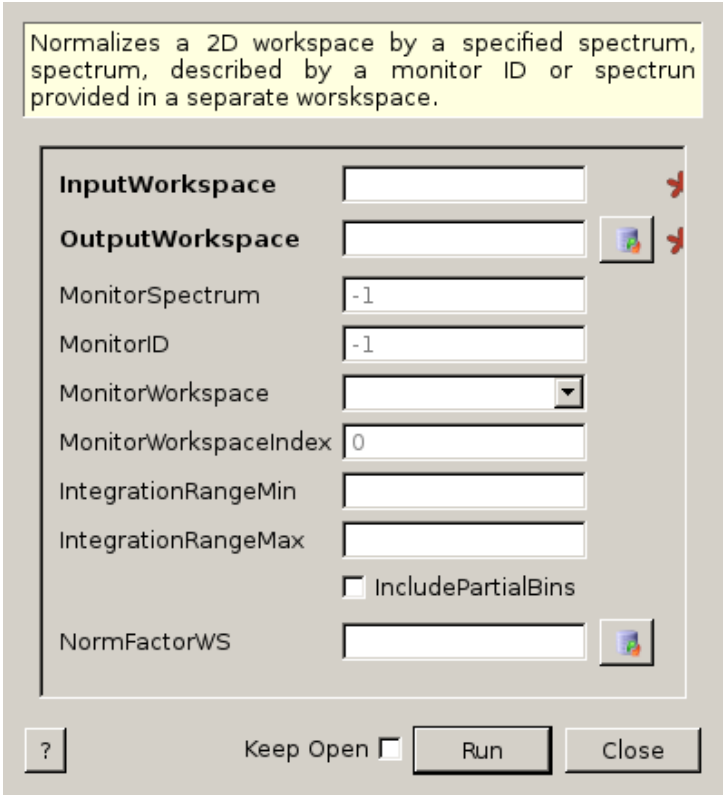
D2B Update

23/10/2017

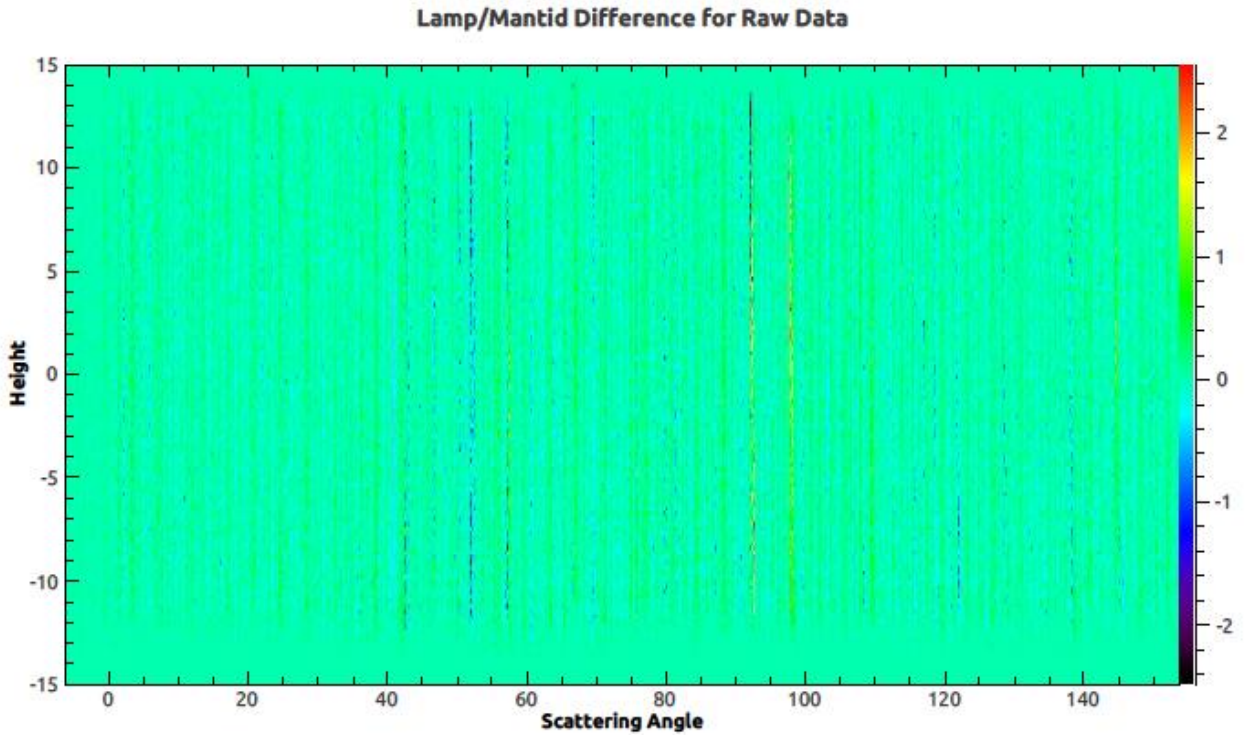
NormaliseToMonitor Updates

- Now supports workspaces with single counts (no ToF axis)
- Now supports detector scans – multiple monitor entries taken into account
- Interface unchanged
- General tidy-up
- PR merged to master
- Needs testing with D20



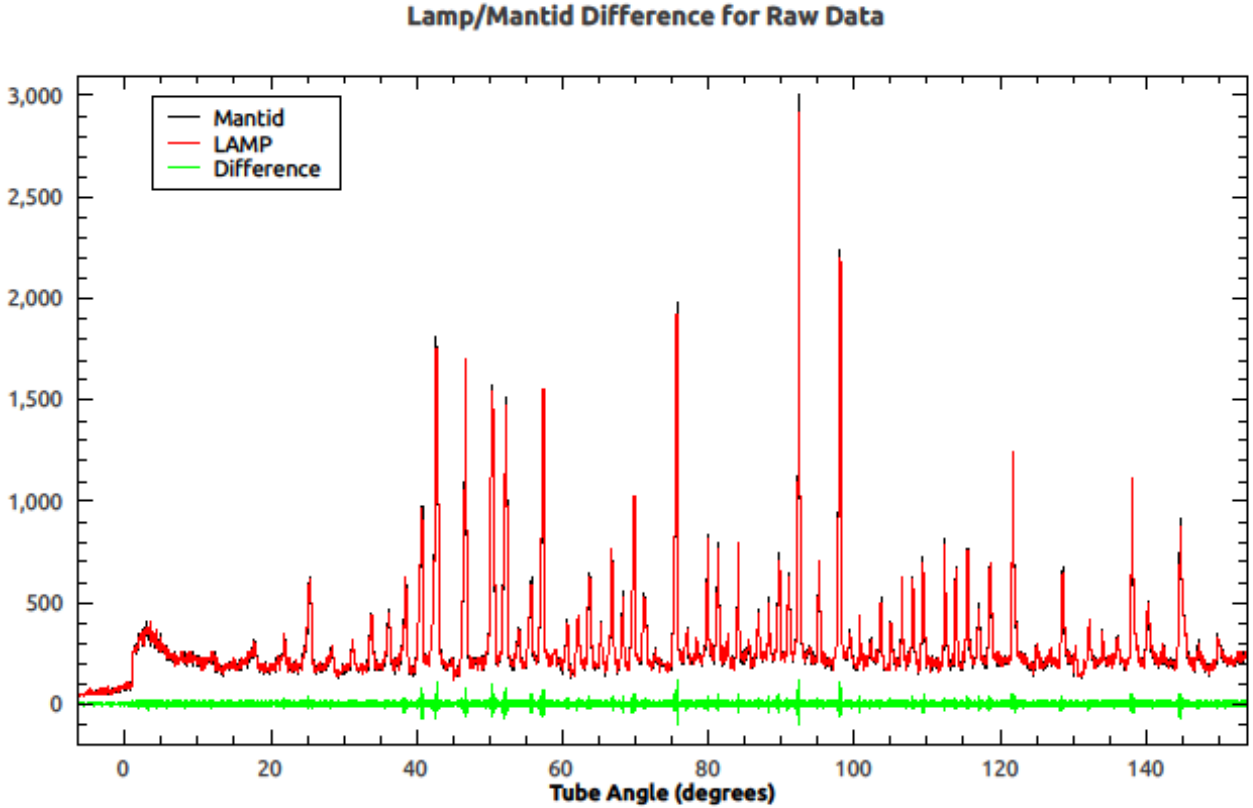
D2B Loader – Raw Data

- Raw data now has data with all tubes in same orientation
- Discrepancy between Mantid and Lamp of a few counts – needs investigating



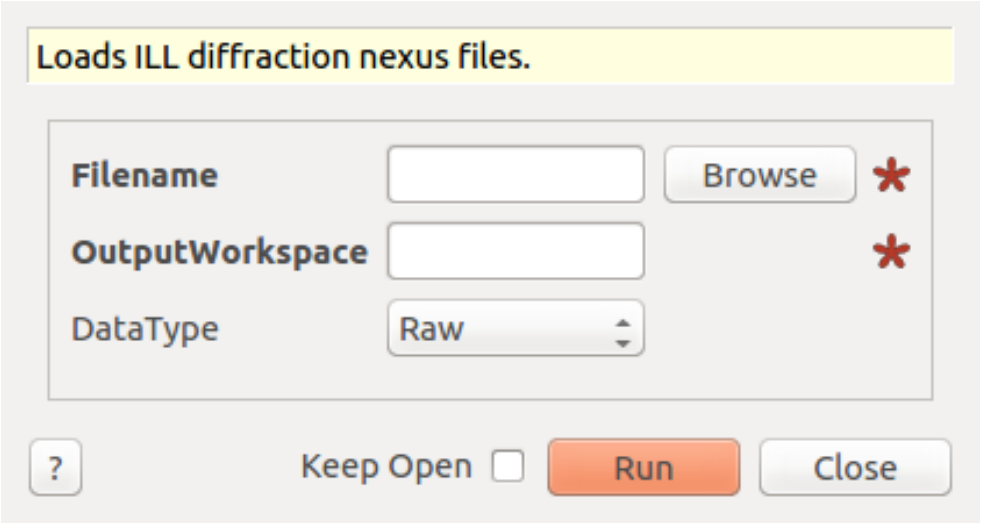
D2B Loader – Raw Data

- Raw data now has data with all tubes in same orientation
- Discrepancy between Mantid and Lamp of a few counts – needs investigating



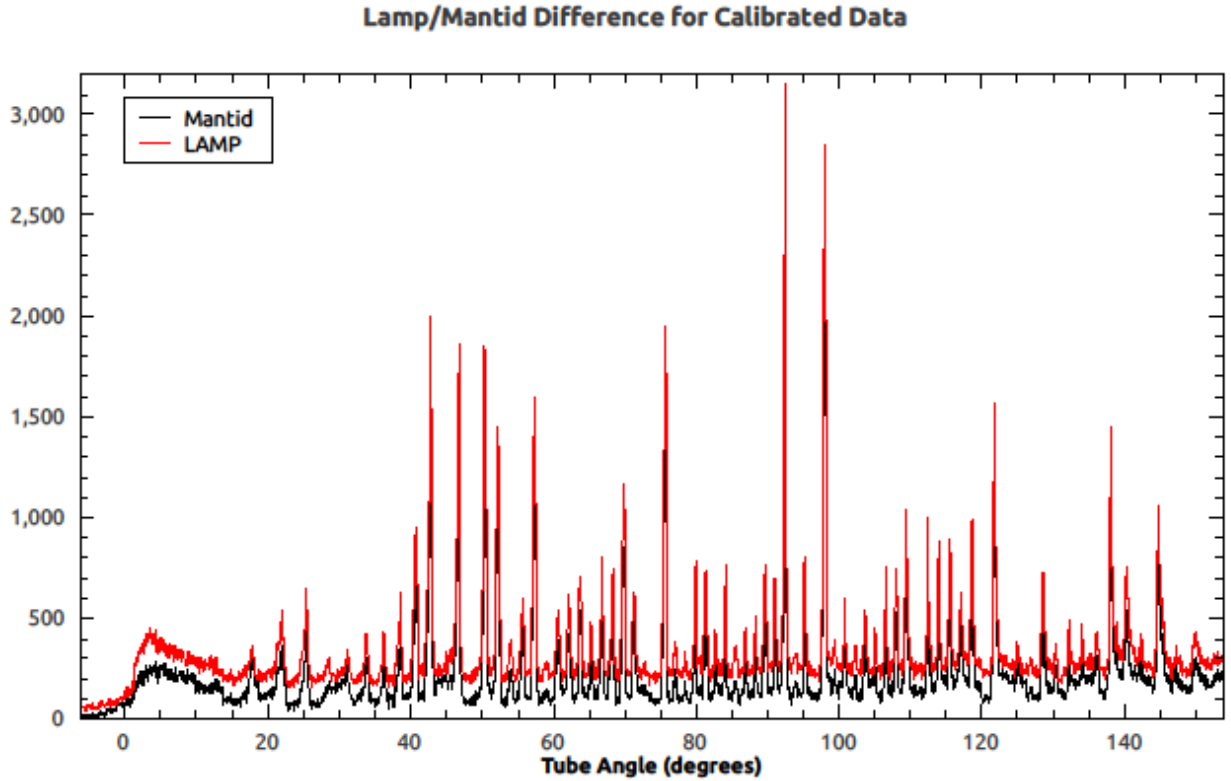
D2B Loader – Calibrated Data

- Calibrated data option added to loader



D2B Loader – Calibrated Data

- Calibrated data option added to loader
- Calibrated data shows some systematic difference in counts (as expected with interpolation)

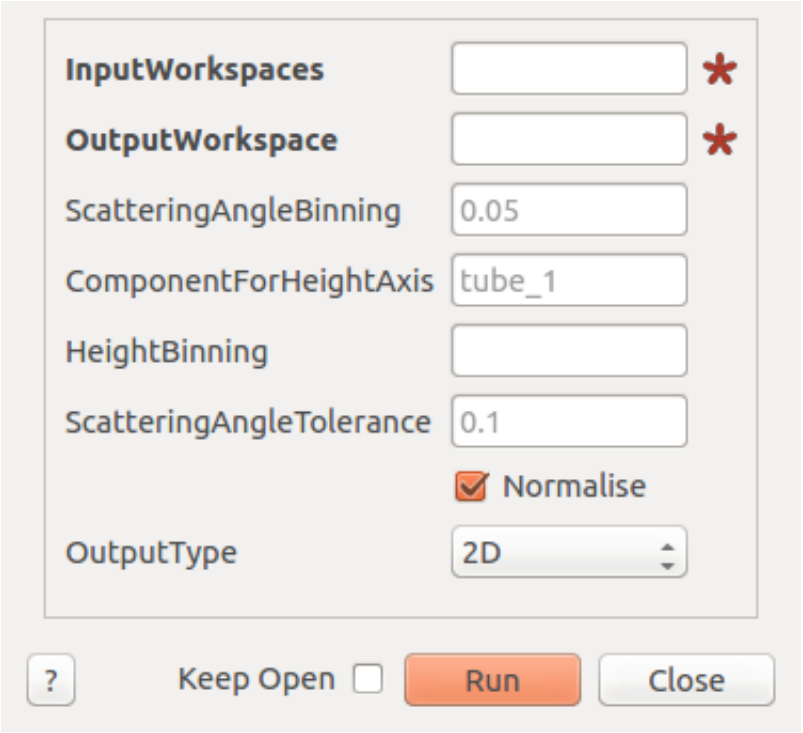


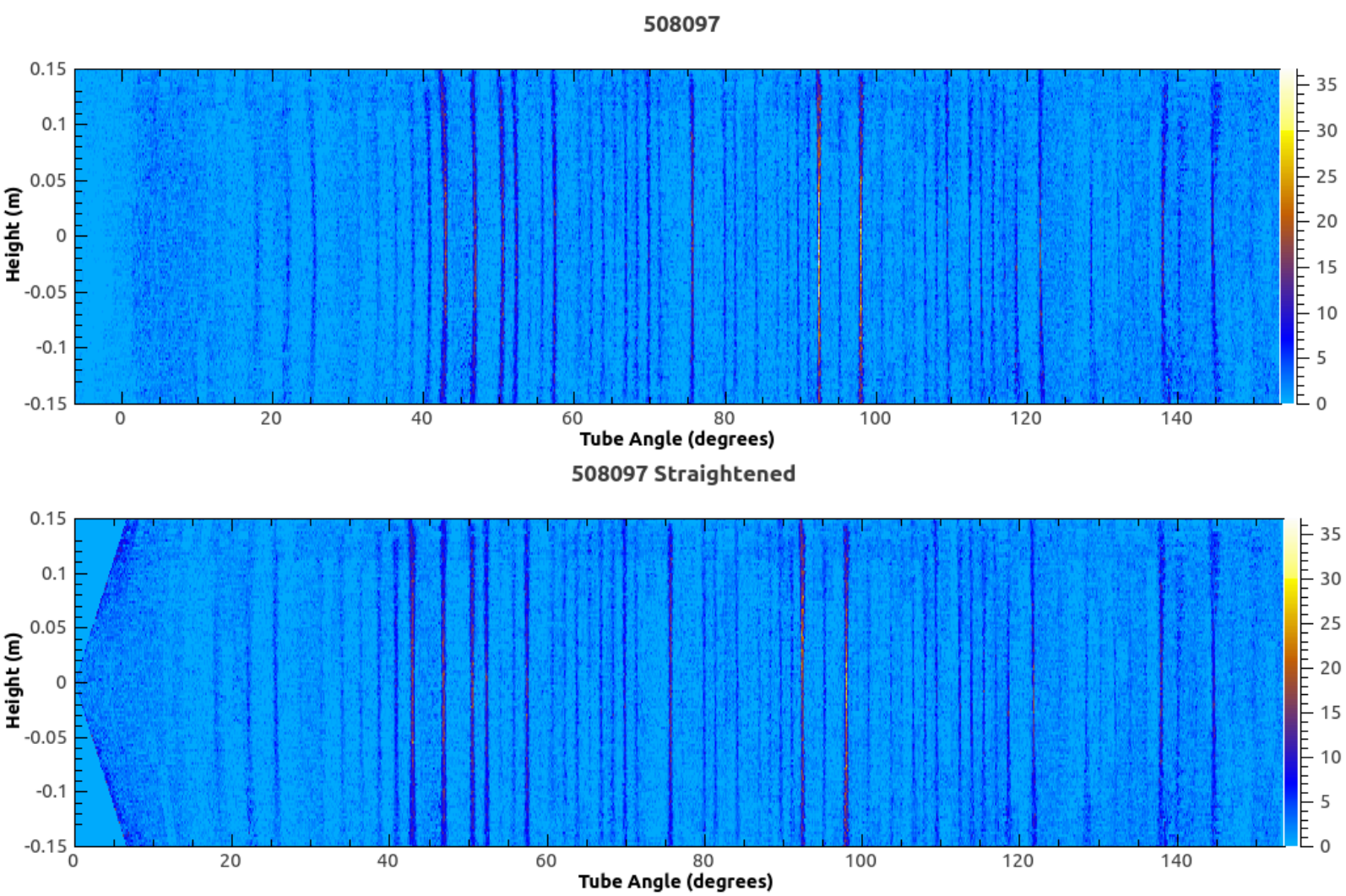
D2B Calibrated Data

- Tube Dead Zones
  - Do we still need to apply this?
  - Alternative is to mask in Mantid, and ignore detector pixels that are outside good range
- Efficiencies
  - Writing integers in NeXus file – is this ok?
  - Could mean different results when applying efficiencies in Mantid

SumOverlappingTubes - Straight 2D

- OutputType can be 2D, 2DStraight or 1D (to be added)
- 2D – height, tube centre scattering angle
- 2DStraight – height, pixel scattering angle
- 1D – pixel scattering angle




508097
Height (m)
0.15
0.1
0.05
0
-0.05
-0.1
-0.15
0
20
40
60
80
100
120
140
Tube Angle (degrees)
35
30
25
20
15
10
5
0
508097 Straightened
Height (m)
0.15
0.1
0.05
0
-0.05
-0.1
-0.15
0
20
40
60
80
100
120
140
Tube Angle (degrees)
35
30
25
20
15
10
5
0

Work To Do

- SumOverlappingTubes
  - 1D Option – for final diffractogram
  - Error propagation
  - Further unit tests for new features
  - Documentation
- Loader
  - Make decision on calibrated data
- Provide build for testing
- Add D2B support to PowderDiffILLReduction workflow algorithm
- Calibration – applying calibration from files