Progress of TOF Calibration Software

Akio Kiyomichi
Univ. of Tsukuba

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Progress

Development under PHOOL;

My private code is running

- following to Jeff's environment
- Storing data in a histogram
- Modules for slewing correction are under developing
  - o Store in 2D−hist
  - o Fitting
  - o Slewing parameters will be obtained and be written in DB

Plan

- Calibration module

  end of October

- Access database to objy using pdbcal

  end of November

- Reconstruction read from objy

  end of November

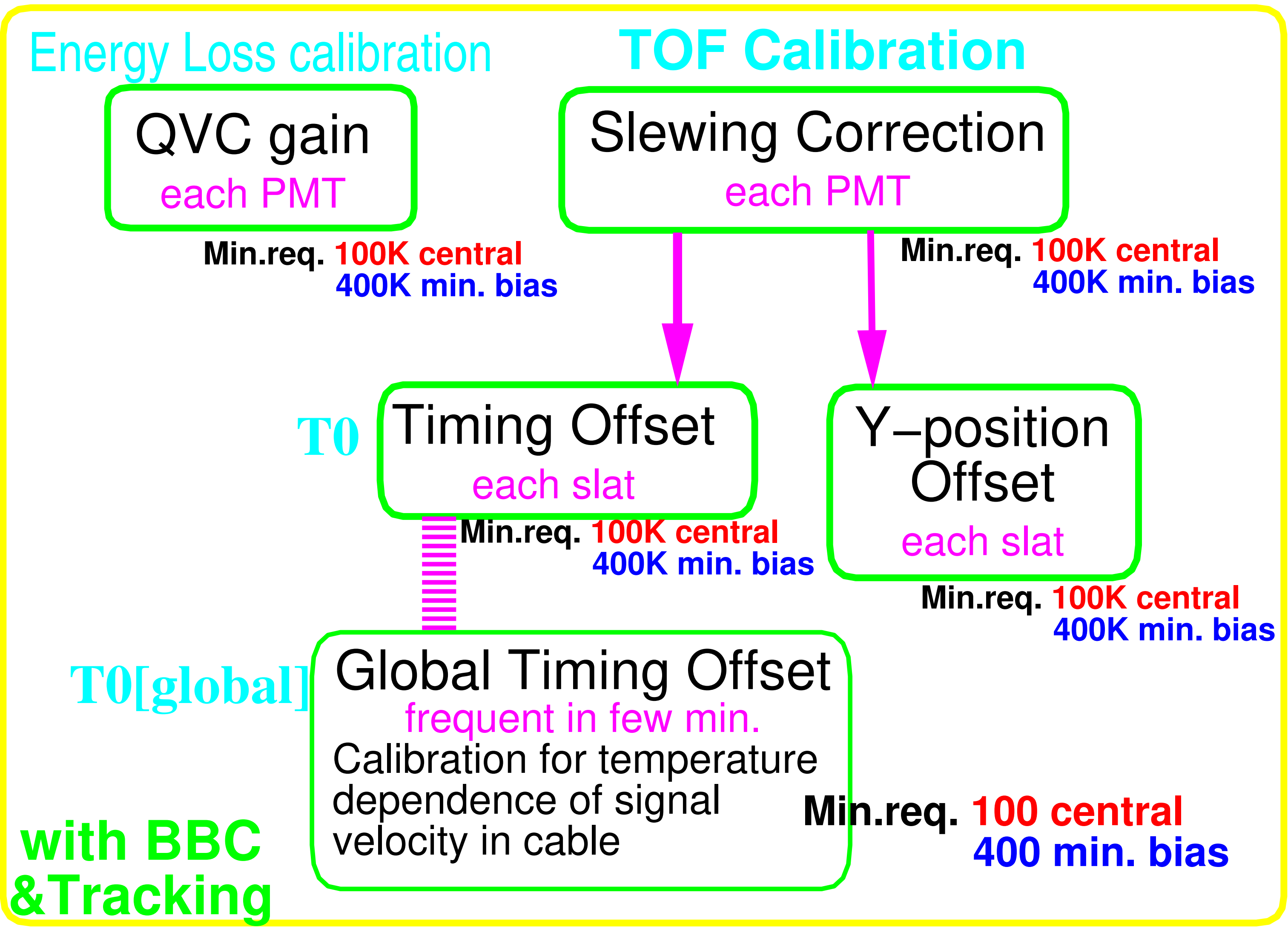
Multiple passes? – Basically No

All of calibration parameters are given by one process in normal condition.

TOF Calibration Process

Minimum requirement (@ Day–1, 10% luminosity)

100K central event (24 h)
400K minimum bias event (10 h)



If temperature in IR change rapidly,
we should do special calibration frequently.

Conclusion

– Calibration Code is developing
  A part of module is running on **PHOOL**

– It will be completed
  by end of **November.**

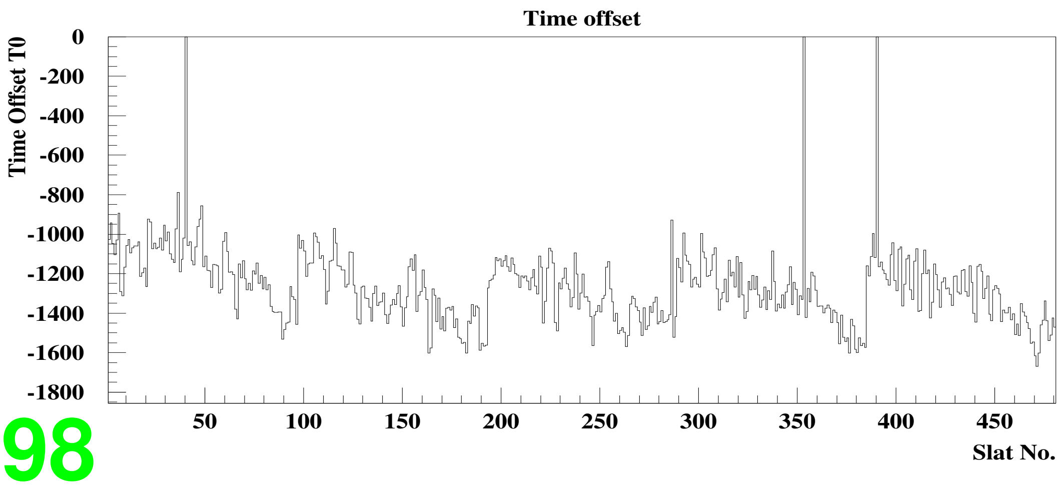
– Multiple passes
  Basically No.

T0[global] – Global Time Offset

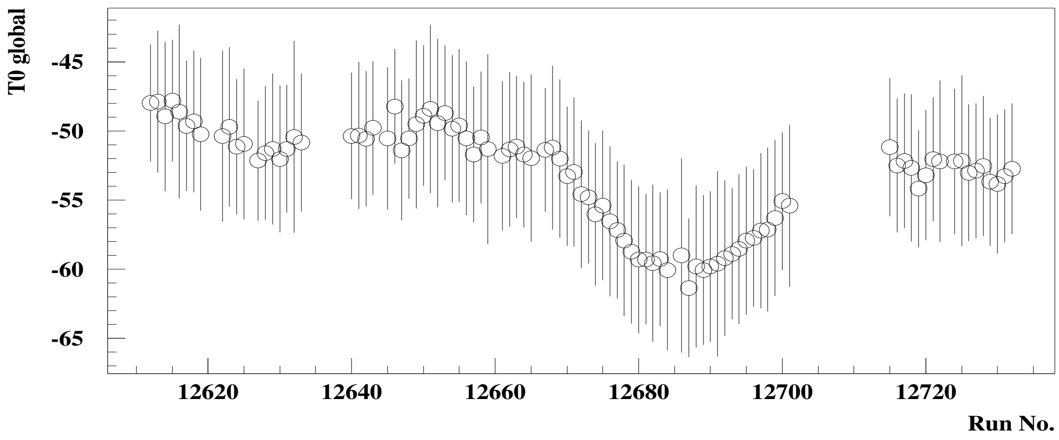
In WA98, depend on chainge of temperature, the time offset was chainged every run.

Condition of WA98

Cable length between start counter and FEE ~ 77m
Difference of T0[global] ~ 10 ch ~ 270ps



WA98



In PHENIX, if temperature in IR change rapidly, we need calibrate the global time offset frequently.

Estimate value of timing expansion by temperture.
0.4ps/K (~20^{o}C)
4.0ps/K (20^{o}C~)