

Potku release 2.2.5 (build date 18.12.2023)

Major updates and milestones

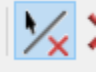
New features, a number of bug fixes and quality of life enhancements, streamlined development pipeline to allow easier release of new versions of Potku.

More detailed info about updates

A streamlined development pipeline has been created on GitHub, where Potku's new versions are released. Get Potku future updates directly from the page: <https://github.com/JYU-IBA/potku>

This new version breaks backwards compatibility, i.e. after opening a request in this version, it no longer works in previous versions. This is (mainly) due to the energy detector option for the simulation and modification of the configuration files. Potku now follows semantic version numbering and this process is automated in GitHub.

New features:

- On the MCERD side users can choose between an automatically calculated reference density value and a manually entered value to use in simulations.
- Cut/selection files can now be modified after creation by adding, deleting and dragging points of an element selection. Also single element from the cut files can be imported to existing cut files. 
- Copying and pasting element selections is now possible via context menu.
- Element selections can be selected from legend.
- Single cut files can now be imported to the ToF-E histogram.
- Energy detector added as a new detector type in detector settings. This is the energy after the last of the "foils".
- Added ability to remove external files when comparing simulated energy spectra to experimental data.
- For each recoil element in MCERD, the simulation type can be chosen between recoil and scatter. Thus one can add Ti as a recoil or Ti* as like Br beam scattered from Ti.
- Timestamped data between ToF and E detector, if they coincidence with the kinematic correction. can now be semi-automated to be used to find the kinematic correction values (eg. timedifference to ToF vs E) and export them as a third column to the Tof-E .asc data file. This fully enables and partially automates the kinematic correction option in Potku.

1840	1346	-465
1804	2465	-441
2116	2142	-475
1669	1698	-430
3021	220	-441
2566	1132	-475

Enhancements/bug fixes:

- Performance of cut/selection file windows has been improved. This is now faster and generated as "image"
- Fixed ratio tool functioning in MCERD.
- Fixed sum spectrum plotting of energy spectra.
- On MCERD side deleting a main recoil element now also properly deletes any associated secondary recoils.

- Python version upgraded to 3.10.
- Potku's version and date of the version is displayed in the title of Potku's main window.
- Enabling measurement-specific settings copies over all request-wide settings as a basis for the specific settings, now including also efficiency files.
- Changing the color of a recoil in MCERD now works as intended.
- "Efficiency files used"- text now actually checks that was some file with non-zero numbers found.
- Previously failing unit tests have been fixed.
- Tons of small bugfixes.
- Tons of code architecture improved.