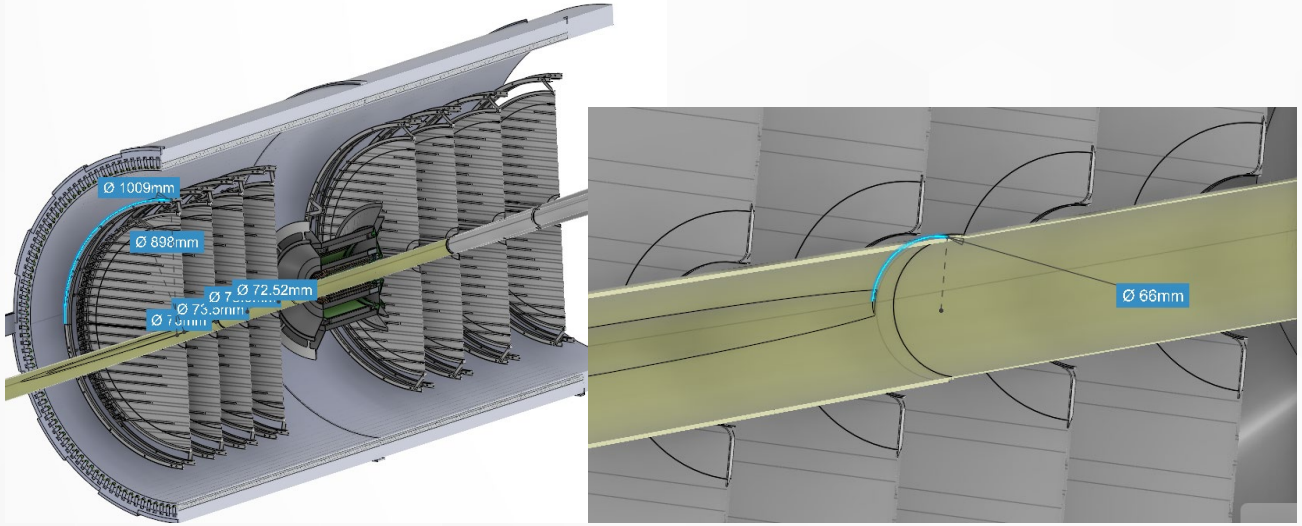
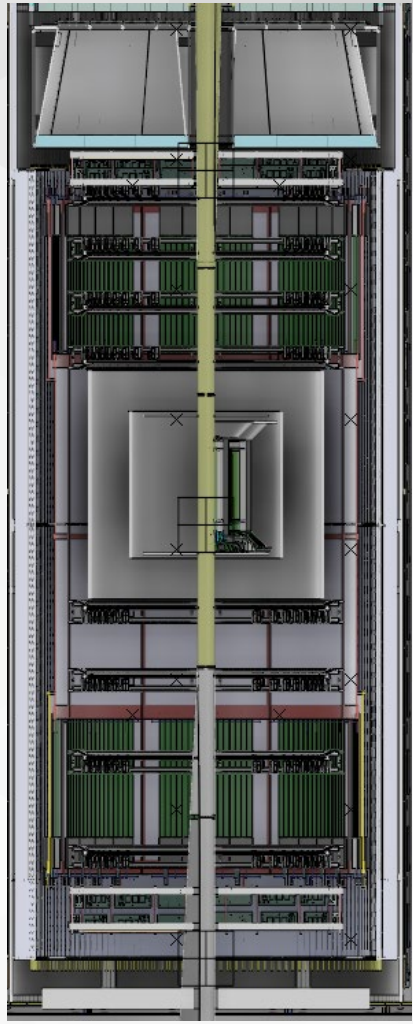
SVT Silicon Disks Clearances for Removal

- Disk Radii
  - Ri = 36.5mm
  - Ro = 449mm
  - Rframe (current) = 504.5mm
- “PST” Inner Radius (current) = 514mm

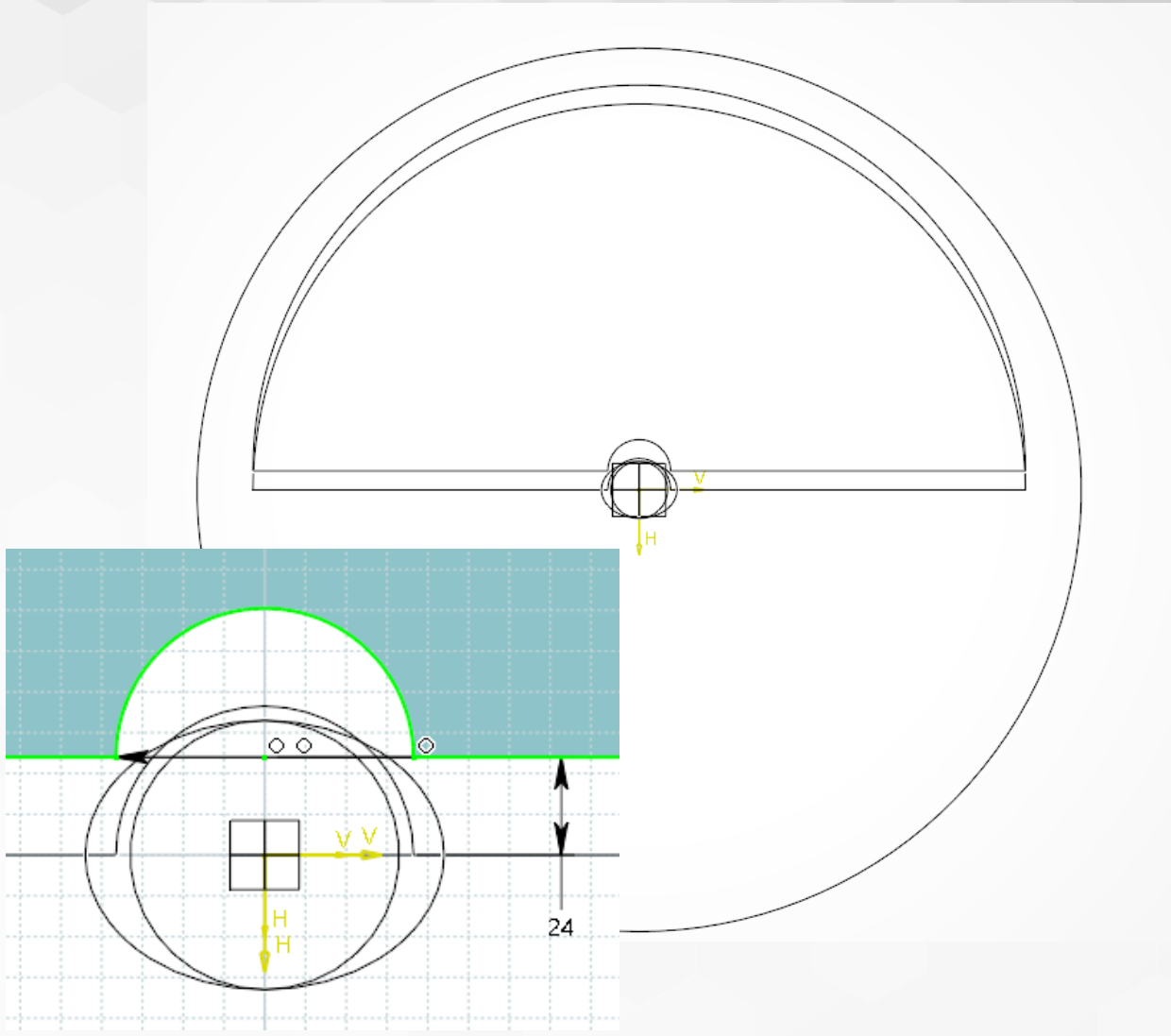


- Beampipe wide axis radius @
  - MPGD disk Z=1225mm, ~44mm
  - Z= 801, 33mm
  - Z= 335, 32.3mm
  - Z= -671, 32.3mm
  - Z= -1220, 46mm



Hard Geometry Check

- Can Si disk move up enough to clear beampipe at exit from SVT space?
  - Ignore “soft” services for now
  - Move disk up into services gap as it moves outward in Z
- Needs to move up ~24mm+
  - Current disk frame-to-”PST” gap only 10mm – smaller frame? Larger PST?
- Additional disk overlap to consider



Notes 7 May 2024

- Si disk removal
  - Not impossible (yet)
  - Consider a few mm extra for disk overlap
  - How will services be handled?
  - How can precision be guaranteed on reinstallation?
- Thermal studies
  - 2d shell representation, of representative strip
  - As few unique components as possible
  - Natural and forced convection coefficient fit well in validation experiment
  - Consider what adjustments scaling up might require