Visualization of Laser Back Scatter
Side-by-Side Volume Visualizations of Time Dependent Behavior

Application: Laser back scatter modeling by Dr. Steve Langer at LLNL

Technology

- Ability to view data using a client/server architecture
- Ability to interactively set transfer function to bring out features of interest at key points in the simulation
- Ability to quickly generate side-by-side animations of key physics quantities to understand time dependent behavior
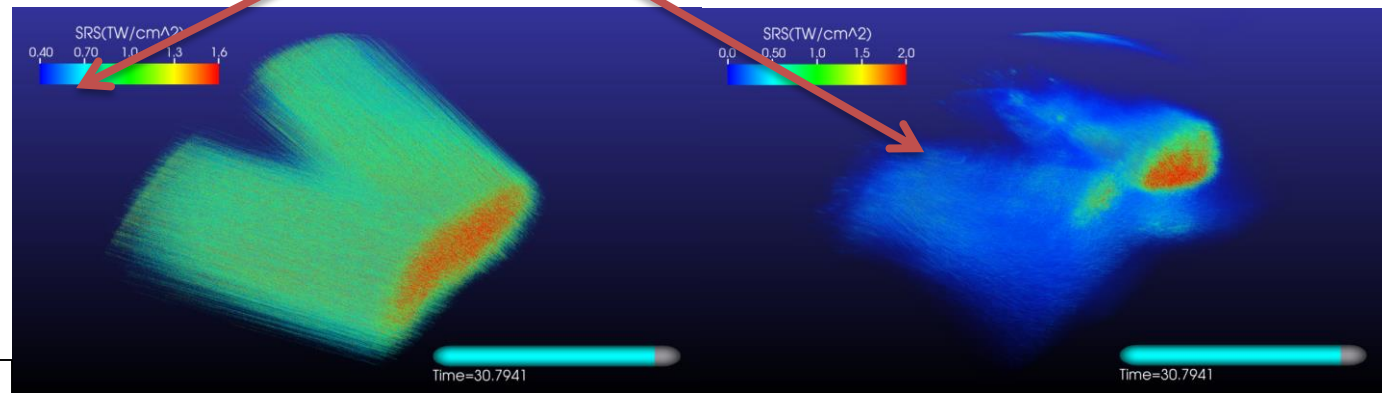
Result/Impact

- Client/server architecture allows the user to view his data on his desktop without moving the data
- Ability to interactively set transfer function allows scientist to quickly explore data
- Automated movie generation makes it easy for the user to see time evolution of data with different views and transfer functions.

Challenges

- Extreme data size generated by high resolution simulation (220 billion cells)
- Correlating multiple, complex, 3d phenomenon over time

A burst of back scatter energy traveling from left to right

Reduced input beam corresponds to high back scatter

Input beam

Back scatter