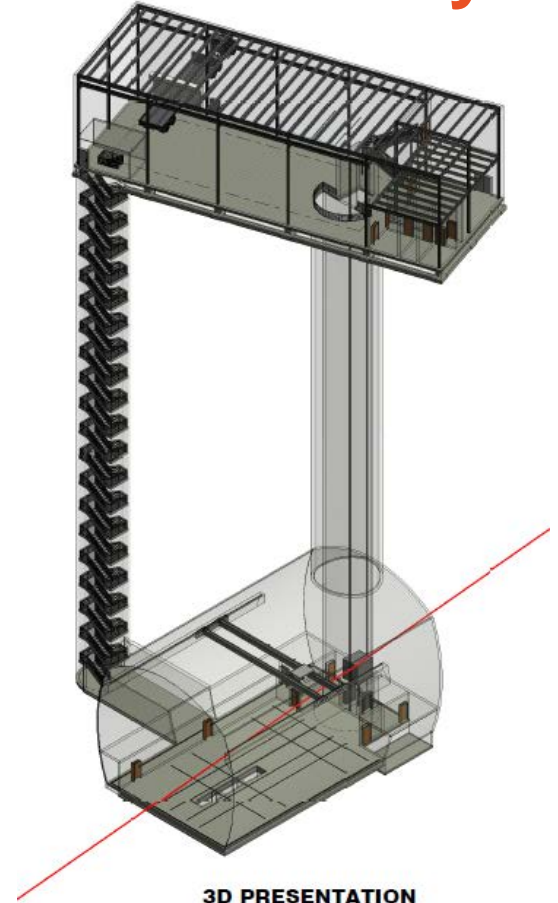


# Ideas for the DUNE Near Detector Cavern Layout



**3D PRESENTATION**

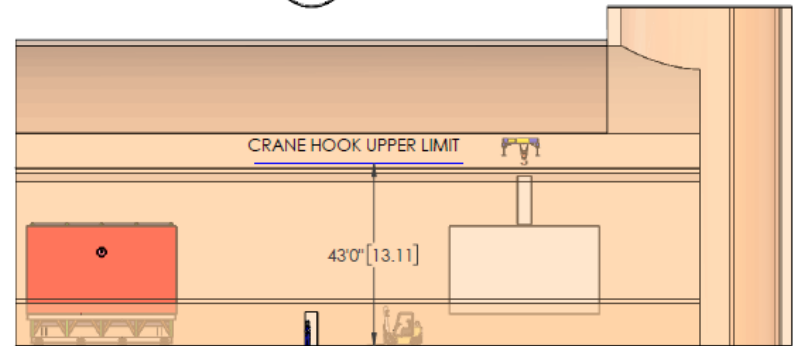
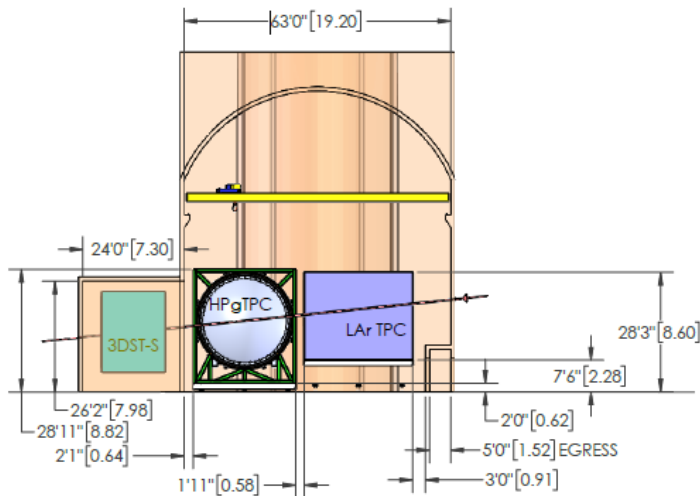
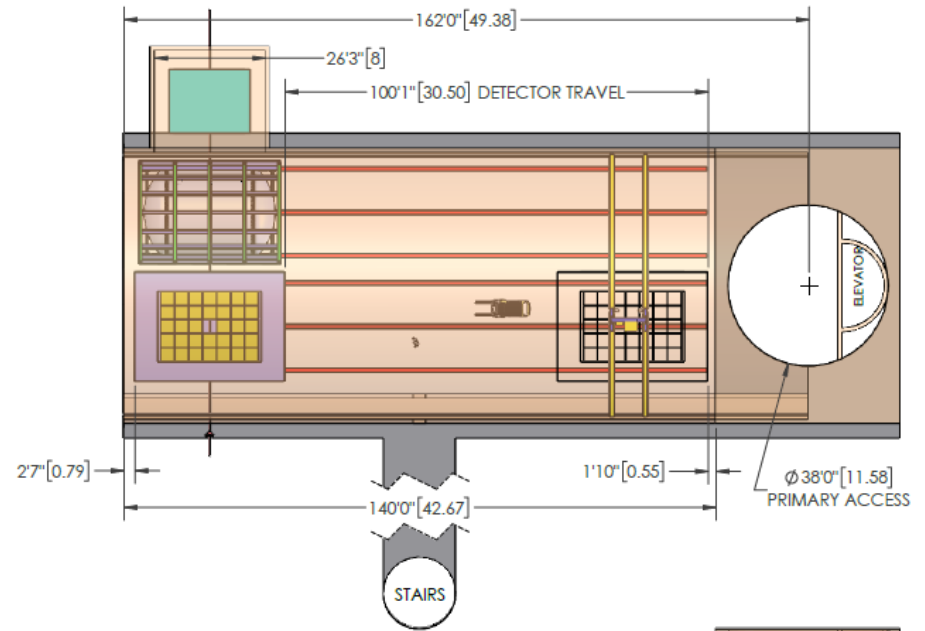
SCALE: N.T.S.



**DUNE**

# Current ND Hall layout

- After several iterations...
- Current ND Hall sizes

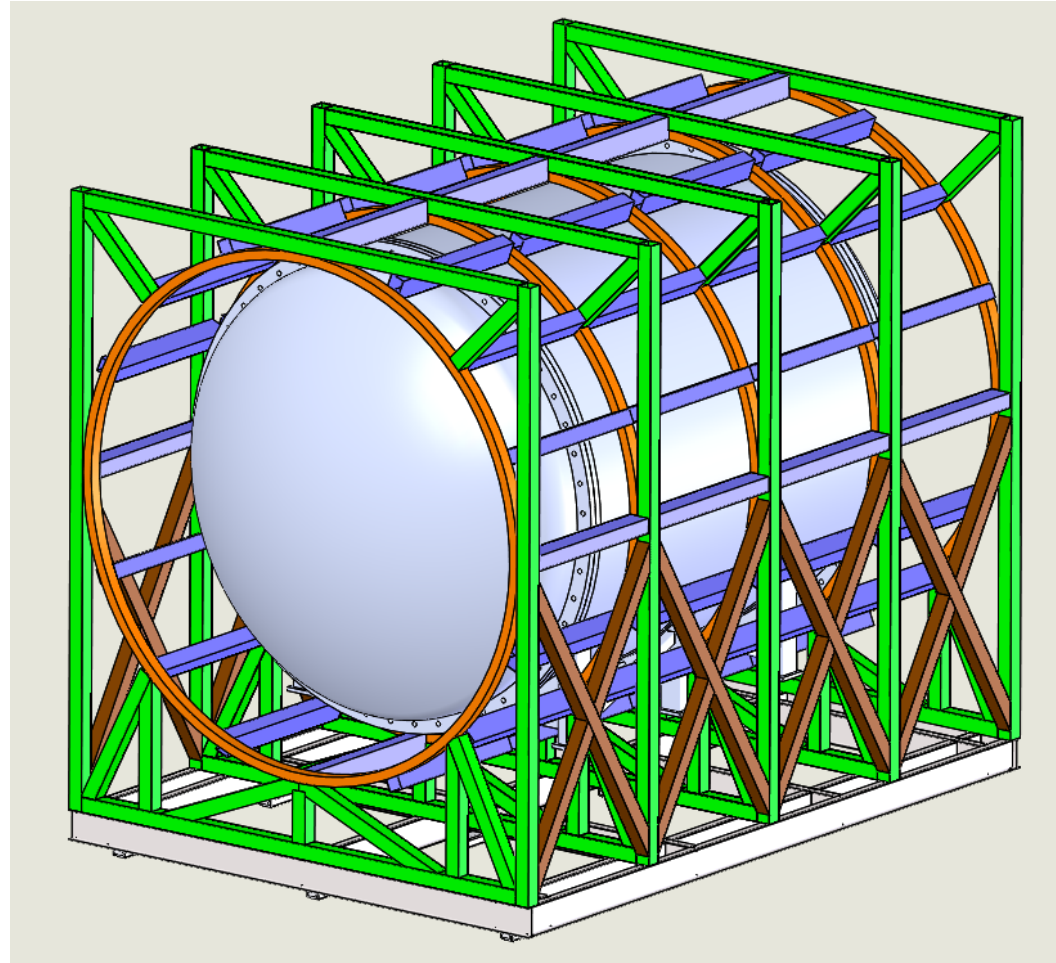


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# Magnet & Tank being defined

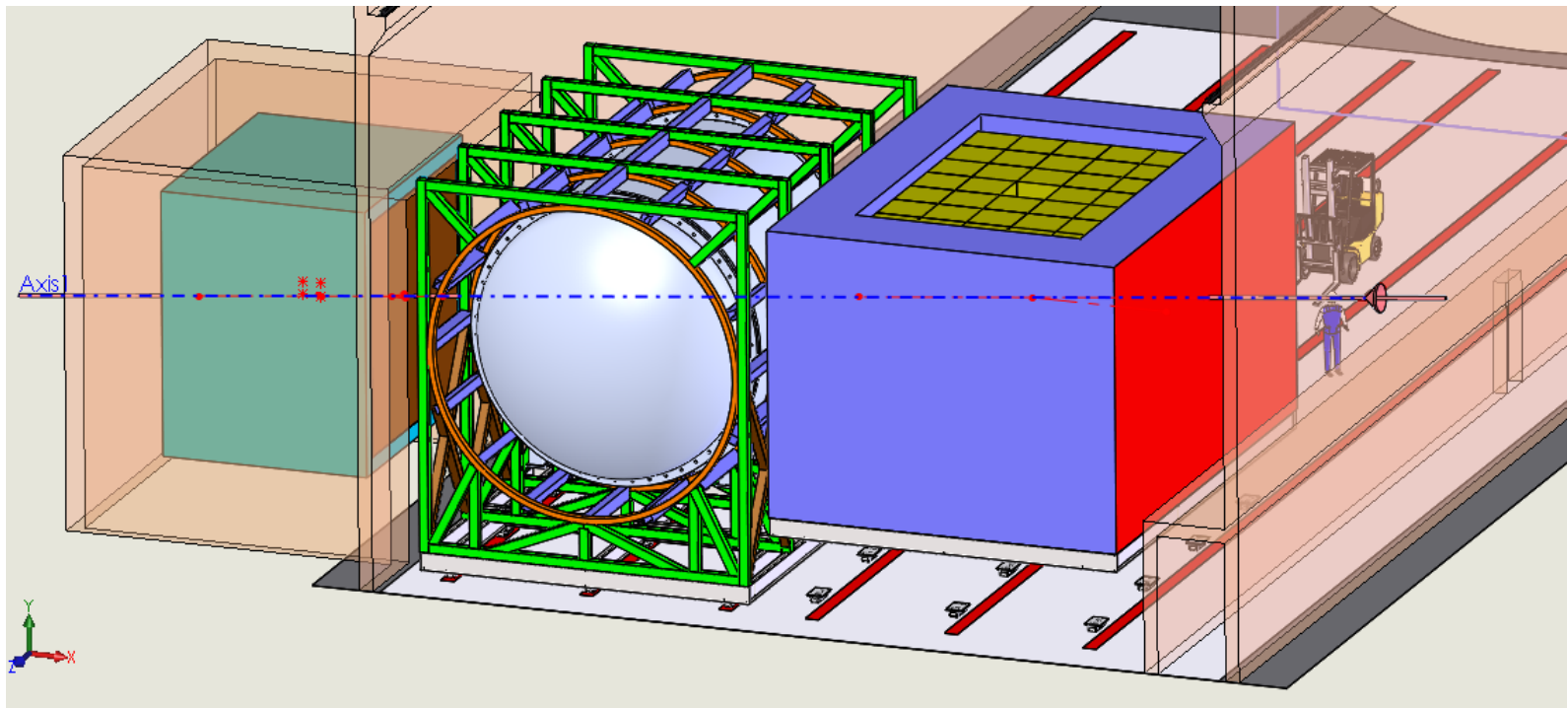
- Additional considerations
  - Magnet ring locations
  - Magnet/Tank support interface
  - Tank material
- Expect several more iterations



# Defining the movements

Beginning thoughts-

- Each detector is placed upon a moving platform
- The platform is supported by a matrix of Hilman rollers
- Motion is provided by a rack & pinion drive system for each detector
- Flush floor required
- All specifics TBD



# The travel, 30.5m

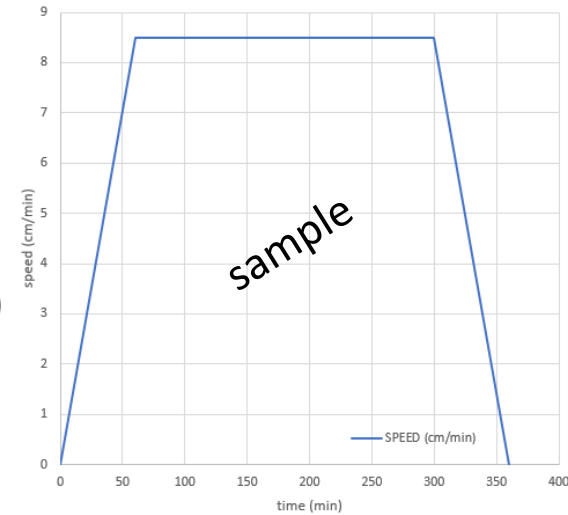
Current assumed motion times & speeds (without data from beam)

- Travel setup- 1 hour preparation at each end location
- Travel speed- 8.5 cm/min
- Acceleration & deceleration rates TBD
- LAr sloshing concerns?
- Preparation & travel time, combined, to be within 8 hours

Current assumed motion times & speeds (taking data from beam)

- Travel setup- 1 hour preparation
- Travel speed- .85 cm/min
  - Continuous or with stops- TBD
- Preparation & continuous travel time (one way), combined, to be approx. 3.5 days, without intermediate stops

Precision: placement <1 cm, position measurement <1 mm



# Examples



# Examples

Brookhaven 1100 ton TPC & magnet



# Movement Summary

- Just starting to look at the movement plans
- Specifications are largely undefined
- Seeking your comments and “wish list”

