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ISIS

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Data Formats and Analysis Codes – New Software for μSR

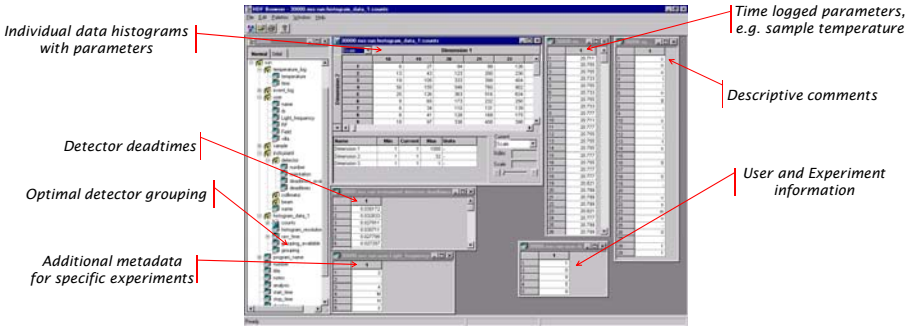
The flexibility of the NeXus data format makes it ideal for storing data collected during muon experiments. Its use opens up the possibility of sharing software beyond the muon community, to take advantage of the many tools already available to manipulate NeXus and HDF based files.

The NeXus Data Format (www.nexusformat.org)

What is NeXus?

- *Design principles* – data groups, fields, attributes and links
- *Storage objects* – base classes and the Instrument Definitions
- *Subroutines* – the NAPI, making it easy to access NeXus files
- *Scientific community* – driving development through application

What does a NeXus file look like?



What's the advantage of using NeXus?

- *Multi-platform* and *portable, format* and *code* in *public domain*
- Underlying format based on *HDF* or *XML*, transparent to the *API*
- *Self-describing files* that are *extendable*
- Potential for a *Common Data Exchange Format*
- *Software sharing*, including codes beyond the muon community

Glossary: *NAPI* – NeXus API, *HDF* – Hierarchical Data Format (see www.hdfgroup.org)

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Mantid (www.mantidproject.org)

What is Mantid?

A platform for analysis of neutron and muon data that is:

- Instrument and technique independent
- Supported on multiple platforms (Windows, Linux, Mac OS X)
- Easily extensible by Instrument Scientists/Users
- Open source and freely redistributable to visiting scientists

Ongoing development in collaboration with Tessella plc, with International support from ISIS and ILL (Europe) and SNS (US)
Primary analysis package for ISIS and SNS, interest from ILL, HMI

Mantid provides Data Reduction, Analysis and Visualisation