



# ALCOR - dRICH Readout

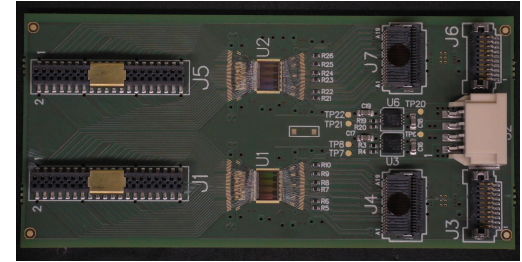
Fabio Cossio on behalf of the ALCOR group  
INFN Torino

EPIC Electronics & DAQ WG meeting  
eRD109 Monthly Progress Reports

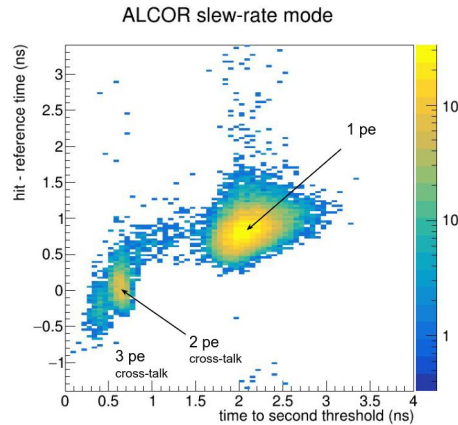
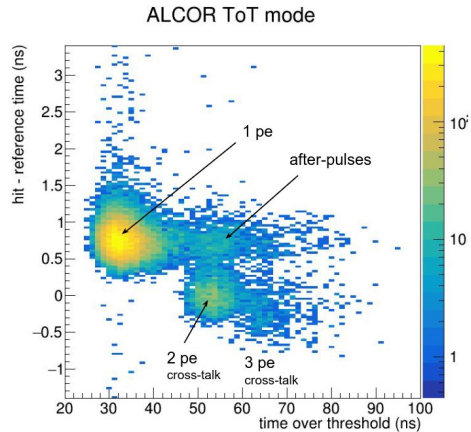
04.04.2024

# Summary of March activities

- Validation tests of 24 **ALCOR FE DUAL** boards (ALCOR v2.1, for May 2024 beam test) almost completed: climatic chamber to study “*reset glitch*” effect occurring at low temperatures, **yield ~ 85%**
- Tested **SR mode** for time walk correction with laser setup: *ToT mode* cannot distinguish between afterpulses (slow-rise time, large ToT) and cross-talk (fast rise-time, large ToT), *SR mode* provides better separation



climatic chamber tests (INFN Torino)



laser tests (INFN Bologna)

# Summary of March activities

- Design of **ALCORv3** (64-channel, BGA): mixed-signal simulations with new pixel (increased bandwidth FE + digital logic with shutter)
- Design of final **FEB** (for ePIC) and '**fake FEB**' (for dRICH 2025 activities): selection of components and connectors for PDU integration ongoing
  - FEB-Carrier connector: LSHM-150-01-L-RH-A-N-K-TR (FEB side) 0.5 mm, 100 places over two rows, current rating 2.0 A per pin (reduced width, easier to connect w.r.t. edge connector)
  - Mapping of ALCOR bus connector pins (FEB and 'fake FEB') for RDO pin-plan and routing

