GIF test of BIS RPC gaps

M. Zaazoua, S. Simsek, Y. Sun

USTC, ISU





Test Goal: aging

What we will test?

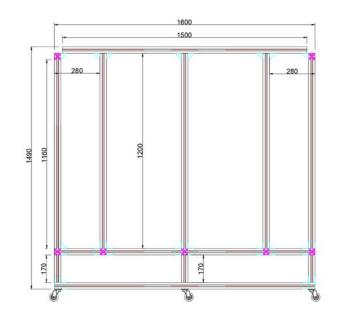
- We have 8 gaps shipped to BB5 from USTC, packaged in an aluminum structure. Among the 8 gaps, 2 of them are fully glued and 6 are half-glued.
- We will test 6 of the gaps at most (mainly limited by the gas flux at GIF++). We propose to test the 2 fully glued gaps first and plus some half-glued ones.

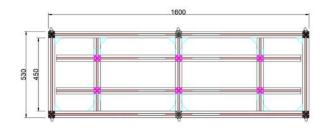
Gas gaps characteristics:

- The size of each gap is 1300mm long, 680mm wide, and 1 mm thick.
- Each gap needs about 0.88L/h of Gas.
- Gas mixture to be tested with: Standard mixture

Trolley information

- Trolley size:
 - 1.6m long * 0.530m thick * 1.49m high
- Where to be placed:
 - Downstream, close to the wall
 - Either in front of the MPI ageing setup or the right side of MOD0
- For how much time:
 - 6 months
- Starting from:
 - Around March 2025





Electronics + Cabling

- We don't need to install any electronics inside or outside except the HV distributor which will be attached to the trolley
- We will need just to route the cables to the electronic cage.

- Cables, pipes needed:
 - For HV: from trolley to the electronic cage
 - Need to install and root
 - For LV: from trolley to the electronic cage:
 - We need to install a flat cable for the gap current read out.
 - For Gas: from trolley to gas rack
 - Installed (Sinem) the gas pipe which is needed to feed the gaps, so it is ready.

Backup

Ongoing purchase:

- Preparing of HV distributor of 6 channels. The material (cables, connectors, etc.) is under purchase.
- The gas distributor and impedance, are to be ordered following the guidance of Giulio.
- The support structure (trolley)
- Bobine of gas pipes, blue 6mm ones which we are using in Atlas.