

IceCube

IC-22 analysis

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□ Summary of data check

- data looks fine
- data agree well with MC

Visit

[http://www.ppl.phys.chiba-u.jp/research/IceCube/EHE/analysis/
22strings/DataCheckEvent/index.html](http://www.ppl.phys.chiba-u.jp/research/IceCube/EHE/analysis/22strings/DataCheckEvent/index.html)

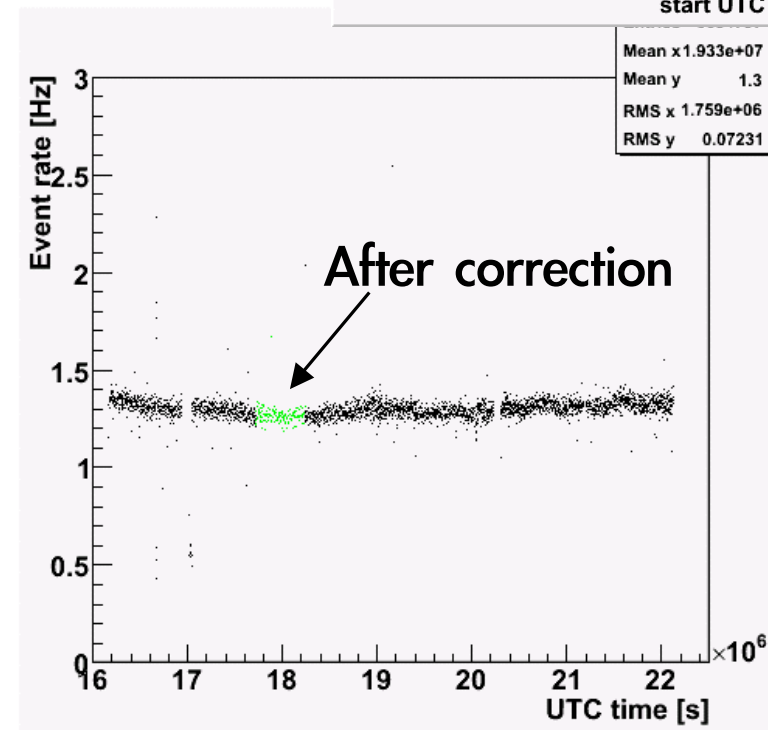
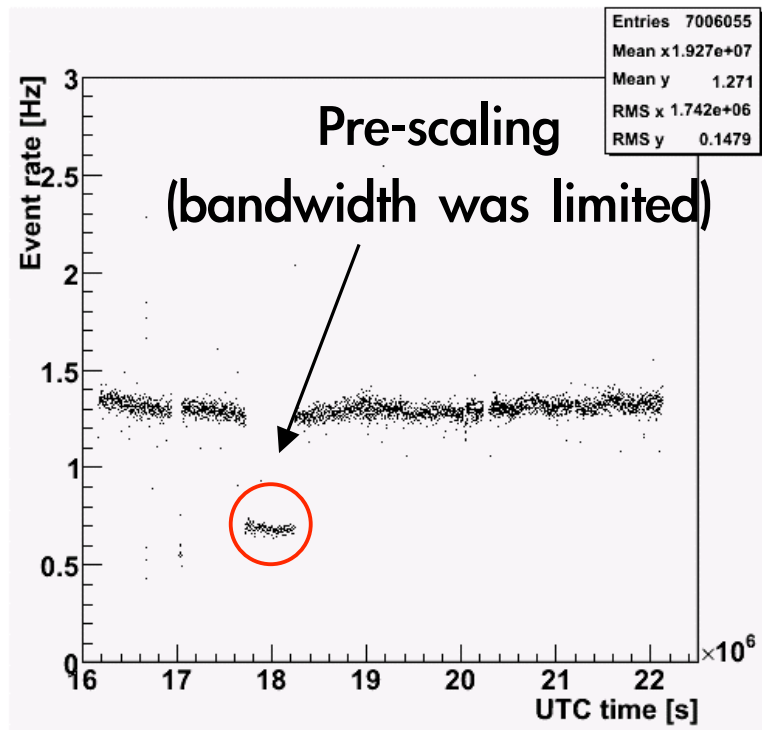
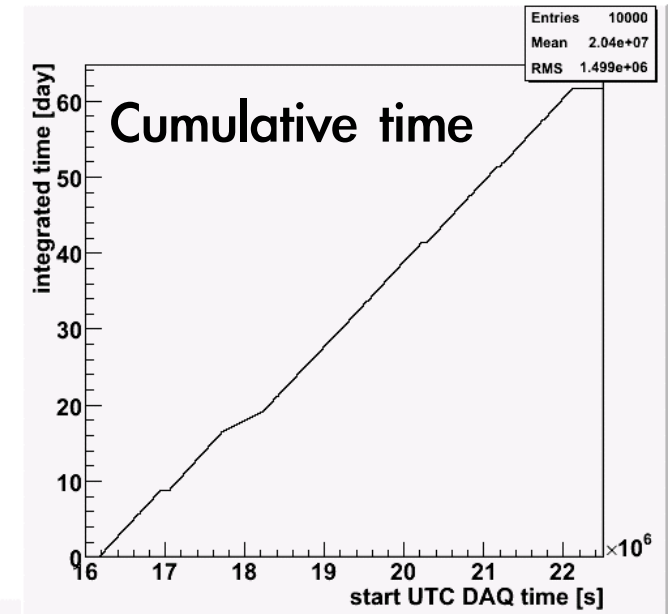
or/and

[http://www.ppl.phys.chiba-u.jp/research/IceCube/EHE/analysis/
22strings/DataCheckChannel/index.html](http://www.ppl.phys.chiba-u.jp/research/IceCube/EHE/analysis/22strings/DataCheckChannel/index.html)

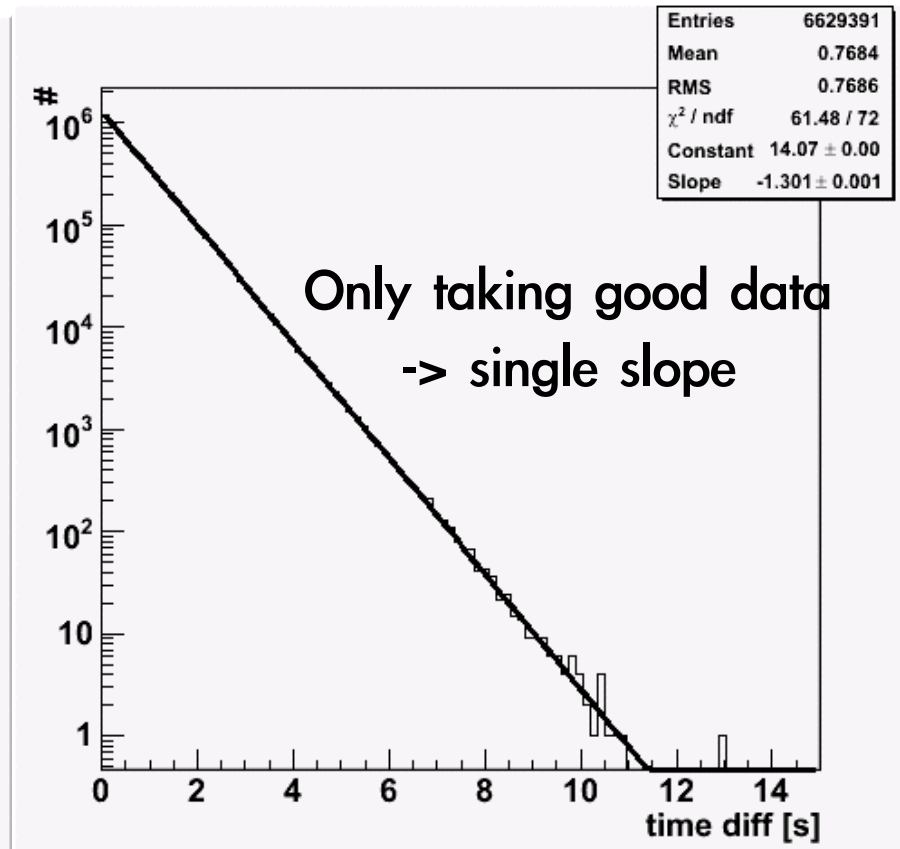
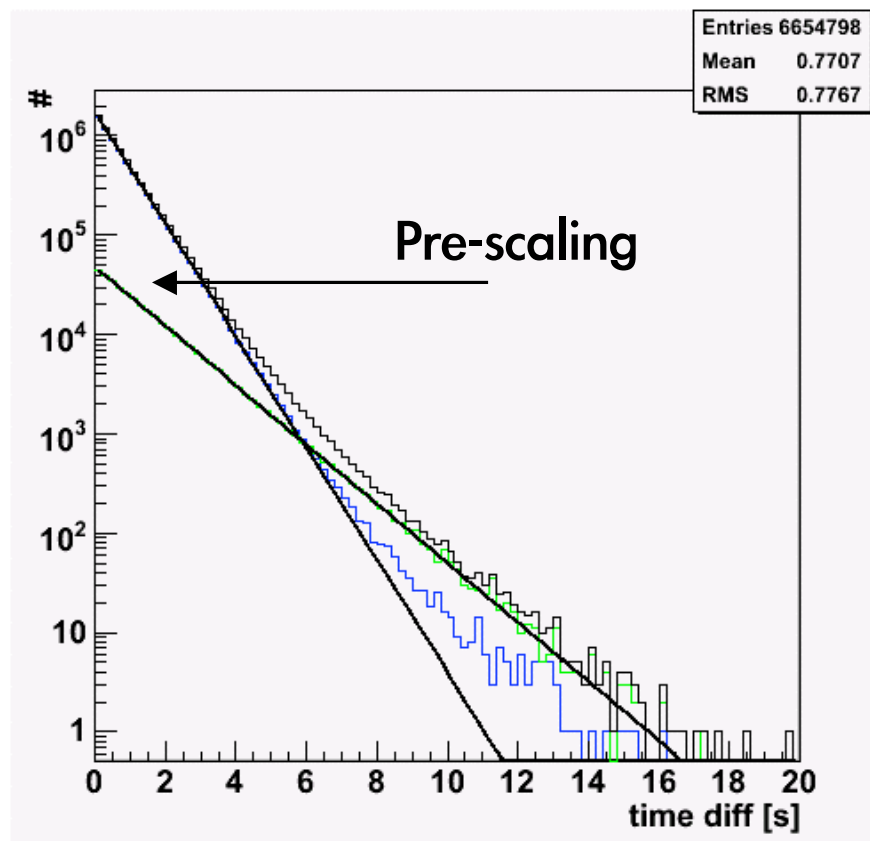
for more detail

□ data used for this check

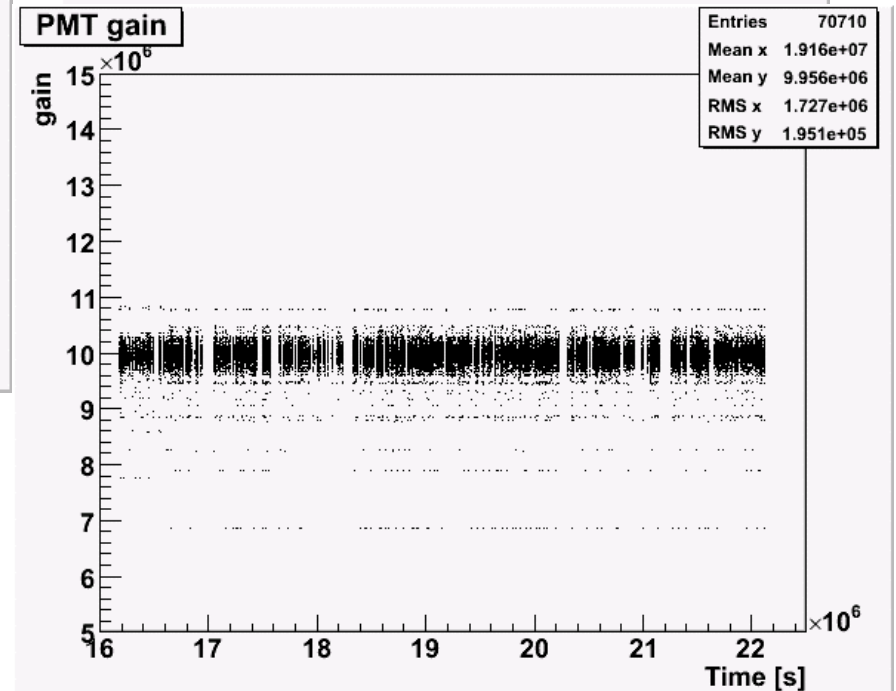
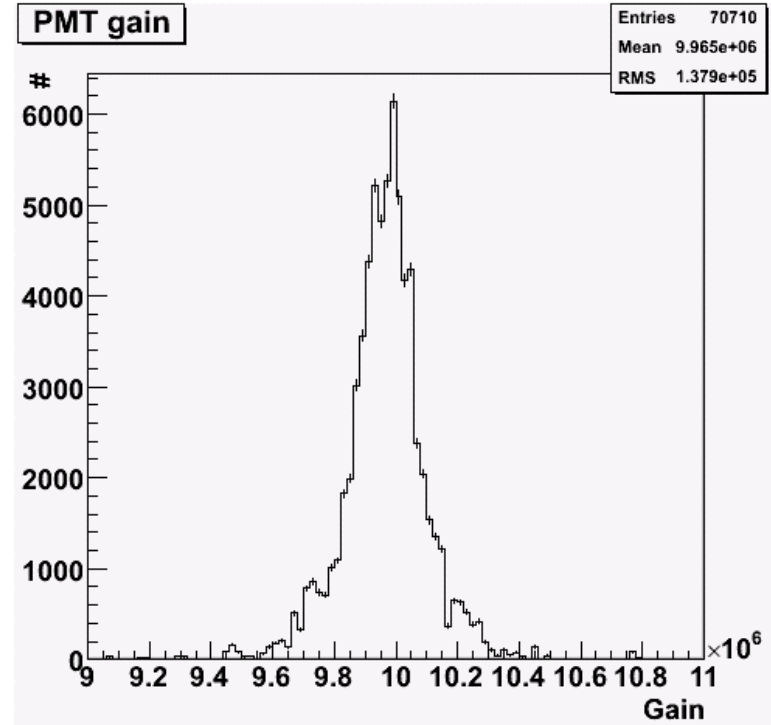
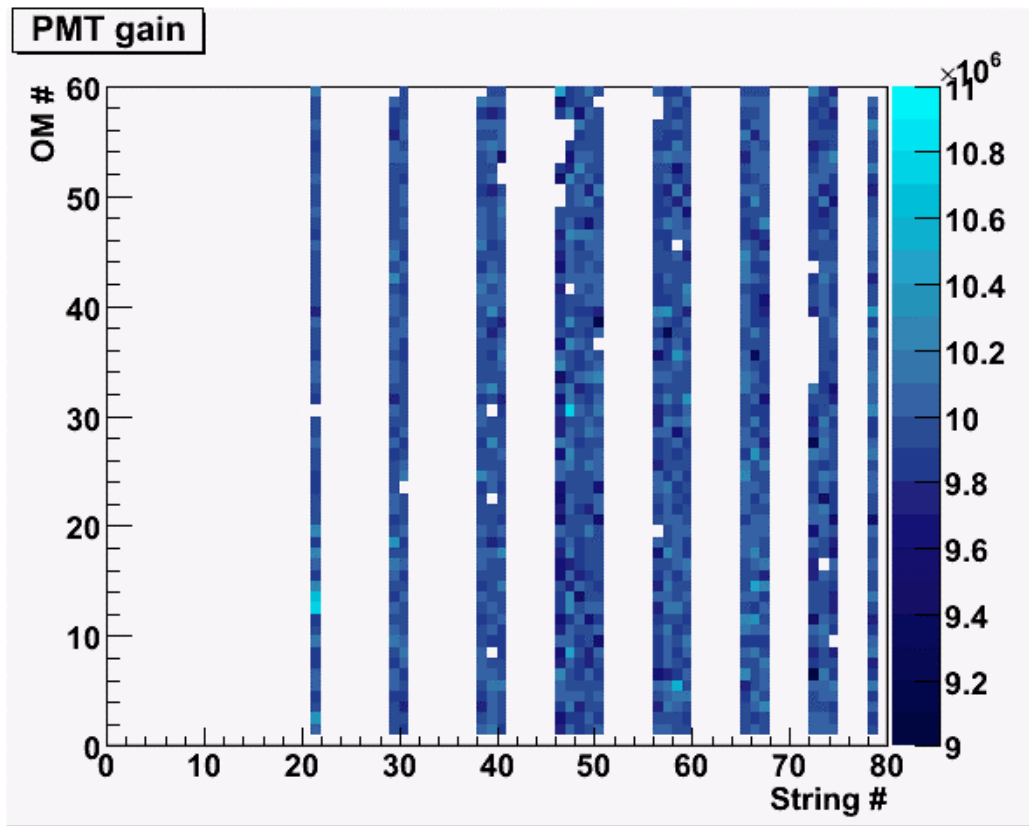
- DOM# > 80
- July 7th - Sept. 13th (effectively ~62 days)
- possible signal region ($\log_{10}(\text{total } N_{pe}) > 5$) is blinded.



□ Time difference



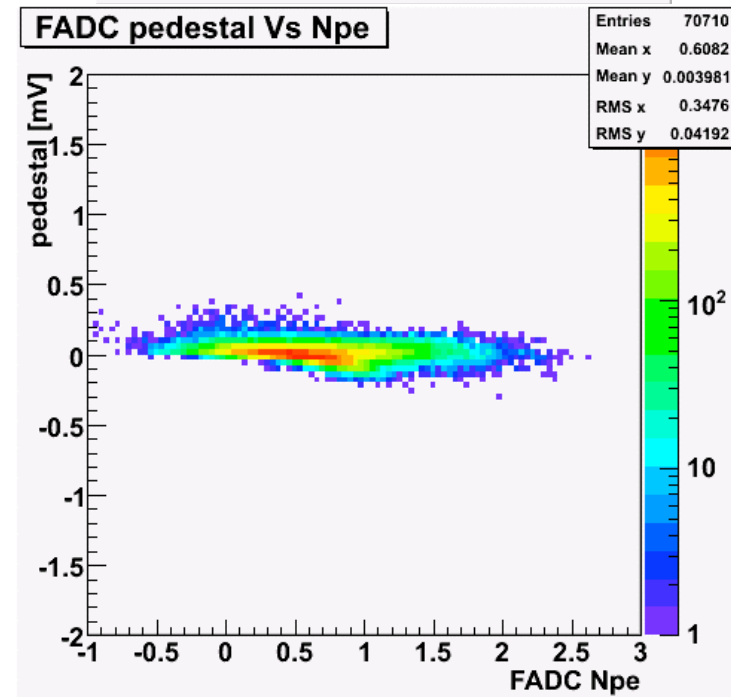
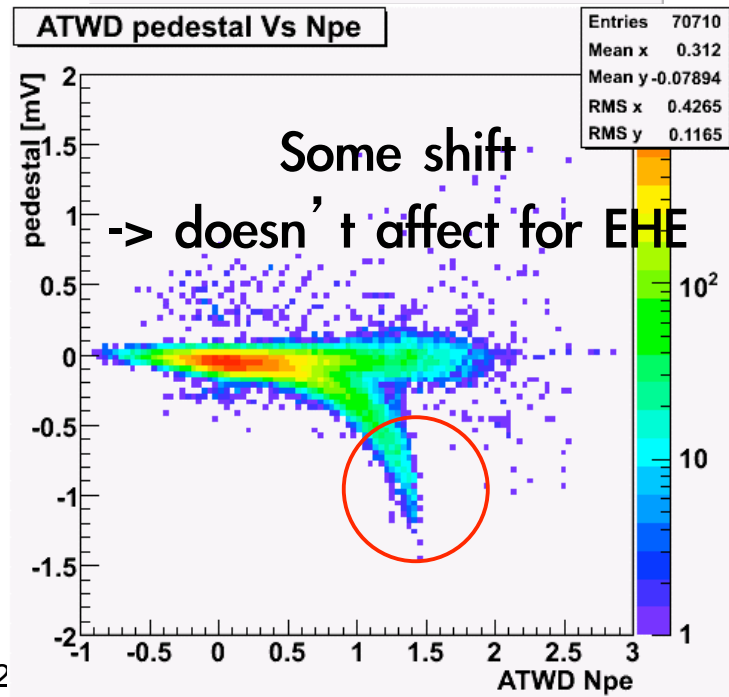
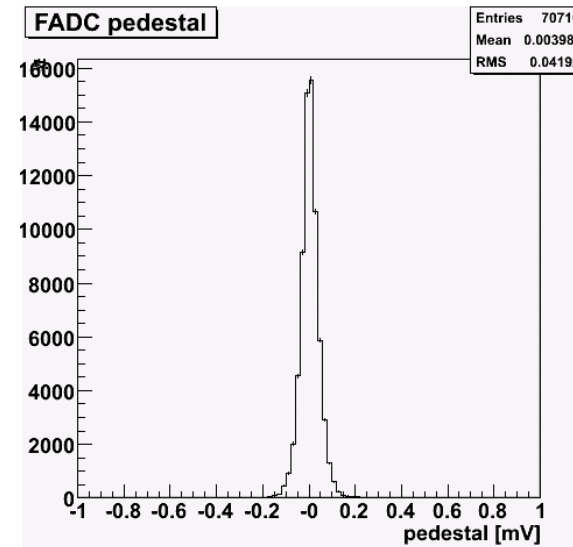
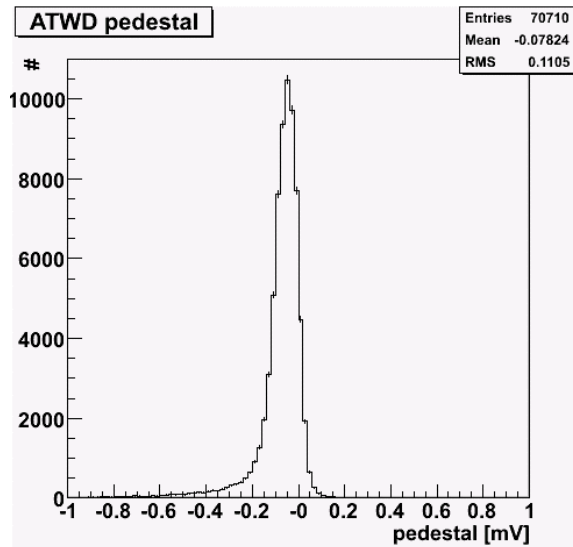
□ PMT gain stability



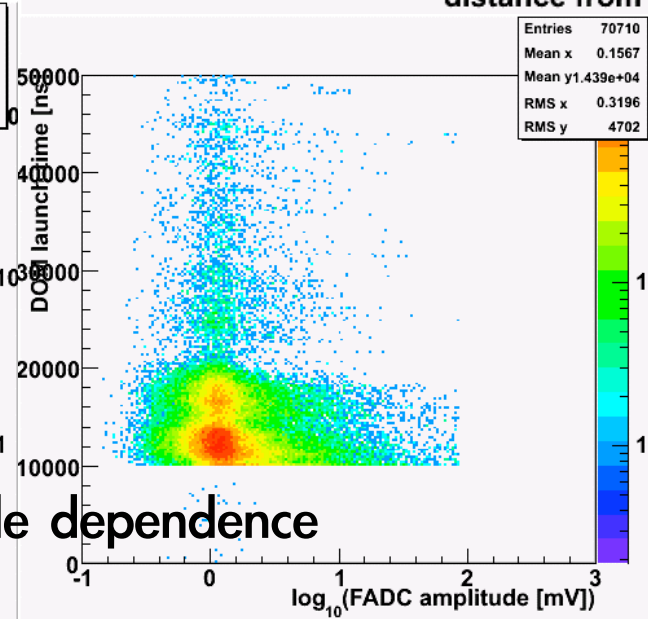
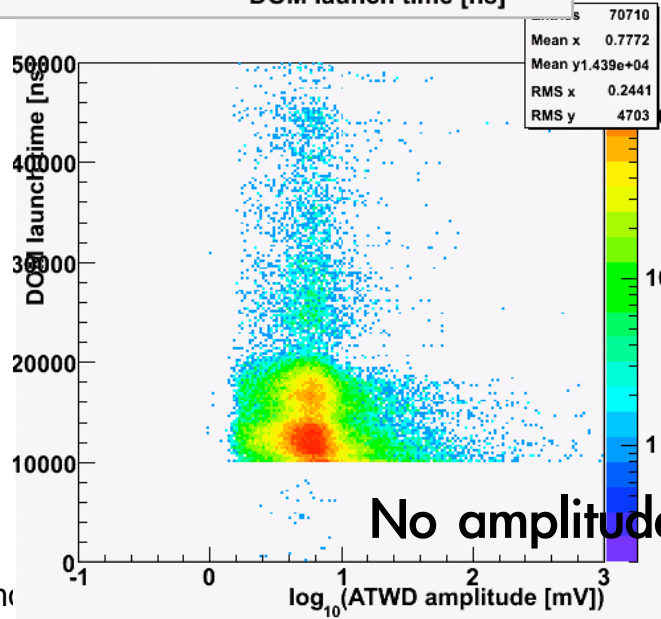
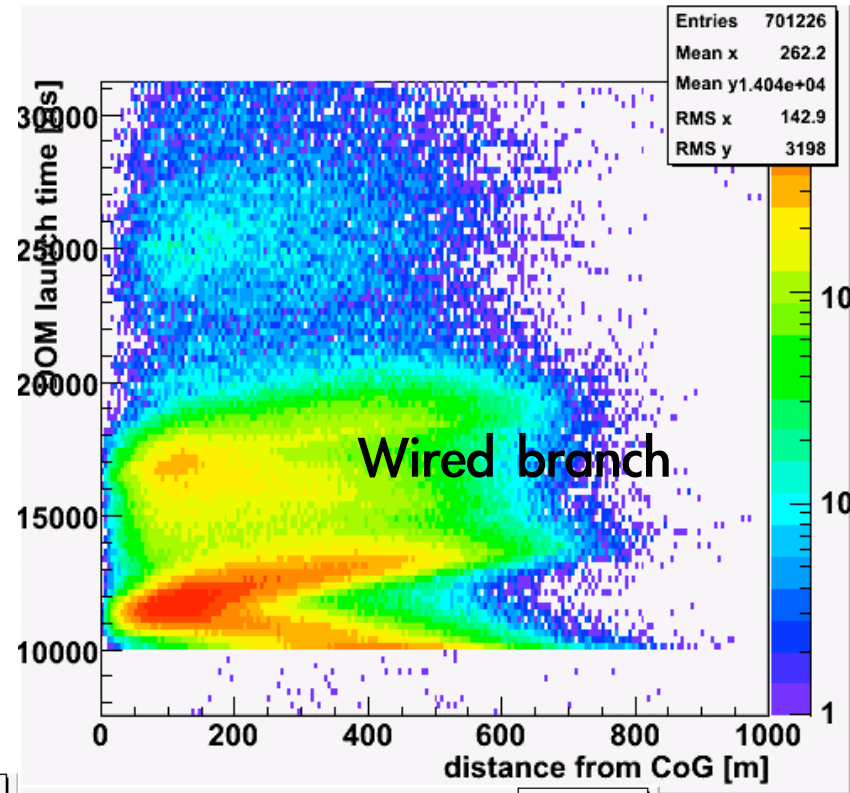
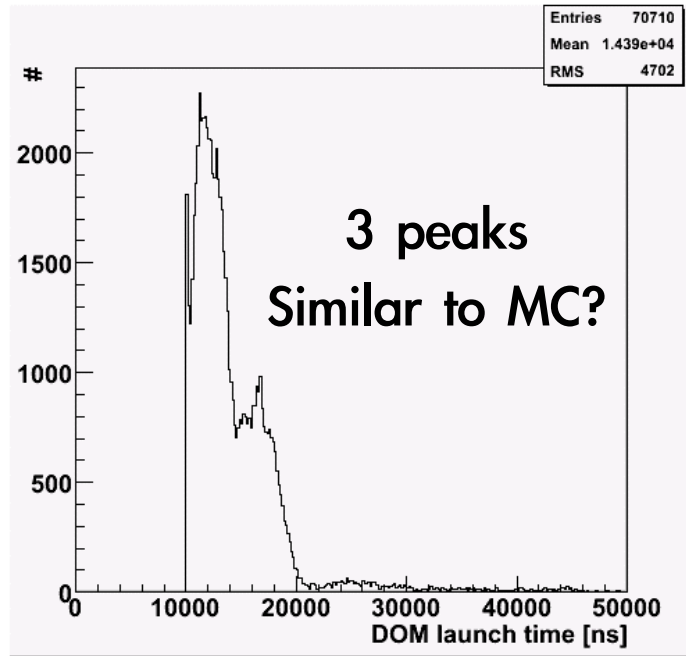
Very stable!

▣ Pedestals

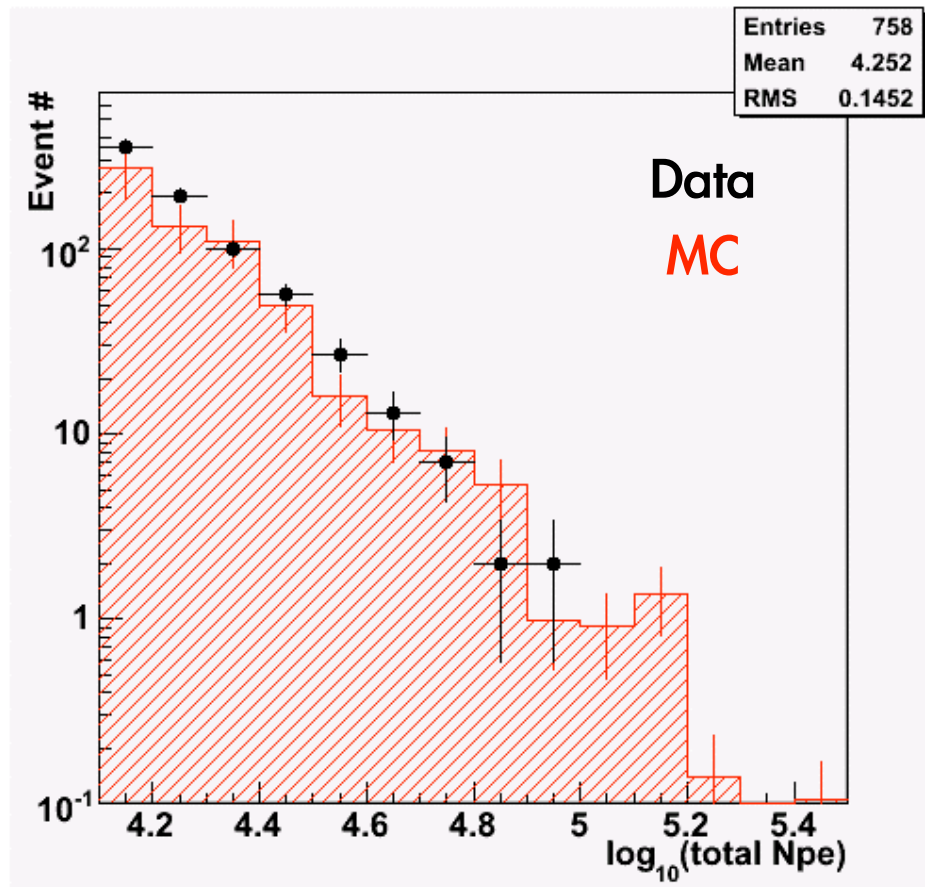
Very small spread



Launch time

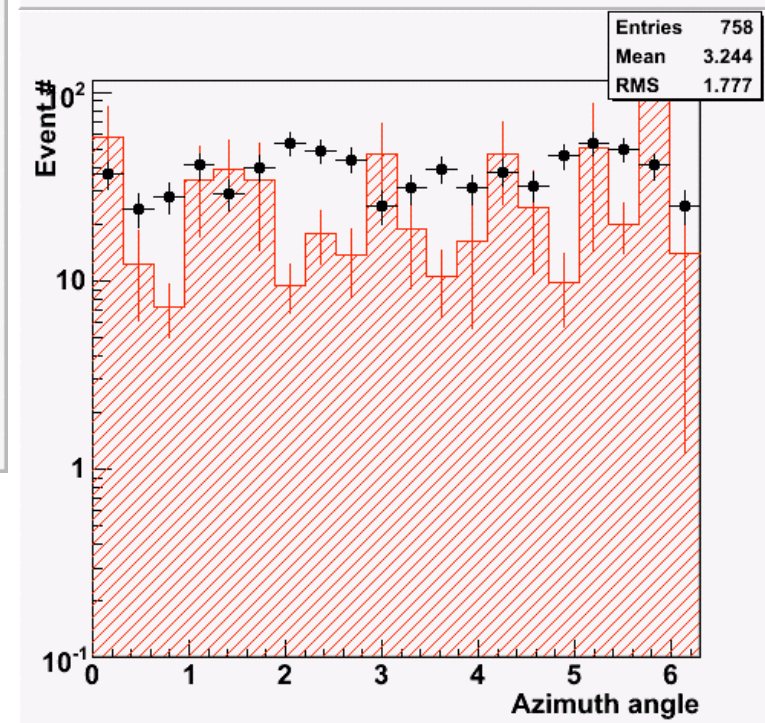
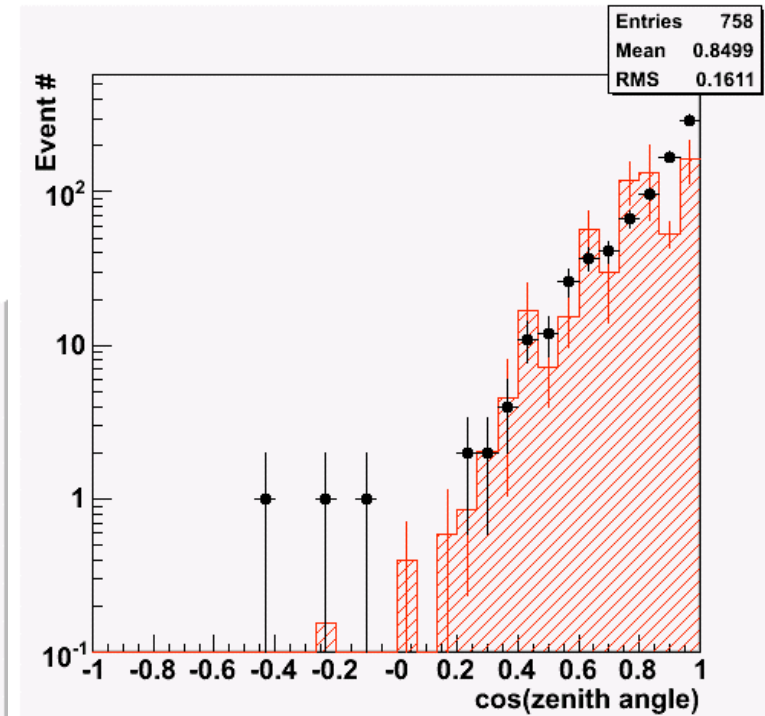


Comparison between MC and observational data

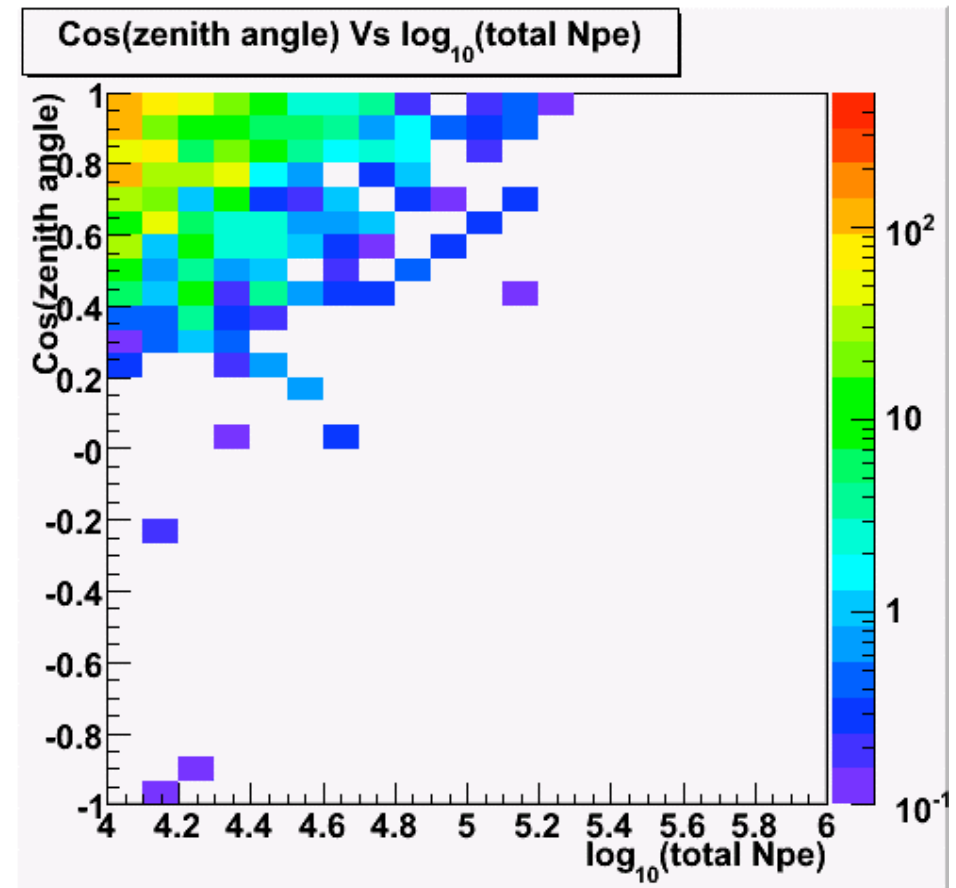
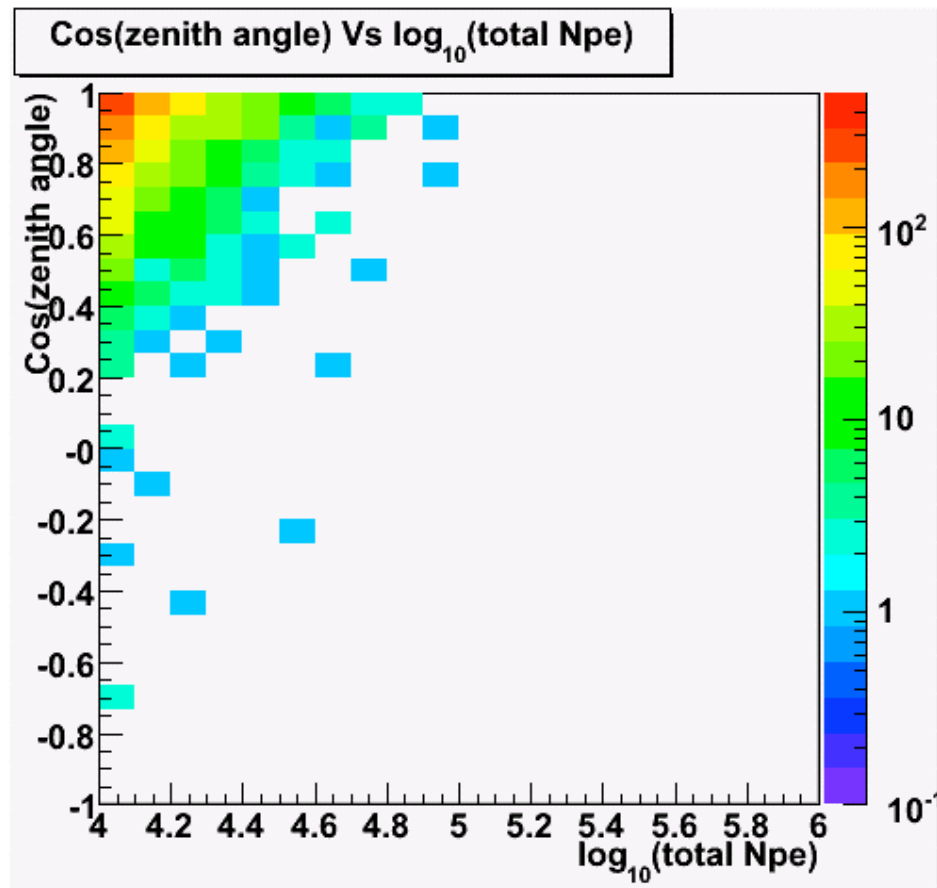


Agrees well!

MC: based on last year's data



Comparison between MC and observational data



The plan

- **Target: unblinding request at beginning of March**
- Three main things to be done
 - (1) Juliet MC generation (AHA layered table)
 - (2) Corsika MC generation for the fluctuation estimation
 - (3) Reconstruction (Aya' s super cut, WF reco, hyper reco?)
- (1),(2) has to get started soon! (a bit delayed, although it will finish with a bit more work, hopefully. A new EHE meta-project based on simV2 is coming!)
- Many things to do. Volunteers?

to do list

(1) analysis

- Waveform check (Launch time, too)
- Potentially good run list? (only 14%: according to Carsten)
- base-line study (for the improvement)

(2) Juliet MC generation

- establish the chain (almost done)
- droop effect?
- Sanity check (catch bugs)

(3) Corsika generation

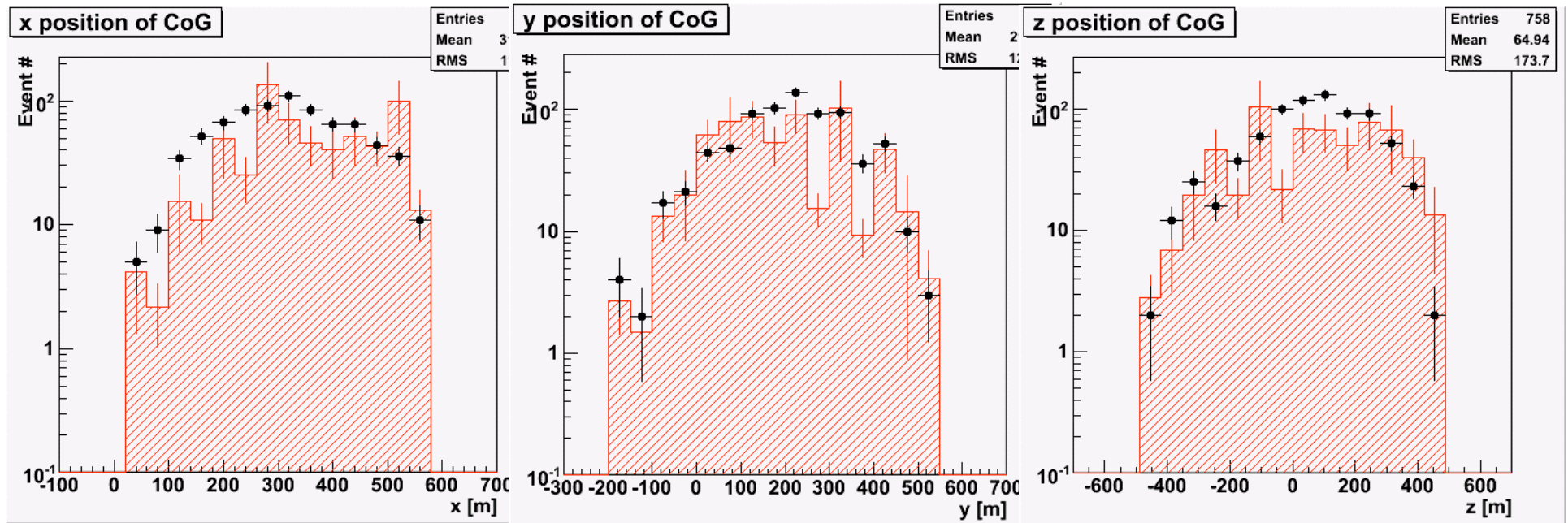
- a bug in SYBILL?
- low energy threshold
- establish the chain (almost done)
- Sanity check

(4) Reconstruction

(AHA lightsaber tables?)

Back up

Comparison between MC and observational data



Launch time (2nd launch)

