

Preparation for Run2 : T0

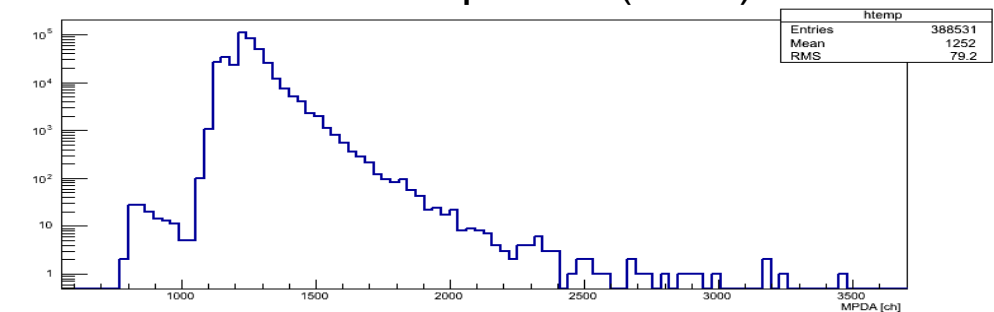
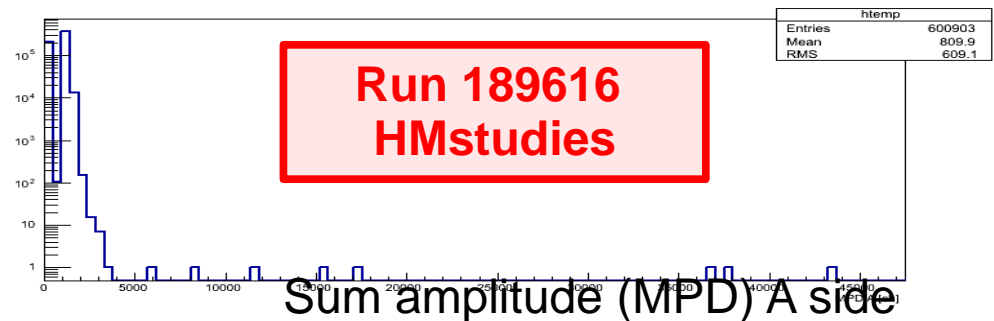
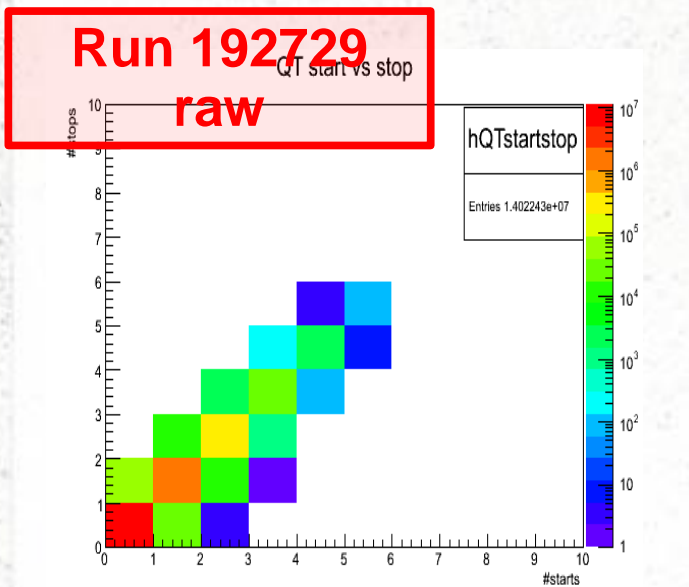
Alla Maevskaya for T0 team

**26 June 2014
Offline week**

Multiplicity reconstruction

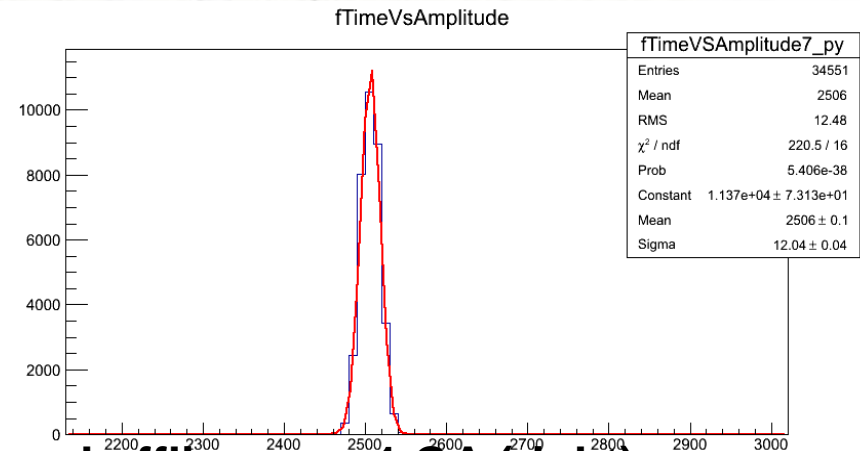
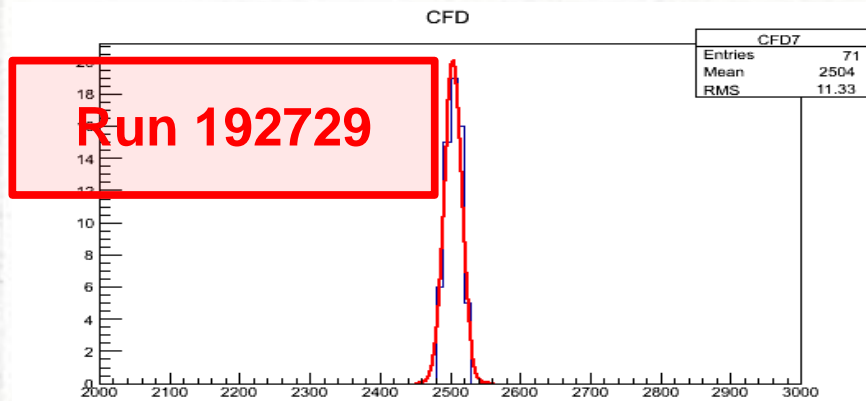
Problem observed during LHC12h – amplitude reconstruction in high pile-up environment. Charge2Time Converter (QTC) generates 2 signals : start and stop, their difference is proportion to amplitude. Matching window is from -75 to +1200 ns around triggered interaction, we read 5hits by each module inside this interval. The point is to choose correct hits. In high pile-up signals could come from different interactions, so we have to choose proper start and corresponding stop for each good time signal. Although amplitude can be reconstructed wrong if stop from previous interaction falls into_matching window.

Time signals with 0 or negative amplitude are not participate in T0 for TOF and efficiency is reduced. Fixed were implemented and reconstruction of run 189616 HM studies with last Friday tag shown that most problems gone but not all.

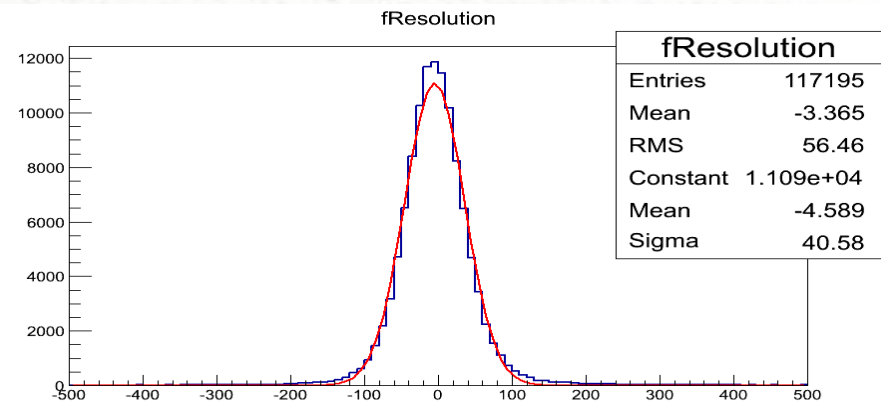
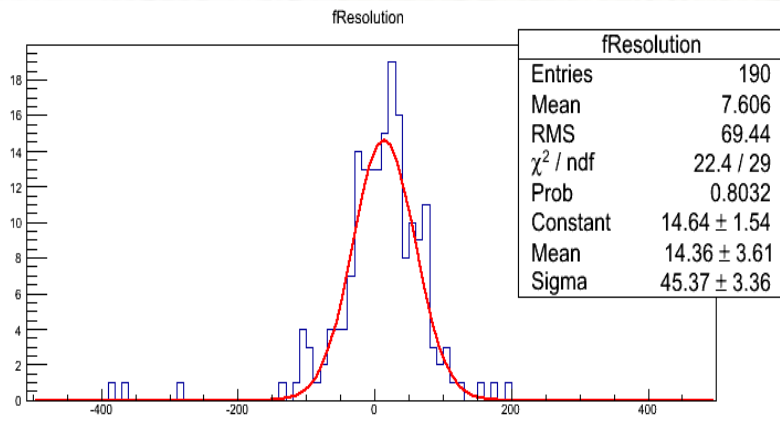


T0 online calibration

AliHLTTZEROCalibrationComponent works under HLT framework but needs more tests and additional functionality to replace **CPass0/1**.



Mean PMT2 time position from HLT(left) and offline pass1 QA (right)



T0 detector resolution from HLT and offline pass1 QA (right)