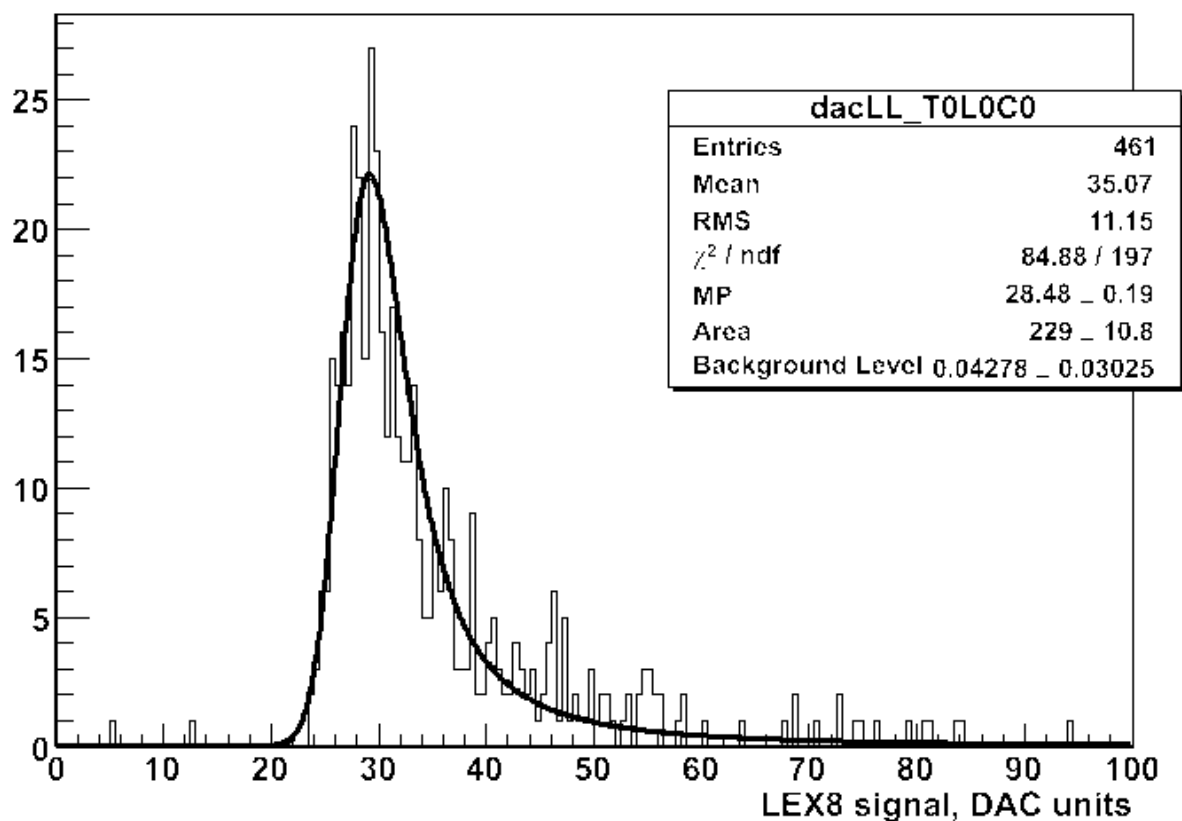


CAL calibration with protons - based on 17 calibOps runs

I've processed 17 runs of calibOps configuration by calibGenCAL and have made a fit of a proton peak position for each crystal.

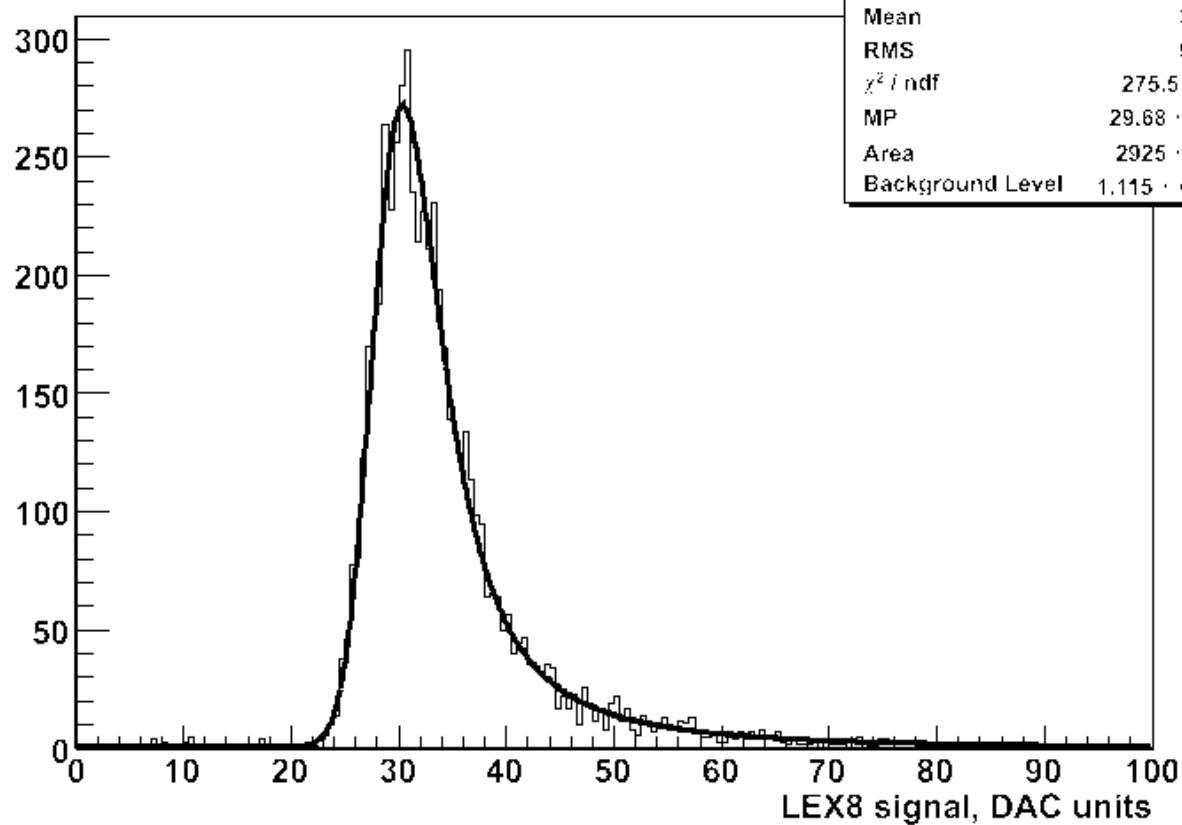
Following two plots show the proton signal for one crystal on orbit

dacLL_T0L0C0 - calibOps (17 runs)



and the muon signal in the same crystal on the ground.

dacLL_T0L0C0 - ground muons 03/2007

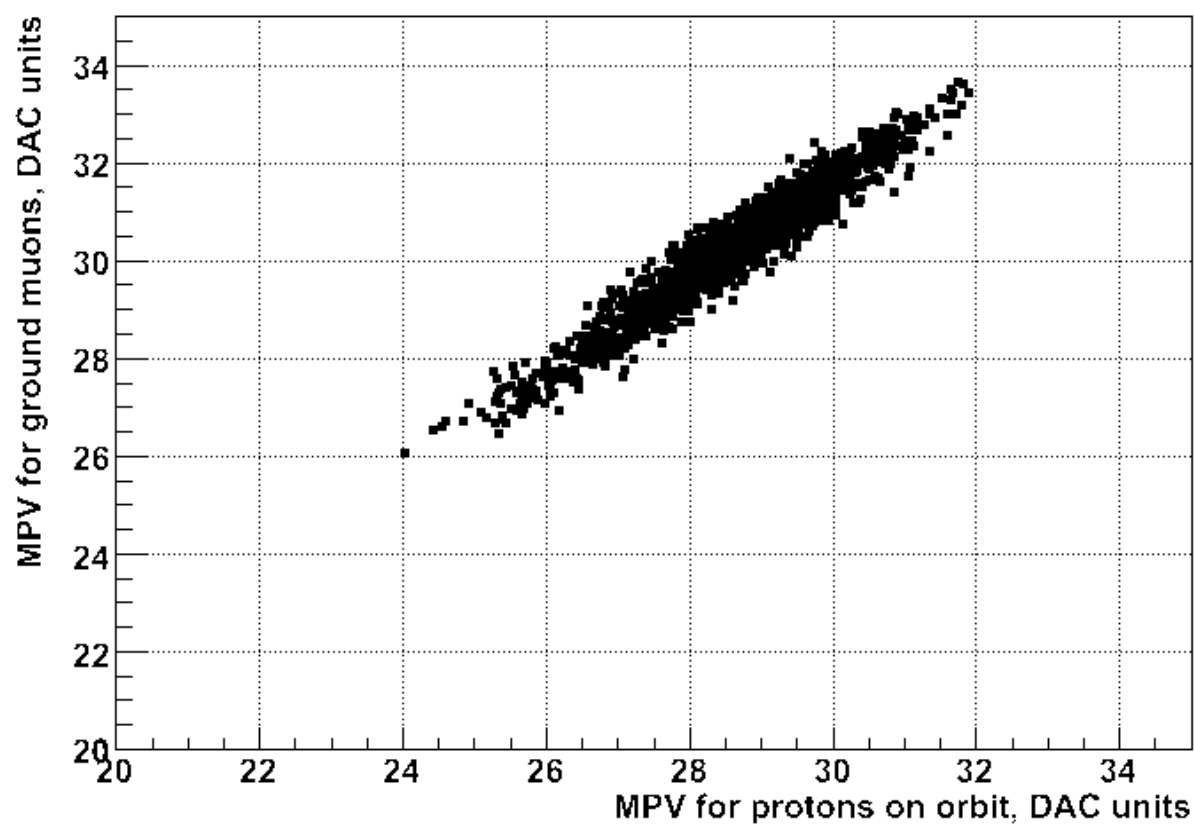


dacLL_T0L0C0

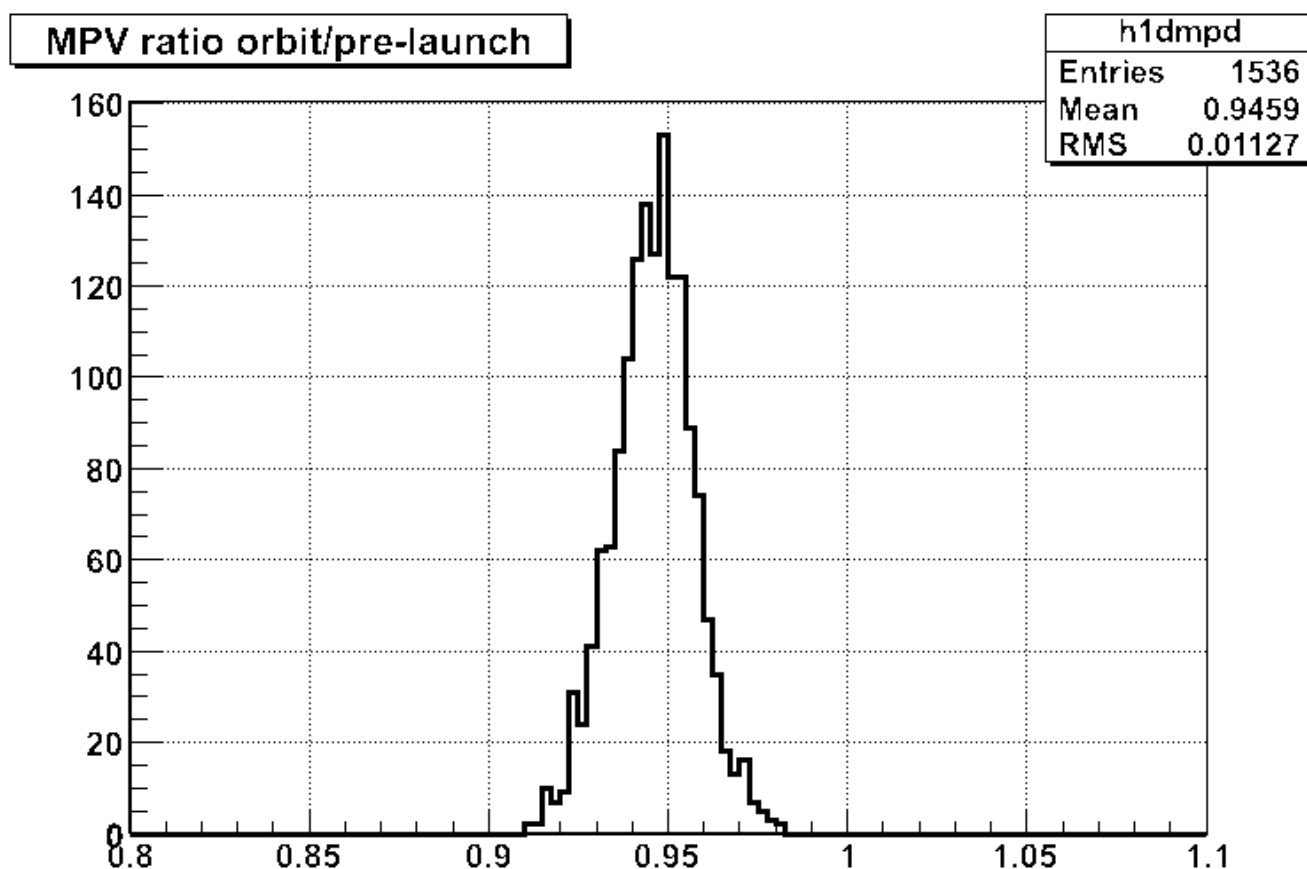
Entries	5808
Mean	34.53
RMS	9.196
χ^2 / ndf	275.5 / 197
MP	29.68 \pm 0.05
Area	2925 \pm 38.8
Background Level	1.115 \pm 0.158

The correlation of MPVs on the ground vs orbit is shown on the next plot for all crystals

MIP signal Landau MPV, ground (muons) vs orbit (protons)



The histogram of the MPV ratio orbit/ground on the next plot.



So proton signal on orbit is in average 5% smaller than muon signal on the ground. The simulation of proton signal taking into account the real spectrum, angular distribution both(different from ground muons) is needed to extract correct crystal calibration coefficient (so far I just used 11.2 MeV - the same as for muons).