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# Module Loading

## C-shape protection and PP0 support

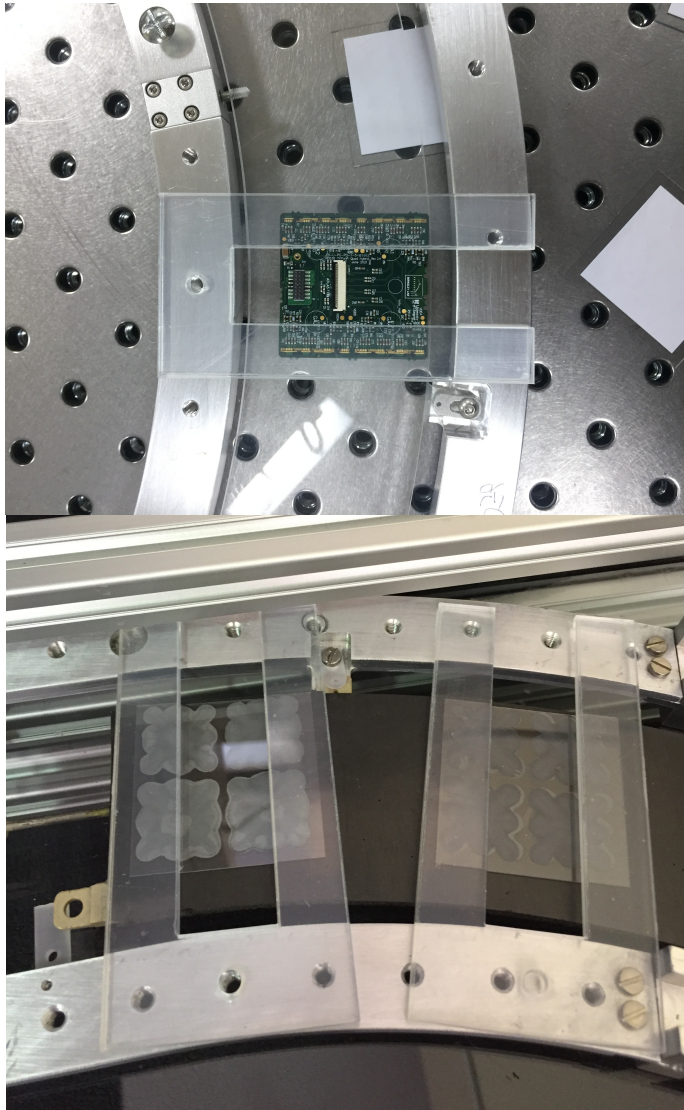
ITK OEC Pixel Integration Workshop

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# C-shape protection



After module loading the wire bonding of each single quad module must be protected until installation of the HR in the HF.

We fabricated about 100 of C-shaped plastic protection to be tested in the real case.

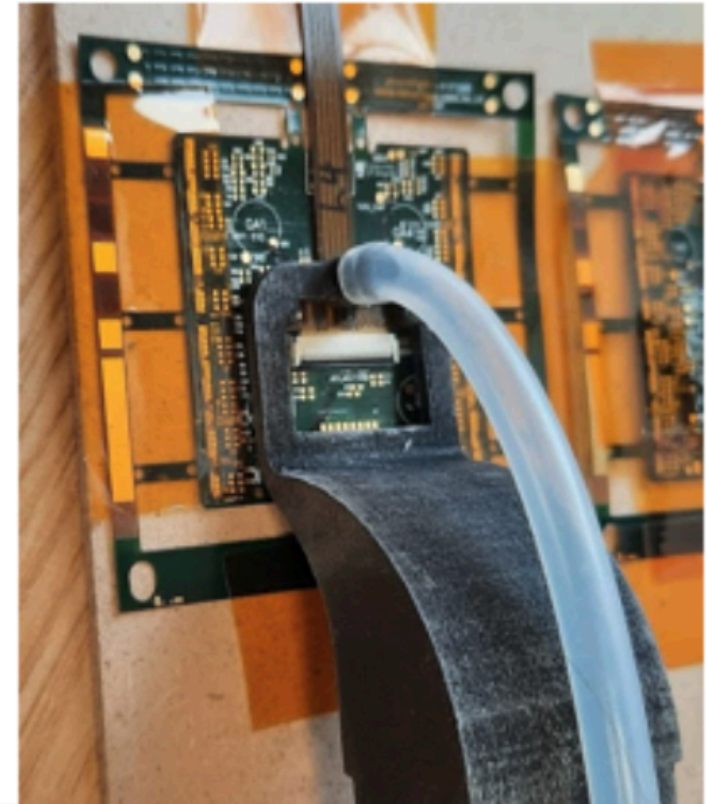
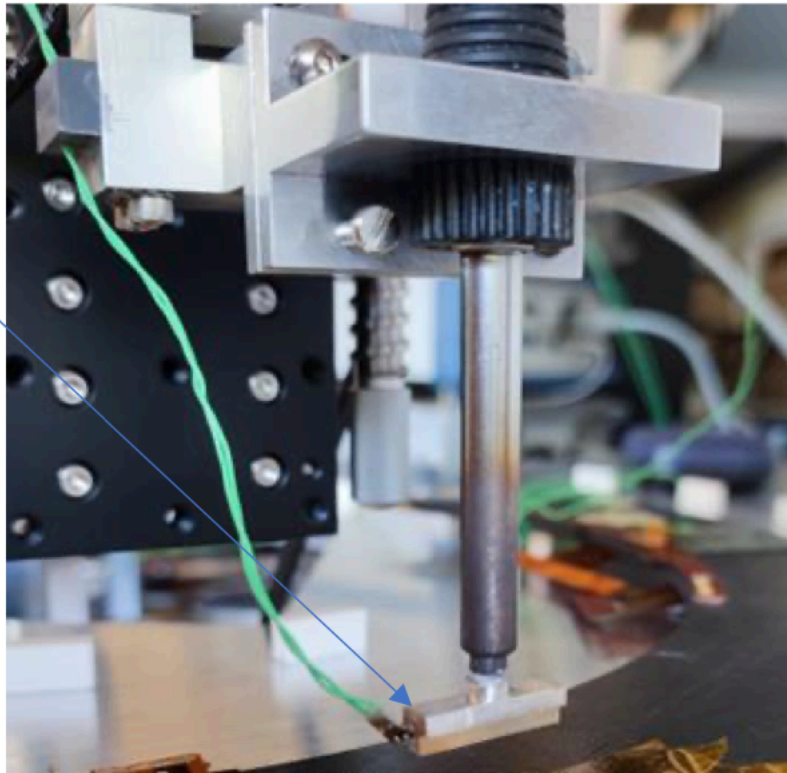
They have to allow Power Pig Tail soldering and data PPO insertion.

The C-shapes are assured to the HF inner arcs with M4 screws. They could be left in this position also during HR installation.

# Power Pig Tail Soldering and Data PPO insertion

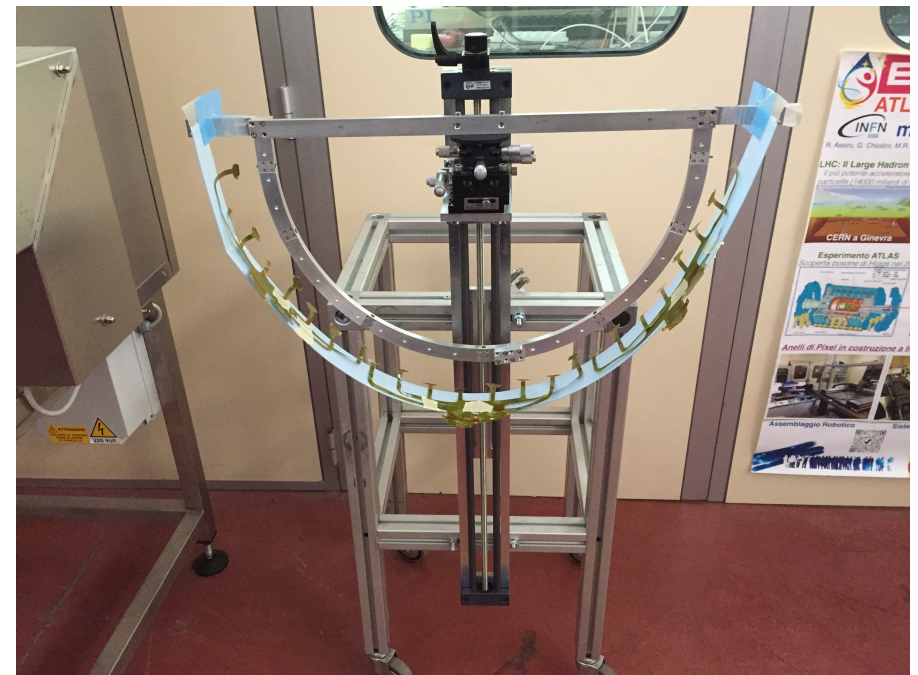
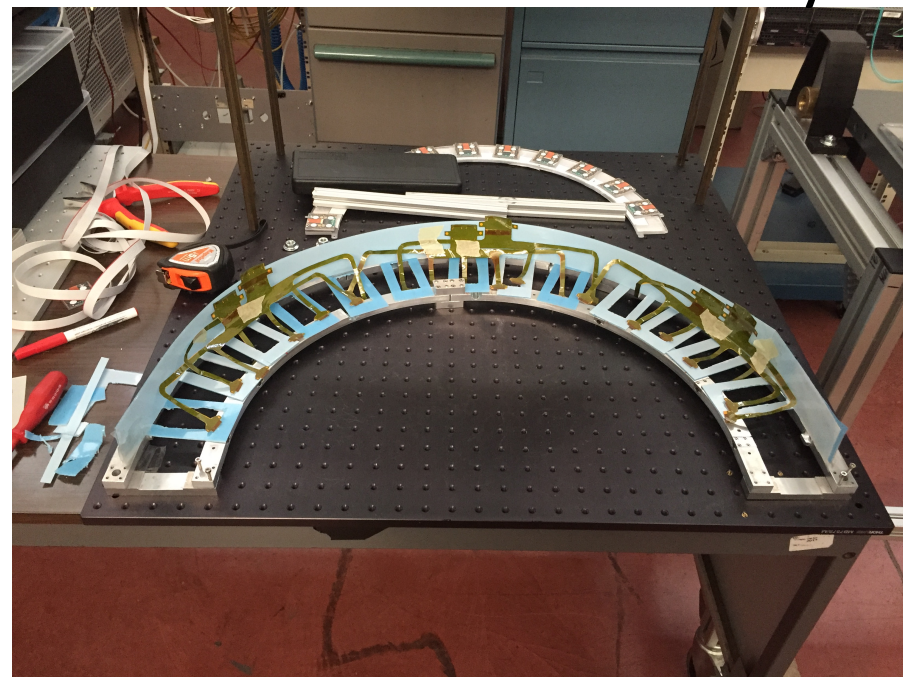
The C-shape inner clearance should have space for the soldering head (left) and data PPO insertion (right).

We insert basically data PPO by hand but an insertion tool exist and must be tried.



# PP0 support on loaded half ring

PP0s support must mimic the half-shell for safety

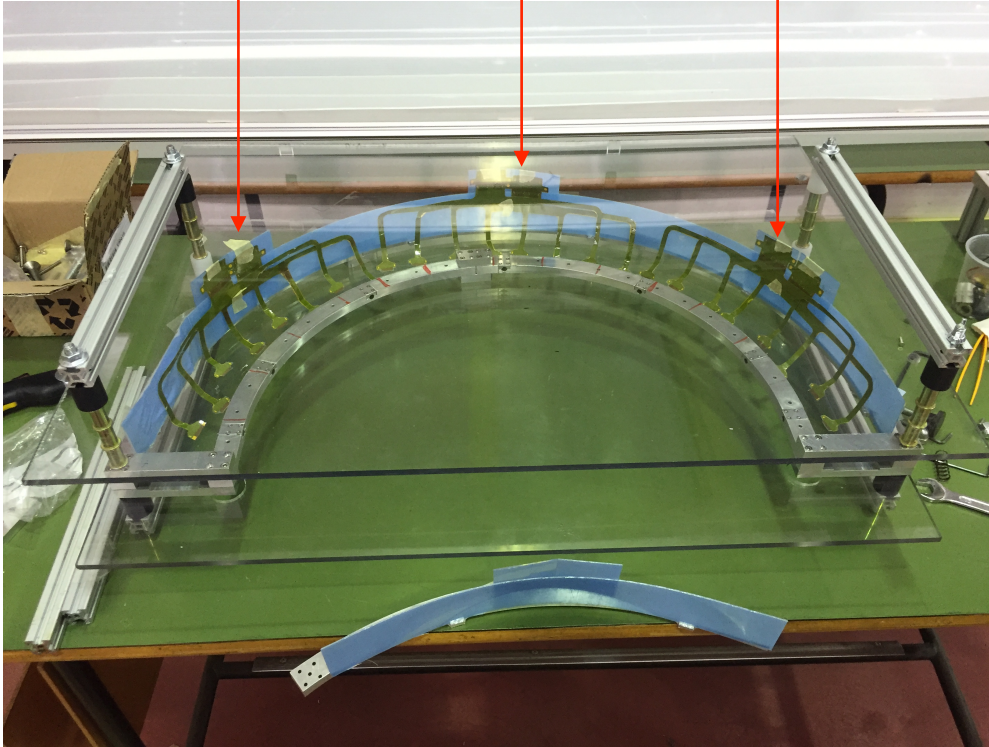


Should follow the loaded HR for testing, transport and insertion in the HS  
Should be attached to the HF inner arc to be left during installation

# Support structure and storage box

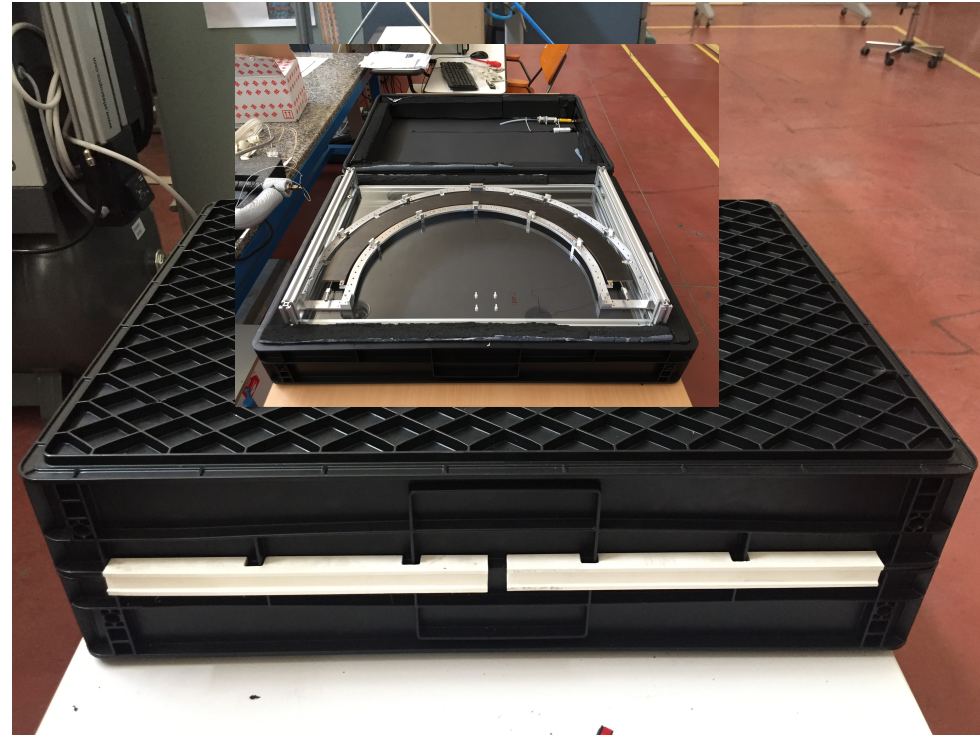
HR+HF+PPO support structure

Missing slots in plexiglass for testing



Lateral plexiglass walls not shown

Storage box



# PP0 support prototype in Lecce 3D printed



# What next

- More details on PP0 handling frame.
- Clarify how to handle PP0s with storage box
- Clarify how to handle PP0s during integration
- How we fix PP0 to the PP0 handling frame.

**Real half rings and half shell needed to really asses the final design of the protections and PP0 supports.**