

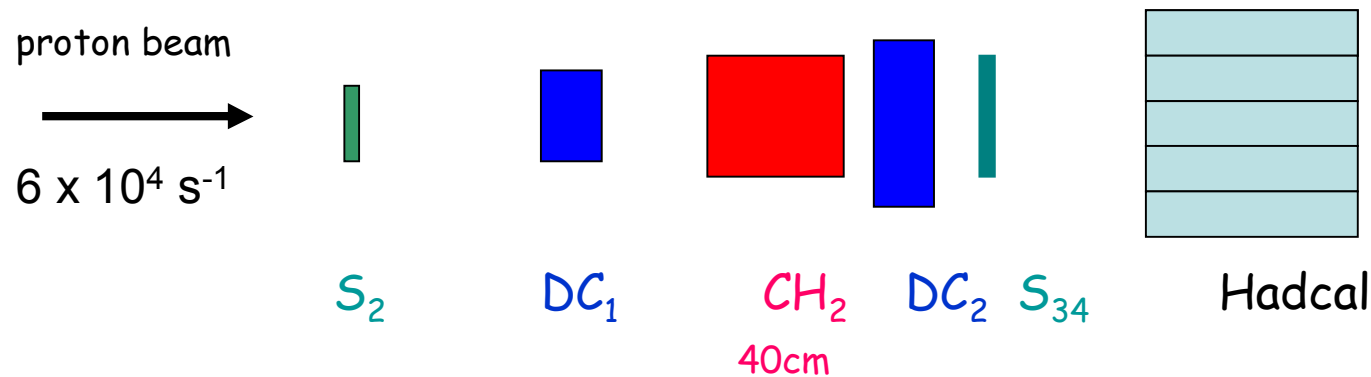
The first test of the ALPOM2 setup

25.03. - 27.03. 2013, 3 shifts, 36 hours

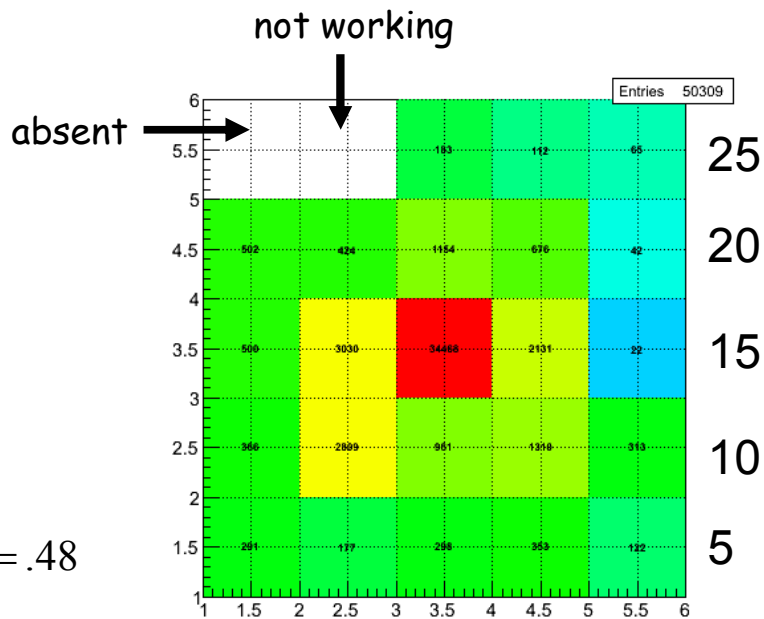
Deuteron beam - 4.4 GeV/n - 2 shifts
4.8 GeV/n - 1 shift

$p_p = 5.66 \text{ GeV}/c$

Fragmentation target:
carbon, 30 cm,
located in F4

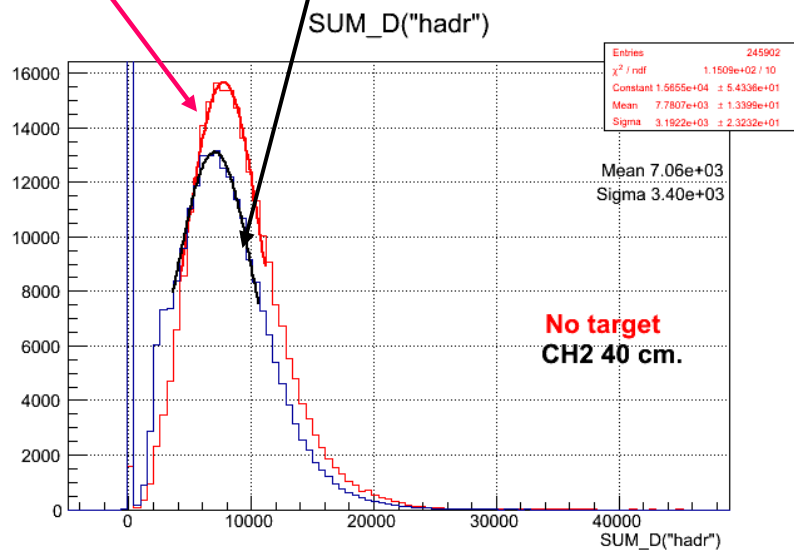


Schematic view of the setup

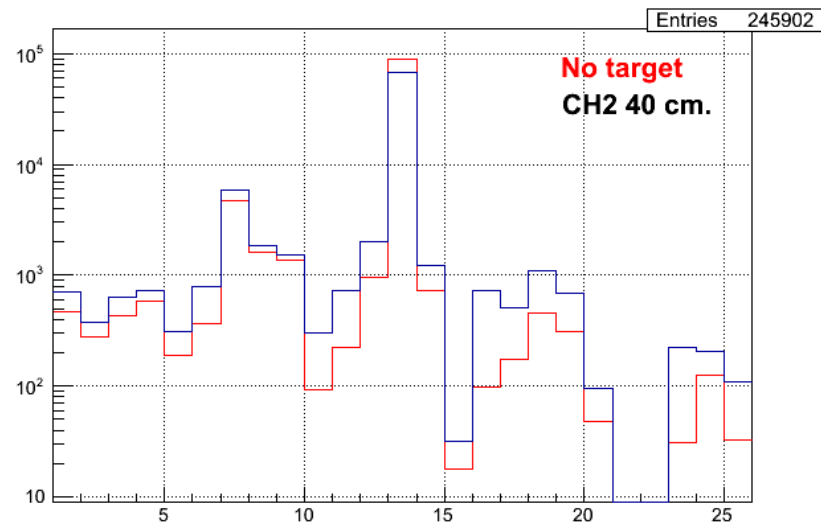


$$\frac{\Delta E}{E} = .41$$

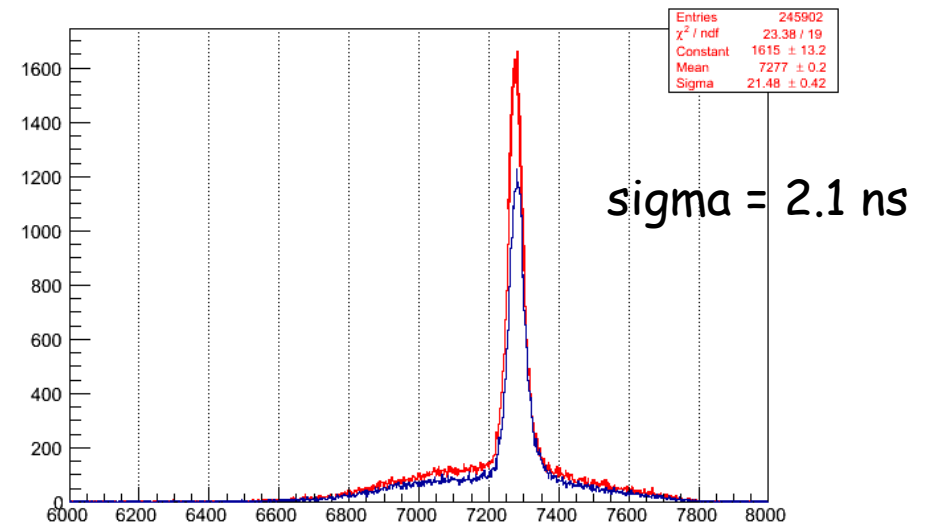
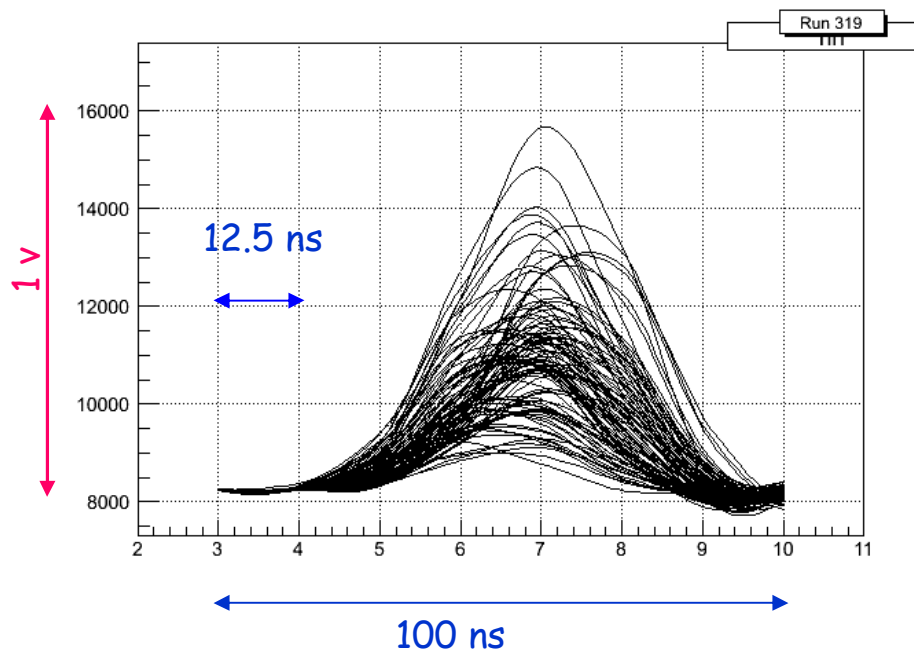
$$\frac{\Delta E}{E} = .48$$



Sum of the amplitudes



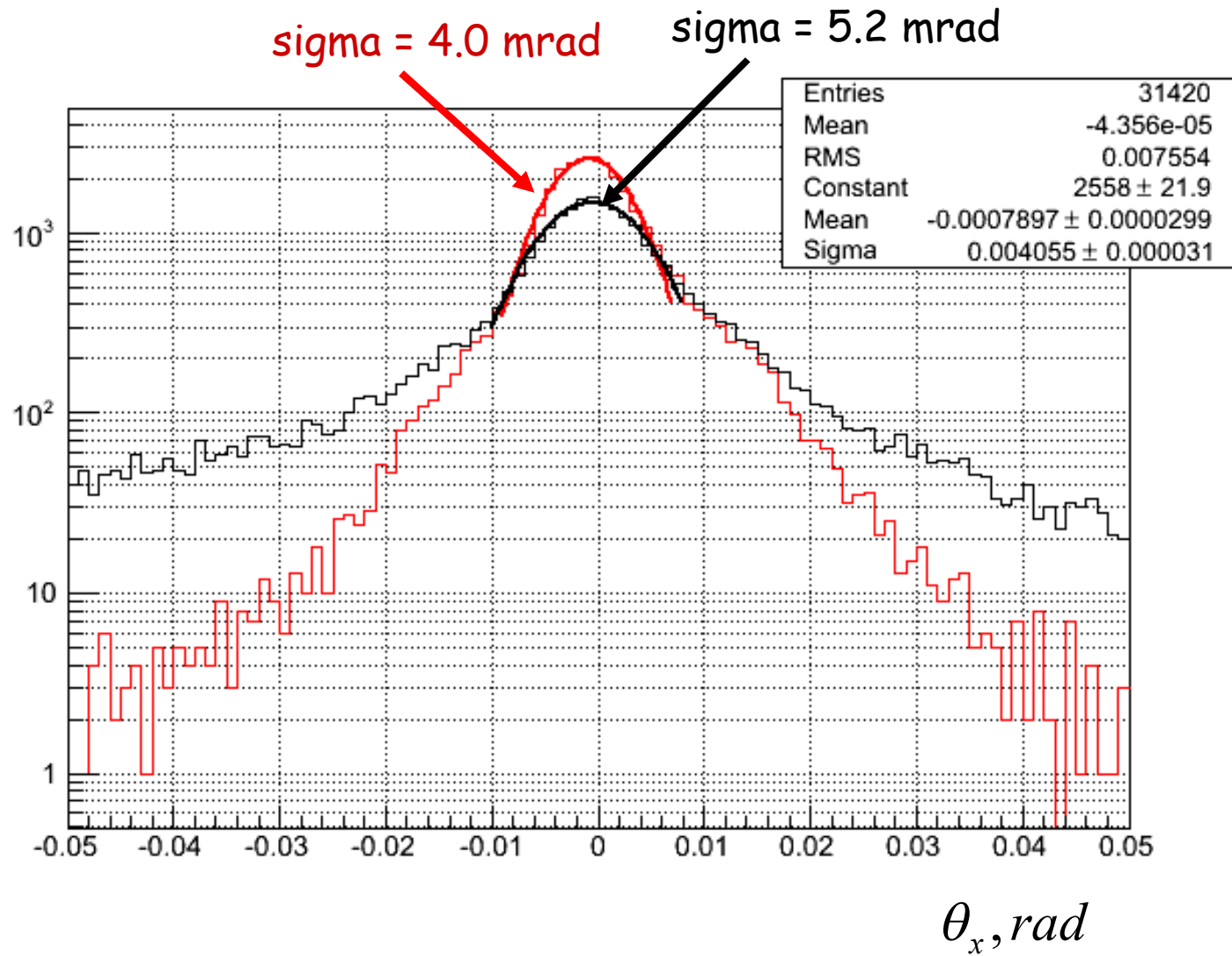
Shapes of signals from hadron calorimeter



$$\Delta t = t_{s2} - t_{hadcal}$$

Tracking, x-plane

No target, 31420 events
CH2 40cm, 30830 events

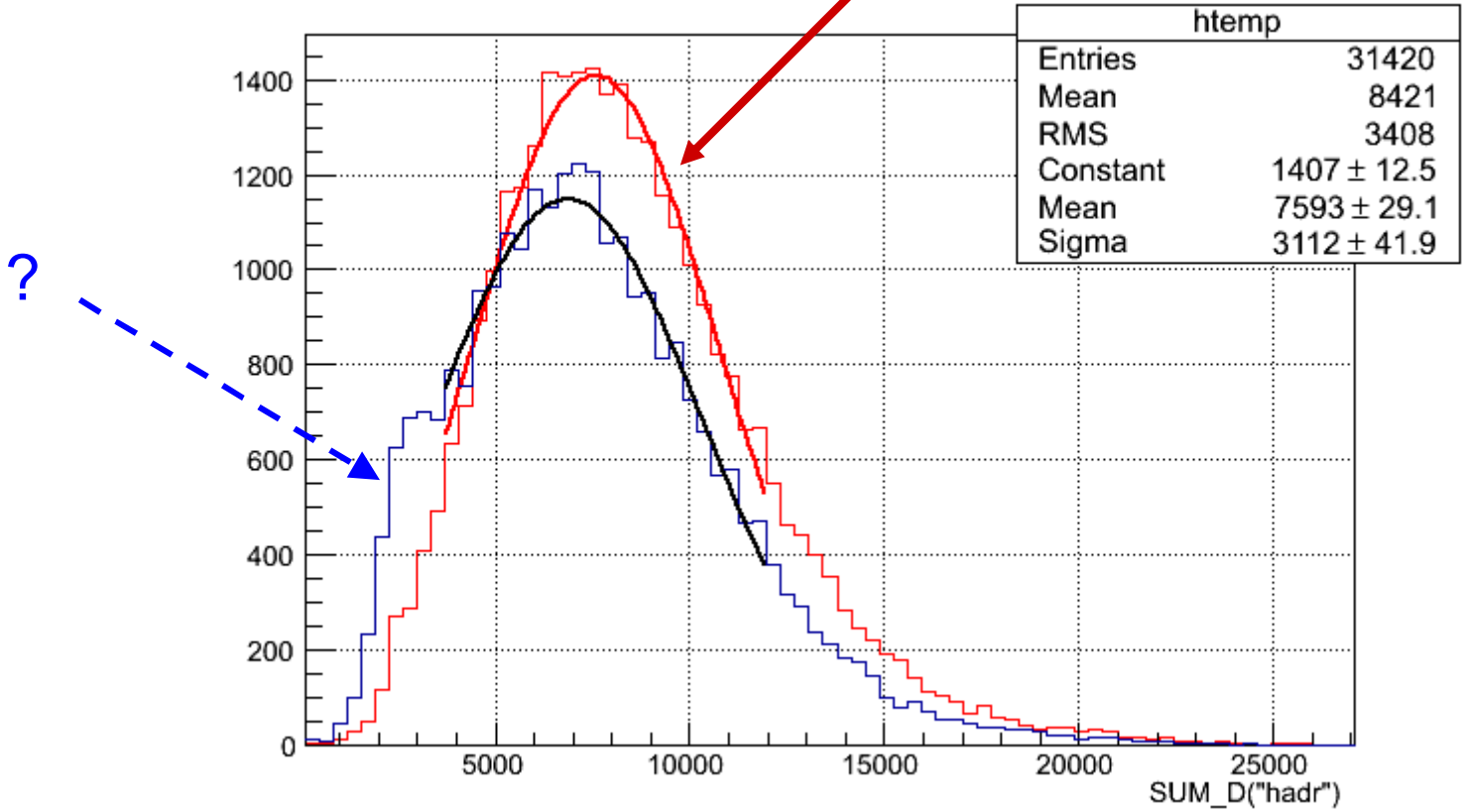


Hadron calorimeter

No target
CH2

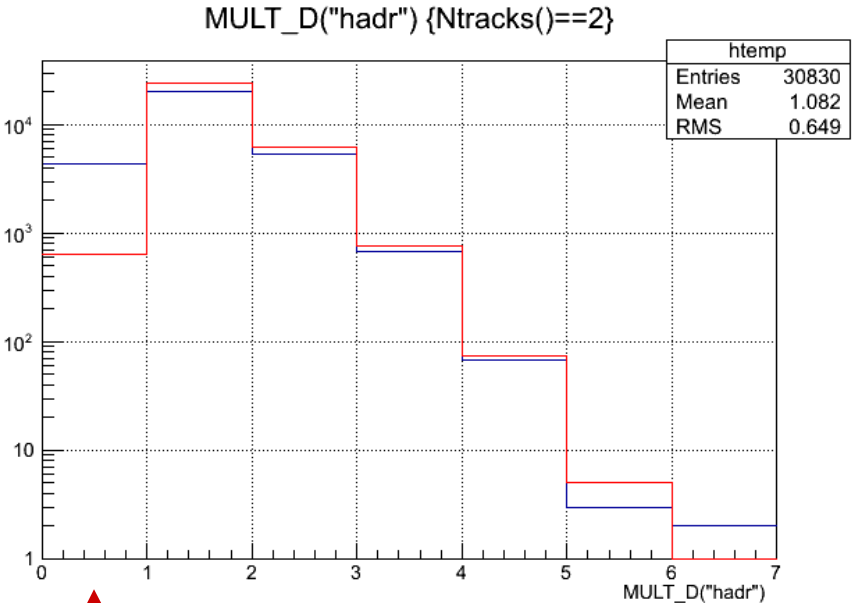
$$\Delta E/E = 0.41$$

SUM_D("hadr") {Ntracks()==2}



Sum of the amplitudes

No target
CH2

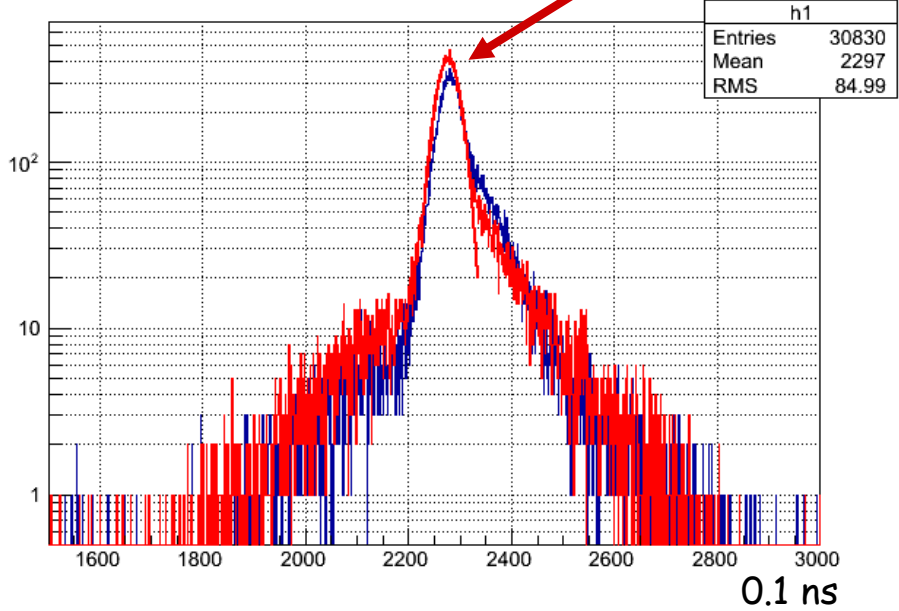


multiplicity

No response of
any module



sigma = 2.3 ns

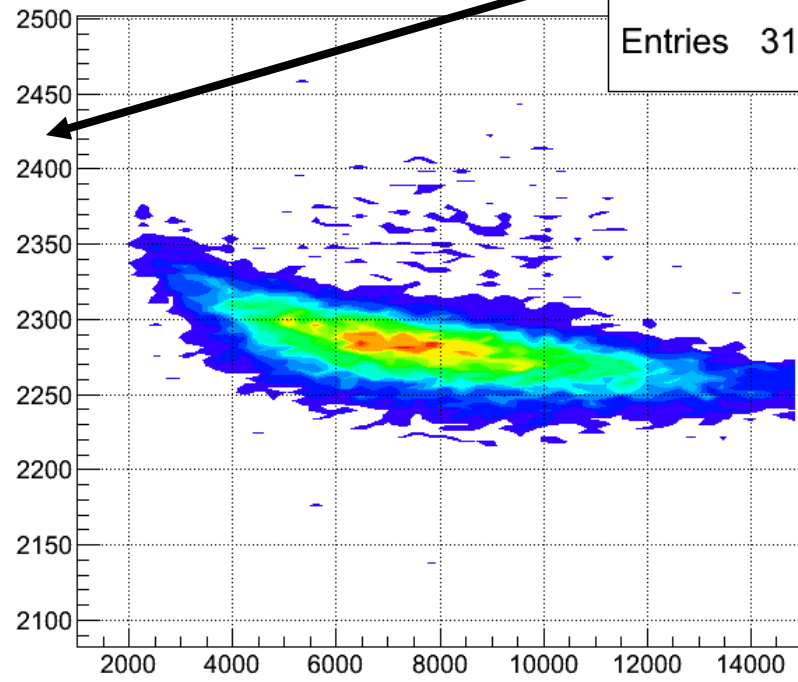


$$\Delta t = t_{s2} - t_{hadcal}$$

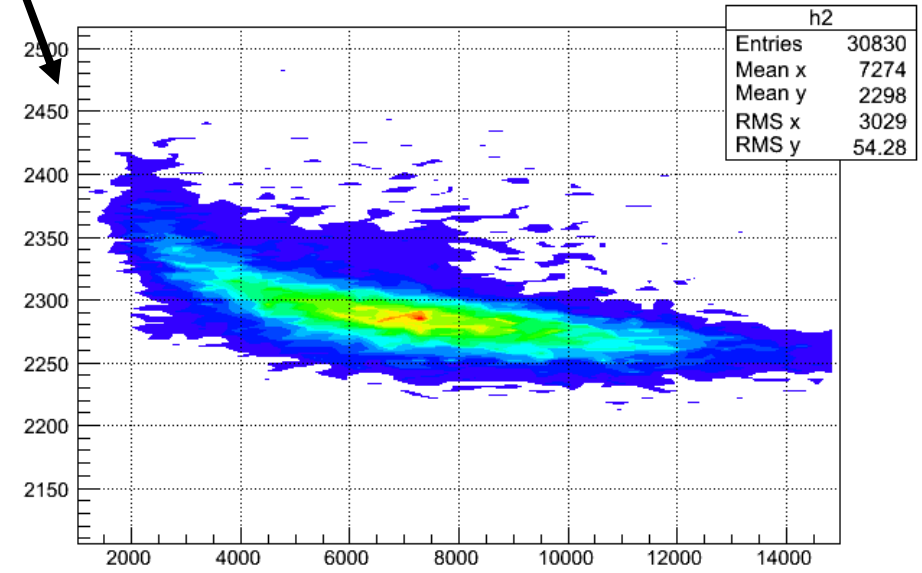
No target

$$\Delta t = t_{s2} - t_{hadcal}$$

CH2

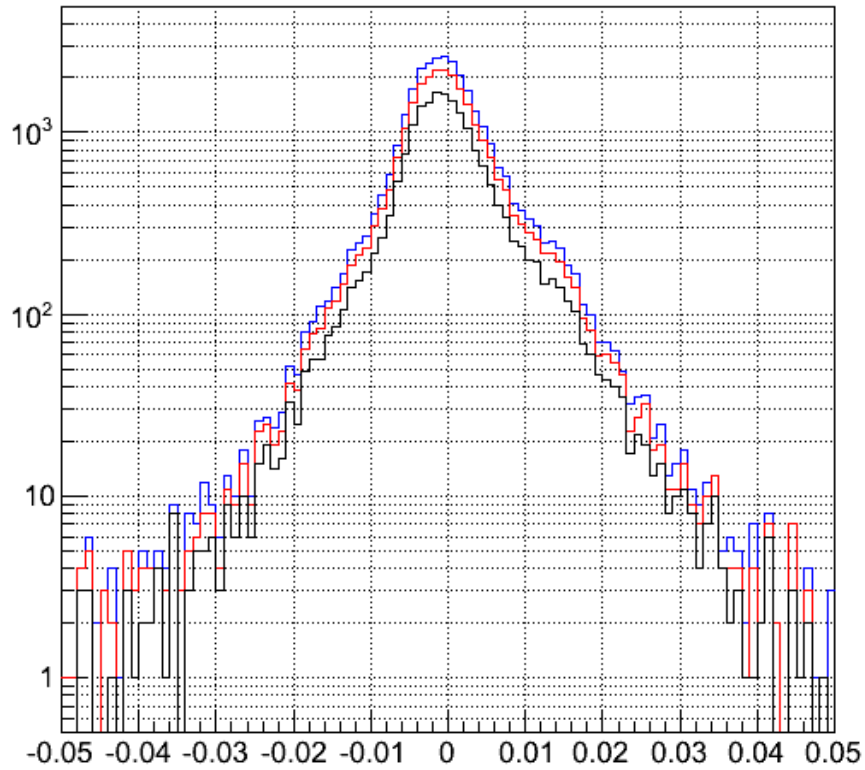


Sum of the amplitudes

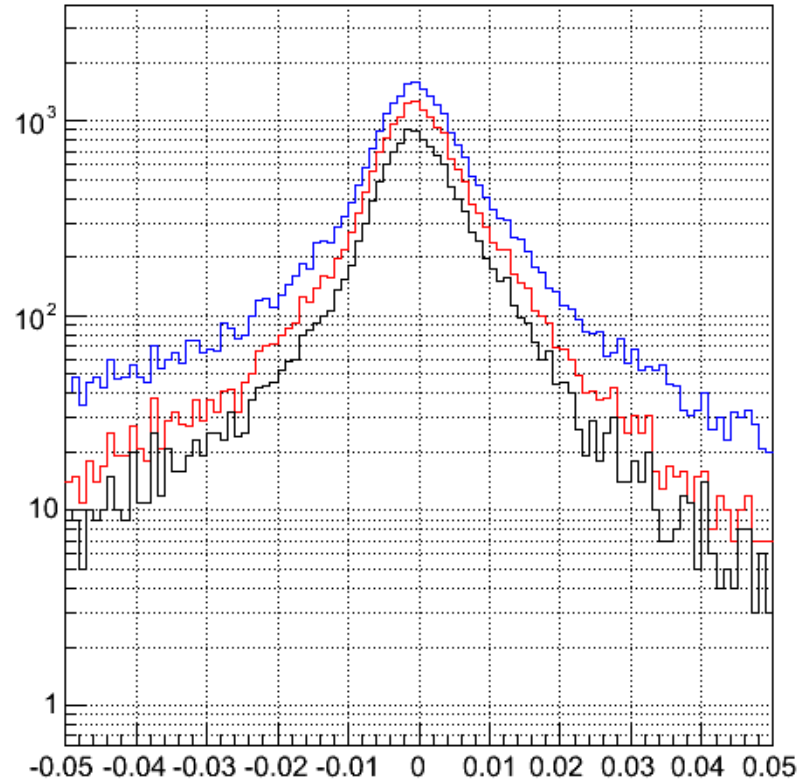


Sum of the amplitudes

No target



CH2



All amplitudes

➤ 5000

➤ 7000

$p\theta_x = 0.3$

$p\theta_x = 0.1$

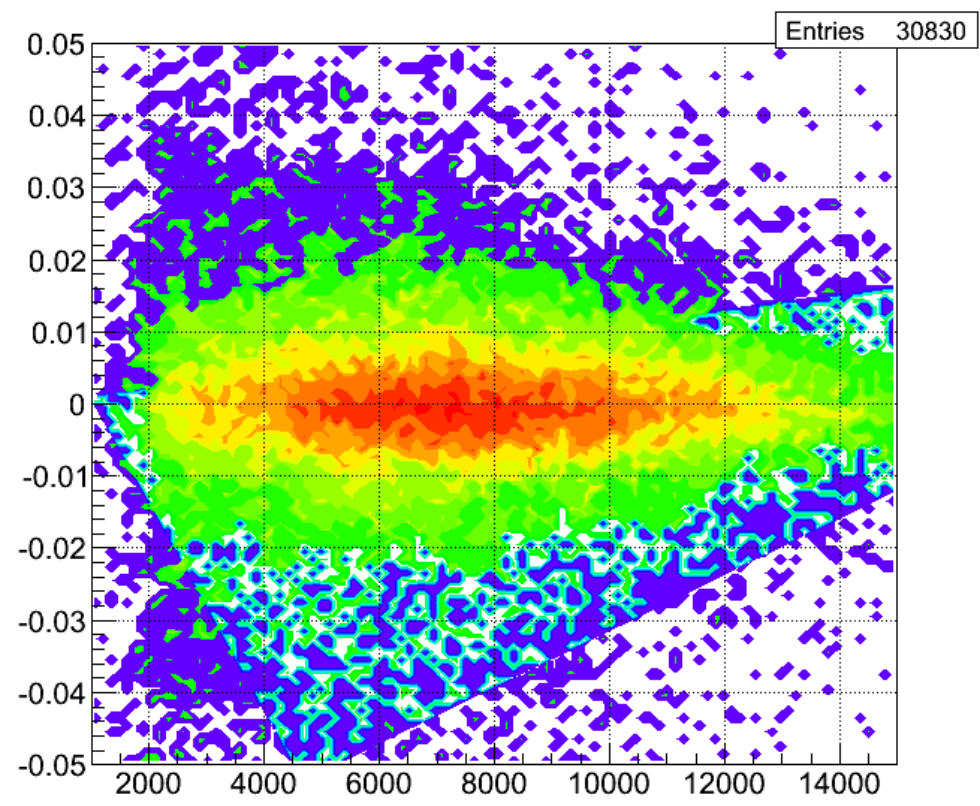
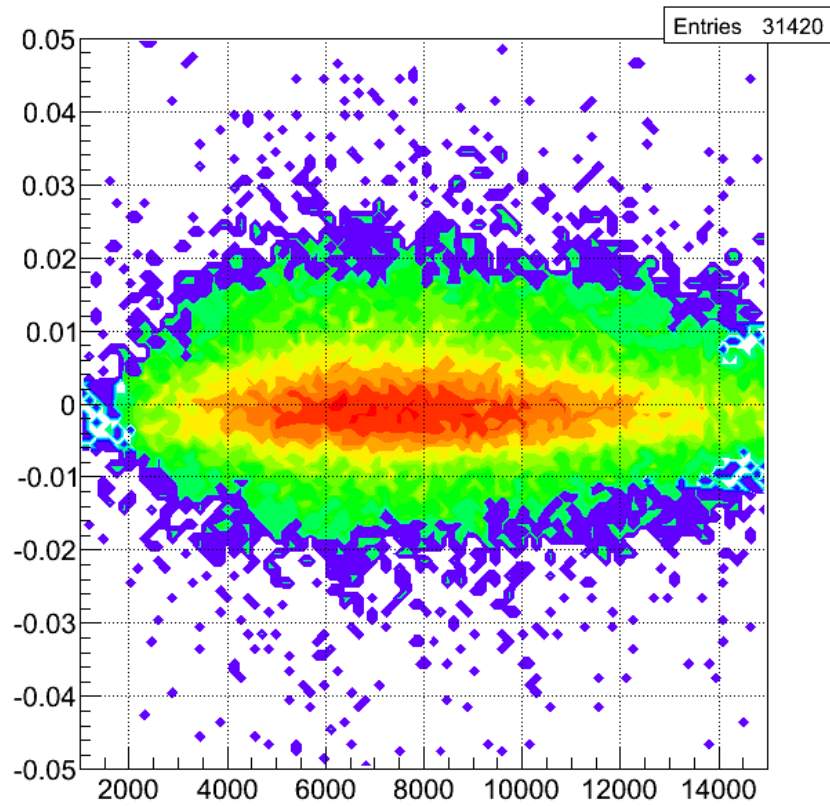
θ_x, rad

Maximum of
analyzing power

Scattering angle x-plane vs Sum of the amplitudes

No target

CH2



Sum of the amplitudes

Sum of the amplitudes

No target
CH2

10 a.u.

Threshold at TQDC

5 a.u.

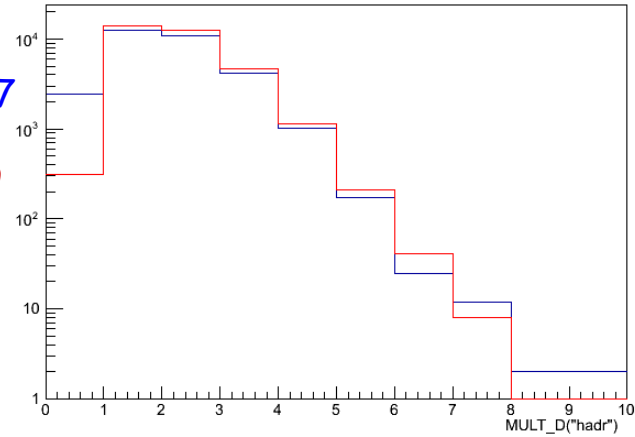
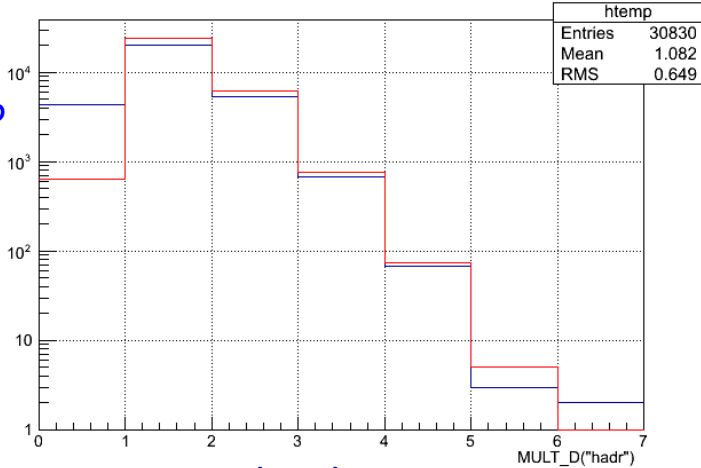


MULT_D("hadr") {Ntracks()==2}

MULT_D("hadr") {tr2.Ntracks()==2}

4406
630

2437
309

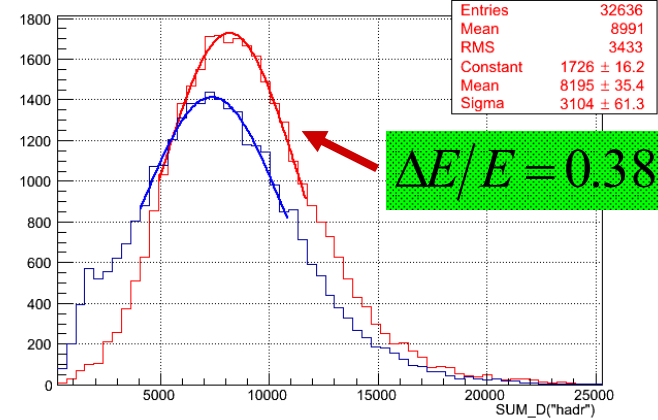
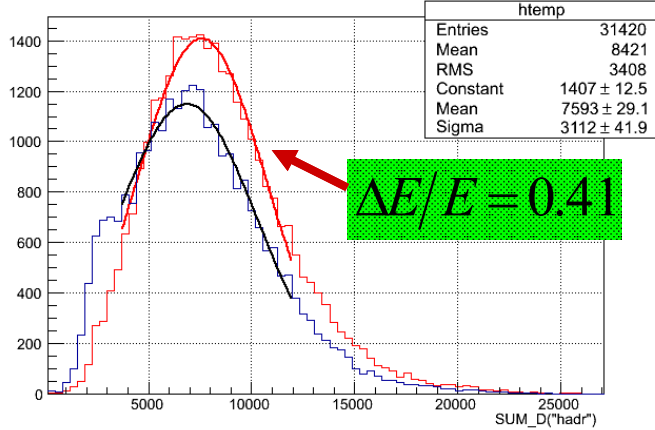


multiplicity

multiplicity

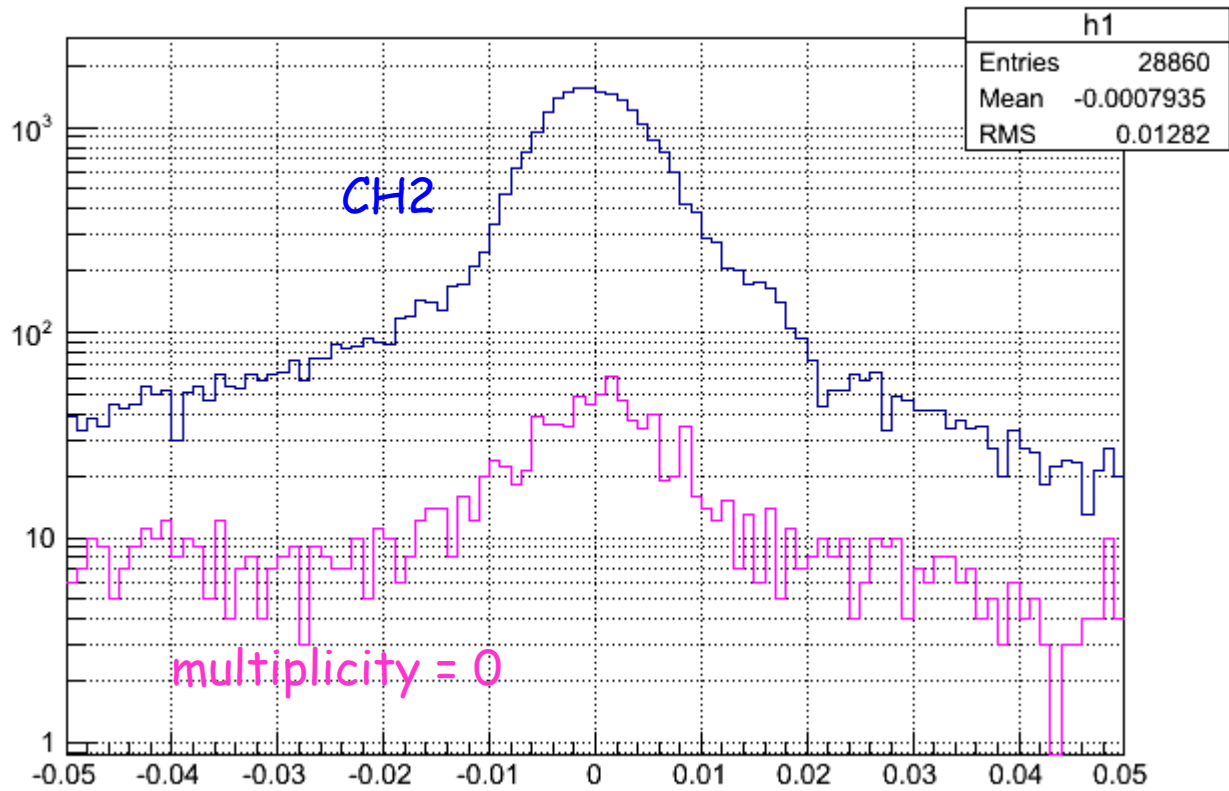
SUM_D("hadr") {Ntracks()==2}

SUM_D("hadr") {tr2.Ntracks()==2}



Sum of the amplitudes

Sum of the amplitudes



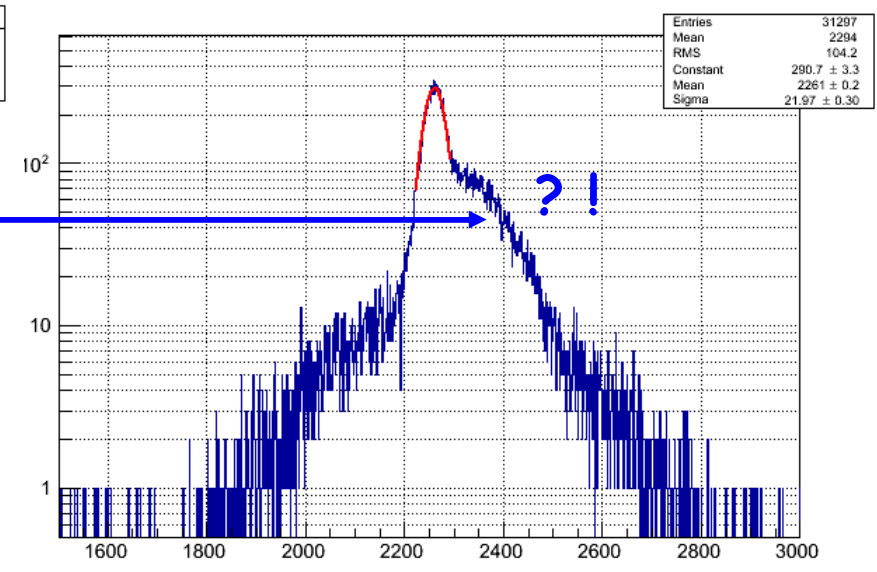
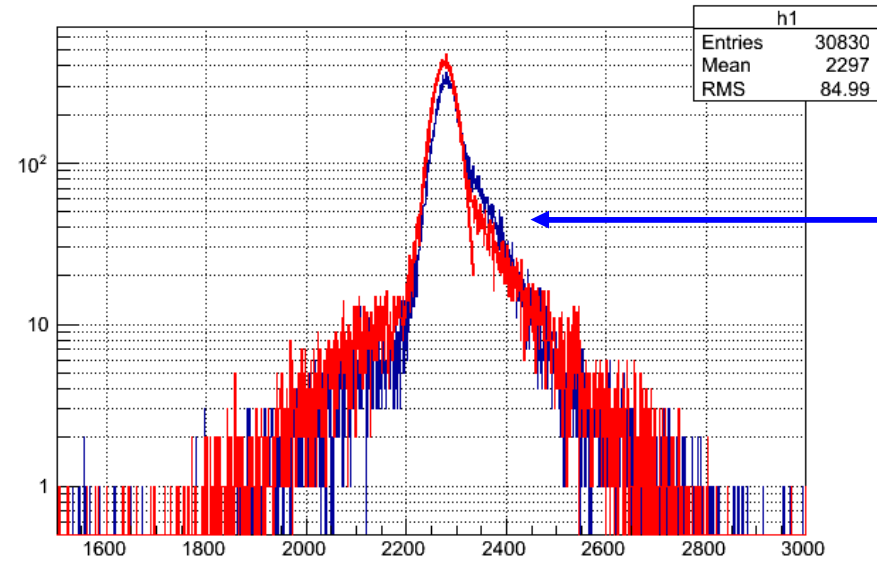
θ_x, rad

No target
CH2

10 a.u.

Threshold at TQDC

5 a.u.



$$\Delta t = t_{s2} - t_{hadcal}$$