

PANDA Barrel DIRC Mainz Status Report

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UNIVERSITÄT MAINZ



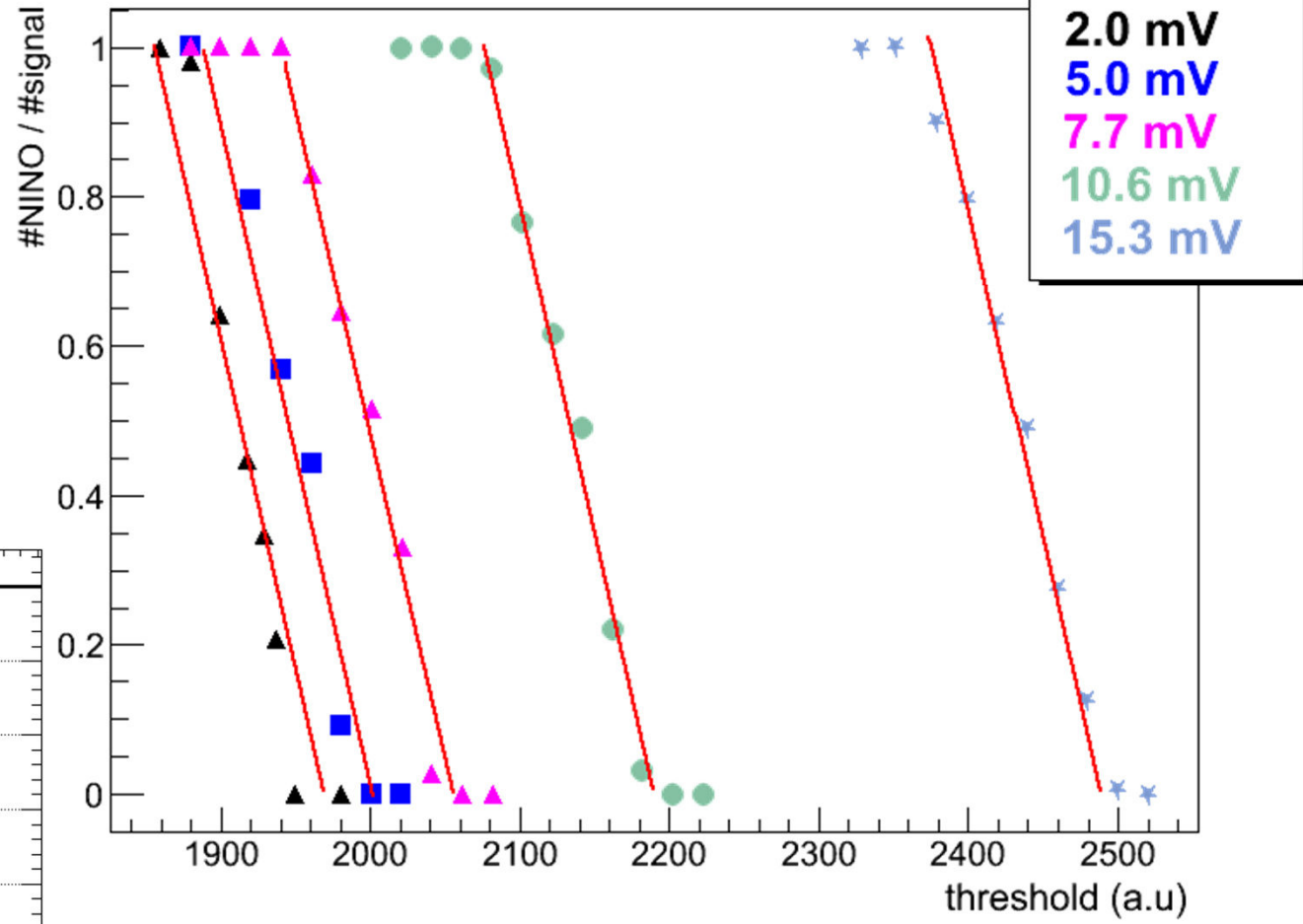
Black Box Status

- Testing Electronics
 - NINO
 - COME&KISS
- Reliable & fast light source
 - PiLas system with 633nm head
 - Absorptive ND filters
- Aluminium box
 - Optical breadboard
 - Custom mounts for laser optics & MCP-PMT + Electronics

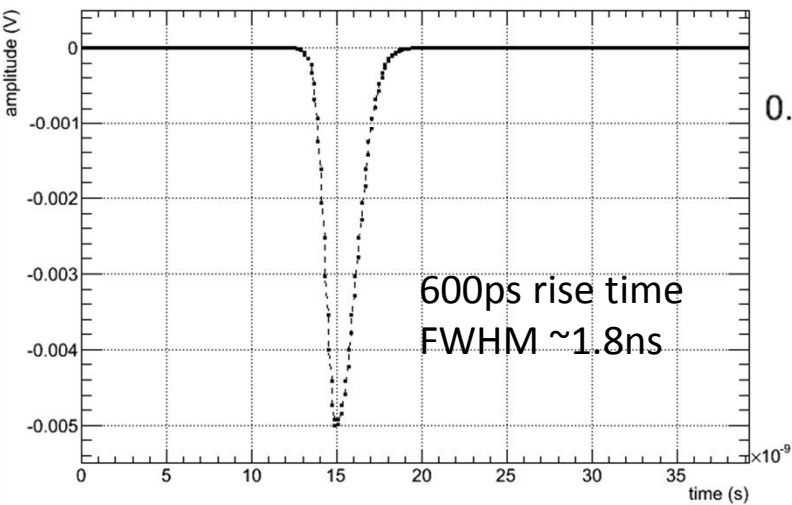


NINO Investigation

- Threshold behaviour
 - Time-over-Threshold
 - Timing Resolution
- Pulse generator
 - MCP-like signals
- Vary amplitude
 - Scan NINO threshold



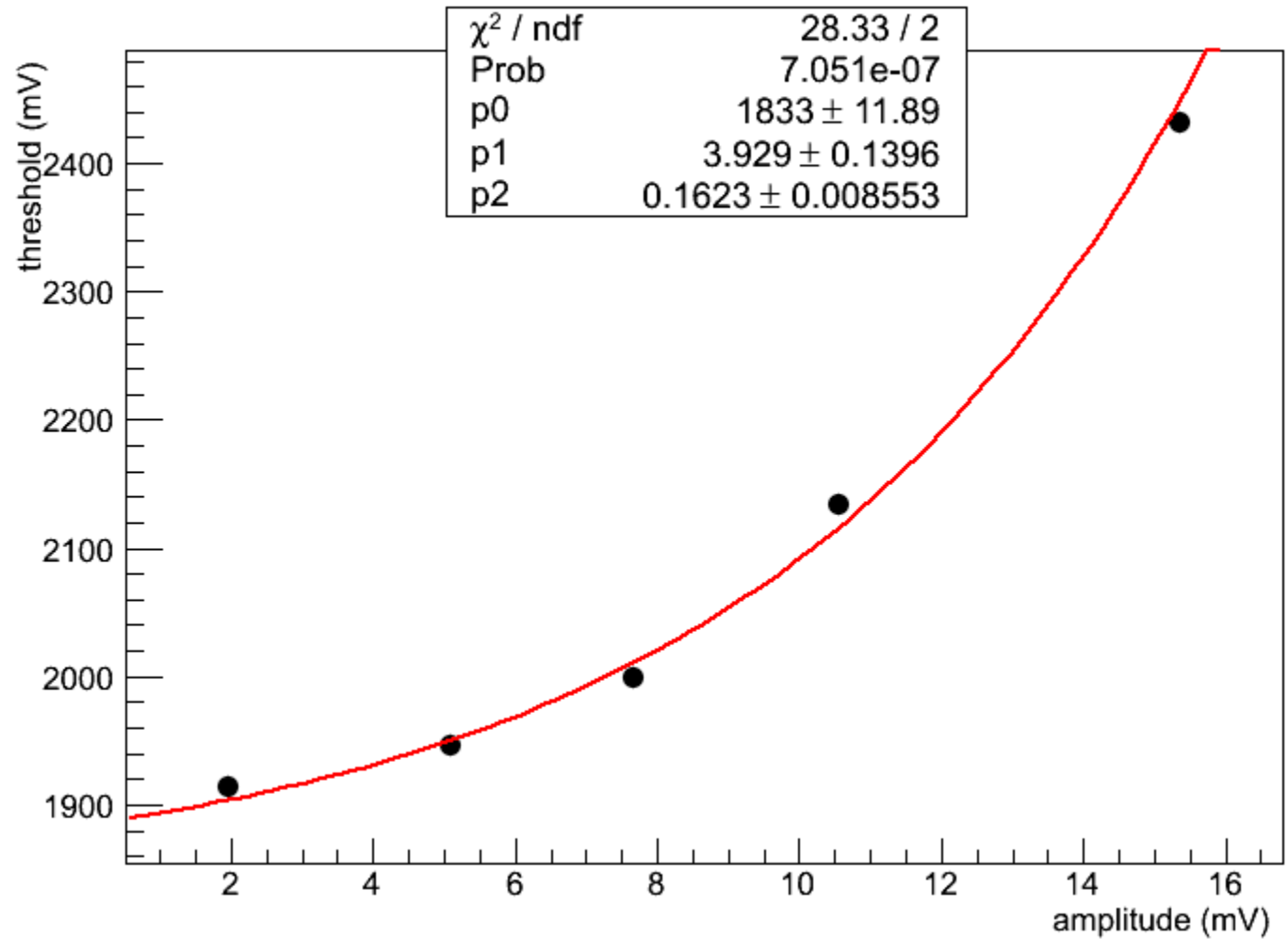
2.0 mV
5.0 mV
7.7 mV
10.6 mV
15.3 mV



NINO Investigation

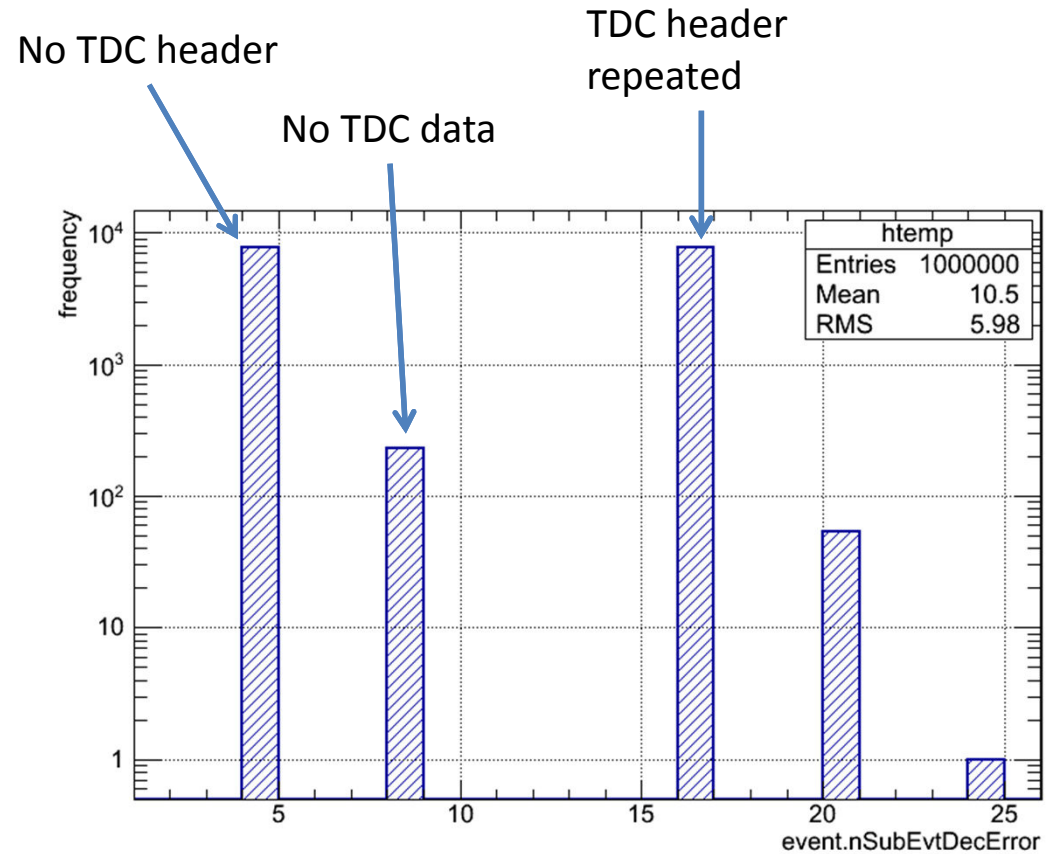
- Threshold behaviour
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- Pulse generator
 - MCP-like signals
- Vary amplitude
 - Scan NINO threshold

- Further investigation
 - Pre-amplifier board



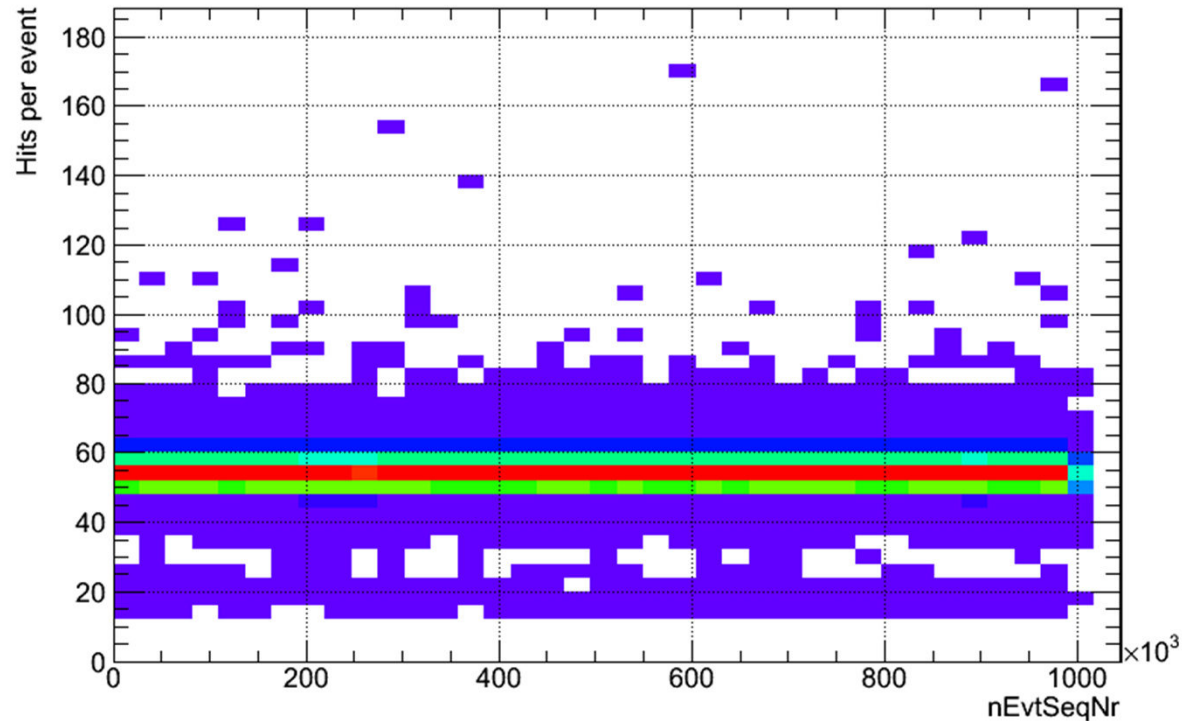
TRBv3 HLD Unpacker Status

- Unpacker developed
 - Event indexing
 - Subevent Builder Error flag
 - Data Sequence Errors



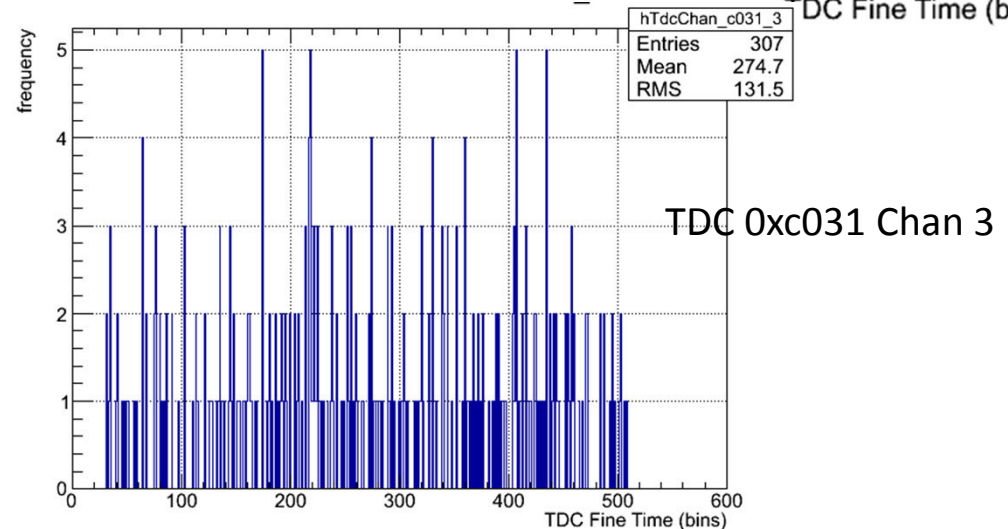
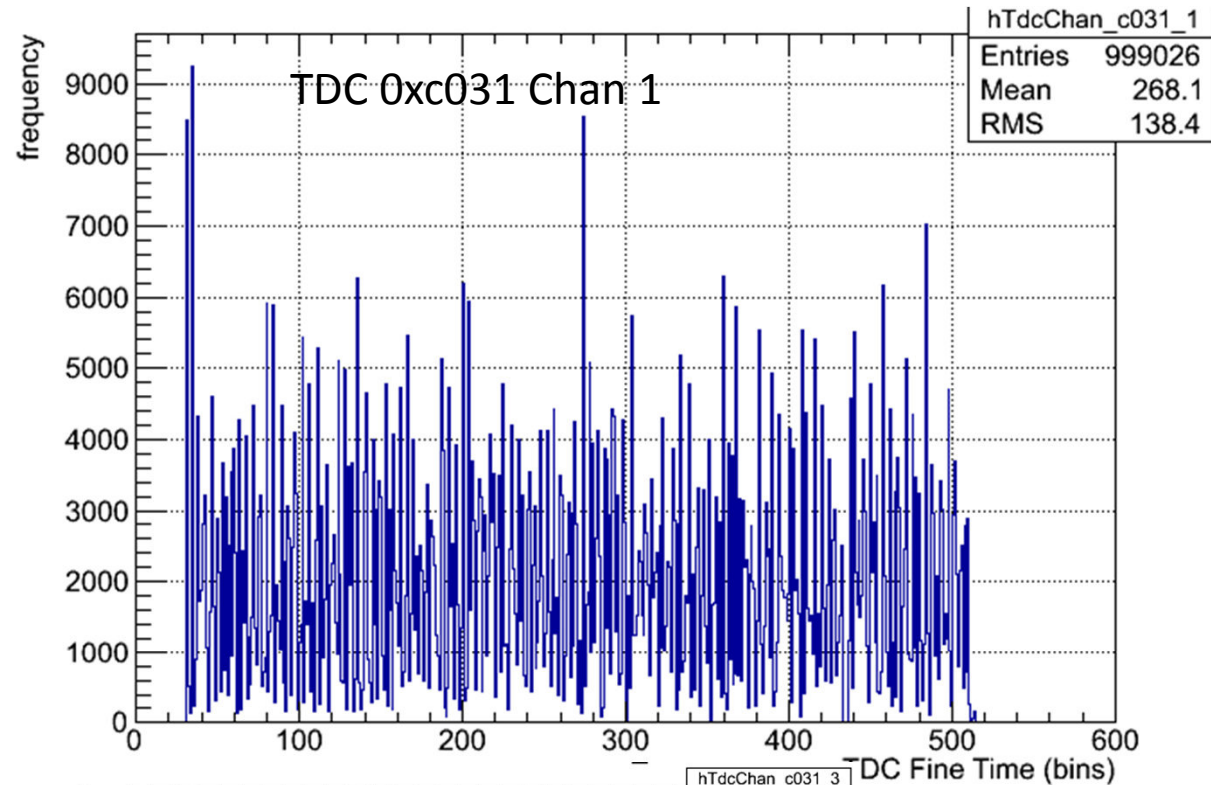
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 - Data Sequence Errors
- TDC calibration
 - Framework finished
 - Study two options



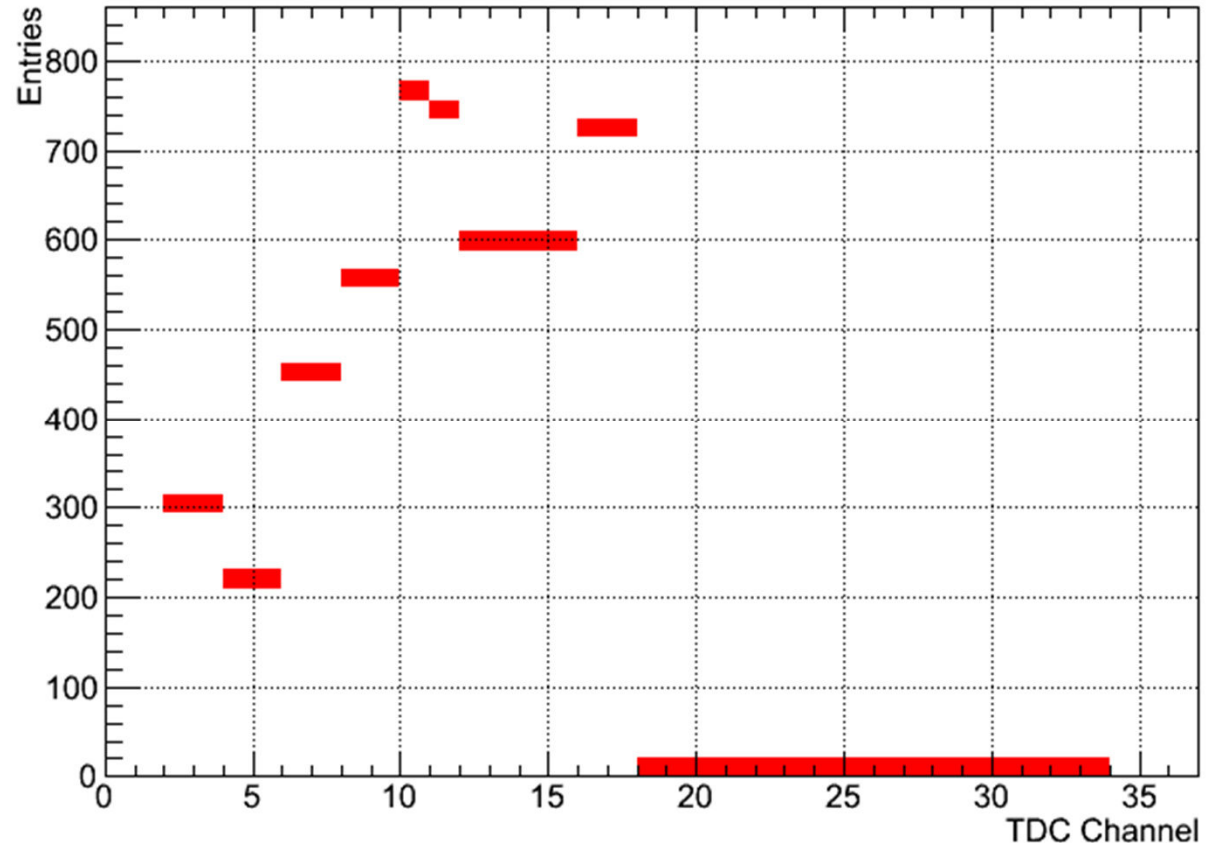
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TRBv3 HLD Unpacker Status

- Unpacker developed
 - Event indexing
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 - Data Sequence Errors
- TDC calibration
 - Framework finished
 - Study two options
- Hit matching needed
 - Leading & trailing edge of NINO pulse on subsequent channels



Future Plans

- Black Box
 - Finish construction
- Electronics
 - NINO threshold behaviour
 - Pre-amplifier board characteristics
 - Charge-over-Threshold design
 - COME&KISS
- Data Analysis
 - TDC calibration
 - Hit matching framework