Future Targetry Plans

NFMCC Collaboration Meeting

Lawrence Berkeley National Laboratory

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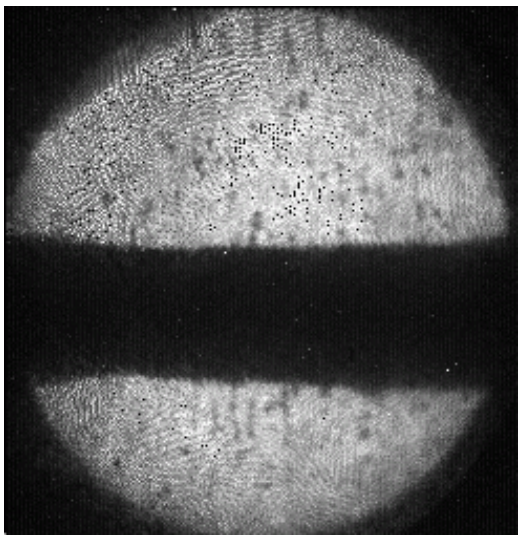
Focus of Future Targetry Efforts

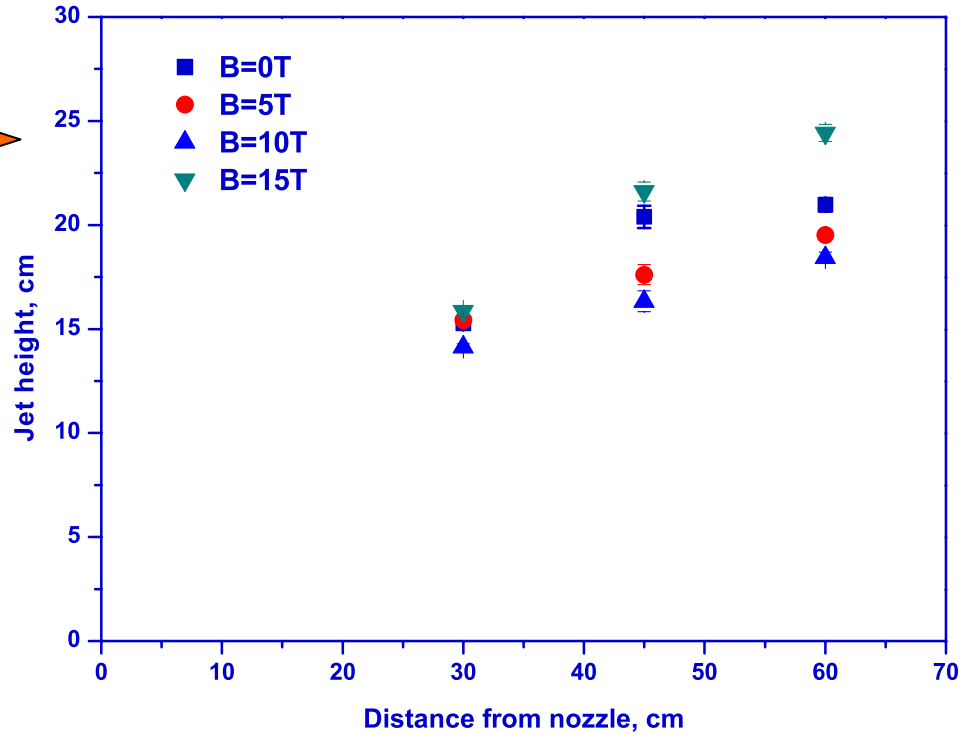
- **Post-MERIT**
- **Magneto hydrodynamics**
- **IDS-NF**

MERIT

Nozzle performance:

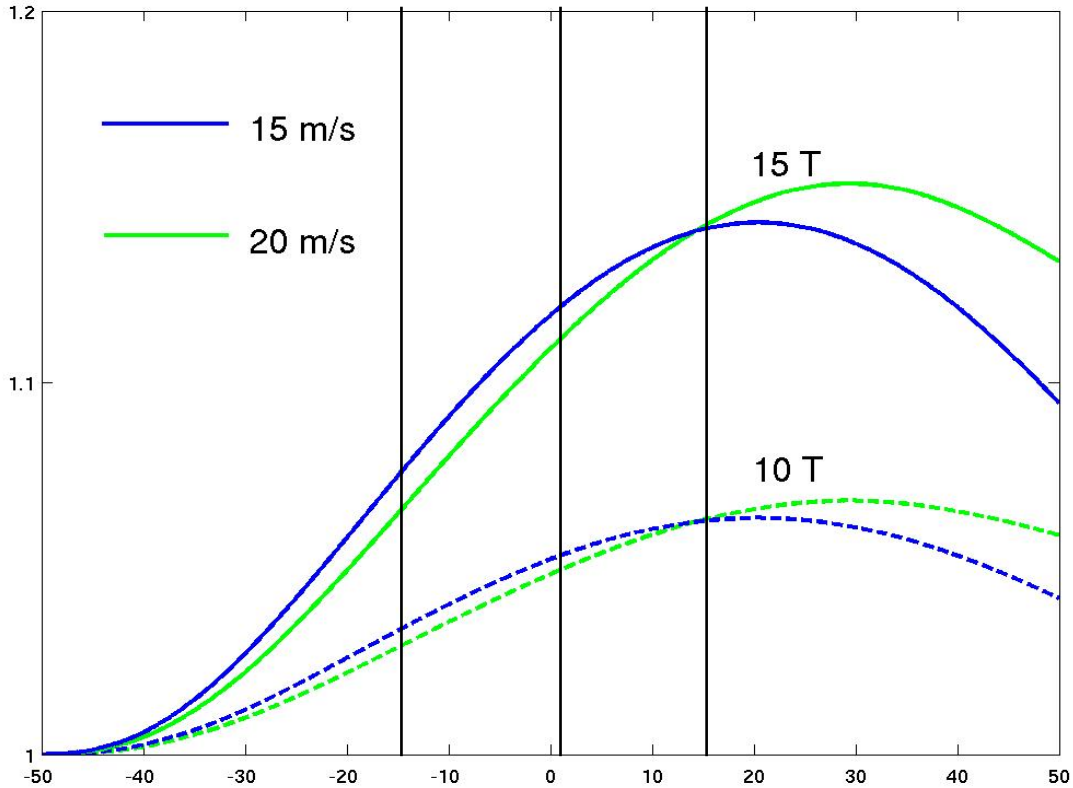
The Issue



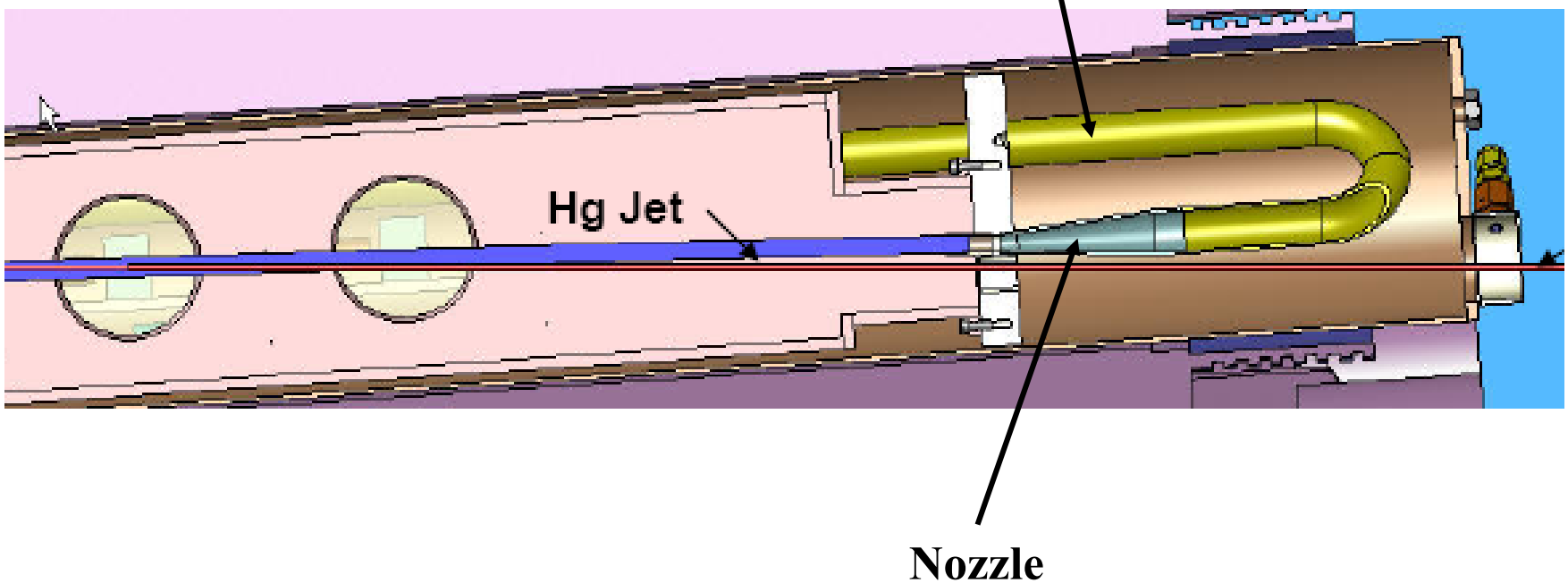


Simulated Jet Vertical Dimensions

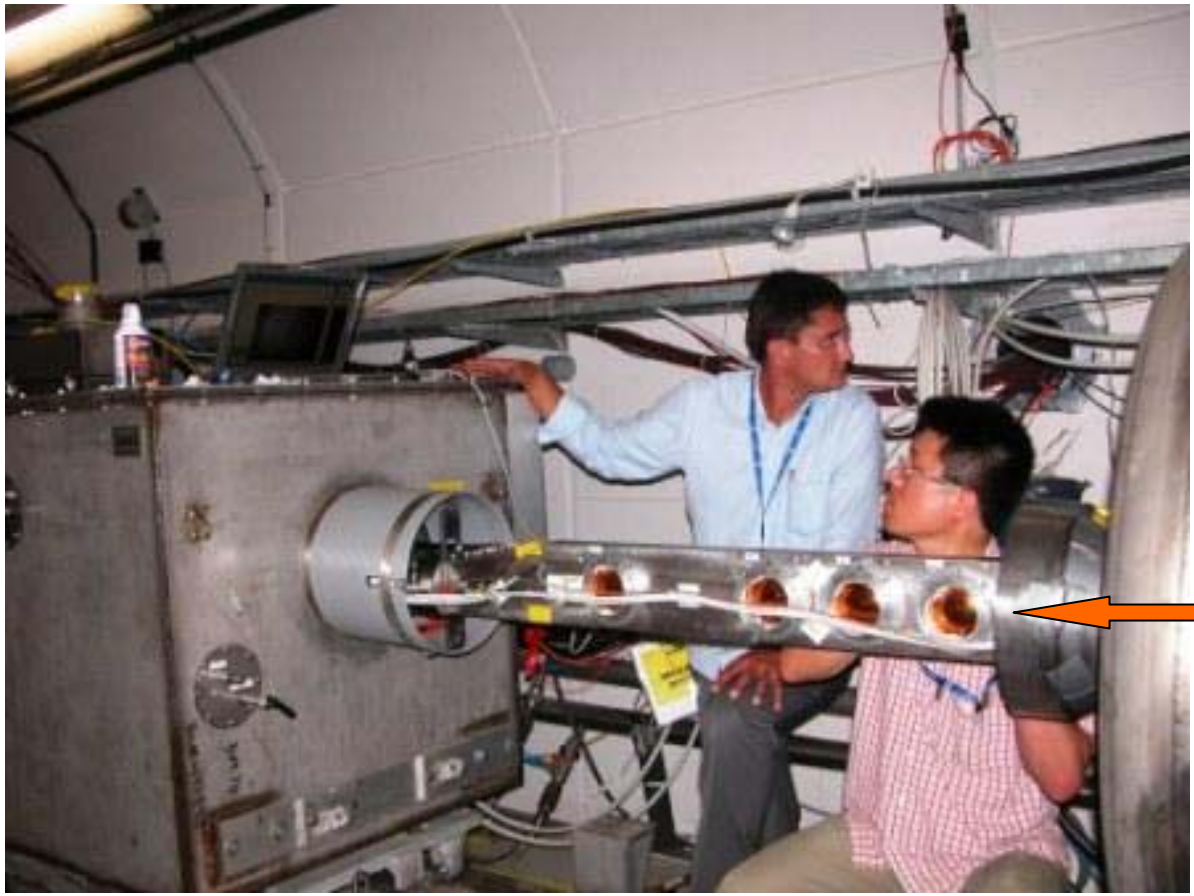
R. Samulyak



The 180^0 Bend

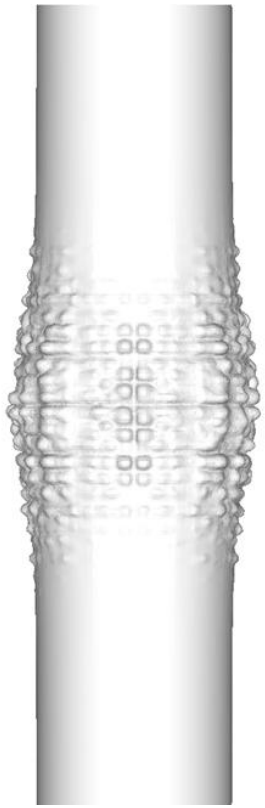


The Primary Vessel Optics

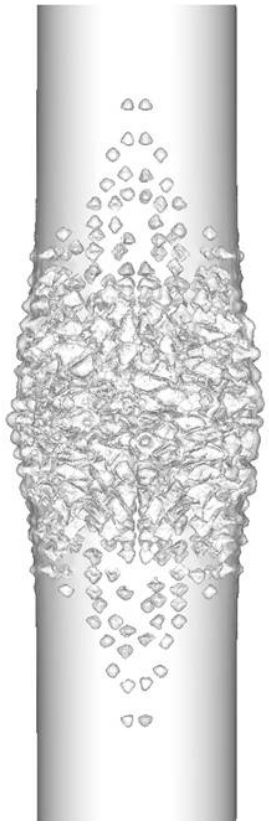


Optics aligned horizontally for vertical view only of Hg jet

Two Phase Hg Simulations



External View

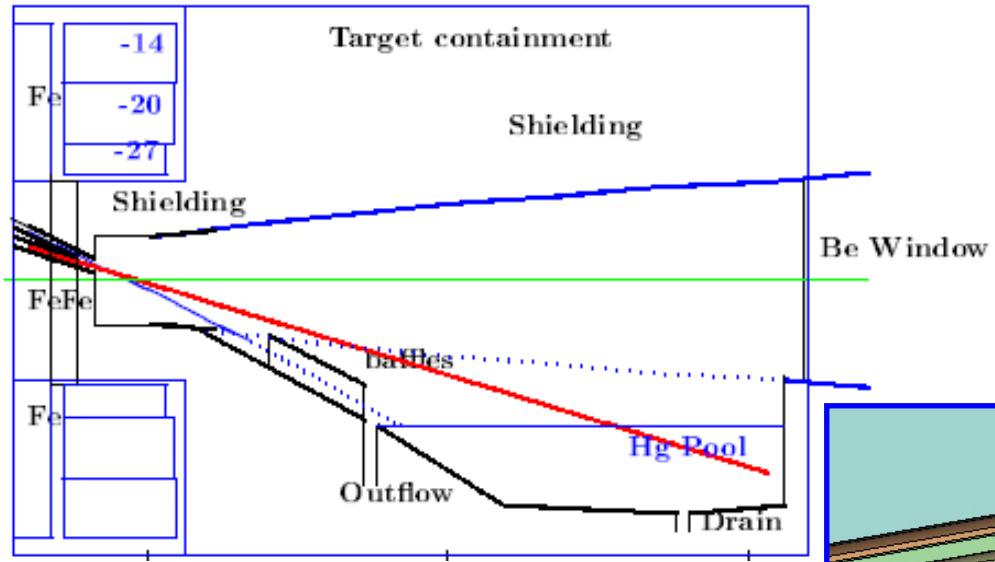


Internal View

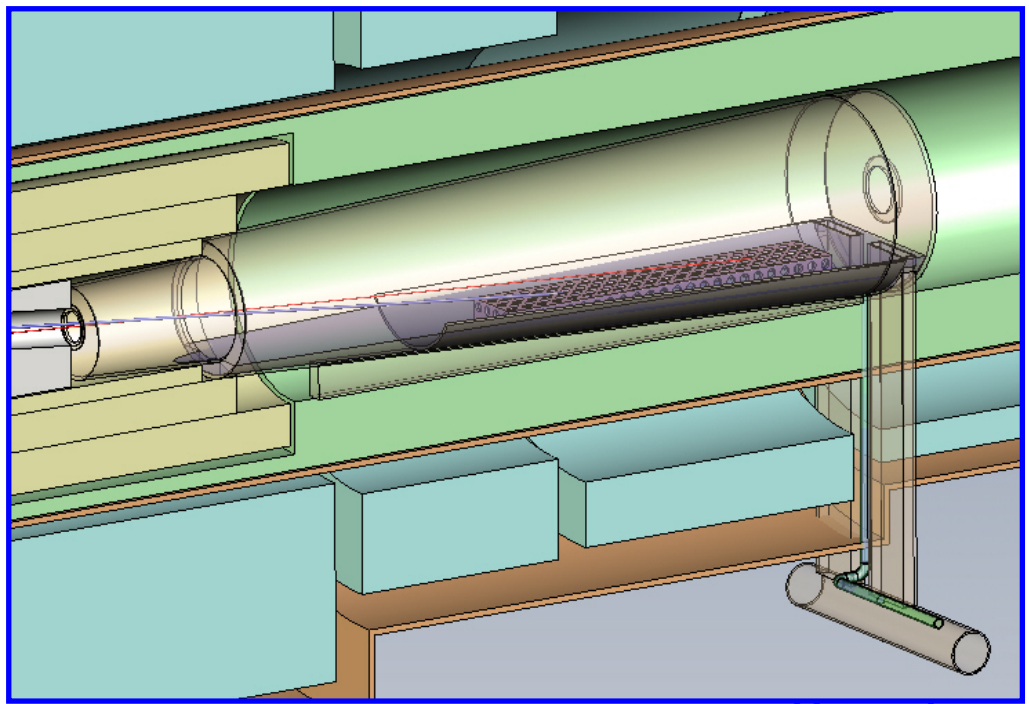
R. Samulyak, W. Bo

No Magnetic Field
100J/g Peak Energy Deposition
t = 30μs

The Hg Capture System



V. Graves, ORNL



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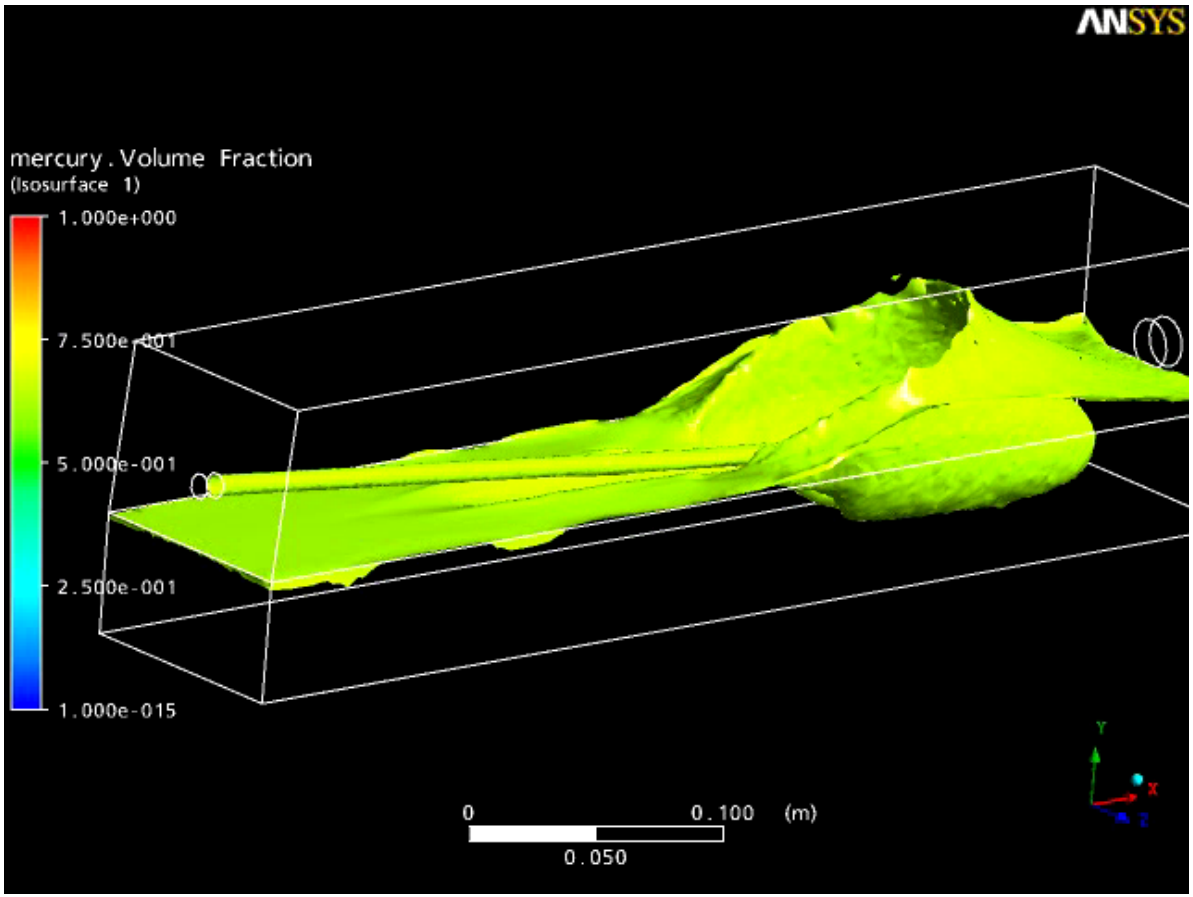
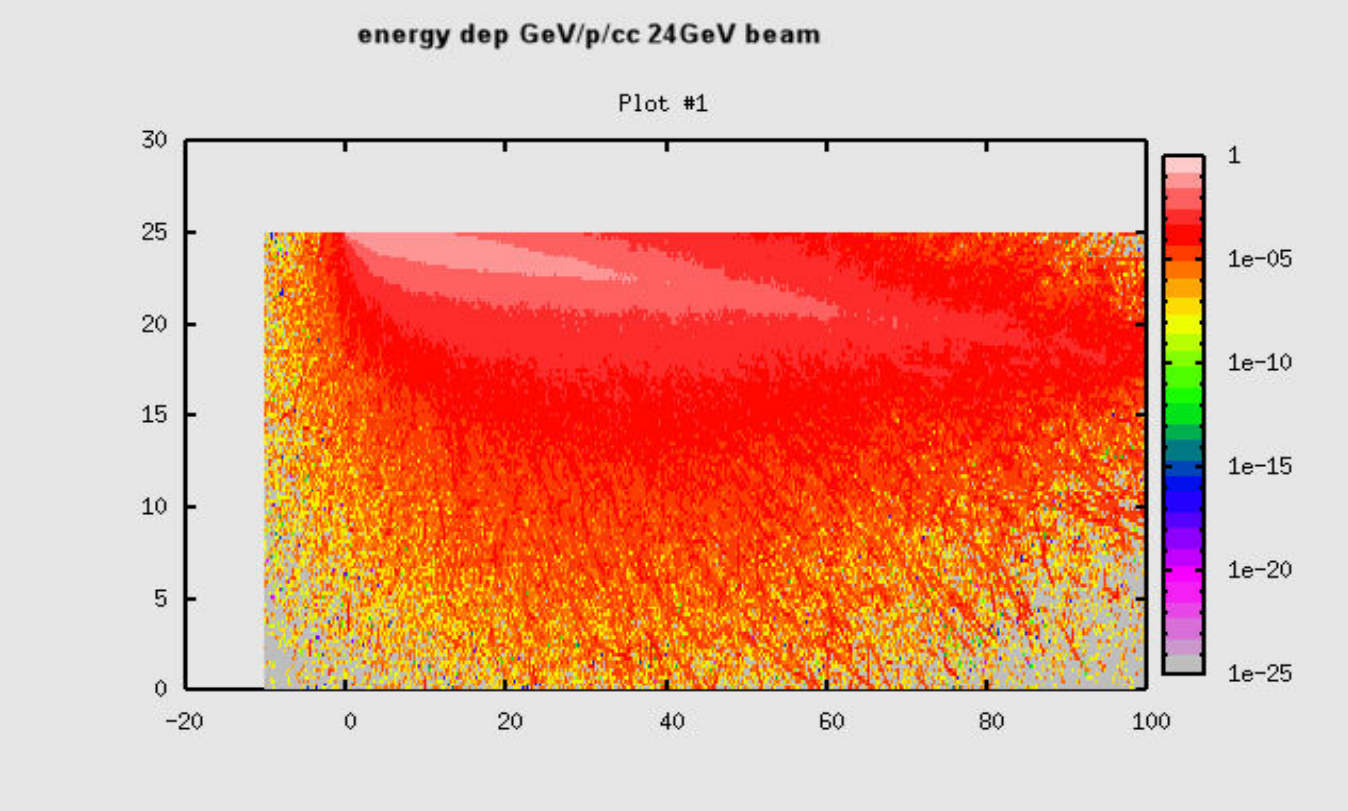
The Jet/Beam Dump Interaction



T. Davonne, RAL

Fluka Simulation - Energy deposition in mercury pool with 24GeV beam



How much of the beam energy is absorbed in the beam dump?

T. Davonne, RAL

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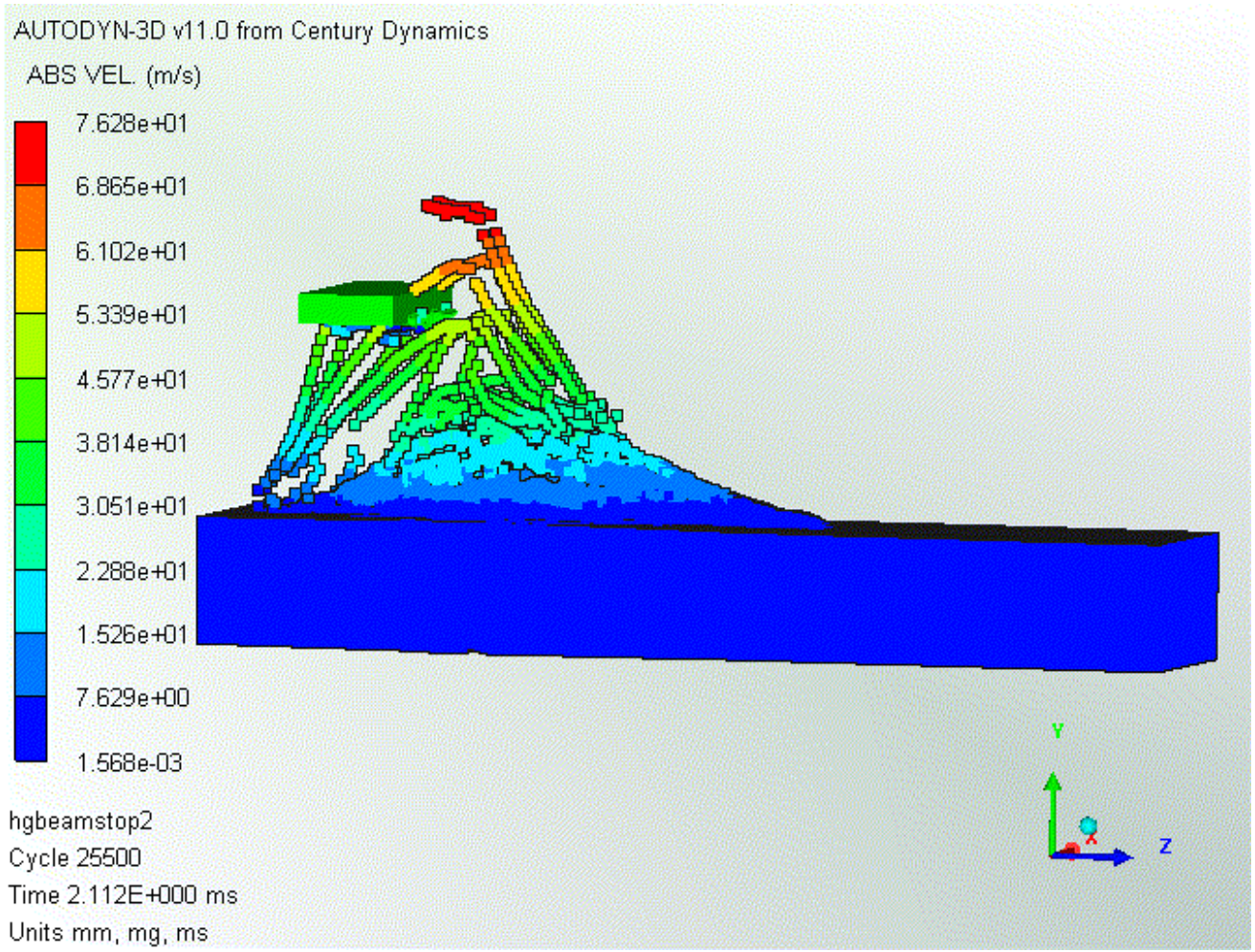
Eruption of mercury pool surface due to 24GeV proton beam



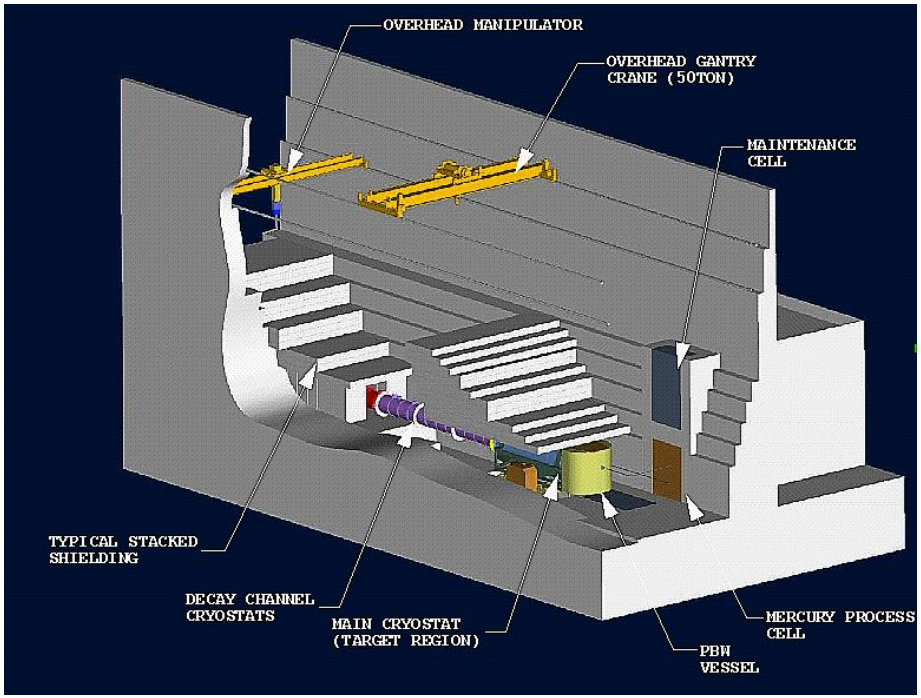
Autodyne simulation

Splash following pulse of 20Terra protons

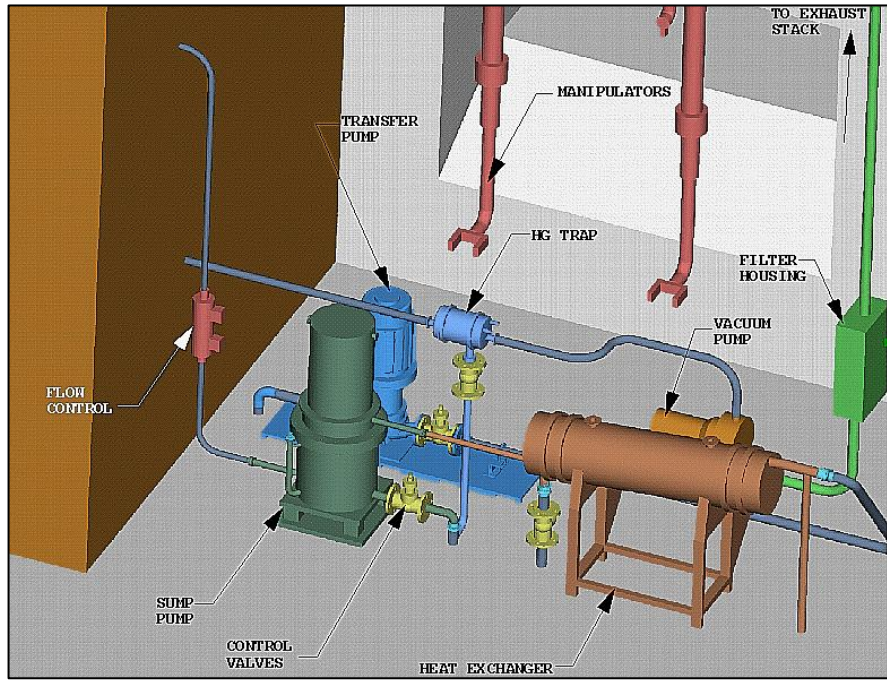
Harold G. Kirk

IDS-NF Target Station Infrastructure

Build on Study 2 Target Staion Concepts



The Target Hall



The Hg Handling System

V. Graves, ORNL

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