

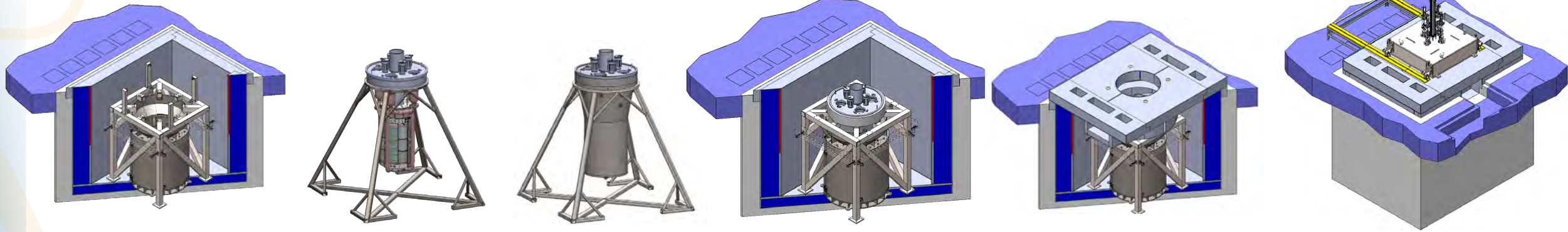


MARVEL Construction Sequence

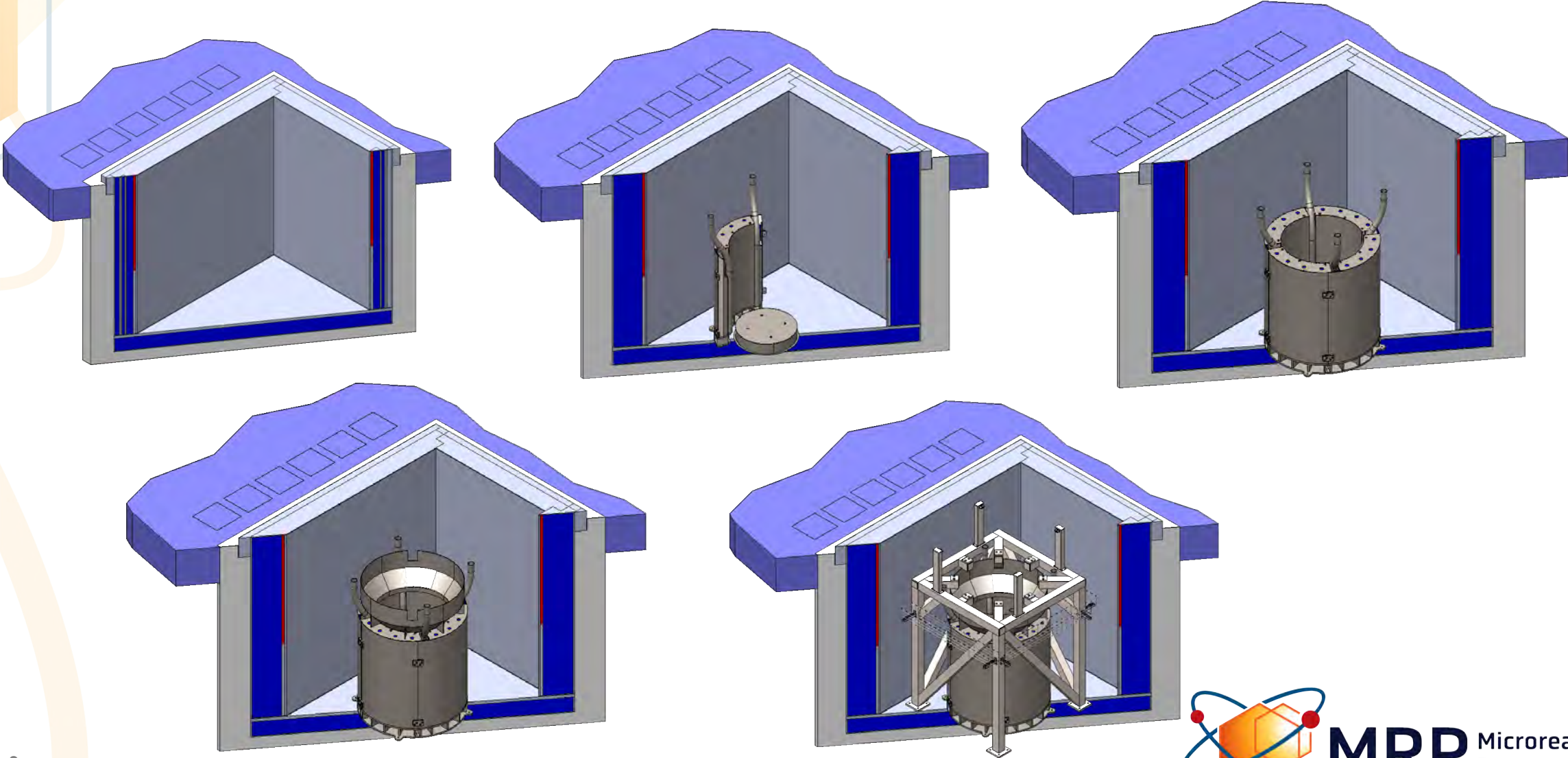
ANS Winter 2023 Conference

Mat Floyd, Walsh Engineering Services

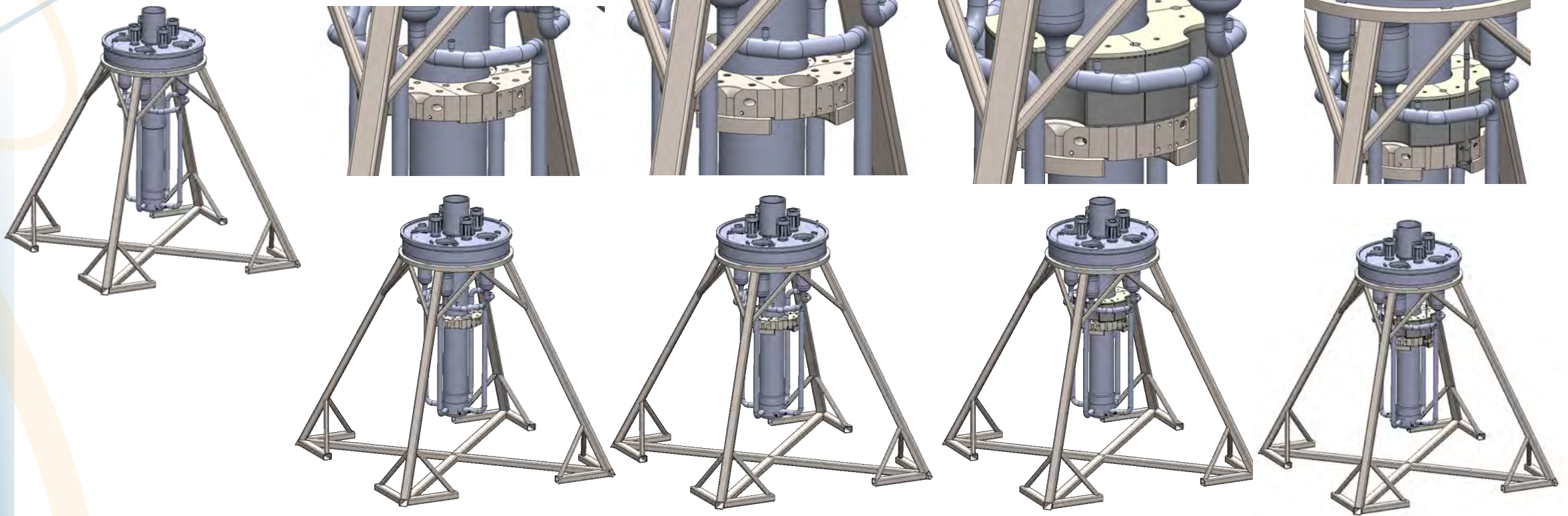
Assembly Overview



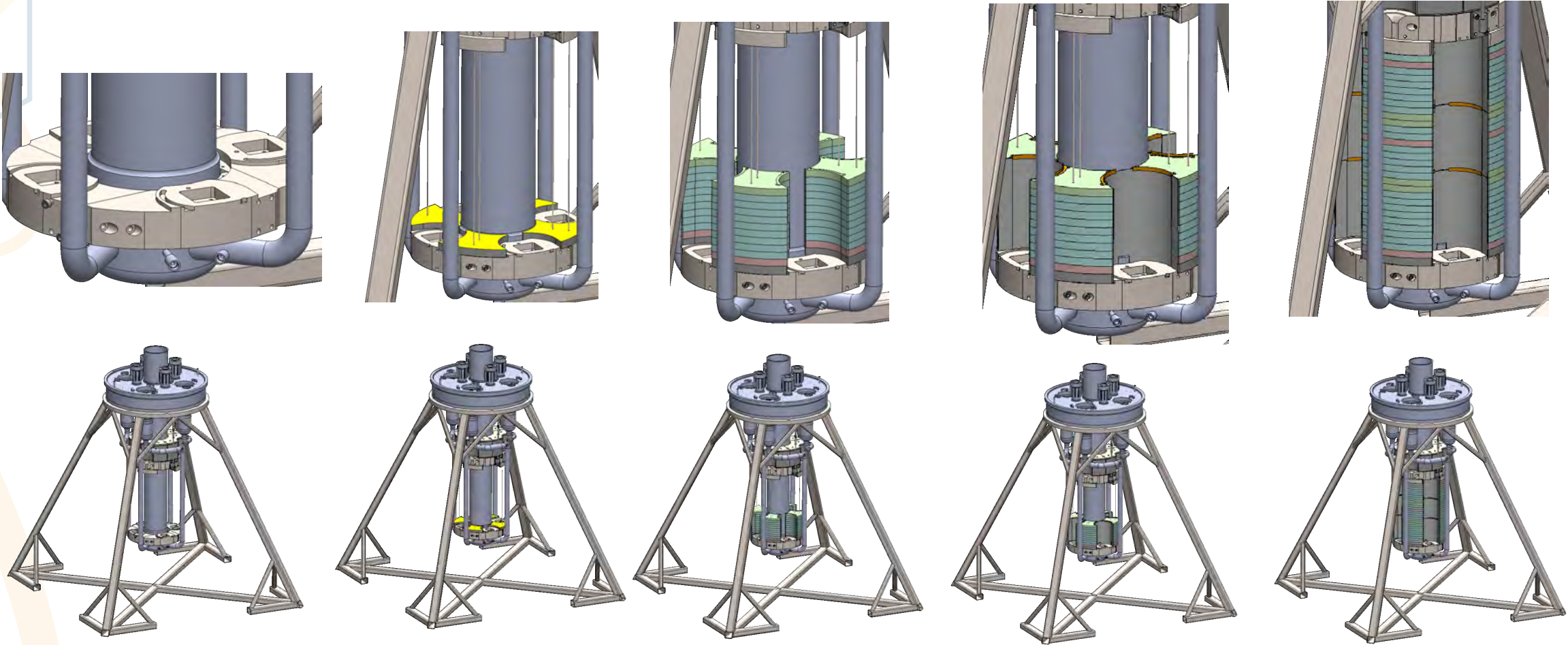
Pit Preparation and Components



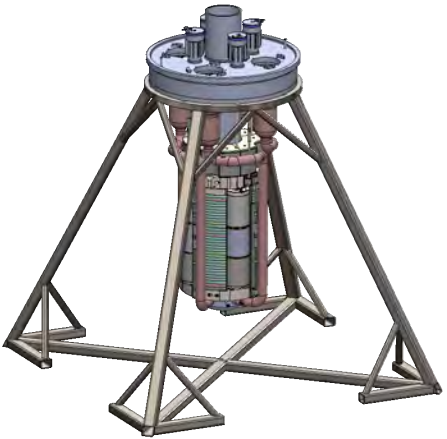
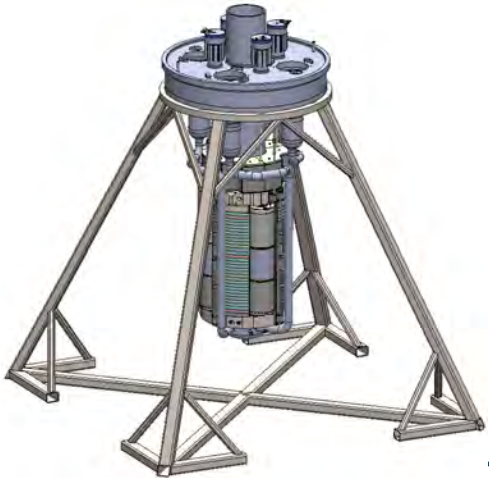
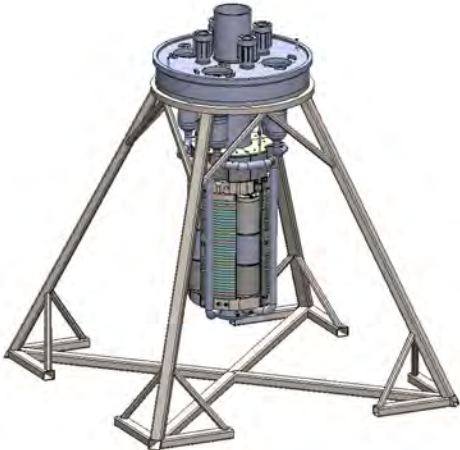
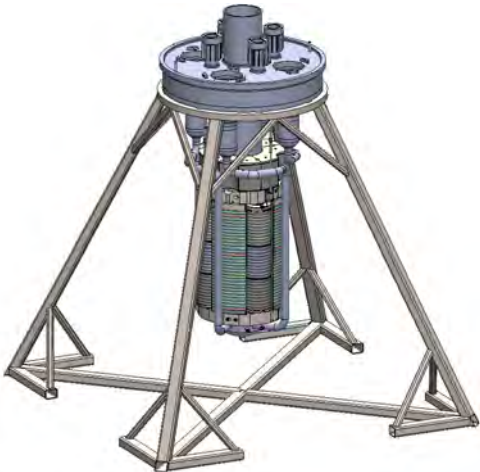
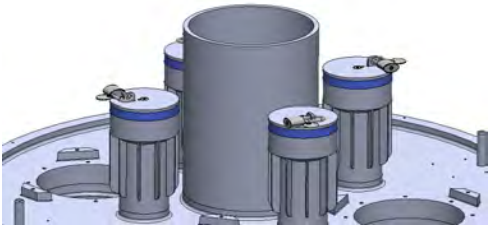
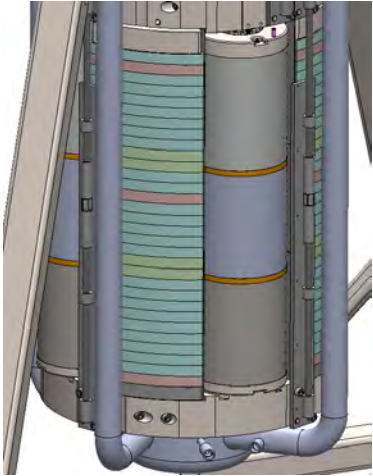
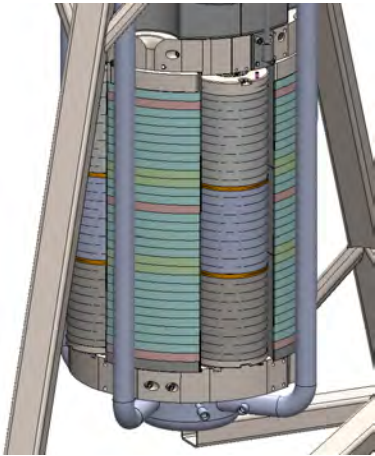
Axial Shields



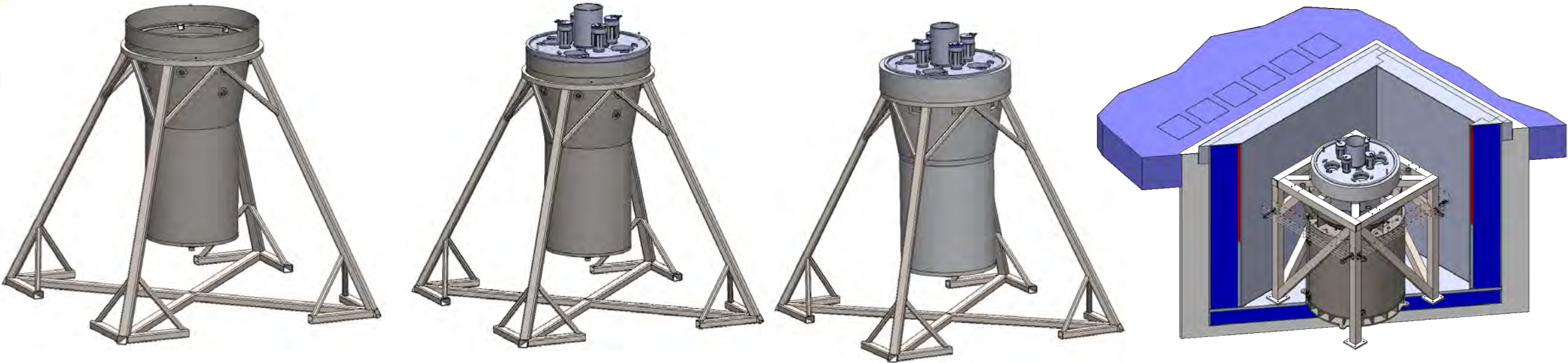
Fixed Reflectors



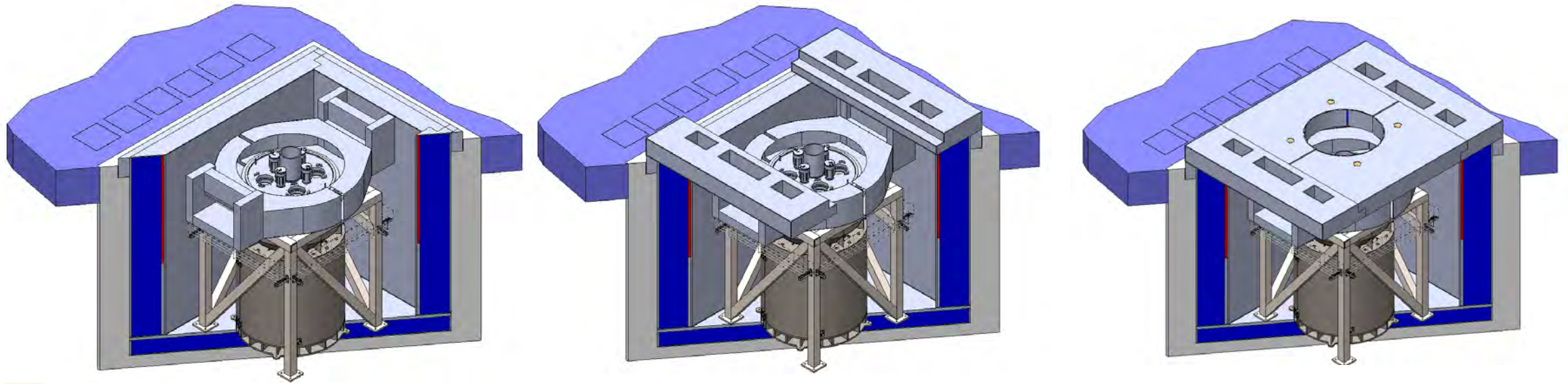
Control Drums



Guard Vessel & PCS



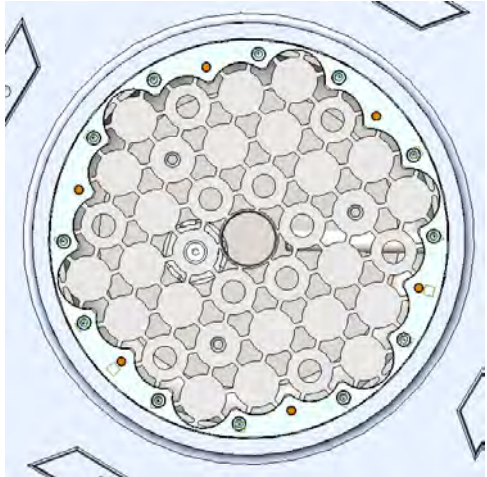
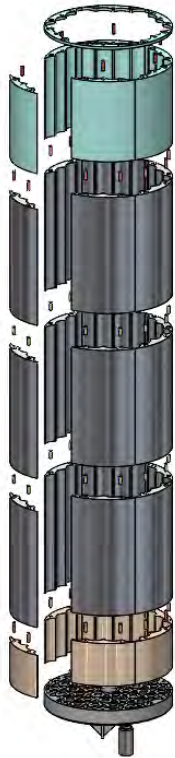
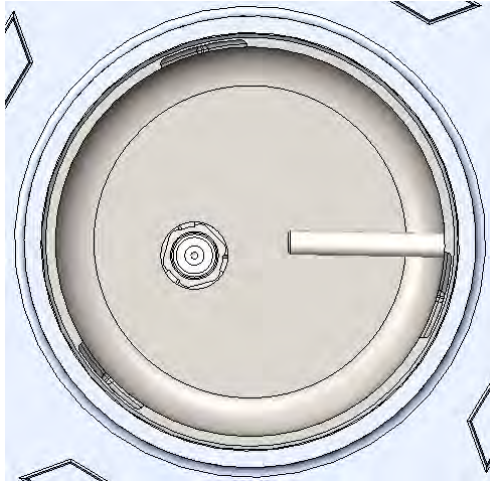
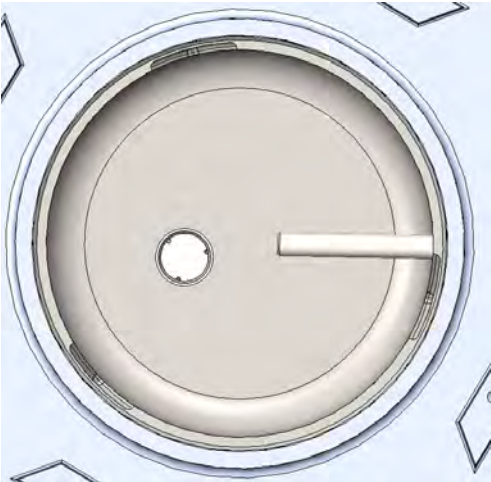
TREAT Pit Lid



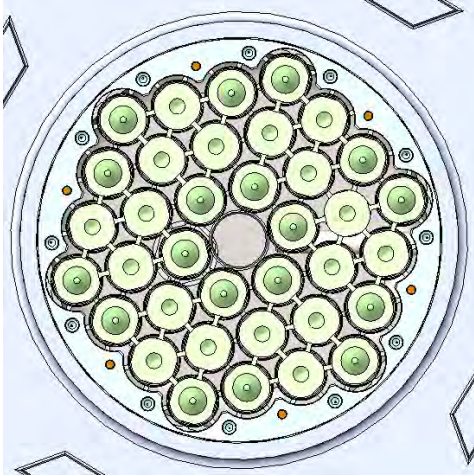
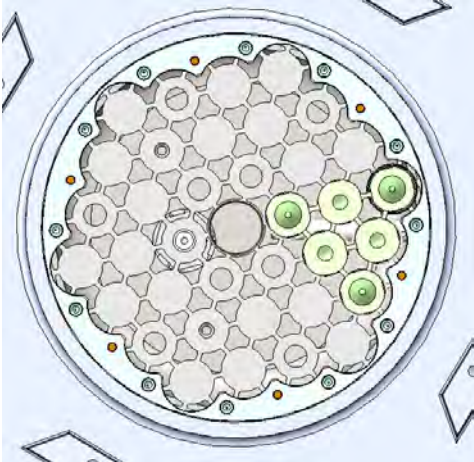
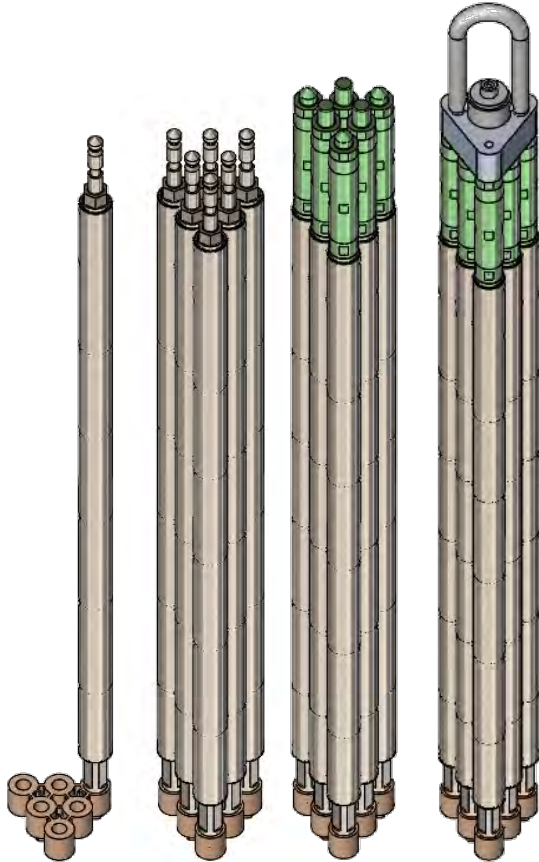
Fuel Core System Preliminary Steps

- Lock control drums place
- Install neutron detectors
- Monitor power levels while loading fuel subassembly

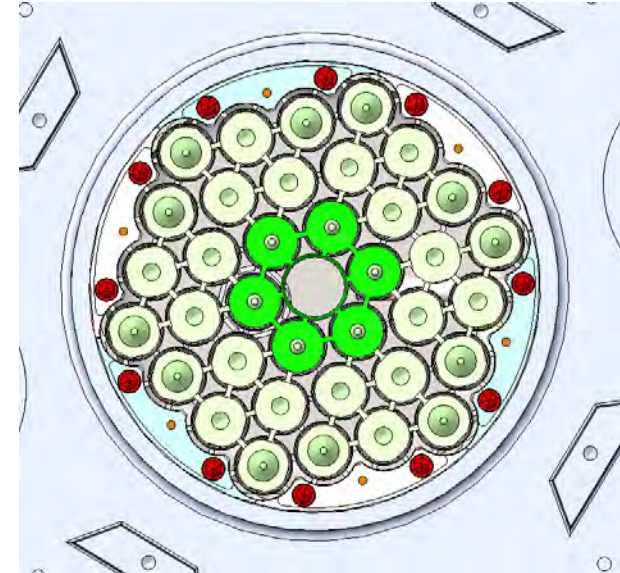
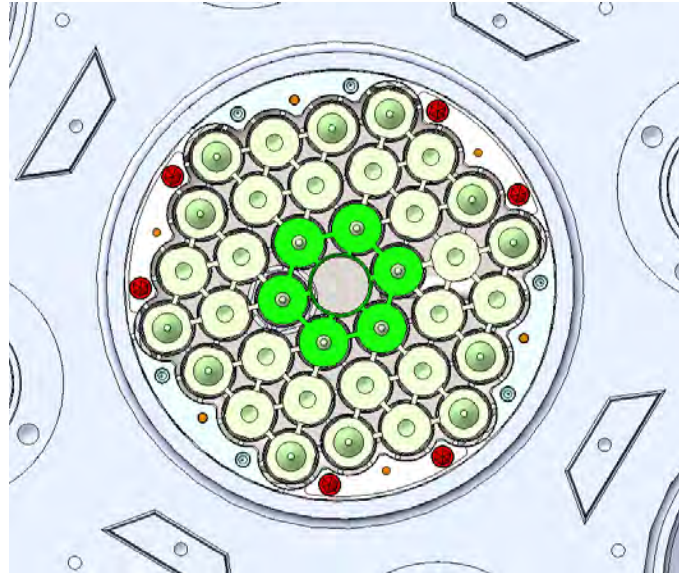
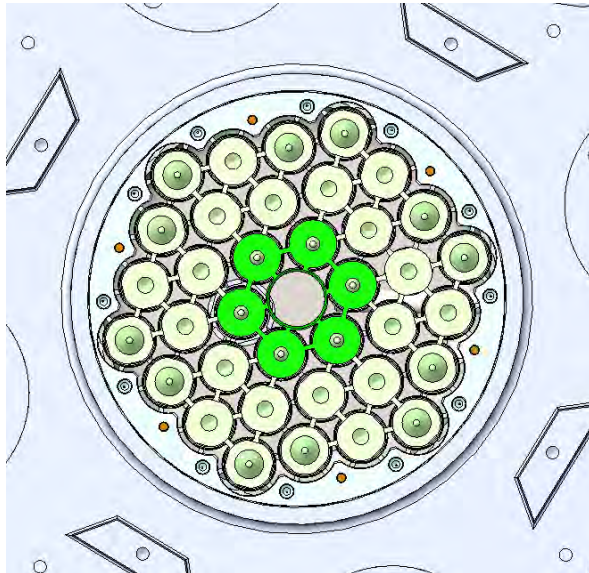
Neutron Source and Shell



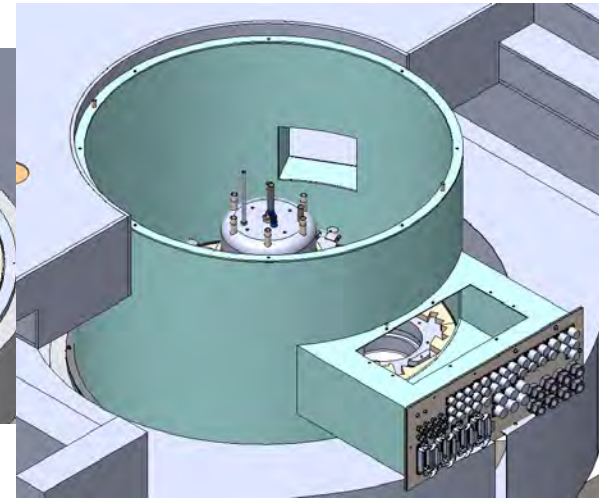
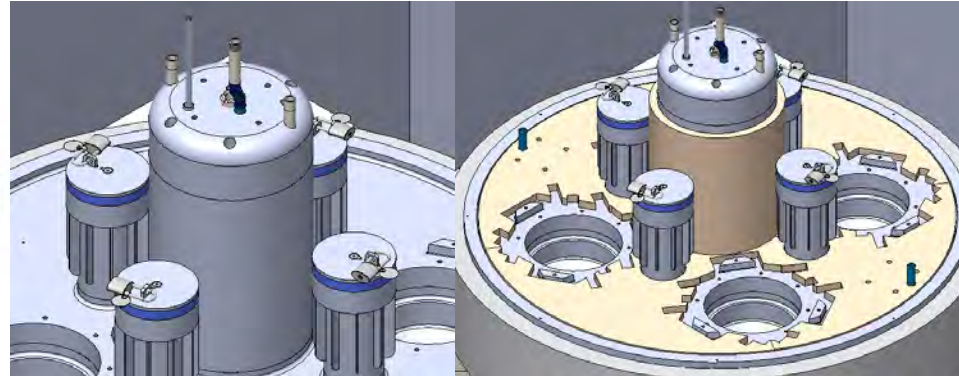
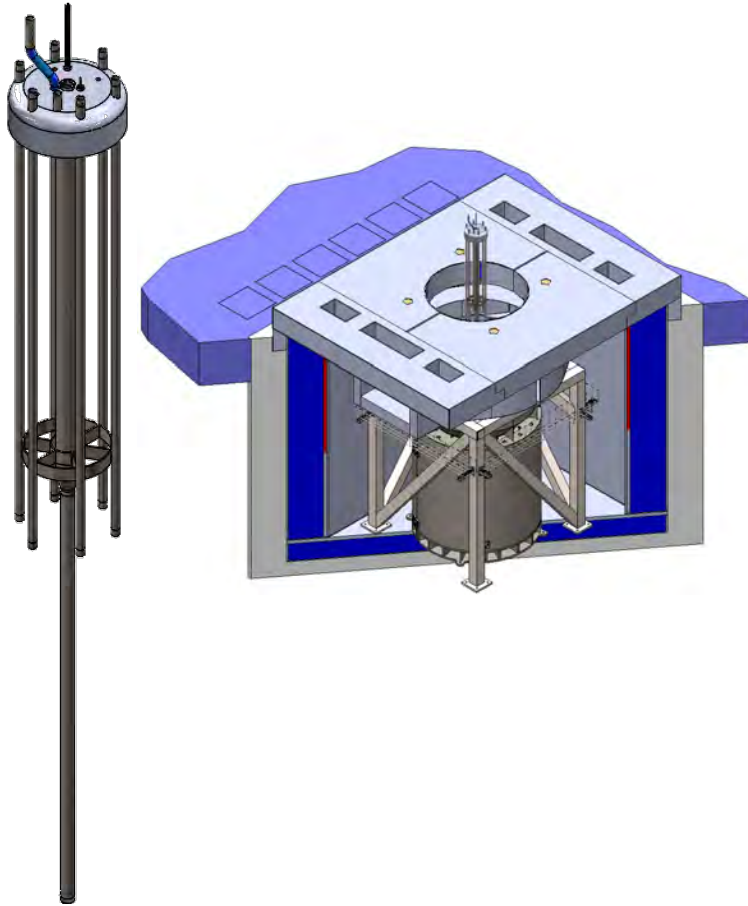
Fuel Loading



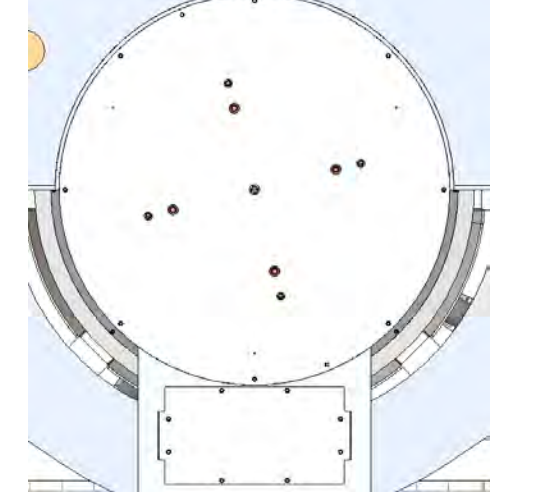
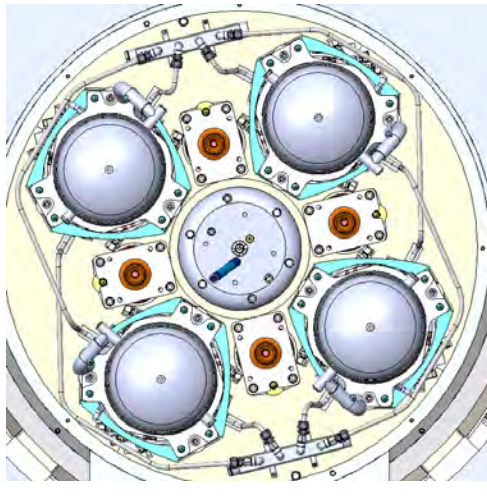
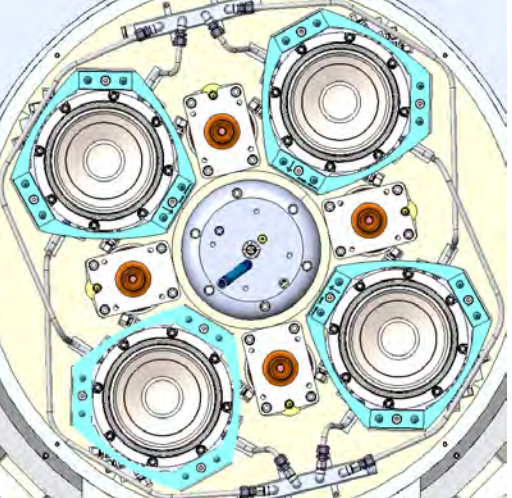
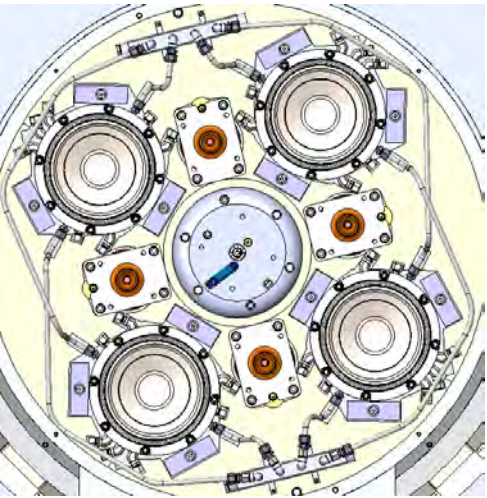
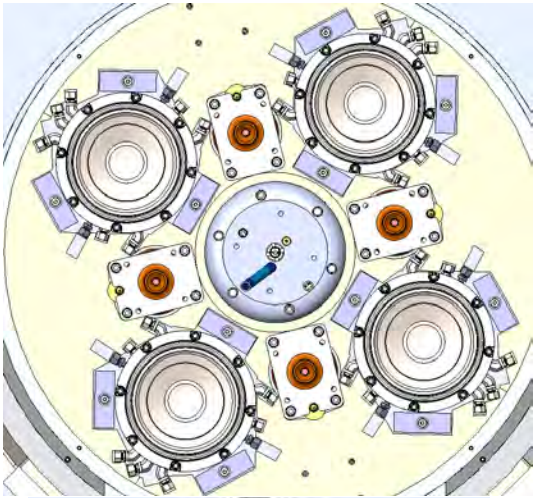
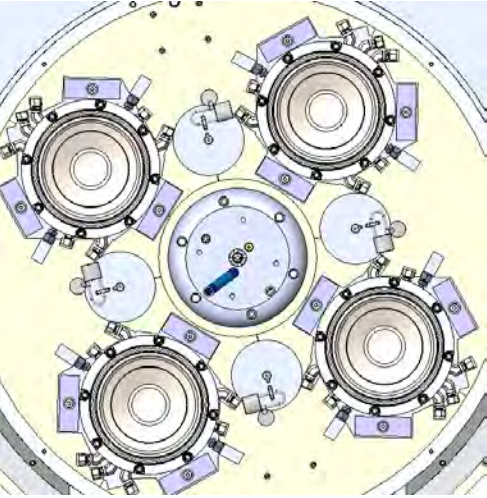
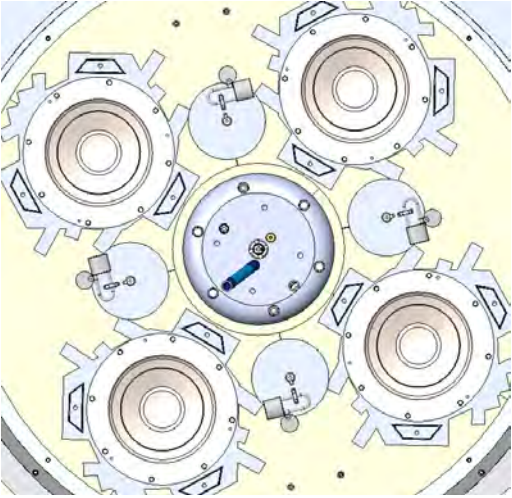
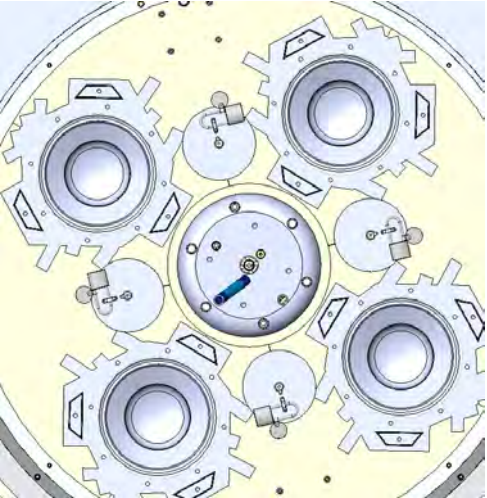
Final Core Steps



CIA Housing



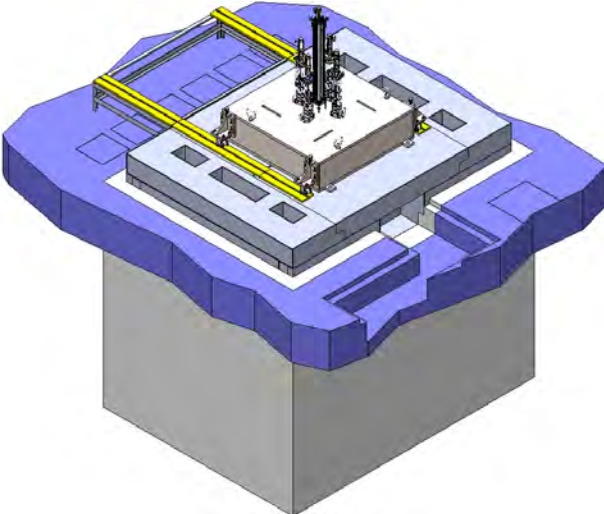
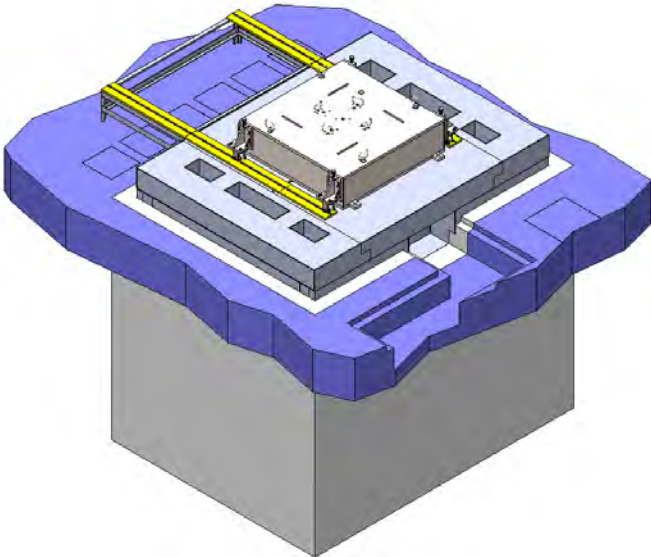
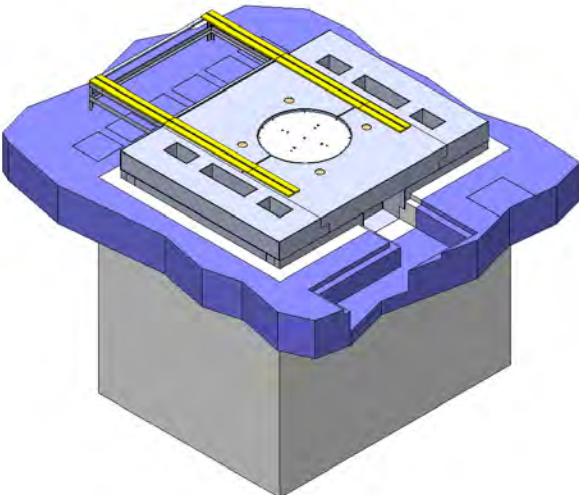
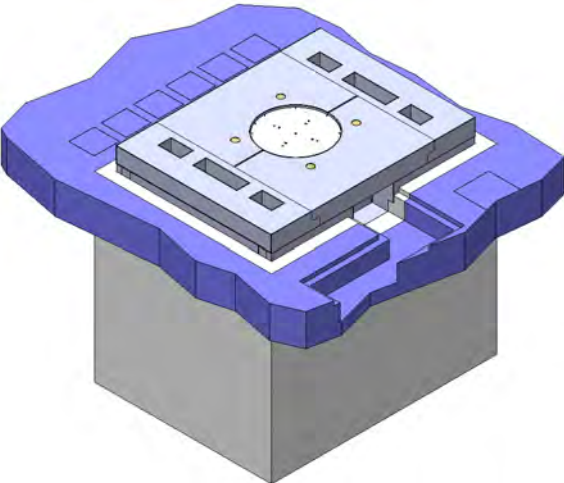
Upper Components



Fill

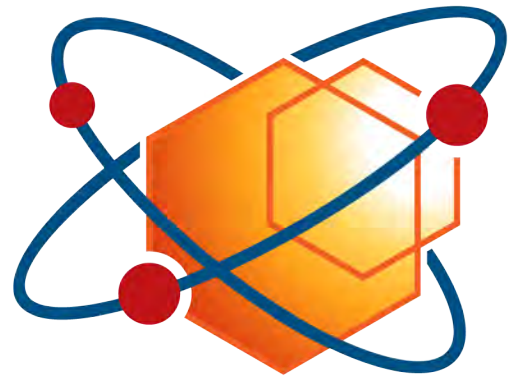
- Fill Stirling Engine loops with coolant, check for leaks
- Purge air from PCS and GVS, fill with Argon
- Fill PCS with NaK

Upper Shield and Actuators



Final Steps

- Adjustment of Neutron Detector Heights
- Grey rod worth and selection



MRP Microreactor Program