

RPC R&D

Alberto Blanco on behalf of RPC group

International Advisory Committee meeting, 27-28 April 2026, Lisbon



2025 Highlights

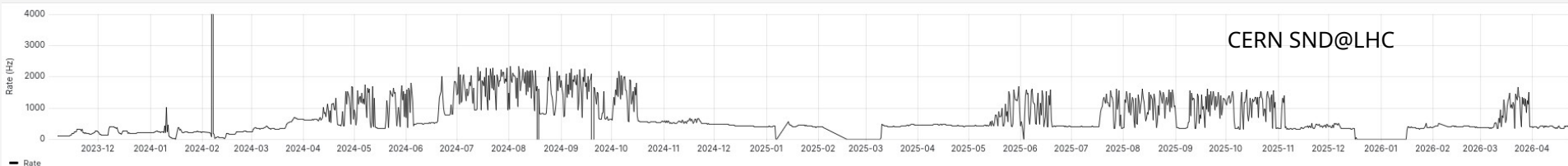
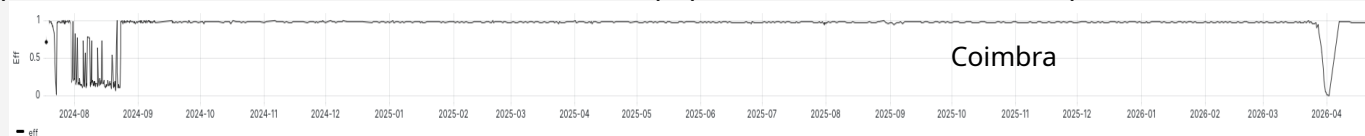
- Significant reduction of real man power

A. Blanco progressively devoted more time to laboratory management duties (Directorate). **L. Lopes** has had reduced availability for R&D due to commitments to DL and MW. **P. Fonte** spent a substantial part of the year in Korea. **J. Saraiva** was primarily focused on completing PhD thesis and has now left LIP.

Sealed RPCs. More than two year of operation in **Coimbra** and **CERN (SND@LHC)** => paper submitted to frontiers special edition.

A. Blanco et al. 2025 NIMA 1080 170743

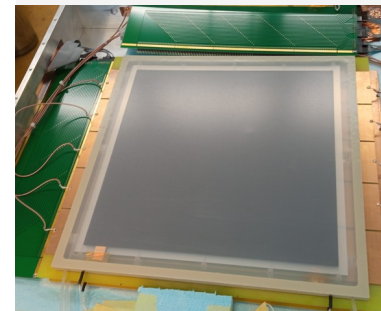
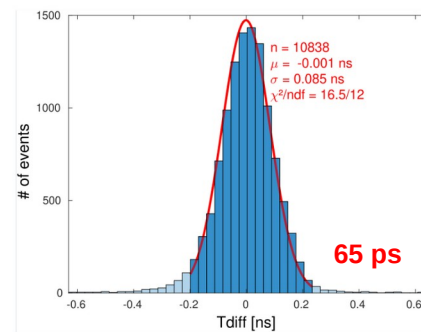
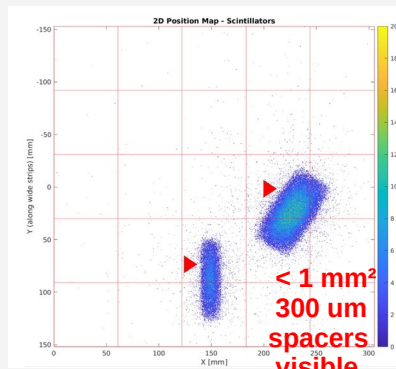
A. Blanco et al. 2025 NIMA 1075 170396



Position Sensitive timing RPCs. João Saraiva's PhD thesis demonstrates sub-millimeter (<1 mm) and time resolution (<100 ps) over large areas (> 1 m²) with a readout that does not depend (in first order) of the area of the detector.

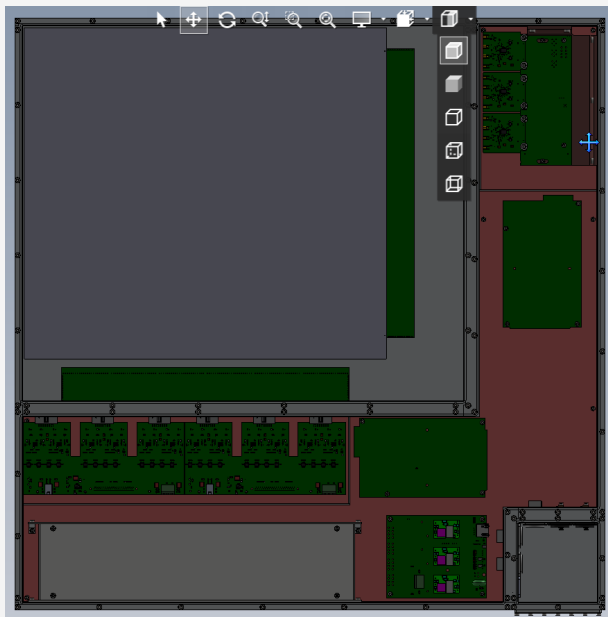
J. Saraiva et al. 2025 NIMA 1076 170466
PHD <https://doi.org/10.17181/pdbbr-z6535>

= > **TOMAR project**



2026 Objectives

- **TOMAR** project (will consume the largest share of resources)



Preliminary CAD TOMAR_0 module



Distributed DAQ for TOMAR.
Tested with a dummy detector

- **Sealed RPCs with timing capabilities** is a priority, we have submitted a Exp Project with this propose.
- **Rest of the topics on the report:** RPC-BrainPET, R³B proton TOF arm, SWGO, sealed RPCs Coimbra + SND@LHC, HADES (RPC-TOF-W and RPC-TOF-FD) and mini trasgos Network.

Thanks !!!!

