

Settings Manager User Guide

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2022-04-28

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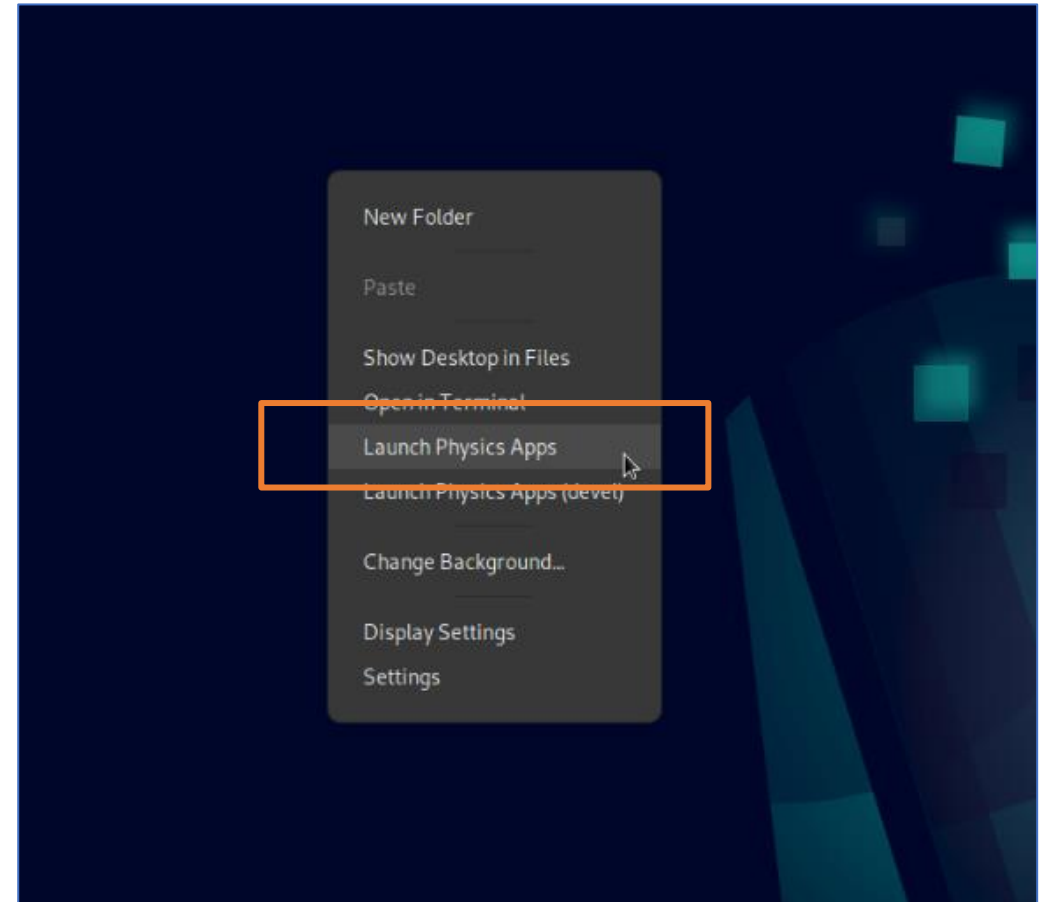
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What is it?

- It is a software application for physics settings management.
- It is one of the applications that built upon PHANTASY framework.
- Take snapshots of the device settings of an accelerator.
- Load snapshots from database system.
- Change device settings with loaded snapshots.
- It supports device settings scaling based on different ion species.
- It supports rich features of data sorting, filtering, device state monitoring and more.
- This guide should work with versions deployed later than 2022-04-25

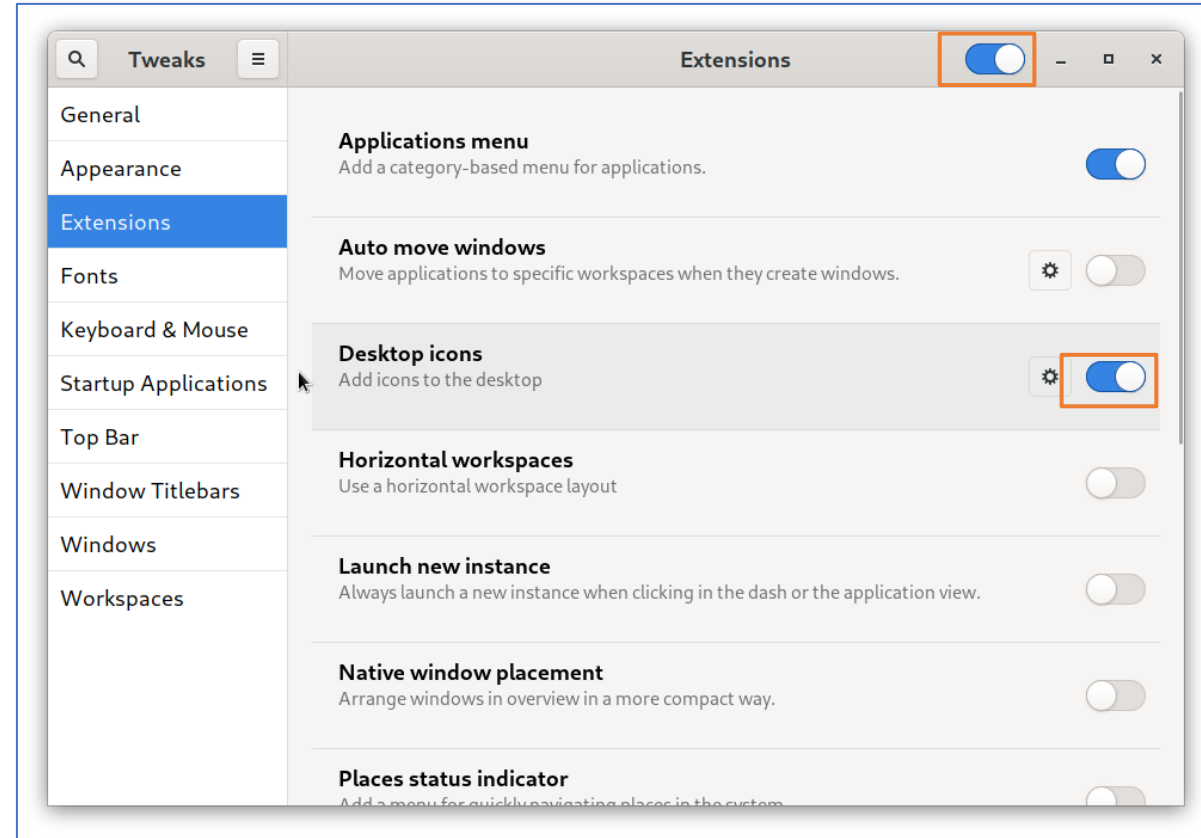
How to start it?

- All physics applications are managed in an app called “App Launcher”
- Each app is presented as one clickable ‘card’ in “App Launcher”
- To have “App Launcher” show up:
 - Right-clicking on the Desktop
 - Select “*Launch Physics Apps*” menu
 - If cannot see this menu, see next page

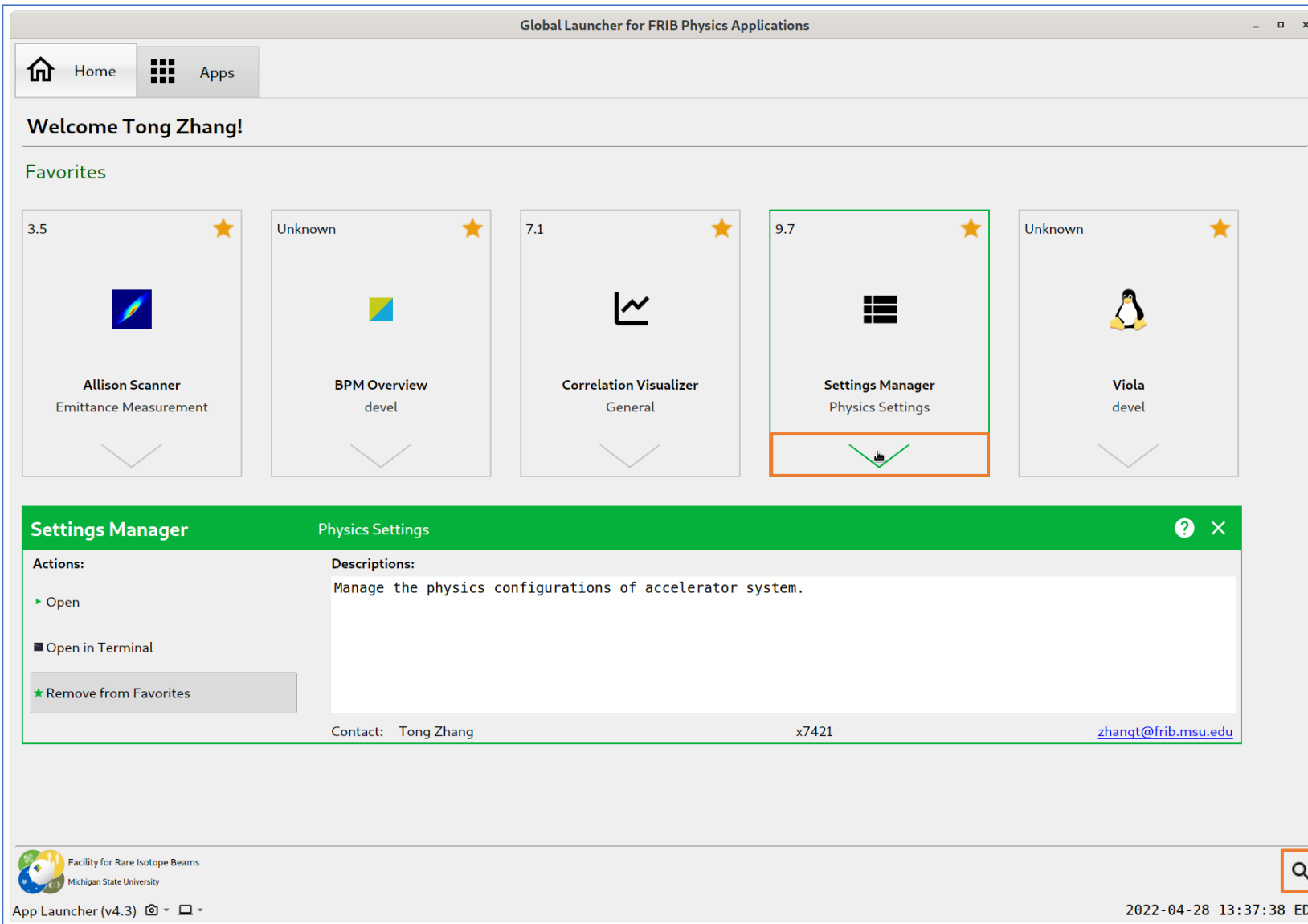




How to enable “Desktop Icon” extension?

- Enable “Desktop Icon” extension to have right-clicking context menu work on GNOME desktop
- Start ‘Tweak’ app, either by searching “tweak” or start from the system menu
- Enable Desktop icons in Extensions tab.



App Launcher: A Global App Manager



- Start app by **single-clicking** the card
- Click the  to expand the detailed info
 - Description
 - Contact
 - Start up options
 - Others...
- Search apps by CTRL + F, or click 

Settings Manager: Main User Interface

Settings Manager: Manage Physics Configurations of Accelerator System

File Tools View Help

Load Lattice Add Devices Take Snapshot Capture Machine State Physics Fields Engineering Fields Preferences Exit

Working Directory: /files/shared/ap/settings_manager/sm.db

NOTAG (20)

Select Tags: None All

Filter between 2022-04-28 and 2022-04-28

Filter Note

Select Ions: None All

Timestamp Ion Z A Q User Tags Note

2022-04-27 Wednesday

2022-04-27T11:30:34 Ca 20 48 10 plastun 173.2 NeV/u to the target, 2W, trajectory corrected to Target Viewer (-2.1 mm, 1.1 mm)

2022-04-27T11:07:14 Ca 20 48 10 plastun 173.2 NeV/u to the target, 2W, trajectory corrected to BDS BPMs

2022-04-26 Tuesday

Check All Uncheck All Invert Checkstate 0 Checked Items

Stripper 224.90 m Disconnected (x0,x2) (x1,x2) State Diff Checked Field Type

Device	Field	Type	Setpoint(x0)	Live Readback(x1)	Live Setpoint(x2)	$\Delta(x2,x0)$	$\Delta(x1,x2)$	$x2/x0$	State	Last State
FE_ISRC1:BEAM	A	ION	48.000	48.000	48.000	0.000	0.000	1.000		
FE_ISRC1:BEAM	Q	ION	10.000	10.000	10.000	0.000	0.000	1.000		
FE_ISRC1:BEAM	Z	ION	20.000	20.000	20.000	0.000	0.000	1.000		
FE_LEBT:BEAM	ATT_TOTAL	ATT	1.000	20.000	20.000	19.000	0.000	20.000		
FE_ISRC1:HVP_D0679	V	HVP	15000.000	342.845	15000.000	0.000	-14657.155	1.000		
FE_ISRC1:PSEL_D0679	V	SEL	0.000	0.000	0.000	0.000	0.000	inf		
FE_ISRC1:PSX_D0679	V	SX	0.000	0.000	0.000	0.000	0.000	inf		
FE_ISRC1:PSB_D0679	V	SB	-185.000	-0.270	-185.000	0.000	184.730	1.000		
FE_ISRC1:SOLR_D0682	I	SOL	455.000	454.776	455.000	0.000	-0.224	1.000		
FE_ISRC1:SOLR_D0685	I	SOL	518.000	517.854	518.000	0.000	-0.146	1.000		
FE_ISRC1:PSE_D0686	V	SE	-2000.000	12.946	-2000.000	0.000	2012.946	1.000		
FE_ISRC1:DRV_D0686	POS	MOTOR	0.000	39.994	0.000	0.000	39.994	inf		
FE_ISRC1:SOLR_D0690	I	SOL	100.304	100.262	100.304	-0.000	-0.042	1.000		
FE_ISRC1:DCH_D0695	I	HCOR	0.000	0.000	0.000	-0.000	0.000	inf		
FE_ISRC1:DCV_D0695	I	VCOR	0.000	0.000	-0.000	-0.000	0.000	inf		
FE_ISRC1:PSEL_D0698	V	SEL	-2000.000	-7.703	-2000.000	0.000	1992.297	1.000		
FE_ISRC1:HVP_D0698	V	HVP	42592.000	0.000	42592.000	0.000	-42592.000	1.000		
FE_SCS1:SOLR_D0704	I	SOL	0.000	0.000	0.000	0.000	0.000	inf		
FE_SCS1:DCH_D0709	I	HCOR	0.262	0.000	0.262	0.000	-0.262	1.001		

Loaded Lattice FRIB LINAC

Update Rate 1.0 Hz Refresh Data Apply x 1

Take Snapshot with Machine State WYSIWYG Auto Precision number 3

Settings Manager (v9.7) 2022-04-28 13:40:07 EDT

Toolbar area:

- **Take Snapshot:** Capture device settings and machine state data
- Beam info (Right most): Current running beam info, with charge state post stripper
 - Double-clicking to launch the physics calculator
 - Hover on to see the meaning and PVs

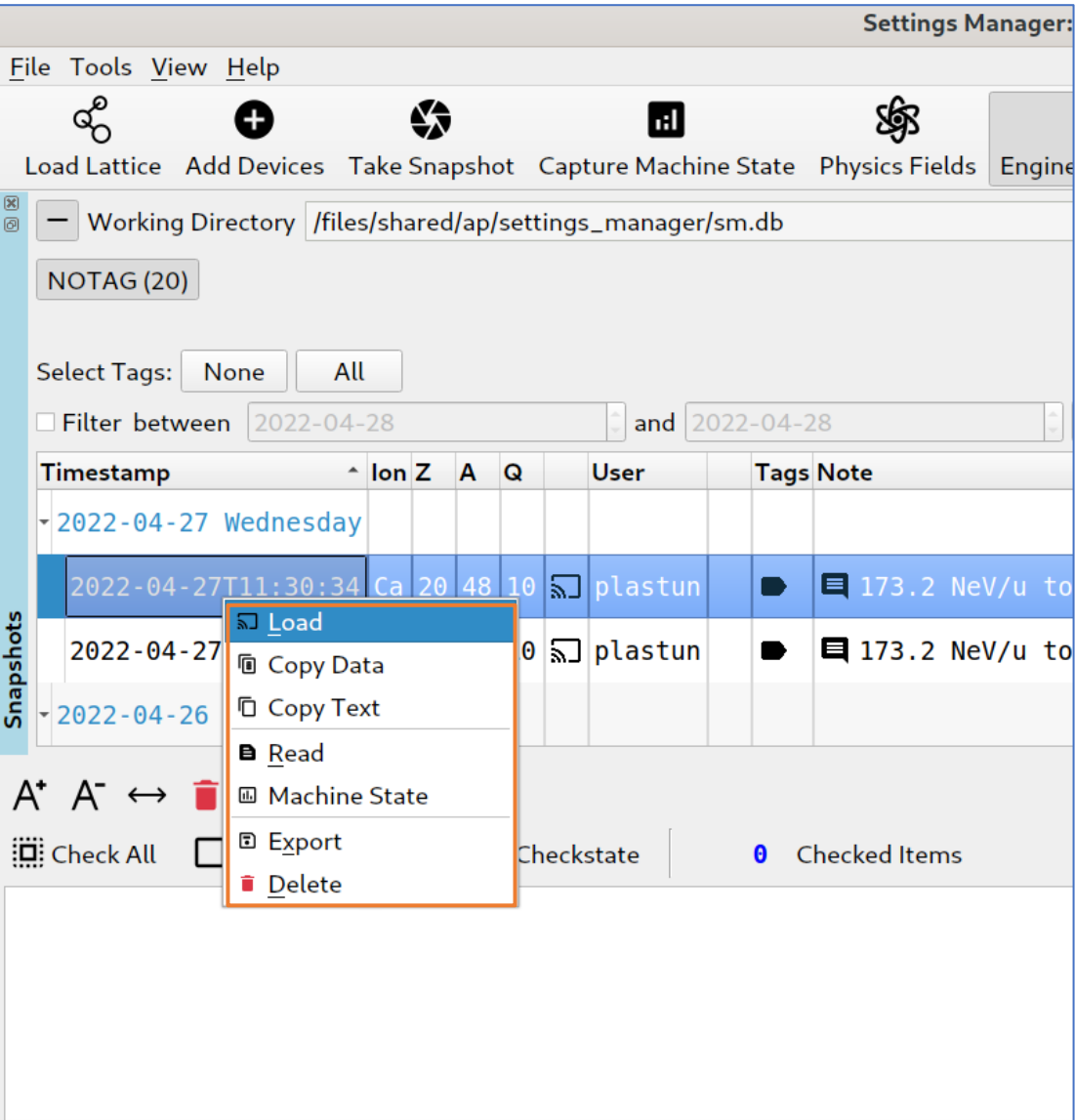
Snapshots data area:

- List the entries of snapshots, each row is one snapshot taken at the shown timestamp, with beam info, tags, user, and note.
- Columns are clickable for sorting

Settings view area:

- Table view of the device settings
- Rich filter buttons for machine state investigation

Settings Manager: Snapshot Actions



Right-clicking menu on snapshot entry:

- **Load:** Load the snapshot and present the data into the Settings view area
- **Copy Data:** Copy the table of settings data and could be paste into other apps, e.g., LibreOffice Calc
- **Copy Text:** Copy the text string, e.g., the timestamp string in this screenshot when the mouse is pointing
- **Read:** Open the snapshot in LibreOffice Calc
- **Machine State:** Visualize the machine state if data is stored in the snapshot
- **Export:** Export the table of settings into other file formats, e.g., xlsx, csv, etc.
- **Delete:** Delete the selected snapshot

1. Double-clicking on the snapshot will load it into Settings View
2. Double-clicking on Tags, Note area will enable editing

- 'Tags' support a string with multiple words that separated with comma (,), do not put spaces. e.g., put the string 'test1,test2' into Tags will tag the snapshot with two tags: 'test1' and 'test2'.

Settings Manager: Snapshot Filters

Working Directory /files/shared/ap/settings_manager/sm.db

NOTAG (41) 21062 (17) ARIS (0) GENERATED (4) PAC1 (4) VD (1) template (1)

Select Tags: None All


Select Ions: None All

Filter between 2022-04-28 and 2022-04-28

Filter Note

Timestamp	Ion	Z	A	Q	User	Tags	Note
2022-04-14 Thursday							
2022-04-14T08:27:51	Ca	20	48	20	maruta	GENERATED,PAC1,21062	48Ca20, 173 MeV/u BDS to fragment target setting for parallel beam
2022-04-14T08:27:50	Ca	20	48	20	maruta	GENERATED,PAC1,21062	48Ca20, 173 MeV/u BDS to fragment target setting for isotope production
2022-03-31 Thursday							
2022-03-31T14:38:33	Ca	20	48	20	maruta	GENERATED,PAC1	FLAME: 48Kr20+, 20.1 -125 MeV/u, foil - BDS, rms beam size at foil is 1 mm, bendin...
2022-03-31T14:38:32	Ca	20	48	20	maruta	GENERATED,PAC1	FLAME: 48Kr20+, 20.1 -173 MeV/u, foil - BDS, rms beam size at foil is 1 mm, bendin...

By default, only 20 most recent snapshots are listed, to show more, proceed:

1. Click the button labeled with number, each click will change the displayed number, e.g., from 20 to 50, 100, and All
2. Click the  to update the snapshot list

Snapshots could be filtered based on tags, and ion species names

- Check the filter buttons right after “Select Tags” or “Select Ions” labels to enable the filters.
- By default, all snapshots are listed
- The example of the screenshot shows:
 - Only show “Ca” with “PAC1” tagged snapshots
- Column could also be sorted by clicking

Settings Manager: Settings View

Settings Manager: Manage Physics Configurations of Accelerator System

File Tools View Help

Load Lattice Add Devices Take Snapshot Capture Machine State Physics Fields Engineering Fields Preferences Exit

Working Directory /files/shared/ap/settings_manager/sm.db

NOTAG (20)

Select Tags: None All

Filter between 2022-04-28 and 2022-04-28

Filter Note

Select Ions: None All

Timestamp Ion Z A Q User Tags Note

2022-04-27 Wednesday

2022-04-27T11:30:34 Ca 20 48 10 plastun 173.2 NeV/u to the target, 2W, trajectory corrected to Target Viewer (-2.1 mm, 1.1 mm)

2022-04-27T11:07:14 Ca 20 48 10 plastun 173.2 NeV/u to the target, 2W, trajectory corrected to BDS BPMs

2022-04-26 Tuesday

A* A* ↔

Check All Uncheck All Invert Checkstate 0 Checked Items

Stripper 224.90 m Disconnected (X₀,X₂) (X₁,X₂) State Diff Checked Field Type

Device	Field	Type	Setpoint(x ₀)	Live Readback(x ₁)	Live Setpoint(x ₂)	Δ(x ₂ ,x ₀)	Δ(x ₁ ,x ₂)	x ₂ /x ₀	State	Last State
FE_ISRC1:BEAM	A	ION	48.000	48.000	48.000	0.000	0.000	1.000		
FE_ISRC1:BEAM	Q	ION	10.000	10.000	10.000	0.000	0.000	1.000		
FE_ISRC1:BEAM	Z	ION	20.000	20.000	20.000	0.000	0.000	1.000		
FE_LEBT:BEAM	ATT_TOTAL	ATT	1.000	20.000	20.000	19.000	0.000	20.000		
FE_ISRC1:HVP_D0679	V	HVP	15000.000	342.845	15000.000	0.000	-14657.155	1.000		
FE_ISRC1:PSEL_D0679	V	SEL	0.000	0.000	0.000	0.000	0.000	inf		
FE_ISRC1:PSX_D0679	V	SX	0.000	0.000	0.000	0.000	0.000	inf		
FE_ISRC1:PSB_D0679	V	SB	-185.000	-0.270	-185.000	0.000	184.730	1.000		
FE_ISRC1:SOLR_D0682	I	SOL	455.000	454.776	455.000	0.000	-0.224	1.000		
FE_ISRC1:SOLR_D0685	I	SOL	518.000	517.854	518.000	0.000	-0.146	1.000		
FE_ISRC1:PSE_D0686	V	SE	-2000.000	12.946	-2000.000	0.000	2012.946	1.000		
FE_ISRC1:DRV_D0686	POS	MOTOR	0.000	39.994	0.000	0.000	39.994	inf		
FE_ISRC1:SOLR_D0690	I	SOL	100.304	100.262	100.304	-0.000	-0.042	1.000		
FE_ISRC1:DCH_D0695	I	HCOR	0.000	0.000	0.000	-0.000	0.000	inf		
FE_ISRC1:DCV_D0695	I	VCOR	0.000	0.000	0.000	-0.000	0.000	inf		
FE_ISRC1:PSEL_D0698	V	SEL	-2000.000	-7.703	-2000.000	0.000	1992.297	1.000		
FE_ISRC1:HVP_D0698	V	HVP	42592.000	0.000	42592.000	0.000	-42592.000	1.000		
FE_SCS1:SOLR_D0704	I	SOL	0.000	0.000	0.000	0.000	0.000	inf		
FE_SCS1:DCH_D0709	I	HCOR	0.262	0.000	0.262	0.000	-0.262	1.001		

Loaded Lattice FRIB LINAC

Update Rate 1.0 Hz Refresh Data Apply x 1

Take Snapshot with Machine State WYSIWYG Auto Precision number 3

Settings Manager (v9.7) 2022-04-28 13:40:07 EDT

- **Device:** name of the device, by default sorted by the device global s-position ascendingly
- **Field:** name of the controllable attribute, e.g., I of FE_SCS1:DCH_D0709 means the current of this horizontal corrector, all the values in right columns are for this field
- **Type:** device type, e.g., SOL is solenoid, HCOR is horizontal corrector, QUAD is magnetic quadrupole, etc.
- **Setpoint(x₀):** saved setpoint values, i.e., the live setpoints when the snapshot was captured
- **Live Readback(x₁):** live readback values
- **Live Setpoint(x₂):** live setpoint values
- **Δ(x₂,x₀):** x₂-x₀, how diff of current set and last saved one
- **Δ(x₁,x₂):** x₁-x₂, how diff of current read and set
- **x₂/x₀:** the ratio of current set and saved one
- **State:** current device state indicator
- **Last State:** last saved device state indicator

Settings Manager: Investigate Settings (1)

Settings Manager: Manage Physics Configurations of Accelerator System

File Tools View Help

Load Lattice Add Devices Take Snapshot Capture Machine State Physics Fields Engineering Fields Preferences Exit

Working Directory /files/shared/ap/settings_manager/sm.db

NOTAG (75) 21062 (17) ARIS (1) GENERATED (7) PAC1 (7) VD (1) template (2)

Select Tags: None All

Filter between 2022-04-28 and 2022-04-28 Filter Note

Timestamp	Ion	Z	A	Q	User	Tags	Note
2022-04-27 Wednesday							
2022-04-27T11:30:34	Ca	20	48	10	plastun		173.2 NeV/u to the target, 2W, trajectory corrected to Target Viewer (-2.1 mm, 1...
2022-04-27T11:07:14	Ca	20	48	10	plastun		173.2 NeV/u to the target, 2W, trajectory corrected to BDS BPMs
2022-04-26 Tuesday							

A* A* ↔

Check All Uncheck All Invert Checkstate 0 Checked Items

Stripper 224.90 m Disconnected (x₀,x₂) (x₁,x₂) State Diff Checked Field Type 1851 Items

Device	Field	Type	Setpoint(x ₀)	Live Readback(x ₁)	Live Setpoint(x ₂)	Δ(x ₂ ,x ₀)	Δ(x ₁ ,x ₂)	x ₂ /x ₀	State	Last State
FE_LEBT:BEAM	ATT_TOTAL	ATT	1.000	20.000	20.000	19.000	0.000	20.000	Red	Green
FE_ISRC1:HVP_D0679	V	HVP	15000.000	342.845	15000.000	0.000	-14657.155	1.000	Red	Green
FE_ISRC1:PSB_D0679	V	SB	-185.000	-0.270	-185.000	0.000	184.730	1.000	Red	Green
FE_ISRC1:PSE_D0686	V	SE	-2000.000	12.946	-2000.000	0.000	2012.946	1.000	Red	Green
FE_ISRC1:PSEL_D0698	V	SEL	-2000.000	-7.703	-2000.000	0.000	1992.297	1.000	Red	Green
FE_ISRC1:HVP_D0698	V	HVP	42592.000	0.000	42592.000	0.000	-42592.000	1.000	Red	Green
FE_SCS1:SOLR_D0704	I	SOL	0.000	0.000	0.000	0.000	0.000	inf	Red	Green
FE_SCS1:DCH_D0709	I	HCOR	0.262	0.000	0.262	0.000	-0.262	1.001	Red	Green
FE_SCS1:DCV_D0709	I	VCOR	-2.036	0.000	-2.036	0.000	2.036	1.000	Red	Green
FE_SCS1:DH_D0717	I	BEND	78.468	-0.007	78.468	0.000	-78.475	1.000	Red	Green
FE_SCS1:DCH_D0723	I	HCOR	-0.515	0.000	-0.515	0.000	0.515	0.999	Red	Green
FE_SCS1:DCV_D0723	I	VCOR	0.978	0.000	0.978	0.000	-0.978	1.000	Red	Green
FE_SCS1:QHE_D0726	V	EQUAD	3310.520	7.405	3310.520	0.000	-3303.115	1.000	Red	Green
FE_SCS1:QVE_D0730	V	EQUAD	-2008.720	-7.538	-2008.720	0.000	2001.182	1.000	Red	Green
FE_SCS1:QHE_D0733	V	EQUAD	52.805	7.515	52.805	0.000	-45.290	1.000	Red	Green
FE_SCS1:QHE_D0743	V	EQUAD	52.804	7.332	52.804	0.000	-45.472	1.000	Red	Green
FE_SCS1:QVE_D0746	V	EQUAD	-2008.720	-7.265	-2008.720	0.000	2001.455	1.000	Red	Green
FE_SCS1:QHE_D0749	V	EQUAD	3310.510	7.299	3310.510	0.000	-3303.211	1.000	Red	Green
FE_LEBT:DH_D0759	I	BEND	77.503	-0.013	77.503	0.000	-77.516	1.000	Red	Green



Update Rate 1.0 Hz Refresh Data Apply x 1

Take Snapshot with Machine State WYSIWYC Auto Precision number 3





Settings Manager (v9.7) 2022-04-28 13:43:31 EDT

 Filter out the items that meet:

Current device state is not the same as last saved one.

Normally, Red  means the device is powered off, Green  is for powered on; for SRF cavities, Red is phase unlocked, green is phase locked.

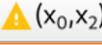
Extended device state indicator:

-  Red state indicates the device is either intercepting or blocking the beam, e.g., chopper, aperture, attenuator, etc.
-  Green state indicates the reverse state of red state
-  Blue state: only for chopper 'off' state
-  Brown state: only for chopper 'invalid input' state

Update all data for once , or continuously 



Settings Manager: Investigate Settings (2)

The screenshot shows the 'Settings Manager: Manage Physics Configurations of Accelerator System' window. The top menu includes File, Tools, View, and Help. Below the menu is a toolbar with icons for Load Lattice, Add Devices, Take Snapshot, Capture Machine State, Physics Fields, Engineering Fields, Preferences, and Exit. The main area displays a list of settings with filters for 'Working Directory' and 'Select Tags'. A table of settings is shown with columns for Timestamp, Ion, Z, A, Q, User, Tags, and Note. The bottom section shows a table of device parameters with columns for Device, Field, Type, Setpoint(x₀), Live Readback(x₁), Live Setpoint(x₂), Δ(x₂,x₀), Δ(x₁,x₂), x₂/x₀, and a status column. The status column includes a 'Disconnected' button and a filter button labeled $\Delta(x_0, x_2)$. A tooltip for the filter button indicates 'Show x₀ != x₂, up to the number of precision.' The bottom status bar shows 'Loaded Lattice: FRIB LINAC', 'Update Rate: 1.0 Hz', 'Refresh Data', 'Apply', 'Take Snapshot with Machine State', 'WYSIWYG', 'Auto', 'Precision number: 3', and the date/time '2022-04-28 13:42:44 EDT'.




 $\Delta(x_0, x_2)$ Filter out the items that meet:
Current live set values are different from the ones that last saved, i.e., only list items with different x_2 and x_0 , or non-zero $\Delta(x_2, x_0)$.

The same applies to  $\Delta(x_1, x_2)$, and other filter buttons in blue highlighted area.

Tips:

- Hover on the button for the hint (brief help).
- General search feature, see  and 
 - e.g., input 'FE' will only show the device name contains 'FE'.

Settings Manager: Change Machine Settings

- After loaded one snapshot, the user is ready to change the machine settings by 'Apply' operation (see the 'Apply' button at the right bottom area)
- **Only checked items** will be put into the 'Apply' list
 - The setting log could be seen in settings log, right-clicking empty toolbar area to enable it
- How to check items:
 - Click the button  Check All will check all items that allowed to control
 - Non-writable items are gray colored, which is largely based on channel access permission
 - Double-click on the device item will check/uncheck the item
 - Supports working with CTRL and SHIFT for multiple selections (not yet check)
 - To check selected items, right-click on the selection area, and follow the menu guide to check/uncheck all
 - To see all checked items, click  Checked filter button
- Click 'Apply' button to set the device with the data in x_0 column, if scaling factor rather than 1.0 is used, the real set values are scaling factor times x_0
 - Click the filter button  To Scale to list the items that good for scaling (contact AP if needed)

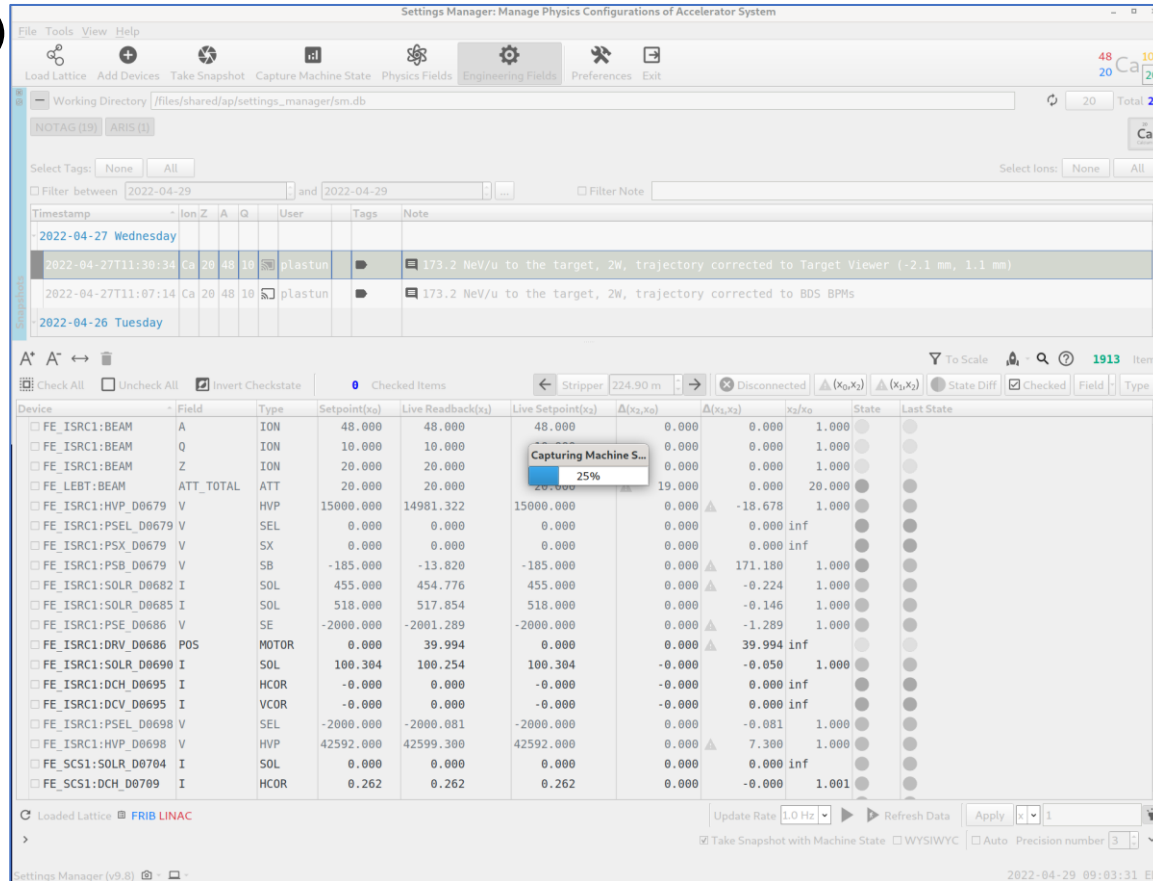
Settings Manager: Take a Snapshot

- Click the “Take Snapshot” button in Toolbar area will make a new snapshot, includes:
 - Capture machine state data
 - Capture live physics settings that listed on the Settings view area
 - By default, it will capture the full list of device settings
 - Unless ‘WYSIWYC’ option is enabled (see the checkbox at the bottom area of the main UI)
- What is WYSIWYC: **What You See Is What You Capture**
 - If enabled, “Take snapshot” will only capture the items that currently show on the page of Settings View, by whatever means to produce the list, e.g., by filtering.
 - This option can be used to make subset of the snapshot for other purposes, e.g., monitoring
 - **Do not forget to turn this option off**, if you want the default take full list of devices settings option back

Settings Manager: Capturing a Snapshot

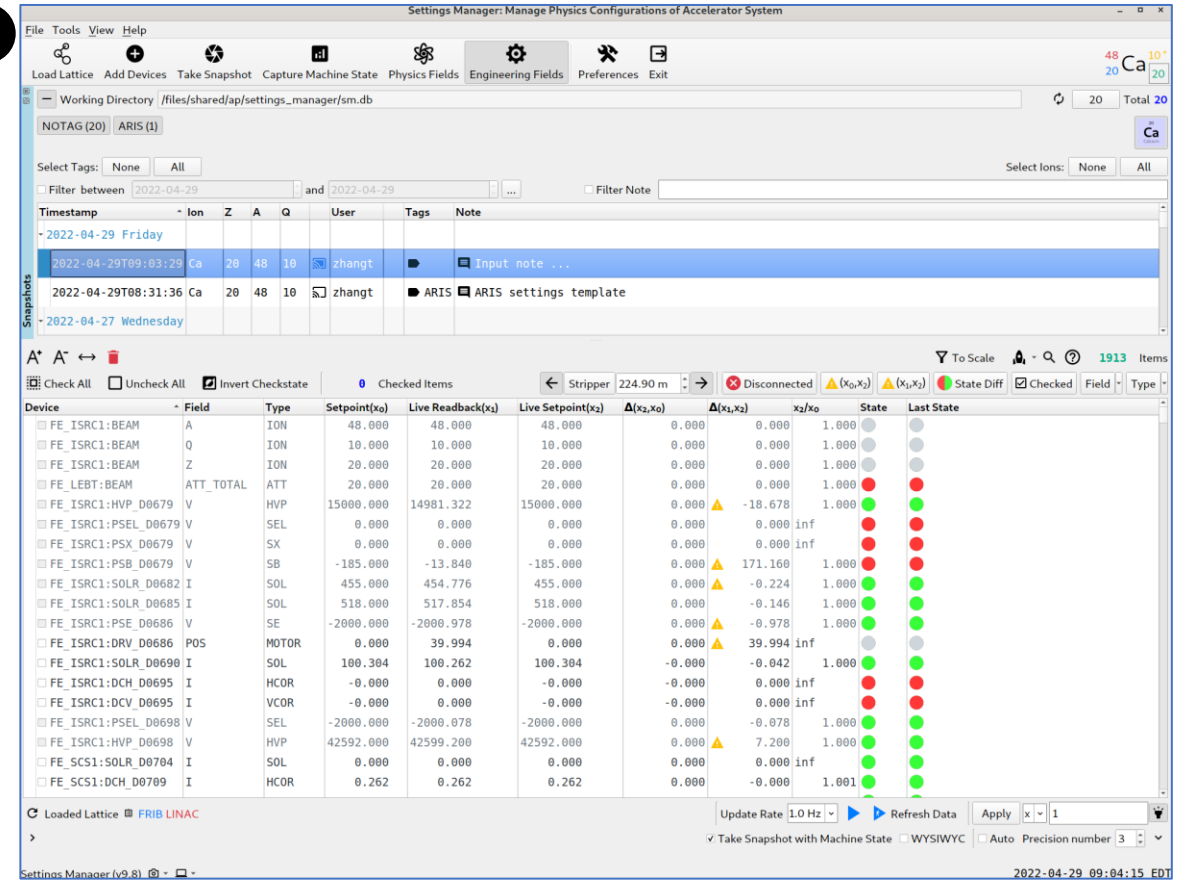
When “Take Snapshot” is hit...

1



Capturing machine state data, which will be saved together with the snapshot database entry


2



The current settings view will be replaced with the just captured snapshot, meaning, e.g., clicking filter button like state diff will list nothing, all $\Delta(x_2, x_0)$ should be zero.

Example of Monitoring Device Settings

- Settings Manager could be used to monitor and alert the abnormal physics settings, display them in different kinds of indicators
- This example is to show how to monitor the ARIS device settings

- ARIS device settings are controlled in ARIS OPI, once the physicist finished setting up the beamline, the user of Settings Manager can take a snapshot of ARIS settings, use the template that with the timestamp of 2022-04-29T08:31:36
- First load this snapshot by double-clicking it
- Then hit “Take Snapshot” button to make a new snapshot
- After turning on the data update button  to monitor the settings, by enabling specific filter button

Monitor Settings: ARIS Example

If everything is good, no items should be listed in the settings view area

Settings Manager: Manage Physics Configurations of Accelerator System

Working Directory: /files/shared/ap/settings_manager/sm.db

GENERATED (23) | LEBT (2) | LEBT_FS1B (2) | LEBT_FS2 (2) | LEBT_MEBT (1) | LINAC (1) | LS1-phasing (86) | LS2-phasing (13)

Select Tags: None | All

Filter between 2022-04-29 and 2022-04-29

Filter Note

Timestamp | Ion | Z | A | Q | User | Tags | Note

2022-03-25T18:13:33 Xe 54 129 28 zhangt template,ARIS All ARIS devices + BDS devices after the last BDS dipole.

2022-03-08 Tuesday

2022-03-08T12:24:19 Ar 18 36 10 zhangt template,ARR07,ARIS,copy All devices in ARIS (0,5,0) with bend NMR readings, snapshots based on this s...

2022-01-27 Thursday

Check All | Uncheck All | Invert Checkstate | 0 Checked Items

Stripper 224.90 m | Disconnected | (x_0, x_2) | (x_0, x_2) | To Scale | 59 Items

Device	Field	Type	Setpoint(x ₀)	Live Readback(x ₂)	Live Setpoint(x ₂)	$\Delta(x_2, x_0)$	$\Delta(x_2, x_2)$	x ₂ /x ₀	State	Last State
FS_F1S1:Q_D1013	I	QUAD	343.826	0.000	0.000	-343.826	0.000	0.000	●	●
FS_F1S1:Q_D1024	I	QUAD	-176.152	0.001	0.000	176.152	-0.001	-0.000	●	●
FS_F1S1:Q_D1035	I	QUAD	116.101	-0.003	0.000	-116.101	-0.003	0.000	●	●
FS_F1S1:DV_D1064	I	BEND	131.467	0.001	0.000	-131.467	0.001	0.000	●	●
FS_F1S1:DV_D1064	NMR	BEND	10.000	0.965	0.000	-9.035	0.965	0.000	●	●
FS_F1S1:DV_D1108	I	BEND	-131.300	-0.004	0.000	131.300	-0.004	-0.000	●	●
FS_F1S1:DV_D1108	NMR	BEND	1.059	1.148	1.148	0.089	0.000	1.084	●	●
FS_F1S1:Q_D1137	I	QUAD	139.883	-0.012	0.000	-139.883	-0.012	0.000	●	●
FS_F1S1:Q_D1148	I	QUAD	-164.929	-0.016	0.000	164.929	-0.016	-0.000	●	●
FS_F1S1:Q_D1170	I	QUAD	91.512	0.009	0.000	-91.512	0.009	0.000	●	●
FS_F1S2:Q_D1195	I	QUAD	28.167	0.019	0.000	-28.167	0.019	0.000	●	●
FS_F1S2:Q_D1207	I	QUAD	126.556	-0.002	0.000	-126.556	-0.002	0.000	●	●
FS_F1S2:Q_D1218	I	QUAD	-111.088	-0.003	0.000	111.088	-0.003	-0.000	●	●
FS_F1S2:DV_D1246	I	BEND	-143.545	0.002	0.000	143.545	0.002	-0.000	●	●
FS_F1S2:DV_D1246	NMR	BEND	1.067	0.446	0.446	-0.621	0.000	0.418	●	●
FS_F1S2:Q_D1288	I	QUAD	35.582	-0.005	0.000	-35.582	-0.005	0.000	●	●
FS_F1S2:Q_D1299	I	QUAD	-63.112	0.004	0.000	63.112	0.004	-0.000	●	●
FS_F1S2:Q_D1311	I	QUAD	38.438	0.003	0.000	-38.438	0.003	0.000	●	●
FS_F1S2:Q_D1338	I	QUAD	41.251	-0.003	0.000	-41.251	-0.003	0.000	●	●

Loaded Lattice ARIS ARIS

Update Rate 1.0 Hz | Refresh Data | Apply | 1.3333

Take Snapshot with Machine State | WYSIWYC | Auto | Precision number 3

Settings Manager (v9.8) | 2022-04-29 09:00:00 EDT

Monitoring the live settings, if diff from the reference, items with warning signs will be listed

Settings Manager: Manage Physics Configurations of Accelerator System

Working Directory: /files/shared/ap/settings_manager/sm.db

GENERATED (23) | LEBT (2) | LEBT_FS1B (2) | LEBT_FS2 (2) | LEBT_MEBT (1) | LINAC (1) | LS1-phasing (86) | LS2-phasing (13)

Select Tags: None | All

Filter between 2022-04-29 and 2022-04-29

Filter Note

Timestamp | Ion | Z | A | Q | User | Tags | Note

2022-03-25T18:13:33 Xe 54 129 28 zhangt template,ARIS All ARIS devices + BDS devices after the last BDS dipole.

2022-03-08 Tuesday

2022-03-08T12:24:19 Ar 18 36 10 zhangt template,ARR07,ARIS,copy All devices in ARIS (0,5,0) with bend NMR readings, snapshots based on this s...

2022-01-27 Thursday

Check All | Uncheck All | Invert Checkstate | 0 Checked Items

Stripper 224.90 m | Disconnected | (x_0, x_2) | (x_0, x_2) | To Scale | 59 Items

Device	Field	Type	Setpoint(x ₀)	Live Readback(x ₂)	Live Setpoint(x ₂)	$\Delta(x_2, x_0)$	$\Delta(x_2, x_2)$	x ₂ /x ₀	State	Last State
FS_F1S1:Q_D1013	I	QUAD	343.826	0.000	0.000	-343.826	0.000	0.000	●	●
FS_F1S1:Q_D1024	I	QUAD	-176.152	0.001	0.000	176.152	-0.001	-0.000	●	●
FS_F1S1:Q_D1035	I	QUAD	116.101	-0.003	0.000	-116.101	-0.003	0.000	●	●
FS_F1S1:DV_D1064	I	BEND	131.467	0.001	0.000	-131.467	0.001	0.000	●	●
FS_F1S1:DV_D1064	NMR	BEND	10.000	0.965	0.000	-9.035	0.965	0.000	●	●
FS_F1S1:DV_D1108	I	BEND	-131.300	-0.004	0.000	131.300	-0.004	-0.000	●	●
FS_F1S1:DV_D1108	NMR	BEND	1.059	1.148	1.148	0.089	0.000	1.084	●	●
FS_F1S1:Q_D1137	I	QUAD	139.883	-0.012	0.000	-139.883	-0.012	0.000	●	●
FS_F1S1:Q_D1148	I	QUAD	-164.929	-0.016	0.000	164.929	-0.016	-0.000	●	●
FS_F1S1:Q_D1170	I	QUAD	91.512	0.009	0.000	-91.512	0.009	0.000	●	●
FS_F1S2:Q_D1195	I	QUAD	28.167	0.019	0.000	-28.167	0.019	0.000	●	●
FS_F1S2:Q_D1207	I	QUAD	126.556	-0.002	0.000	-126.556	-0.002	0.000	●	●
FS_F1S2:Q_D1218	I	QUAD	-111.088	-0.003	0.000	111.088	-0.003	-0.000	●	●
FS_F1S2:DV_D1246	I	BEND	-143.545	0.002	0.000	143.545	0.002	-0.000	●	●
FS_F1S2:DV_D1246	NMR	BEND	1.067	0.446	0.446	-0.621	0.000	0.418	●	●
FS_F1S2:Q_D1288	I	QUAD	35.582	-0.005	0.000	-35.582	-0.005	0.000	●	●
FS_F1S2:Q_D1299	I	QUAD	-63.112	0.004	0.000	63.112	0.004	-0.000	●	●
FS_F1S2:Q_D1311	I	QUAD	38.438	0.003	0.000	-38.438	0.003	0.000	●	●
FS_F1S2:Q_D1338	I	QUAD	41.251	-0.003	0.000	-41.251	-0.003	0.000	●	●

Loaded Lattice ARIS ARIS

Update Rate 1.0 Hz | Refresh Data | Apply | 1.3333

Take Snapshot with Machine State | WYSIWYC | Auto | Precision number 3

Settings Manager (v9.8) | 2022-04-29 09:00:30 EDT

Monitoring the live device state, if diff from the reference, items will be listed