Flexible collimator apertures: vacuum inserts.
Primary Collimator vacuum chamber design.

Vladimir Sidorov
Recycler Collimation System meeting
01/26/2016
Recycler Secondary Collimator Vacuum Liner

- 4”x4”x1/4” Tube
- CF8” flange
- 0.0312” gap
- 0.0156 gap
- Fiducial
- Insert
• Vacuum liner insert

Top half

Bottom half

Weld

Horizontal cross section

Vertical cross section
• Vertical moving block with vacuum liner.
• Secondary Collimator
• **Primary Collimator**

![Diagram of Primary Collimator]

- Support frame
- Vacuum chamber
- Foil
- Motion control
- Primary Collimator

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• Primary Collimator Vacuum chamber

- CF2.75”RT flange
- CF 6.75” flange
- Fiducial
- Foil port
• Vacuum Chamber with Steel Shielding
Mask Vacuum Liner

- 4”x4”x1/4” tube
- CF 8” flange

- Vacuum liner
- Steel shielding
- Marble

Insert
Mask

- Insert
- Frame
- Steel shielding
- 3/4-10 Thread rod
- Marble
- Vacuum liner
• Primary, Secondary Collimators and Mask