

T0 online calibration: status

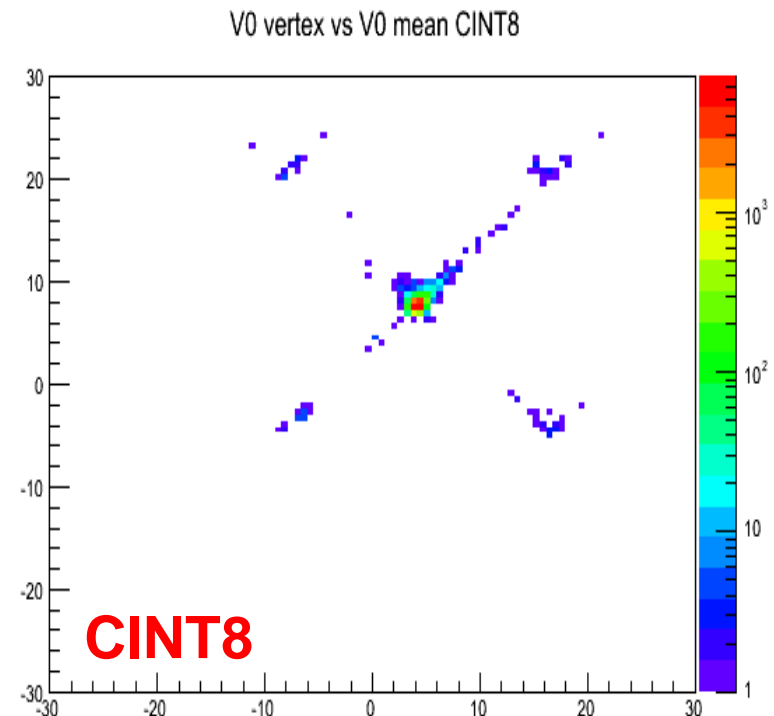
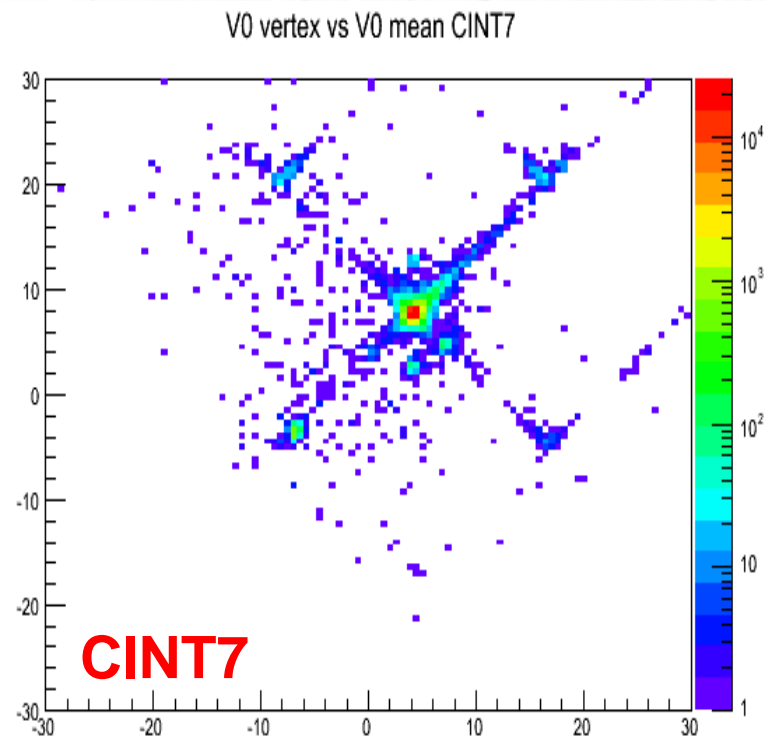
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**25 June 2014
ALICE offline week**



Event selection with 0TVX (CINT8)

$(V0A-V0C)/2$ vs $(V0A+V0C)/2$



T0 calibration II

Place interaction time signals around 0: global offset T0A, T0C and T0AC

Started from 2nd 1000 events with 0TVX (CINT8) trigger:

- read raw data in time interval 100 channels around mean from step I, apply slewing correction;
- equalize channels with numbers from step I;
- calculate $(T0A+T0C)/2$ – interaction time;
- read SPD vertex and correct T0A and T0C by vertex position;
- calculate resolution $(T0A-T0C)/2$ with T0A and T0C correct by SPD vertex;

- fit histograms
- Means and sigmas → OCDB/T0/TimeAdjust

CPASS1

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CPASS1

HLT/T0

AliHLTTZEROAgent

AliHLTTZEROCalibrationComponent :AliHLTCalibrationProcessor()
read slewing correction graphs from OCDB, read data, produce calibration parameters.

AliHLTTZEROREcoComponent :AliHLTProcessor()
was started during March training session: read slewing correction graphs from OCDB, read data. Should get calibration parameters from **AliHLTTZEROCalibrationComponent** and do simple reconstruction.

AliHLTZEROCalibrationComponent

ProcessCalibration

read CDB map slewing correction graphs;
read raw;
check 0TVX trigger;
for 1st 1000 events collect histograms with time signals and offset between channels;
Event 1000: fit histograms; set parameters for equalizing channels: mean time position for each PMT;
Event>1000: choose 1st time for each side, calculate $(T0A+T0C)/2$, T0A and T0C and fill histograms;

ShipDataToFXS

Fit histograms with global offsets

write object with calibration parameters on FXS

Write Calib.root file with all histograms

AliHLTZEROCalibrationComponent

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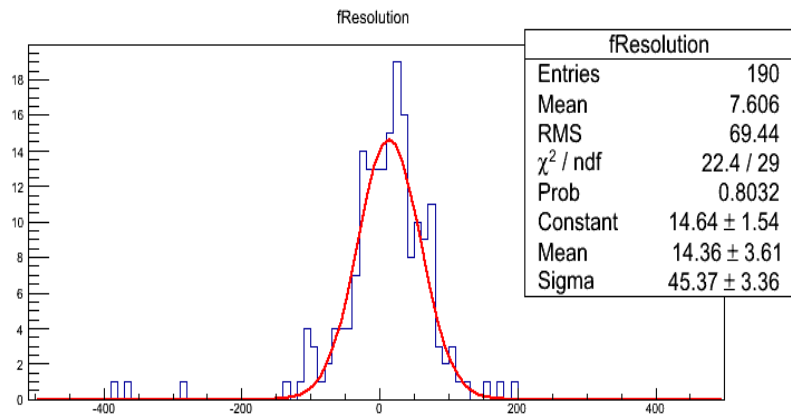
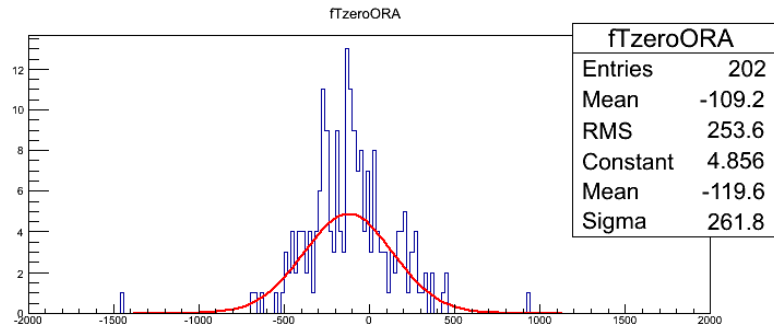
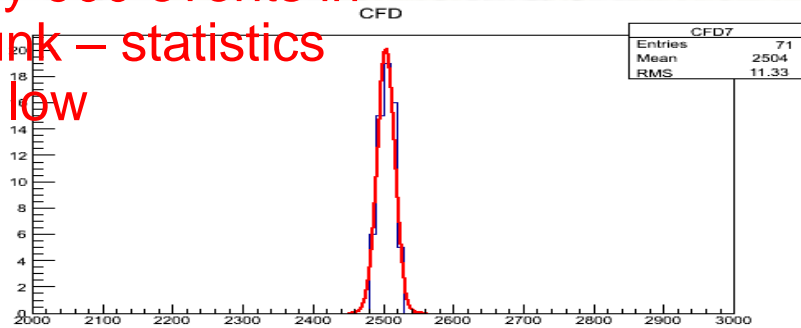
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Write Calib.root file with all histograms

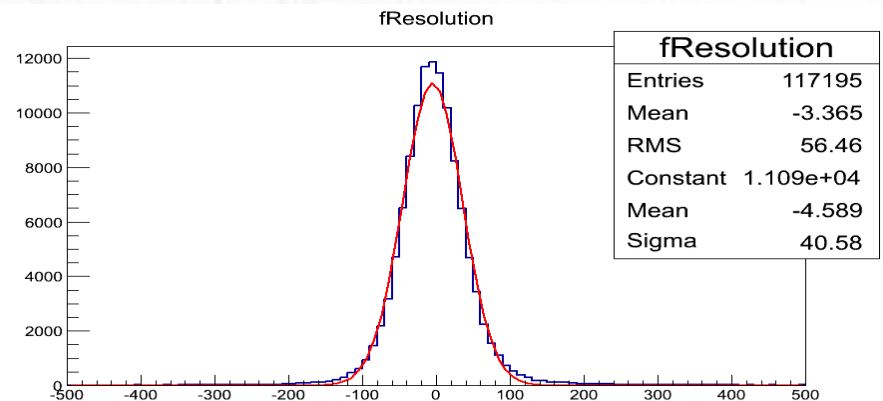
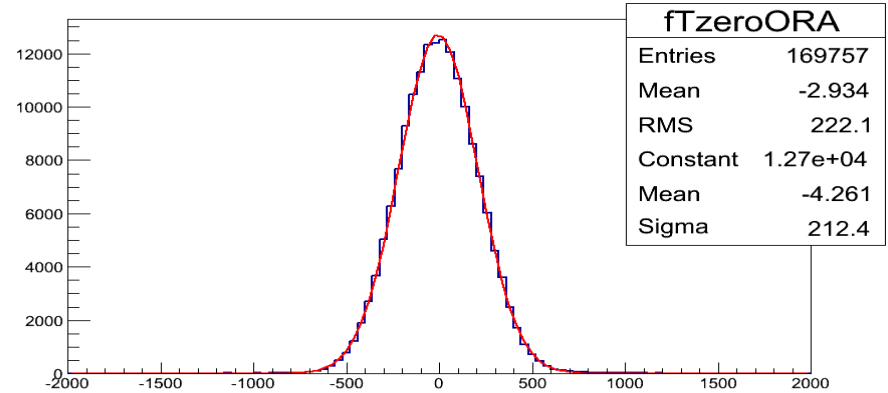
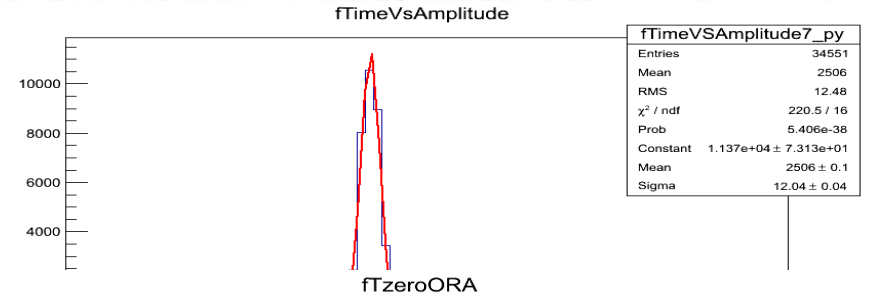
Run 192729 LHC12h

results of test on 1 chunk

Only 900 events in
chunk – statistics
too low



QA CPass1 plots



Summary

T0 part of the calibration code under HLT is works correctly.

To be done:

- additional assertions as in AliT0PreprocessorOffline;
- send calibration parameters to FXS and OCDB;
- pass calibration parameters to reco component;
- commit T0 directory;
- test offline reconstruction with OCDB entries produced by HLT;