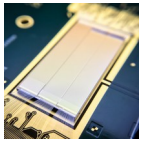
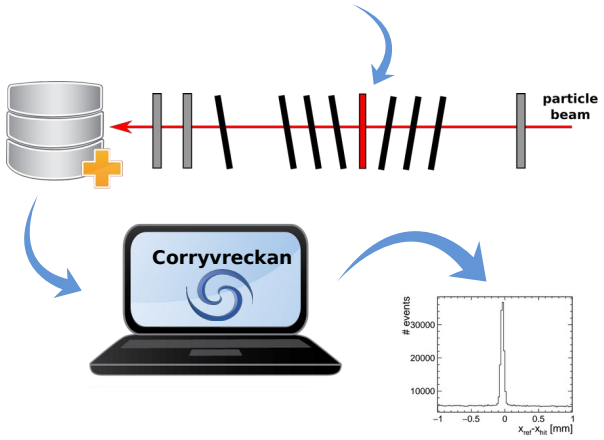
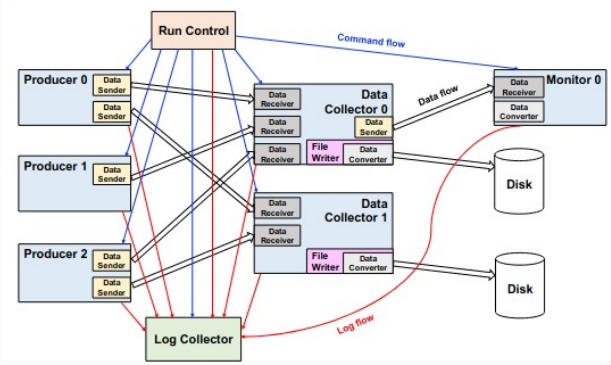
BTTB10

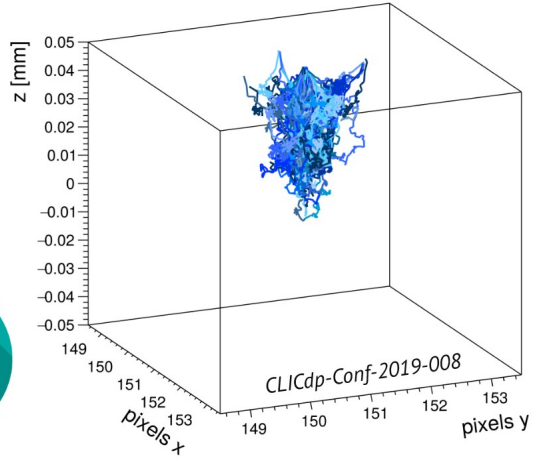
Hands-On Tutorials

*** for in-person participants**









Test-beam Reconstruction with Corryvreckan

Finn Feindt et al

Content

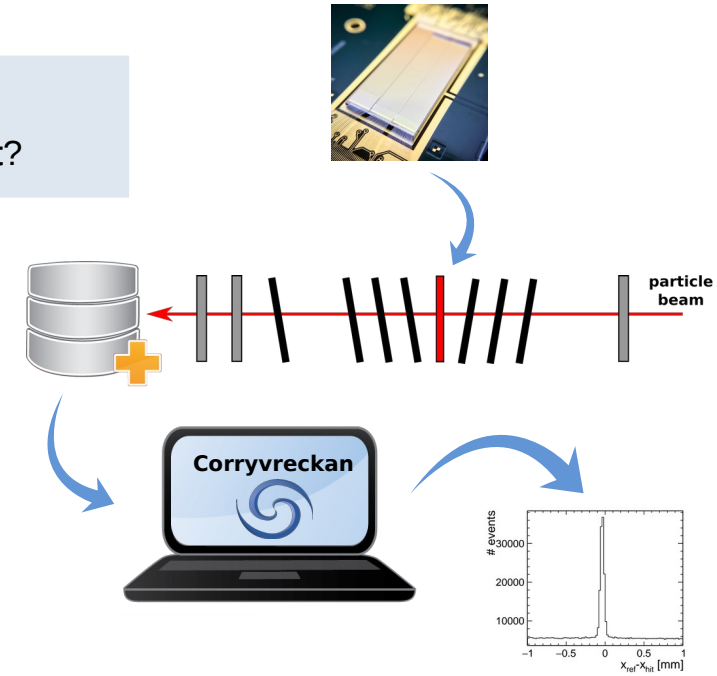
- **Introduction**
  - What is Corryvreckan?
  - What's new since BTTB9?
- **Hands-on**
  - installation options
  - **setting up an analysis** step-by-step

Focus can be adjusted according to **interests of participants!**

- What's the **philosophy**?
- Resources: **Where** to find **what**?

- Which option is the **right one** for **my needs?**

- many different **example use-cases**
- analyse **SPS** and **DESY** data
- focus on different **event building** schemes

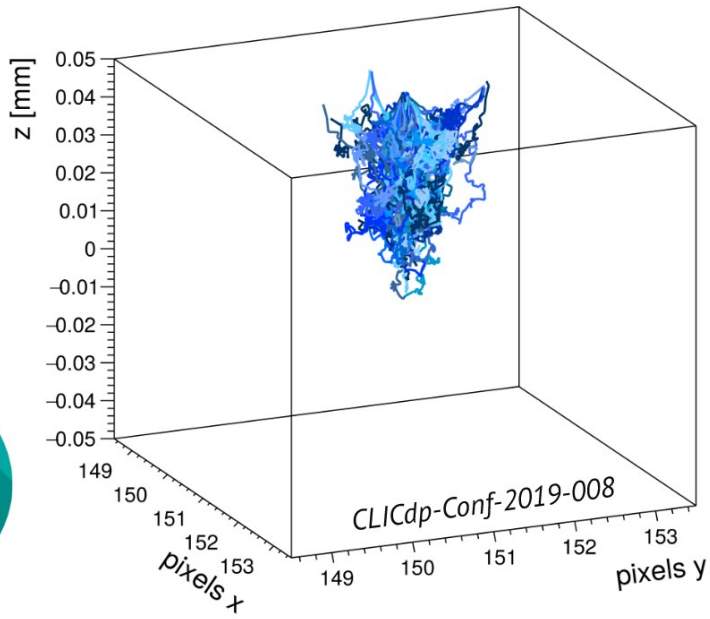


Silicon Detector Monte-Carlo Simulations with Allpix Squared

S. Spannagel, P. Schütze
A. Simancas, M. Del Rio Viera

Content

- Installation options
- A beginner's guide to detector simulation:
  Step-by-step guidance through simple and more complex simulations
  - Task: Optimize the residual for a given det
- How to customise your simulation …
- Use TCAD outputs:
  Convert & import electric field maps
- Q&A: we're here to answer your questions!



Making the most of your test-beam time – Understanding the interplay between the new AIDA-TLU and EUDAQ2 to optimally match your DAQ system

Lennart Huth et al

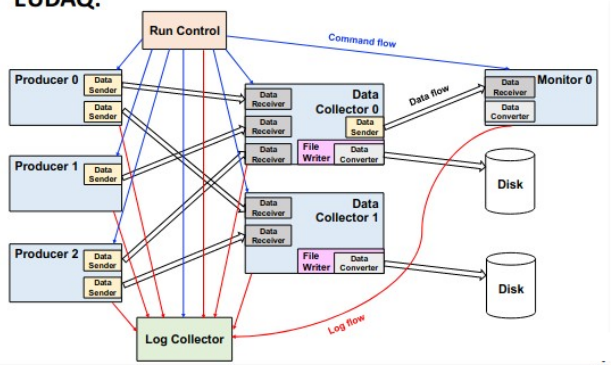
Content:

- Install and use EUDAQ2
- Introducing the AIDA-TLU
- Testing the data taking modes
- Setting it all up and build a small test system

Example of test-beam setup with various devices/subsystems (scintillators, telescope, DUT):

AIDA Trigger Logic Unit (TLU) for synchronization of sub-systems:

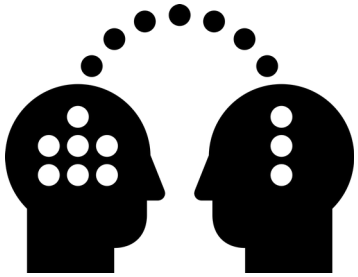
Schematic of integration of various sub-systems in EUDAQ:



Knowledge transfer in the High Energy Physics domain

Jan Visser

- Are you interested in looking at technology applications outside HEP?
  - Either from within HEP or perhaps after leaving HEP…
  - Motivated to think of applications of technology outside the original domain?
- Join Jan Tuesday afternoon for a workshop on knowledge transfer and come up with surprising applications yourself!
- Note: only for those in Lecce



Jan Visser

Linking Dutch industry to CERN

Detector R&D @ Nikhef

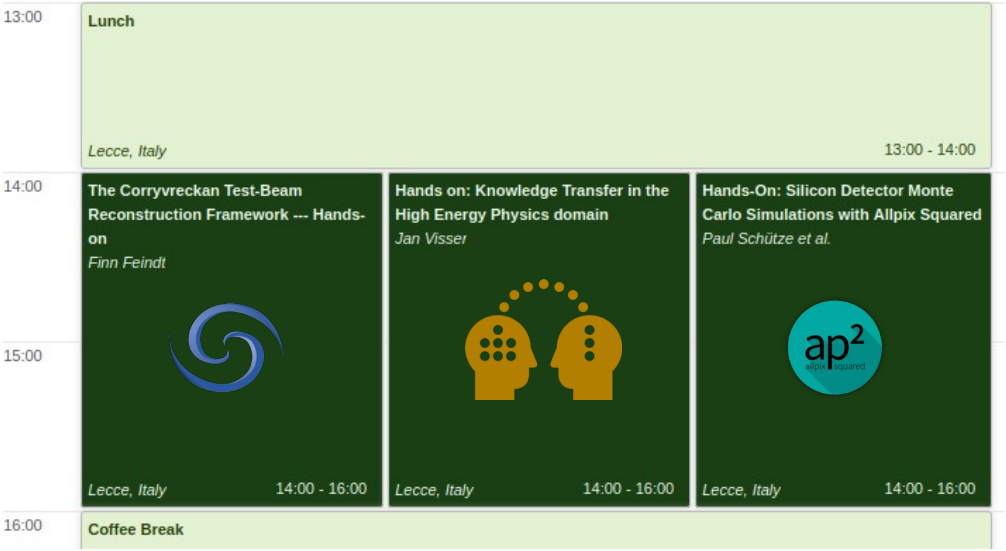
Co-founder Amsterdam Scientific Instruments

Experience at multiple R&D companies

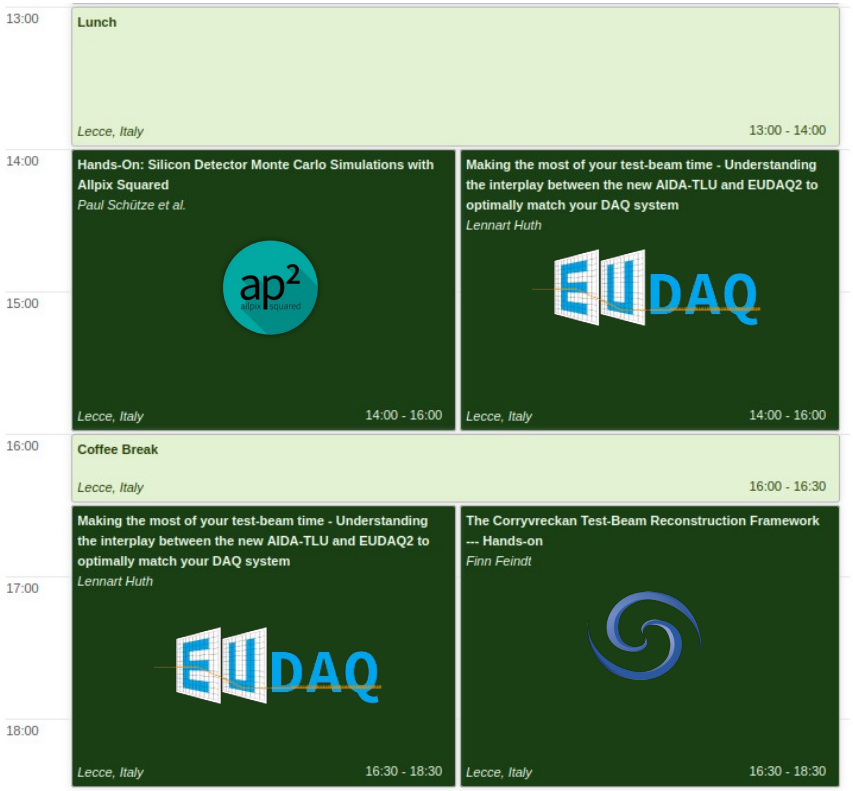
Timetable

Rooms will be assigned depending on the number of participants → Indico/Announcement

Tuesday



Thursday



Preparation: & 

- **Recommendation:**
  Virtual Machine for BTTB10 workshops
  - Comes with *Corryvreckan*, *Allpix Squared*, *ROOT* & *Geant4*
  - Download and install VirtualBox
  - Download virtual machine image **before** tutorial (> 5 GB)
  - Click for instructions on setting up the virtual machine

Includes the sample data for *Corryvreckan* tutorial!

- Local installation possible (takes some time depending on satisfied dependencies), please install before tutorial
- Sourcing via CVMFS (via LXPLUS/NAF/...) possible
- Additional preparation for *Corryvreckan* (download of sample data, not required for VM): instructions

Preparation: EUDAQ

- You can install the following software tools if you are interested in running a setup with your own machine:
  - EUDAQ2 (v2.4.7)
  - IPBUS (v2.8.2)
- Pre-installed setups will be provided

Sign Up!

Sign up to the tutorials via the paper sheets
laid out in the main auditorium!

Do so until the first coffee break on Tuesday (10 am)!

We wish you an interesting & productive time
at the **BTTB10**!