

Mantid for Continuous Flux Sources, JRA

Leading beneficiary: PSI

Partners:

ILL, Tessella

Estimated budget (in person months, other direct cost) and tentative distribution per partner

60PM plus 20K for travel and communication. 12PM Tessella, 24PM ILL, 24PM PSI

Abstract of your innovative activity:

Mantid, www.mantidproject.org, is a professional framework for data analysis and data reduction. It is jointly developed between ISIS, SNS and the company Tessella. It is expected that the ESS will join the Mantid consortium sooner or later. Driven by its main contributors, Mantid primarily addresses the concerns of time-of-flight instruments. However, the framework contains many desirable features which would make it useful for data reduction tasks at continuous flux sources too. Traditionally such sources use a host of home grown and often badly maintained utilities for data reduction and analysis.

This JRA would add the algorithms and data structures required to make Mantid usable for continuous flux source instruments. In special, add support for scanning instruments. Another intended output of this JRA is a set of standard data analysis tools within Mantid for at least reflectometry, xans, triple axis spectroscopy and multi dimensional fitting. This work should be done at a european level as all continuous flux sources in europe can benefit from this work. Beyond the listed partners potential beneficiaries include the HZB, FRM2, Saclay, Reactor Instituut Delft etc.

The benefit for the user community is three fold:

- The sources themselves would be freed from maintaining their own data reduction and analysis software. Instrument scientists would only need to provide a WWW-page detailing how to do data reduction and analysis with Mantid*
- The users would be able to download and use a professionally developed tool for most platforms. They could use one common tool for most data reduction and analysis tasks rather than learning to use a plethora of facility specific tools.*
- For the first time users would have a tool available which allows standard data analysis to be performed cross facility*

