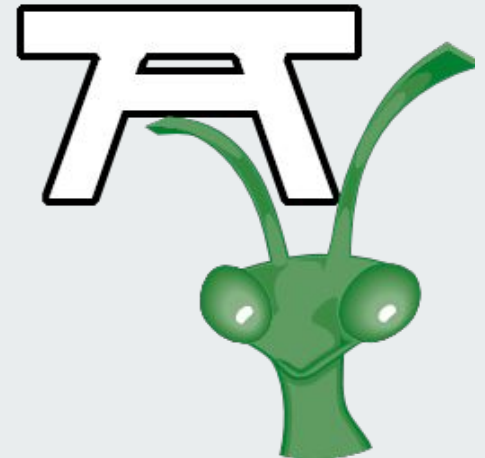# Mantid Workbench

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Mantid User Meeting 2019
ILL, Grenoble

Brief History

- MantidPlot is over 10 years old
  - Old technology
  - V. hard/a lot work to update to new technologies
  - Plotting never much liked
  - Complicated interface with many options
- Decision was made to begin work on a new interface with matplotlib-based plotting
- First release of new GUI happened with version 4.0
- **The date for MantidPlot to be removed from the installation has not yet been set. The removal will be announced well in advance.**

Mantid Workbench   ×

File   View   Interfaces

Workspaces ▭▢✕   Editor   ▭▢✕   **Messages** ▭▢✕

Load ▾ | Delete | Group | Sort ▾ | Save ▾

Filter Workspaces

Workspaces

- mar21335
  - Plot ▸
    - Spectrum...
    - Overplot spectrum...
    - Spectrum with errors...
    - Overplot spectrum with errors...
    - Colorfill
  - Show Data
  - Show History
  - Show Instrument
  - Show Sample Logs
  - Rename
  - Save NeXus
  - Delete

New* ▣

```
1  # The following line helps with future compatibility with Python 3
2  # print must now be used as a function, e.g print('Hello','World')
3  from __future__ import (absolute_import, division, print_function, unicode_literals)
4
5  # import mantid algorithms, numpy and matplotlib
6  from mantid.simpleapi import *
7
8  import matplotlib.pyplot as plt
9
10 import numpy as np
11
12 mar21335 = Load('MAR21335_Ei60.00meV.nxs')
```

▶ ⏹ Options ▾

Welcome to Mantid 3.13.20190318.1126
Please cite: http://dx.doi.org/10.1016/j.nima.
2014.07.029 and this release: http://dx.doi.org/
10.5286/Software/Mantid
Load started
Load successful, Duration 0.27 seconds

mar21335 sample logs   ✕

☑ Relative Time

	Name	Type	Value	Units
29	mon_sum1	number	34030948	
30	mon_sum2	number	0	
31	mon_sum3	number	0	
32	nchannels	number	2395	
33	nperiods	number	1	
34	nspectra	number	922	
35	period 1	bool series	True (1 entry)	
36	periods	int series	1 (2 entries)	
37	phase_t0	float series	(1265 entries)	
38	phase_thick	float series	(1265 entries)	
39	raw_filename			
40	rawfrm			
41	rb_proposal			
42	run_end			
43	run_header			
44	run_number			
45	run_start			
46	run_title			
47	running			

Log Statistics

Min: 0.0

mar21335   ✕

Pick | Draw | Instrument

Full 3D ▾

Axis View: Z+ ▾

Display Settings ▾

Save image

4399.65

10³

10²

31.709

SymmetricLog10 ▾

☑ Autoscaling

Energy transfer   -30   58.2   Reset

Mouse Buttons: Left -- Rotation, Middle -- Zoom, Right -- Translate. Axes: X = Red; Y = Green; Z = Blue   ?

Algorithms

Execute

- Arithmetic
- CorrectionFunction...
- Crystal
- DataHandling
- Diagnostics
- Diffraction
- Events
- Examples
- ILL
- ISIS
- Inelastic
- MDAlgorithms
- Muon
- Optimization
- Reflectometry
- SANS
- SINQ

mar21335-1   ✕

🏠 ⤢ 🔍 | Grid | 💾 🖨 ⚙ | Fit

Fit Function

Fit ▾ | Display ▾ | Setup ▾

Property	Value
Functions	
Type	CompositeFuncti...
NumDeriv	☐ False
Settings	
Workspace	mar21335
Workspac...	4
StartX	-9.397331
EndX	6.977078
Output	mar21335
Minimizer	Levenberg-Marq...
Ignore inv...	☐ False
Cost funct...	Least squares

mar21335

— mar21335: spec 5
— mar21335: spec 6
— mar21335: spec 7

Counts

Energy transfer (meV)

Status: Idle. Last job completed successfully at Mon Mar 18 15:56:12 2019 in 0.369s

Algorithms | Plots   Editor | IPython

DEMO!

Future

The following is a planned list of features that we will be continuing to develop:

- Port of all scientific interfaces required
- Slice Viewer/Spectrum Viewer
- Generating a script from a plot
- Improved tools for editing plot properties
- Subplot (grid of plots) tools
- Built-in help
- About window
- Script repository tool - sounds like there are new requirements for this

There is also planned time for working on feedback that we hope to receive on this first iteration of the interface.

Feedback

We would be grateful of any feedback on the new interface to any of the usual means of communication

- there is a http://forum.mantidproject.org/t/mantid-4-0-workbench/463 that can be used to report feedback
- the standard mantid-help mailing address
- come and have a chat to your local mantid developers.