

# Mercury Catcher Status

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**Hg Jet Design Meeting**

**Princeton University**

**Nov 15, 2004**

# 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

- **Welded to primary containment**
- **Full width of primary**
- **Leading edge positioned upstream of potential impact location**
- **Smooth flow redirection out of primary tube**
- **Does act 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**