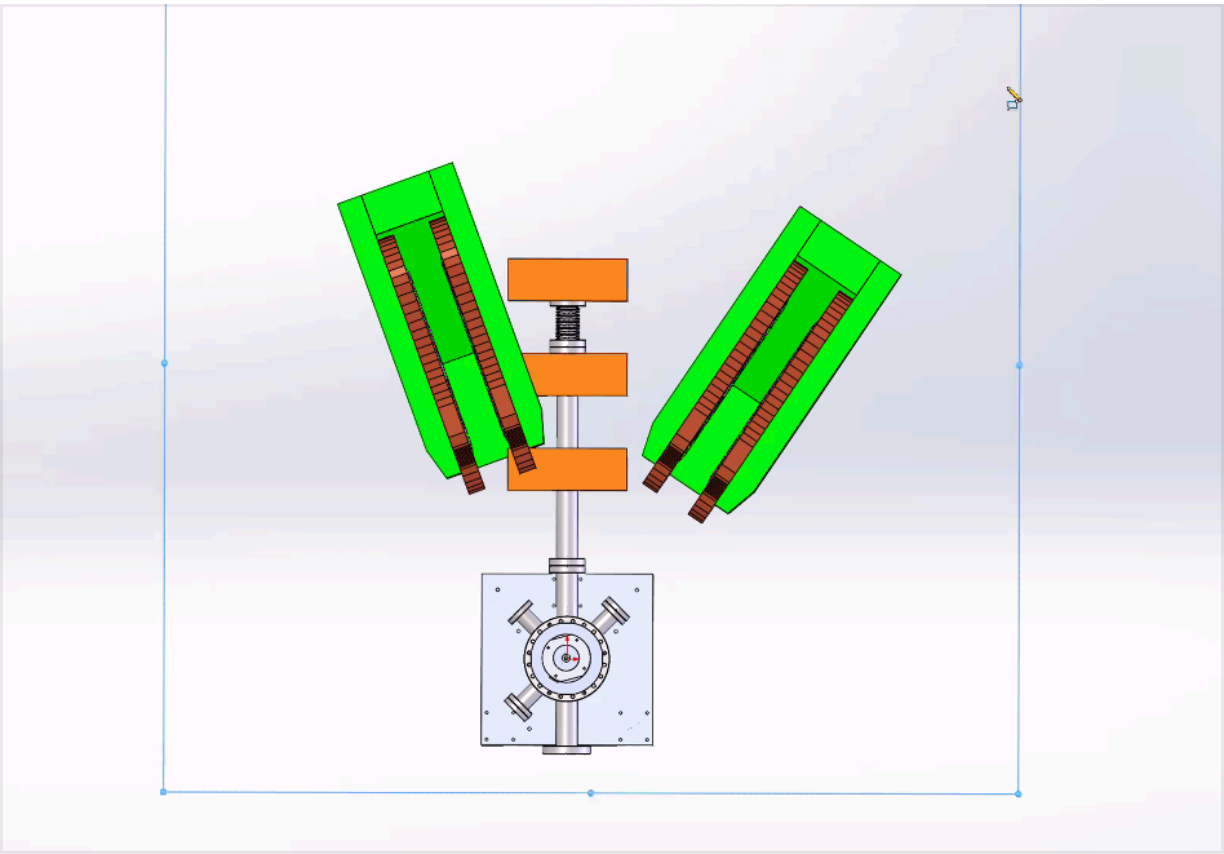
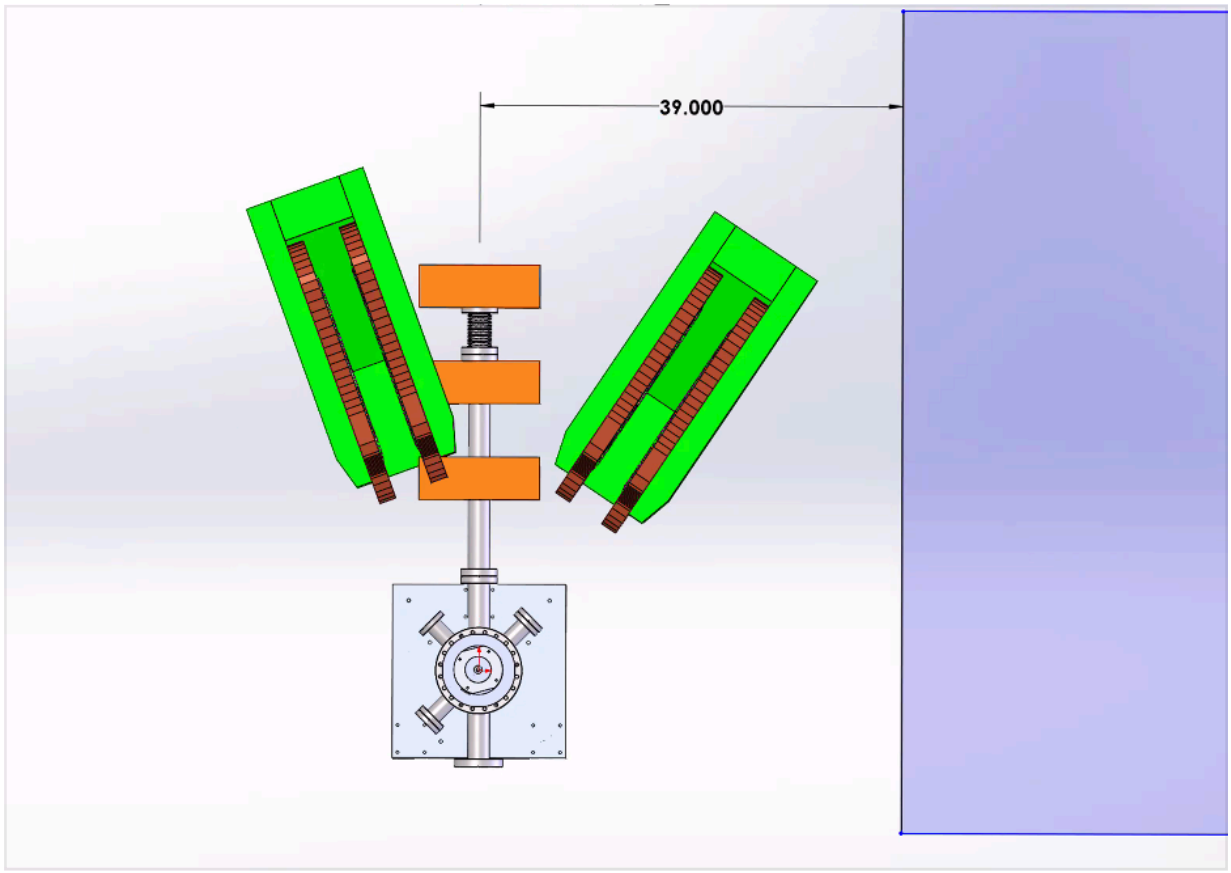
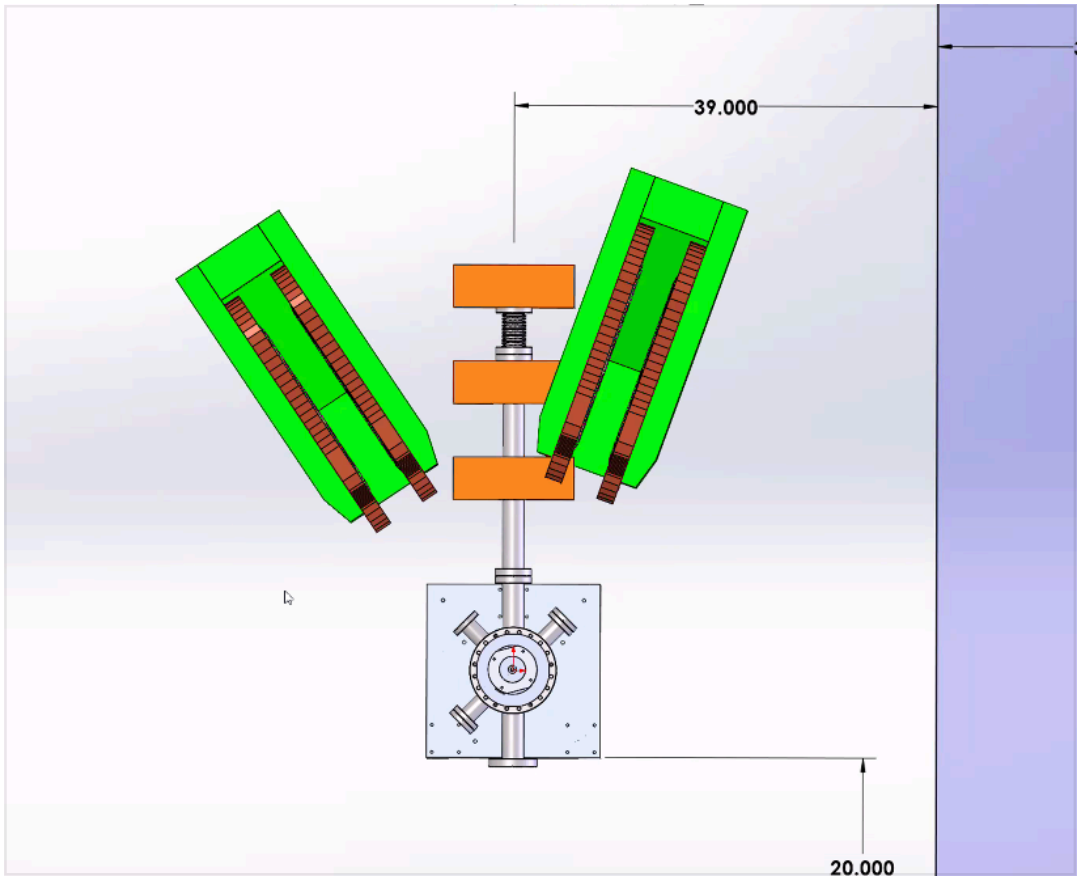
These are some extemporaneous notes from the mechanical design of the spectrometers, looking at their spacing from the quads/beamline, the wall, and other concerns.



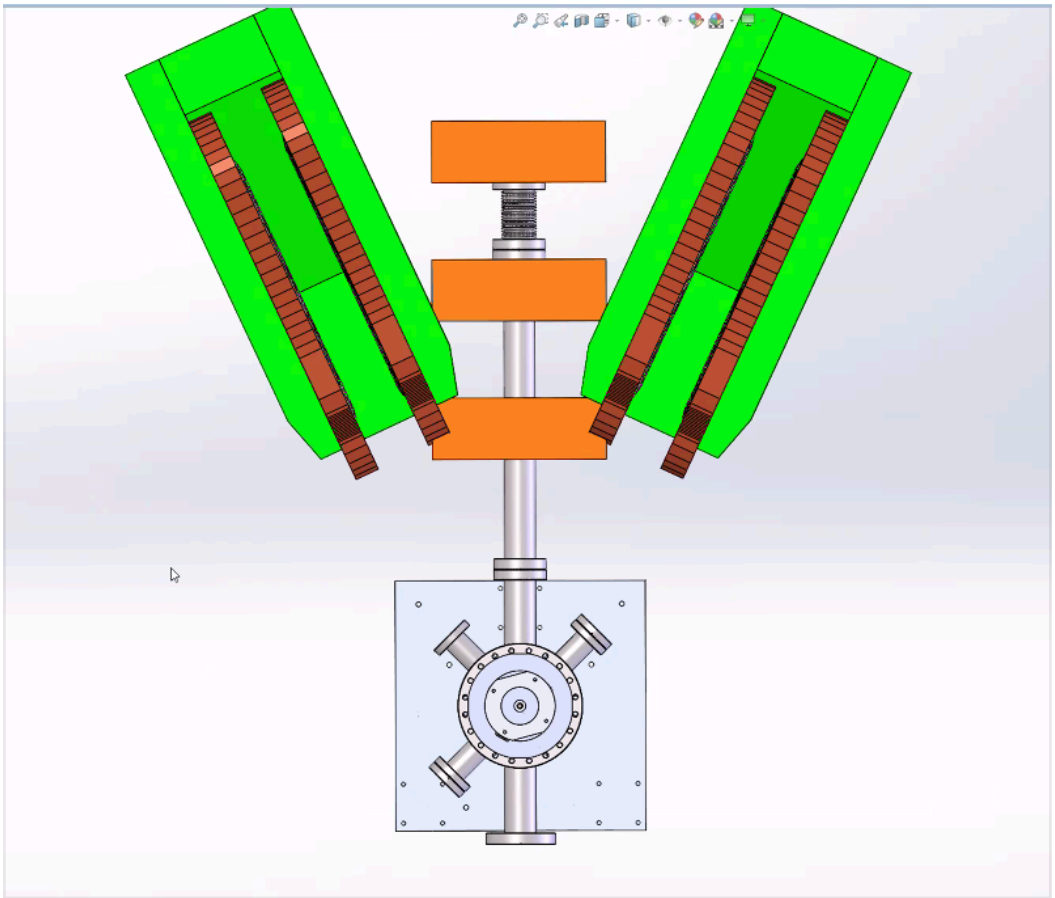
Layout of tthe chamber: 39" from beampipe center to wall.


39.000



With the angles flipped to the more likely configuration, there is now plenty of space.

There is some concern that there's not enough vertical space below the specs. But that seems to not be a problem



moved to the symmetric 25 °. Looks like it almost fits. Thomas wants to make sure there is some sort of shielding to prevent the edge fields from impacting the quad.

next beam in a few weeks, 30 MeV.

Harald points out that asymmetric quads are typical to fit between specs, because they can still have the 180° and mirror symmetries needed. SO the first quad can be narrow but tall.

Jan and many suggest:

1. check if it can be done with permanent magnets (radiation, design)
2. Harald can look at the CST simulation of a skinny magnet

Benson says you will presumably want to shield.

the 0.5um situation is quite close to tractable, but Richard and others suggest focusing on 1um foil, and the permanent magnet solution to the front quad. Then simulate that geometry thoroughly, and see how it plays.
Aveen is already working on figuring out the dose in the permanent magnet region, to see how long the perm. magnet could survive there.

we want to design at fixed angles, and use a continuous vacuum system. We will need to pump on the chamber because the heat will cause the foil to outgas, and it will also raise the pressure coming off the wall. So will want a turbo hanging from the bottom of the chamber.
Jan points out that