Quick Noise study

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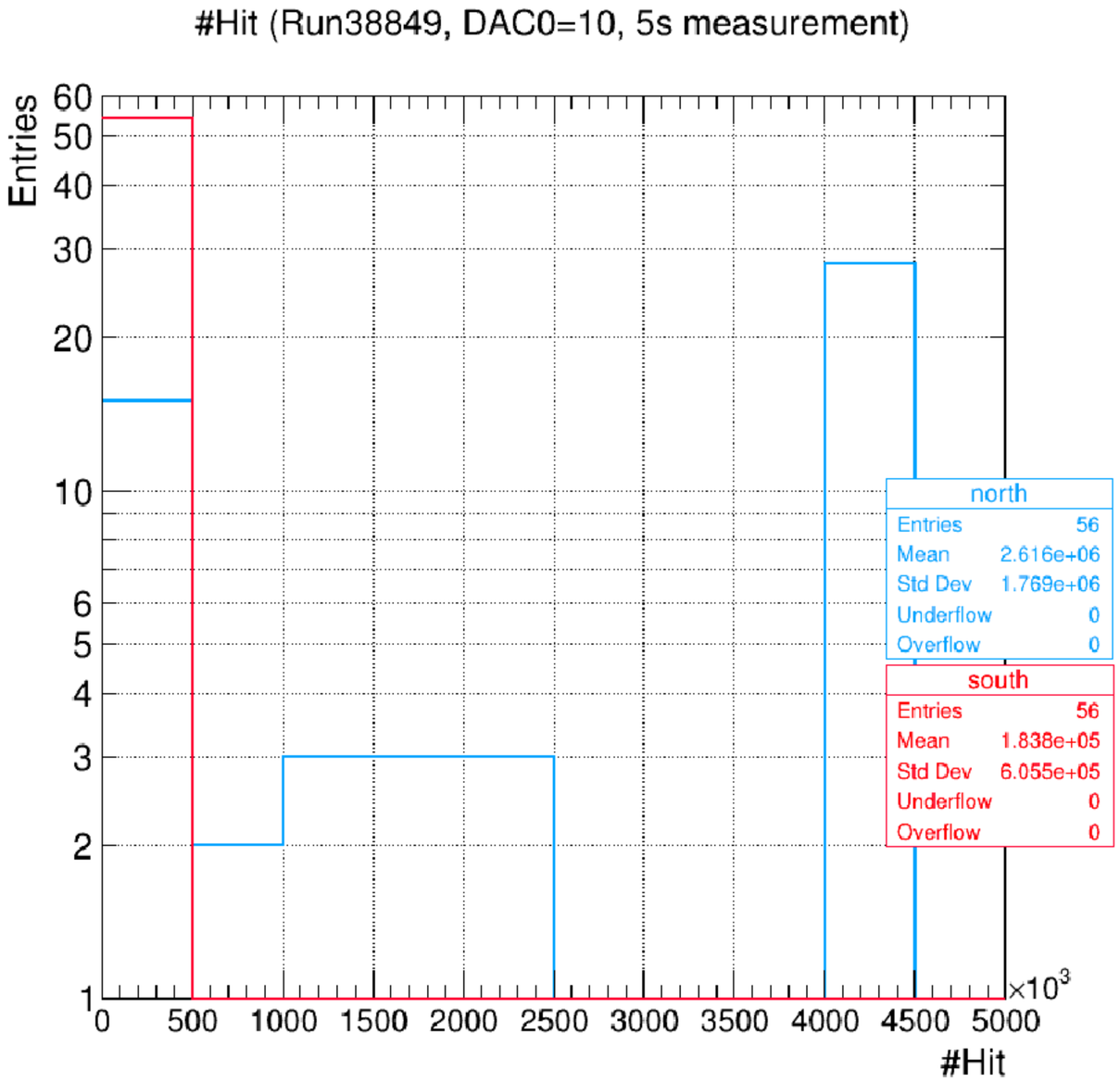
Motivation

The north side turned out to be more noisy than the south side. The standard DAC0 value 15 is too low in this condition. An optimal value is needed for the operation.

Situation



Run condition

- run 38849
- DAC0 = 0
  (usual setting to check whether the ladder is working or not)
- 5 sec measurement
- No hot channel mask was applied when taking data

The number of hits from each ladder was counted and shown in the histogram. The red(blue) histogram shows data from south(north) ladders.

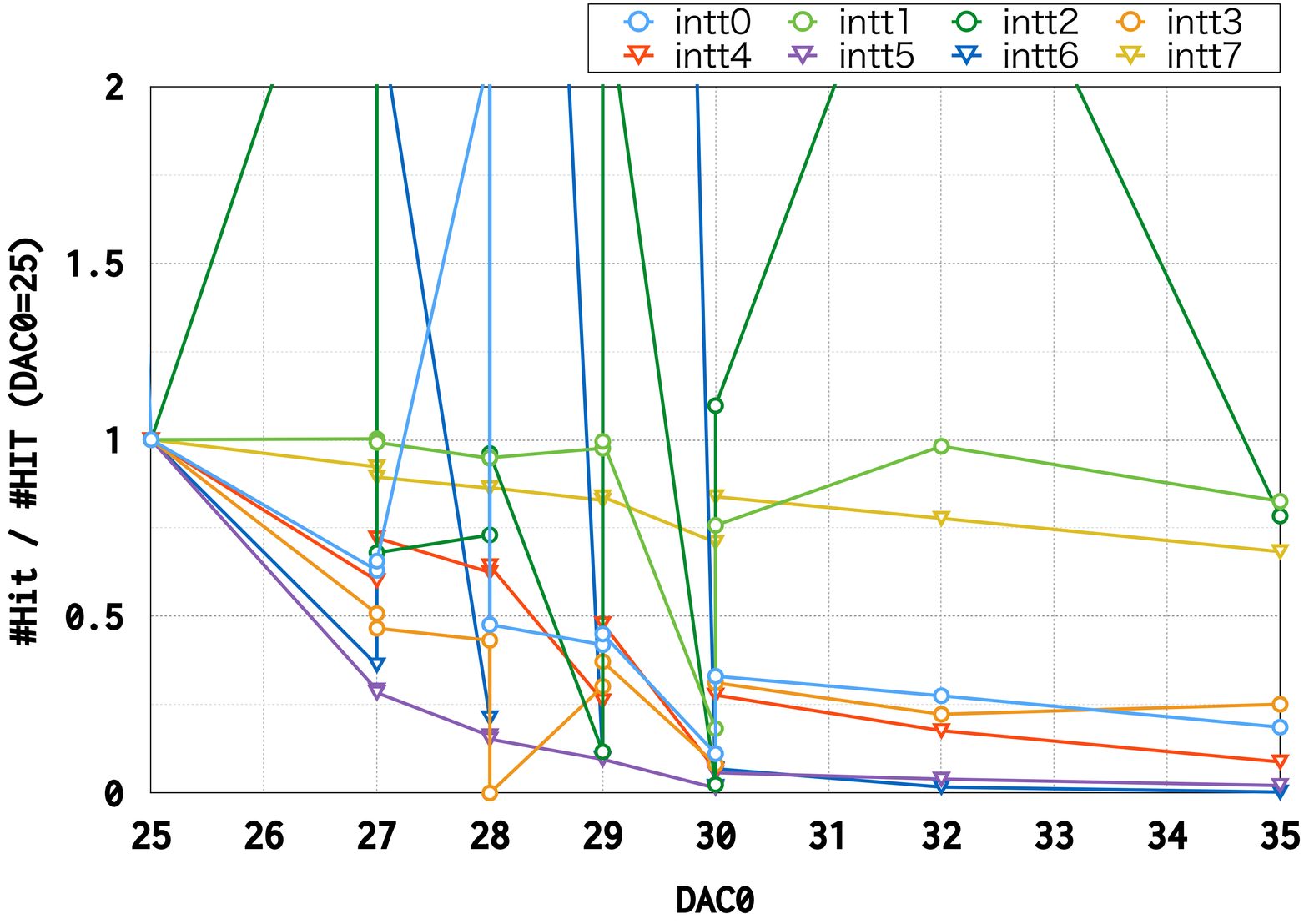
The south ladders got much fewer hits than the north, i.e., the north ladders have more noise.

These histograms were made using Jaein's hitmap. InttRawHit was used.

List of runs

Run	DAC0	Measurement time
38849	10	5s
38854	10	5s
38856	10	5s
38857	20	1
38859	20	1
38860	20	1
38861	25	1
38862	25	1
38863	25	1
38864	28	1
38865	28	1
38866	28	1
38867	30	1
38868	30	1
38869	30	1
38870	32	1
38871	32	1
38872	32	1
38873	35	1
38874	35	1
38875	35	1
38876	27	1
38877	29	1
38878	27	5
38879	28	5
38892	29	5
38893	30	5

#hits as a function of DAC0



Note:
Clone hits included.
Hot channels included.

#Hit doesn't depend on DAC0 value.
← Because it's calm enough.

#Hit is reduced as DAC0 value goes high.

There are more data. Is there any volunteer analyzing them? Tomoya? Takahiro?