

# CS-Studio at NSLS2

# CS-Studio versions

- Default version
  - 4.1.5
- Preparing to migrate to
  - 4.3.3b

# Integrated Framework

# Olog

+ 8/23/16 12:16 AM	SR filled to 250mA with tophoff injections resuming.	santana	Operations	Beam Available	1
8/23/16 12:05 AM	successfully restore machine with the snapshot #2295(filtered with pattern *bpm*) of	santana	Operations	MASAR	0
+ 8/22/16 11:58 PM	Transmitter D - CCG7 taper vacuum fault & Klystron reverse power fault.	santana	Operations		1
+ 8/22/16 11:57 PM	Post-mortem shows cavity D field collapses first then C becomes unstable and collapses	weiner1	Operations	RF Systems	3
+ 8/22/16 11:56 PM	RF Status shows only 4 Transmitter D faults & 3 Transmitter C faults.	santana	Operations		1
+ 8/22/16 11:55 PM	C31 AIS Status shows horizontal orbit instability on the dispersion BPMs.	santana	Operations		1
+ 8/22/16 11:54 PM	Cell 31 Active Interlock Status	weiner1	Operations	Diagnostics	1
+ 8/22/16 11:53 PM	Beam Dump from Cavity D taper vacuum fault.	santana	Operations	Beam Dump	0
+ 8/22/16 9:30 PM	Mod 3 CT arc & Sw6 temp resets given	santana	Operations		1

# Sharepoint

The screenshot shows a SharePoint form with the following fields and values:




- Subsystem: RF
- Device: Cavity D
- Fault Description: CCG7 taper vacuum fault
- Time Fault Occurred: 8/22/2016 11 PM 55
- Time Fault Cleared: 8/23/2016 12 AM 00
- Beam Interrupted?: Yes
- Time Beam Restored: 8/23/2016 12 AM 05
- Operator Details: Beam Dumped from Cavity D taper vacuum fault. Transmitter D detected faults - CCG7 taper vacuum fault & Klystron reverse power fault. Post-mortem shows cavity D field collapses first then C becomes unstable and collapses Smaec laser.
- Group Leader: Rose, James
- Person Assigned: do not fill in.
- Assigned by Group Leader: do not fill in.
- Engineers: Root Cause: System needs conditioning.
- Engineers: Repair Detail: More conditioning.
- Engineers: Corrective Actions: More conditioning.
- Status: Closed
- Estimated Completion: 8/25/2016

Issues:

A lot of duplication of data entry.

No references to the log entries from the fault report.

Date	Description	Owner	Logbooks	Tags	A...
9/21/16 10:50	SR filled to 250mA with toff injections resuming.				2
9/21/16 10:45	RF Status shows only 4 Transmitter D faults & 3 Transmitter C faults				1
9/21/16 10:42	Cell 31 Active Interlock Status				3
9/21/16 10:40	Beam Dump from Cavity D taper vacuum fault.				0
9/21/16 1:58 PM	A Fault with log entries				1

-  Copy URL to Clipboard
-  Export Logs
-  Create Fault Report

- Creating fault reports from log entries.

**Create a Fault Report**

Fault Id: New Fault Report

Area:\* Global

Sub System:\* EPS

Device:\* M01

Fault:\*  
 Beam Dumped from Cavity D taper vacuum fault  
 Transmitter D detected faults -CCG7 taper vacuum fault & Klystr  
 Post-mostem shows cavity D field collapsed first then C become

Assign: Operations Contact: Reid Smith<smithr@bn

Occurred:\* 2016-09-21T22:56:10.979 Cleared: 9-21T22:56:18.979

Beam Lost:\* False

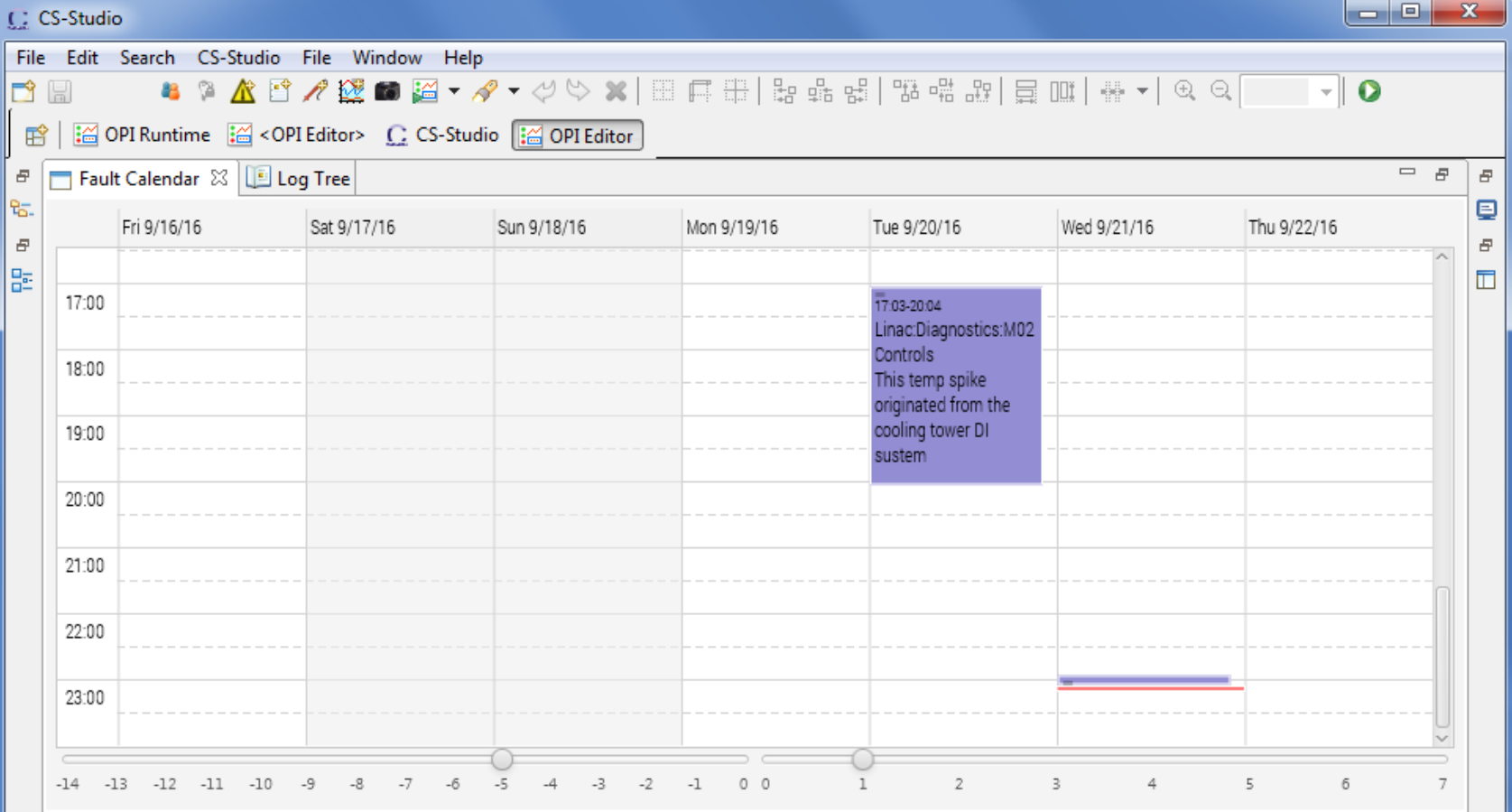
Start: Restored:

Cause:

Repair:

Corrective:

Log Ids: 6;7;8;9



Search:

Start: 2016-09-20T22:37:56.050 End: 2016-09-21T22:37:56.055

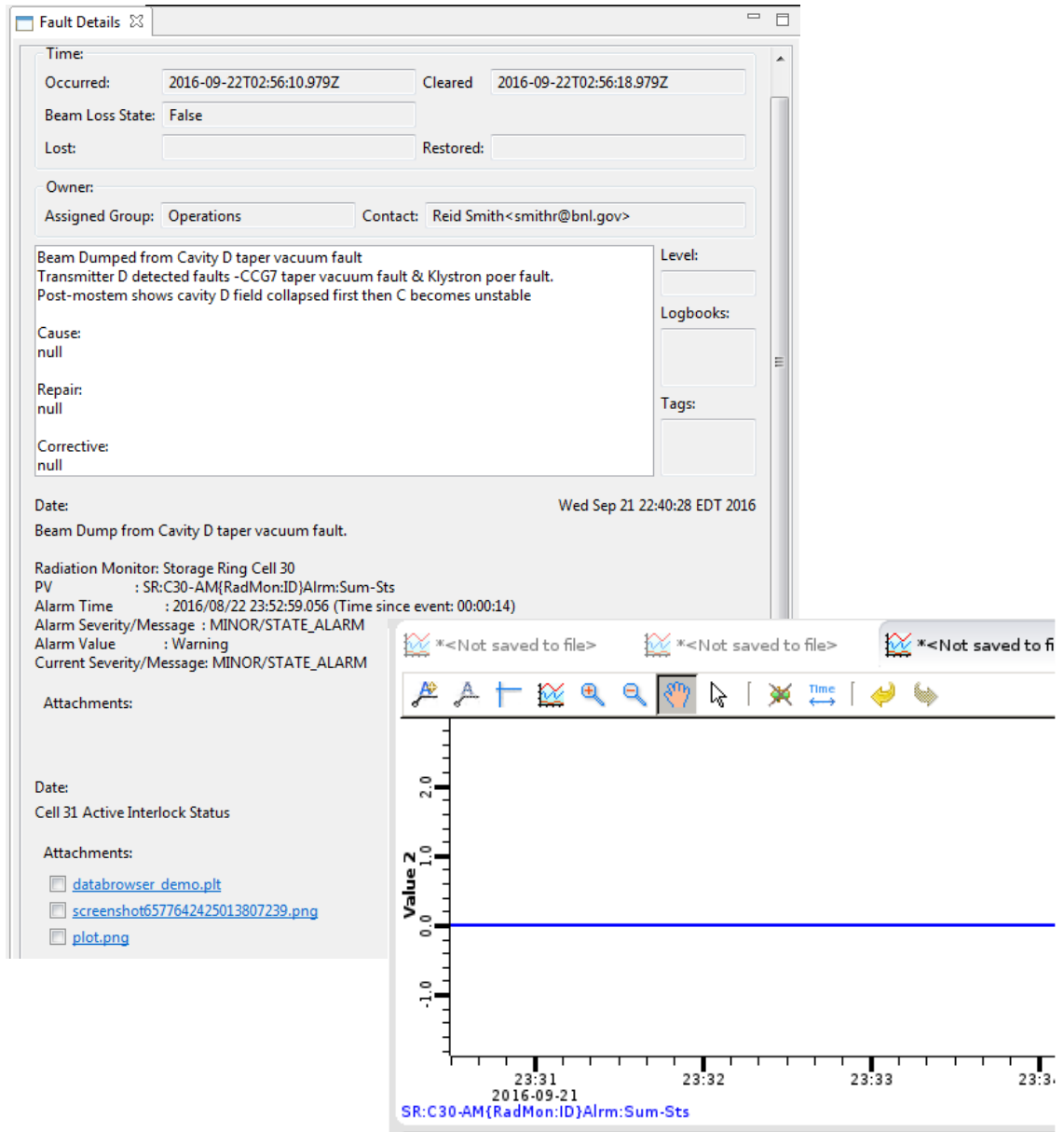
Area	System	Device	Fault Start	Fault Duration	Beamloss	Beamloss Start	Beam...	Desc
Linac	Diagnosics	M02	2016-09-20T17:03:20.04	3:01:00	False			This temp spike origina
Global	EPS	M01	2016-09-21T22:37:56.050	0:00:08	False			Beam Dumped from Ca
Global	Diagnosics	M01	2016-09-07T13:00:00.000		False			A Fault with log entries
Global	Diagnosics	M01	2016-09-13T15:00:00.000		Studies			A linked fault reportCa
Linac	EPS	M01	2016-09-12T15:00:00.000	24:03:00	False			And a new faultCause:l

- Update Fault Report
- Fault Details
- Email Fault
- Export Fault

# Reading fault reports

Faults →  
log entries →

databrowser(.plt)  
probe  
alarm msg history



# Perspectives



# Perspectives in 4.3.3

- Save and Share named perspectives with other users of cs-studio
- Perspectives are created by users instead of developers and model the workflow of the users
  - e.g.
    - Operations group is creating “Booster Injection Tuning” perspective

# Booster Injection Tuning

The image displays three software interfaces used for accelerator control and monitoring:

- Linac RF Agt 02:** Shows the status of three modules (Module 1, 2, and 3). Each module displays parameters such as Voltage (0.0 kV), Current (0.0 A), and Power (0.00 MW). It also includes controls for HVPS Setpoint, Filament, and various interlocks.
- LTB-PS:** Displays the status of the Linac Transfer Beam Power Supply. It includes a status bar with 'Turn All On', 'Emergency Off', and 'MS Limits' indicators. Below this are detailed tables for 'LTO Board' and 'LTO Outputs', listing various components like B1, B2, B1\_A, B2\_B, etc., with their respective feedback and status.
- Beam Orbit Viewer:** Shows the 'Beam TBT Orbit & Current Viewer'. It contains three graphs: 'X View', 'Y View', and 'SPX Scan'. Each graph plots beam position or current against particle number (0 to 370). The graphs show data points and trend lines, indicating the beam's trajectory and current over time.

Questions?