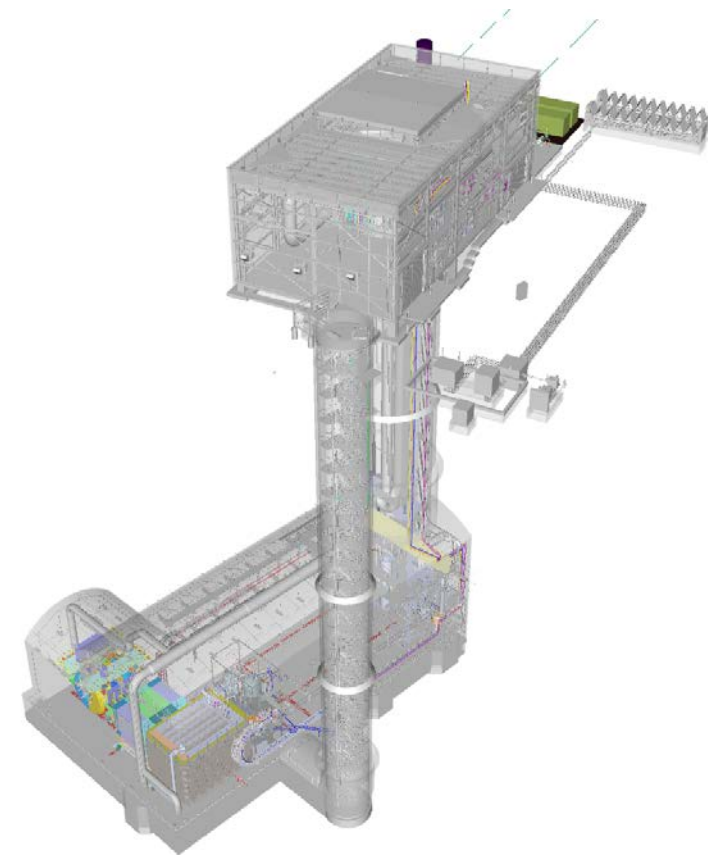


Near Detector Visualization

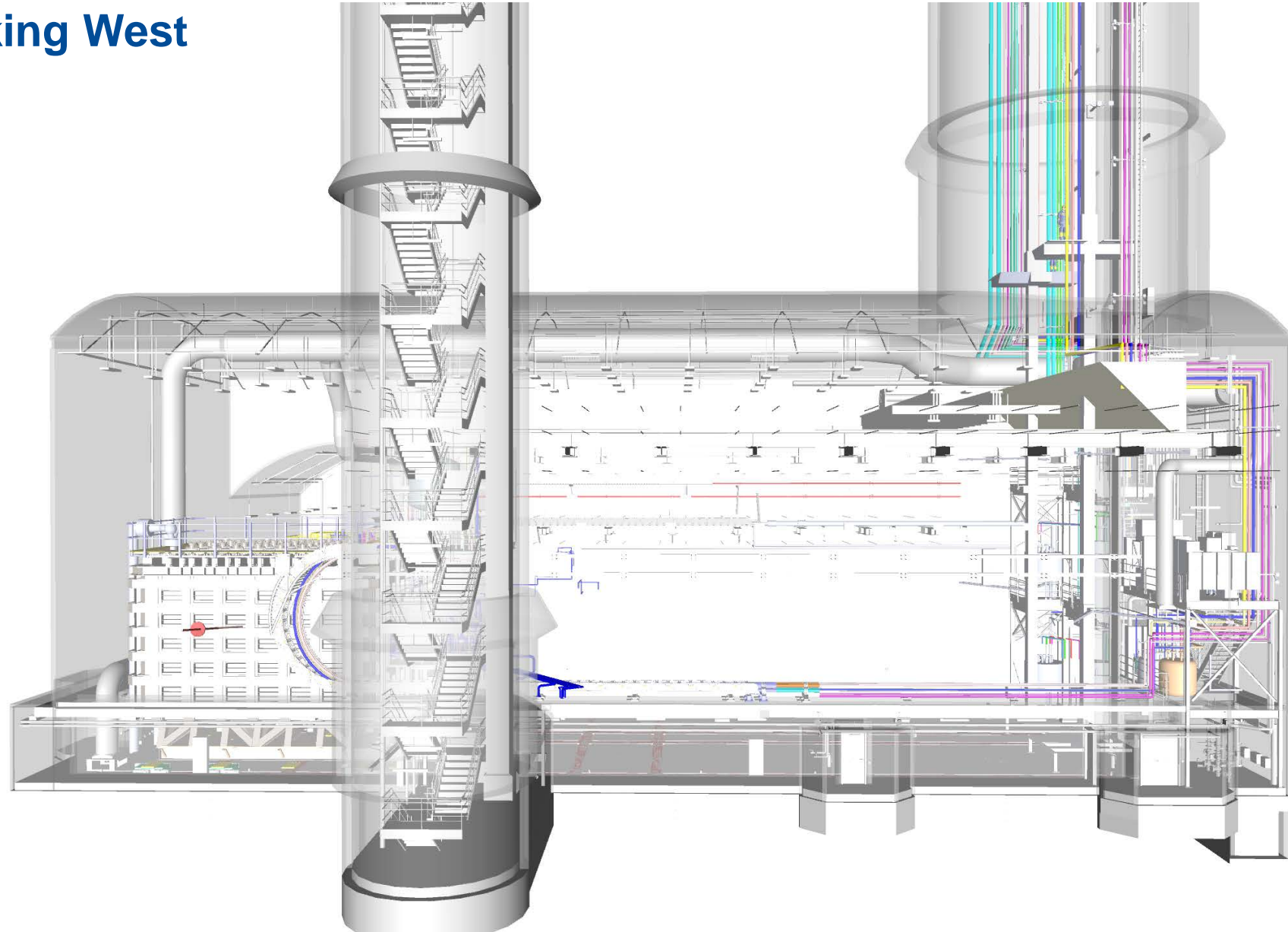
Tom LeCompte
SLAC



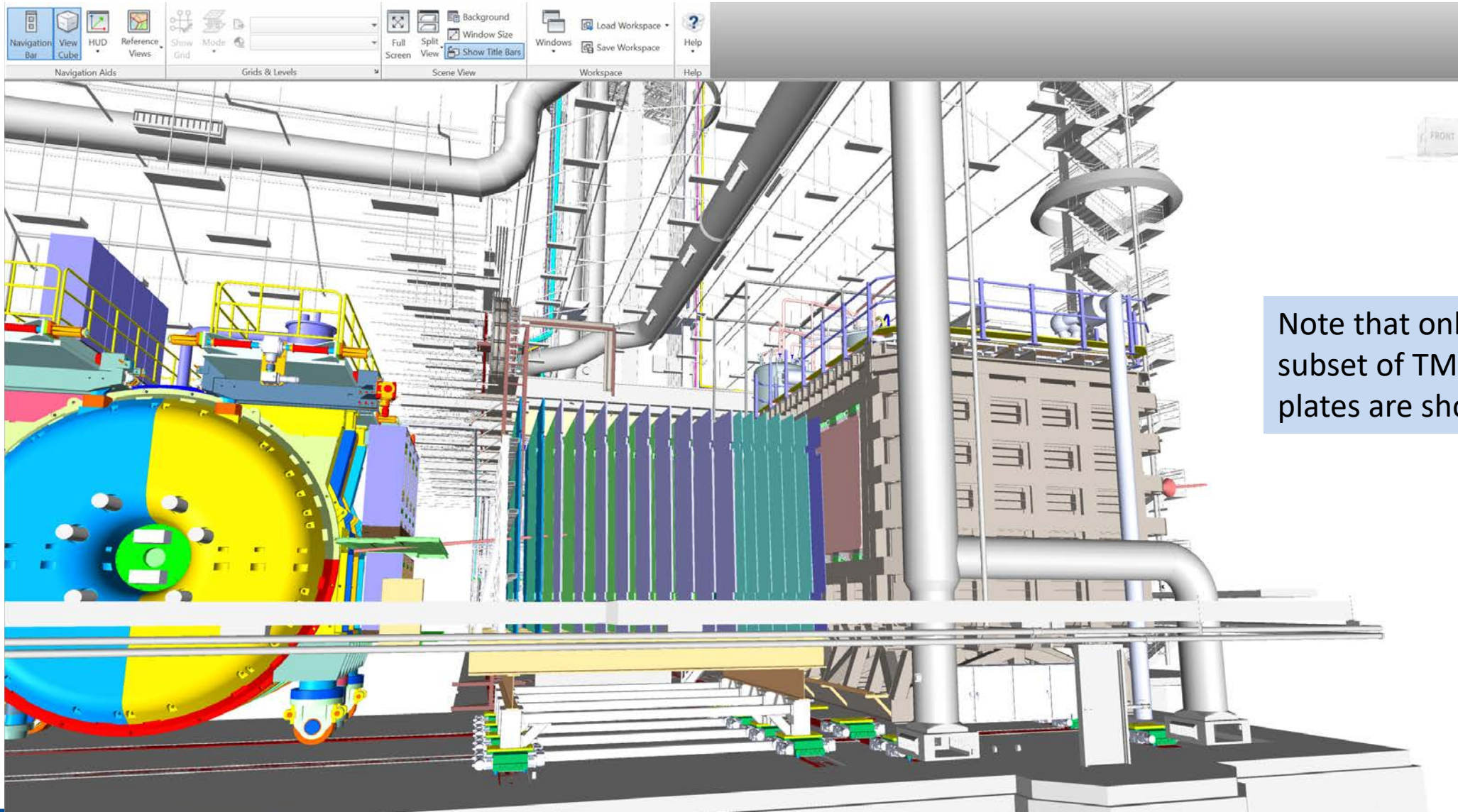
Navisworks Freedom

- Autodesk (makers of AutoCAD) has a free 3D visualization tool available for download, called Navisworks Freedom
 - Download from here: <https://www.autodesk.com/products/navisworks/3d-viewers>
- DUNE has a model suitable for visualization in EDMS
 - Complete, but not at the individual nut and bolt level
 - Get it (usually the latest is what you want) here: <https://edms.cern.ch/document/2618574/1>
- Some pictures follow
 - Recommendation: a good computer and graphics card helps. Will run on a Surface Pro in 4K...but it's not exactly zippy.

ND Hall, Looking West

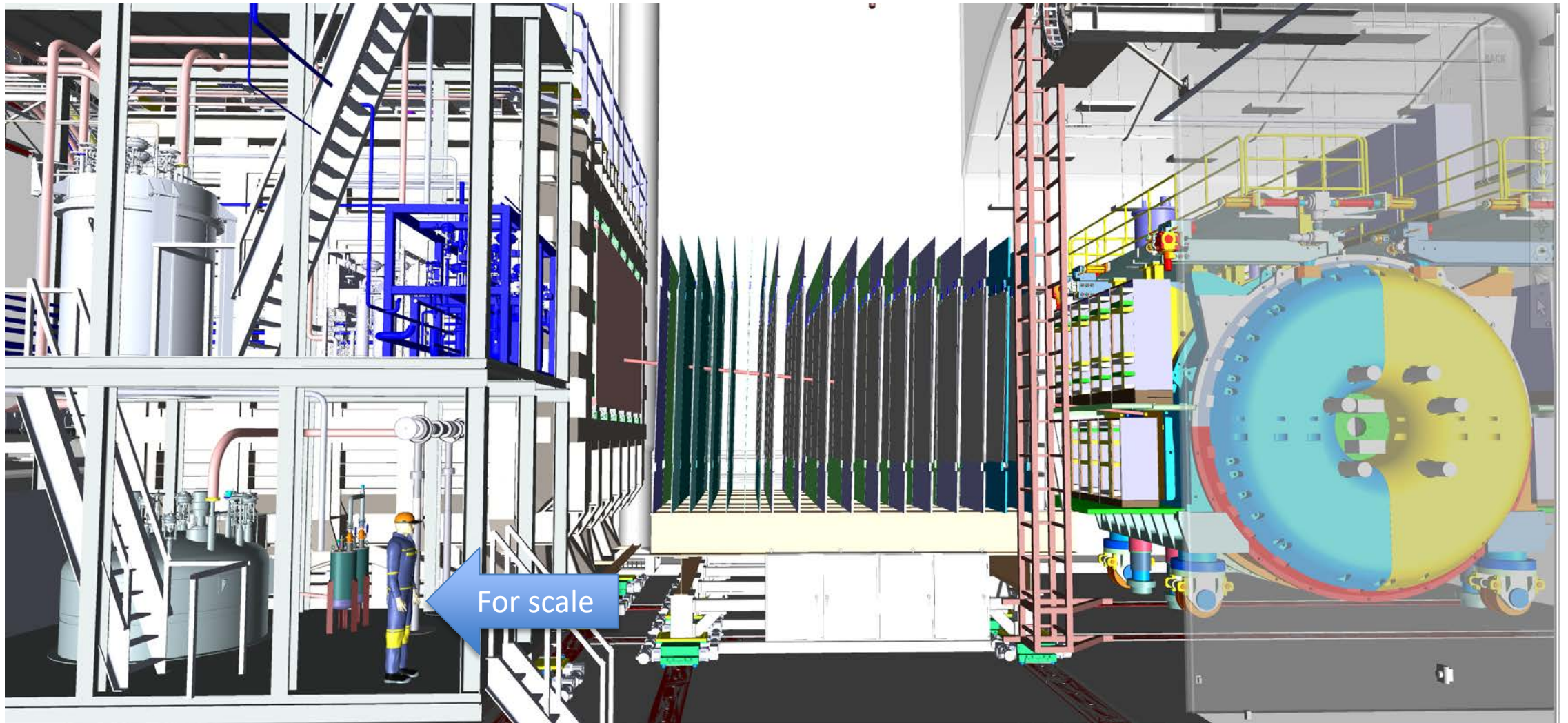


ND Subsystems (Looking North)



Note that only a subset of TMS plates are shown

Inside ND Hall Looking South



Summary

- There are some nice 3-D visualization tools and a ND Model available to all of DUNE
- This will add reality to our thinking
 - For example, there is more contention for space under the detector than I had thought. There is space for electronics – but can we get to it?
 - I am more convinced than ever that we need the “short stack”
 - The egress shaft is in an interesting spot re: cosmic rays
- Experiment!