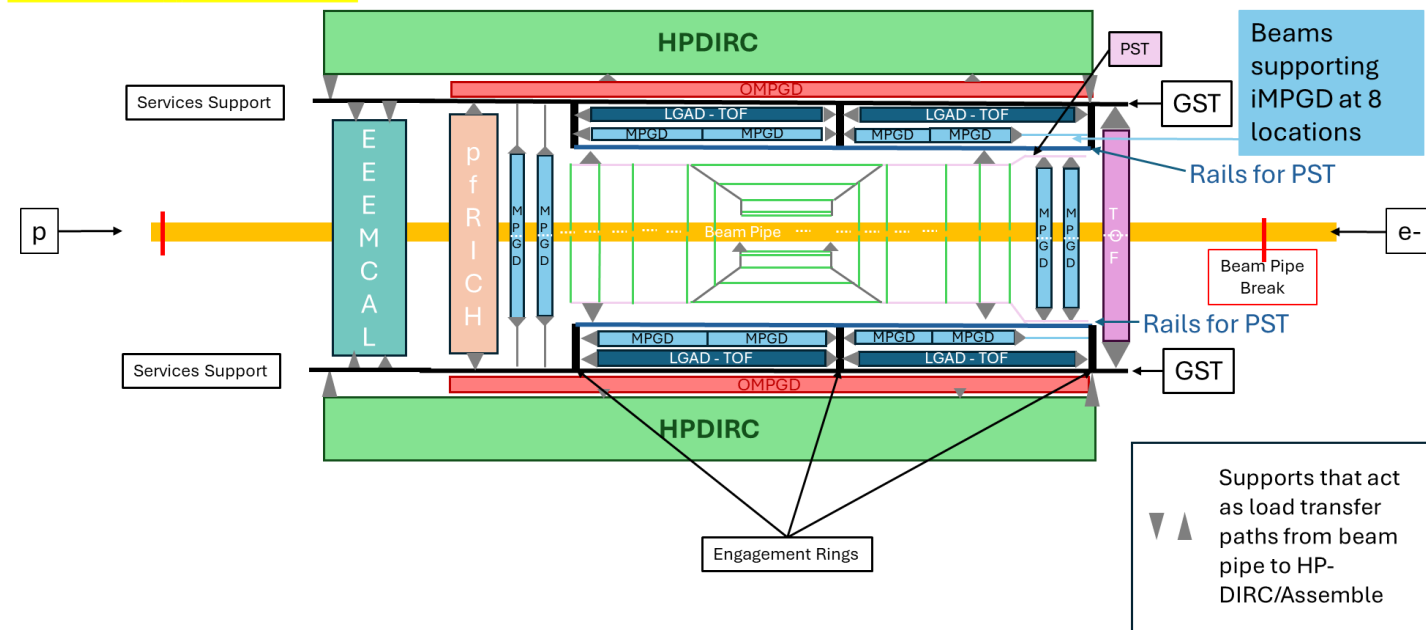


Inner MPGD MicroMegas (CymBal) and discs mounting concept from Global Integration

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FIRST DRAFT – NOT TO SCALE



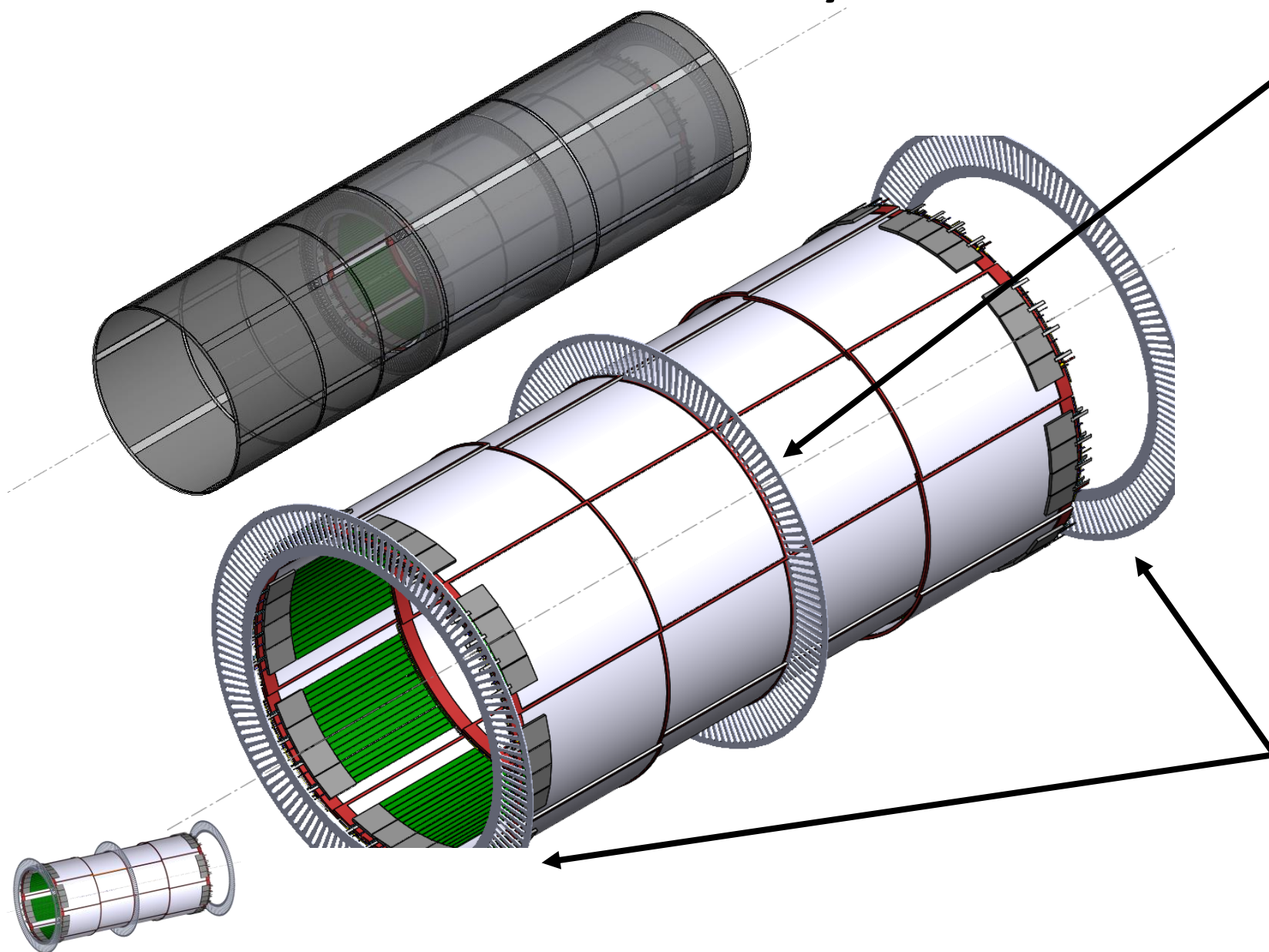
Inner MPGD – Micromegas (CymBal) has two support concepts being evaluated –

1. Supports on a frame structure directly to Engagement Rings
2. Support from Pixel Support Tube (if the pixel support tube concept is approved)

Inner MPGD Discs will be supported from the pixel support tube using kinematic mounts

Position of engagement ring and Inner Micromegas

Cymbal MPGD

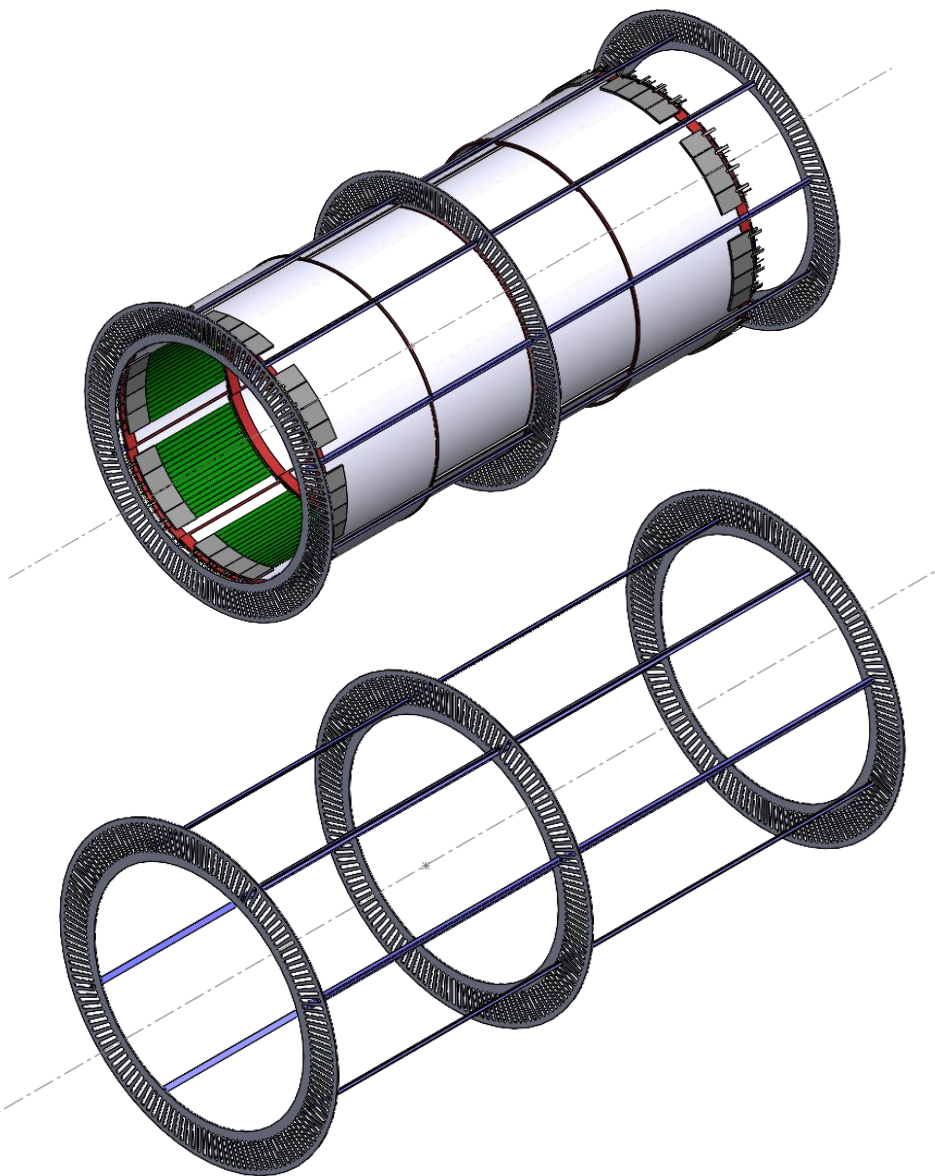


- The position of the center engagement ring aligns with the 'left and right' or Z+/Z- center of the Inner MPGD Cymbal.

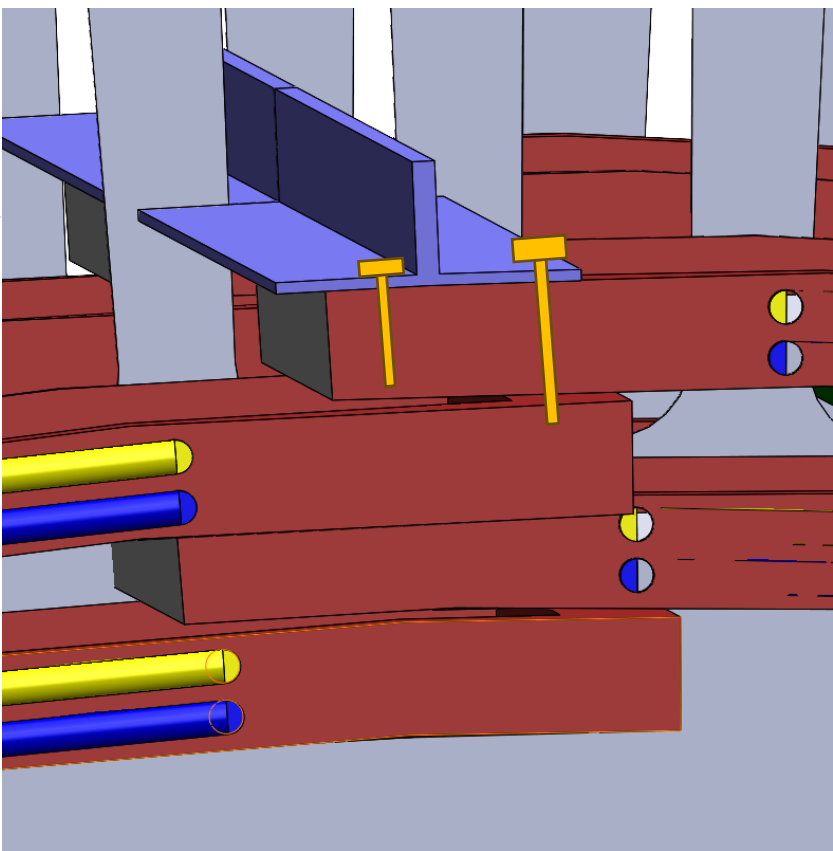
We want to keep the potential of this engagement ring to pass through completely and be able to support the SVT. Thickness in z-dir = 5mm

- The position of the outer engagement is currently being modified wrt. the length of the BarrelTOF – this does not affect Inner MPGD

1. Cymbal : Concept from End Ring Mounting



- For Inner Micromegas Cymbal MPGD – this will be assembled in two left and right halves separately
- This will then be inserted into the pre-assembled bTOF + GST + Engagement ring assembly.

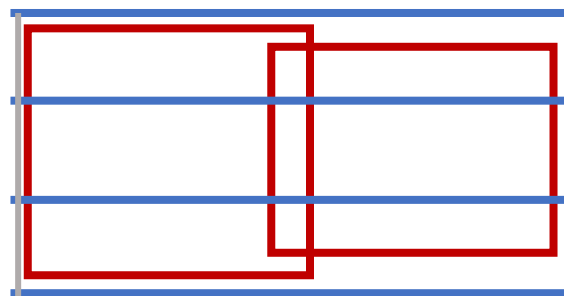
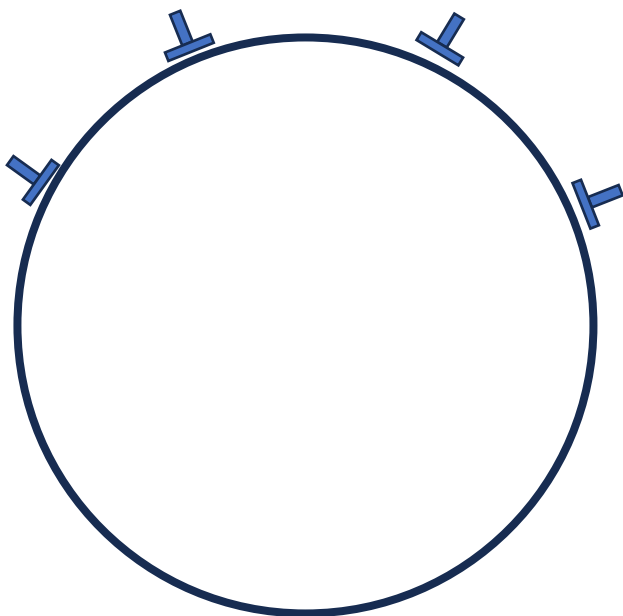


  Some bolting mechanism not detailed yet

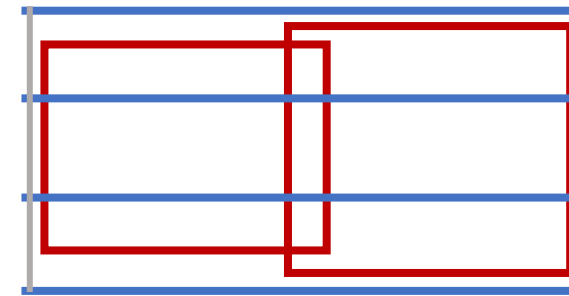
1. Micromegas Cymbal : Concept from End Ring Mounting

- ⬡ For Inner Micromegas Cymbal MPGD – this will be assembled in two left and right halves separately
- ⬡ This will then be inserted into the pre-assembled bTOF + GST + Engagement ring assembly.

- | Temporary inner support that will be removed once attached to engagement ring assembly
- T-beams to attach each Micromegas Cymbal cell and t-beam to engagement rings



Z+ side

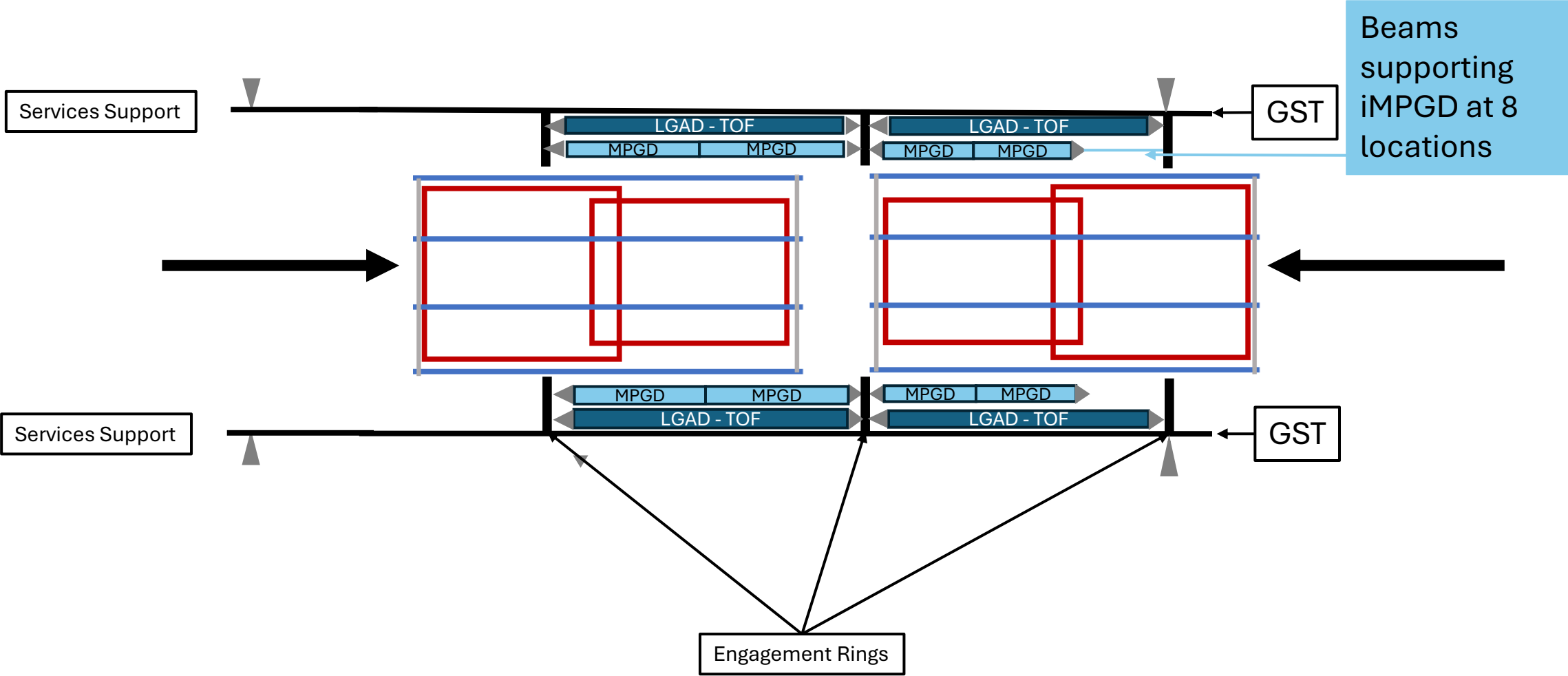


Z- side

Concept Sketch – NOT TO SCALE

1. Micromegas Cymbal : Insertion into assembly and mounting in place

FIRST DRAFT – NOT TO SCALE



1. Supports on a frame structure directly to Engagement Rings

- Cells can be individually placed
- For services dressing there is access from both sides (inside Micromegas Cymbal and outside Micromegas Cymbal) radially
- The sub-assembly needs to be inserted into the engagement ring assembly - need additional temporary jigs and rails.

2. Support from Pixel Support Tube (if the pixel support tube concept is approved)

- Cells can be individually placed
- For services dressing there is access from radially outside Micromegas Cymbal
- The sub-assembly will be inserted into engagement rings along with the SVT assembly – we already are working to make this integration mechanism.

THIS IS BEING EXPLORED AS THE SVT GLOBAL MECHANICS DESIGN COMES ALONG

- ⬡ Each Inner Micromegas CymBal MPGD cell will have 4 mount points to the t-beams / supporting beams irrespective of the choice of assembly 1 / 2.
- ⬡ The center engagement ring will need the ability to pass through the Z+/Z- (left and right) halves of the Inner MPGD Micromegas Cymbal with a thickness of 5mm to support SVT assembly
- ⬡ The MPGD discs will be support with the SVT assembly – design is in progress