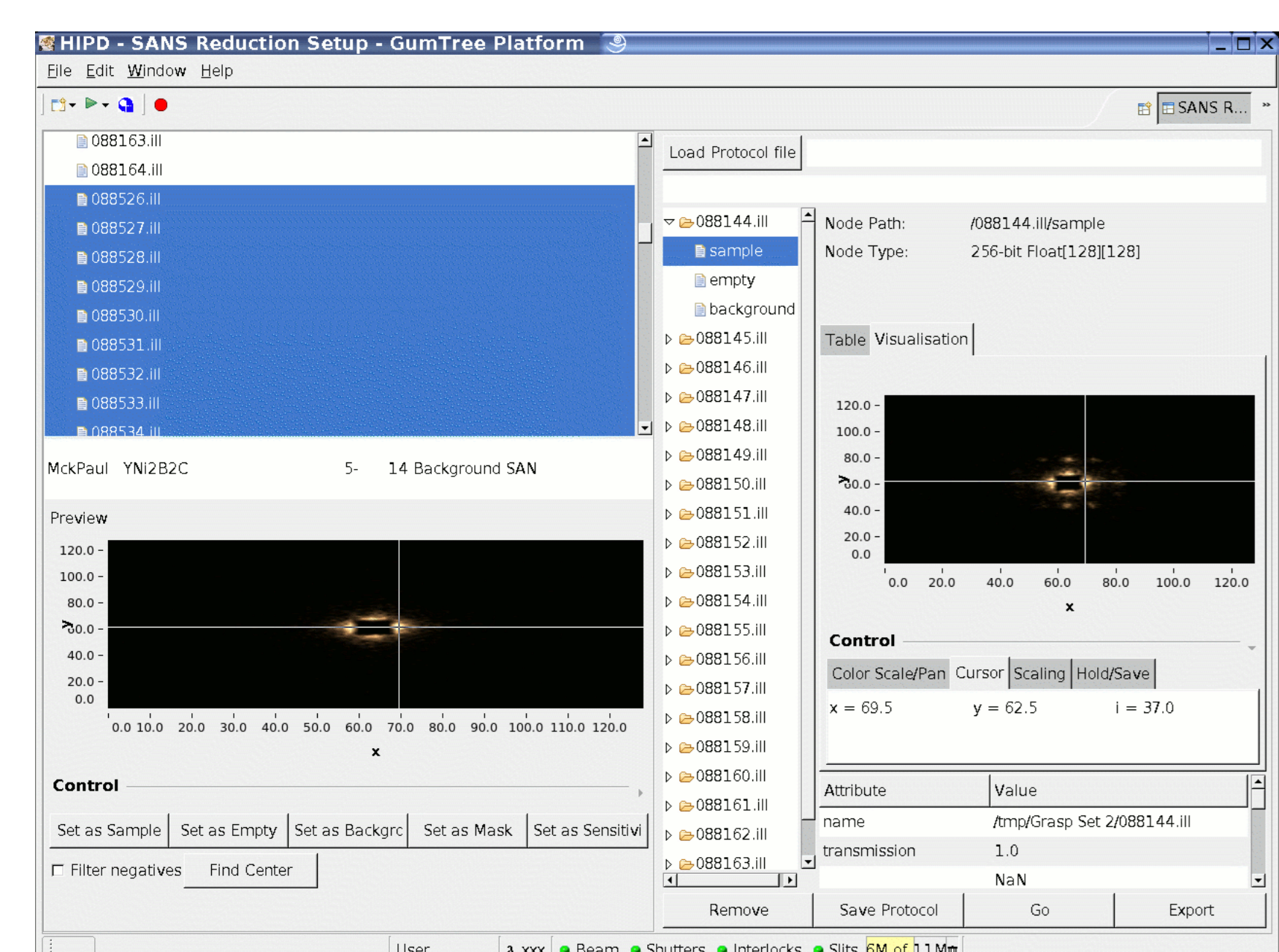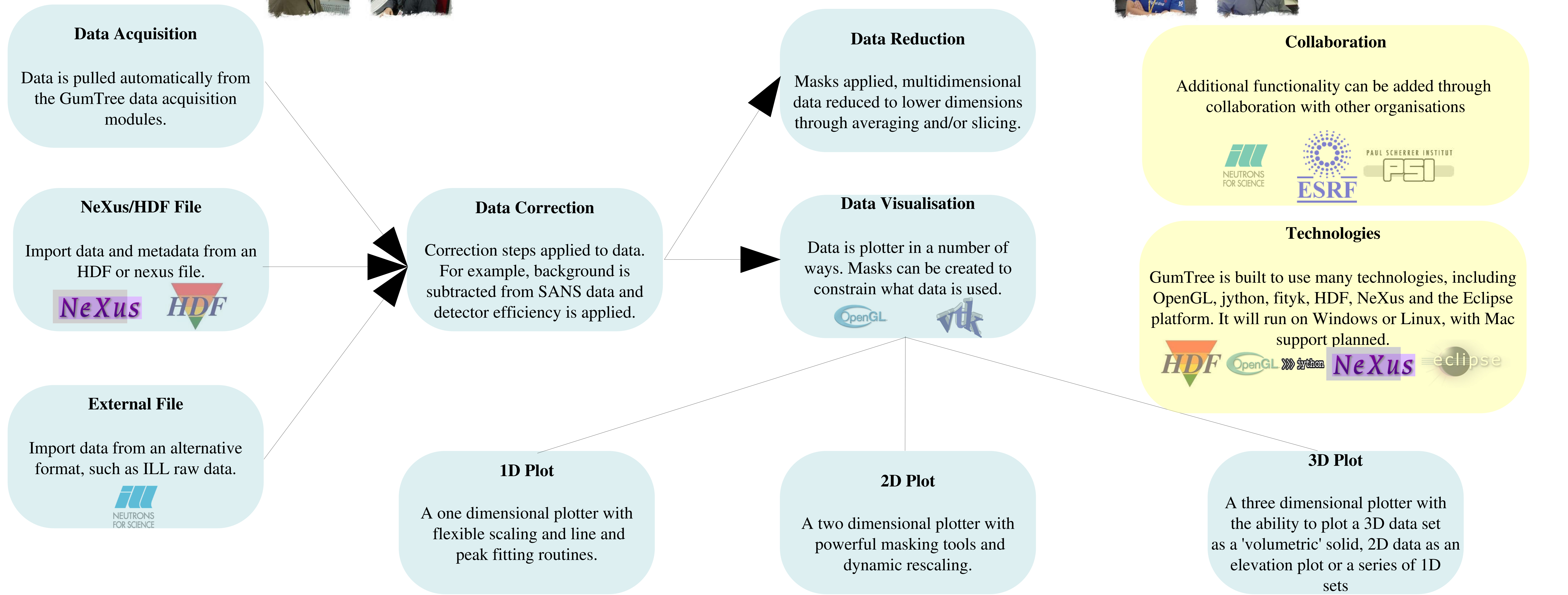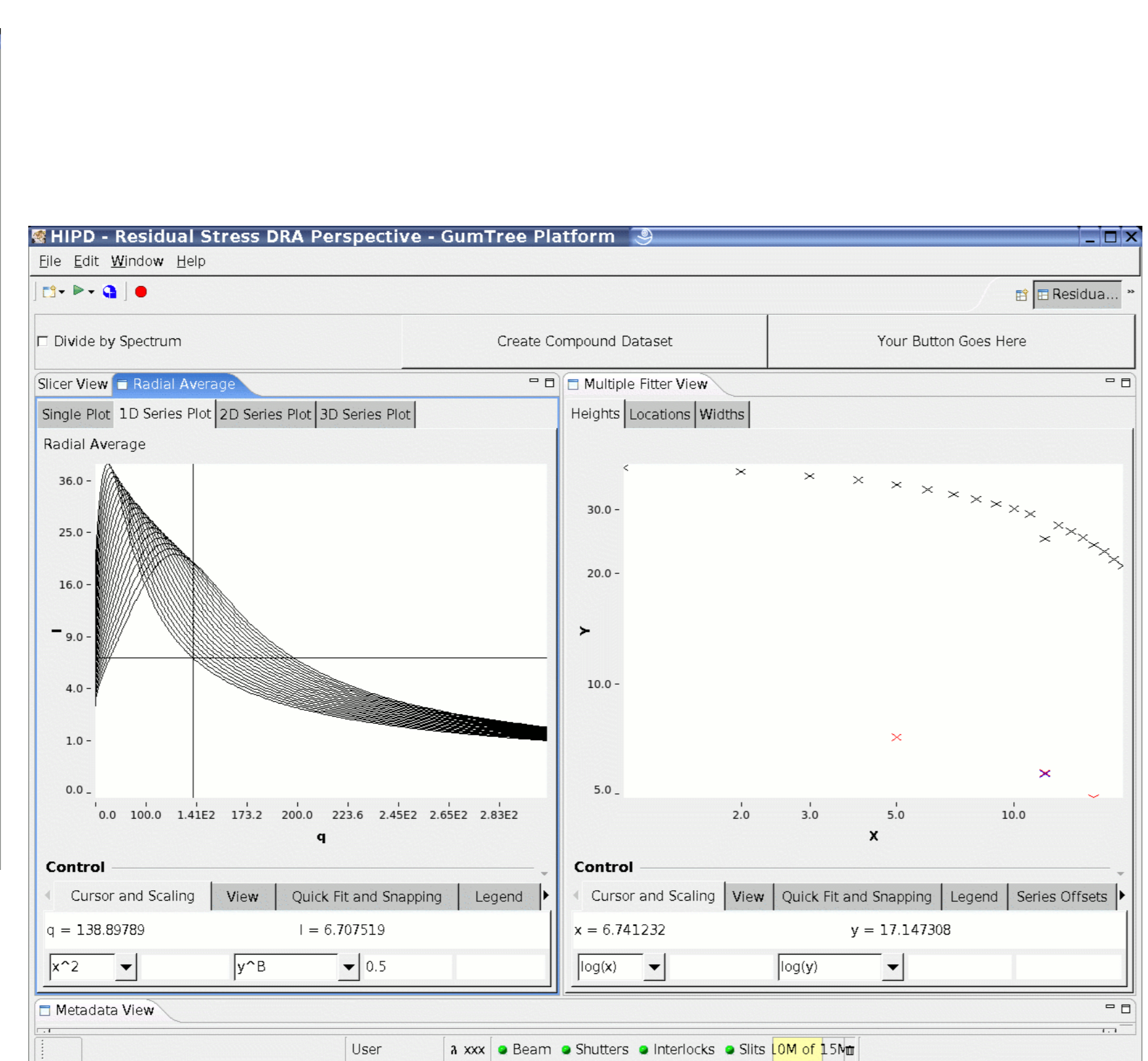# GumTree Data Reduction and Visualisation

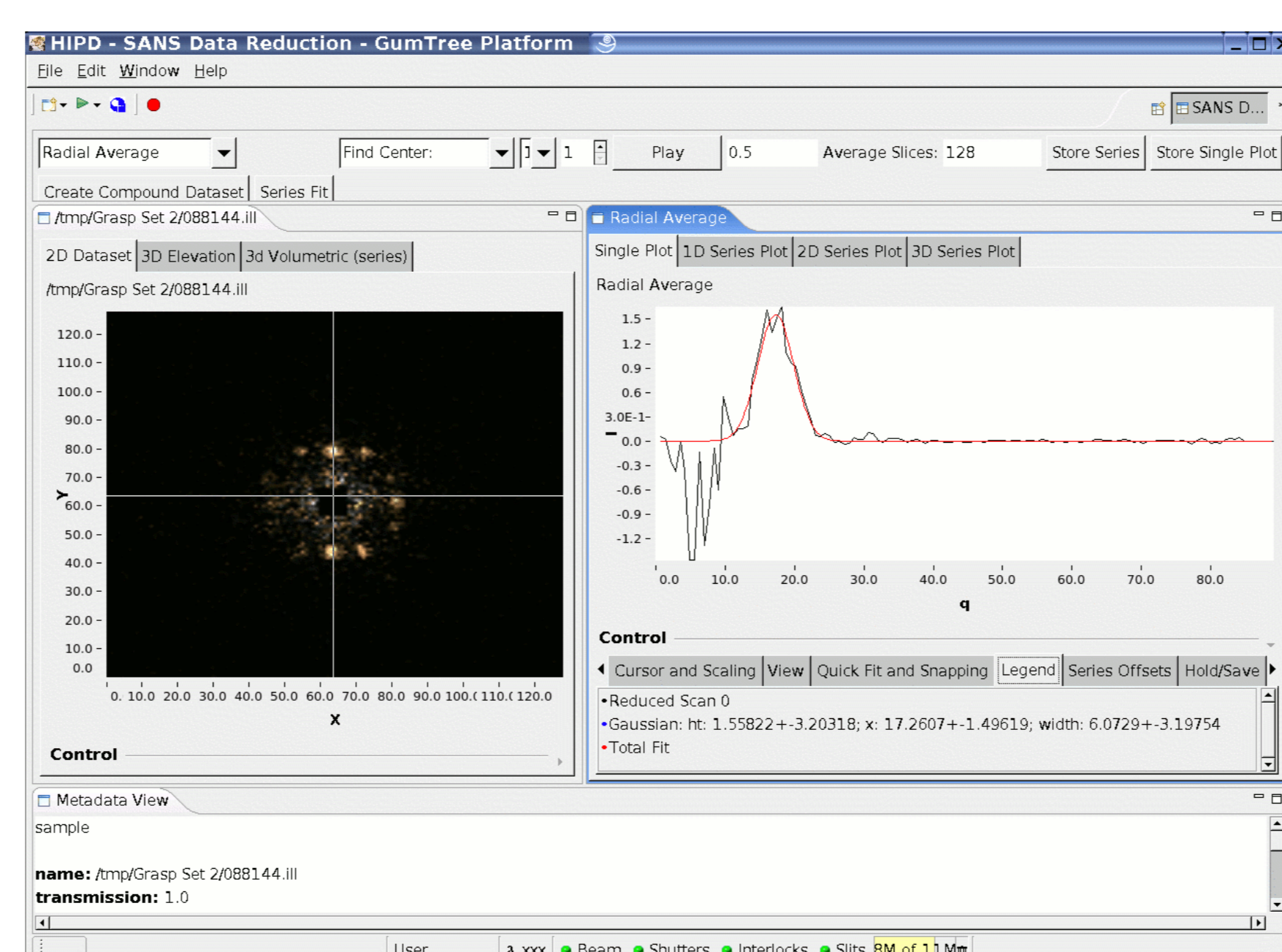## Online data reduction and visualisation for the GumTree integrated scientific workbench.

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Data Acquisition

Data is pulled automatically from the GumTree data acquisition modules.

NeXus/HDF File

Import data and metadata from an HDF or nexus file.

External File

Import data from an alternative format, such as ILL raw data.

Data Correction

Correction steps applied to data. For example, background is subtracted from SANS data and detector efficiency is applied.

Data Reduction

Masks applied, multidimensional data reduced to lower dimensions through averaging and/or slicing.

Data Visualisation

Data is plotter in a number of ways. Masks can be created to constrain what data is used.

Collaboration

Additional functionality can be added through collaboration with other organisations

Technologies

GumTree is built to use many technologies, including OpenGL, jython, fityk, HDF, NeXus and the Eclipse platform. It will run on Windows or Linux, with Mac support planned.

1D Plot

A one dimensional plotter with flexible scaling and line and peak fitting routines.

2D Plot

A two dimensional plotter with powerful masking tools and dynamic rescaling.

3D Plot

A three dimensional plotter with the ability to plot a 3D data set as a 'volumetric' solid, 2D data as an elevation plot or a series of 1D sets
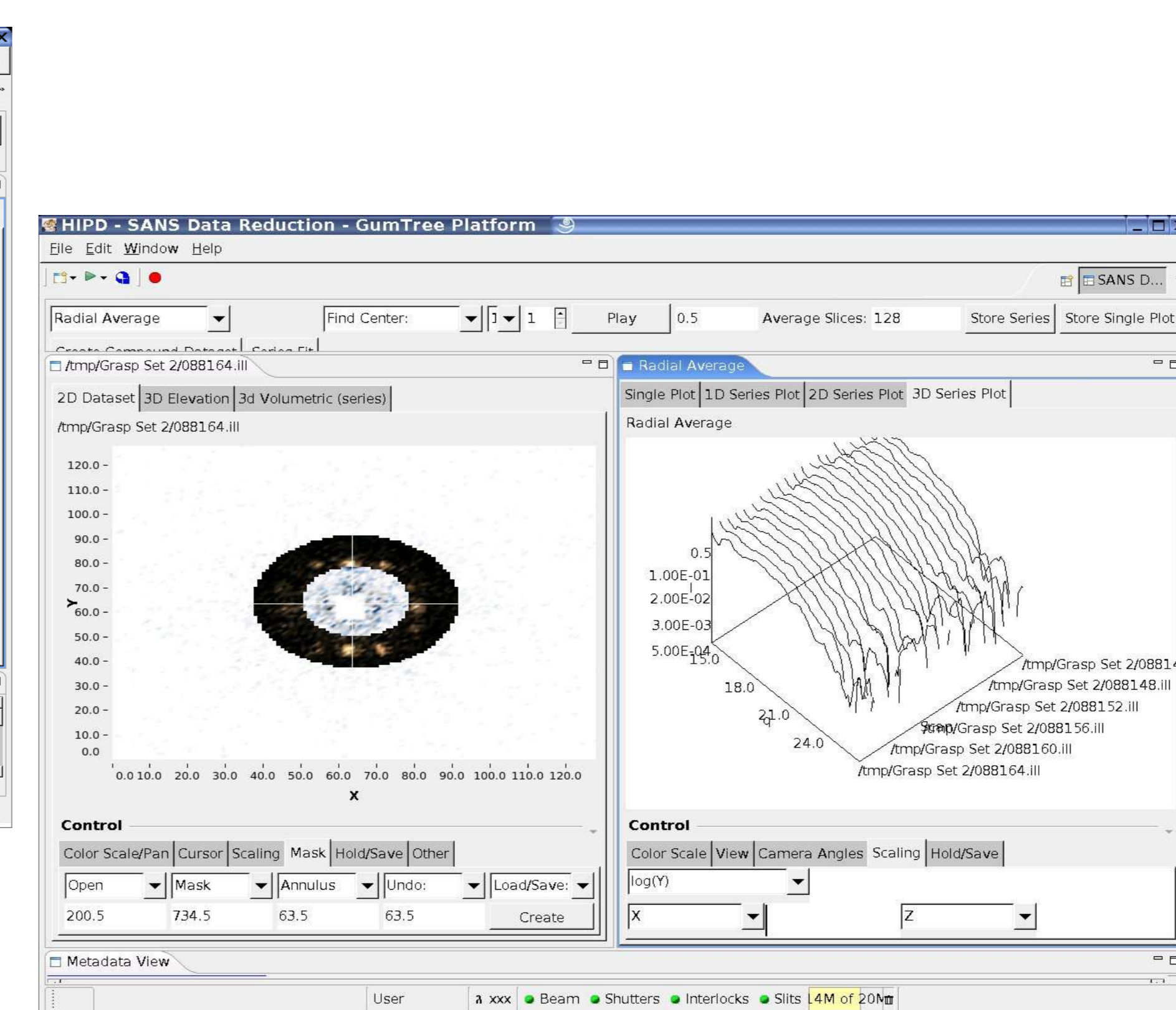
File loader displays previews and metadata for files on disk and loaded data.
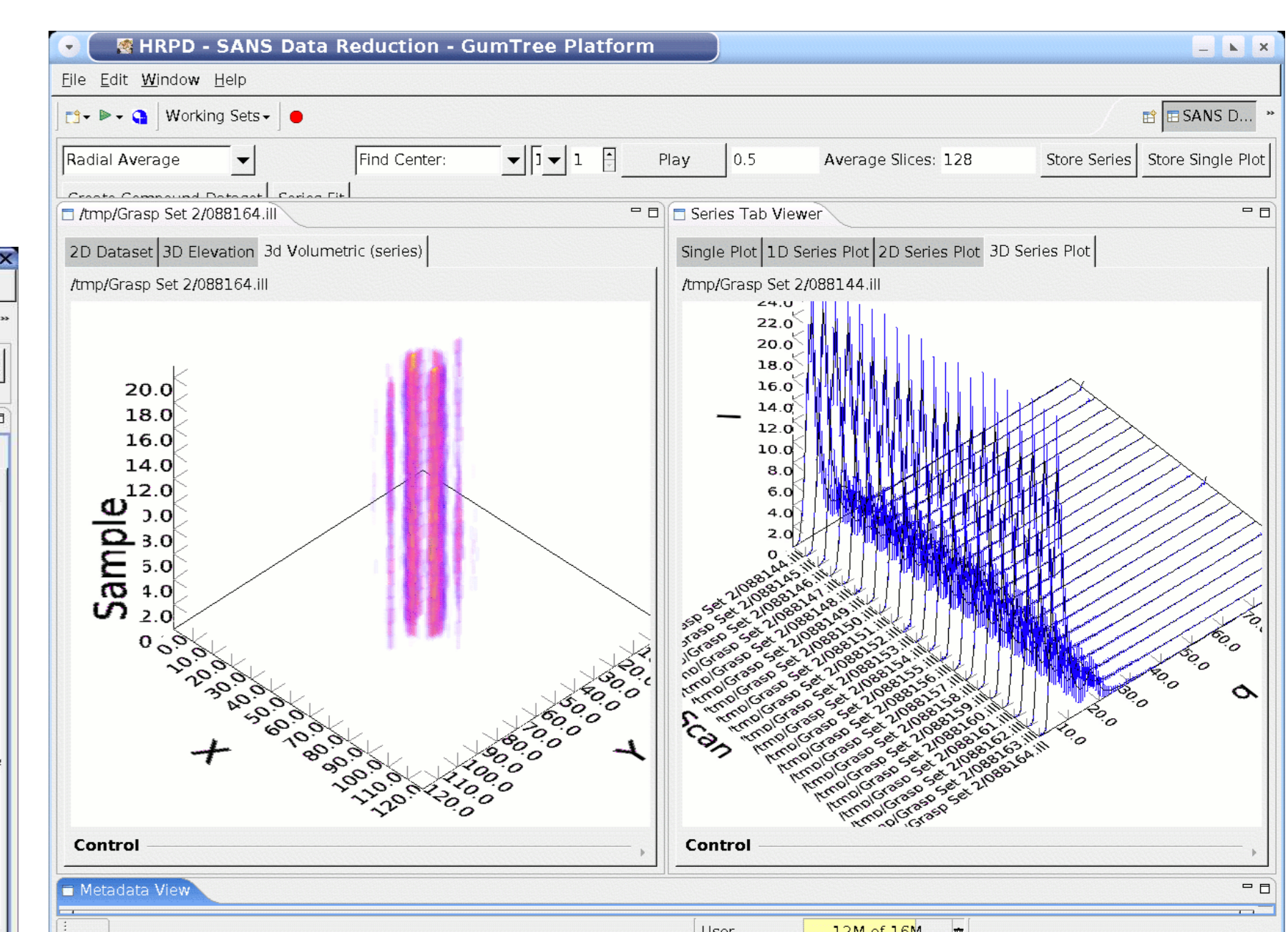
Flexible scaling on 1D and 3D plots with data coordinate tick marks, real time readouts and snap-to-curve.

Peak fitting readily available from any 1D data set.

Changes to masks immediately reflected in series reductions. Scaling can also be applied to 3D plots.

"Volumetric" plots allow a series of 2D data sets to be viewed at a glance, making transitions stand out clearly.