

Brief update on Hall-A coincidence trigger



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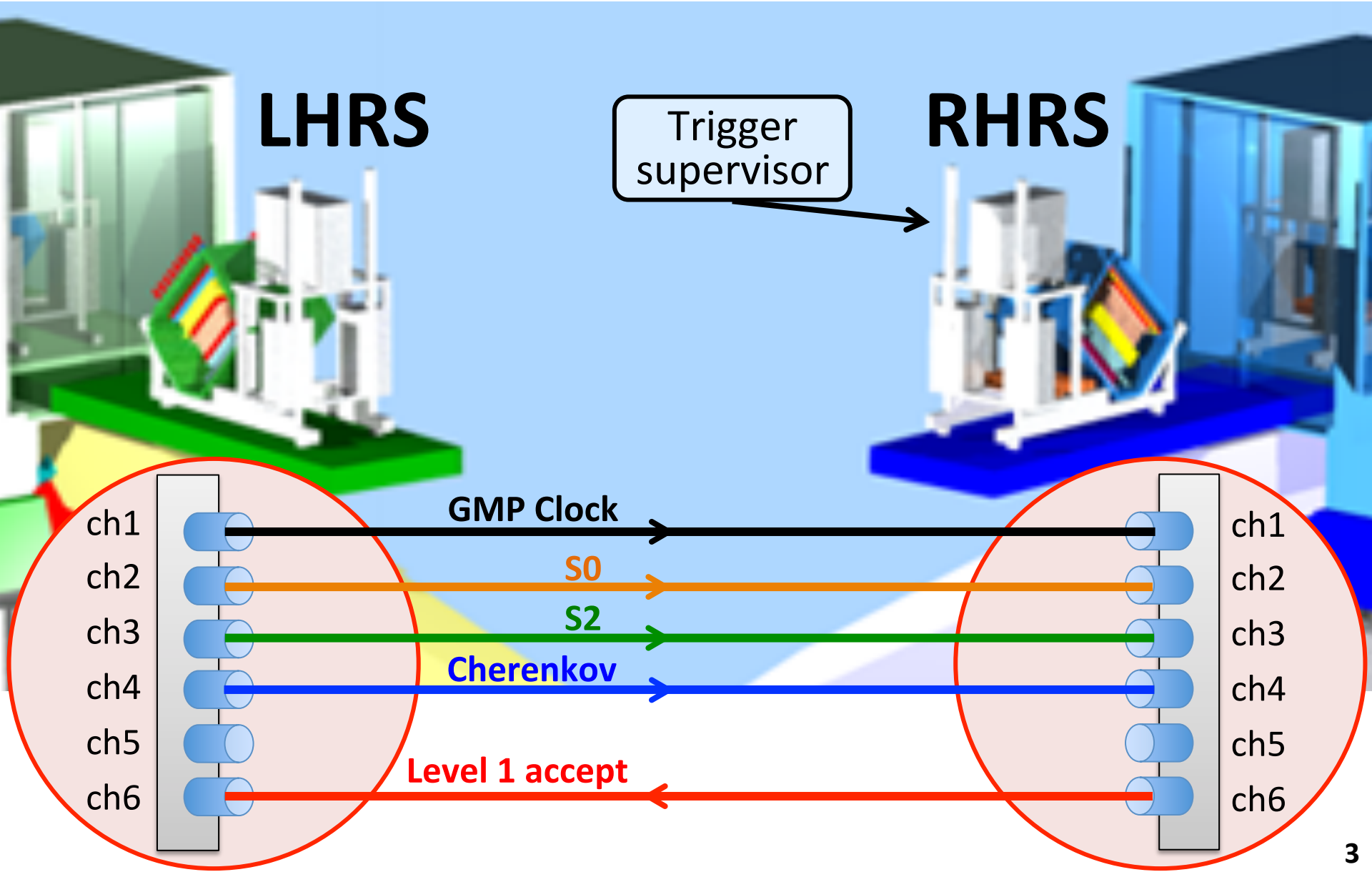
Hall-A meeting

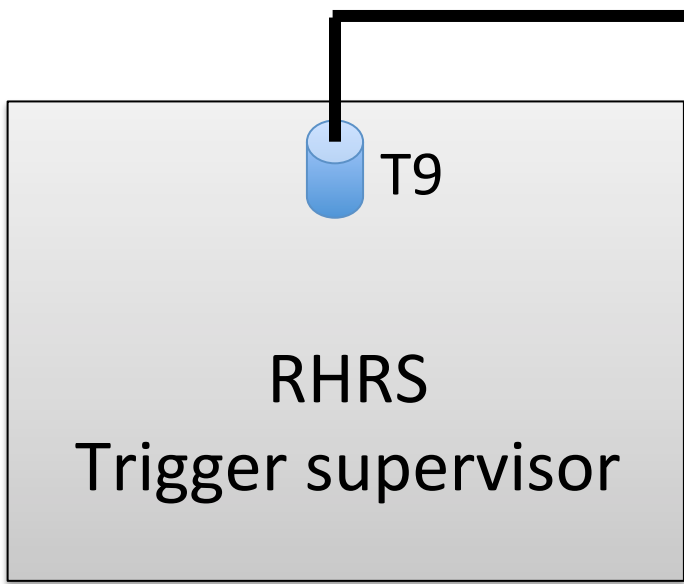
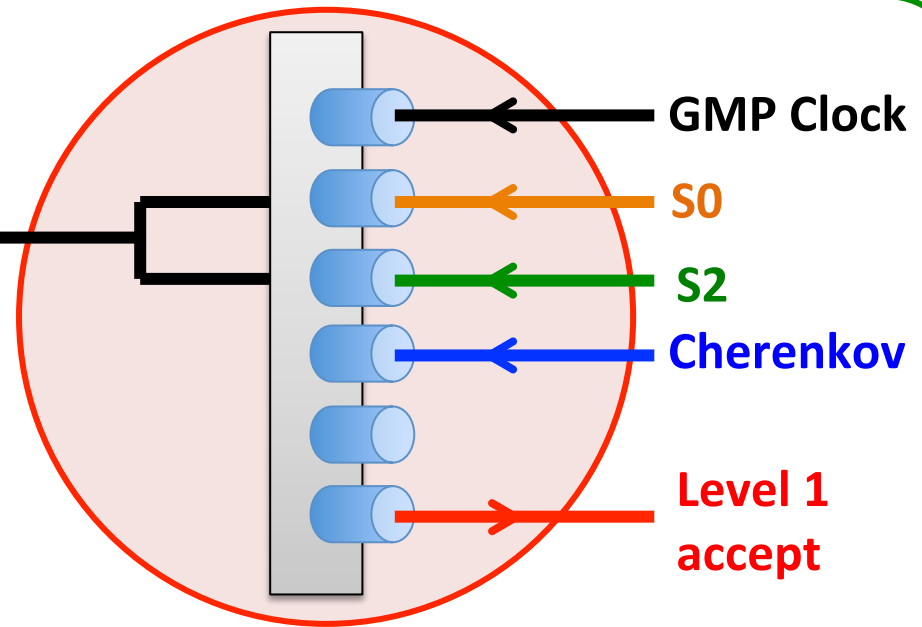
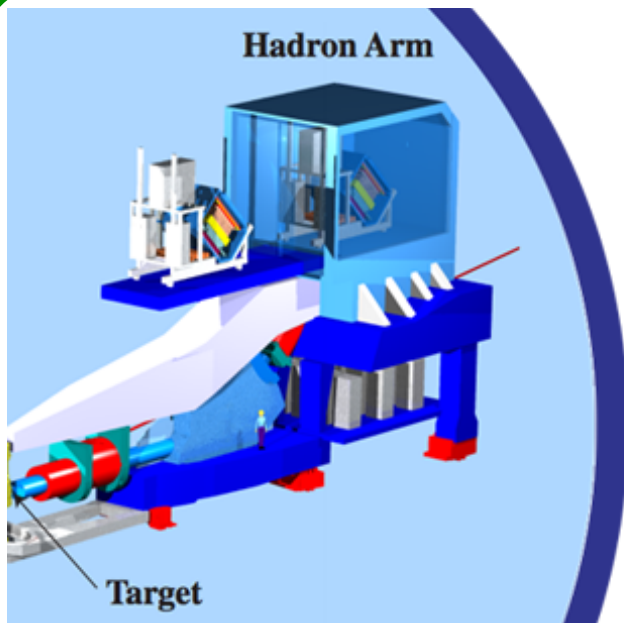
02/07/2017

What we have done so far

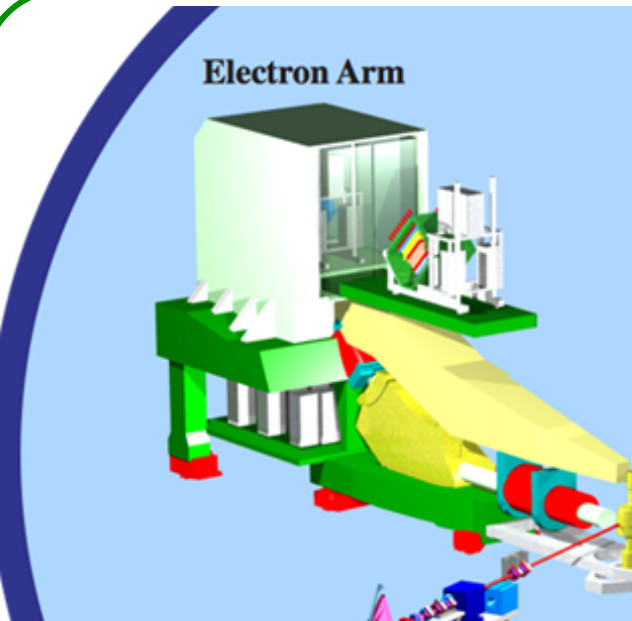
- We set up the Coda configuration to read the information off of both arms on all event types (low event rates).
- Started working on the coincidence replay script (replay_Coinc.C)
- Checked the cables connecting the two arms with a pulser

Cables connecting the two spectrometers





On the RHRs we are sending the coincidence between S0 and S2 to the trigger supervisor (Channel T9).

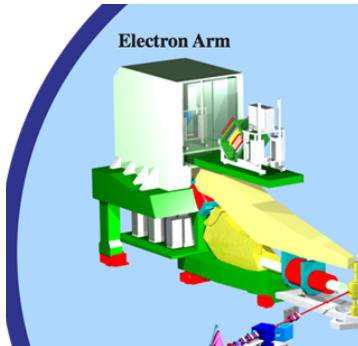


We did timing on the LHRS by looking at the signal from T9 on the RHRS

We set a gate of ~ 400 ns

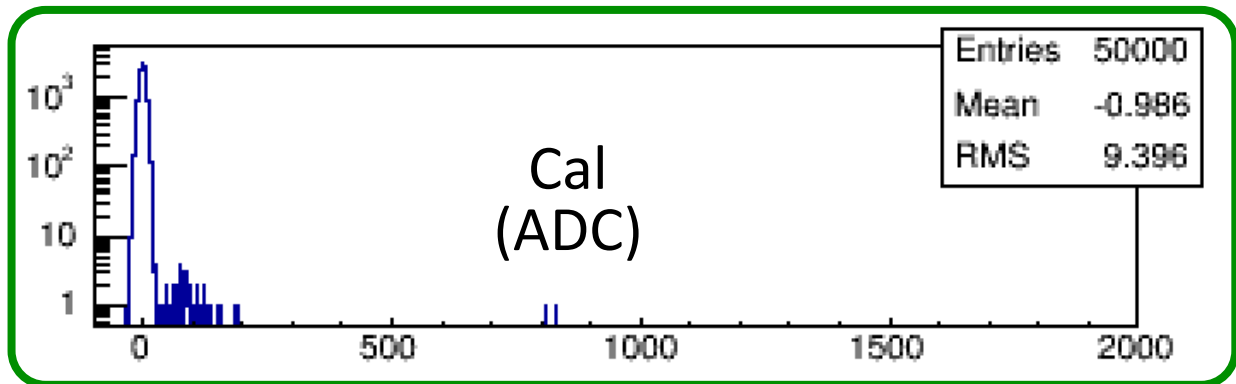
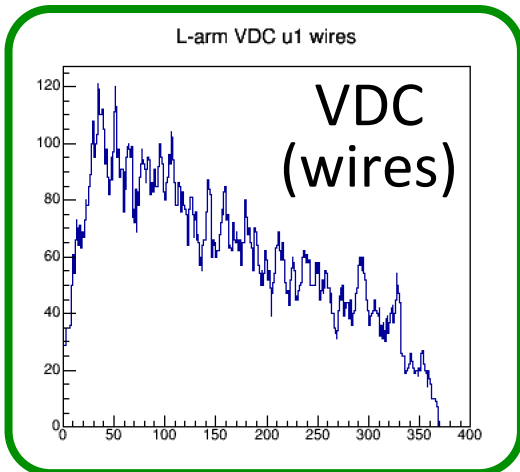
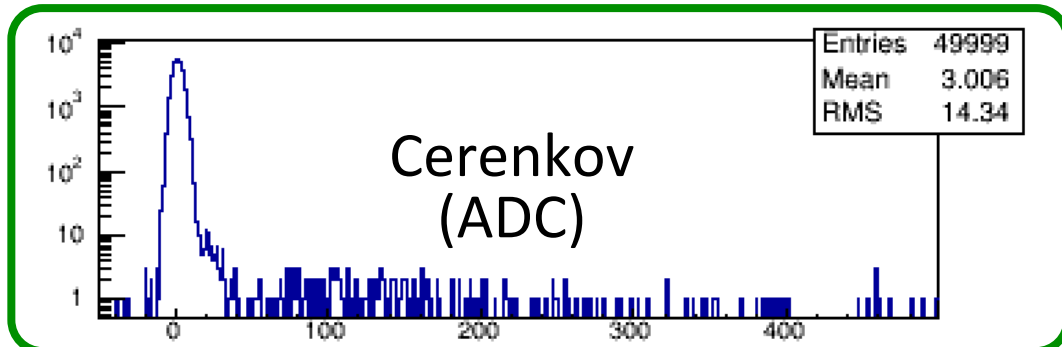
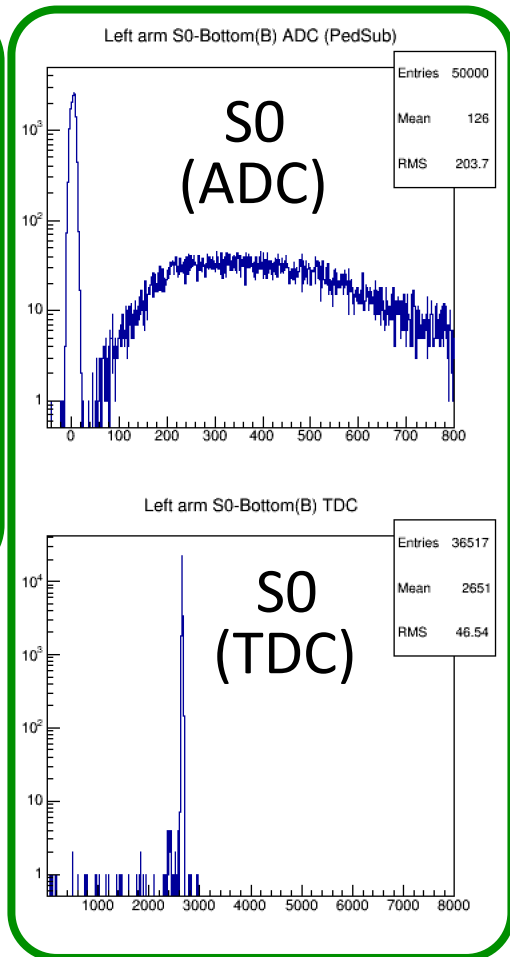
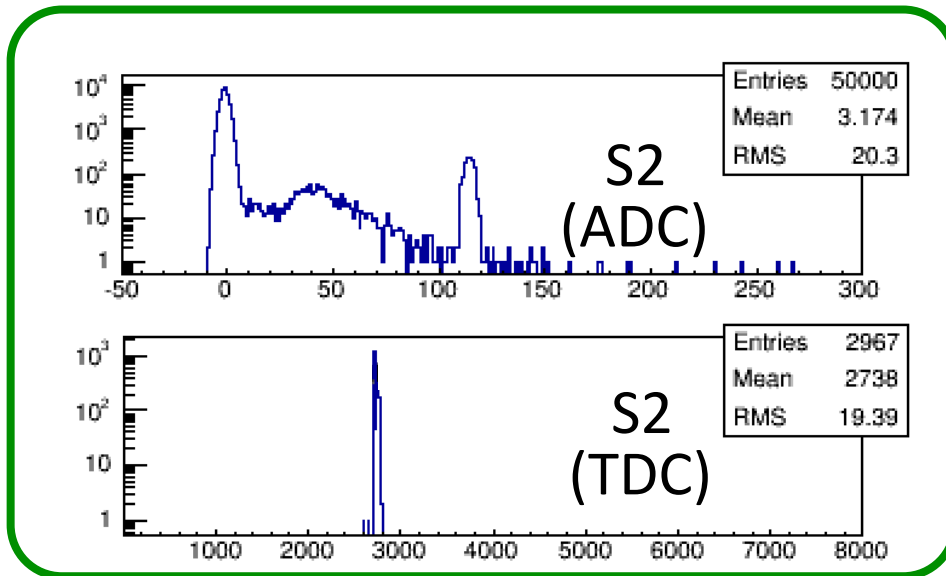
At the moment both arms look OK.

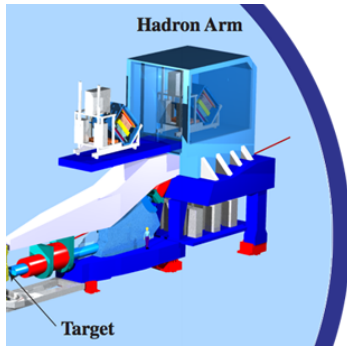
We are taking cosmic runs to test the signals



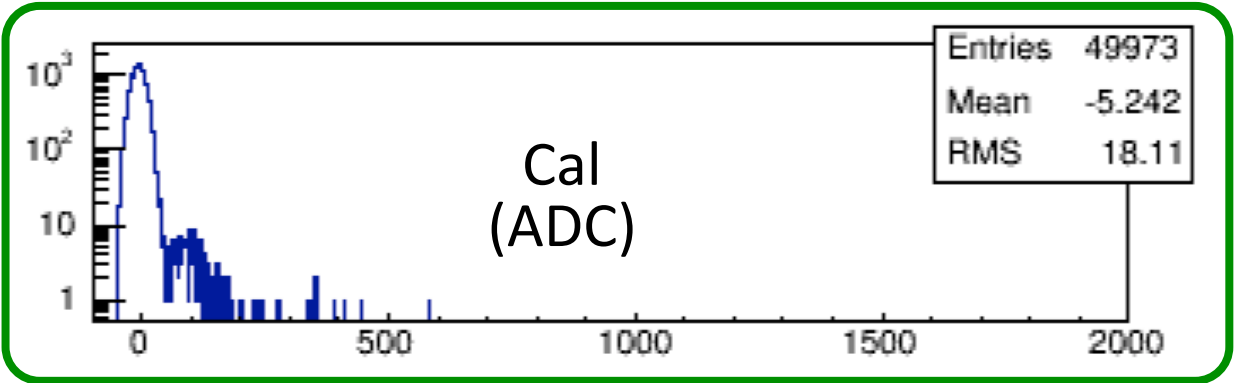
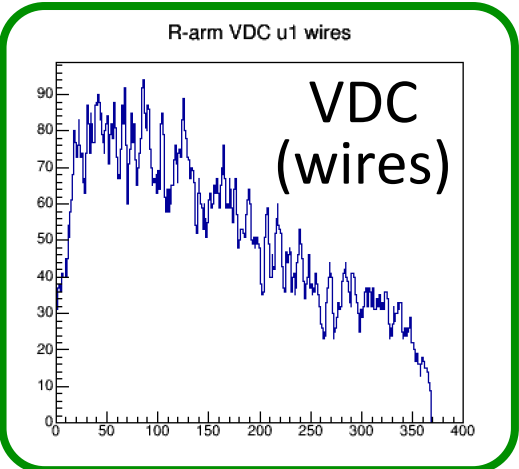
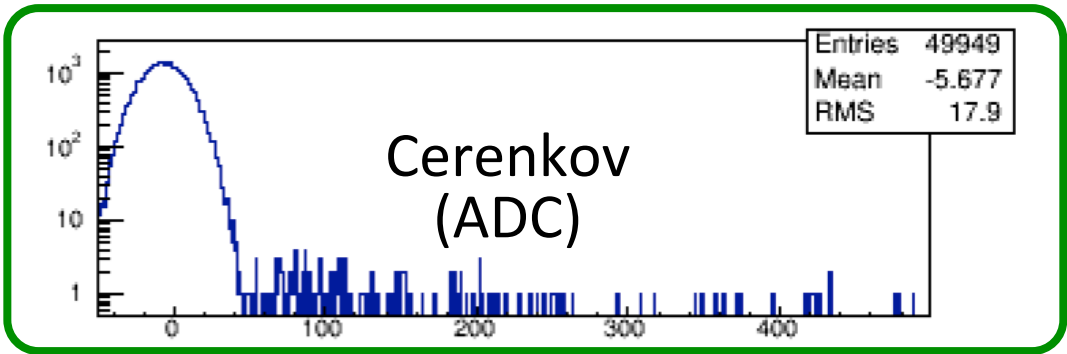
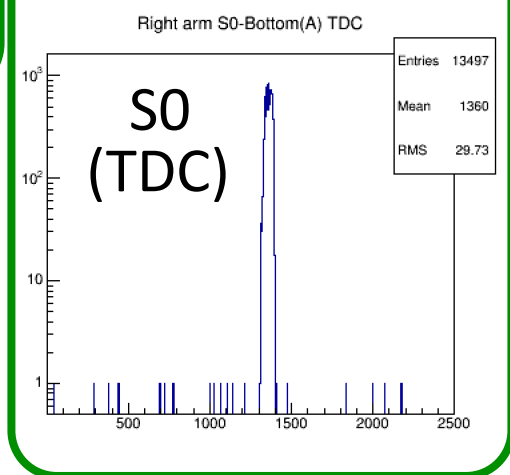
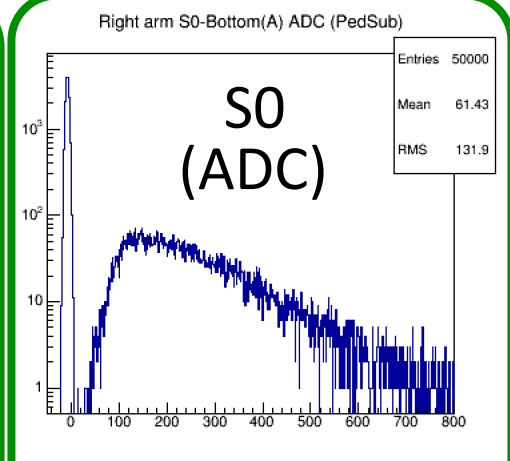
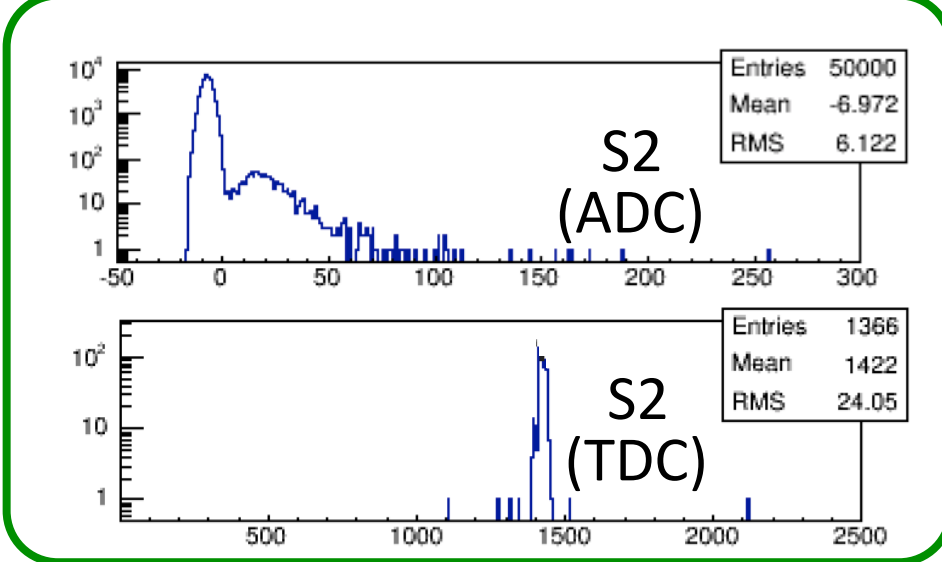
LHRS

Run: 23793





RHRS
Run: 23793



Proposed triggers

- T1: [S0 & S2 & Shower]L
- T2: [(S0 || S2) & (Cherenkov || Shower)]L
- T3: [S0 & S2]R
- T4: [(S0 || S2) & !(Cherenkov || Shower)]R
- T5: T1&T3
- T6: T2&T4
- T7: EDTM

& = and
|| = or

Time ordering:

T5 – T1 – T6 – T2 – T3 – T4 – T7

To-do list

We need to:

- set up the coincidence trigger
- Check timing with a pulser
- Implement re-timing
- BCM
- synchronization

[no problems found in the checklists]