

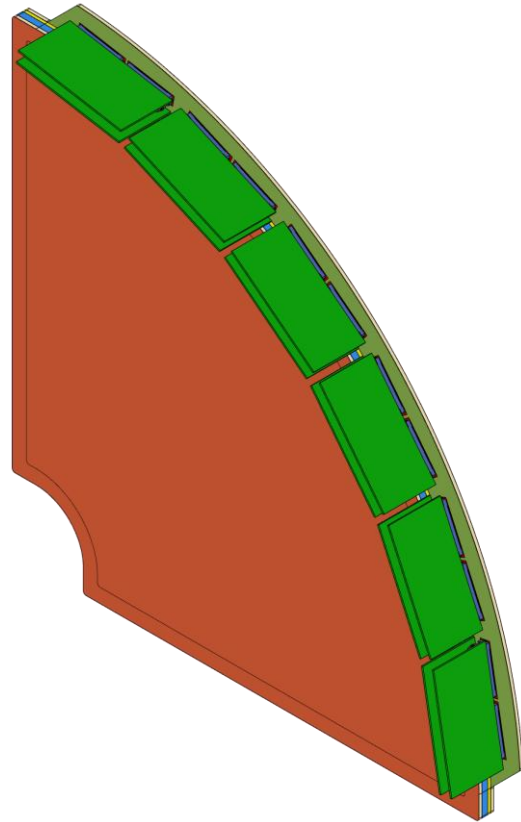
ECT Update

Stefano Gramigna

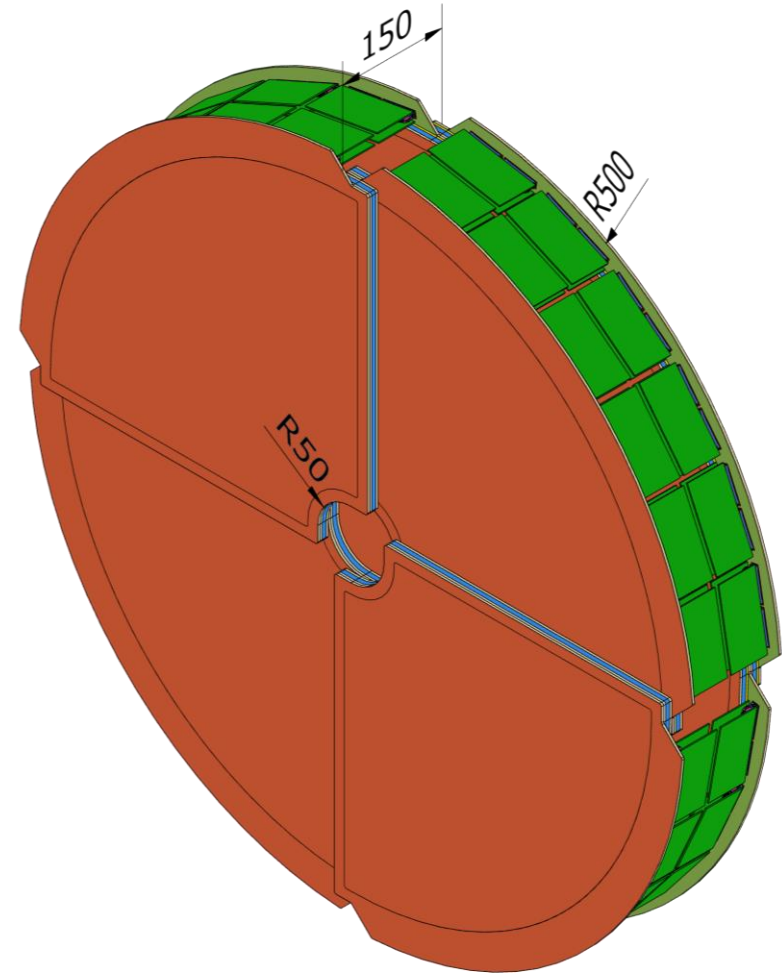
MGD-DSC ECT Meeting

Adapting the Design to the New Envelope – Lepton Side

8 ×

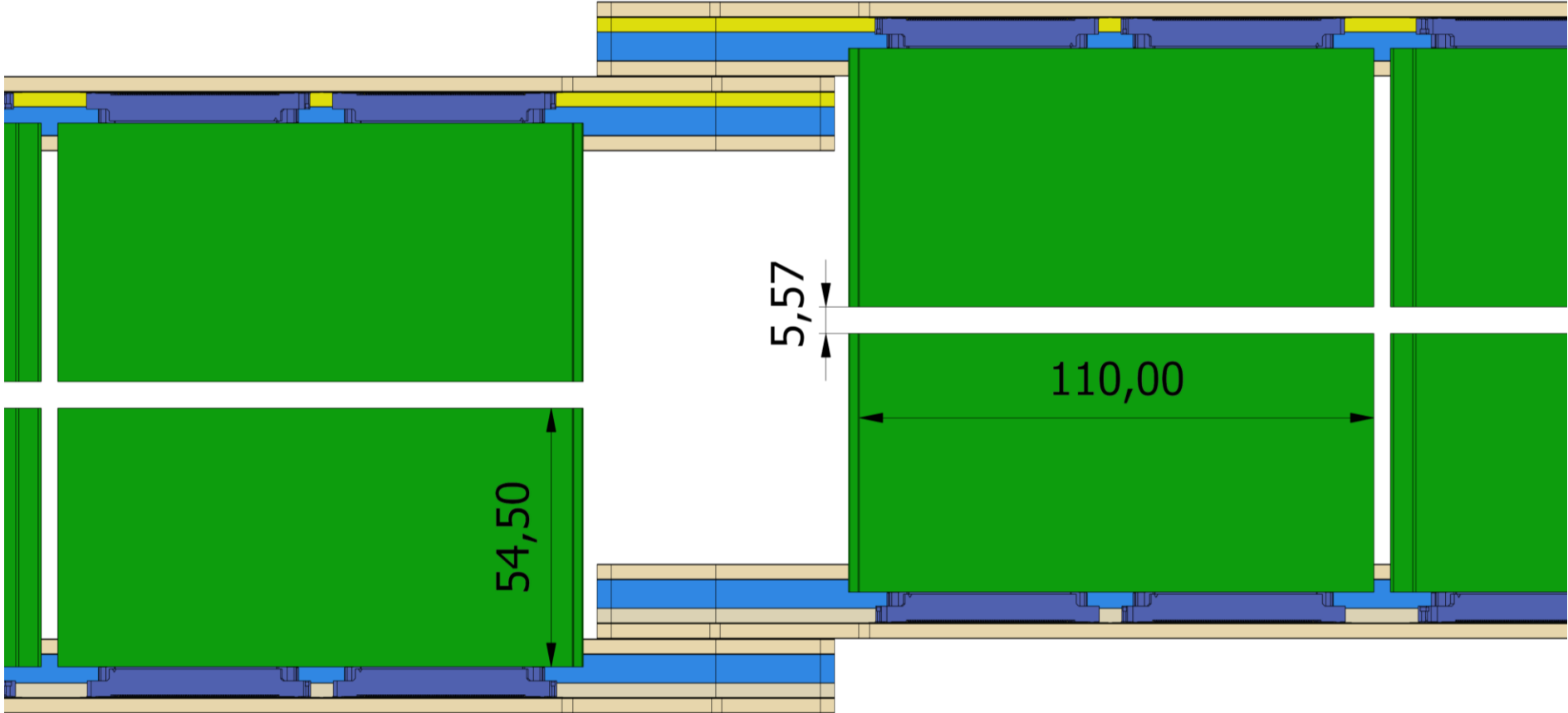


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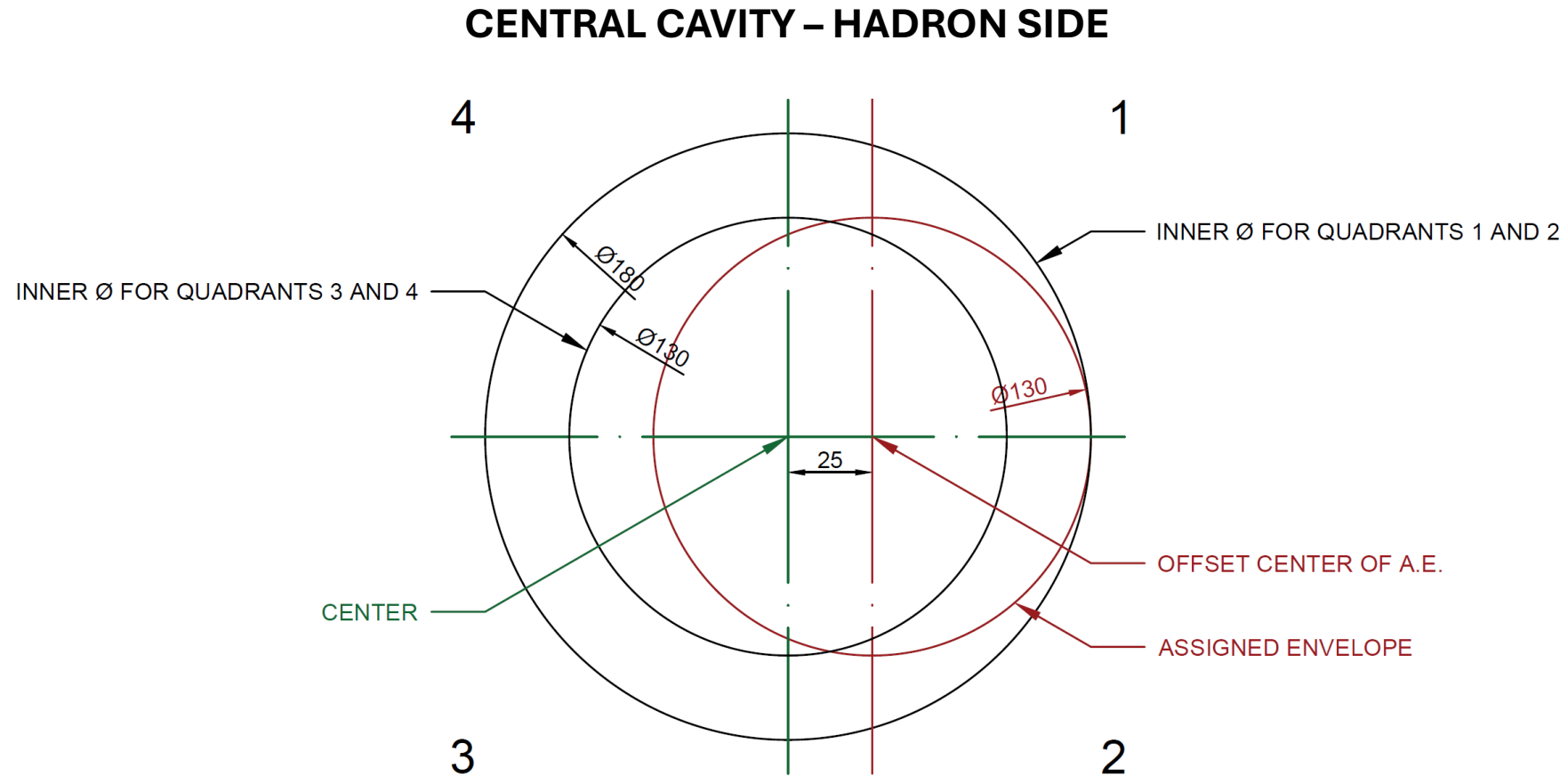
Updated Constraints for FEB Form Factor

OVERLAP REGION - TOP VIEW



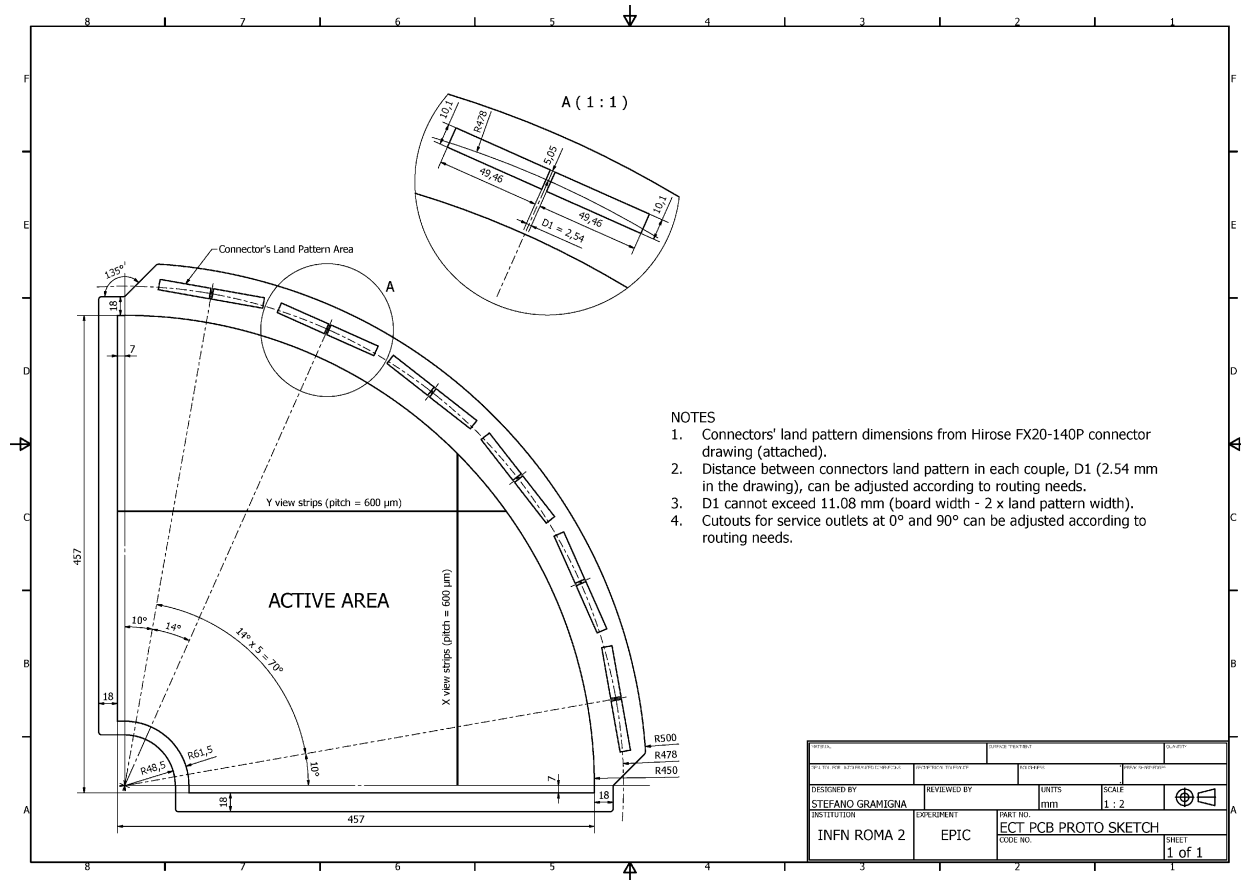
Lepton and hadron side now have the same constraints

Adapting the Design to the New Envelope - Hadron Side



3 different sector designs, each with a different diameter of the central cavity, is it worth the effort?

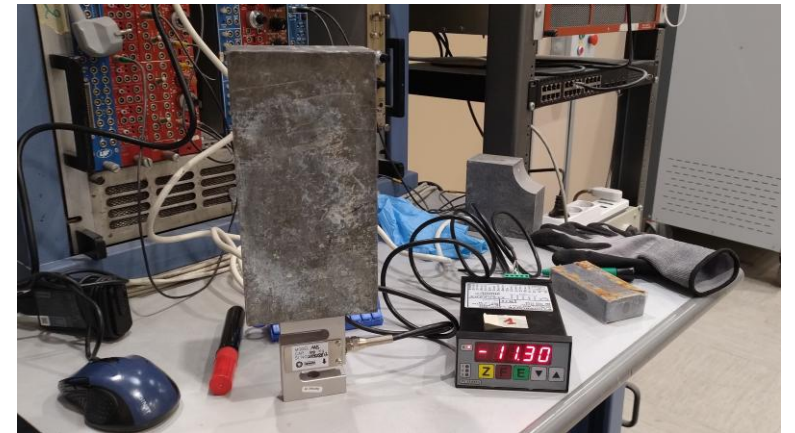
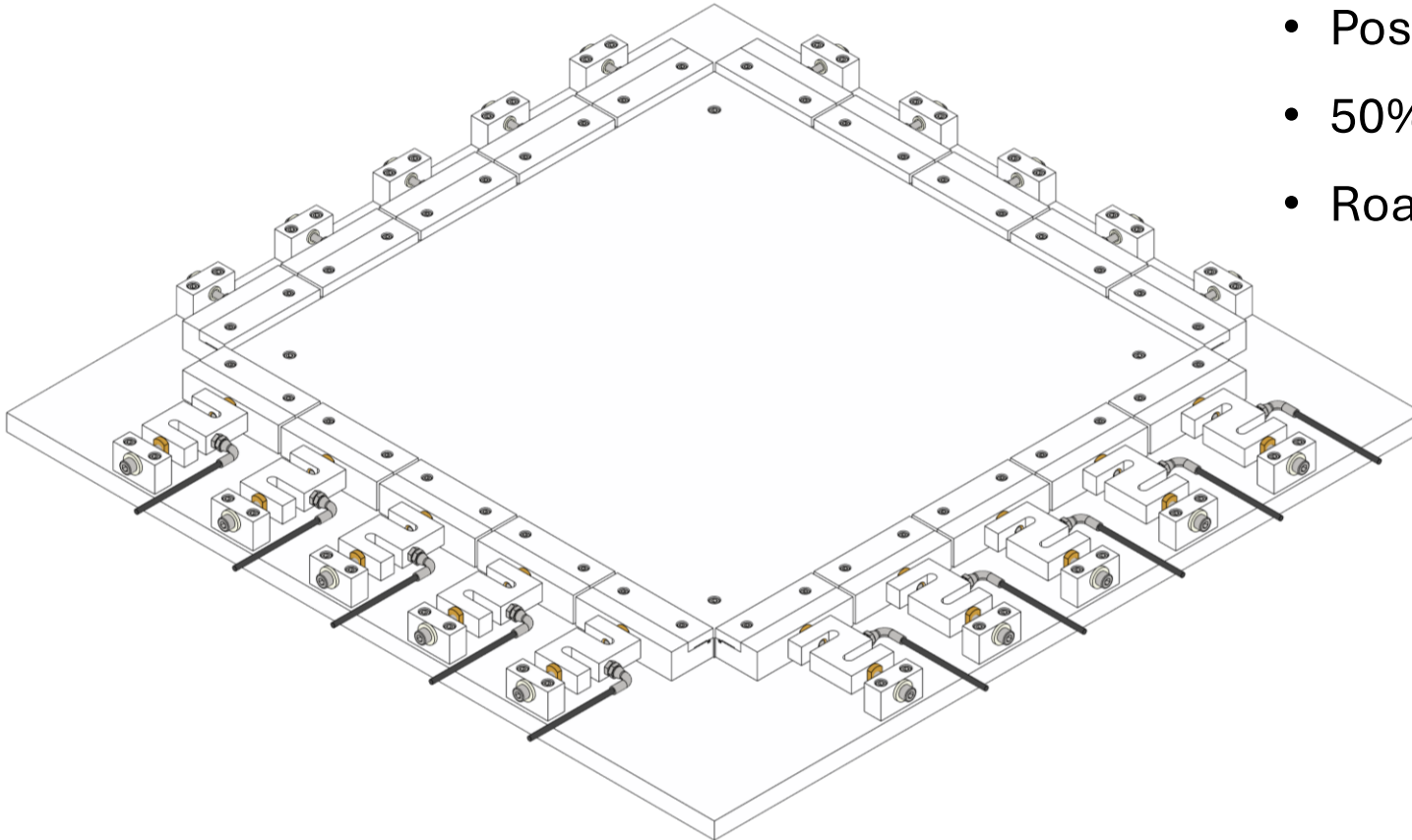
Routing Discussion with Rui



Sketch of the old LD AA submitted to Rui for investigating the feasibility of the routing
Changes to the central cavity introduced by the new envelope do not affect routing

GEM Stretcher Design and Production Update

- Stretcher design nearly completed
- Possibility to house 610x610 foils
- 50% of the load cells calibrated
- Roadmap for user interface outlined



Strategy

Manufacture 1st Engineering Test Article

Objectives:

- Validate **scalability of G-RWELL** technology
- Practice **operation** of a large area detector
- Advance towards **final AA and routing scheme**

Features:

- **Reliable** mechanics
 - FR4 supports for anodes and cathodes
 - Wider, sturdier frames
- **Recoverable** design:
 - O-ring and screw closure or hybrid solution
 - Glue reservoirs for eventual sealing
- **Semi-final routing** with Hirose connectors
- **Convenient** mounting points and form factor for testing
 - Test beam and cosmic ray telescope

Continue Final Detector Design

Objectives:

- Satisfy physics/integration needs
- Plan development and future production

Features:

- Lightweight mechanics
 - Sandwich structured composites
- Final mounting points and mechanical interfaces
- FEBs and services

Studies, Mock-ups, and Procedures

Mechanical mock-up(s)

Objectives

- Study lightweight mechanical solutions
- Study gas tightness solutions
- Study gas distribution solutions*
- Practice production techniques

GEM Stretcher Test and Training

Objectives

Develop and practice GEM stretching procedures

Method

Use of Dummy Foils (Marked Kapton-Cu) and dummy frames (FR4/PEEK)

QC of the via optical inspection

BACKUP

