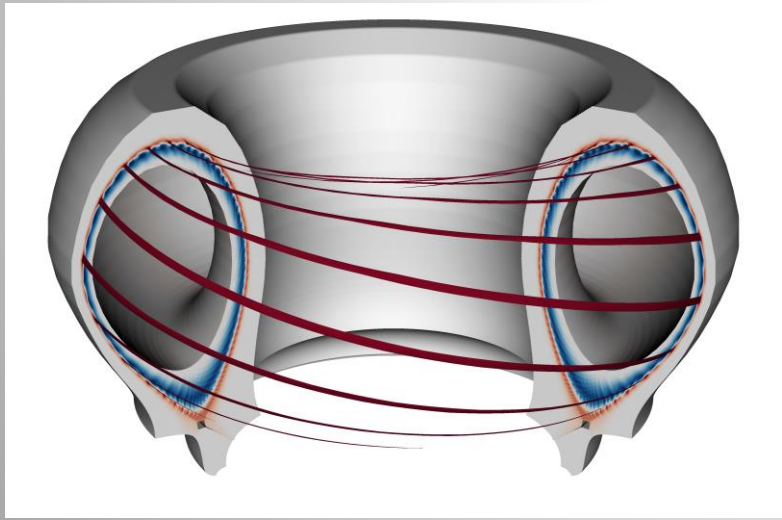
Visualizing data from the BOUT++ framework for fluid/plasma simulations

Objectives

- BOUT++ is a framework for writing fluid / plasma simulations in curvilinear geometry
- Provide a visualization capability for BOUT++ data beyond visualizing it as simple 2- and 3-dimensional arrays
- Want to be able to look at the data as it would appear in the physical world

Impact

- They are now able to visualize their data as it appears in the physical world using a fully functional visualization and analysis tool.
- The are now able to verify that the complex behavior of the field lines is correct
- They are now able to effectively explore the time dependent behavior of their data



Results

- Implemented a VisIt reader that understands the BOUT++ NETCDF conventions
- Deployed in VisIt 2.7
- Gave a tutorial on using VisIt to visualize BOUT++ data at the BOUT++ 2013 workshop