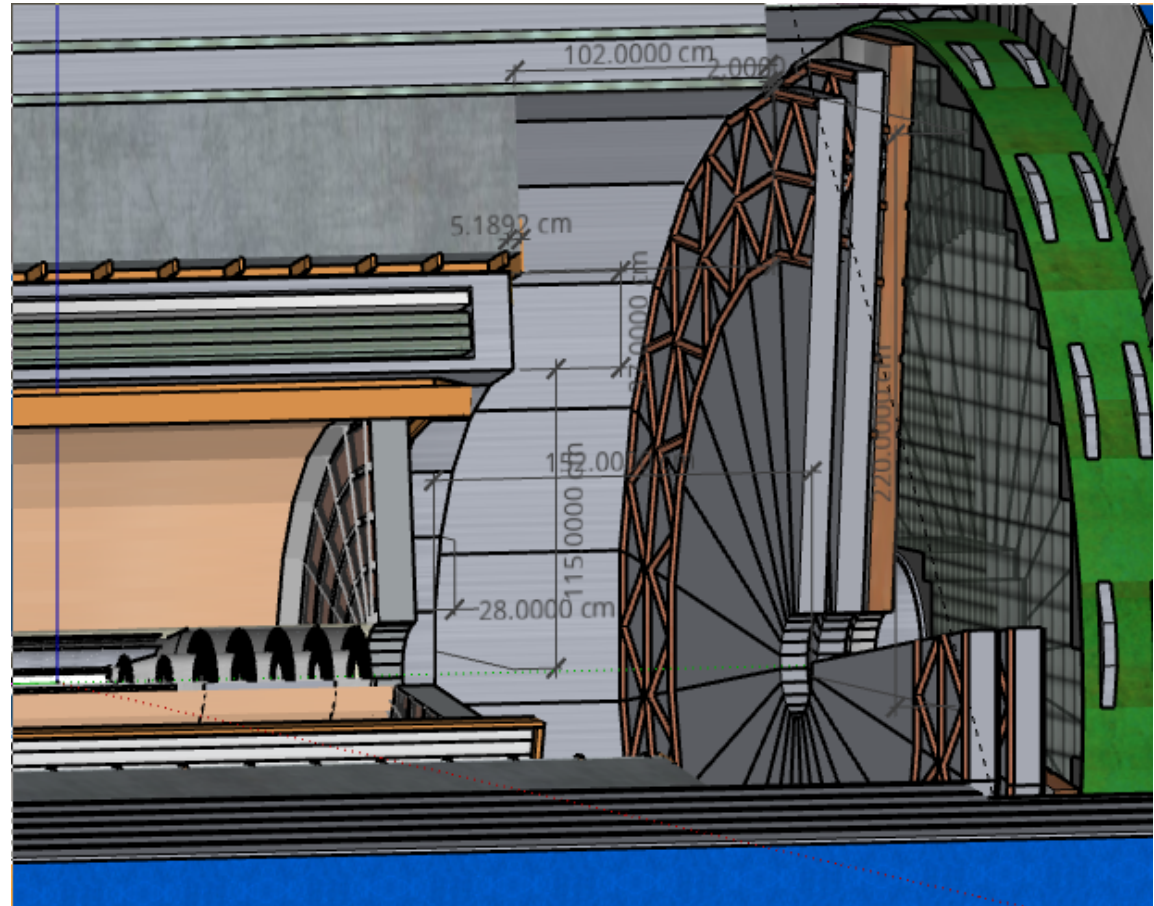
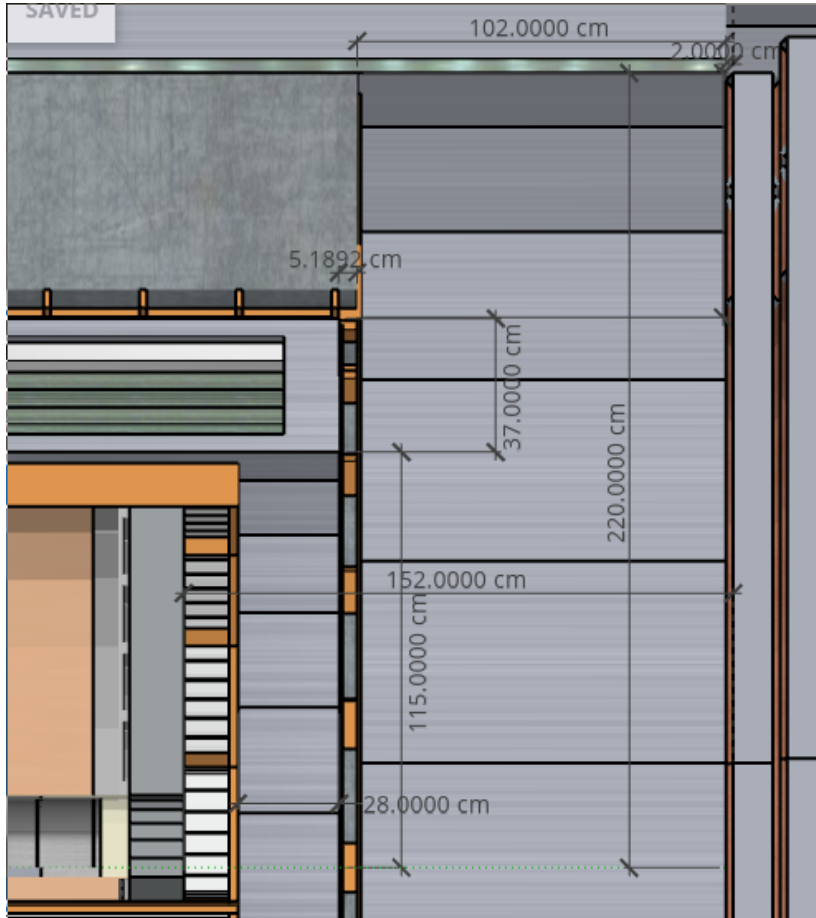


conic dRICH envelope,  
Menagerie 3T, DIRC LD readout

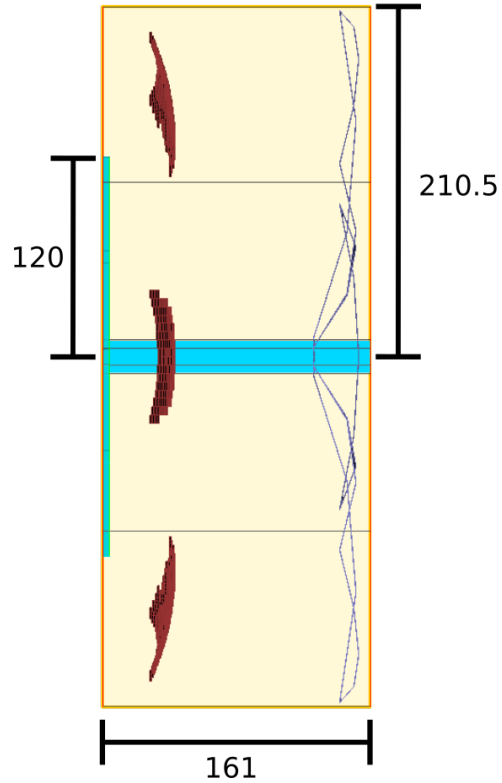
<i>Overall Length</i>	145 cm
<i>Aerogel Length</i>	35 cm
<i>Aerogel Radius</i>	100 cm
<i>Detector Length</i>	110 cm
<i>Bore</i>	10 cm
<i>HD Radius</i>	220 cm
<i>LD Radius</i>	125 cm
<i>Offset</i>	290 cm in Hadron Direction
<i>Segment Count</i>	6
<i>Total Volume</i>	11.94 m <sup>3</sup>

# dRICH space, Menagerie 3T, DIRC LD readout

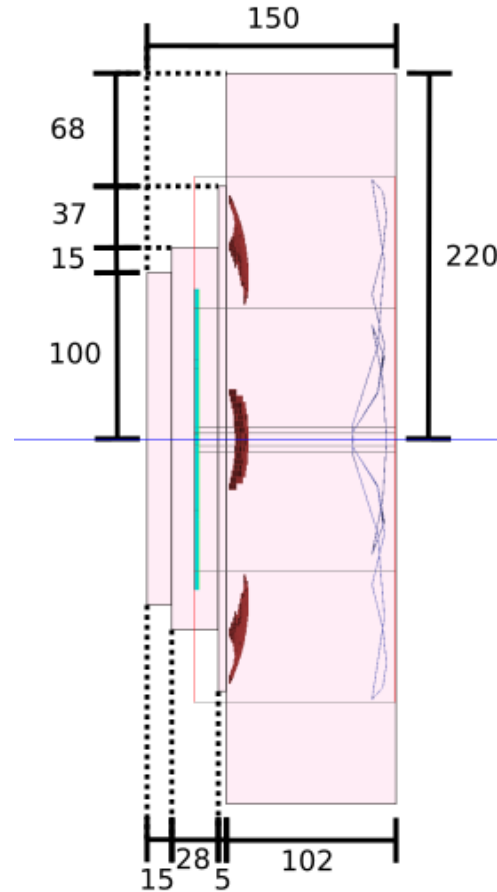


[units=cm]

Fun4all

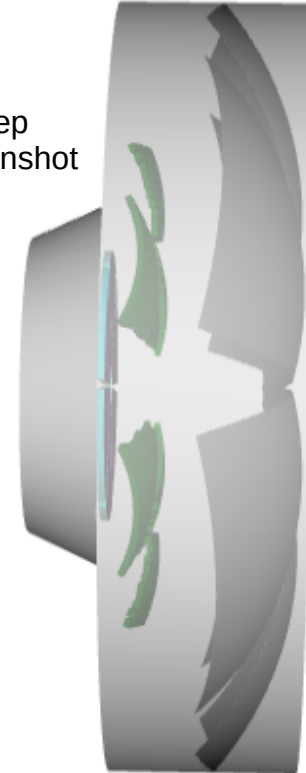


available dRICH space,  
Menagerie 3T  
DIRC LD readout

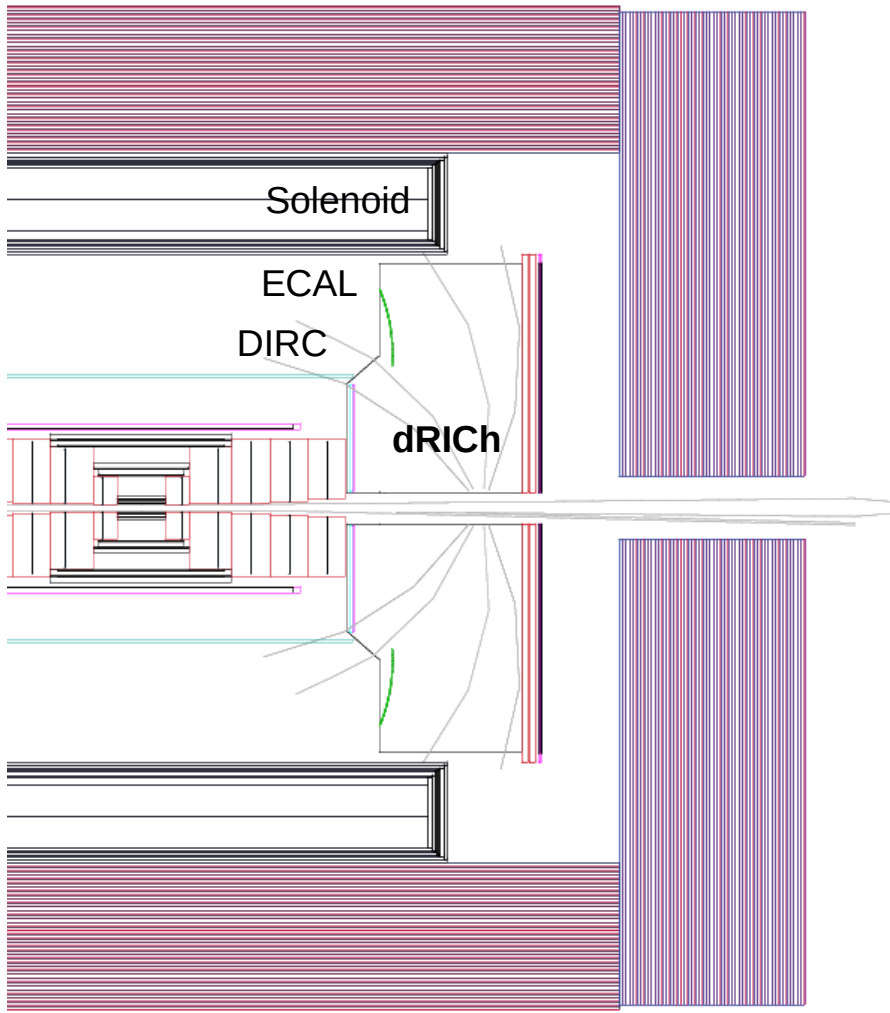


- **First Step:** F4A geometry *re-scaled* to fit in available space (not optimal!!)
- **Next step:** Re-optimize geometry within this space

dd4hep  
screenshot

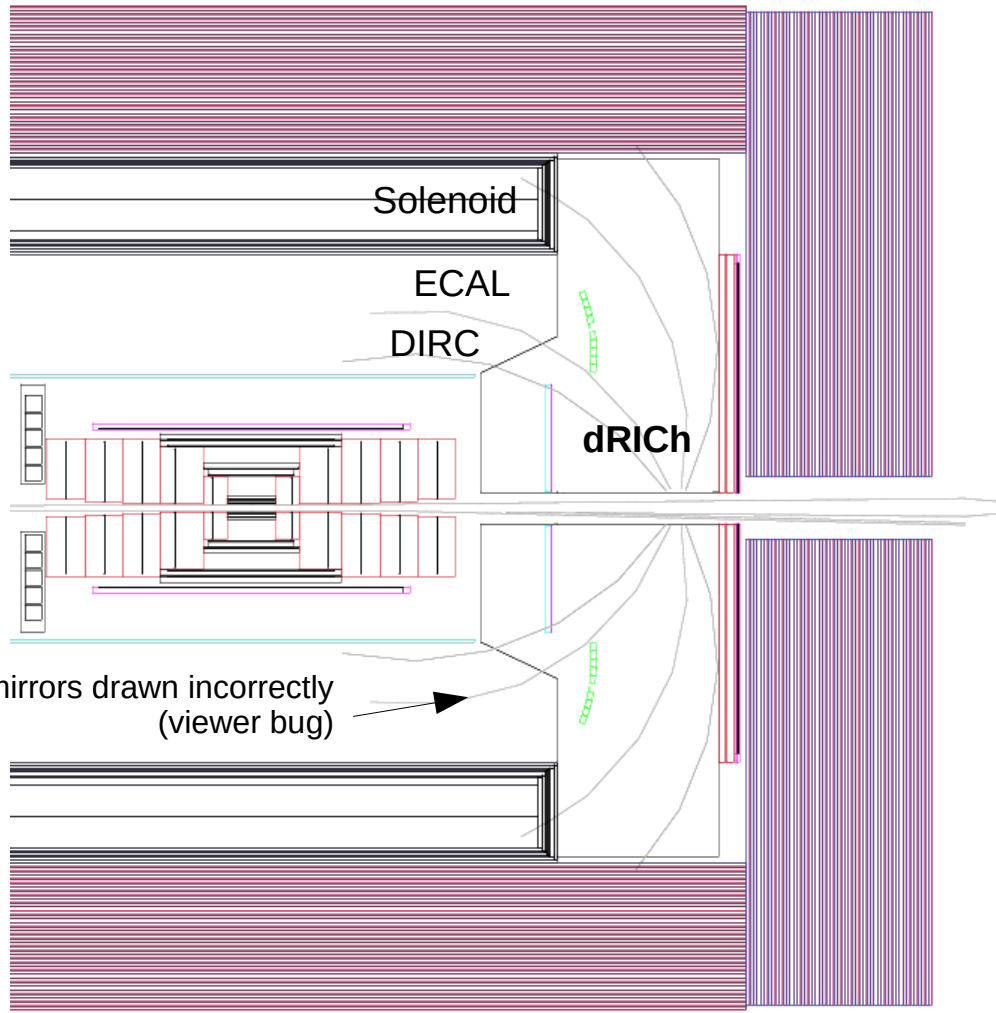


dd4hep top view  
(ECAL and DIRC not visible)



**before**  
(with the gaseous RICH envelope)

**after updating envelope geometry**  
as close as possible to menagerie (sketchup) schematic



## Material Properties

work in progress, stuck on several problems

- material property tables **dumped** from fun4all port → athena.xml
- fun4all port contains all the formulas for generating these tables, and will be the central place to store these data; athena.xml will only contain the resulting dumps

This is a dRICH ring from the gas volume, but there are **several** issues:

- pion thrown in xz plane, but ring center is also offset by y
- far too few optical photons
- aerogel volume does not radiate (but the material does)
- **desperate need for 3D event visualization**
  - (I'm running out of ideas for debugging these issues)

