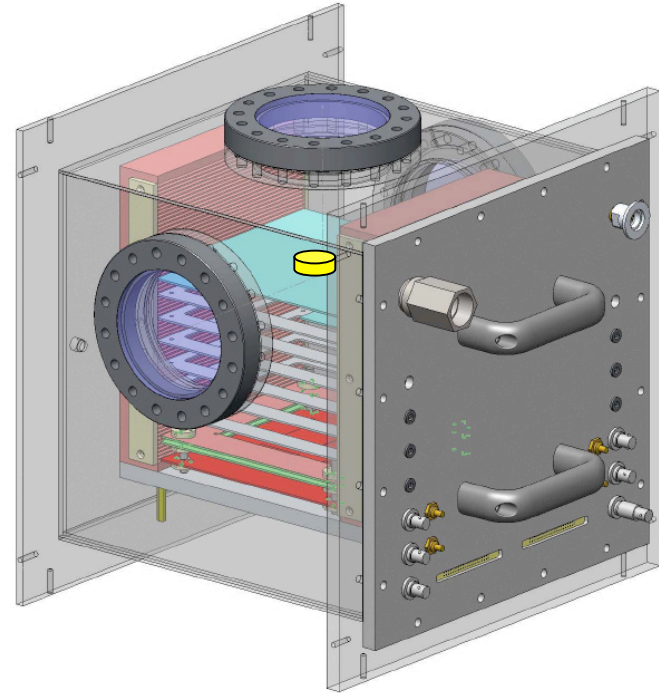


# GEM Test Chamber: Design Review

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August 11, 2008

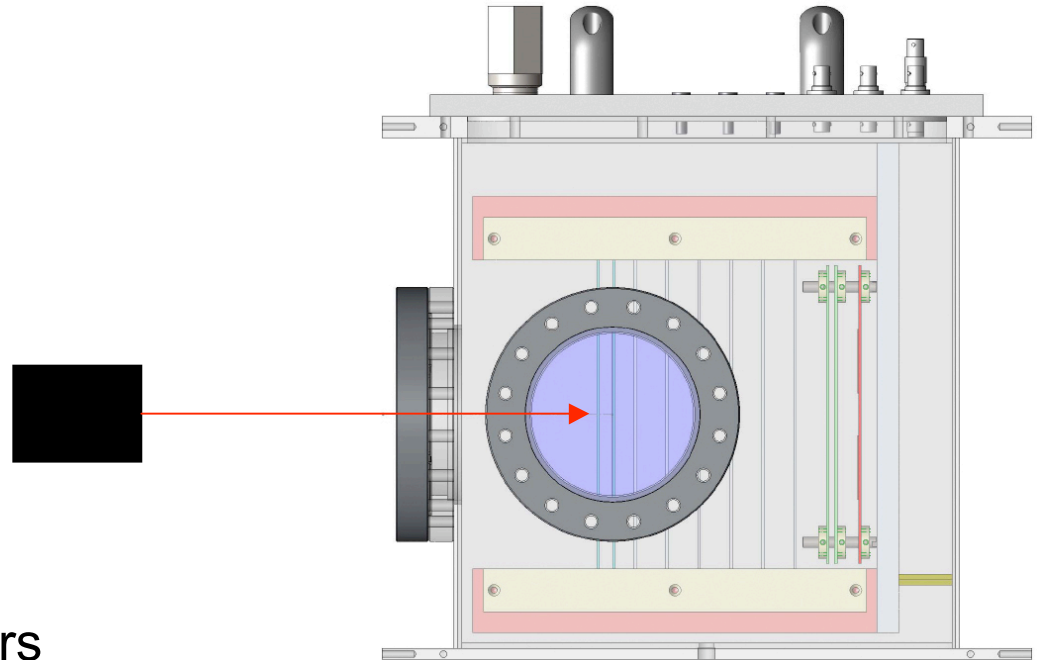
# Mode 1: Alpha Source

- Required for absolute gain measurements
- Requirements
  - Source must be supported inside detector chamber
- Orientation
  - Set on original base
    - Access internal structure by pulling horizontally
    - Outer box must be held in place by the user



# Mode 2: Laser on Cathode

- Requirements:
  - Laser must directly hit Ni-Cr photocathode
  - Laser must not directly hit GEMs
  - Horizontal translation of laser across photocathode
- Chamber Orientation:
  - Set on end opposite connectors
    - Access internal structure by lifting upwards
    - No need to move laser nor access window to access internal structure



# Mode 3: Future Beam Tests

- Requirements
  - Move cathode to top of chamber to remove from beam path
  - Extend equipotential planes to top of chamber
  - No magnetic materials
- Orientation
  - Set on original base
    - Access internal structure by pulling horizontally
    - Outer box must be held in place by user
- Need ~6 additional equipotential planes

