```
=========================
Version 10.3: 2022-08-22
=========================
```

 – Add menu for reading changelog.
 – Post snapshot note info when a snapshot is loaded.
 – Update the PV info for loaded snapshot.
 – Return +charge_state for SnapshotData.ion_as_str().

```
=========================
Version 10.2: 2022-08-17
=========================
```

 – Improved data refreshing efficiency when Alarm Config button is checked.
 – Enable 'Keep Refreshing' after loading a snapshot, refresh data every 20 seconds.
 – Resolved one issue regarding high CPU loading.
 – Improved the Settings View looking style.
 – Post text info when data is refreshed and snapshot is loaded.
 – Added argument support for --snapshot and --snapshot-window-off options.
 – Changed the settling time of alarm set to 20 ms.
 – Other bugfixes.

```
=========================
Version 10.1: 2022-07-15
=========================
```

 – Live data updating at 0.5 Hz is working fine by enabling 'Keep Refreshing' button.
 – Limit the access of snapshot deletion function through the menu.
 – Fix the performance regression for data refreshing:
   – Refresh tolerance, reference, alarm switches status when needed.
 – Rename column names: State --> Live State, Last State --> State.
 – Fix a bug regarding the multi-field device state display.

```
=========================
Version 10.0: 2022-06-22
=========================
```

 – As of this release, Settings Manager supports to work together with the dedicated
   – Phoebus Display
   – Phoebus Alarm system, which is maintained as separated projects.
 – Fixed the backcompatiblity of reading old snapshots that does not have device state info.
 – Add support for Reference Setpoint set and visualization.
 – Add support for device alarm controls.
 – Add support for filtering reference set, alarm controls.
 – Manage tolerance of live read and set with PVs.
 – Add support to set tolerance/referece_set through context menus.
 – Add support to publish snapshot as the one in operation.

```
=========================
Version 9.8: 2022-04-28
=========================
```

- Hide Position column, sort Device column by position.
- Support filter diff device state with a new filter button.
- Support show device state, and last saved device state.
- Support more blocking device types, e.g. AP, ATT, CHP etc.
- Improved data refresh speed.
- Swap the sign of dx02.
- Chanve the default policy for 'Take Snapshot':
  - Always save the full list of device settings, unless,
  - Enable WYSIWYC option (What You See Is What You Capture)
- Support '+' operation for batch apply settings, i.e. shift setpoint by some value.
- Add scripts for snapshot generation.
- Other bugfixes.

```
======================
Version 9.7: 2022-01-24
======================
```

- Fix packages by adding missing files.
- Add new context menu action for data trending
  - Pull and visualize data from Archiver Appliance
- Add support for showing checked items stats.
- Add new button for unchecked all items.
- Update UI.

```
======================
Version 9.6: 2021-12-09
======================
```

- Update the routine for settings generation.
- Fix: no-write-access item could still be checked.
- Add STRIP_D2249 to read-only device list.
- New: support unchecked all items.
- New: add stat for globally checked items.
- Update UI.

```
======================
Version 9.5: 2021-11-02
======================
```

- Fix settings view style per write access
- Update carbon stripper position (FRIB only)
- Support Oxygen icon
- Drag and drop XLSX snapshots will also trigger database update
- Export snapshot only update cloned SnapshotData model
- Update the routine for generating snapshots from xlsx files.

```
Version 9.4: 2021-10-26
======================
```

- Support visualize BPM signal saved along with SnapshotData.
- Support database backup, merge, etc.
- Update UIs and resources.

```
Version 9.3: 2021-10-22
======================
```

- Clean up elements.json configuration file, which was used to keep user
-customized high-level
  device configurations. Now all the device info should be from phantasy
-machines.
- Show disconnected status if the devices are not connected, but are sti
ll managed by MachinePortal
  – It will cause caget timeout and freeze the GUI before this fix
  – Show warning dialog if the snashot to load has non-existing devices
(usually happened after
    machine reconfiguration), inside the dialog, show the saved settings
 for reconfigured devices.
- Add filter button for disconnected devices
- Refined feature of settings initialization from loaded lattice
  – Add support to initialize settings for those disconnected devices
  – Add option to skip none settings or not, none is return for non-reac
hable devices, uncheck
    this option to make settings table for offline devices
- Now "Add Devices" tool only work with adding devices from pre-deployed
 machine configuartions
  – The field of interest for the high-level element is updated with STR
IPPER, SLT device type.
- Ensure the database connection
- Update the configuration file for machine state data fetching (some BP
Ms are relocated)

Version 9.2: 2021-10-01
=======================

- Implemented app configuration module
  – use settings_manager.toml file to manage all the configurations
  – Runtime change configuration from Preferences dialog
- Add a tool for database management
  – Initialize an empty database
  – Update existing one with snapshot files (Settings Manager in FILE wo
rking mode)

Version 9.1: 2021-09-29
=======================

- Support working with SQLite database for snapshot data
  – Also leave option of working with files
- Performance improvement when working with database
  – Use threading to shift data loading
  – Limit number of snapshots to display
  – Lazy-load snapshot table
- Other fixes and enhancements

Version 8.0: 2021-05-14
=======================

- Refactored SnapshotData class to support multi-sheet data
  – Adopt pandas.DataFrame to manage the data
  – Default data format: xlsx
  – Read and save from/to xlsx, h5, csv, etc.
  – Store settings data, metadata for settings data, and machine state d
ata

- Support capture and save machine state data when taking snapshot
- Support save power on/off status data into snapshot
- Support control device power switch via context menu
- Support search snapshot files by note and datetime range

Version 7.1: 2021-04-13
=======================

- Setting View
  - Support to show devices readonly by maintaining hardcode name list
  - Add field of interest for more diagnostic devices
  - Support switch power status via context menu

Version 7.0: 2021-02-22
=======================

- Setting View
  - Support only showing field-of-interest, defined in config/field.toml
  - Support show device power status in a new column
  - Support running with LIVE_MODE environmental variable
  - Do global data refreshing when any filter button is checked
  - F5 (Ctrl+F5) for single data refresher (continuously)
  - Manage all devices in phantasy-machines for ISRC1

- other bug fixes

Version 6.0: 2021-01-19
=======================

- Snapshots Window:
  - Add support to show 'Ca' icon
  - Refactor the snapshot data model --> SnapshotData
    - Create unittests for snapshot data
    - Eliminate 'filepath' attribute
    - Support freely re-organize data directory structure
    - Change default naming rule: eliminate ':' from file name
  - Refactor treeview of snapshot data presentation
    - Create context menu actions to perform snapshot operations
  - Fix duplicated signal emit issue
  - Fix 'wrong index when mapFromSource' issue
  - Rename operation 'cast' to 'Load'
  - Treat empty tags as 'NOTAG' when doing tag filtering
  - Fix wrong hit statistics when doing tag/ion filtering
  - New action to copy snapshot data as a table

- Settings View:
  - Add loose/strict wildcard option for filtering

- Preload default machine and segment when starting up app

Version 5.2: 2020-12-04
=======================

- Snapshots Window:
  - Add Selenium icon
  - Fix window height retaining issue

- Rename 'Cast' to 'Load'

- Settings Treeview:
  - Fix bug: cannot invert selection from unchecked to checked

Version 5.1: 2020-12-03
=======================

- Settings Treeview:
  - Bugfix: invert selection
  - ENH: dblclick to toggle item selection

- Snapshot Treeview:
  - Update 1st level node style
  - Do not show parent node if no children hit when filtering

Version 5.0: 2020-11-05
=======================

- Single data refresher:
  - Update with multiple processes
  - Not show progress bar

- SettingsModel:
  - Remove CSET and RD PVs, and regarding view aspect

Version 4.3: 2020-10-26
=======================

- Single data refresher:
  - Add support to show progress
  - Improve the GUI responsiveness

- Continuous data refresher:
  - Only do value updating for the items in current view

- SettingsModel:
  - Speed up the model initialization, FRIB/LINAC 6s --> 2s

Version 4.2: 2020-10-19
=======================

- Settings view filtering:
  - Add support to 'in' test to Settings View filtering.
  - Add support compound 'and' filter for settings view.
  - Compare x0 and x2 with precision number.
  - Implement buttons for filtering with dx12, dx02 warning signs.

- Apply settings:
  - Skip setting device if current setting is close to the proposed.

- Fixes:
  - Fix crash when do inverse selection on all checked items.
  - Fix delta x0, x2 updating retarding issue.
  - Hint typoes.

- Scaling factor:

   – Set scaling factor format with '.5g'.

– Maintaince:
   – Update default device sp/rd tolerance list.
   – Always keep set log file.
   – Load elements from config.
   – Update notebook for generating settings files.
   – Support add note meta in contrib notebook for generating settings.
   – Update the notebook to generate settings files for cavity tuning.

– GUI:
   – Hide settings statistics info by default.
   – Update symbol for dx02 and dx12.
   – SettingsModel support 'auto_fmt' argument, '{0:{n}g}' as auto format
.
   – Handle the widget control permission for data updaters.
   – Add option to set .{n}g format for presenting data.
   – Add min/max-imize buttons to floating snapshots window.
   – Close device set log by default.

– Tools:
   – Update the command to evoke ipython console.

– Data/FRIB:
   – Update settings data file for cavity tuning.
   – Add generated settings file for 129Xe50 cavity tuning.
   – Add revised settings xlsx file for LS2 phasing.
   – Add setting files for 129Xe27 to 50 from MEBT to FS1A,B, FS2.
   – Add xlsx file for 129Xe27 to 50 for MEBT to FS1A/B, FS2.
   – Add settings with reduced solenoid current, 2020-10-06.
   – Append timestamp to the generated filename.
   – Update settings files for LS1,2 cavity tuning.
   – Add settings files for LS1,2 cavity tuning.

– Doc:
   – Update settings manager guide doc, pdf.
   – Add user guide .doc file.

Version 4.1: 2020-10-01
=======================

– Refactor SnapshotDataModel, w.r.t. the solution to handle buttons in r
ow
– Implement dynamic filter buttons for ion names and tag names to Snapsh
ots
– Add support to delete snapshot from memory or disk drive
– Enable sorting of Snapshots
– Change the naming rule of SnapshotData to avoid name collision
– Other bug fixes and feature enhancements

Version 4.0: 2020-09-25
=======================

– Hide Save and Load Settings tools, use Save and Cast in Snapshots Wind
ow instead
– Initialize cofiguration files for new users
– Update values before taking snapshot

- Add x2/x0 column to show the ratio between current setpoint and saved one
- Auto fill scaling factor if loaded snapshot working with different Q/A
- Updated settings view
- Support open Help contents from menu or F1

- Snapshots Window:
  - Support manage data files from a directory, recursively search all possible files
  - Update TableSettings, SnapshotData and SnapshotDataModel to support show more metadata
  - Support in-place saving data
  - Support input tags, golden setting indicator, ion species
  - Keep cast status after taking snapshot or auto refreshing working directory

- Settings Apply:
  - Remove setdone status
  - Implement applying progress bar, and highlight current applying device
  - Support saving snapshot before apply option
  - Show log messages when applying
  - Support Cancel before Apply
  - Update values after applying is done

- Device Set Log Window:
  - Capture all set log when doing settings apply
  - Support open in system text editor, e.g. do searching

Version 3.0: 2020-09-15
=======================

- Initial settings:
  - Add support initialize settings with loaded lattice

- Settings apply:
  - Add support to input math expression as scaling factor
  - Show progress bar when iterating devices

- Snapshots:
  - Add module to manage snapshots from CSV files
  - Ensure fetch the most recent setpoints before taking snapshot
  - Add support to manage snapshots via drag and drop
  - Add support to preload snapshots from working directory (Preferences)
  - Introduced cast feature of snapshot
  - Add support to input metadata to snapshots

- Add tool dialog to fix LS1,2 corrector name issue for old saved CSV files,
  due to the changes of phantasy-machines (commit: 39c94e5)

- Do not need to manually load lattice before load settings from CSV file