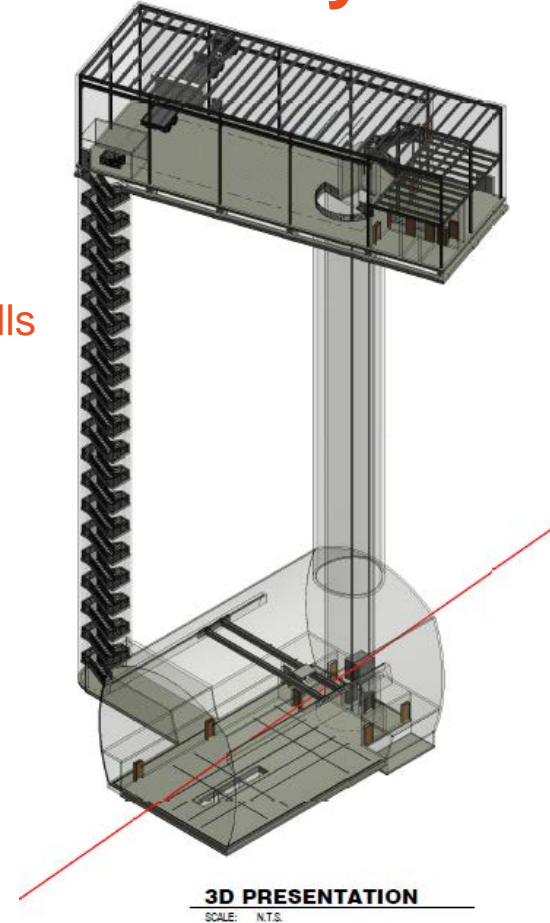


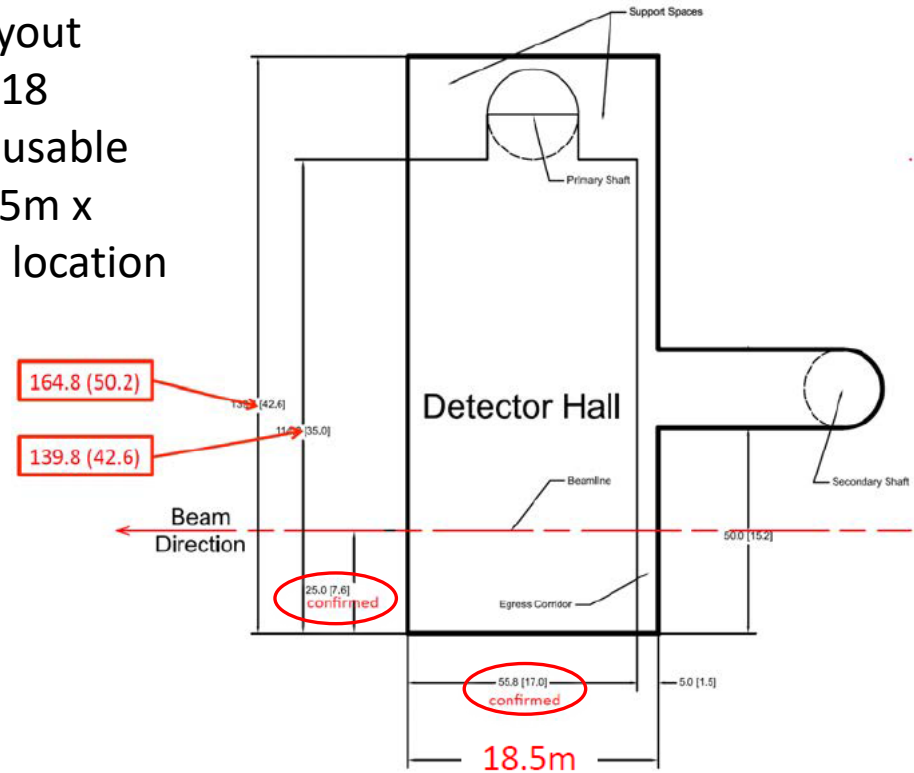
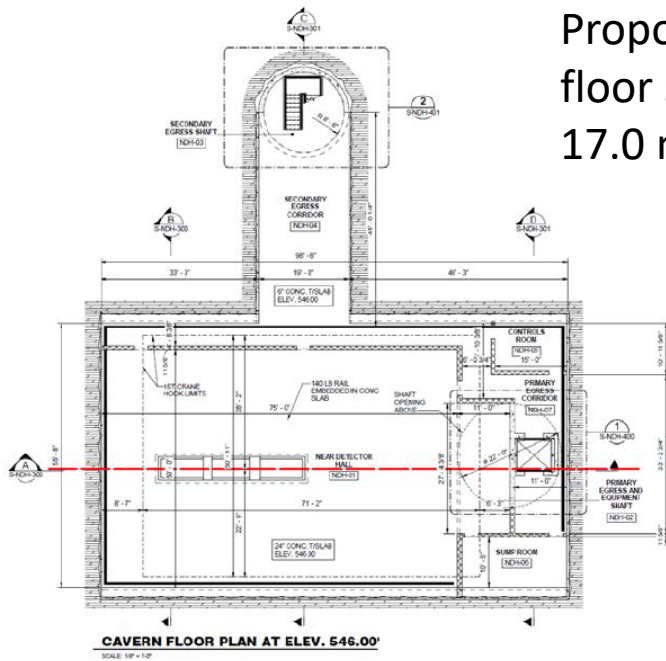
Status of DUNE Near Detector Cavern Layout

Discussion of changes & issues- making it all fit within the walls



DUNE ≡ DEEP UNDERGROUND NEUTRINO EXPERIMENT

Started the ND layout using the June 2018 Proposed Cavern usable floor space of 42.5m x 17.0 m and beam location



Reference ND Detector Cavern Concept:

100ft x 56ft Cavern with
75ft x 50ft Detector Hall

June 2018 ND Collaboration Proposal:

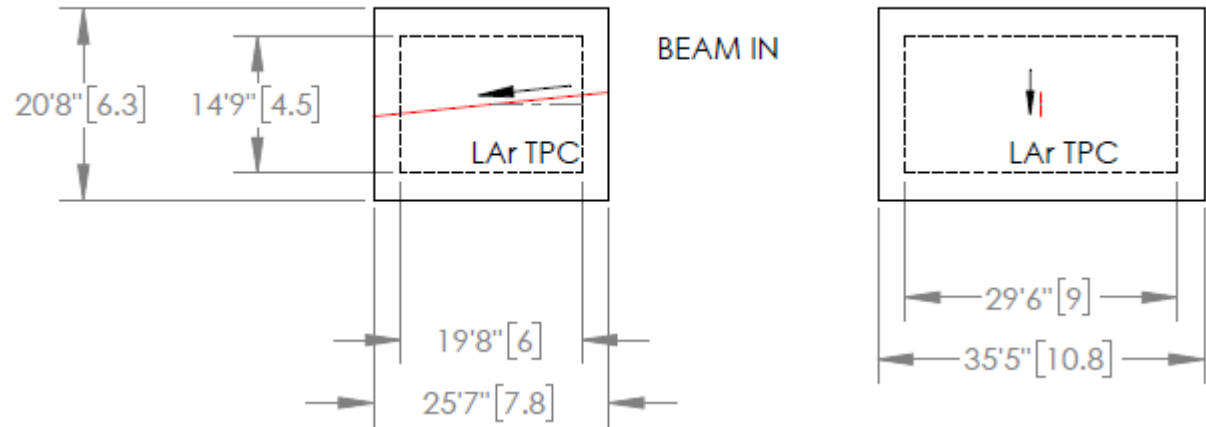
165ft x 61ft Cavern with
140ft x 56ft Detector Hall



LAr TPC updated size utilized

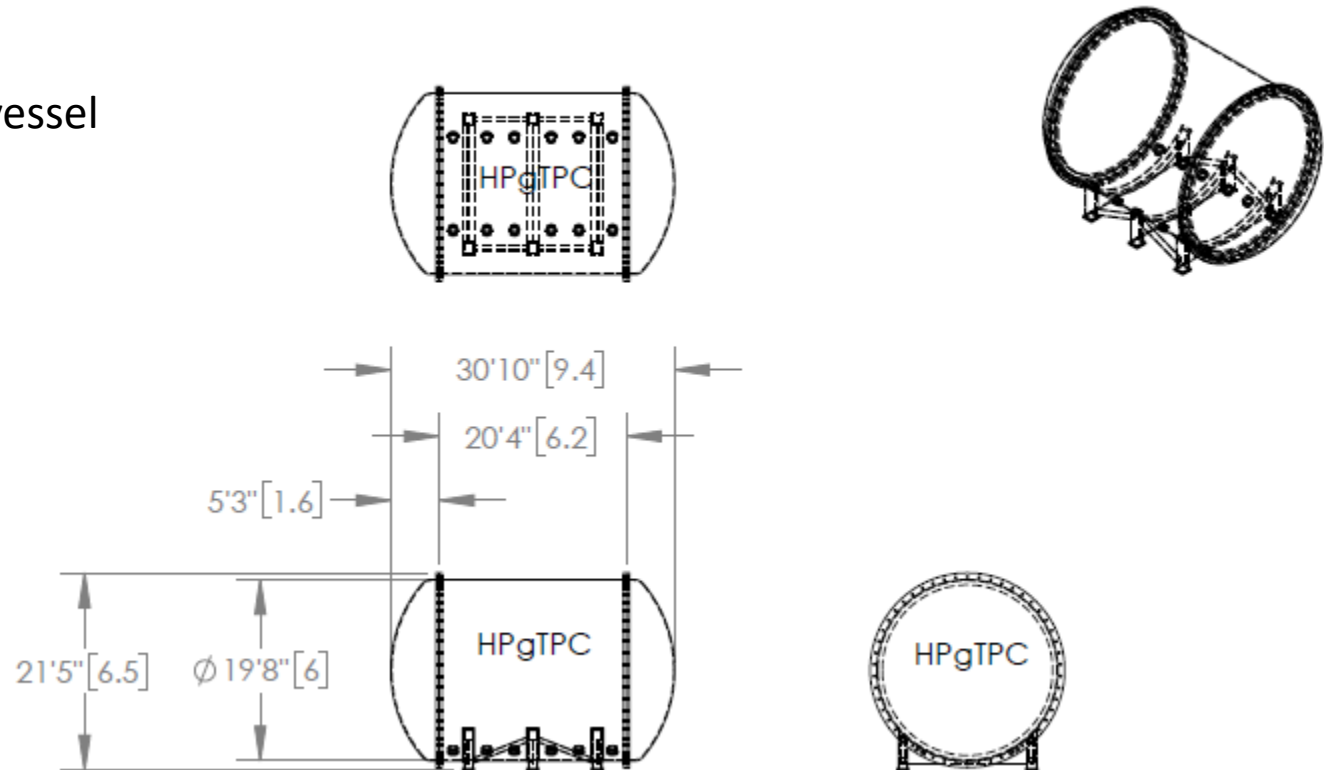
Min Jeong Kim provided updated sizes on 10/22/18.

This is larger than the previous internal size of 7m x 5m x 3.5m high



HPgTPC vessel

The current HPgTPC vessel



Floor space too small?

1. Placing the items within the usable floor area, including the beam shows a space problem.
2. No room for the magnet, size unknown. It is expected to house the HPgTPC vessel.
3. Movements of items undefined.
4. Masses of items TBD.
5. Any considerations as to how the items are moved into the cavern?
 - Tank assembly on the surface or in the cavern?
6. Discuss the options
 - Change item sizes
 - Change floor size

