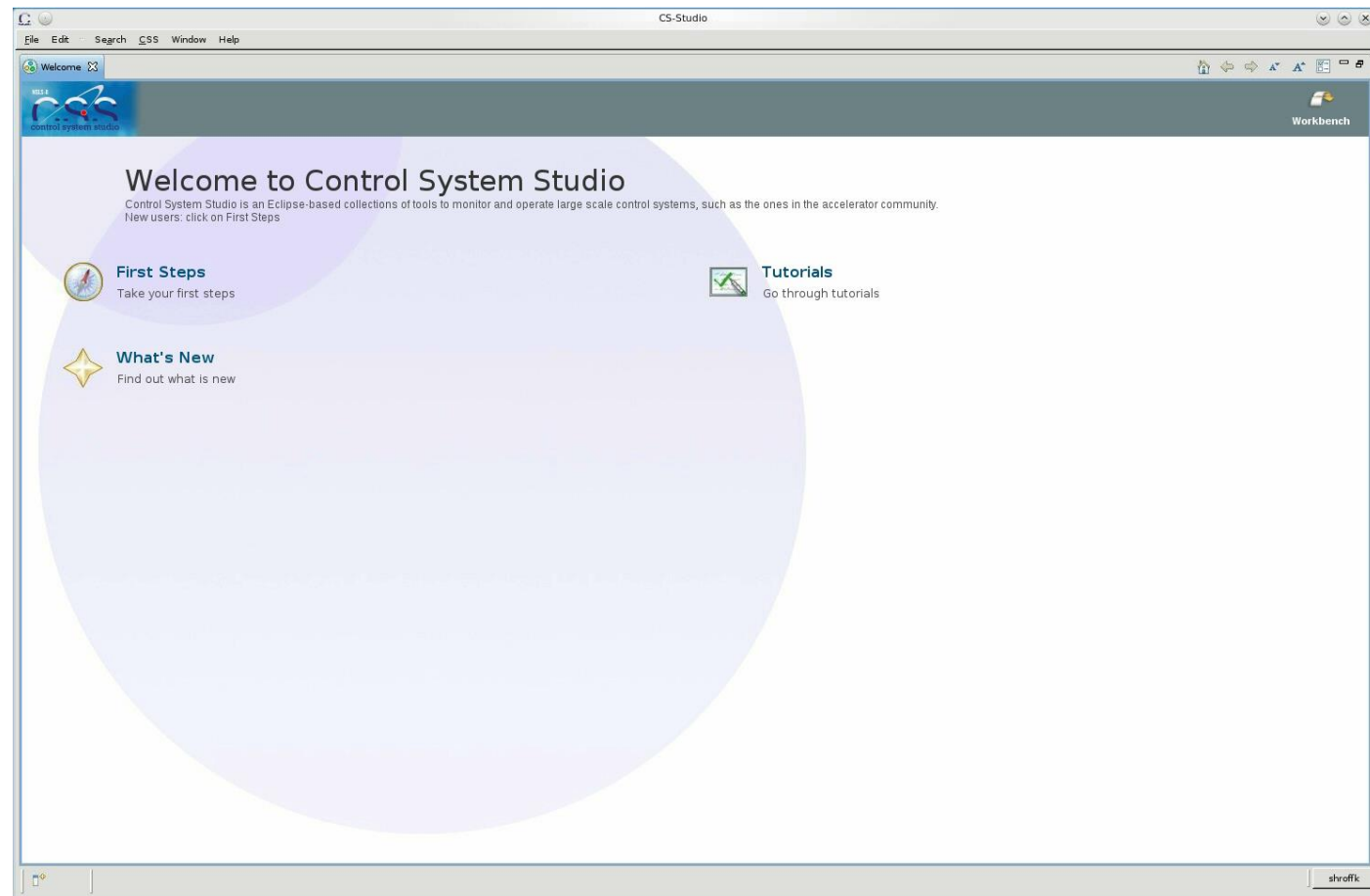


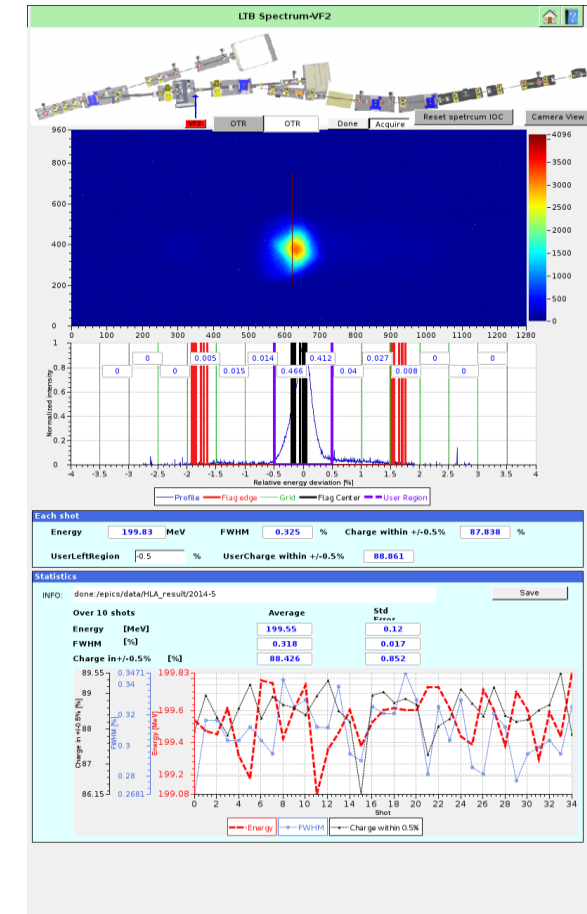
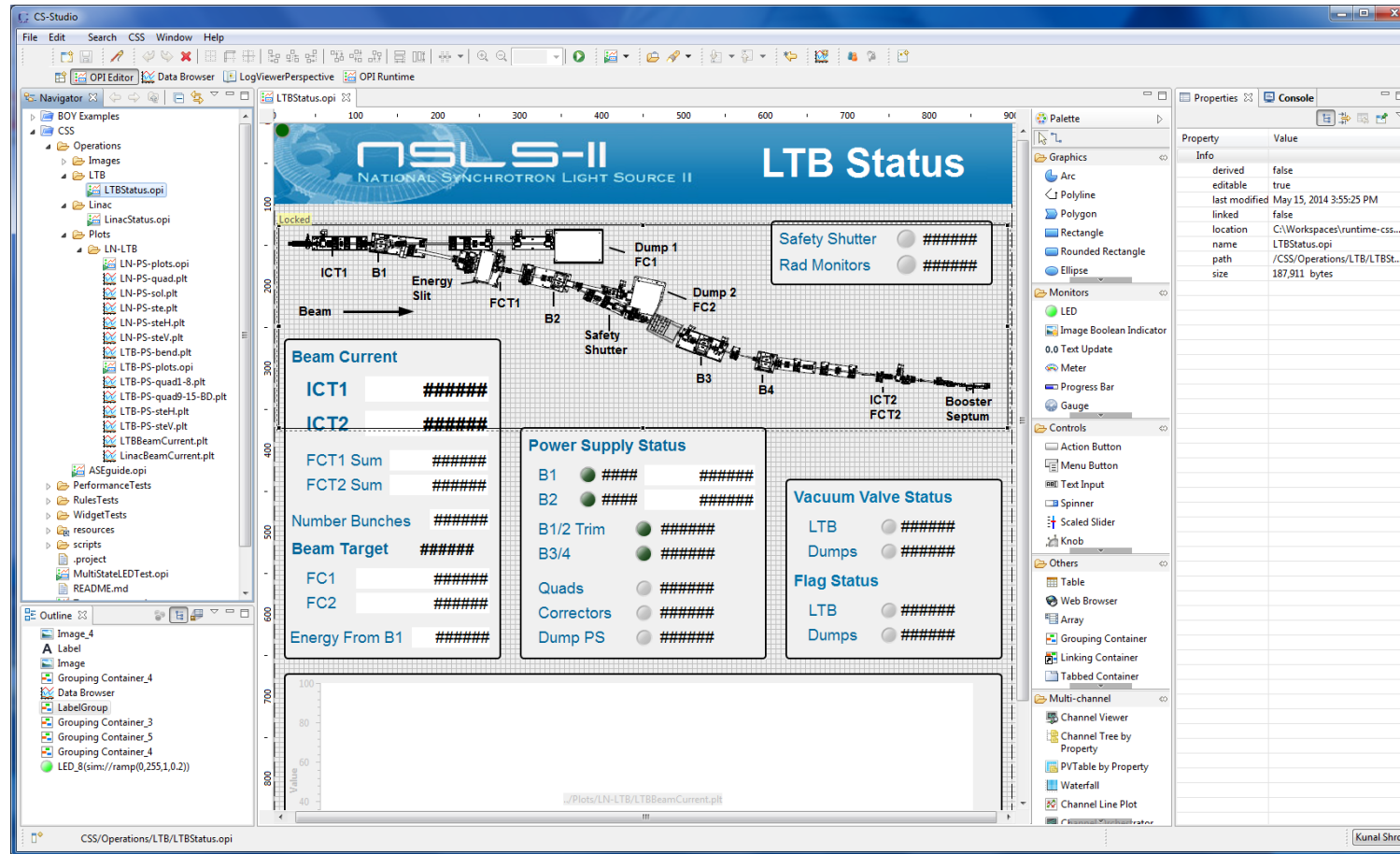
CS-Studio: An Introduction

What is cs-studio:

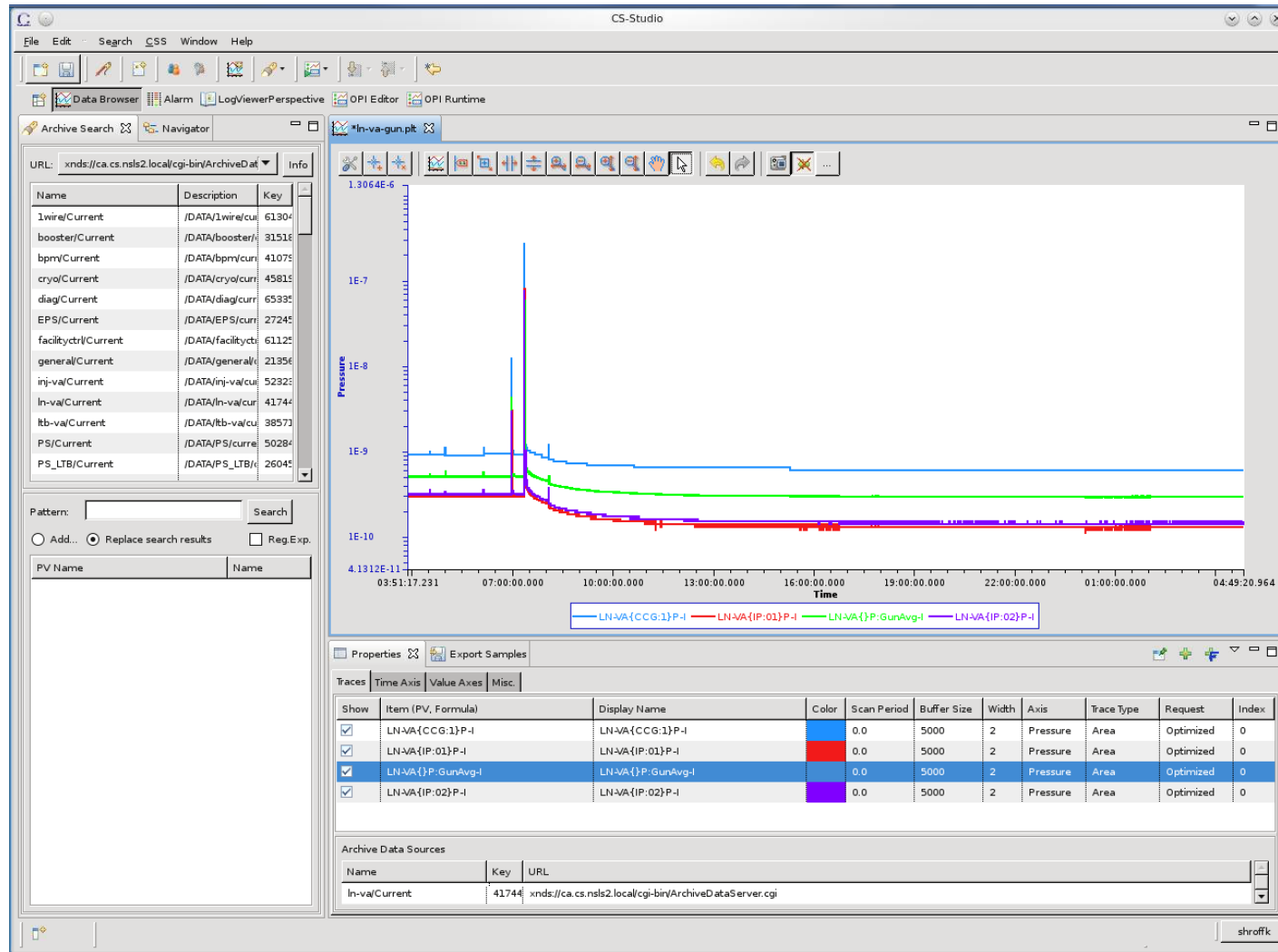
Demo



OPI editor and run environment



Viewer for Historic data



Log Viewer

The screenshot displays the Log Viewer application window, which is part of the CS-Studio environment. The interface is divided into several sections:

- Top Menu and Toolbar:** Includes File, Edit, Search, CS, Window, and Help menus, along with various icons for file operations and viewing.
- Log Table:** A table listing log entries with columns for Date, Description, Owner, Logbooks, Tags, and a numeric value. The entries are sorted by date, with the most recent at the top.
- Log Entry Detail:** A panel on the right showing the details of a selected log entry. It includes a date filter (May 12, 2014), a level filter (Info), and a text area containing the log message.
- Log Entry Content:** The selected log entry describes a beam loading compensation adjustment. It includes a 3D visualization of the beam path, a 2D plot of the beam profile, and a table of parameters.

Date	Description	Owner	Logbooks	Tags	
5/12/14 7:40 AM modified at: 5/13/14 11:32 AM	Systems are now shut down for SR, BTS, Booster, LBT, and Linac. Klystrons 1 and 3 were left on and in standby.	zeitler modified by: zitvogel	Operations		0
5/12/14 7:32 AM modified at: 5/13/14 11:32 AM	Pentant 3 would not open using normal access request, RCT had to hit emergency access button. At the time the SR RF was set to AUX state, the main dipole was off, BTS B2 was off, and BTS shutter was closed.	zeitler modified by: zitvogel	Operations		0
5/12/14 7:21 AM modified at: 5/13/14 11:32 AM	Linac is Off. Cathode is off. Klystrons in standby.	rfiller modified by: zitvogel	Operations		1
5/12/14 7:19 AM modified at: 5/13/14 11:32 AM	Vertical Emittance Measurement epsy: 85.6 +/- 3.8 nm betay=14.2 +/- 0.63 m alphay=-1.67 +/- 0.07	rfiller modified by: zitvogel	Operations		1
5/12/14 7:09 AM modified at: 5/13/14 11:32 AM	Horizontal Emittance Scan: epsx: 81 +/- 5nm betax: 14.3 +/- 0.6m alphax=-1.81 +/- 0.08	rfiller modified by: zitvogel	Operations		1
5/12/14 7:00 AM modified at: 5/13/14 11:32 AM	Linac Status Page.	rfiller modified by: zitvogel	Operations		1
5/12/14 7:00 AM modified at: 5/13/14 11:32 AM	Starting to shut down the Storage ring and booster while Ray finishes some measurements on the Linac.	zeitler modified by: zitvogel	Operations		0
5/12/14 7:00 AM modified at: 5/13/14 11:32 AM	There are the 72 bunches in all their glory. Saved the waveform to a text file.	rfiller modified by: zitvogel	Operations		1
5/12/14 6:55 AM modified at: 5/13/14 11:32 AM	72 bunches in the booster! That is what the linac is making. GREAT! We have established that the linac can inject its bunch train into the booster.	rfiller modified by: zitvogel	Operations		1
5/12/14 6:52 AM	successfully restore machine with the snapshot #1164 and Config LTB_BR_BTS_20140421	rfiller	Machine Physics Operations	MASAR	0
5/12/14 6:52 AM	Succeed to save a snapshot #1165 to MASAR database using Config LN-LTB-All-20131219 with description: 200 MeV, 9.0nC at ICT1, 150 ns 0.3% energy spread. Comment: Saving best Beam Loading Compensation with 9nC at ICT1, 150 ns	rfiller	Machine Physics Operations	MASAR	0
5/12/14 6:50 AM modified at: 5/13/14 11:32 AM	This is the best beam loading compensation to date with a 150 ns pulse. 9nC at ICT1. 7.4 nC at FCT1.	rfiller modified by: zitvogel	Operations		1
5/12/14 6:23 AM modified at: 5/13/14 11:32 AM	Booster extraction kicker 1 pulse is still erratic.	zeitler modified by: zitvogel	Operations		1

Log Entry Detail (May 12, 2014, Info):

This is the best beam loading compensation to date with a 150 ns pulse. 9nC at ICT1. 7.4 nC at FCT1.

Logbooks: Operations

Tags:

Hide details

Images: Files Properties Shift

Images:

Energy: 199.83 MeV, Charge: 9.025 nC, Charge in Web: 0.655 nC, Energy: 199.83 MeV, Charge: 9.025 nC, Charge in Web: 0.655 nC, Energy: 199.83 MeV, Charge: 9.025 nC, Charge in Web: 0.655 nC

shroffk

Alarm Viewer

CS-Studio

File Edit Search CSS Window Help

Data Browser Alarm LogViewerPerspective OPI Editor OPI Runtime

Alarm Area Panel LN VA

NSLS-II Linac Vacuum System

Common environment

Linac

Booster

Storage ring

7E-10 KLYIP2

3.6E-12 KLYIP1

WGIP7 2.8E-8

WGIP6 7E-9

8.5E-9 WGIP3

6.8E-11 WGIP2

4.7E-10 WGIP1

7E-11 IP08

1.4E-10 IP07

8.5E-11 IP06

1.1E-10 IP05

9E-10 IP04

3E-10 IP03

1.4E-10 IP02

1.2E-10 IP01

Acc #2

Acc #1

GUN

Detail Info

Readings & History

Settings Download

Linac Reset

Linac Reset

Alarm Tree

NSLS2_OPR

Area: Common environment

Area: Linac (major-ack'd/STATE_ALARM)

System: Vacuum (major-ack'd/STATE_ALARM)

System: Linac Vacuum (major-ack'd/STATE_ALARM)

System: GV

System: CCG

System: IP (major-ack'd/STATE_ALARM)

PV: LN-VA{ES:1}HVSD-Sts

PV: LN-VA{CAB:2}LWL-SUM-Sts (r

PV: LN-VA{CAB:2}LN-Box-Sts

PV: LN-VA{CAB:2}VAK-ES-Sts

Alarm Table

Current Alarms (999999)

PV	Description	Alarm Time	Current Seve	Current Statu	Alarm Sev	Alarm Status	Alarm Value
BR:IS-PS{PS:KIC4}Trip-S	MAJOR alarm: Booster Injection kicker 4	2014/05/13 10:50:00	OK	NO_ALARM	MAJOR	STATE_ALARM	Trip
SR:C07-MG{PS}AlarmS	MAJOR alarm: Storage Ring Cell 7 Power Supply Sur	2014/05/13 13:06:00	OK	NO_ALARM	MAJOR	STATE_ALARM	Alarm
SR:C14-MG{PS}AlarmS	MAJOR alarm: Storage Ring Cell 14 Power Supply Su	2014/05/13 16:42:00	OK	NO_ALARM	MAJOR	STATE_ALARM	Alarm
SR:C20-MG{PS}AlarmS	MAJOR alarm: Storage Ring Cell 20 Power Supply Su	2014/05/13 22:43:00	MAJOR	STATE_ALARM	MAJOR	STATE_ALARM	Alarm
SR:C25-MG{PS}AlarmS	MAJOR alarm: Storage Ring Cell 25 Power Supply Su	2014/05/13 15:35:00	MAJOR	STATE_ALARM	MAJOR	STATE_ALARM	Alarm
SR:IS-PS{ACsept}Alarm	MAJOR alarm: Storage Ring AC septum Fault	2014/05/13 12:05:00	MAJOR	STATE_ALARM	MAJOR	STATE_ALARM	Alarm
SR:IS-PS{Kick4}Alarm-S	MAJOR alarm: Storage Ring Injection Kicker 4 Fault	2014/05/13 12:06:00	MAJOR	STATE_ALARM	MAJOR	STATE_ALARM	Alarm

Acknowledged Alarms (999999)

PV	Description	Alarm Time	Current Seve	Current Statu	Alarm Sev	Alarm Status	Alarm Value
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shroffk

ChannelFinder

The screenshot displays the 'Channel Orchestrator' application window. At the top, the title bar reads 'Channel Orchestrator'. Below it, a 'Query:' field contains 'V*SM*SP' and a 'Configure' button is visible. The main area features a table with columns: Channel, hostName, Min, Value, Max, Weight, Step1, Step2, and Step3. The table lists 10 channels, all with 'virtac' as the hostName. Below the table, there are input fields for 'Step Count: 3' and 'Step Size: 1', followed by a 'Generate Setpoints' button. A pop-up window titled 'sim://noise' is open, showing a 'PV Formula: LTB-BI{BPM:6}Pos:X-' and a 'Value: -3.5'. A 'History' panel within this pop-up shows 'History (0 matching items)' and 'ChannelFinder (5 matching items)' with a list of five items: 'LTB-BI{BPM:6}Pos:X-SQHST', 'LTB-BI{BPM:6}Pos:X-RMSHST', 'LTB-BI{BPM:6}Pos:X-I', 'LTB-BI{BPM:6}Pos:X-SQ', and 'LTB-BI{BPM:6}Pos:X-RMS'. The 'Status:' field at the bottom of the pop-up shows 'Connected'.

Channel	hostName	Min	Value	Max	Weight	Step1	Step2	Step3
V:1-SR:C14-MG:G4{SM2H:1623}Fld:SP	virtac	12.922061...	14.357846...	15.793631...	1.0	15.3578466516	16.3578466516	17.3578466516
V:1-SR:C19-MG:G4{SM1:2188}Fld:SP	virtac	-10.85894...	-12.06549...	-13.27204...	1.0	-11.0654912139	-10.0654912139	-9.0654912139
V:1-SR:C02-MG:G4{SM2H:279}Fld:SP	virtac	12.922061...	14.357846...	15.793631...	1.0	15.3578466516	16.3578466516	17.3578466516
V:1-SR:C12-MG:G4{SM1:1404}Fld:SP	virtac	-11.74268...	-13.04742...	-14.35784...	1.0	15.3578466516	16.3578466516	17.3578466516
V:1-SR:C06-MG:G4{SM1:718}Fld:SP	virtac	-10.85894...	-12.06549...	-13.27204...	1.0	-11.0654912139	-10.0654912139	-9.0654912139
V:1-SR:C07-MG:G4{SM1:833}Fld:SP	virtac	-10.85894...	-12.06549...	-13.27204...	1.0	-11.0654912139	-10.0654912139	-9.0654912139
V:1-SR:C14-MG:G4{SM1:1628}Fld:SP	virtac	-11.74268...	-13.04742...	-14.35784...	1.0	15.3578466516	16.3578466516	17.3578466516
V:1-SR:C21-MG:G4{SM1:2412}Fld:SP	virtac	-10.85894...	-12.06549...	-13.27204...	1.0	-11.0654912139	-10.0654912139	-9.0654912139
V:1-SR:C05-MG:G4{SM1:609}Fld:SP	virtac	-10.85894...	-12.06549...	-13.27204...	1.0	-11.0654912139	-10.0654912139	-9.0654912139
V:1-SR:C24-MG:G4{SM2H:2754}Fld:SP	virtac	12.922061...	14.357846...	15.793631...	1.0	15.3578466516	16.3578466516	17.3578466516

Step Count: 3 Step Size: 1 Generate Setpoints

sim://noise

PV Formula: LTB-BI{BPM:6}Pos:X-

Value: -3.5

Timestamp:

New Value:

Data source:

Type: VDO

Display limits:

Alarm limits:

Warning limits: -3 - 3

Control limits: -5 - 5

Unit: x

Status: Connected

History (0 matching items)

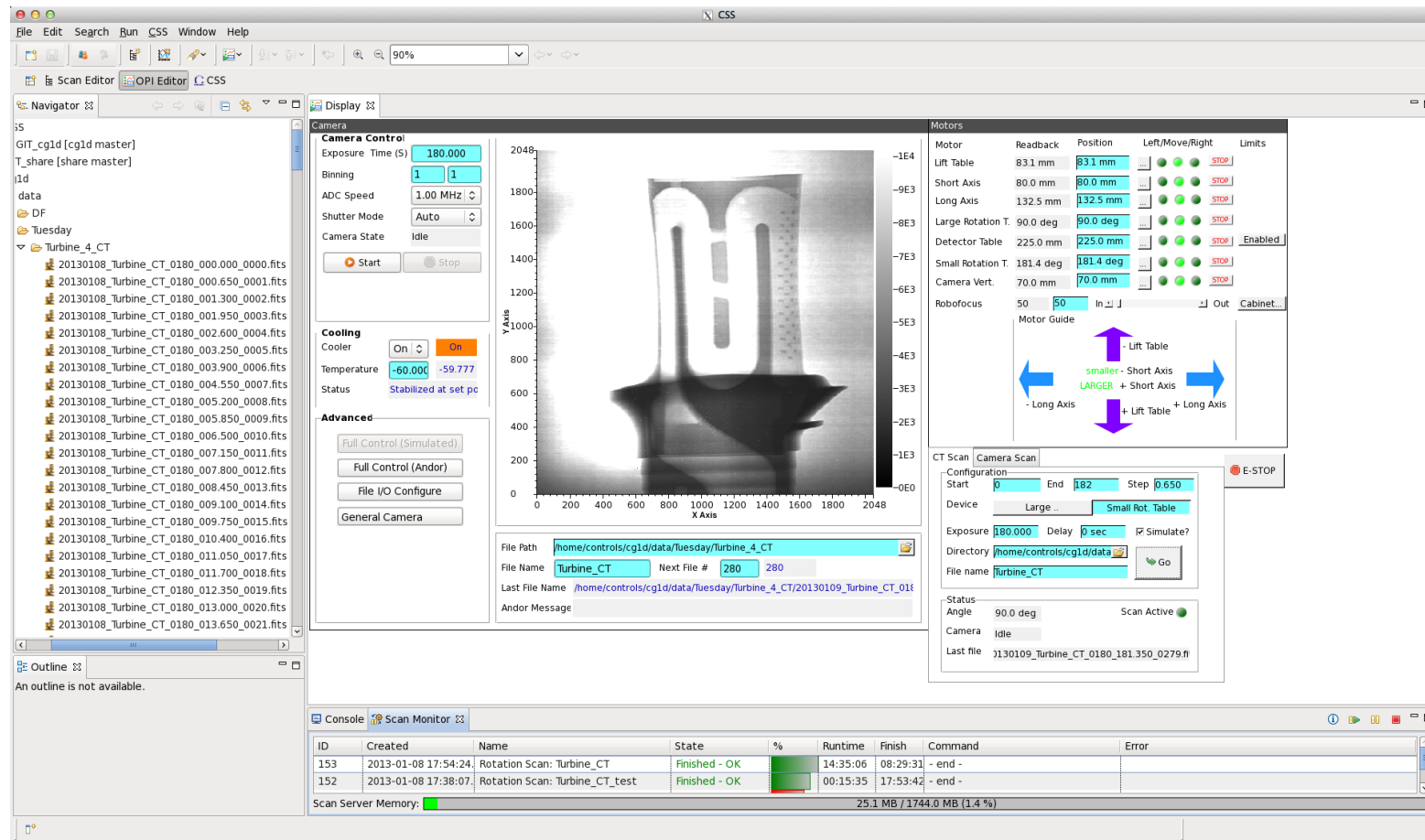
ChannelFinder (5 matching items)

- LTB-BI{BPM:6}Pos:X-SQHST
- LTB-BI{BPM:6}Pos:X-RMSHST
- LTB-BI{BPM:6}Pos:X-I
- LTB-BI{BPM:6}Pos:X-SQ
- LTB-BI{BPM:6}Pos:X-RMS

A Integrated set of tools

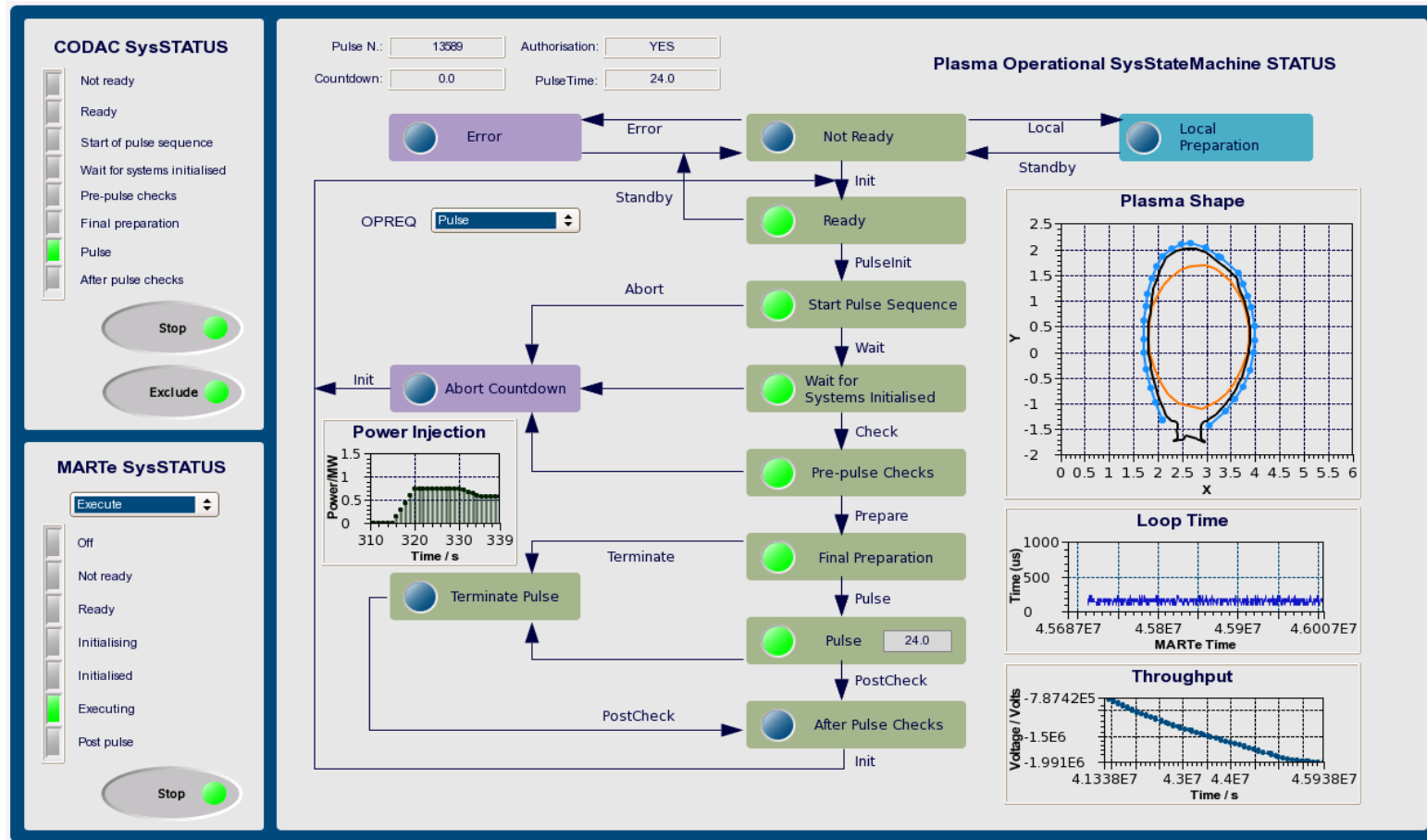
- Control Systems (epics v3, v4)
 - BOY, probe, pvtable
- Epics services
 - Alarms, Archiver, Save Restore
- Utility Services
 - Logbook, Channel Directory, Shift
- Physics services
 - Lattice, unit conversion

ORNL 'CG-1D' Beam Line



Neutron Tomography, EPICS/CSS since Jan. 2013

ITER-FPSC-vBetaVersionPanelsOPI



Neutron Tomography, EPICS/CSS since Jan. 2013