

Root2ebye

Using Simulations to Mimic DAQ Output

Björn Johansson

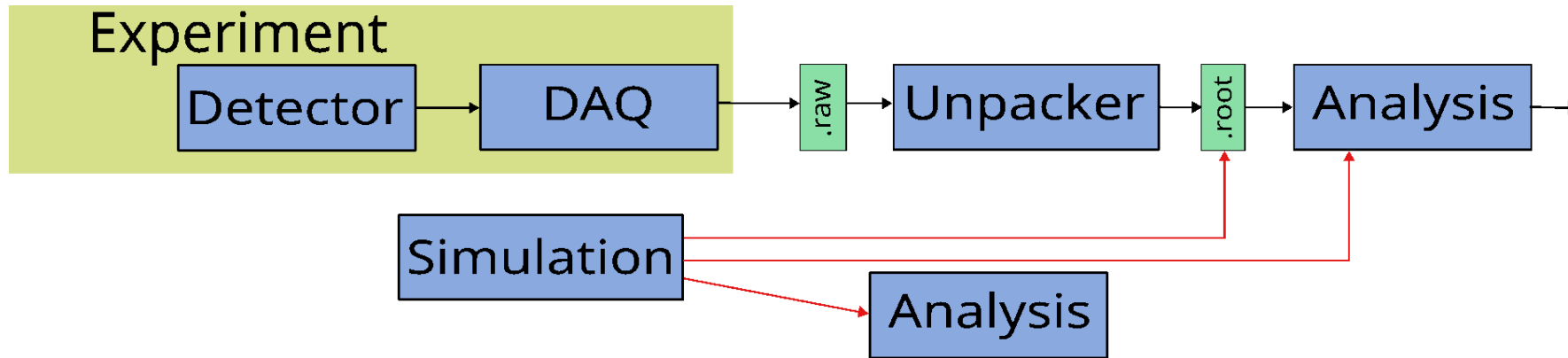


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Simulations of Experiments

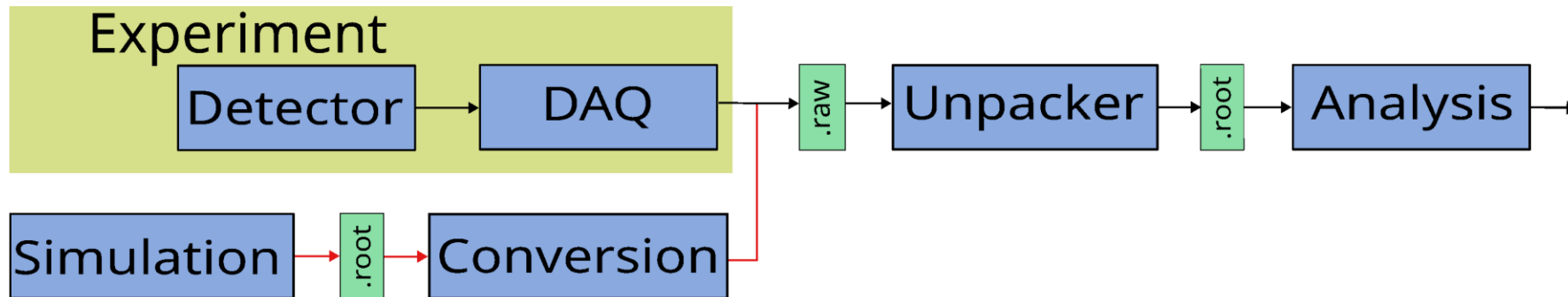


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Convert Simulations to "Raw" Data



- Converted simulation is software agnostic
- Help test and develop analysis routines
- Not dependent on radioactive beams, can reduce workload during experiments

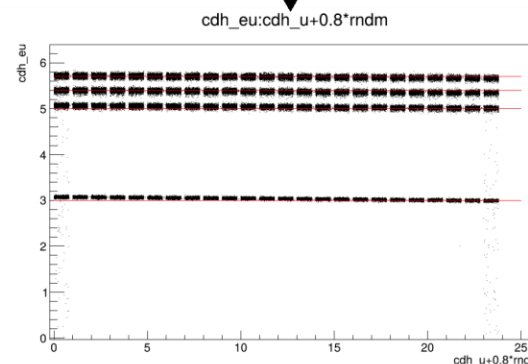
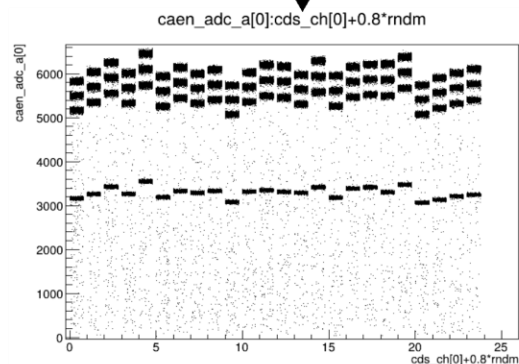
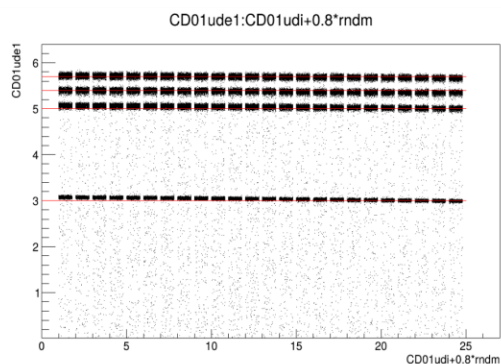
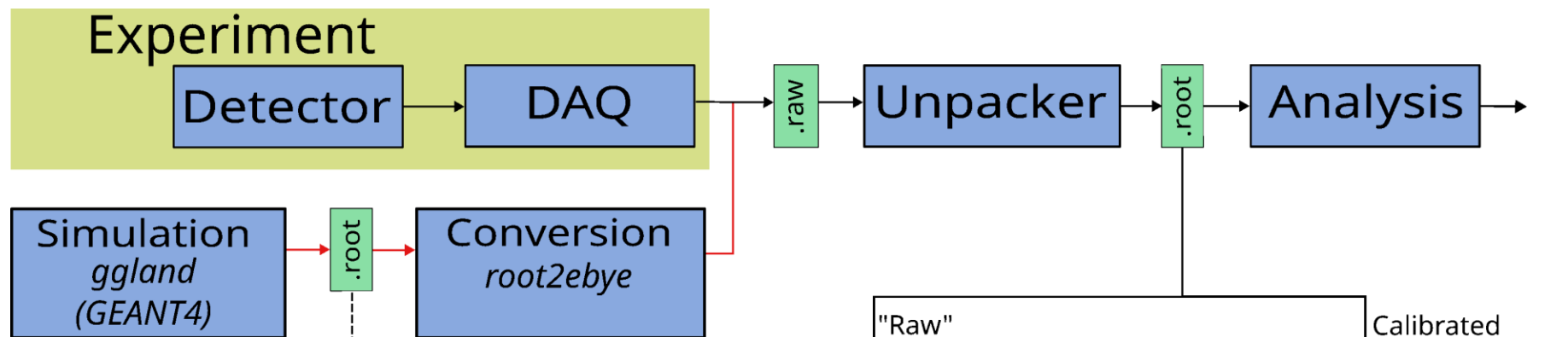


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Root2ebye – Example of an Alpha Source at ISS



Simulation of an alpha source at ISOLDE Solenoidal Spectrometer (ISS)



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Extra Slides

Simulation script:

```
~/sw/ggland_test/scripts/ggland/land_geant4 \  
--cd-01=z0=2cm,sigma_e=0.005 \  
--gun=dummy,z0=0cm,feed=source \  
--gun=from=source:0.25,decay-Gd-148 \  
--gun=from=source:0.25,decay-Am-241 \  
--gun=from=source:0.25,decay-Pu-239 \  
--gun=from=source:0.25,decay-Cm-244 \  
--world=type=vacuum \  
--events=1000000 --np \  
--seed=100,100 \  
--tree=digi,alpha_cd1.root
```

Root2ebye

Root to EBYE data writer.

Usage: egmwsort/root2ebye/bin/root2ebye INPUT OUTPUT <options> ...

INPUT	Input filename (typically input.root).
OUTPUT	Output filename (typically output.ebye).
--ldf	Generate LDF format data (instead of EBYE).
--lmd	Generate LMD format data (instead of EBYE).
--in-tree=NAME	Name of input tree (default: h102).
--go-seed=N	Seed to randomized per-channel gains and offsets.
--dump-gain-offset	Prints gain, offset pairs to stdout.

Root2ebye can be found at

https://git.chalmers.se/expsubphys/egmwsort/-/tree/master/root2ebye?ref_type=heads



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