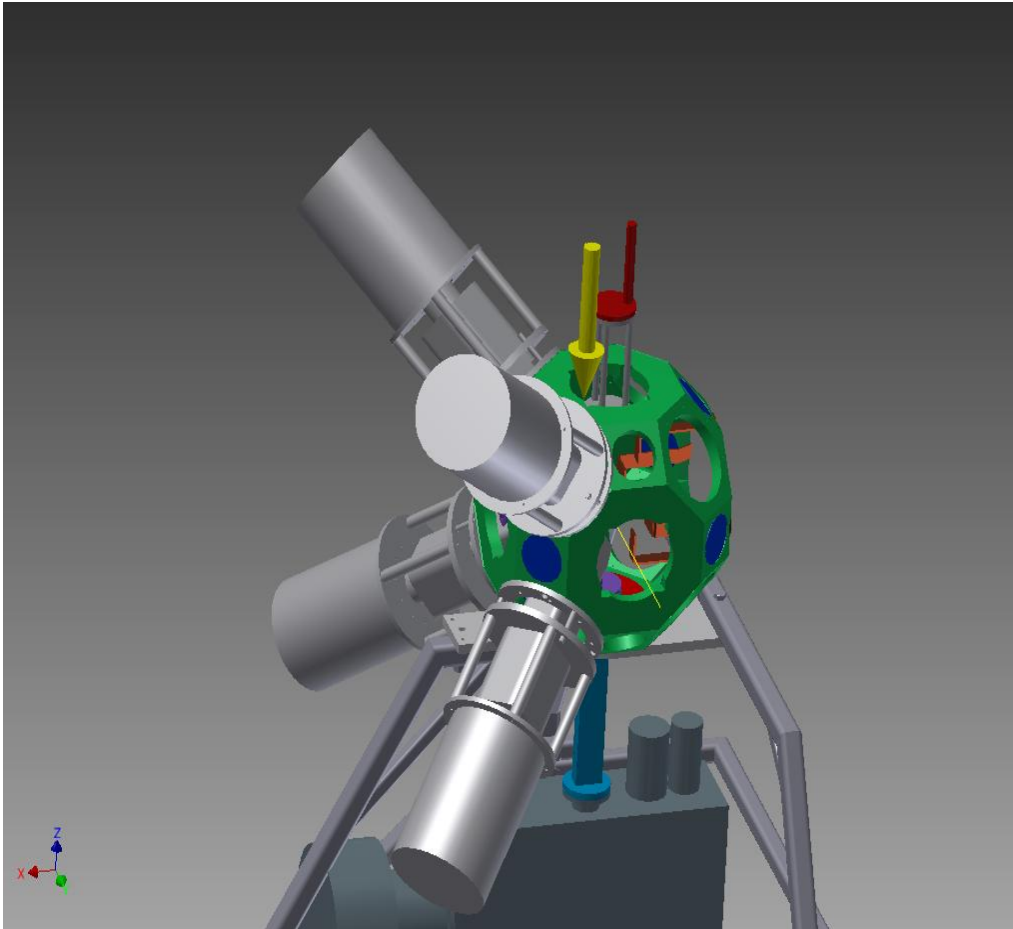


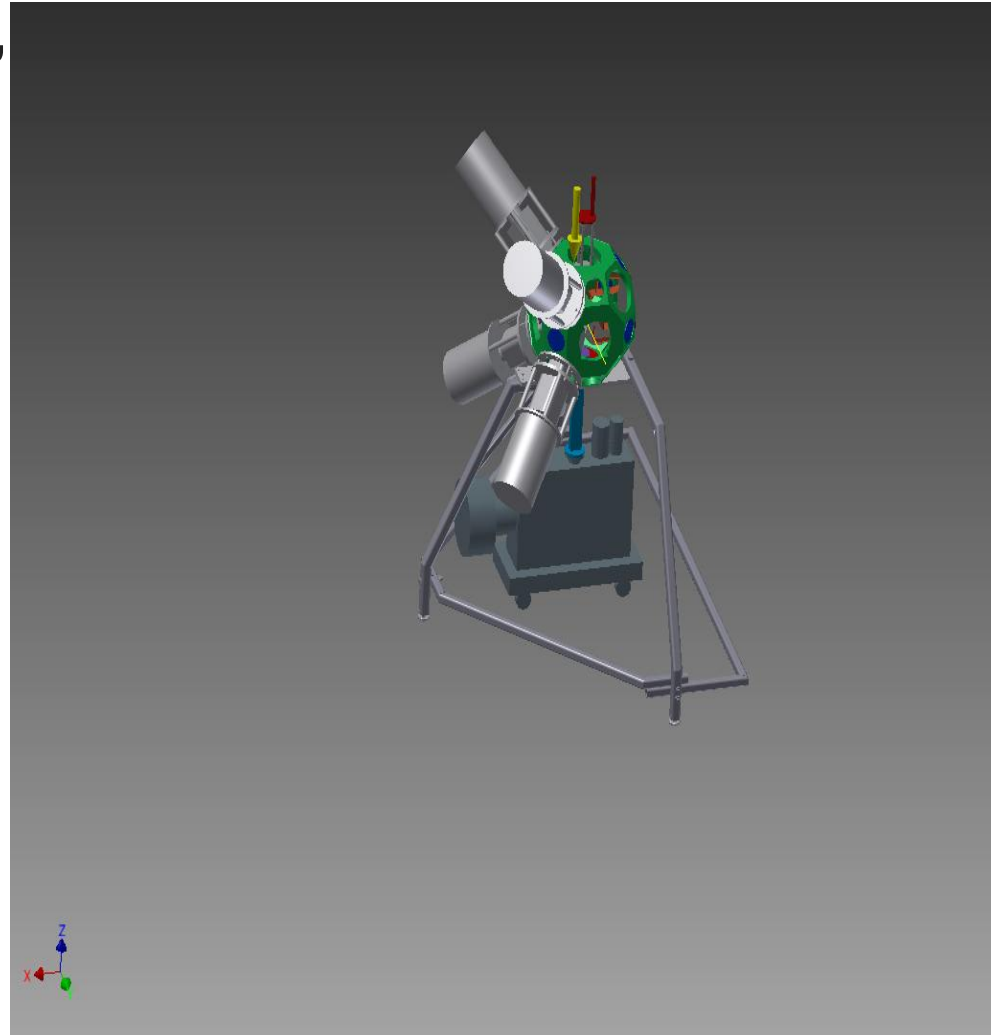
ISOLDE DECAY STATION

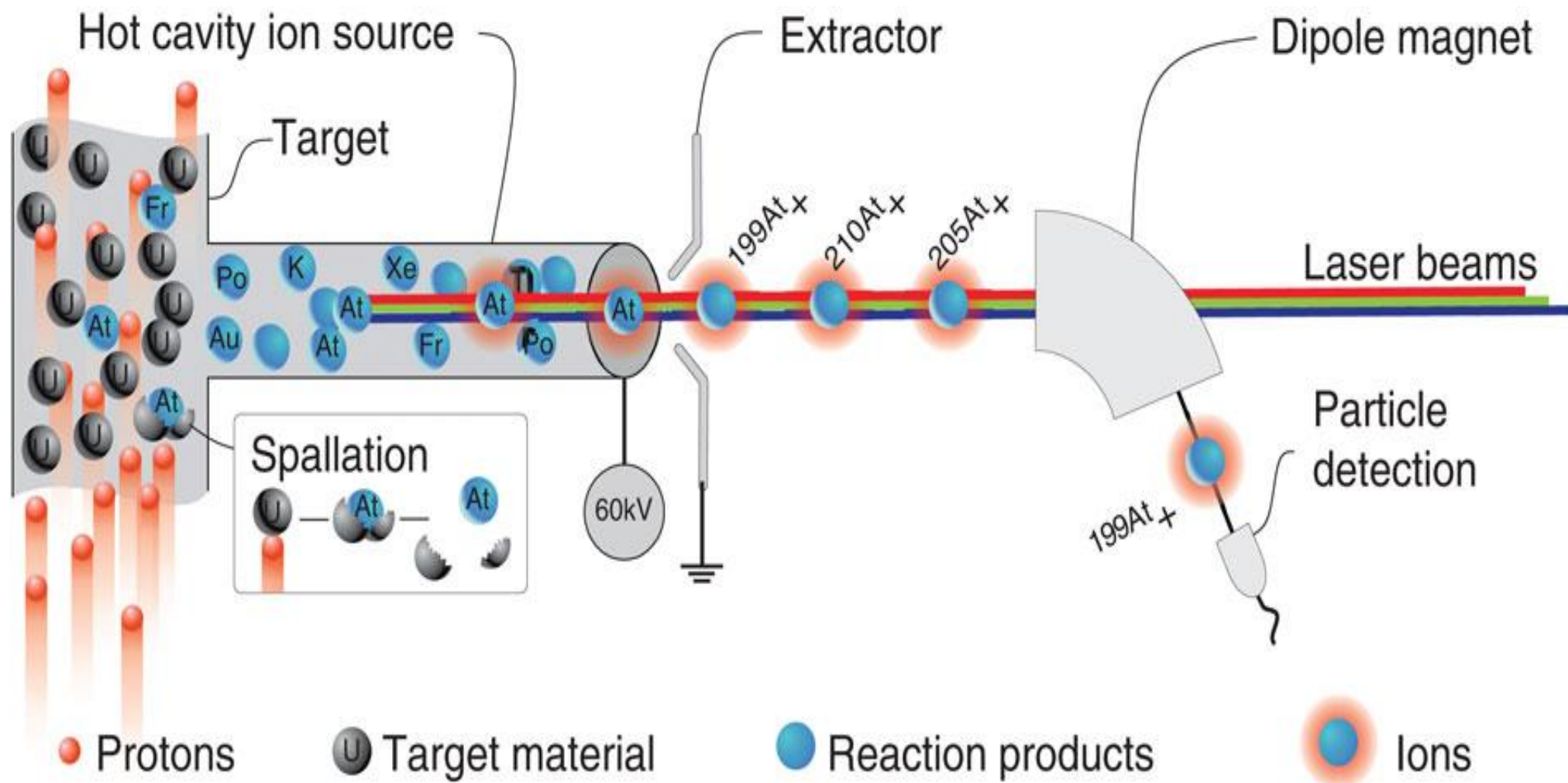


- Guy Rosin

Detector Setup

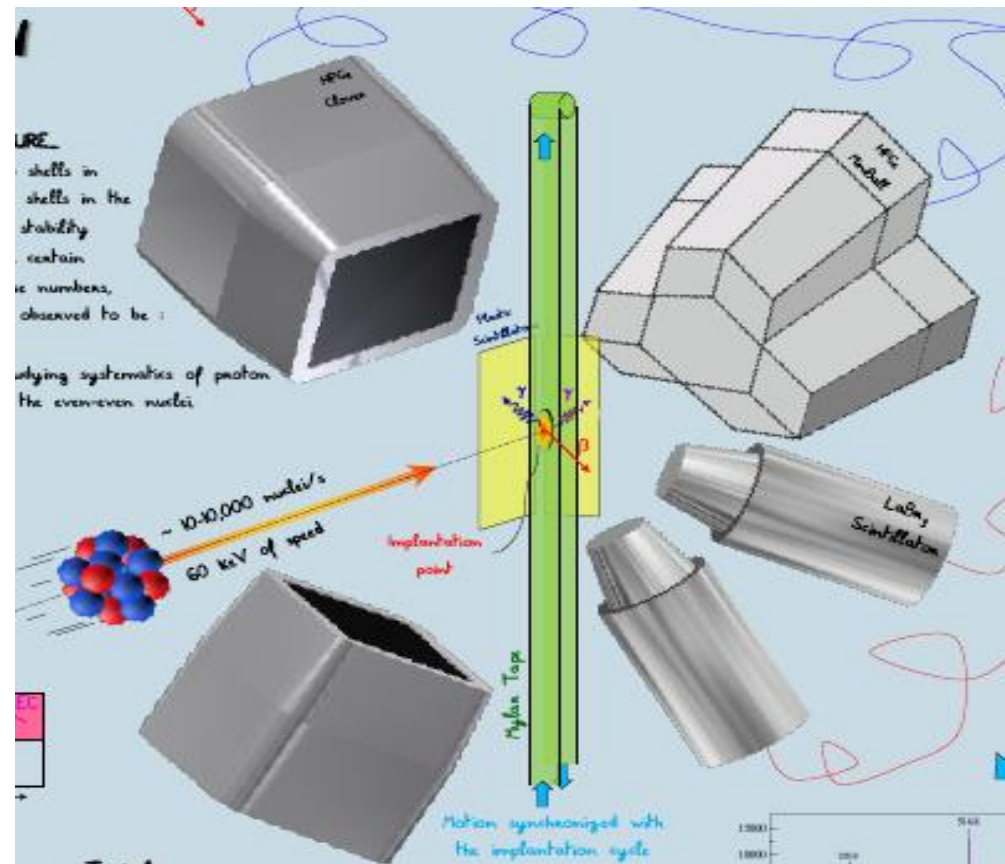
The Decay station contains several detectors to measure radioactive decay, as of now ,
the high purity Germaniums
detectors (Clover
and Miniball),
LaRB3 Scintillators
and plastic detectors



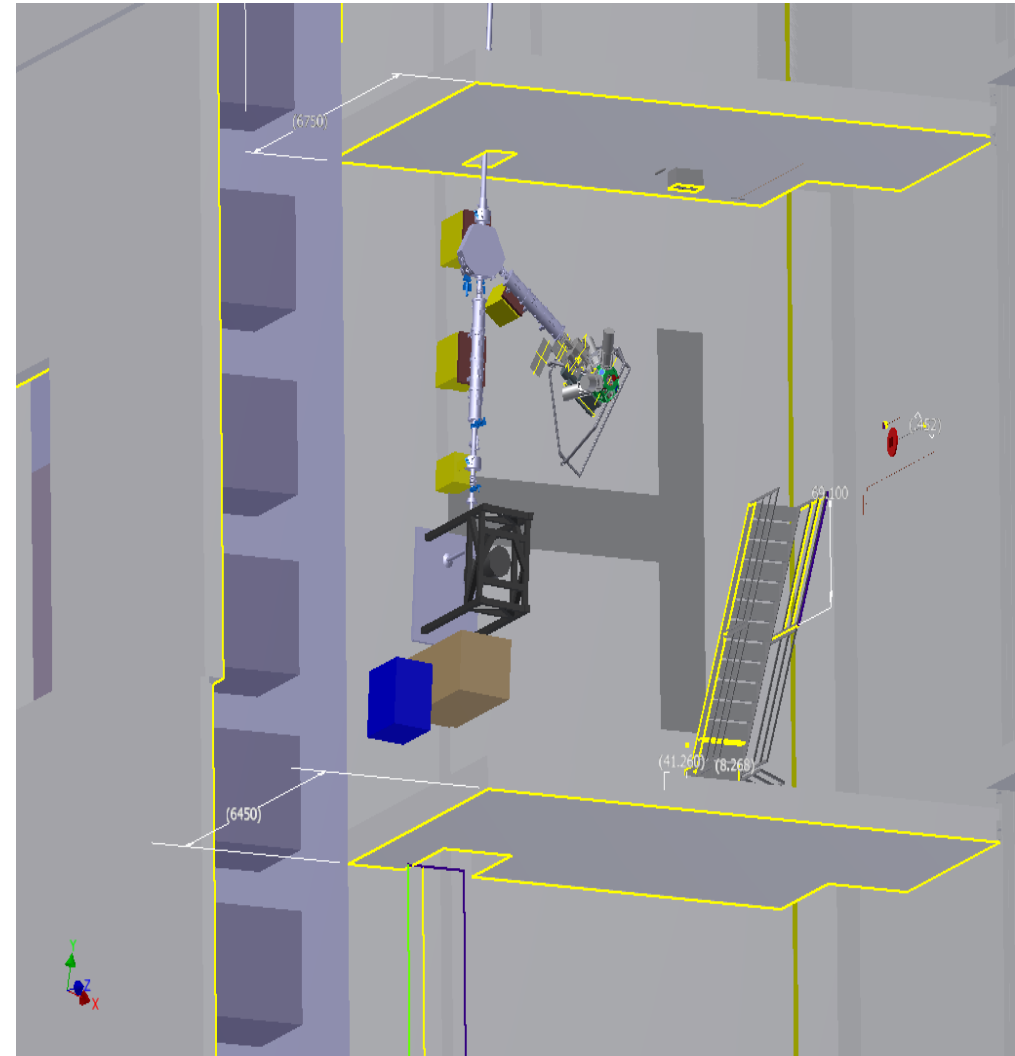
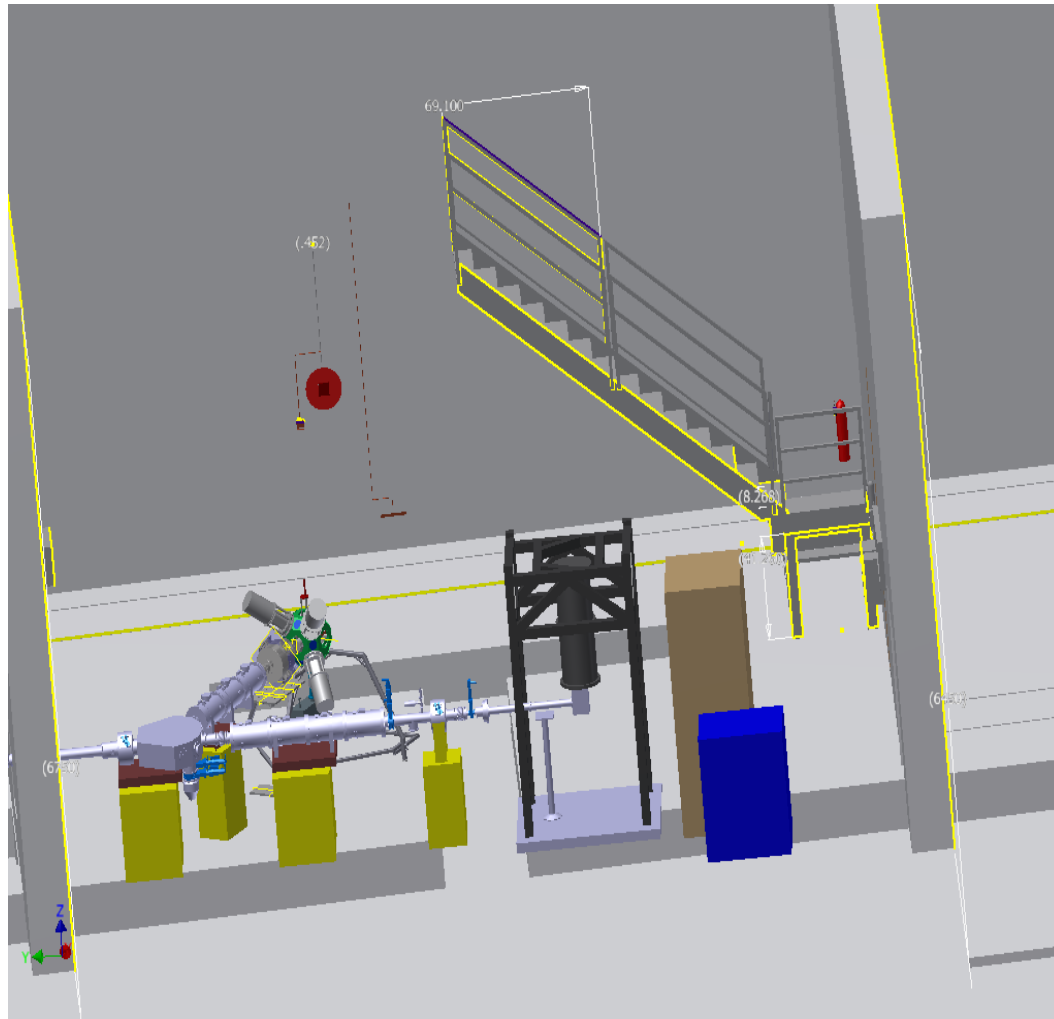


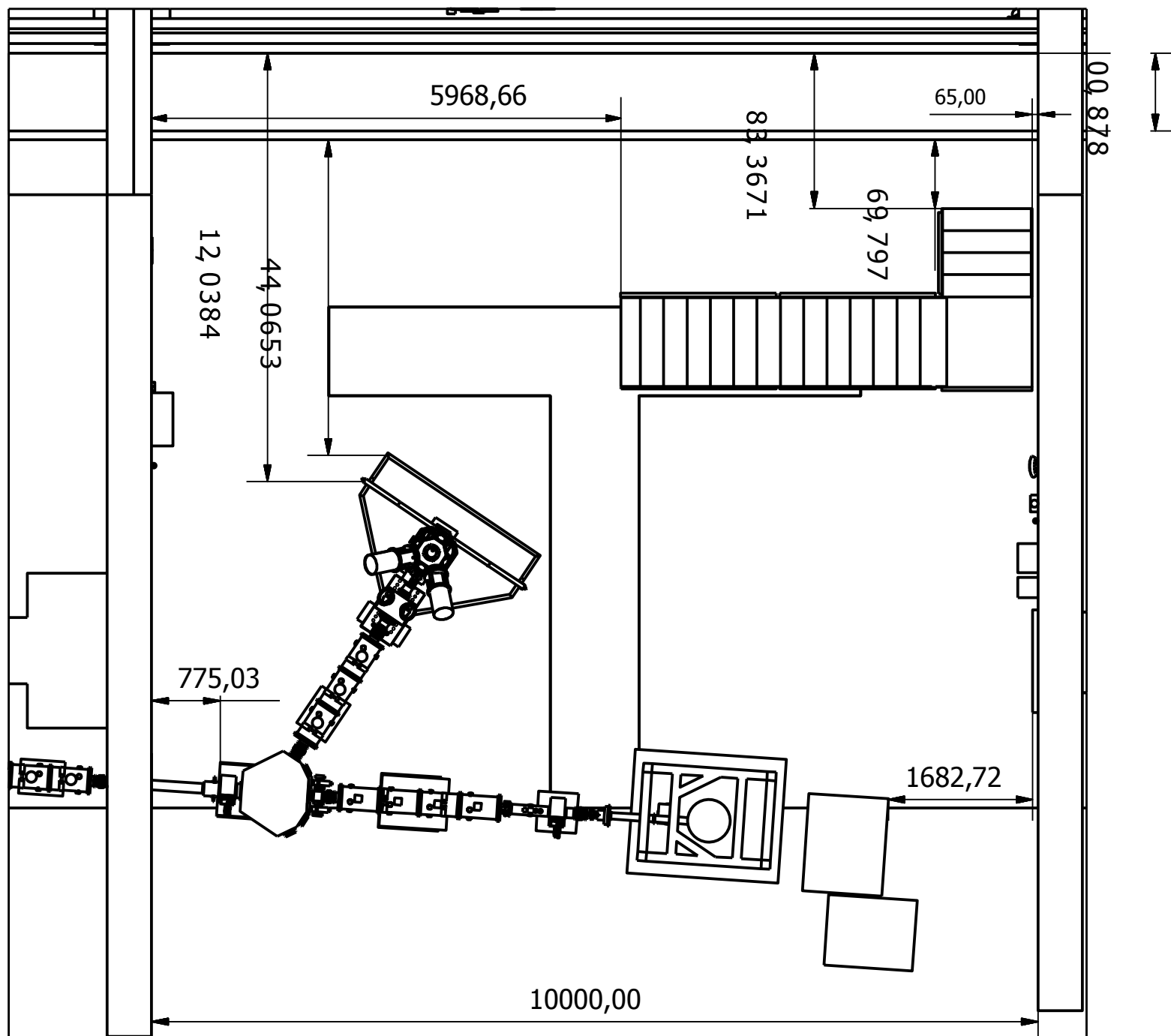
Detector setup

- Gr Detectors have high energy resolution, but low response time (\sim microseconds), Scintillators have high response time (\sim nanoseconds), but more noise. The HPGs are used to distinguish events from noise
- and the scintillators are then
- used to get a more accurate
- of gamma decays.

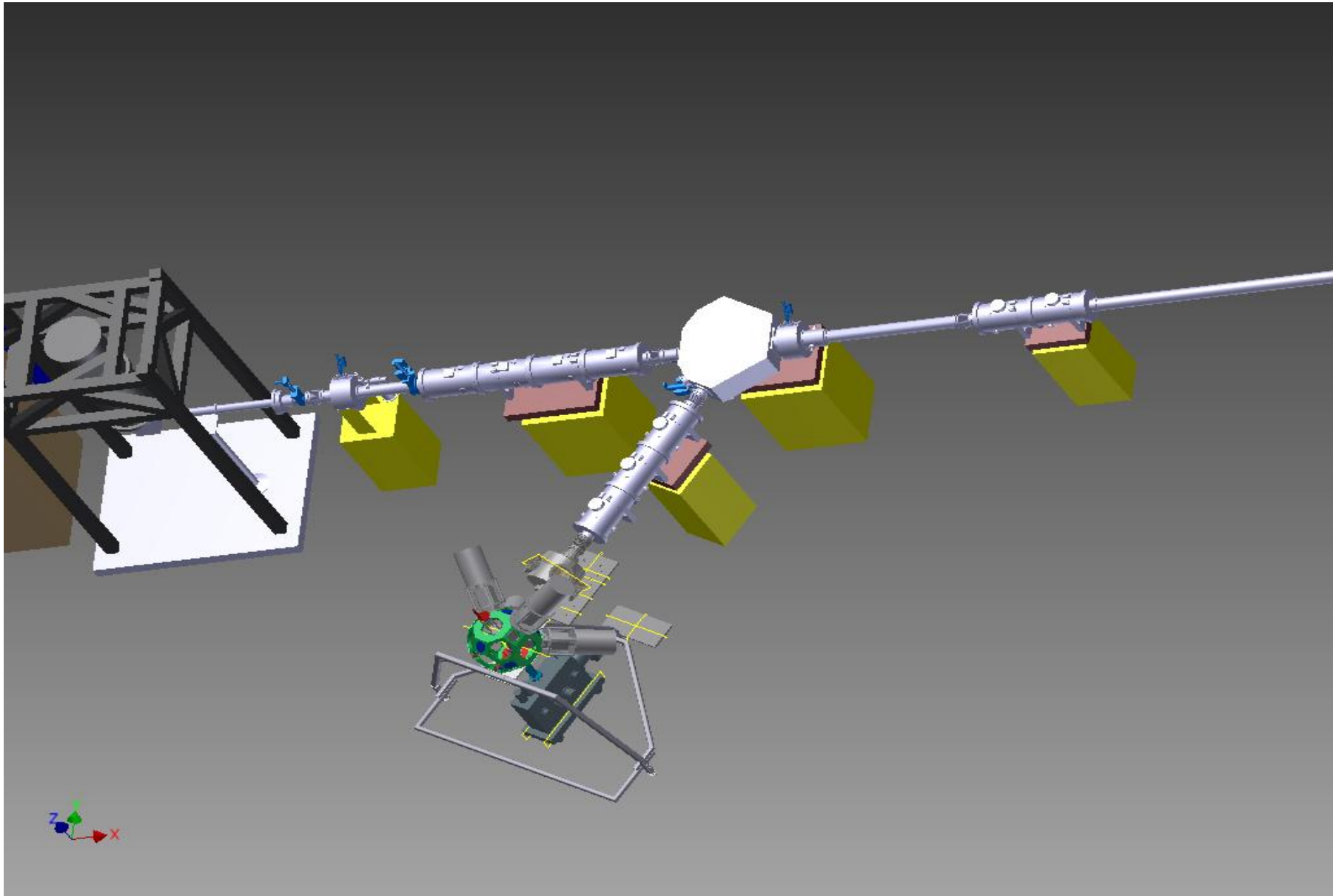


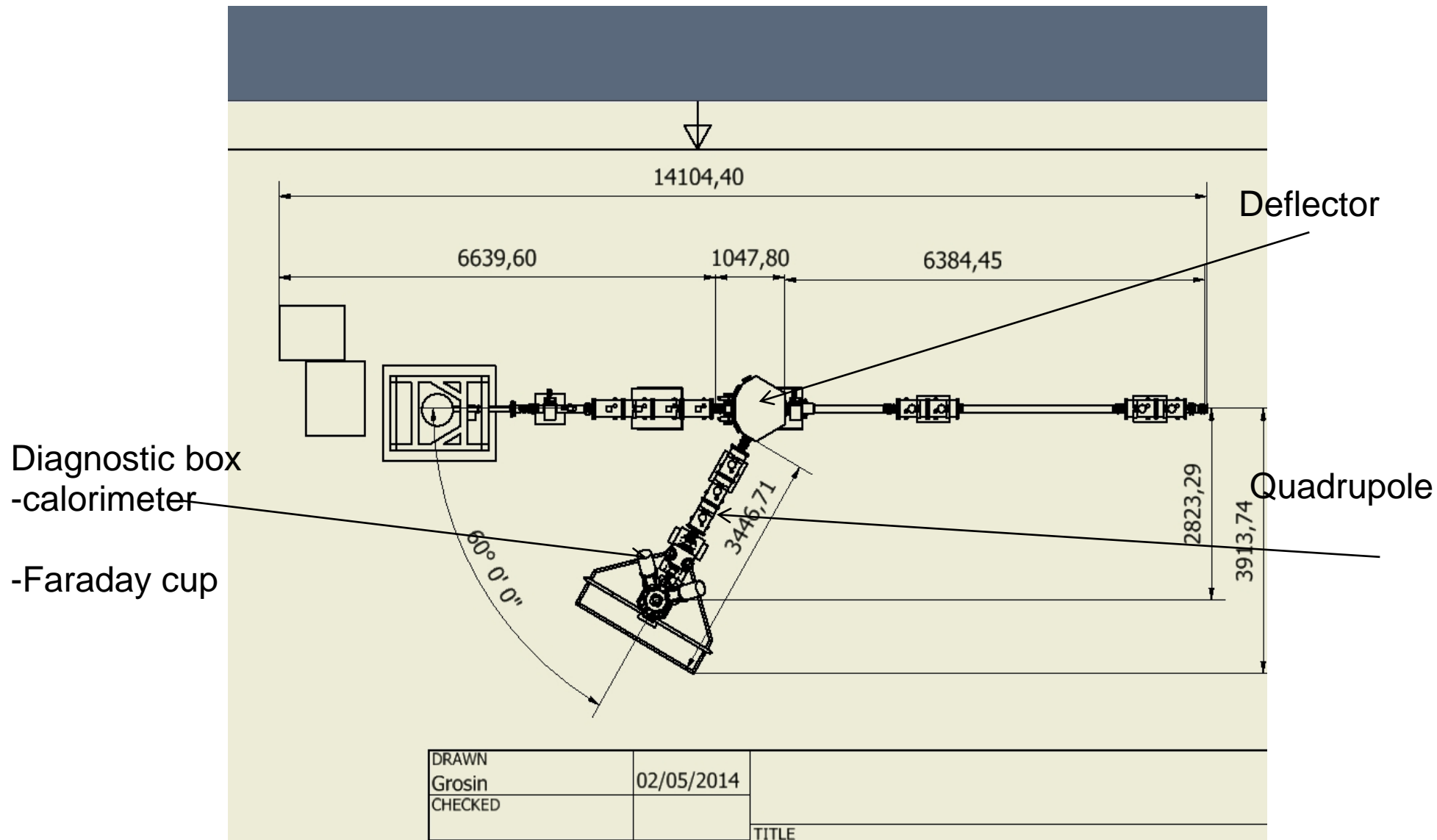
Computer Drawing



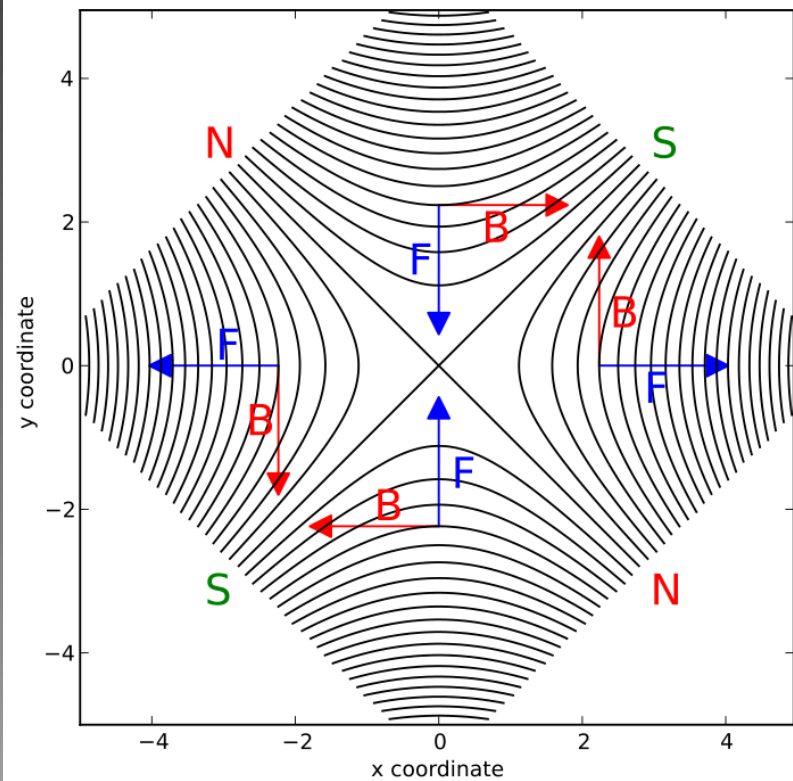
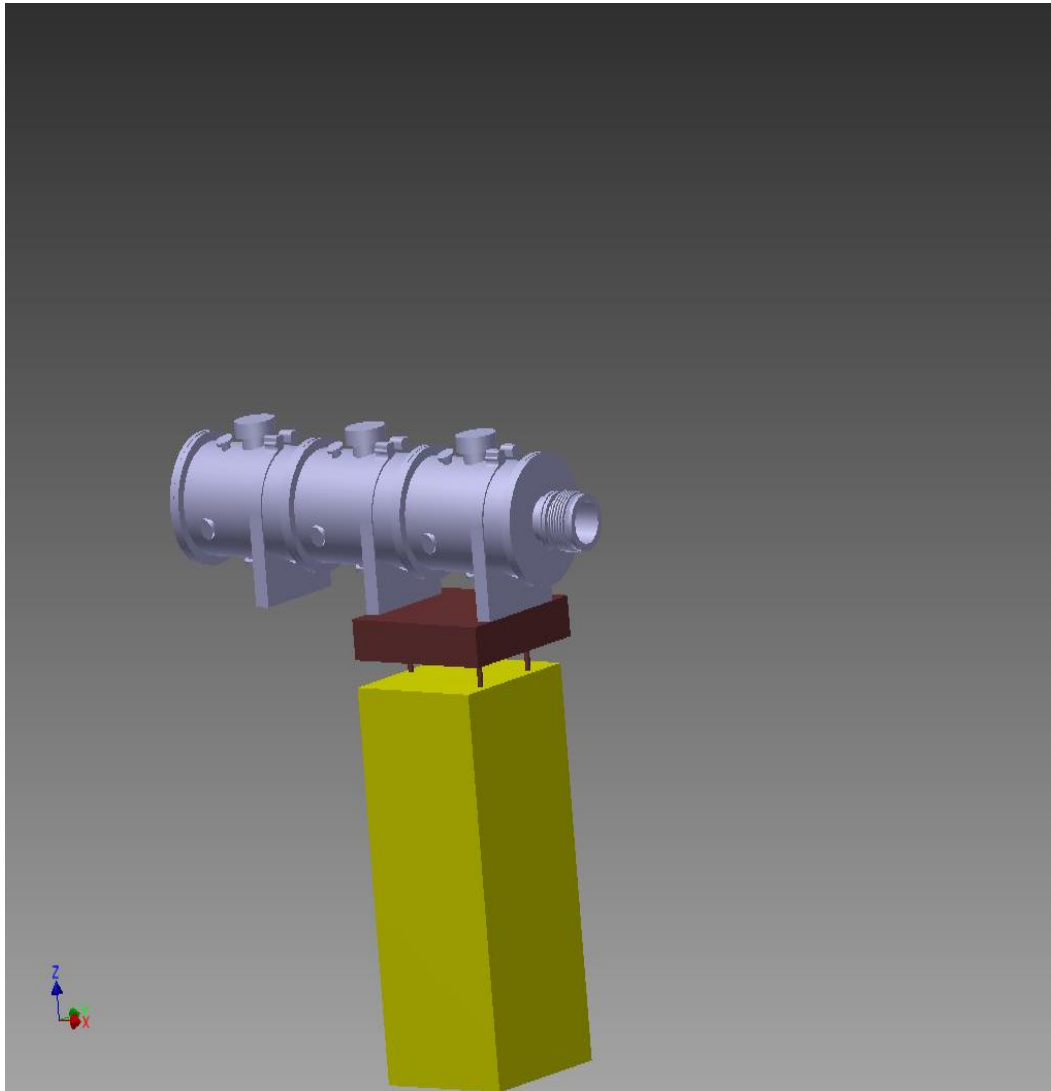


Beam Line

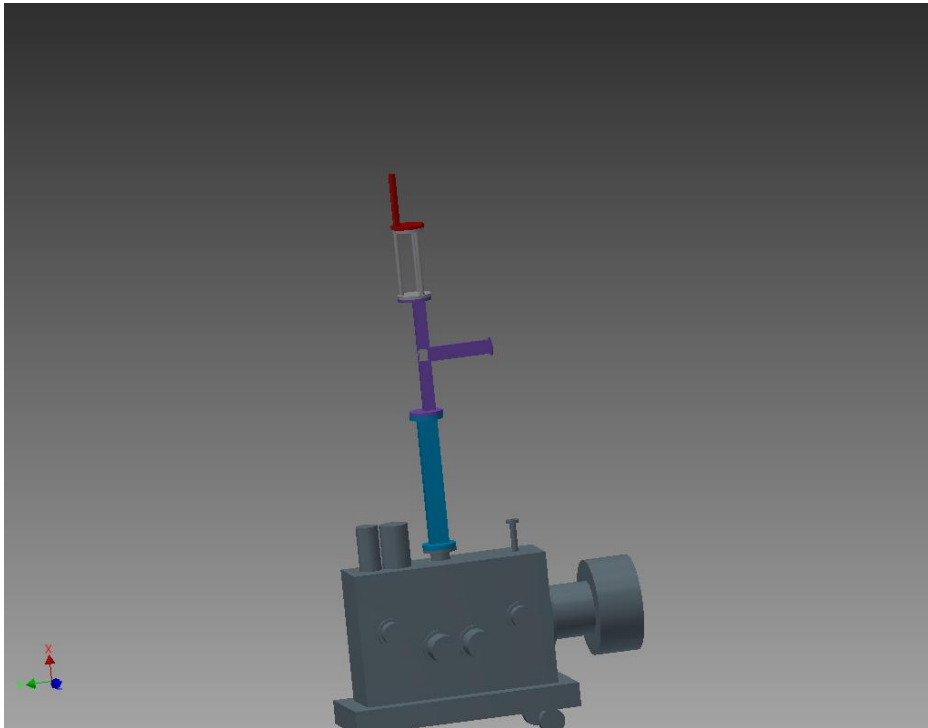




Quadrupole Focus



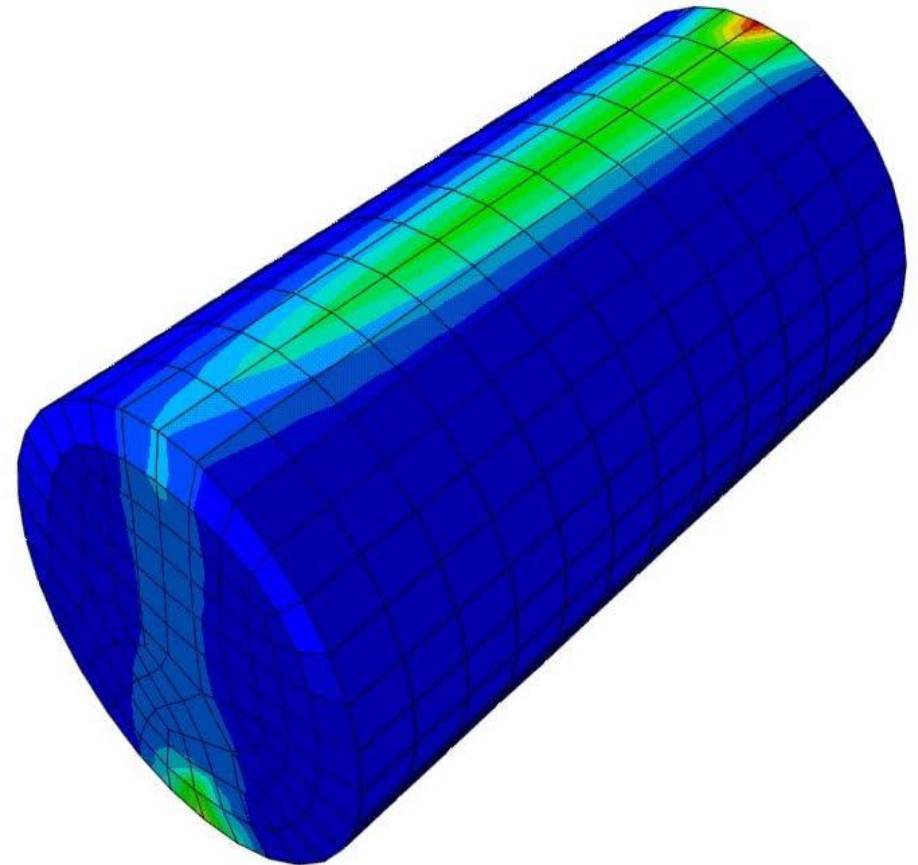
Tape Station



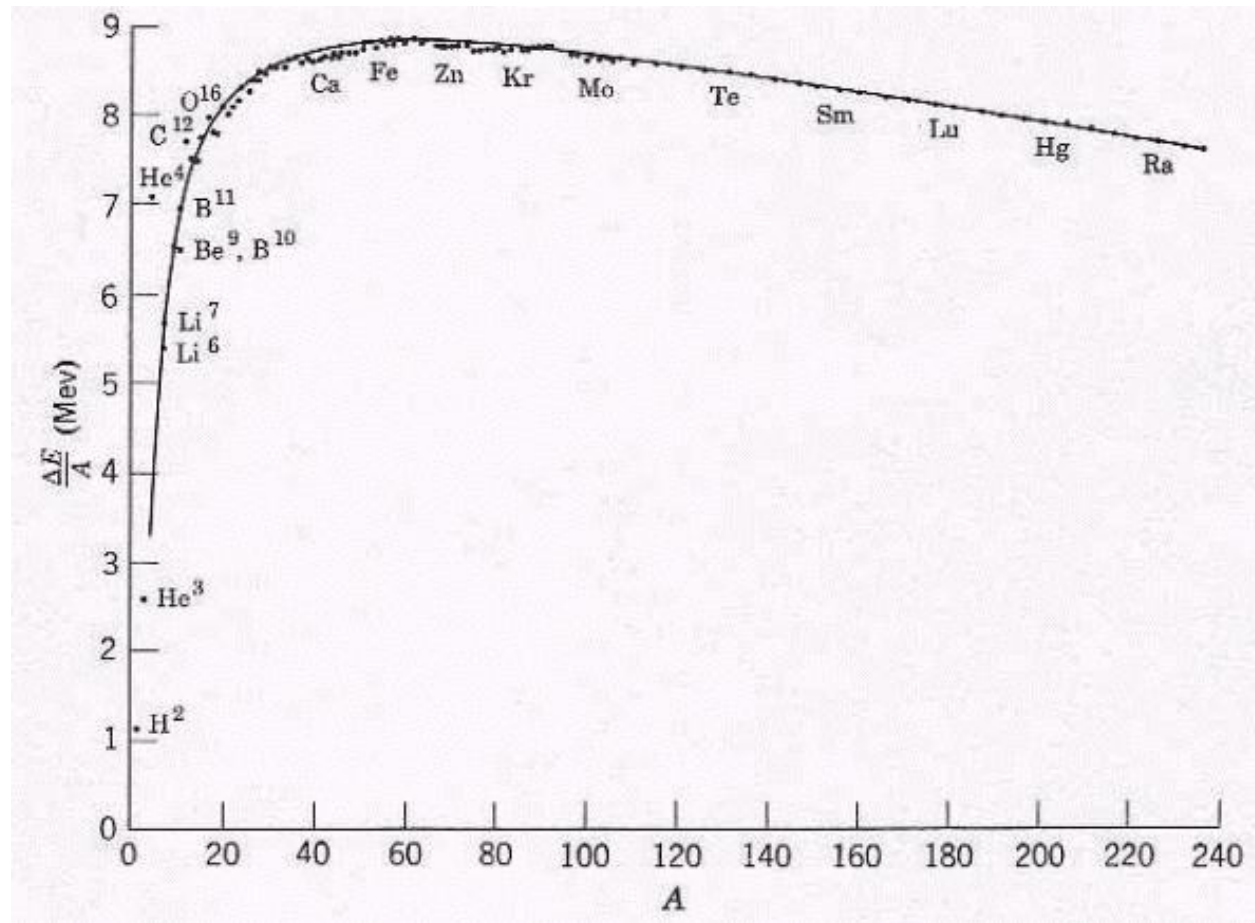
Tape Station is used to remove the noise from the decay products. Products of radioactive decay still emit radiation which interferes with the detectors, so the tape removes the decay products from the detector configuration. The decay products are implemented in the Mylar tape and cycled down to the lead protected bin.

Stress Test

Future uses, One of the things the CAD drawing might be used for is a stress analysis. A stress analysis shows the net force on the objects in the model (usually from gravity). The equipment usually sags under its own weight which causes error in the alignment. Stress test can be used to calculate in advance corrections in the equipment



Liquid Drop Model of the Nucleus



Shell Model

The most stable nuclei have filled up a proton or neutron shell. The “magic numbers” of stability correspond to a full shell.

