

Vessel Systems and Target Station Shielding Project and Scope

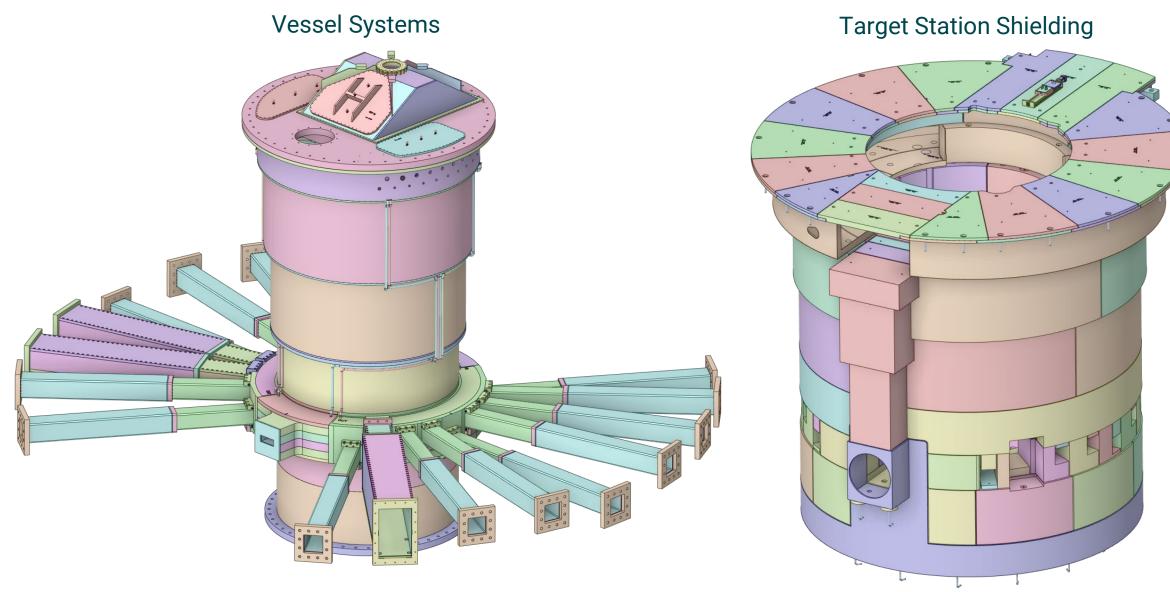
Chris Anton Cam Eiland Hogan Knott Darren Dugan Mike Strong April 21, 2025



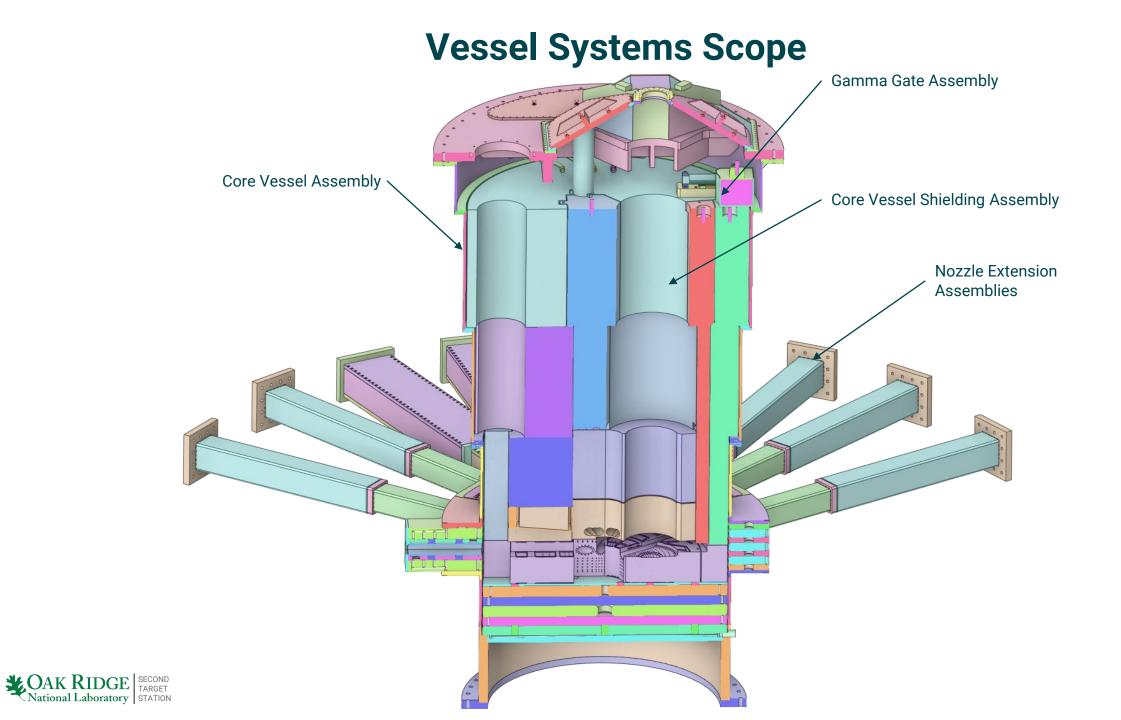
ORNL IS MANAGED BY UT-BATTELLE LLC FOR THE US DEPARTMENT OF ENERGY



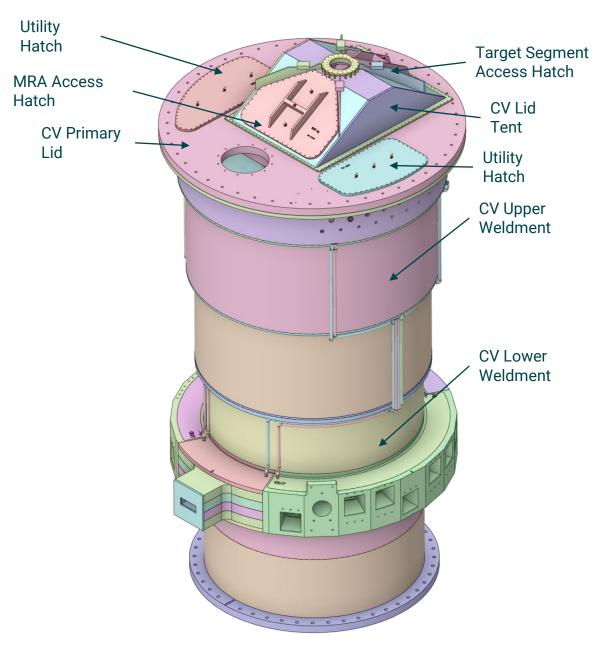
S.03.06 Vessel Systems and S.03.07 Target Station Shielding





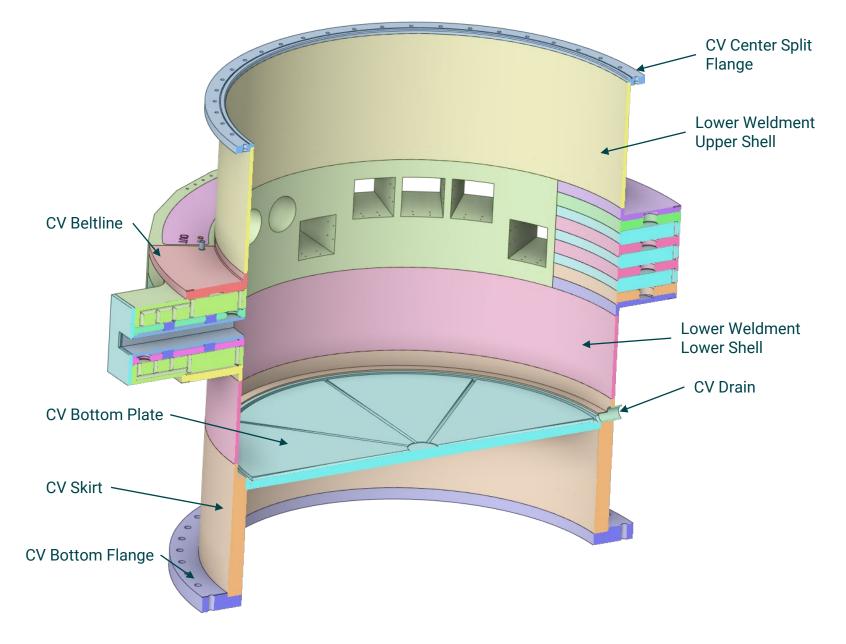


Core Vessel Assembly



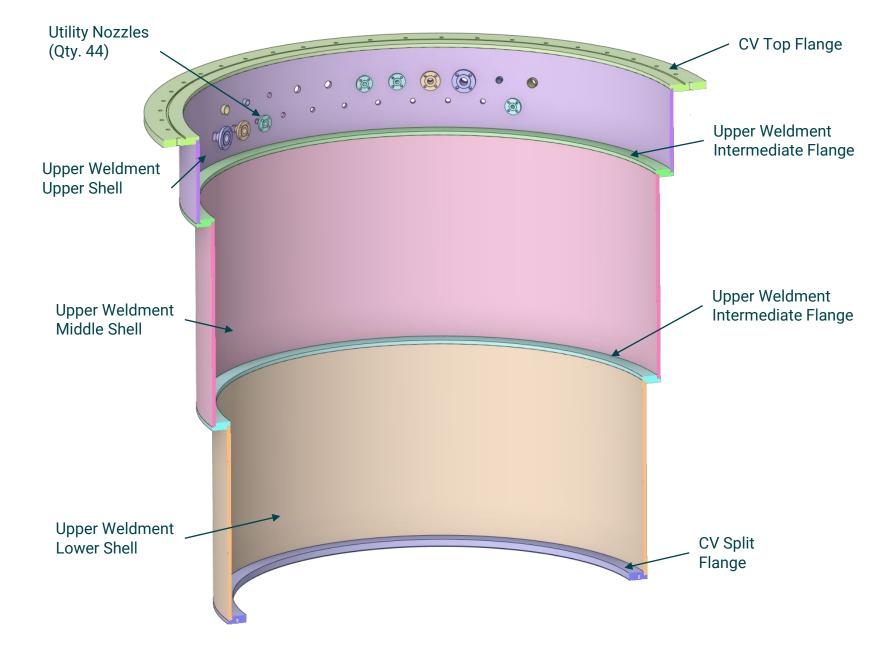


Core Vessel Lower Weldment



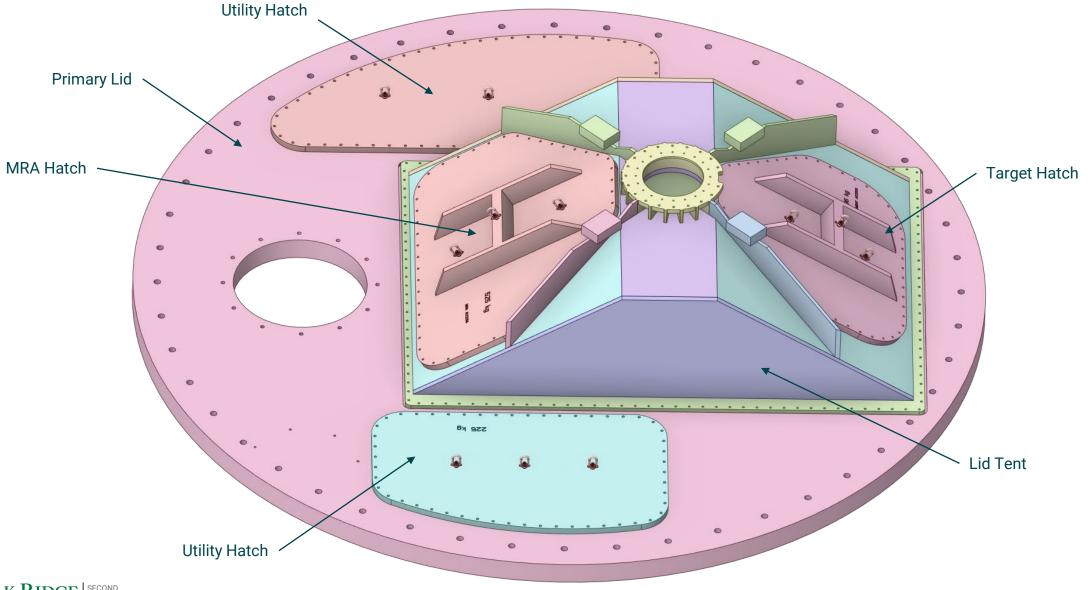


Core Vessel Upper Weldment



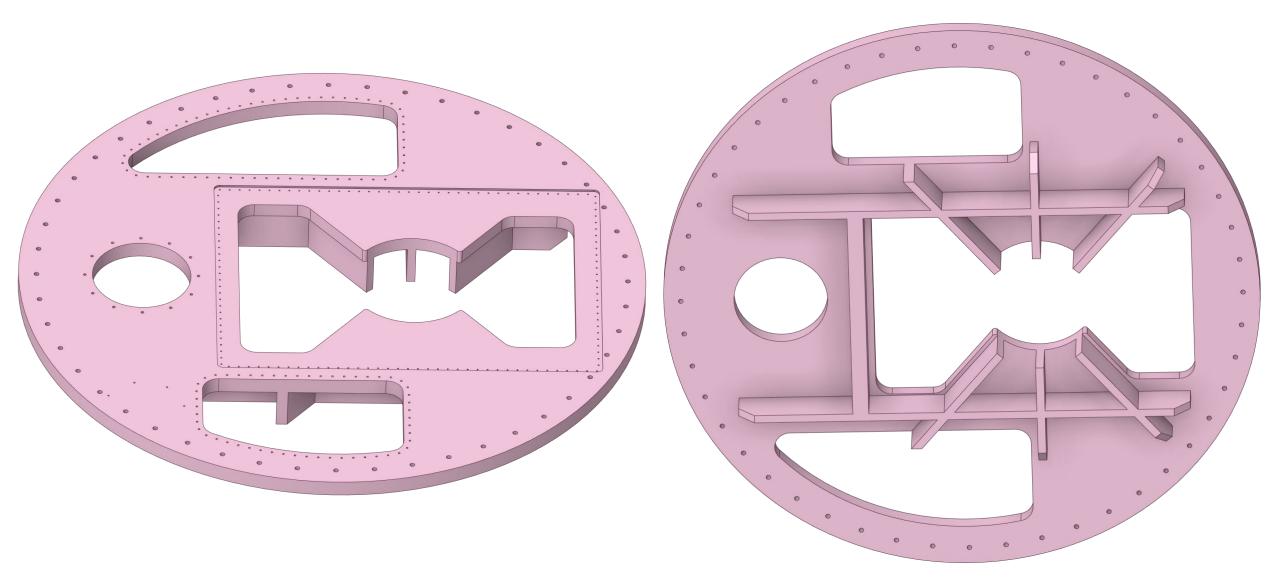


Core Vessel Lid Assembly



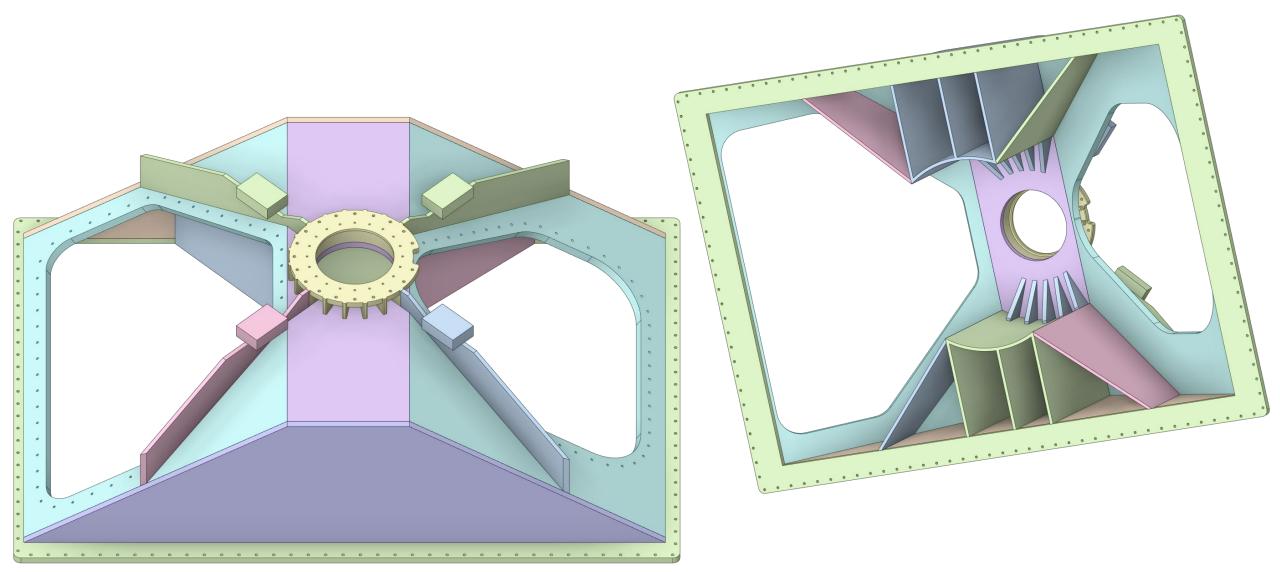


Core Vessel Primary Lid



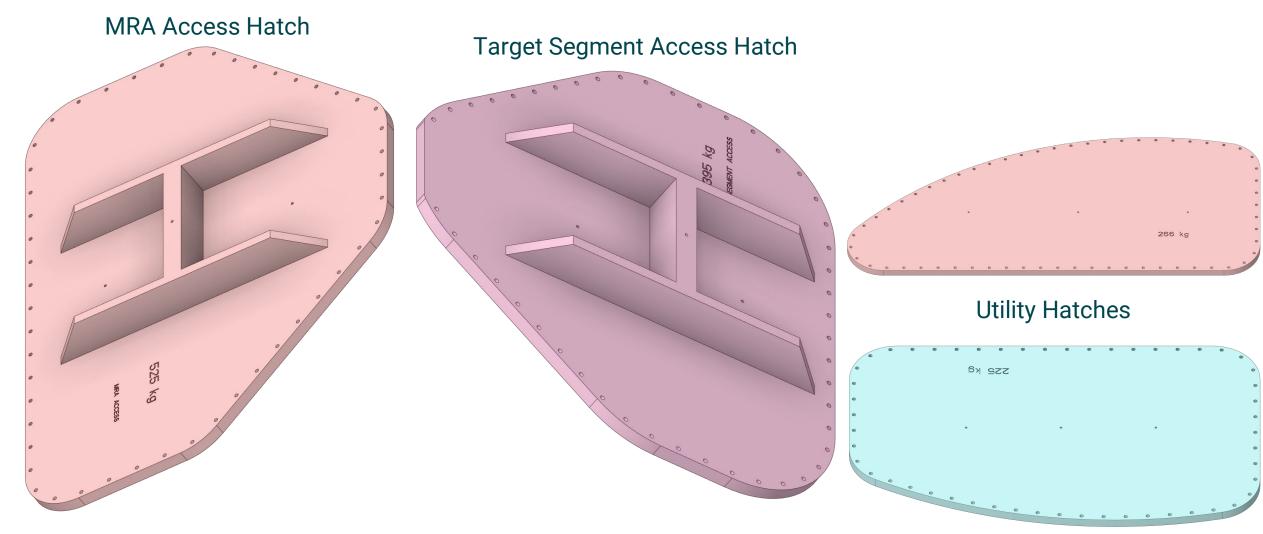


Core Vessel Lid Tent



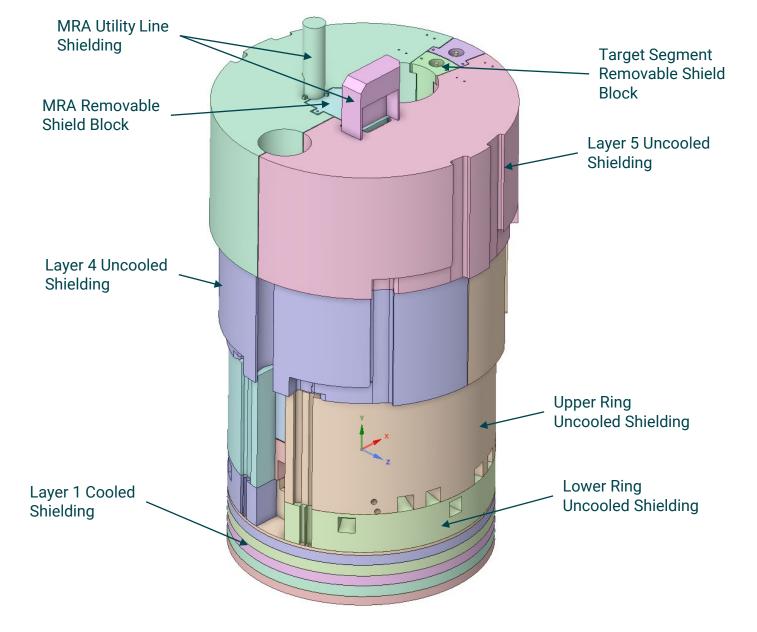


Core Vessel Lid Hatches





Core Vessel Shielding

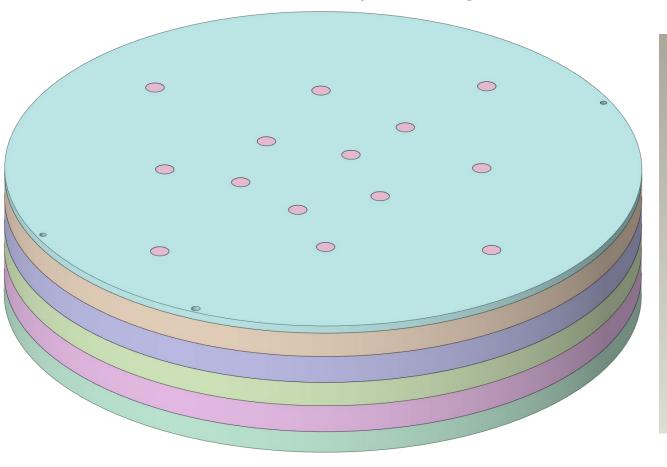


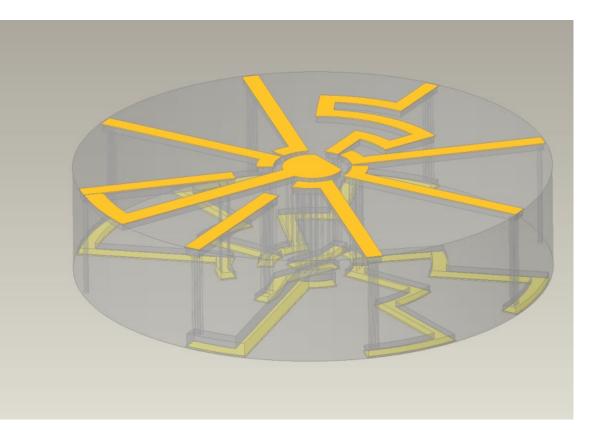


CV Shield Block #1

Previous laminated plate design

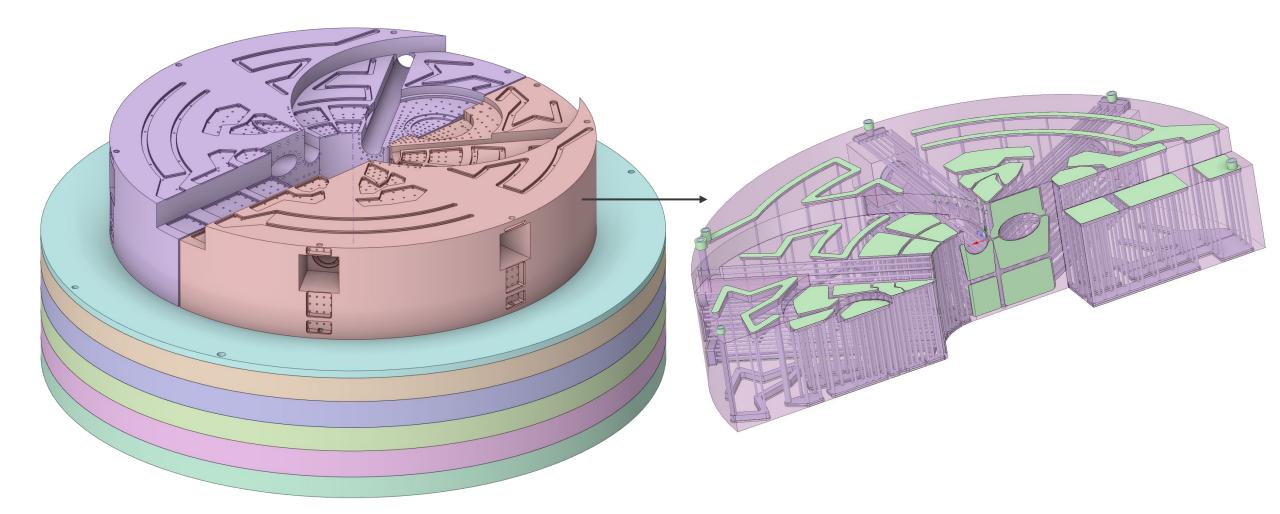
Current gun drilled forged design





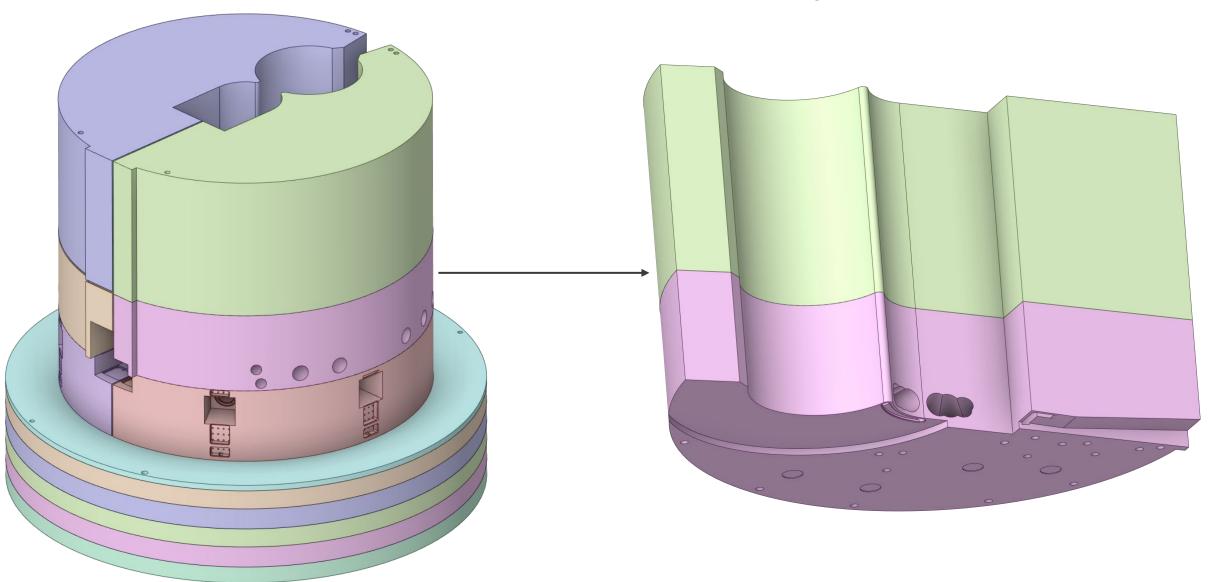


CV Cooled Shield Block Layer 2



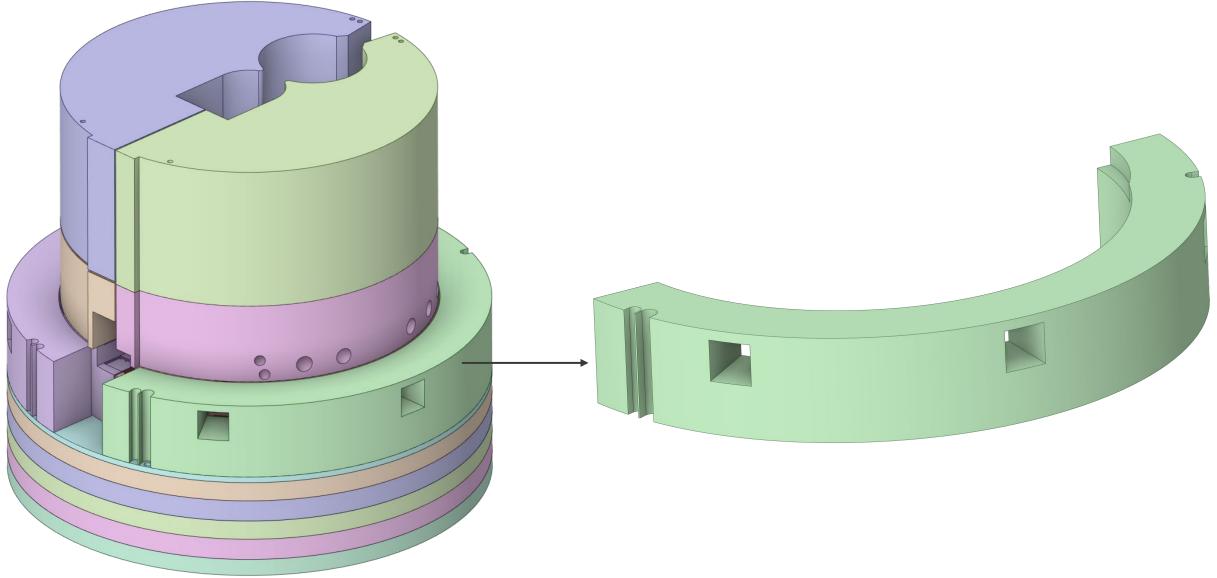


CV Cooled Shield Block Layer 3



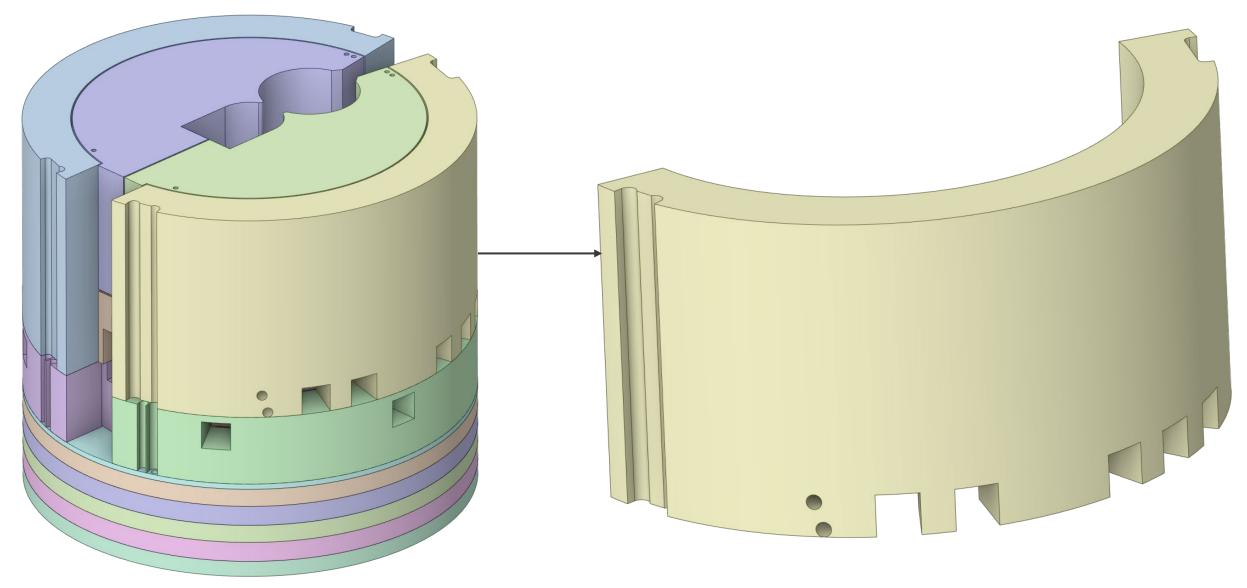


CV Lower Ring Shielding



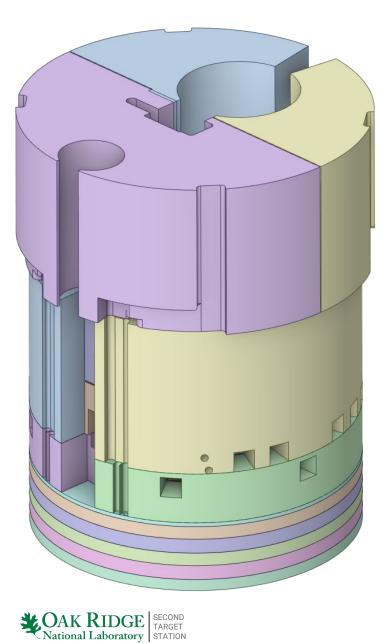


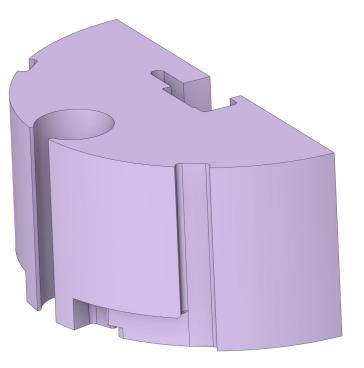
CV Upper Ring Shielding

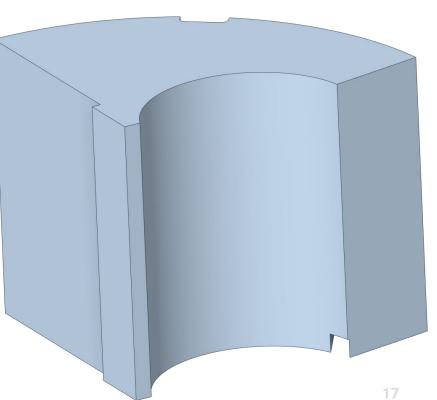




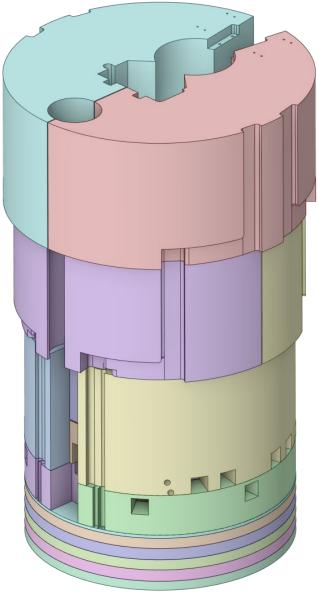
CV Layer 4 Shielding

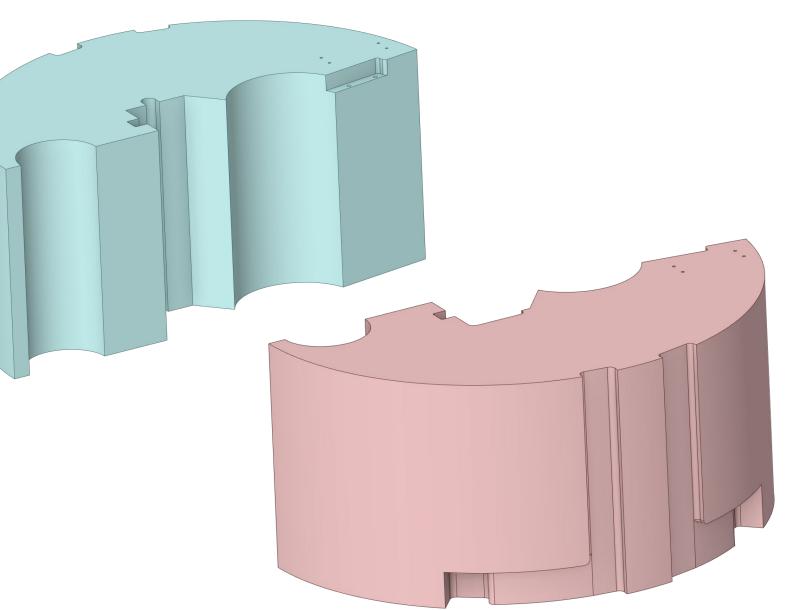




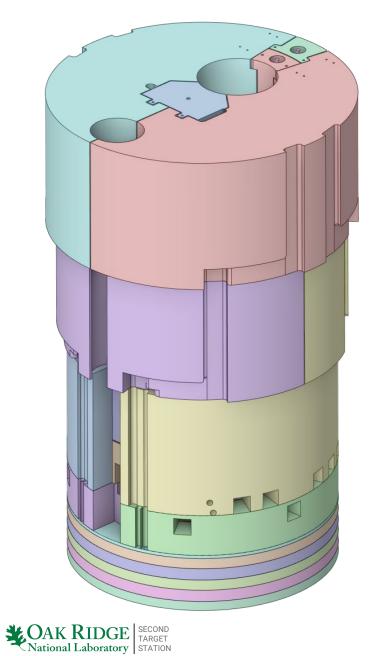


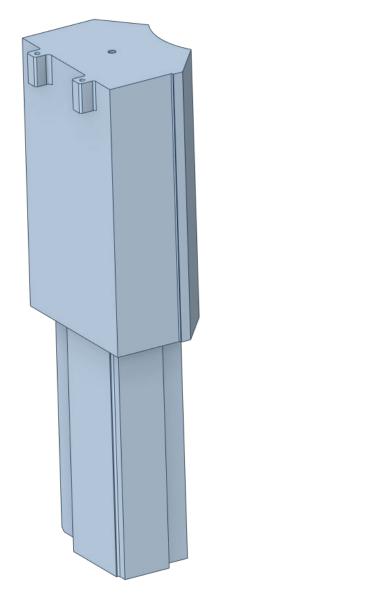
CV Layer 5 Shielding

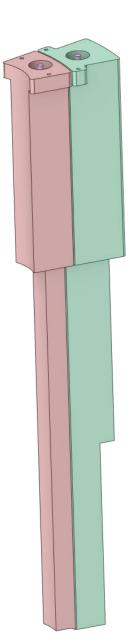




CV Removable Shielding

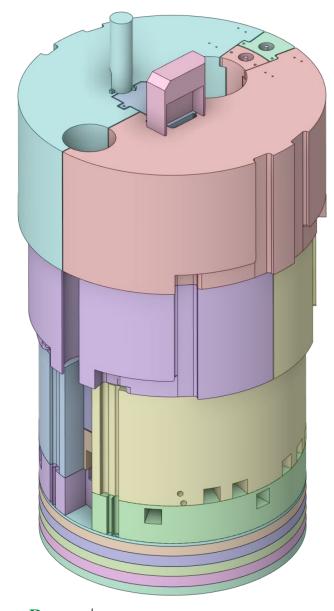


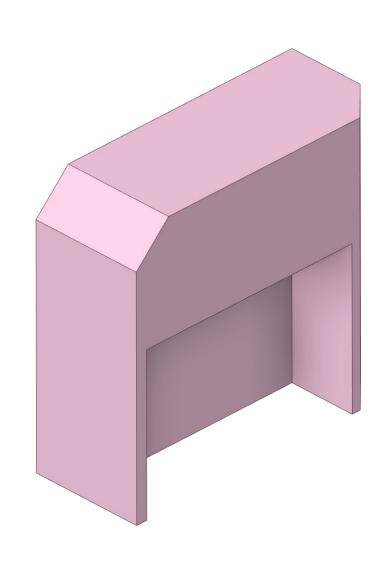


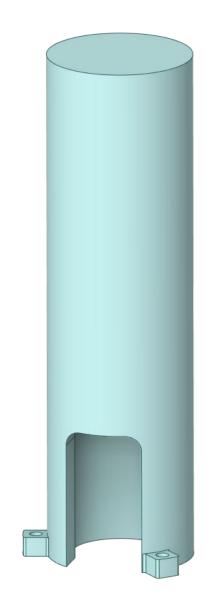


19

CV MRA Utility Shielding

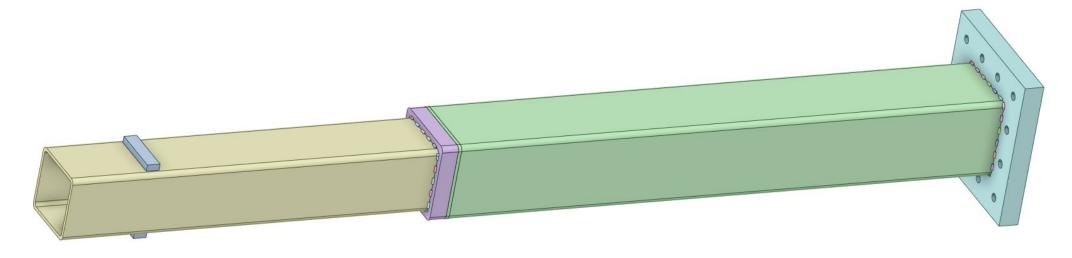








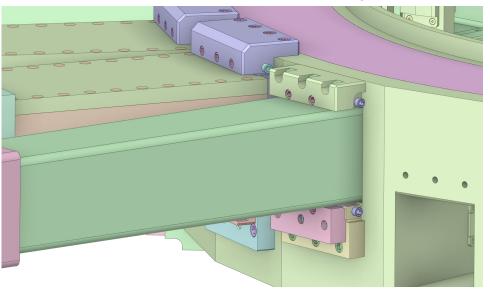
Standard Nozzle Extension Assembly



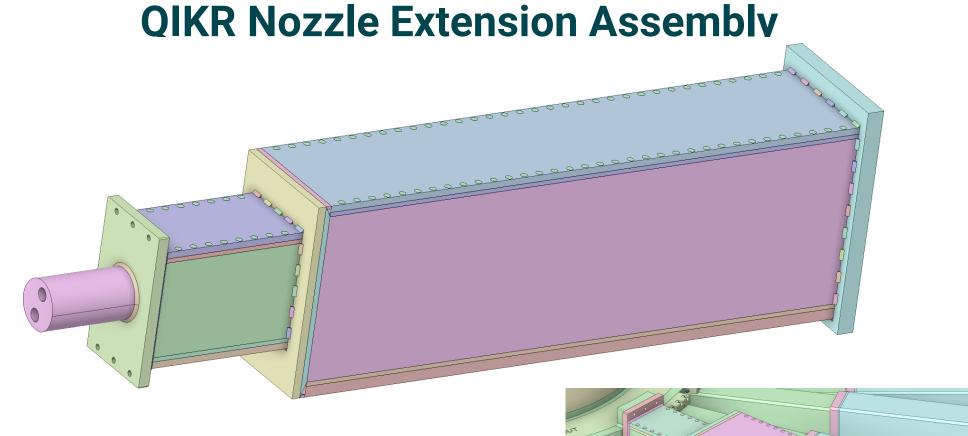
Lower Bracket Assembly

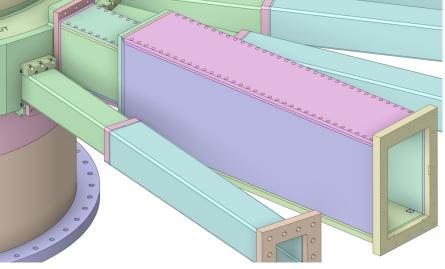


Upper Bracket Assembly





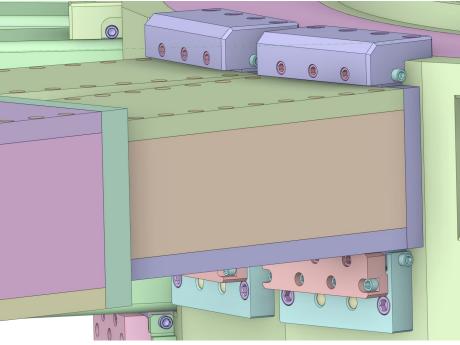






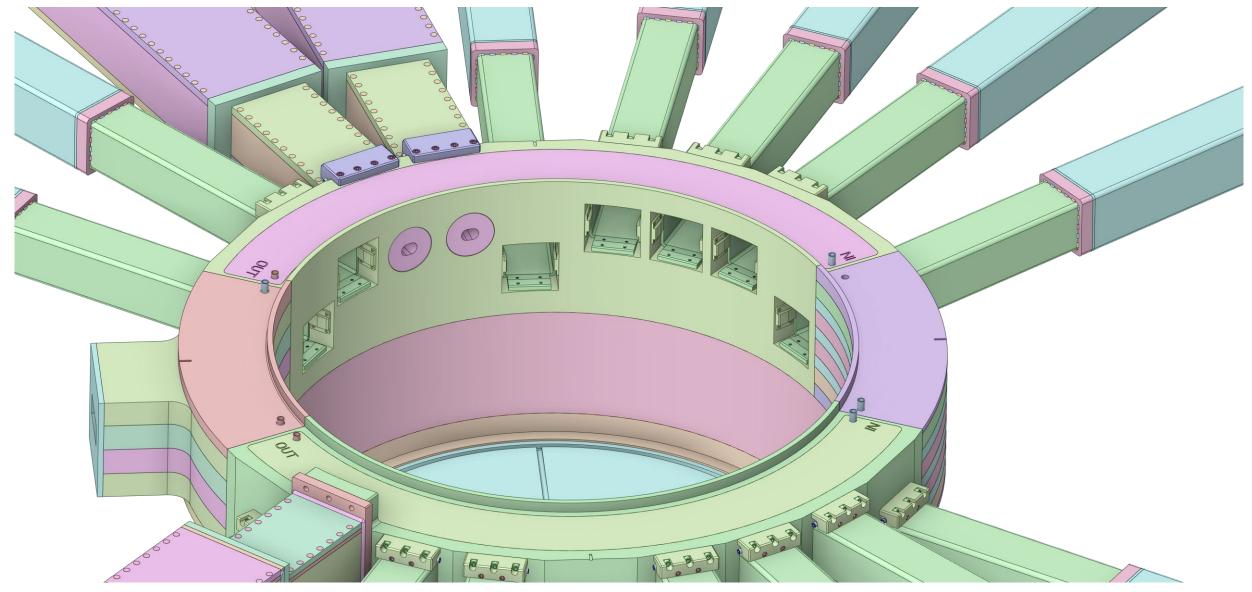
Dual Channel Nozzle Extension Assembly

Dual Channel Nozzle Extension Bracket Assemblies



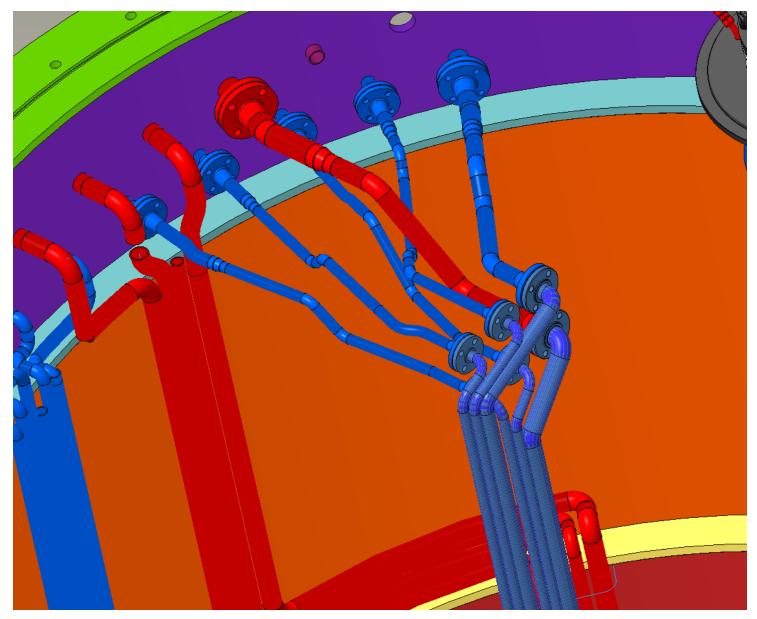


Monolith Insert Landing Pads



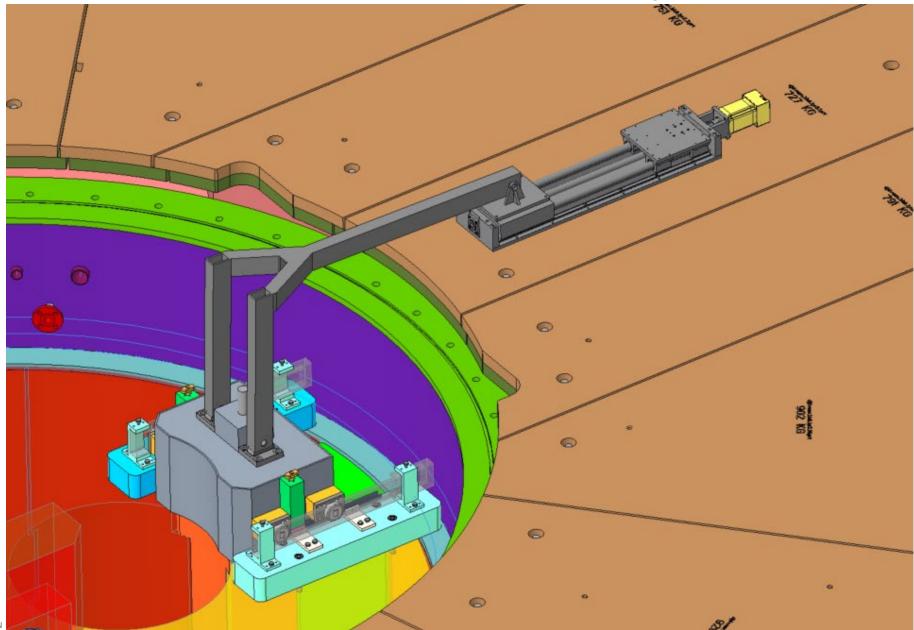


MRA Utility Jumpers



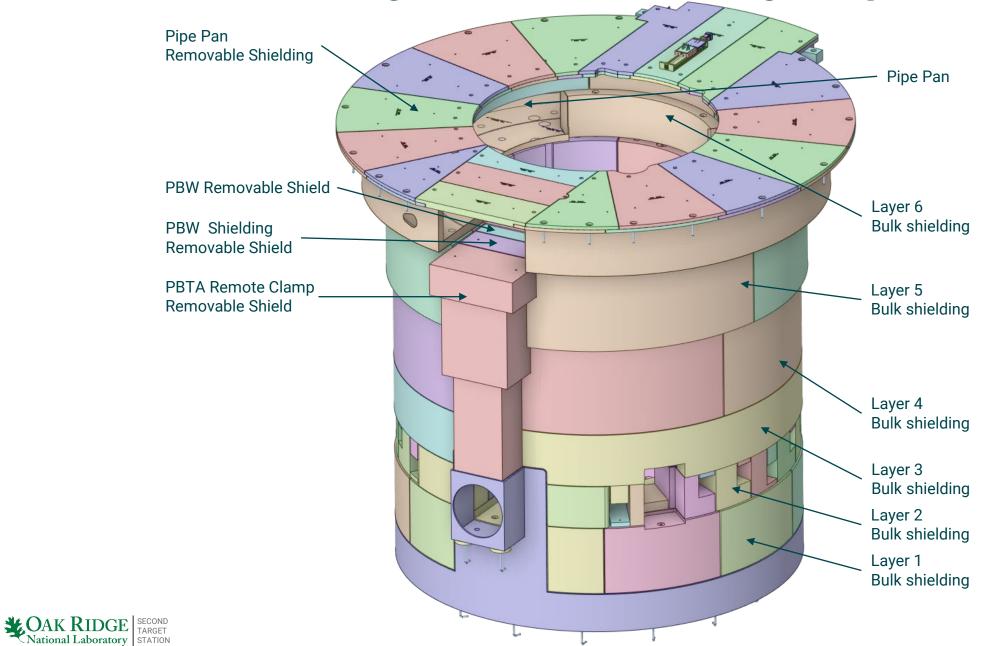


Gamma Gate Assembly

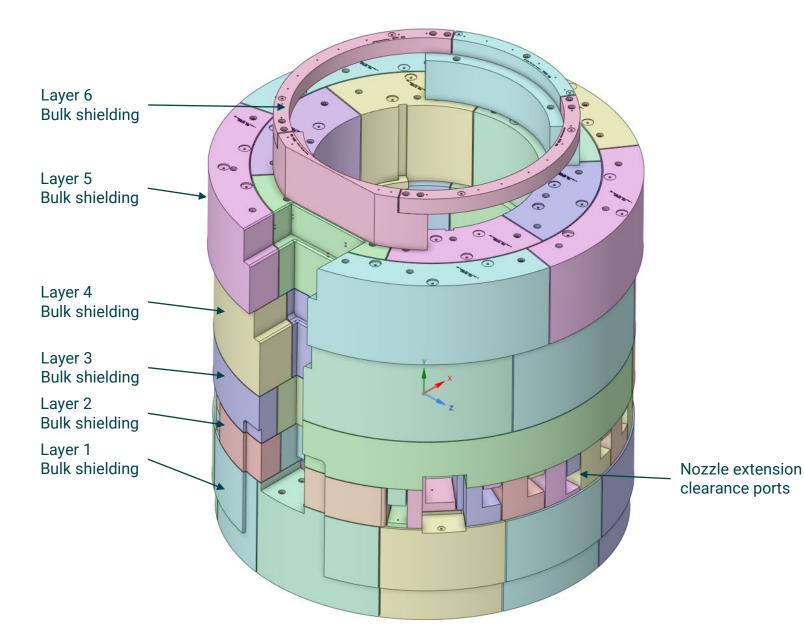




Target Station Shielding Scope

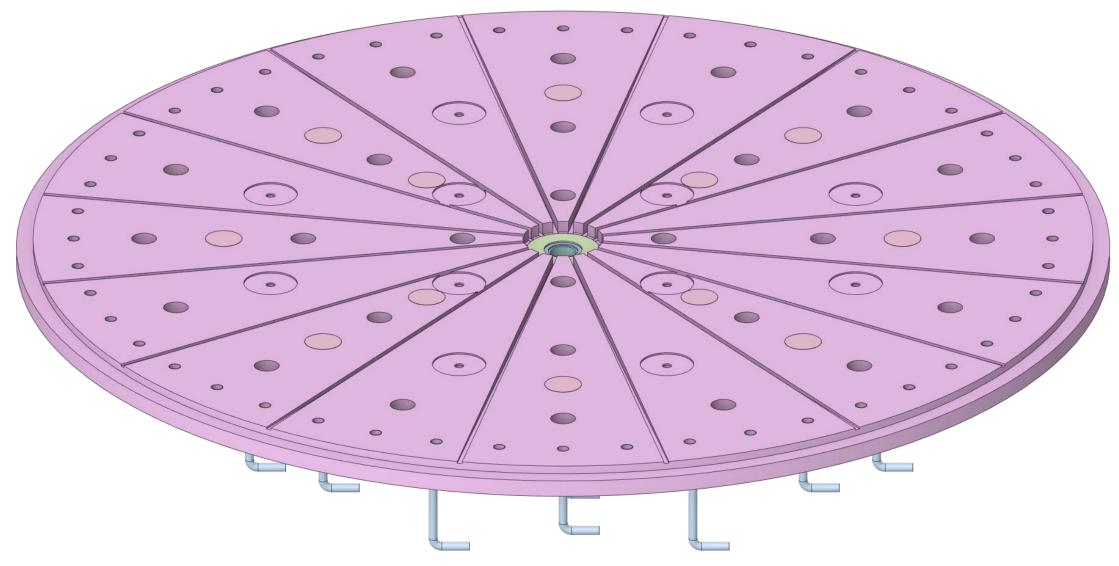


Bulk Shielding Scope



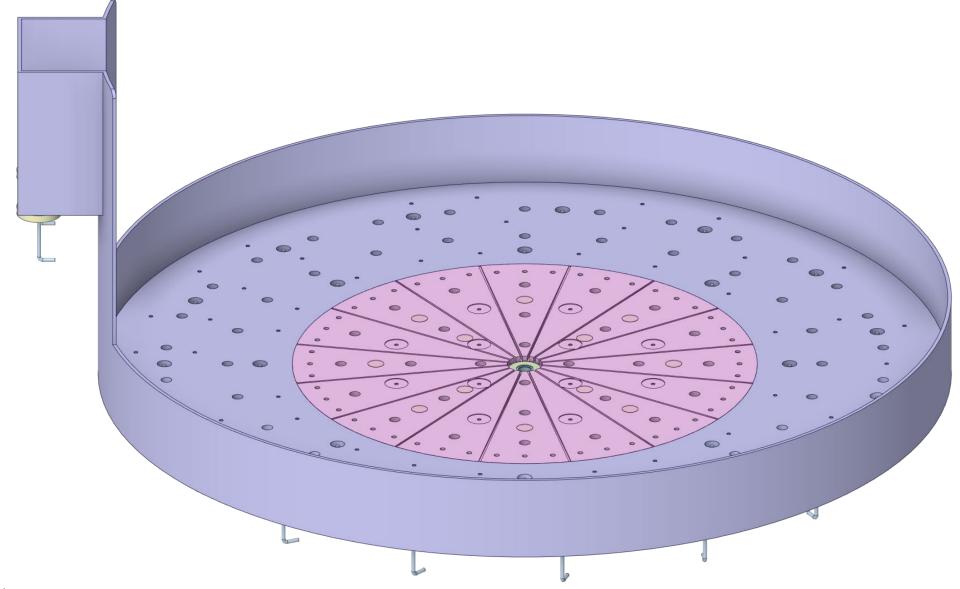
CAK RIDGE National Laboratory

Core Vessel Baseplate

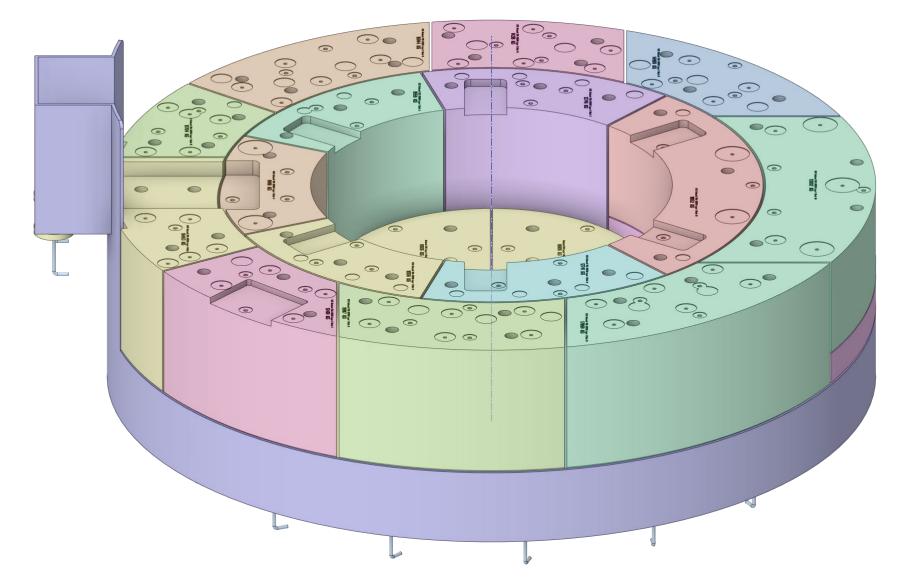




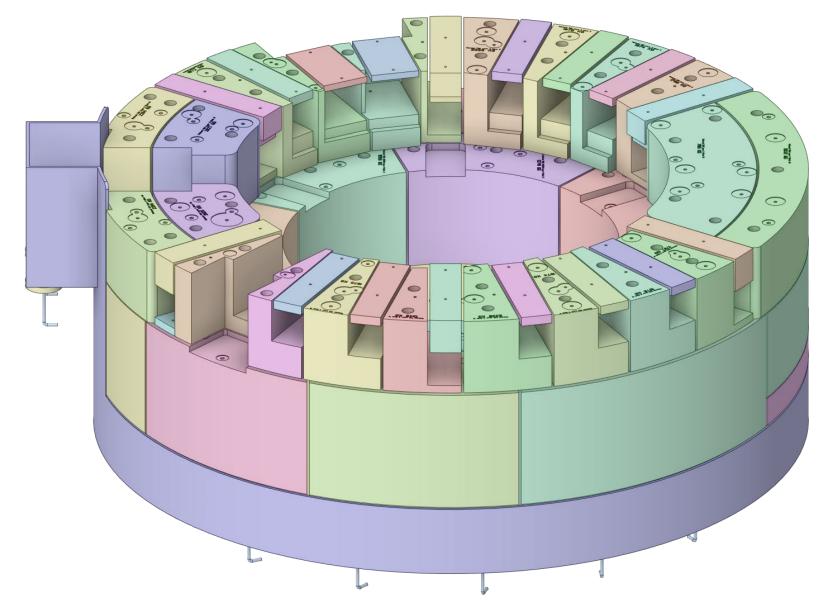
Bulk Shielding Liner



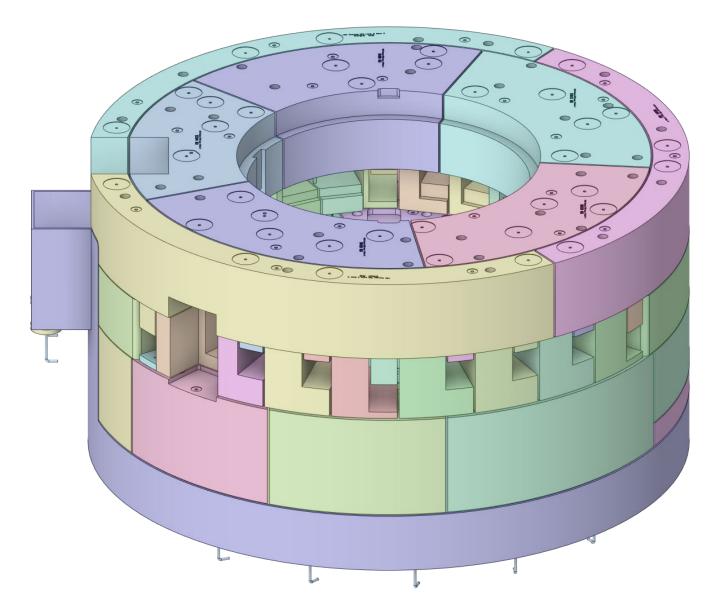




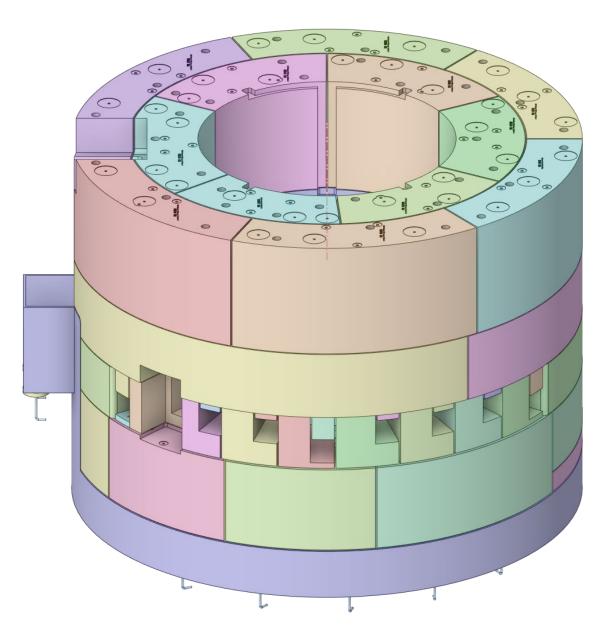




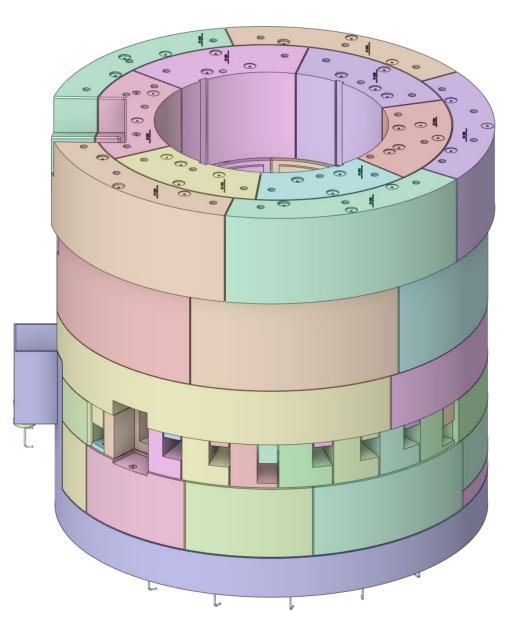




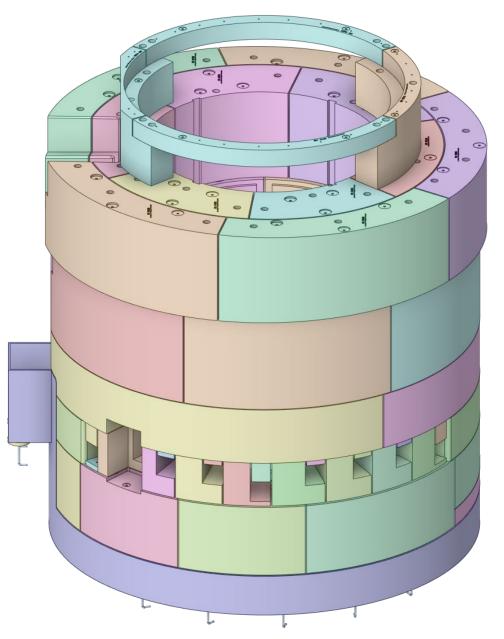






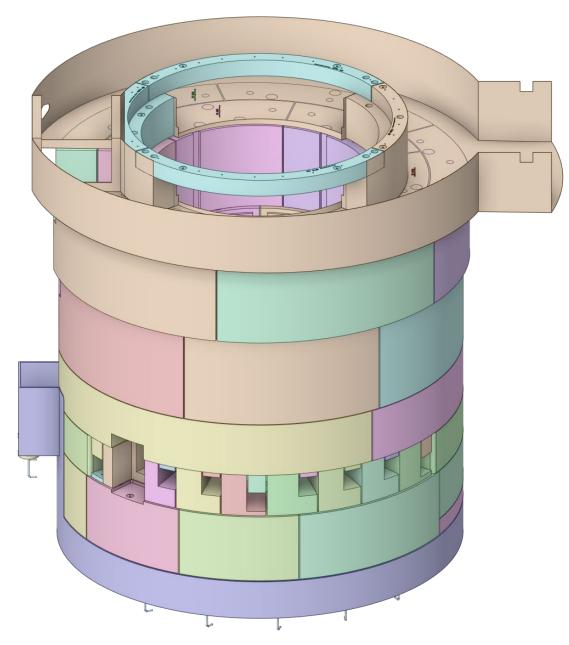






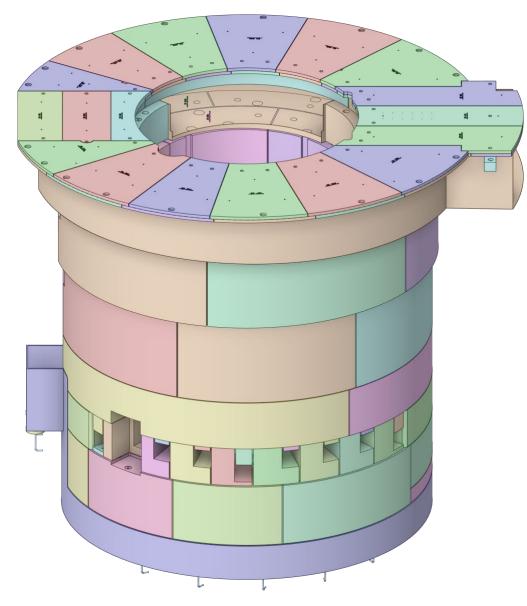








Pipe Pan Removable Shielding





AIC Removable Shielding

