delta 2.6 ampli from 30.0 to 25.0 delta 1.0 short_scalar_w from 15.0 to 22.0 delta 0.4375

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