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# *The CARIBU Isobar Separator*

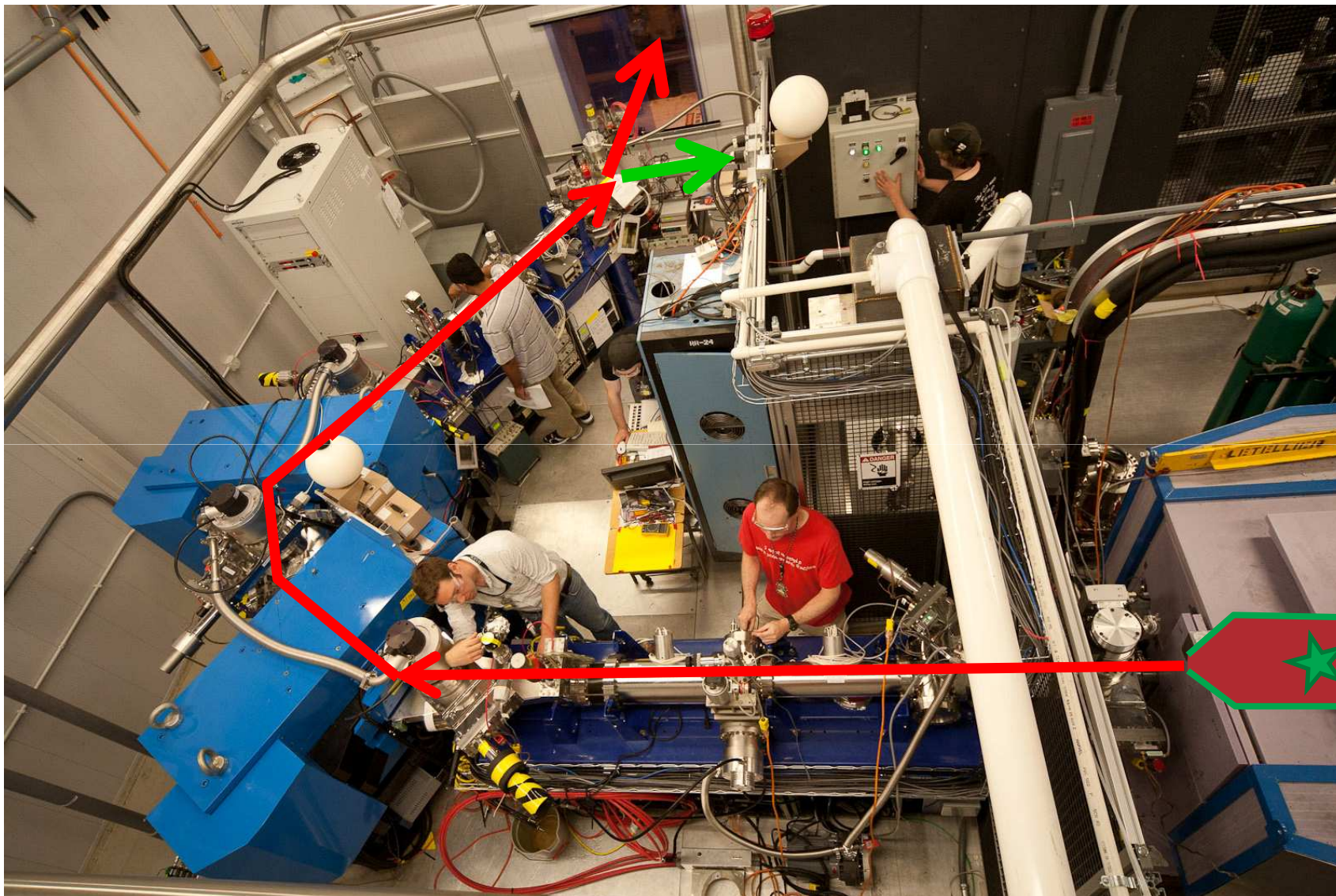
***Cary N. Davids***

***November 17, 2011***

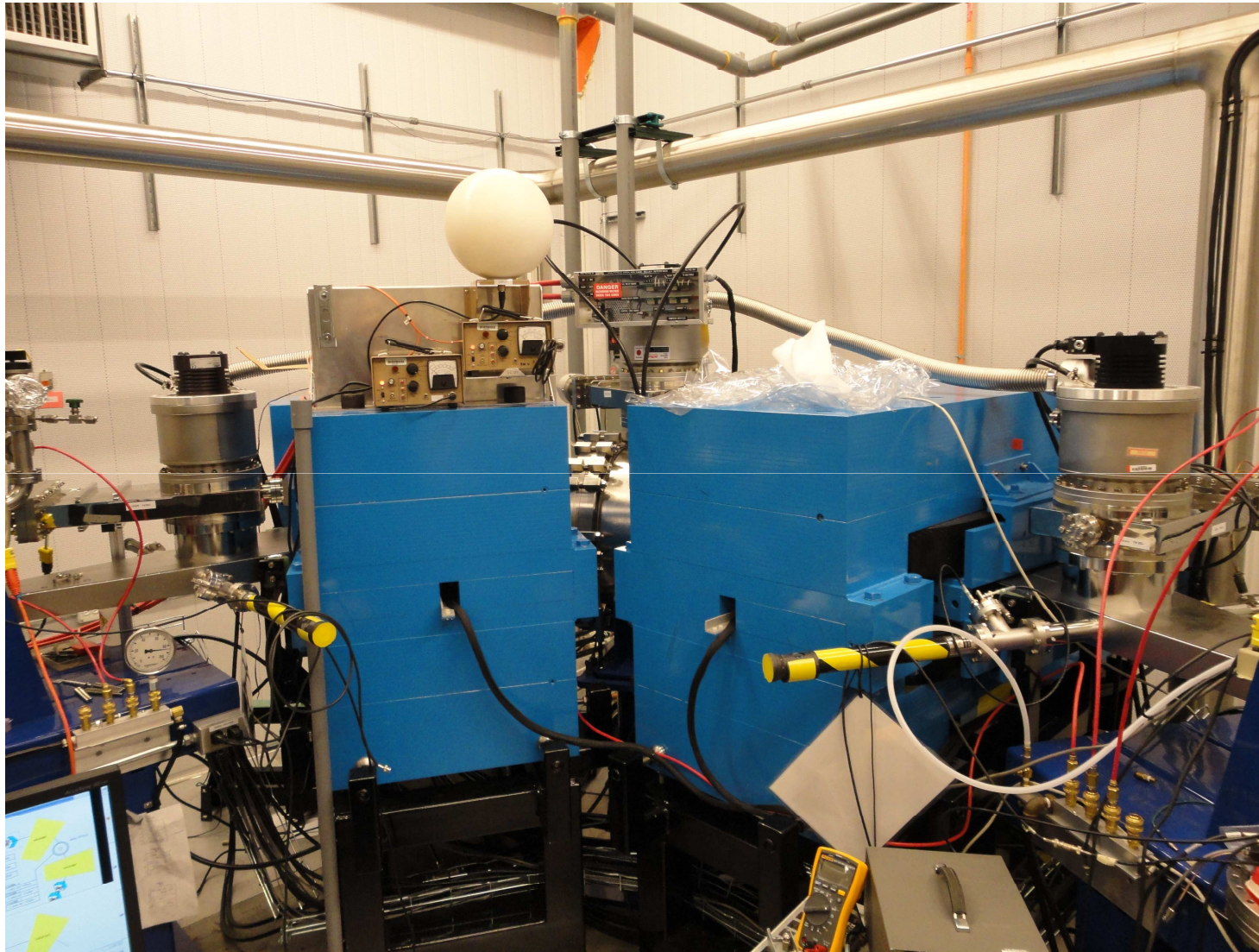
# *Design Goals*

- **Mass resolution  $M / \Delta M > 20,000:1$ .**
- **High transmission ( $> 95\%$ ).**
- **Compact (must fit on HV platform).**
- **No energy compensation (means no electric dispersive elements).**
- **Match beam emittance from gas catcher (transverse:  $< 3\pi$  mm-mr, longitudinal:  $\Delta E < 1$  eV at 50 keV).**
- **Simple configuration for ease of tuning.**
- **Focussing and corrective elements are all electrostatic, settings are independent of mass.**

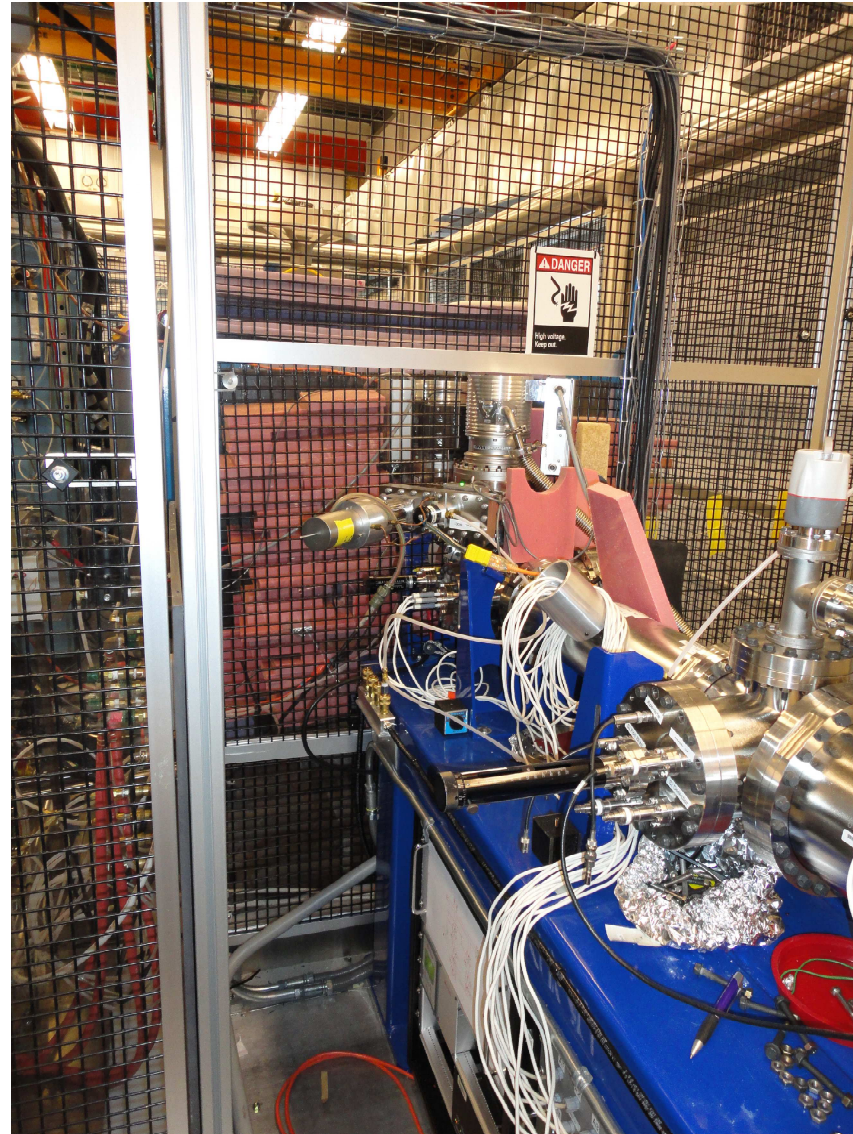
# Photo of CARIBU w/ beam paths overlay to ECRCB & Trap



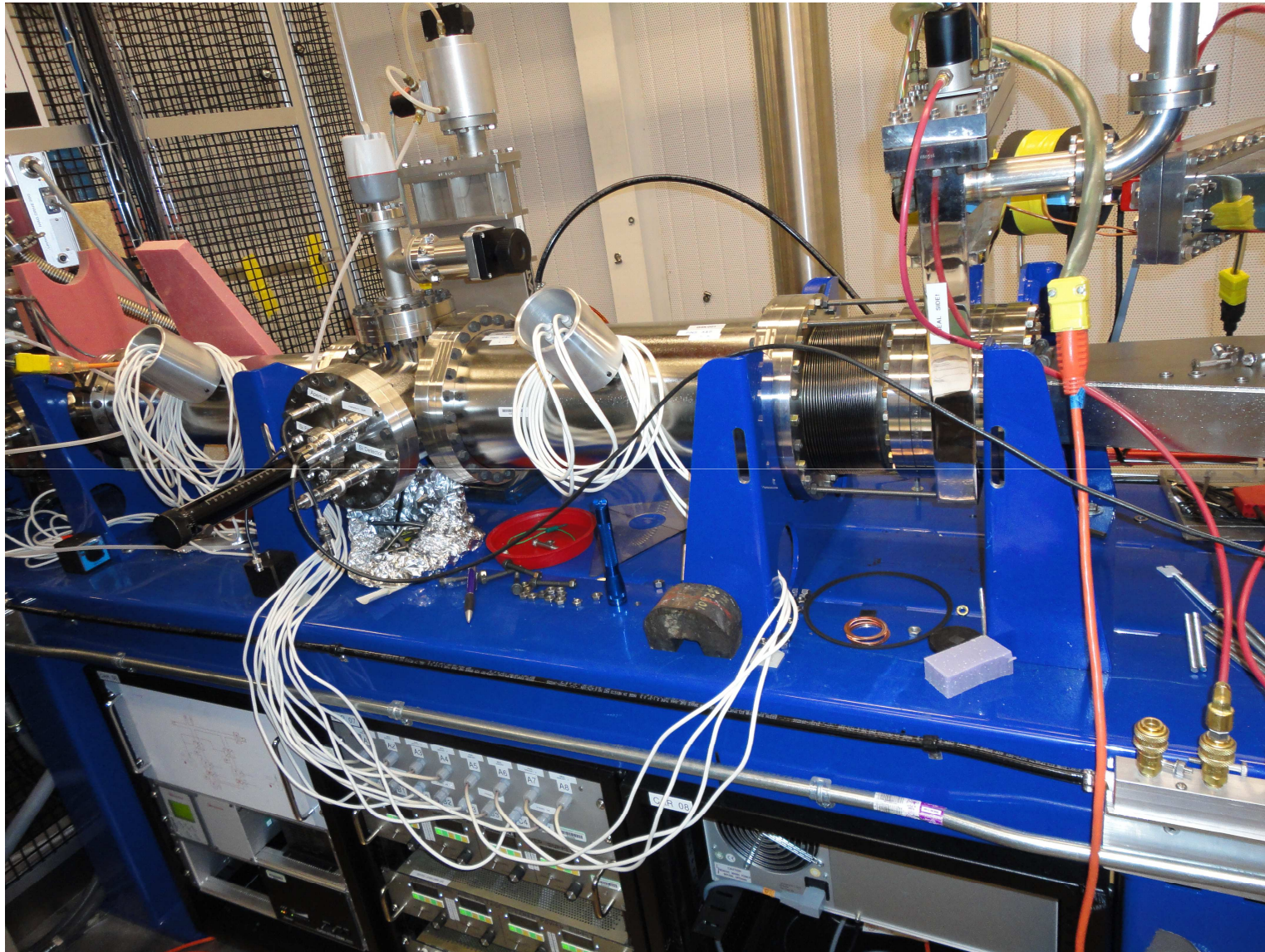
## *Two Magnets, Beam Enters from Left*



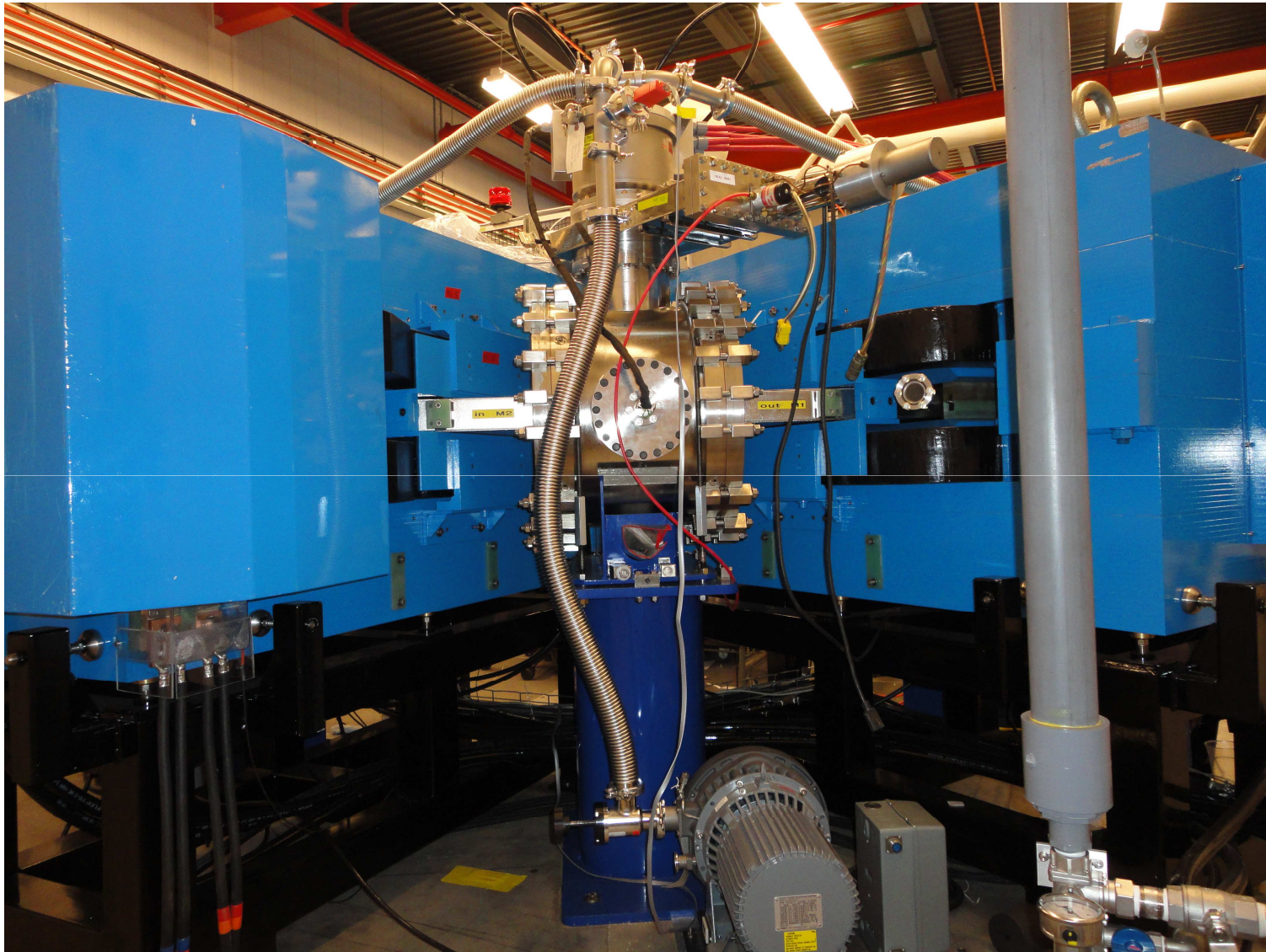
## View Looking at Gas Catcher Source



## *Input Beamline Showing Quad Doublet and Quad-Hex*



## *Outer View Showing Multipole and 2 Magnets*

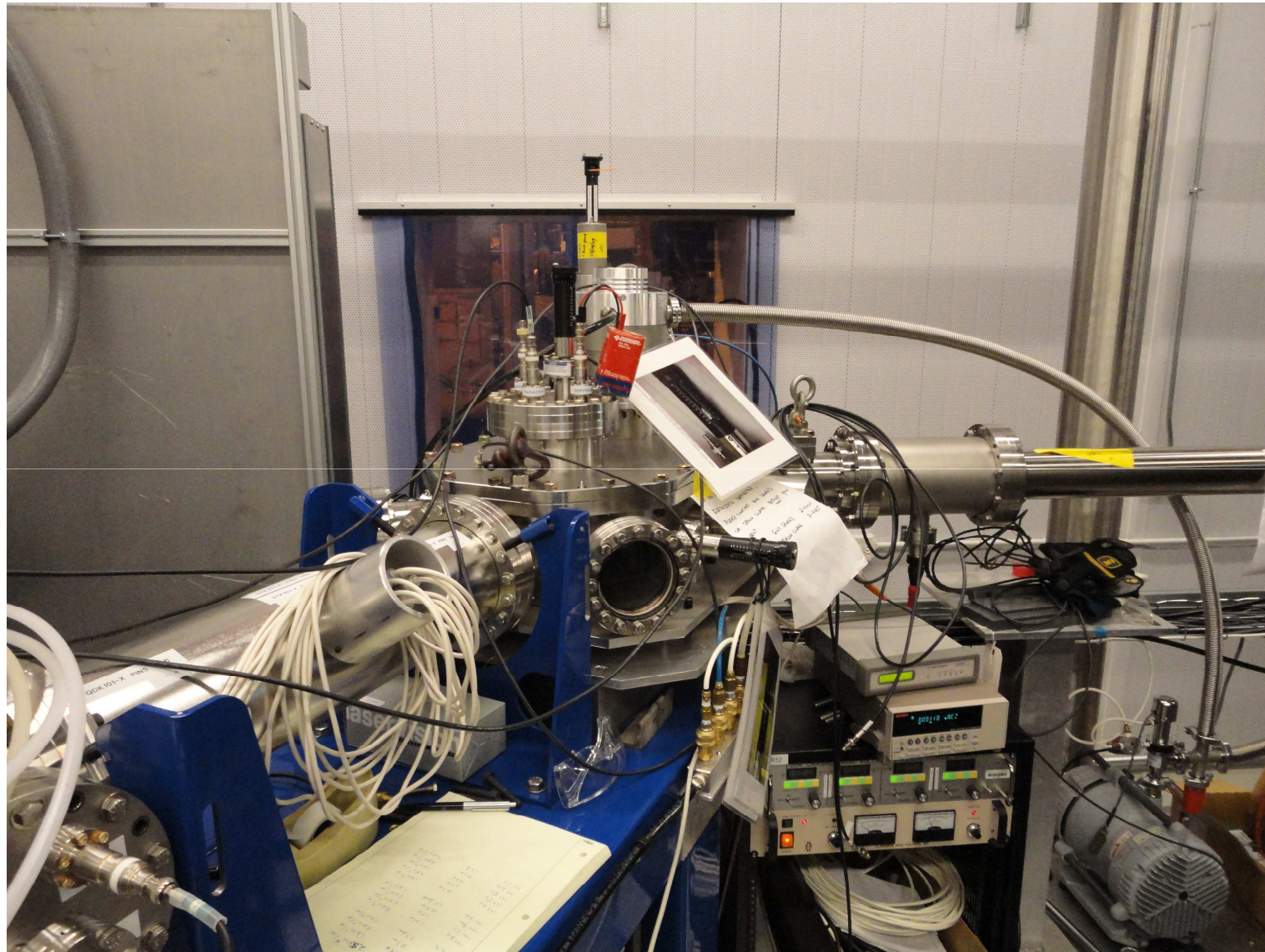


## *Isolation Transformer (left), Magnet Power Supply*

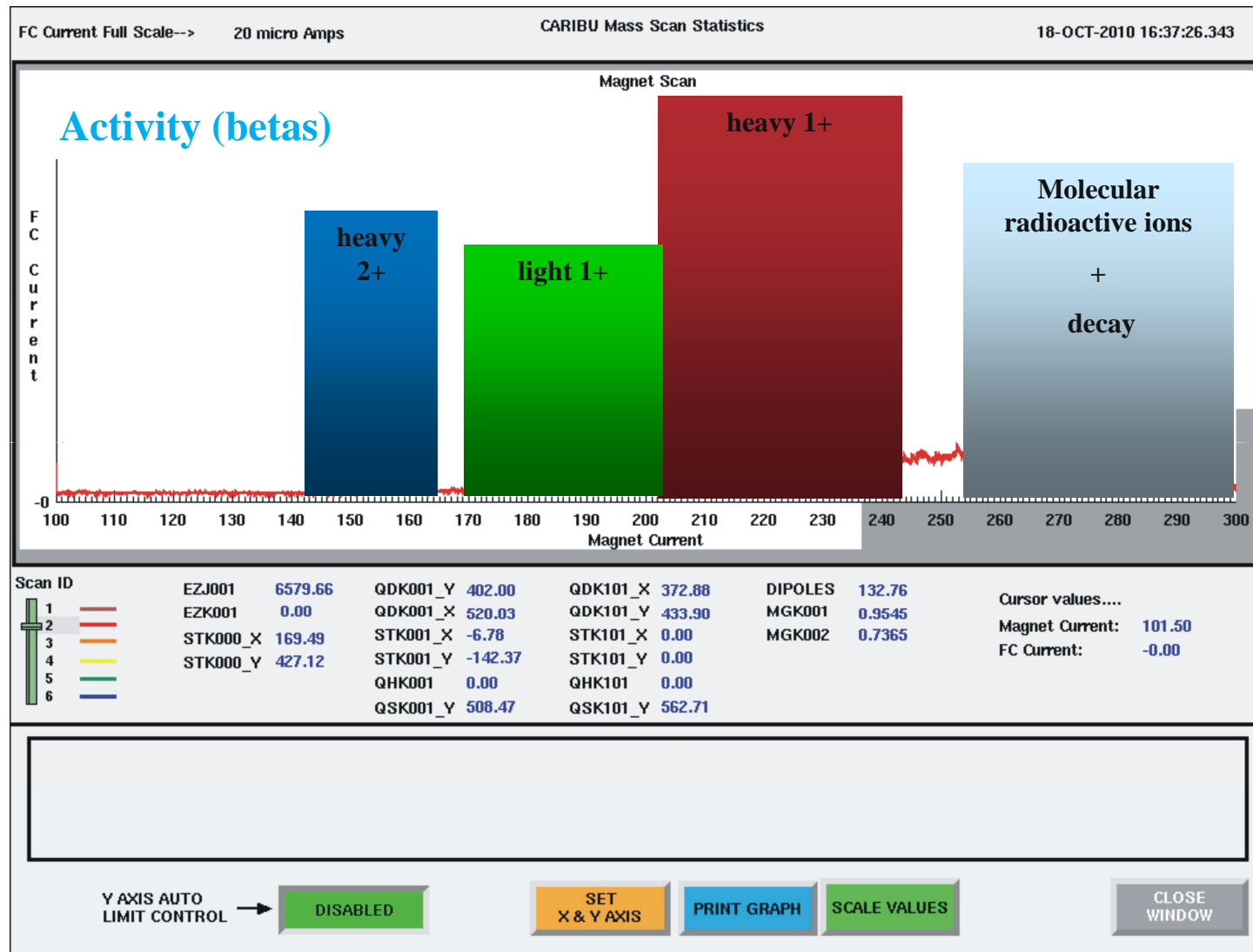




## View of Focal Plane Area



# Going from mass to specific activity



# Zooming in on specific activity

