

ProtoDUNE Beamline and Window Alignment

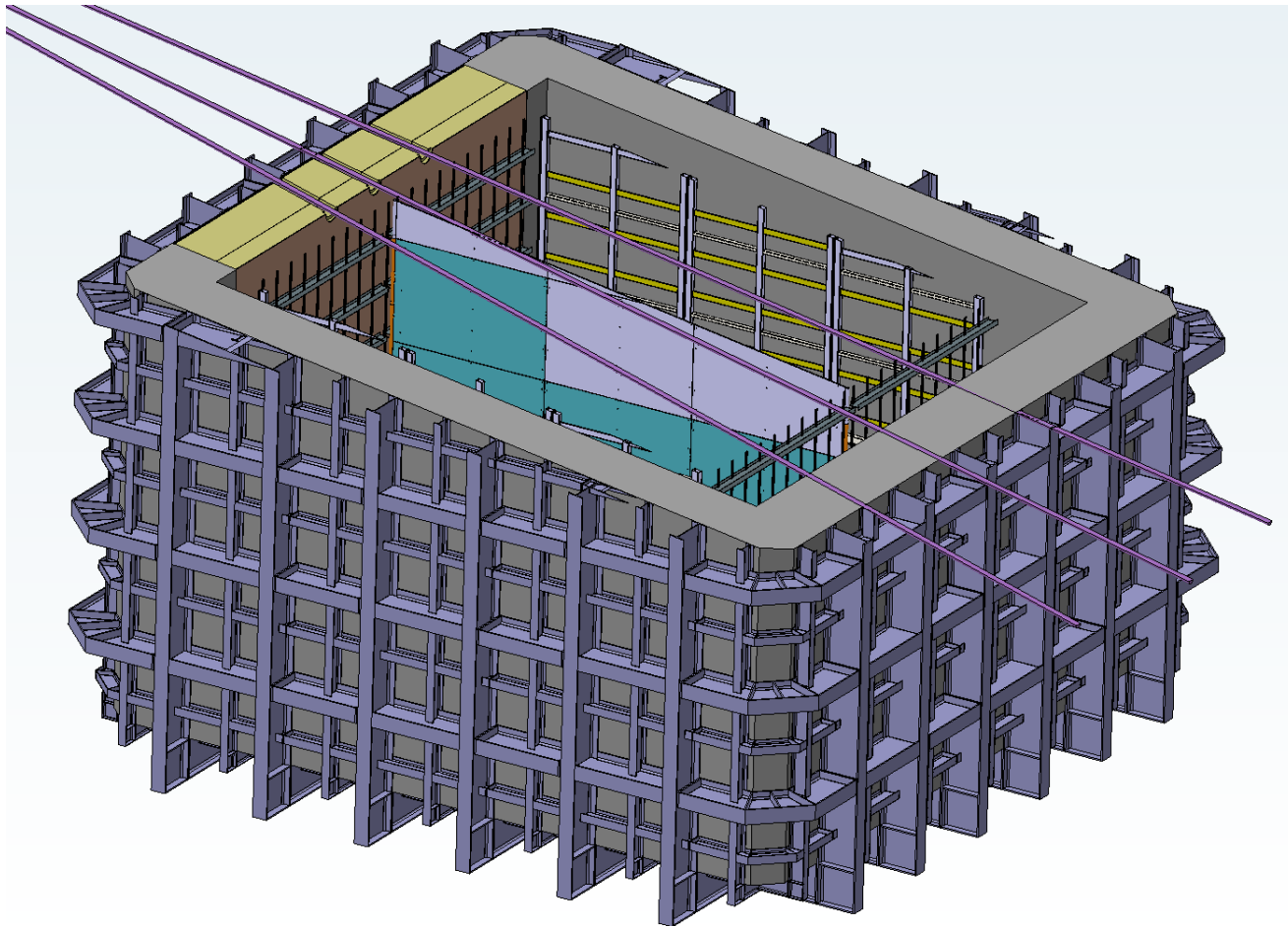
Tim Loew, LBNL

November 6, 2015

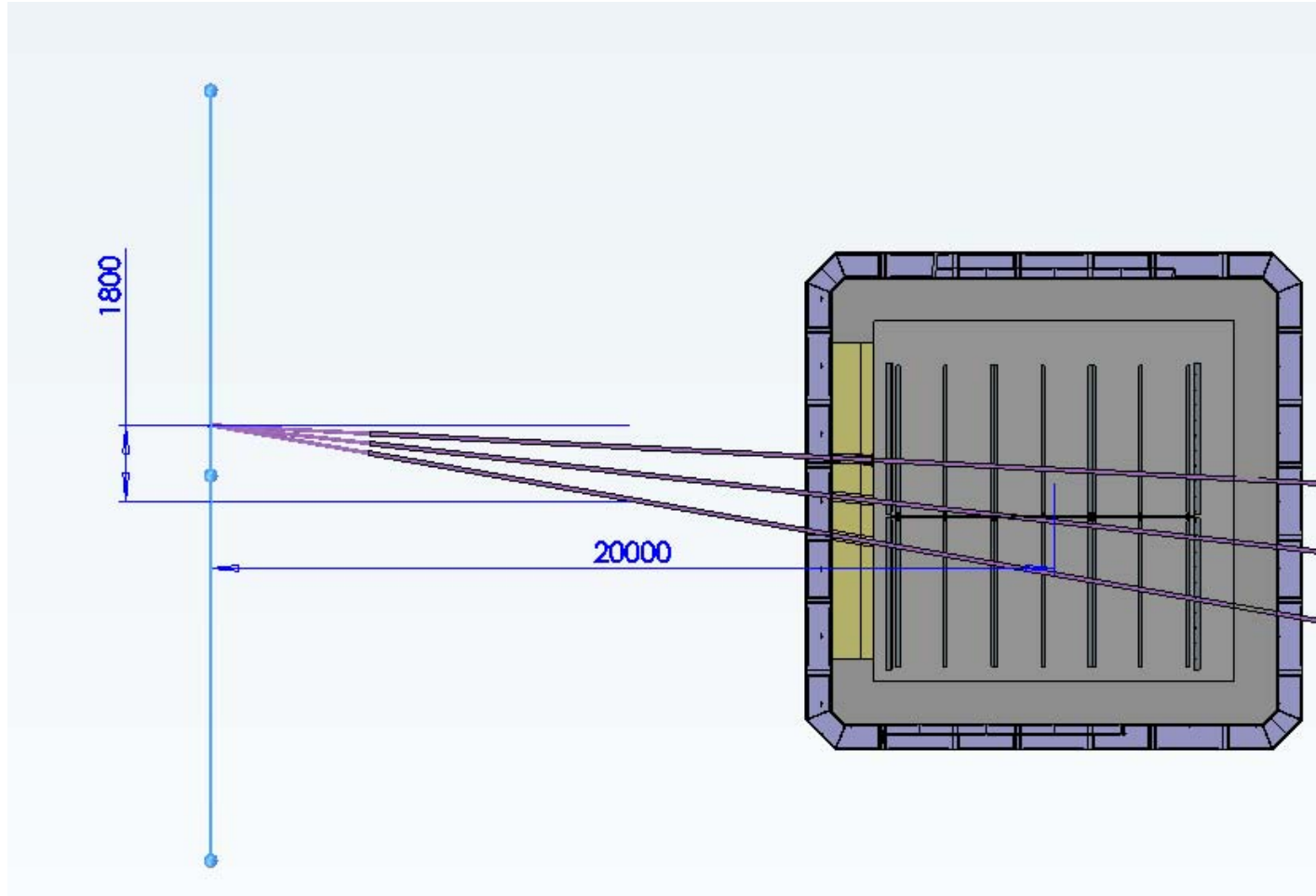
Outline

- Detailed CAD model with TPC, GST insulation system, external structure, beamline components downstream of Bending Magnet #2
- Can set beam paths relative to either Bending Magnet #2 position or TPC elements.
- Physics drives the beam configuration, interference with support structure likely.

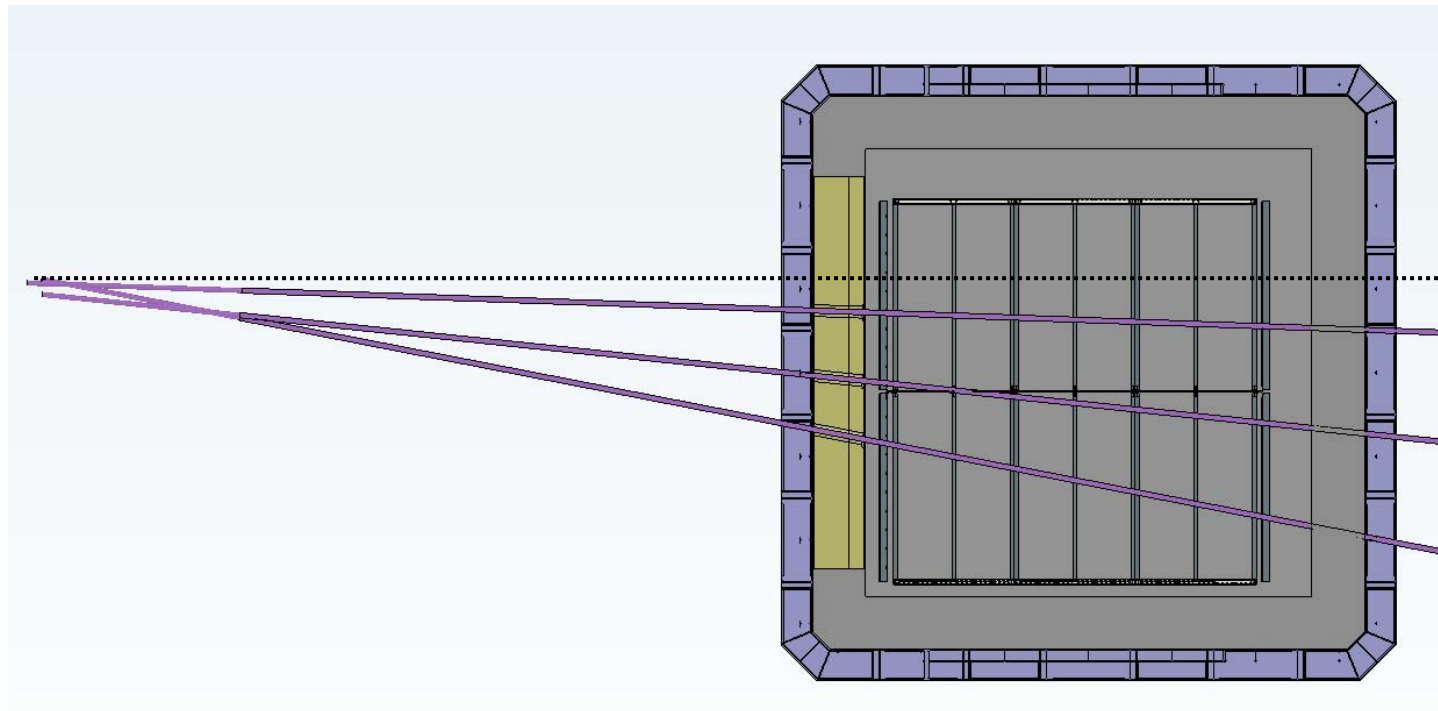
Detailed Beamline – Detector Model



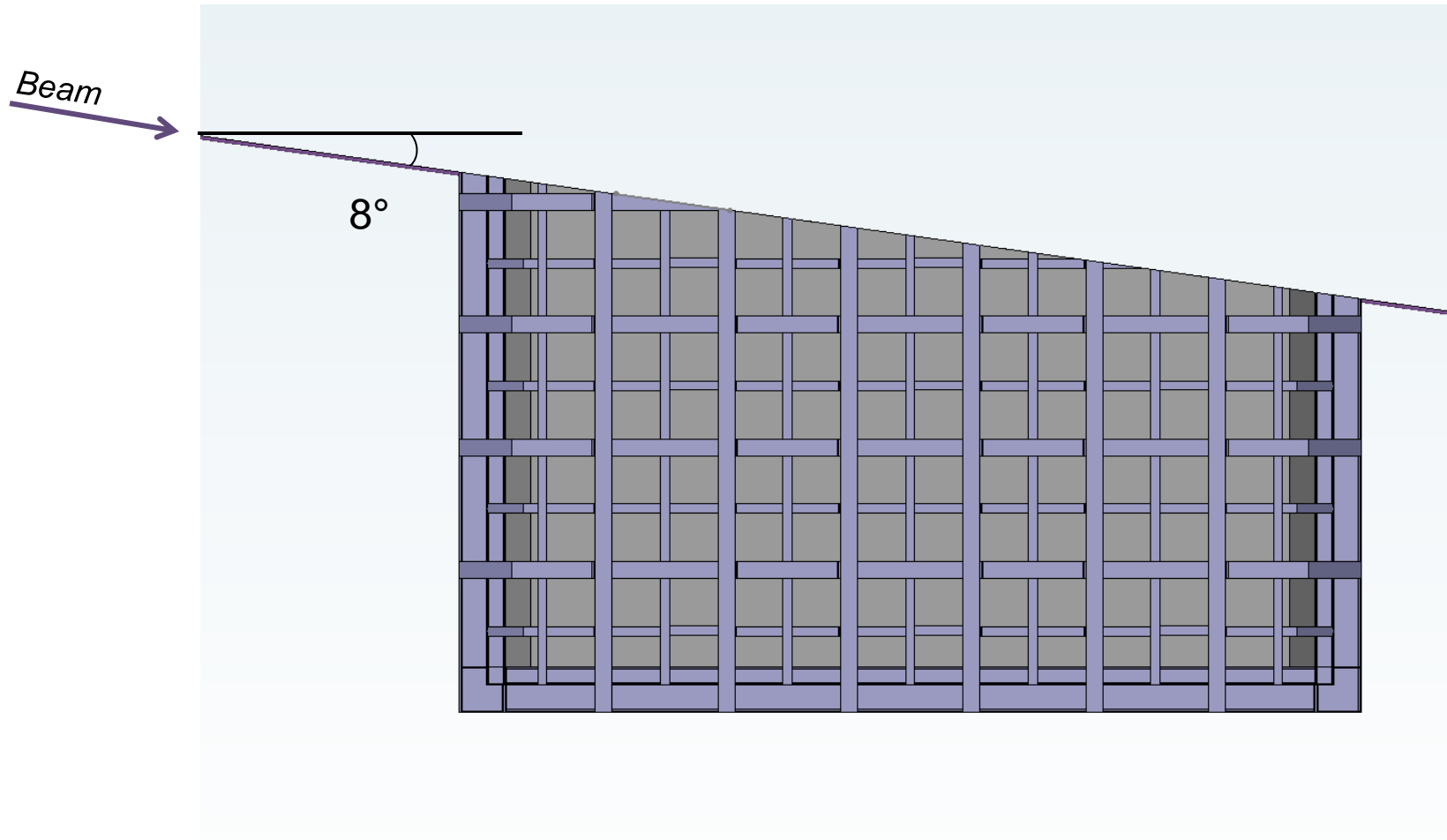
Case #1: Beams Set by Bend Magnet #2 Position



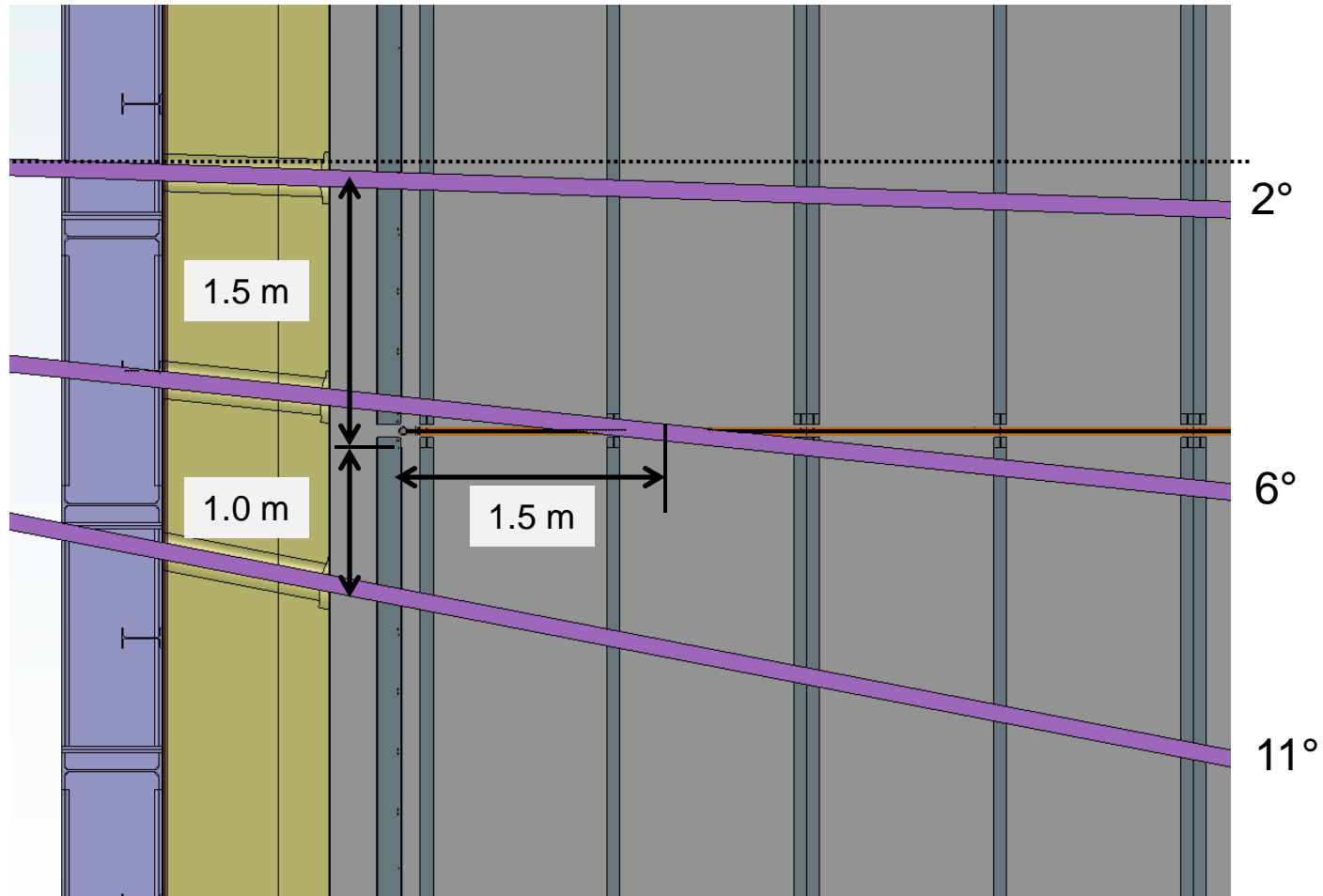
Case #2: Beams Set by Position Relative to TPC Elements



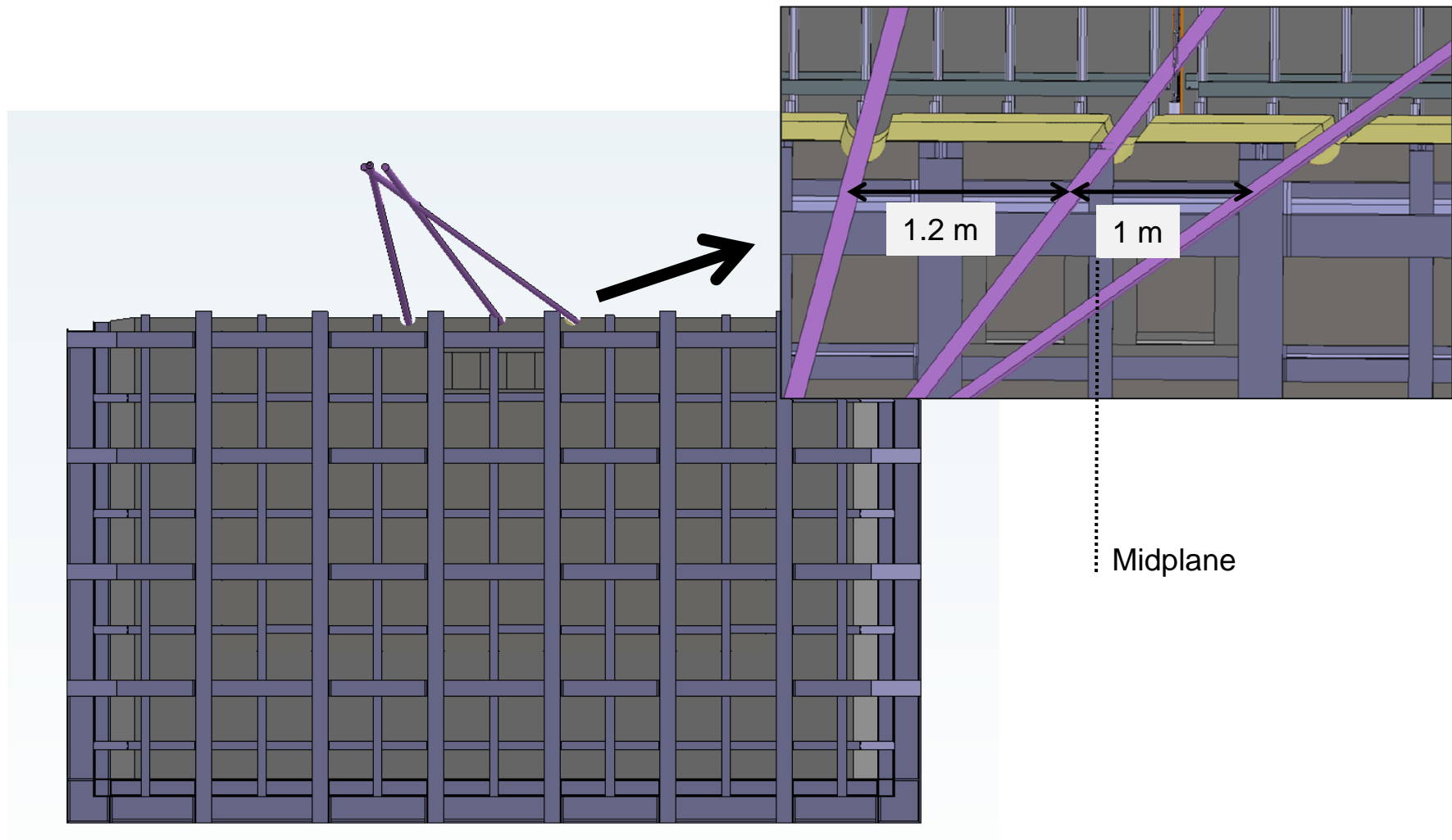
Window and Thru-Hole Angled



Case #2: Beams Set by Position Relative to TPC Elements



Beam Entry Points Interface with External Structure



End