Overview and Organisation of the Hands-On Sessions

6 Tutorials at BTTB6
on Thursday afternoon

Tools for your test beam and you

Taking Data / Simulation   Analysis   Publication

MIDAS

AllPix^2

Proteus

EUTelescope (Scattering)

Timing Algorithms

Presentation Skills

You can attend up to TWO tutorials

- Please mark your **TWO preferences** in the list

- **Deadline:** Today (Wednesday) 19:00, after the Forum

- We announce the **order** and the **rooms**
 on Thursday morning and update the Agenda

	Room A	Room B	Room C
Thursday 13:00 - 14:45	Presentation Skills	???	???
Thursday 13:00 - 14:45	???	???	???

The **MIDAS** data acquisition system for Test Beams by Stefan Ritt

Contents

- short demonstration of **installation**
- basic overview of the components and concepts
- application to test beams
- event-based data acquisition and slow control
- data visualization and web-based user interface
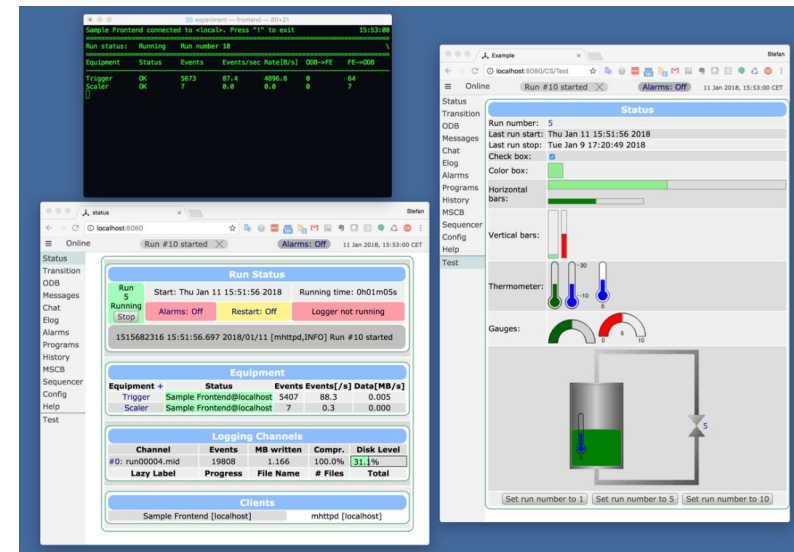
Possible preparation

- MIDAS documentation: https://midas.triumf.ca/MidasWiki/index.php/Midas_documentation

Allpix² Simulation Framework
by Simon Spannagel

Contents

- introduction to the Allpix Squared simulation framework
- walk-through the examples
- set up your own telescope-plus-DUT simulation

Recommended Preparation

- Installation of the latest version (v1.1.0) on your computer or remote machine: https://cern.ch/allpix-squared

The **Proteus** Reconstruction Software by Moritz Klein

Contents

- analysis flow from raw hit data to reconstructed tracks
- basic efficiency measurements using an example dataset

Recommended preparation

- Installation on local computer or on CERN lxplus machines
- Instructions: https://gitlab.cern.ch/unige-fei4tel/proteus
- Requirements ROOT and a C++11 compatible compiler
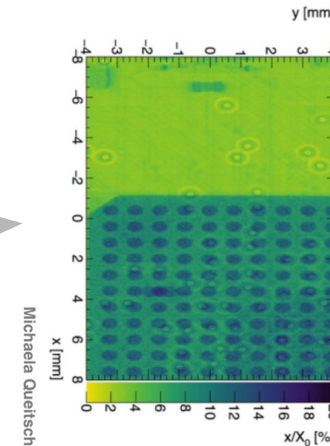
Scattering Images using **EUTelescope**
# by Michaela Queitsch-Maitland

Contents

- brief overview on EUTelescope
- analysis flow from raw hit data to a scattering image
- using a "noDUT" dataset

Recommended preparation

- Installation on CERN lxplus machine
- Requirements and instructions:

- Reference:
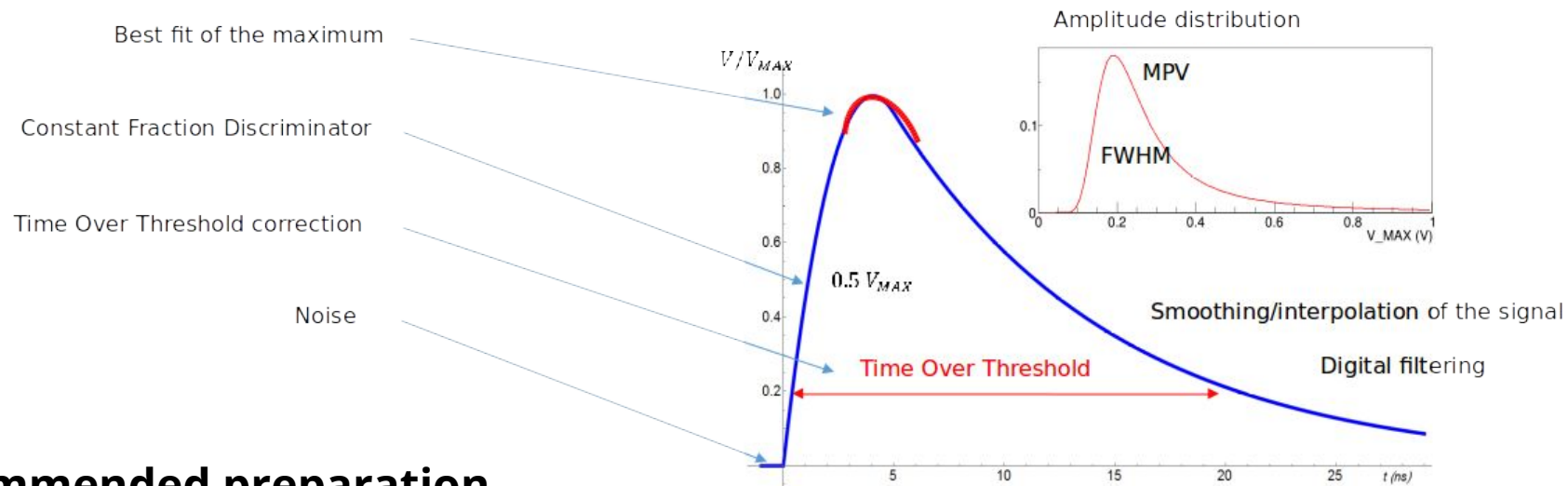 http://eutelescope.web.cern.ch/

Michaela Queitsch-Maitland | Radiation length measurements with testbeam | 30.11.2017
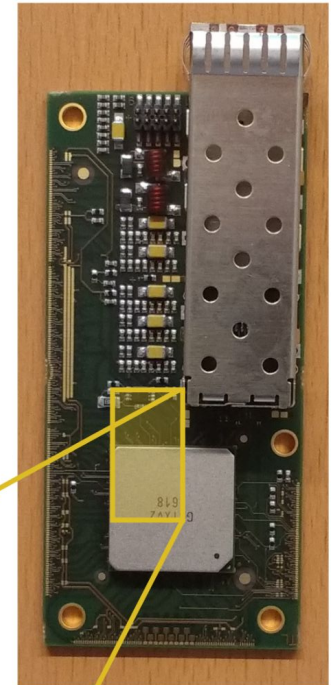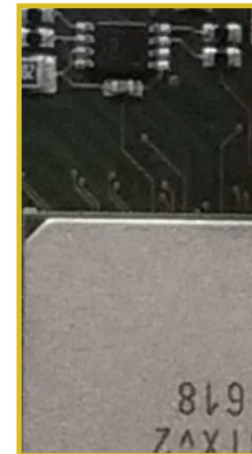
Timing: Measurement of time of arrival by Nicola Minafra (nicola@cern.ch)

Contents

- computing the arrival time using sampled signals
- comparison between different algorithms

Recommended preparation

- laptop, C++ knowledge
- (any) installation of ROOT

Making the most of your 10 minutes of fame
Presentations Skills by David Barney

Contents

- identifying some simple but effective methods of improving presentations and posters
- hands-on activities to reinforce concepts

Recommended (mental) preparation

- your own laptops
- be prepared to share your work with fellow participants

a different example...

Review of Test Data Indicates Conservatism for Tiles Penetration

- The existing SOFI on tile test data used to create Crater was reviewed along with STS-107 Southwest Research data
  - Crater overpredicted penetration of tile coating significantly
    - Initial penetration to described by normal velocity
      - Varies with volume/mass of projectile (e.g. 200ft/sec for 3cu. In)
    - Significant energy is required for the softer SOFI particle to penetrate the relatively hard tile coating
      - Test results do show that it is possible at sufficient mass and velocity
    - Conversely, once tile is penetrated SOFI can cause significant damage
      - Minor variations in total energy (above penetration level) can cause significant tile damage
  - Flight condition is significantly outside of test database
    - Volume of ramp is 1920cu in vs 3 cu in for test

Thank you for your attention!!!.