New LIU Wirescanner Application

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Introduction

Following the problems we have with the Wire scanners, some functionalities have been added in the application to improve the measurements:

• Fitting in a user-defined window.
• Selection of PMT voltage.
• Deletion of bad profiles.
• Update/continue multiple measurements.
Profile fitting 1/2

Source of problems:

- Bump in the base-line.
- High peaks on the edge of the profiles.
Profile fitting 2/2

Proposed solution:

• 2 cursors.
• 1 redo button.

• Zoom is still required.
Presentation of Salvatore and Federico during MPC 12/05/2021

**LOW VOLTAGE (425V):**
- MTE (PM2) ✓
- LHC 25A (PM2) ✓
- LHC INDIV (PM1) ✓
- LHC PILOT (PM1) ✓

**MEDIUM VOLTAGE (625V):**
- MTE (PM3) ✓
- LHC 25A (-) ×
- LHC INDIV (PM2) ✓
- LHC PILOT (PM2) ✓

**HIGH VOLTAGE (725V):**
- MTE (-) ×
- LHC 25A (PM4) ✓
- LHC INDIV (PM3) ✓
- LHC PILOT (-) ×
PMT Voltage 2/2

Implementation in the application:

- This voltage is **non-PPM**.
- Different values by ring and plane.
- 3 possible values: LOW (425V), MEDIUM (625V), HIGH (725V).
- If different voltage in hardware, AQN in red.
- If voltage changed in another application, AQN in red.
- By default, Voltage should be LOW.

- Probably some improvements needed.
  - Higher intensity beam.
  - Automatic selection by beam type?
Deletion and Update of Profiles

A right-click on the table brings up a contextual menu:

- To **delete** a profile.
  - Bad profile.
  - No beam.
  - ...

- To **update** profiles.
  - Measurement cancelled.
  - More profiles needed.
  - ...

![Graph and table showing data analysis and profile management options](image.png)
More To come

• Send result table and all screenshot in the e-logbook.
• Improvement on PMT voltage usage.
• Your idea?