

# SRS setup ePIC

mmDAQ3

# Hardware setup

- Tranceiver in J11 e collegati allo switch ethernet
- CTGF collegata ai port J9-B
- Trigger collegato alla CTGF tramite nim
- Switch trigger interno o esterno



# Setup

- FEC 1

- Ch 0/1 – TRK\_IN X
- Ch 6/7 – TRK\_IN Y
- Ch 8/9 – TRK\_OUT X
- Ch 10/11 – TRK\_OUT Y

- FEC 2

- Ch 0/1 – HYB\_1 X
- Ch 2/3 – HYB\_1 Y
- Ch 4/5 – HYB\_2 X
- Ch 6/7 – HYB\_2 Y
- Ch 8/9 – GROOVE\_1 X
- Ch 10/11 – GROOVE\_1 Y
- Ch 12/13 – GROOVE\_2 X
- Ch 14/15 – GROOVE\_2 Y

# Set SRSDCS

- In /root/acquisition DDG/SRSDCA.v1.5.4
- Lancio due SRSDCS
- FEC Address 10.0.0.2 (o 10.0.1.2)
- Connect
- Load: /root/acquisition DDG/mmdaq/MMDAQSERVER/mmdaq-server/config\_TB\_2024/FEC\_10.0.0.2.txt (o 10.0.1.2)
- Ok
- Enable expert mode
- Download to H/W
- Ok
- Acquisition OFF
- Trigger External

Ripeto per la FEC 10.0.1.2

The screenshot shows the SRSDCA v1.5.4 software interface. The 'FEC' section has the 'Address' field set to '10.0.0.2'. The 'Select Peripheral' section has 'APV Application' selected. The 'Configuration Files' section has the 'Load' button highlighted. The 'Acquisition' section has 'Off' selected. The 'Trigger' section has 'External' selected. The 'Zero Suppression' section has 'Force Pedestal to Zero' and 'Force Signal Detector' checked. The 'Control APV Processor' section has 'Bypass on' selected and 'Enable Expert Mode' checked. The 'Configuration' section has 'Both APVs' selected and all channels (1-8) checked. The 'Select Command Type' section has 'Write Pairs' selected. The 'Reply Form' section shows a 'Reply Port' of '6007' and a log of received data with error and data fields.

MainWindow

FEC v1.5.4

Address: 10.0.0.2

Connect Disconnect

Select Peripheral

APV Hybrid

APV Application

ADC Card

PLL

Configure Hybrid Reset

Configuration Files

Load Download To H/W

er/config\_cosmics\_trk/srs\_file\_trks.txt

Acquisition Trigger

Off  External

Zero Suppression

Threshold 0

Force Pedestal to Zero

Force Signal Detector

Set

Control APV Processor

Bypass on  Bypass off

0

Resets

Enable Expert Mode

Configuration

Select Mode

PLL

Master APV

Slave APV

Both APVs

Select Channel(s)

Channel 1

Channel 2

Channel 3

Channel 4

Channel 5

Channel 6

Channel 7

Channel 8

Select All

Select Command Type

Write Pairs

Write Burst

Read Pairs

Read Burst

Reset

Reply Form

Reply Port 6007

Request Id: 0 Header: 0000ff03, aaaaafff, 00000000

|          |                   |          |      |
|----------|-------------------|----------|------|
| Error    | Data              | Error    | Data |
| 00000000 | 0000c216 00000000 | 0000c600 |      |

..... Nominal Reply <<.....

Received at 10:24:26 of 2024.05.06

Request Id: 2 Header: 0000ff03, aaaaafff, 00000000

|          |          |       |      |
|----------|----------|-------|------|
| Error    | Data     | Error | Data |
| 00000000 | 00000001 |       |      |

..... Nominal Reply <<.....

Received at 10:24:27 of 2024.05.06

Request Id: 3 Header: 0000ff03, aaaaafff, 00000000

|          |          |       |      |
|----------|----------|-------|------|
| Error    | Data     | Error | Data |
| 00000000 | 00000000 |       |      |

# Terminale 1

- `cd /root/acquisition DDG/mmdaq/MMDAQSERVER/mmdaq-server/`
- `./mmdaq-server`

# Terminale 2

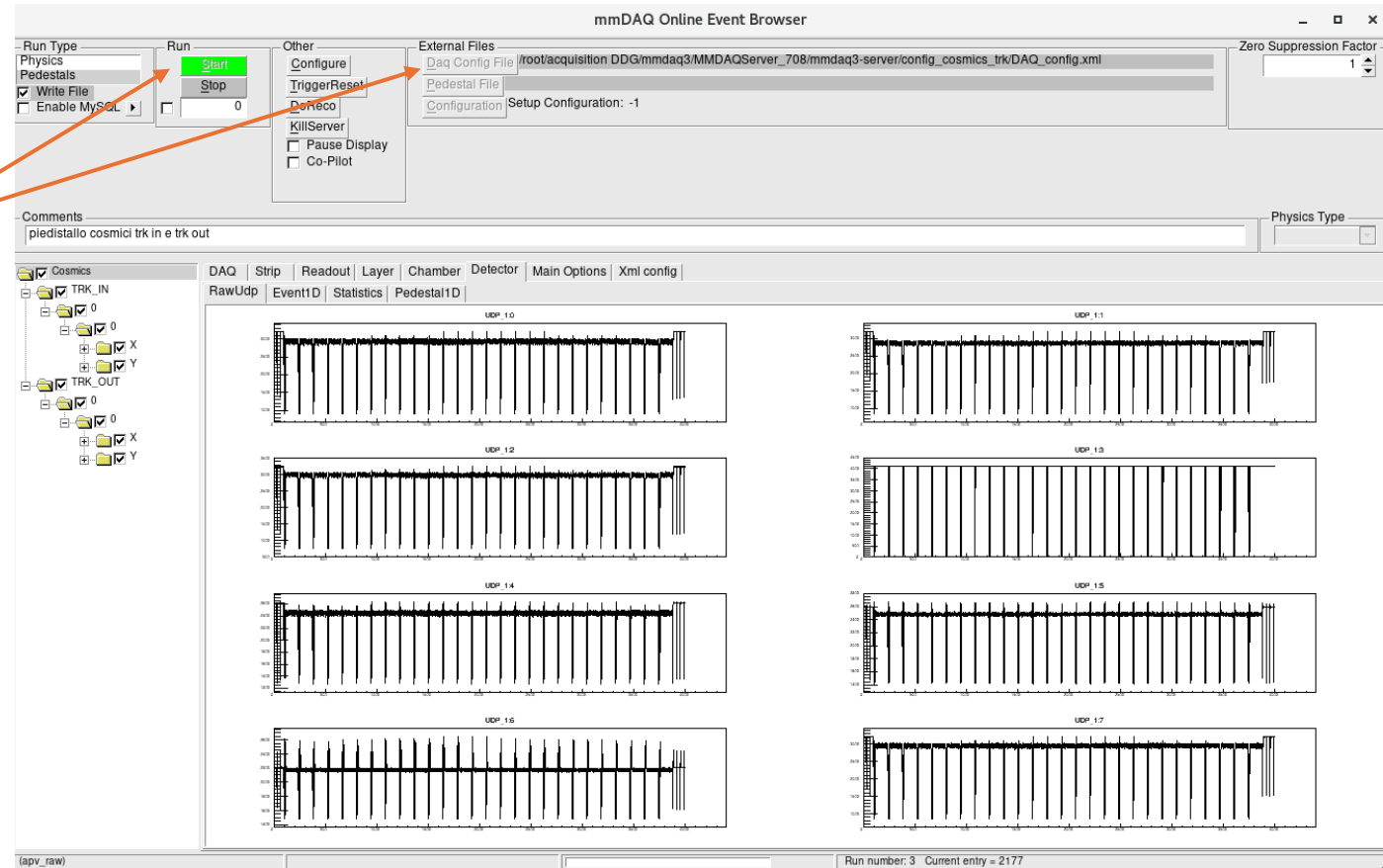
- `cd /root/acquisition DDG/mmdaq/MMDAQSERVER/mmdaq-server/config_TB_2024`
- `./../../../../MMDAQBROWSER/browser --online`

# Run Piedistallo

## Browser

- External file – Daq Config file: DAQ\_config.xml -> GREEN
  - Run Type pedestal
  - Write file
  - Start -> GREEN
- SRSDCS
- Acquisition ON
  - CTGF
  - Trigger NIM - ext
- Browser
- Stop
  - Start -> GREEN
  - Stop (dopo tot eventi)

Questo si esegue solo una volta, a inizio presa dati



# Run Fisica

## Browser

- External file – Daq Config file: DAQ\_config.xml -> GREEN
- Eternal files - Pedestal File: /root/rpicdaq/test\_TB/raw/runXXX.root -> GREEN
- Run Type Physics
- Write file
- Start -> GREEN
- Stop (dopo tot eventi)



# Problem solving

Se il Detector Raw UDP mostra degli APV non funzionanti

Browser:

- Stop
- Kill Server

SRSDCS:

- Disconnect

Spegnere SRS e ricominciare le procedura

Possono volerci anche 10 tentativi

# Problem solving

- Se all'apertura del browser, ci sono cose già scritte al Daq Cionfig file, premere STOP e Kill Server e rilanciare server e browser normalmente (l'unica scritta che deve esserci all'apertura è Setup Configuration -1)
- Può essere utile fare ping delle fec da spente e poi di nuovo da accese

# To do list

- Inserire APV positive per TOP delle GROOVE