Mercury Catcher Status

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Hg Jet Design Meeting

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U. S. DEPARTMENT OF ENERGY

Hg Catcher Design

- **Purposes**
  - **Receive 20m/s Hg jet after beam interaction**
  - **Redirect flow out of primary tube**
  - **Minimize (or eliminate) any backsplash toward upbeam end**
- **Considerations**
  - **Tilted solenoid puts roof of primary very near Hg jet path**
  - **Jet and beam paths nearly parallel at downbeam end**
  - **Jet may not be well-formed after beam interaction**
  - **Primary containment windows cannot withstand Hg jet impact**

Current Catcher Concept

- **Deflector welded to primary containment tube**
- **Leading edge positioned upstream of potential impact location**
- **Smooth flow redirection out of primary tube directly into sump tank**
- **Acts as a SS beam window**
  - **What thickness is allowable?**
  - **Assumed that imparted beam energy will not be heat issue**
- **Assumed that windows need exposure to primary containment environment – true?**
- **Would like to incorporate design into Princeton jet tests**