

TB22 File Merge

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LUXE ECAL Workforce

06 Dec 2022

TB22 in September

- Electronic logbook

<https://docs.google.com/spreadsheets/d/1K9QkbQ1fBcAsWyVH-P3xLQp8ignQackvi9lY0btifbU>

- Geometries & Tested sensors

<https://confluence.desy.de/display/luxeecal/Testbeam>

- Data from the sensor: ROOT TTree “TreeOnFire”

- Data from the telescope: EUDAQ raw data

- analysable through Corryvreckan

<https://confluence.desy.de/display/luxeecal/Telescope>

<https://github.com/LUXEsoftware/TBTelescope-TrackingInfo>

<https://github.com/shan-yamabuki/TBTelescope-Configure>

Files we were looking at ...

- Sensor: ROOT TTree “TreeOnFire”
 - complex structure (for many reasons)
- Telescope:
 - tracker plane alignment; track reconstruction
 - methods of straight-line and general-broken-line
 - ROOT TTree “TrackingInfo”
 - reconstructed interception of the track on the planes
 - predicted extrapolation of the track on the DUT/sensor
- Spatial-temporal coordinates
 - timestamps/local (pad) coordinates; TLU time/telescope coordinates

Files we are about to look at ...

- **Sentel:** ROOT TTree “HitTracks” / HDF5 database
 - synchronised time/timestamp
 - aligned coordinate system
 - metadata: ~~runid~~/eventid (TLU)/planeid
 - sensor (taken from 2nd and 3rd timeframe out of 7):
 - number of pads were hit
 - channel ids and ADC amplitudes for the pads
 - telescope (~90% of all events successfully reconstructed)
 - number of electrons were recorded
 - extrapolated position and resolution (to be implemented)

Files we are about to look at ...

- RunInfo (to be implemented)
- HitTracks
- Tracks (telescope)
 - all planes `[x/y]_te1[0-5]` , `[x/y]_res[0-5]`
- Hits (sensor)
 - all timeframes `pads/channel/adc_[0-6]`
- Samples:

https://tauex-my.sharepoint.com/:f:/g/personal/shan_tauex_tau_ac_il/En95XGfJy45PqYVcQCa18LEBeafBqvc0xtTy57Jx8emkvQ?e=f4wHsZ

- Runs 4484 (Anton1, straightline/gbl), 4502 (Yan1, gbl)

Background

- Currently we have extra 1 BX for 4-week simulation
 - totally, 1.5 BX, mostly generated at DESY NAF
- Analysis is underway