

# Current status of DirectILLReduction

- ▶ Basically usable for simple data reduction scripts.
  - ▶ Vanadium normalisation, empty container subtraction, but no Cadmium ATM.
  - ▶ Problems with the TOF axis solved.
  - ▶ Detector diagnostics and reporting.
  - ▶ Detector grouping.
- ▶ Parts of functionality unit tested.

# Self-shielding corrections

- ▶ Plan: use the Paalman-Pings correction algorithms.
- ▶ A prototype exists.
- ▶ Issues with `ApplyPaalmanPingsCorrection`.
  - ▶ Unconditional use of `RebinToWorkspace`, does not work with workspaces having varying bins.
  - ▶ Expects input workspace names in certain format.
- ▶ Normal empty container subtraction still possible.

# Other functionality to be implemented

- ▶ Absolute normalisation.
  - ▶ Waiting for self-shielding corrections as they have common input properties.
- ▶ Saving output to disk.
- ▶ Plotting.
- ▶ Detector efficiency.
- ▶ Vanadium Debye-Waller correction.
- ▶ Small issues, like `Transpose` output, automatic rebinning in  $q$ ...
- ▶ Memory usage optimisation (IN5).
- ▶ Documentation.
- ▶ Testing and bug fixing.

### Global Settings

Elastic peak width  sigmas Index type

Monitor index  Detectors at nominal L2 distance

Mask detectors by index  Mask components

Flat background averaging window

	Input	ReductionType	OutputWorkspace	SticPeakInSign
1				0
2				0
3				0
4				0
5				0

Add Remove

### Property Editor

Output workspace/prefix

Reduction

Intermediate workspaces

Logging

Vanadium

Empty container

EPP workspace

Monitor's EPP workspace

☐ Calibrate Ei

Ei calibration workspace

Reduce

- ▶ PyQt based prototype.
- ▶ No Python bindings for `DataProcessor`\* yet.
- ▶ How to handle large number of input properties?
- ▶ Reporting, property adjustment (detector diagnostics, self-shielding)?
- ▶ Plotting?

# Breaking `DirectILLReduction` into smaller parts?

- ▶ Inspired by `IndirectILLReduction`.
- ▶ GUI workflow could be broken into logical steps.
  - ▶ Initial inputs.
  - ▶ Detector diagnostics.
  - ▶ Self-shielding and empty container subtraction.
  - ▶ Initial data analysis.
- ▶ Might cause confusion when used in scripts.
  - ▶ Possibility to wrong ordering or forgetting algorithm calls.
  - ▶ A single master algorithm to be used in scripts?

# Tentative plans for the future

- ▶ Fix most urgent issues in `DirectILLReduction`, open a pull request.
- ▶ Start serious work on GUI.
- ▶ Implement missing functionality.