COT Stage0

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- Overview
- Statuss
- Problems
- Plans

COT Stage 0 Overview

Two main goals

- Fit drift constants
  - Drift velocity,angle, t_0, etc.
- Monitor performance after tracking
  - Complements YMON monitoring

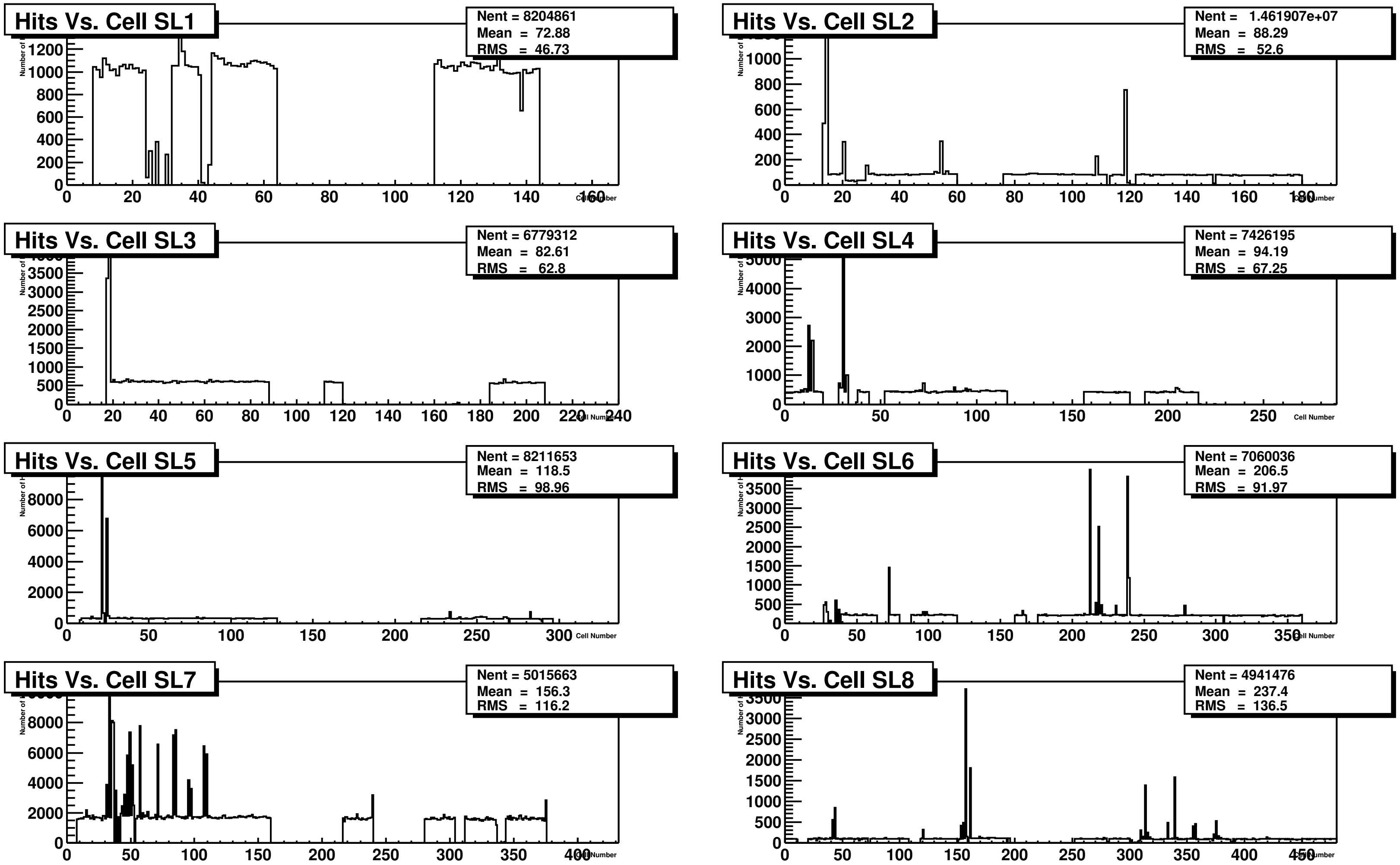
General Plans:

- Stage 0 runs as an online consumer
- No intermediate dataset as in Run 1 with Stage 0/Post 0
- Fit constants at end of run

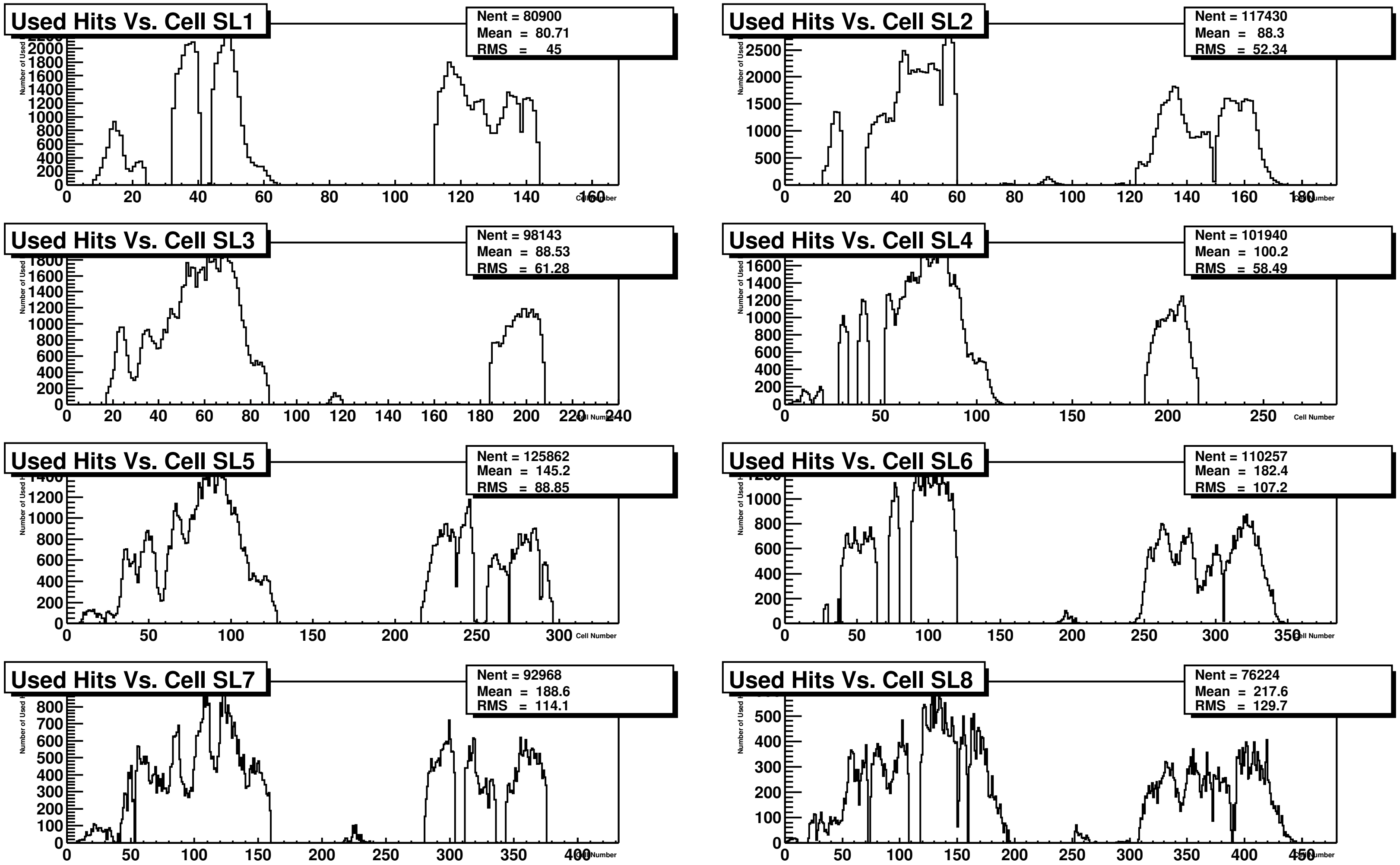
Fitting Drift Constants

- Start with drift model used in Run 1
- 8 parameters
- Fit only 3 run-by-run
  - Lorentz Angle
  - Drift velocity
  - t_0

Stage0 COT plots Run:102825



Stage0 COT plots Run:102825



Current Status

- Running online by default
- Filling monitor histograms
- Results of fit recorded in file
- Not writing to database

What has been included

- Same drift model
- New width correction implemented
- Channel t_0's can be implemented by tomorrow

Some problems

- Peter and I don't agree on all the drift constants
- Myron mode not handled correctly
- Database interaction not worked out

- Stage0 not getting EndRun
  - Fit doesn't start until next BeginRun
  - No prayer of quick results available for next run

Plans

Short Term

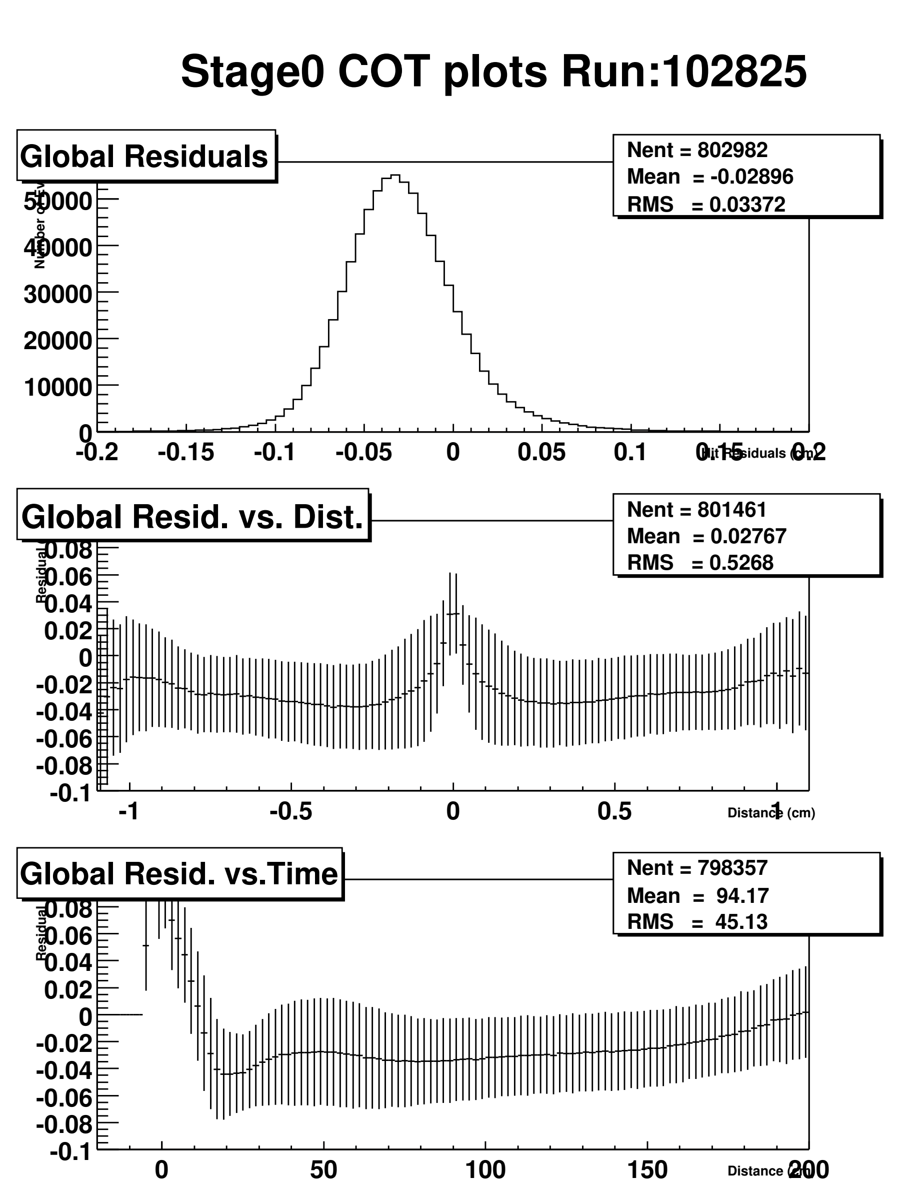
- Agree on fit results
- Fix retrieval of constants from database
- Run offline on commissioning run data
- Put 1st set of constants in DB for all runs

Longer Term

- Study fit, drift model
- Put improved constants in DB for all runs

Long Term - Operational issues

- Getting EndRun records
- DB access between runs


Stage0 COT plots Run:102825
Global Residuals
Nent = 802982
Mean = -0.02896
RMS = 0.03372
0
10000
20000
30000
40000
50000
-0.2
-0.15
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Global Resid. vs. Dist.
Nent = 801461
Mean = 0.02767
RMS = 0.5268
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
-1
-0.5
0
0.5
1
Distance (cm)
Global Resid. vs.Time
Nent = 798357
Mean = 94.17
RMS = 45.13
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
0
50
100
150
200