

Tile assembly

Di Venere L.
for Bari group

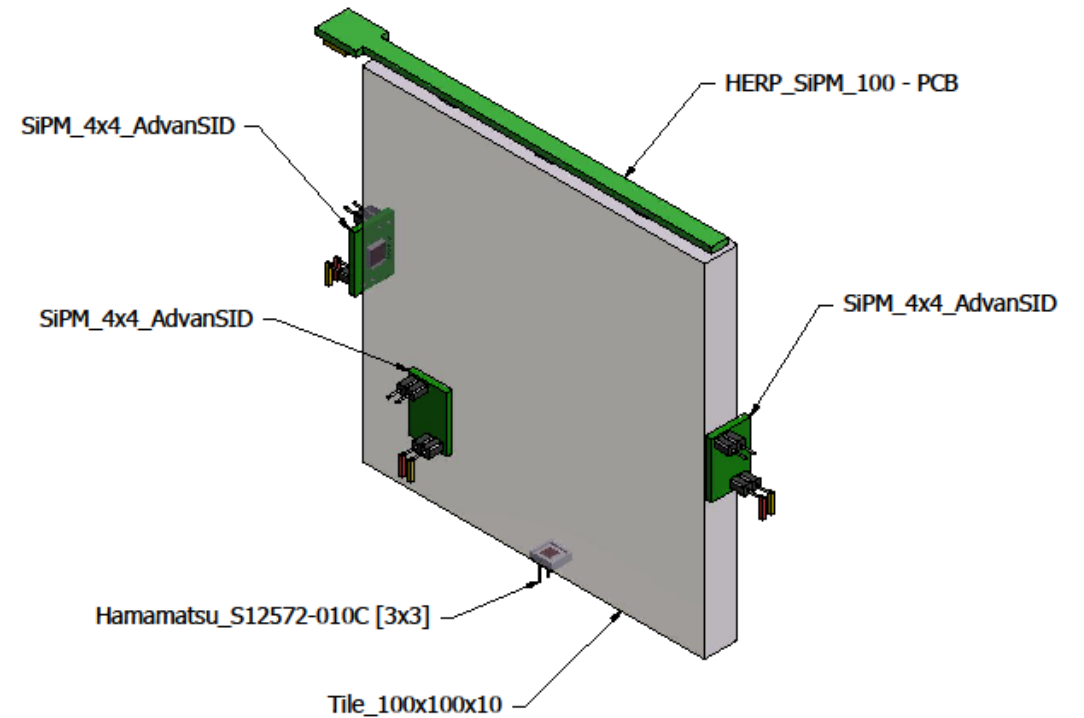
January 22 , 2020

Hardware details

- 3 new tile to be assembled
 1. BC-404 (**GSSI**) , size:10 cm x 10 cm, height: 10 mm
 2. Epic Crystal (eq. BC-400) , size:10 cm x 10 cm, height: 10 mm
 3. Epic Crystal (eq. BC-400) , size:10 cm x 10 cm, height: 5 mm
- SiPMs :
 - AdvanSiD ASD-NUV4S-P: NUV, 4x4mm² size, 40um cell pitch
 - Hamamatsu S12572-015C, S12572-010C : NUV, 3x3mm² size, 10/15 um cell pitch
 - SiPM PCB with 3x Hamamatsu S12572-050P (**Pavia**): NUV, 3x3mm², 50um cell pitch

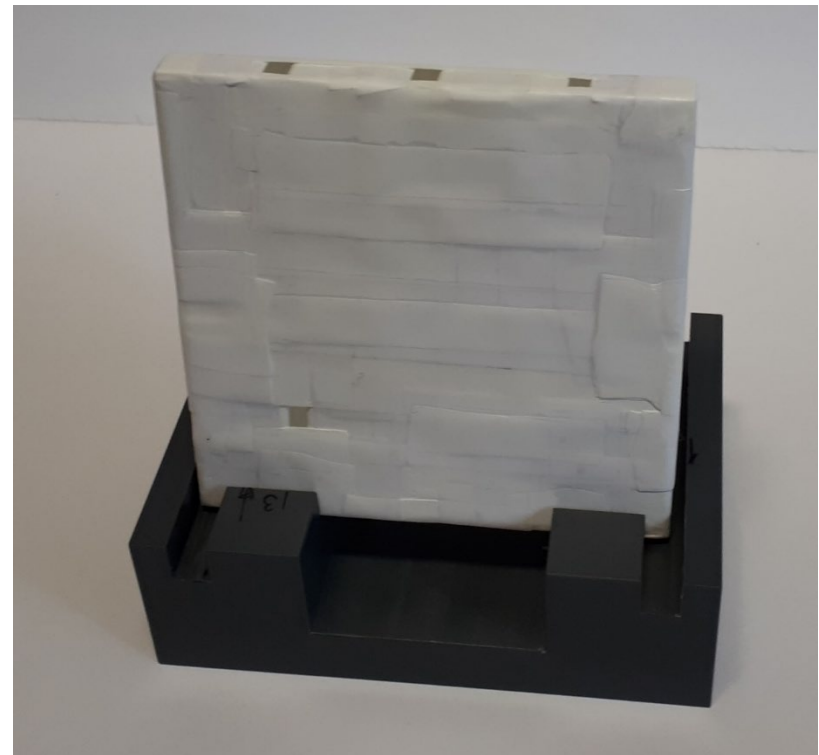
Assembly

- 4 single SiPMs + 1 SiPM-PCB per tile
 - 2x AdvanSiD NUV SiPMs on opposite sides
 - 1x AdvanSiD NUV SiPM on top facet
 - 1x Hamamatsu on side
 - 1x SiPM PCB on remaining side
- Tile 1: 1 x HAM 10um + 1 x PCB 50um + 3 x ADV 40um
- Tile 2: 1 x HAM 15um + 1 x PCB 50um + 3 x ADV 40um
- Tile 3: 1 x HAM 15um + 1 x PCB 50um + 3 x ADV 40um
- Only tile 1 assembled up to now



Assembly procedure

- Wrapping teflon, 200 μm thickness
 - 2 layers, but some parts have 3-4 layers due to overlap
- We leave small windows for SiPMs



Assembly procedure

- Wrapping teflon, 200um thickness
 - 2 layers, but some parts have 3-4 layers due to overlap
- We leave small windows for SiPMs
- SiPMs are coupled with optical grease
 - Black tape to secure SiPMs
 - Probably moving to optical glue instead of grease
- External layer of black tape for light insulation

