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• Rdata, Excel, and GoogleDocs versions

attached to the Twiki page about SiWAnalysis

https://twiki.cern.ch/twiki/bin/view/Main/SiWECALAnalysisDataStructure

https://docs.google.com/spreadsheets/d/1pJOnNK9arqM4L1Mf3qj4t0BjWlaCDCRXLOkkZOYP-Qc/edit?usp=sharing

- Mistakes are possible!!!
- Read TB elog and shift summaries for more details

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	ai 2015/11/95 12:38:59	2015/15/05 21:29:39								6 158-04303333 5315						67 K7463	6 1585eV	**	8.448 of 8			THUE		Collimators are back in their nominal positions,	The reduced rate in chip 52 and to a bas extent is chip 5 may be related to		,	

- In total we have 476 runs with data (regardless quality) with e+, pi+, mu+ (15...150GeV)
- Different detector configurations were tested:
- 1. with/without absorber inside and before the detector
- 2. different thresholds for slabs or chips (check configuration file for every run)
- 3. turned detector
- 4. DIF0->off, DIF1,2,3->DIF0,1,2 after run 77
- 5. Few runs were affected by problems with CCC<—>Zedboard cable connection

Detector Configurations

11 detector configurations used during testbeam:

Absorber before	Absorber inside	Angle
0.0	0.0	0
4.2X0W	0.0	0
8.4X0W	0.0	0
8.4X0W+200mmFe	0.0	0
8.4X0W+300mmFe	0.0	0
0.0	4.2X0W between each plate	0
1.8X0W	4.2X0W between each plate	0
2.4X0W	4.2X0W between each plate	0
4.2X0W	4.2X0W between each plate	0
2.4X0W	4.2X0W between each plate	48
0.0	0.0	90

From default elog output (Frederic's variables):

run <- run number start_time <- start of the run stop_time <- stop of the run nb_data_pkts <- number of transferred data packets nb_lost_pkts <- number of lost packets bytes_on_dsk <- size of run (all packets without header) nb_spills <- number of spills cur_spill <- current spill nb_evts <- number of reads nb_hits <- number of read signals from cells run_duration_min <- run duration in minutes</pre>

2. From elog comments and run summaries:

energy <- energy of the beam

particle <- main particle in the beam

Absorber <- what was inside and before the detector Angle<-information about rotation of the detector Useful.Run <- run marked as useful in the beam

summary

Run.Quality <- TRUE (run duration>5min), FALSE (run duration<5min), NA (elog entry was deleted, but data can be good)

General_comment <- information about setup which is valid for next few runs

comment1 <- information about current run

comment2 <- information about current run

3. Data quality characteristics:

evts.dif0 <- number of events per dif0 Nhits.dif0 <- number of hit per dif0 evts.dif1 Nhits.dif1 evts.dif2 Nhits.dif2

4. Configuration charactristics:

num.xml <- number of each configuration file in time order (in total 67 different configuration files were used) nconfig <- total amount of runs created with same configuration file

config.group <- runs with same configuration ("A", "B", "C", "D", "E", "F", "G", "H")

5. Other information:

- A. There were some mistakes with elog (with absence of entry about run), so sometimes there was good run but quality listed as NA
- B. Sometimes shifters didn't write shift summary, so I would recommend to analyse all long runs
- C. Muon runs during the night were collected without shifters and sometimes without summary



