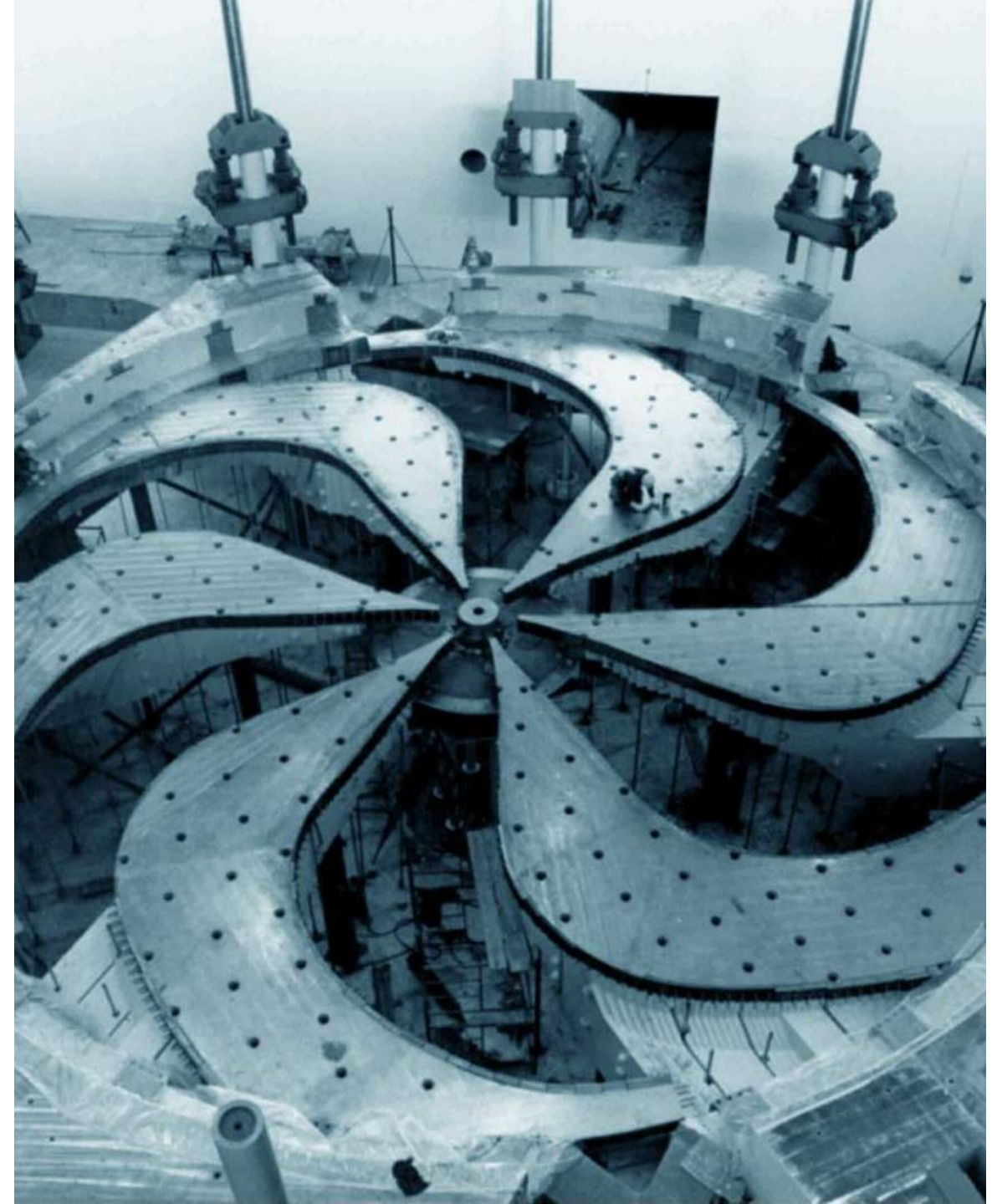


Hi-Lumi RFD CM Project P455 at TRIUMF

Bob Laxdal

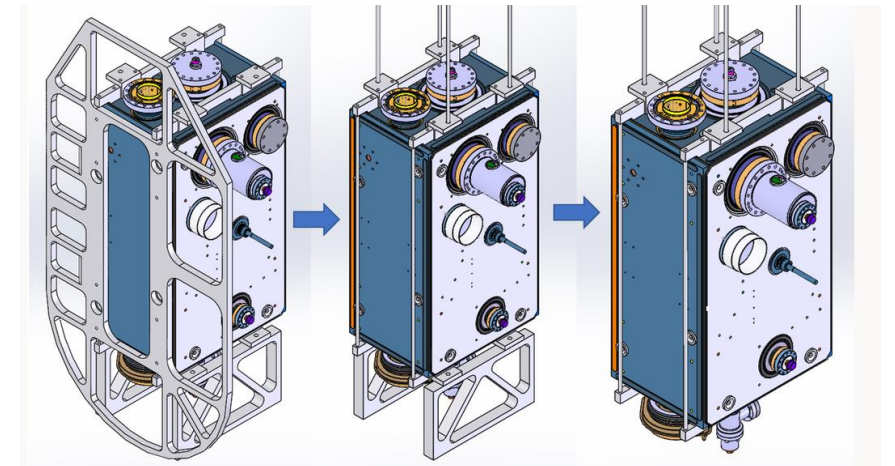
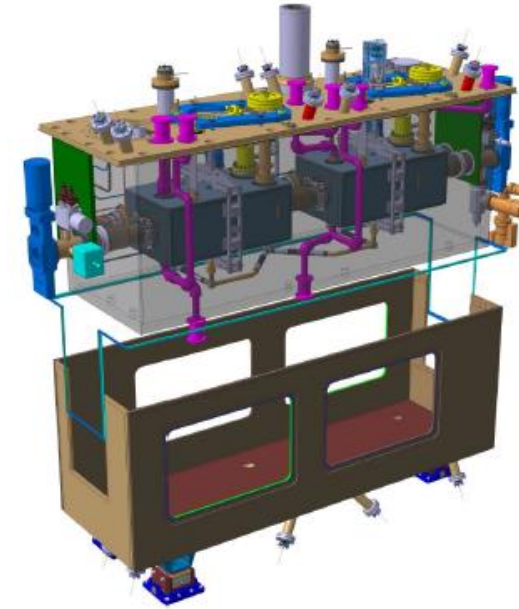
TRIUMF Hi-Lumi Technical Coordinator

Sept 25, 2020

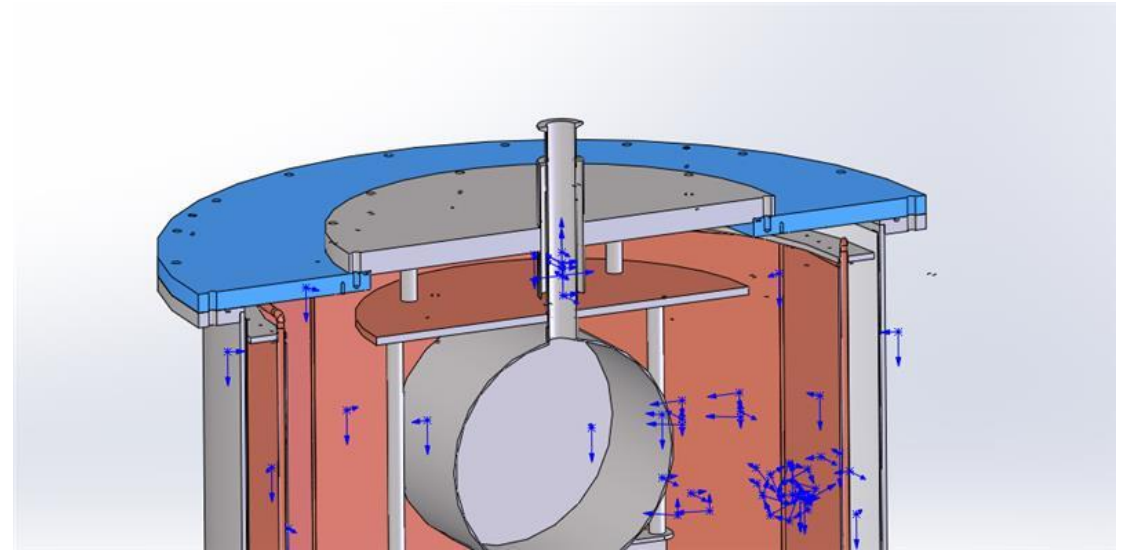
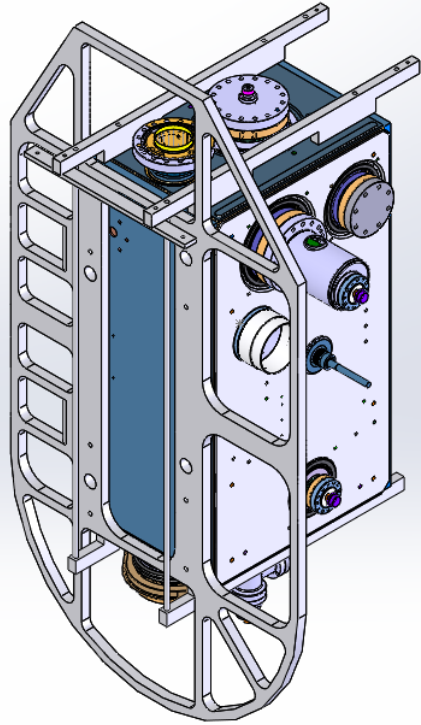


Our status –

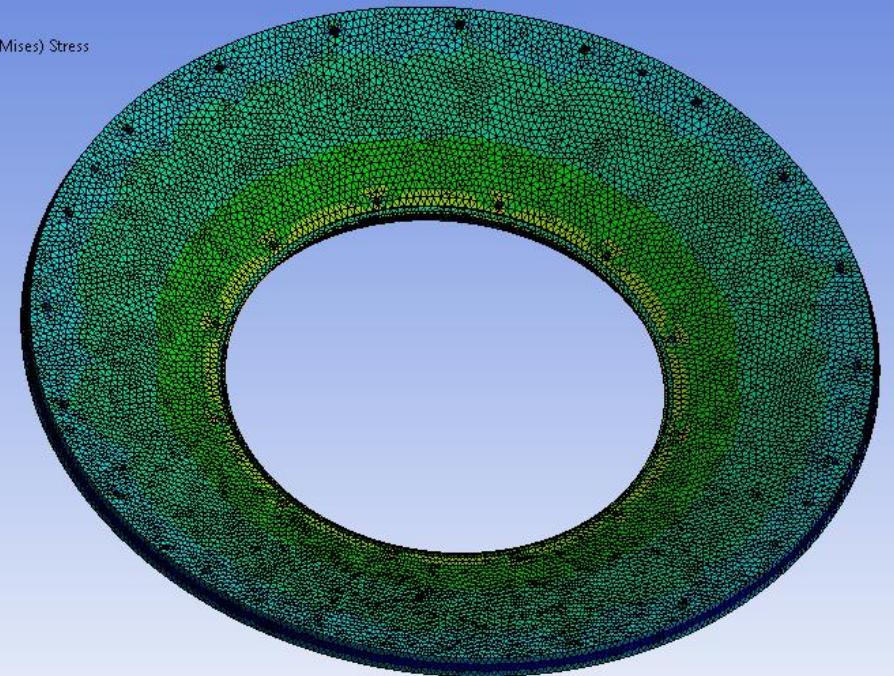
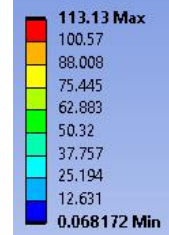
- TRIUMF is now in Phase 3 CV-19 protocols – technical staff on site at 80% level – work on CM work is ramping up – we have one CM in the pipeline before we start Hi-Lumi TCM-0
- We continue with remote design work including project planning
- Student design of cavity support frame complete for handling in clean room and for cavity cold test



Cold test preparations



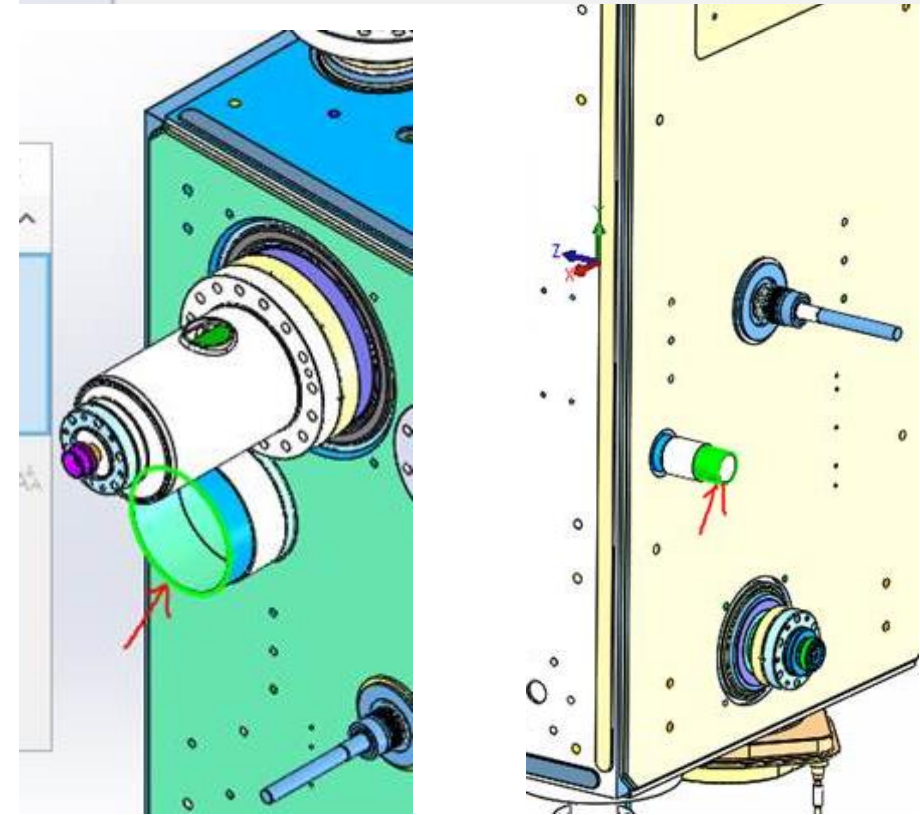
A: Static Structural
Equivalent Stress
Type: Equivalent (von-Mises) Stress
Unit: MPa
Time: 1
2020-06-26 11:49 AM



Helium stubs

- For 4K jacket test at TRIUMF need flanges for helium supply and helium return (AUP bath test doesn't require this)
- Discussions with AUP on helium connection flanges for TRIUMF cold test – need to bring CERN into the discussion
- Based on CERN step files stub dimensions are 28mm inlet and 104mm exhaust tube stub diameters
- Those are not nominal CF bore sizes. According to ISO/TS 3669-2:2007 we'd be looking at a 40CF (2.75"CF) inlet and 100CF (6"CF) outlet.

Area: 2181.52193865mm ² [3.381in ²]
Perimeter: 175.92918860mm [6.926in]
Diameter: 28.00000000mm [1.102in]
ST1318284_01_SPS_RFD_DC_Transport_assembly.SLDPR

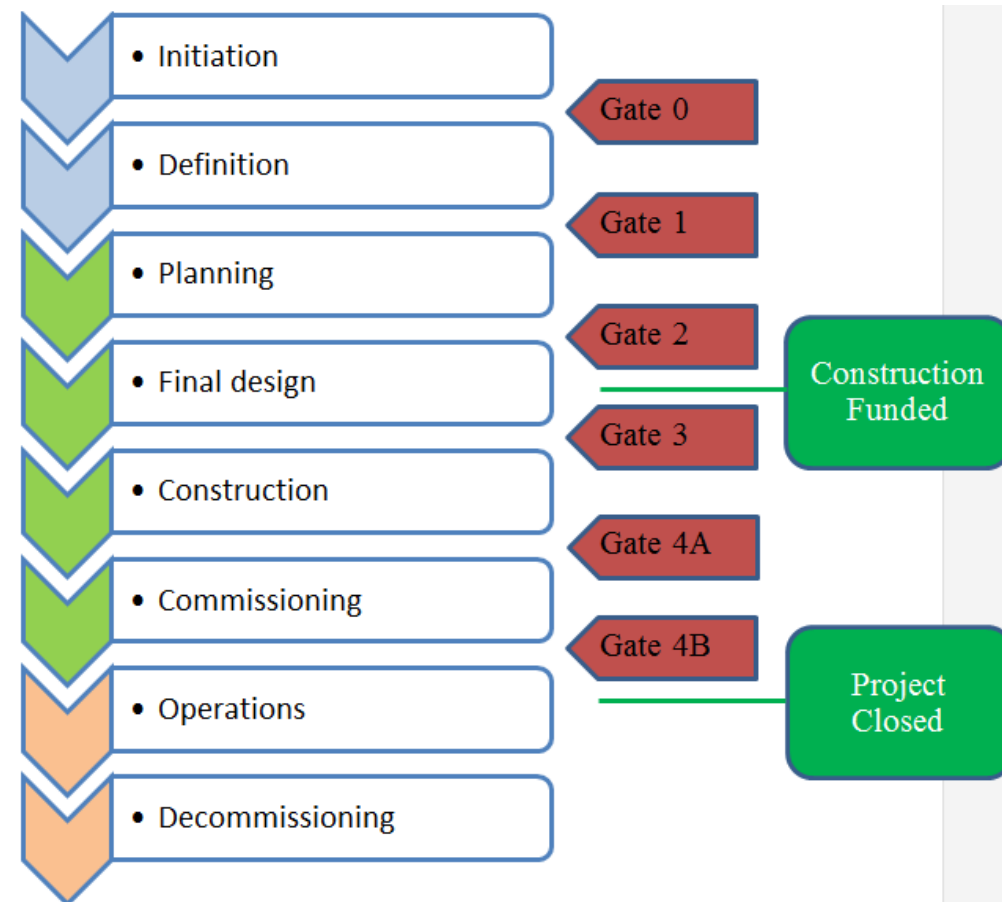


Length: 326.72563597mm [12.863in]
Diameter: 104.00000000mm [4.094in]
ST1318284_01_SPS_RFD_DC_Transport_assembly.SLDPR

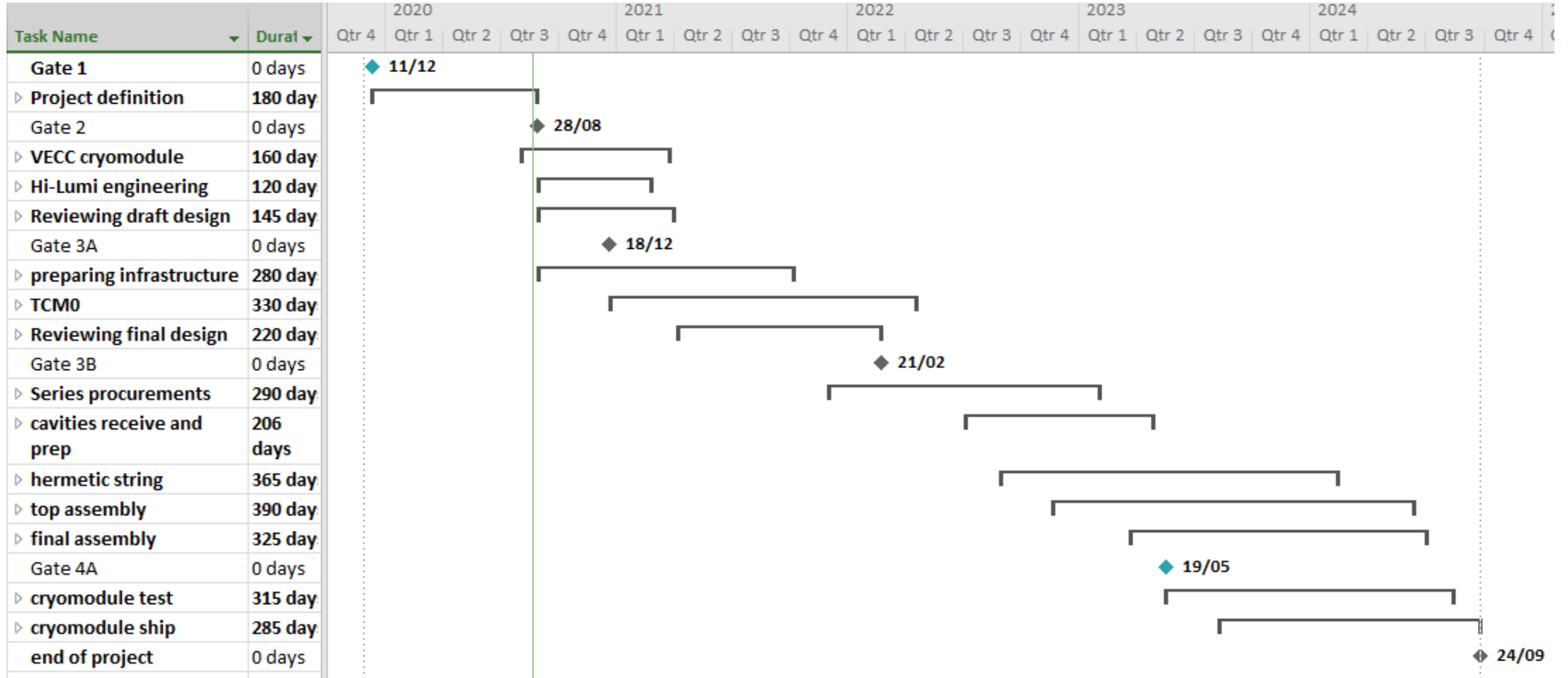
TRIUMF Project milestones

- The project has now completed Gate 2 within TRIUMF project planning
- We would like to get to Gate 3 before standard procurements. The prototype TCM0 could be considered in a Gate 3A – need to have released drawings and specifications from CERN

Project Milestone	Proposed date	Hi-Lumi input
Gate 1 ✓	Dec 2019	Conceptual design review, preliminary scope def'n
Gate 2 ✓	Aug. 2020	Final scope def'n, detailed budget
Gate 3A TCM0	Dec 2020	TCM0 design review, released drawings and specifications
Tech review	Dec. 2021	Launch long lead procurements
Gate 3B TCM1-4	Feb. 2022	Final design review, released drawings and specifications



Level 1 WBS – as of Gate 2



Summary

- CV-19 update (now in Phase 3)
 - Technical staff now in 80% occupancy
 - Professional staff to 25% occupancy
- Some delays in current CM assembly (another project)
- Tooling and handling fixtures
 - Student completed cavity support tooling model for clean room and cold test
- MOU-Addendum
 - Last few comments being accepted by both sides
 - Should be ready for signing on both sides

