

The ATLAS Forward Proton tagging detectors

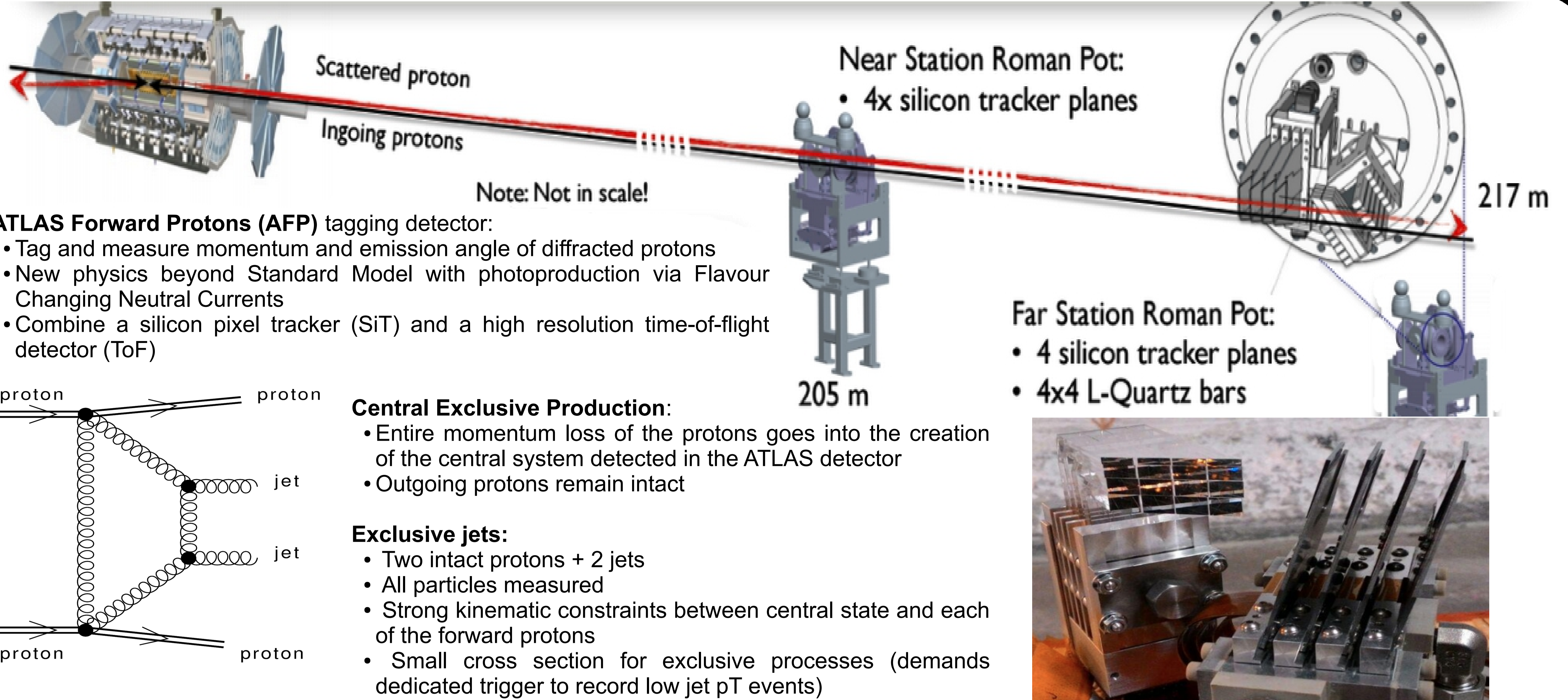


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Cofinanciado por:



The ATLAS Forward Proton



Detector Control System (DCS)

Control and monitor of components to ensure the safe detector operation

Large variety of different systems integrated in the ATLAS detector

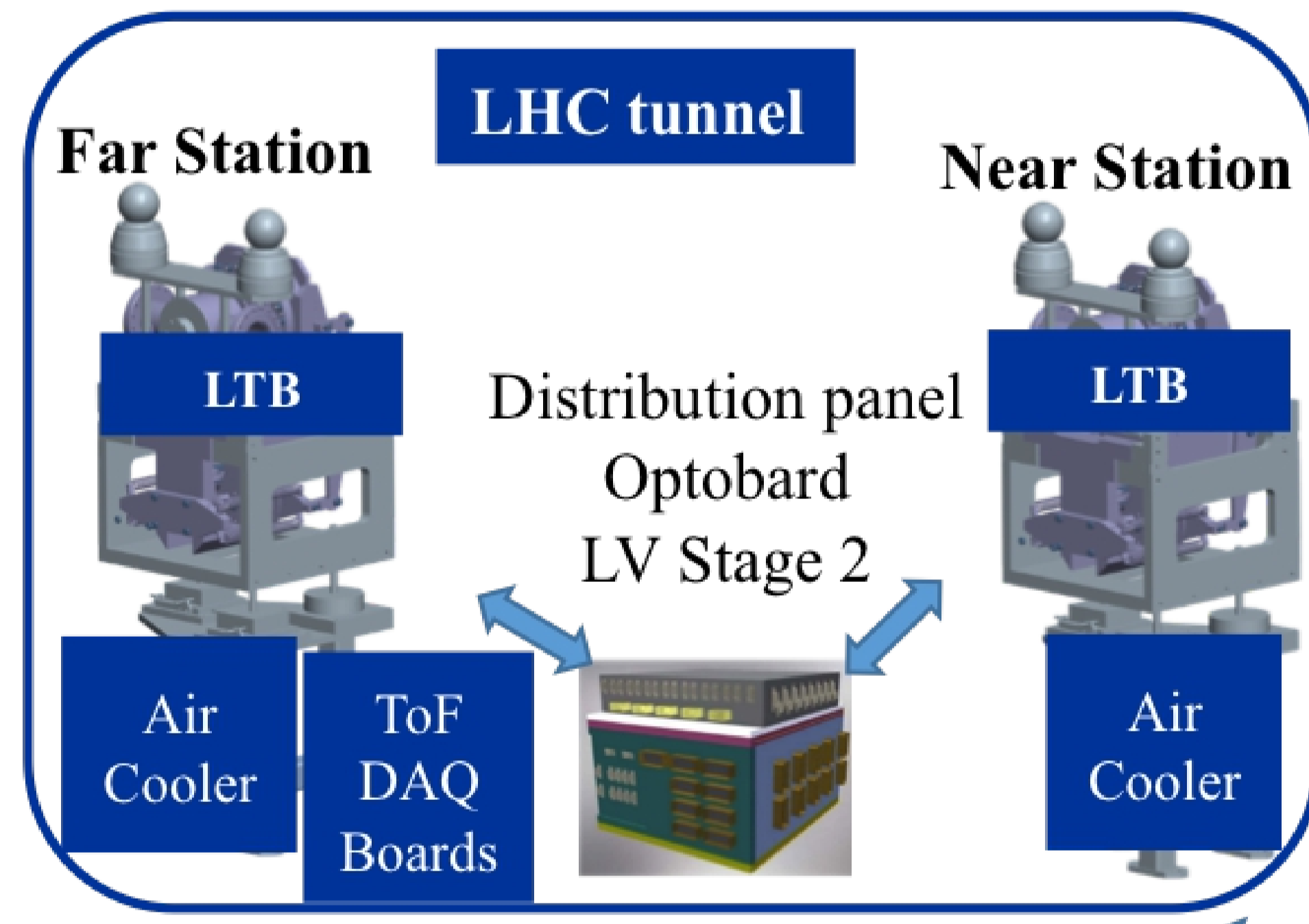
Supervisory Control And Data Acquisition (SCADA), WinCC OA

The DCS provides tools:

- Finite State Machine (FSM)
- Archiving
- Alerts
- Graphical user interfaces

Independent horizontal **Movement System** of 5 μ m step
Independent **Vacuum System** in each arm (10-40 mbar)

Cooling System for each station provided by Dry Air Vortex Cooling System (AirCooler)



USA 15 - ATLAS Underground Counting Room



DCS PC Linux SLC6 VM2008

Roman Pot movement servers

Secondary vacuum and cooling control

Supply: HV, LV Stage1, CAN bus, Optoboard

Temperature monitoring Hardware Interlock

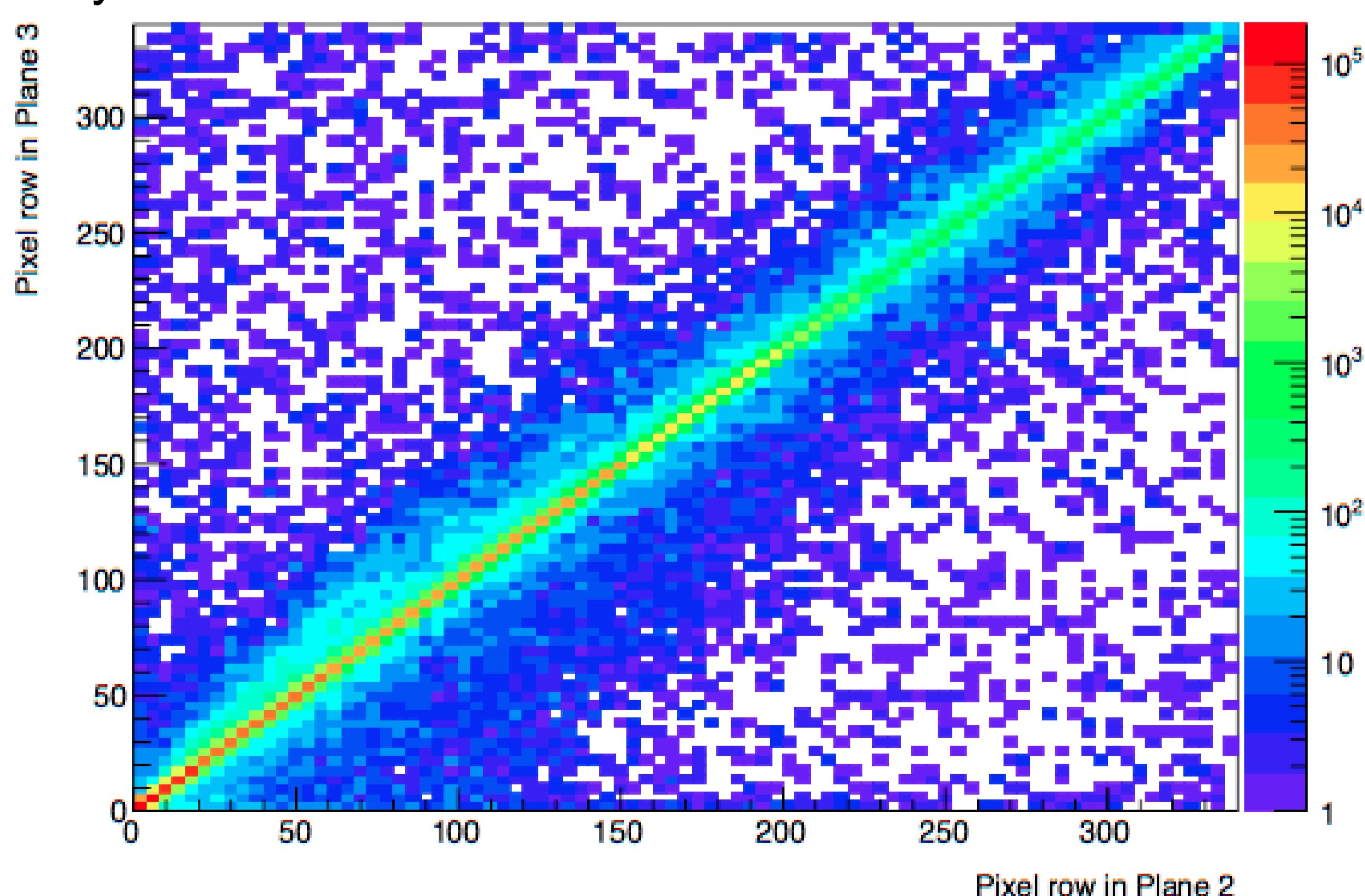
VME DAQ Crate

Level 1 Trigger Performance (SiT)

Study of AFP Level 1 trigger efficiency for data taken during special low- μ runs in 2016 (requires 1 or 2 hits per detector plane)

Level 1 trigger highly correlated with offline reconstructed AFP tracks, thus rather track reconstruction efficiency should be considered

Correlation study between track reconstructed and hits position in the different layers



Calculation of the L1 efficiency requires improved alignment and good offline track definition (ongoing work)

High Level Trigger Implementation

Objectives:

- Select central exclusive (di)jet production
- Use (di)jet system to determine proton track position at AFP
- Compare to the real track measurements in AFP

