

Mercury Nozzle Status

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Hg Jet Design Meeting

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Nov 15, 2004

Nozzle Constraints

- **Tilted solenoid has imposed new geometry constraints on the nozzle**
 - **Windows are now at bottom of primary containment**
 - **Nozzle cannot penetrate primary on end flange, currently shown on bottom**

Flow Issues

- **High flow in small lines, tight flow path**
- **Direction changes cause several problems**
 - **Pressure drop**
 - **Vibration**
 - **Cavitation**
 - **Tube erosion**

Design Issues

- **Desire mechanically attached nozzle for changeout during cold testing**
- **Need to maximize pipe diameter to decrease velocity and minimize pressure drop**
 - Two supply lines
- **Minimize number and severity of direction changes**
 - Fairly complex manifold to avoid beam
- **Possibly supply Hg outside of solenoid in double-wall pipe**

Existing vs new

- **Show two images – one of existing single tube vs two tubes into manifold with beam hole**