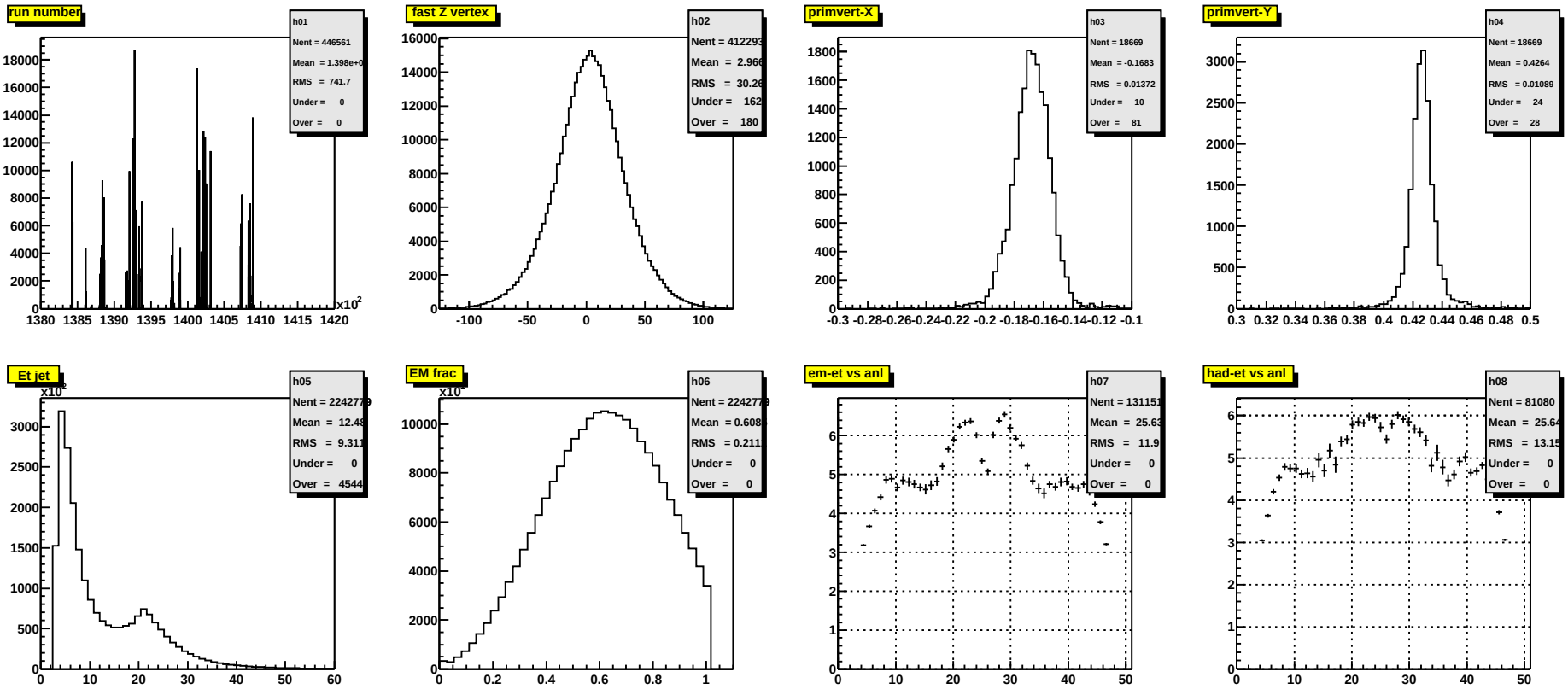
A look at East−West asymmetries in dijet balancing

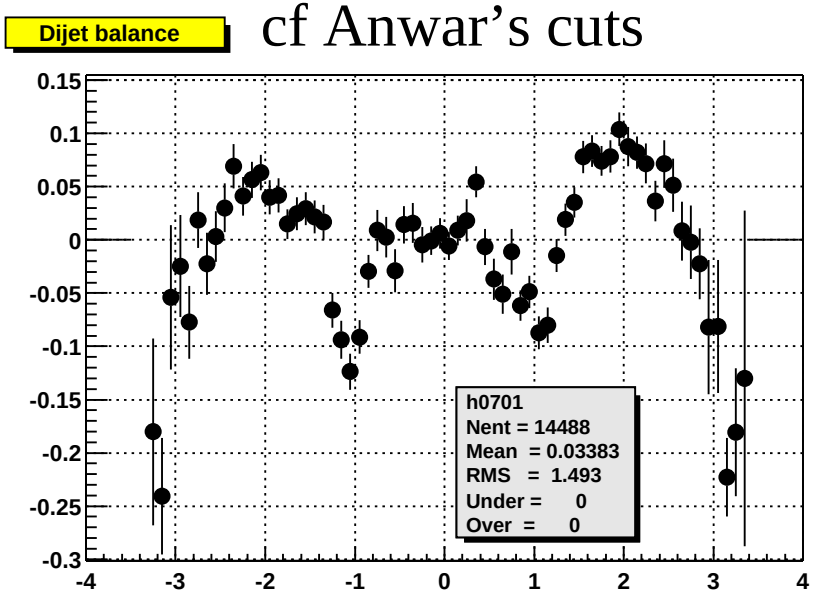
Ch. Currat − LBNL

<z>~ +3 cm

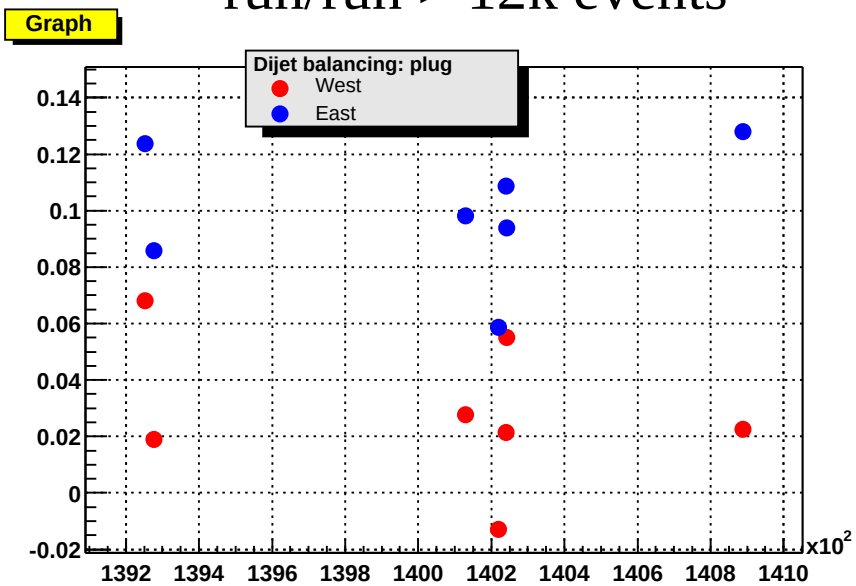


Ch. Currat − LBNL

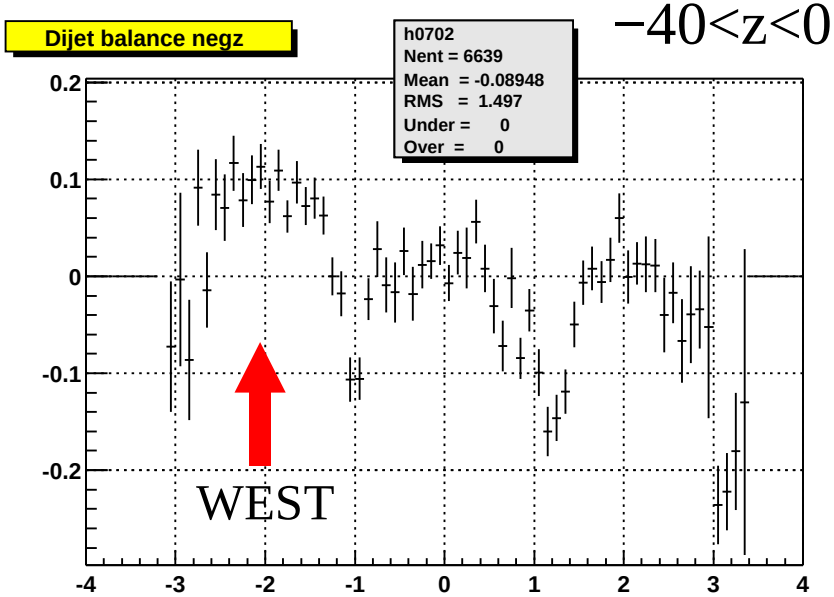
J20 / Vertex strategy 3
cf Anwar's cuts



run/run > 12k events

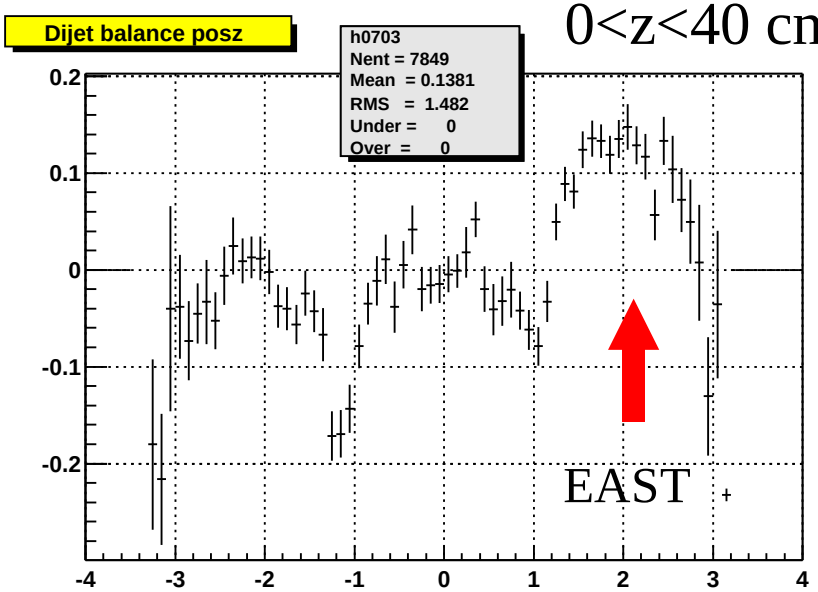


−40<z<0 cm



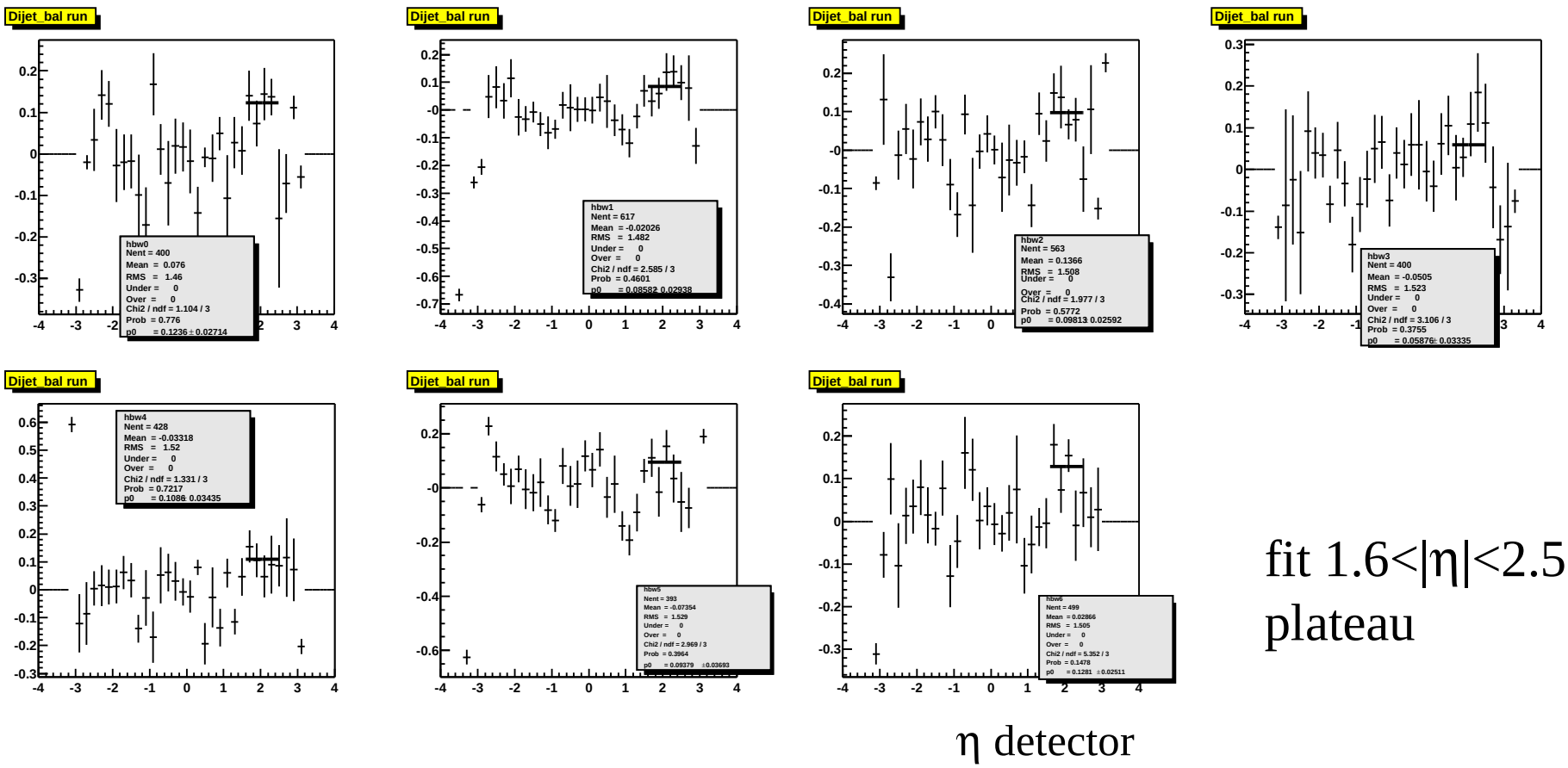
η detector

0<z<40 cm



η detector

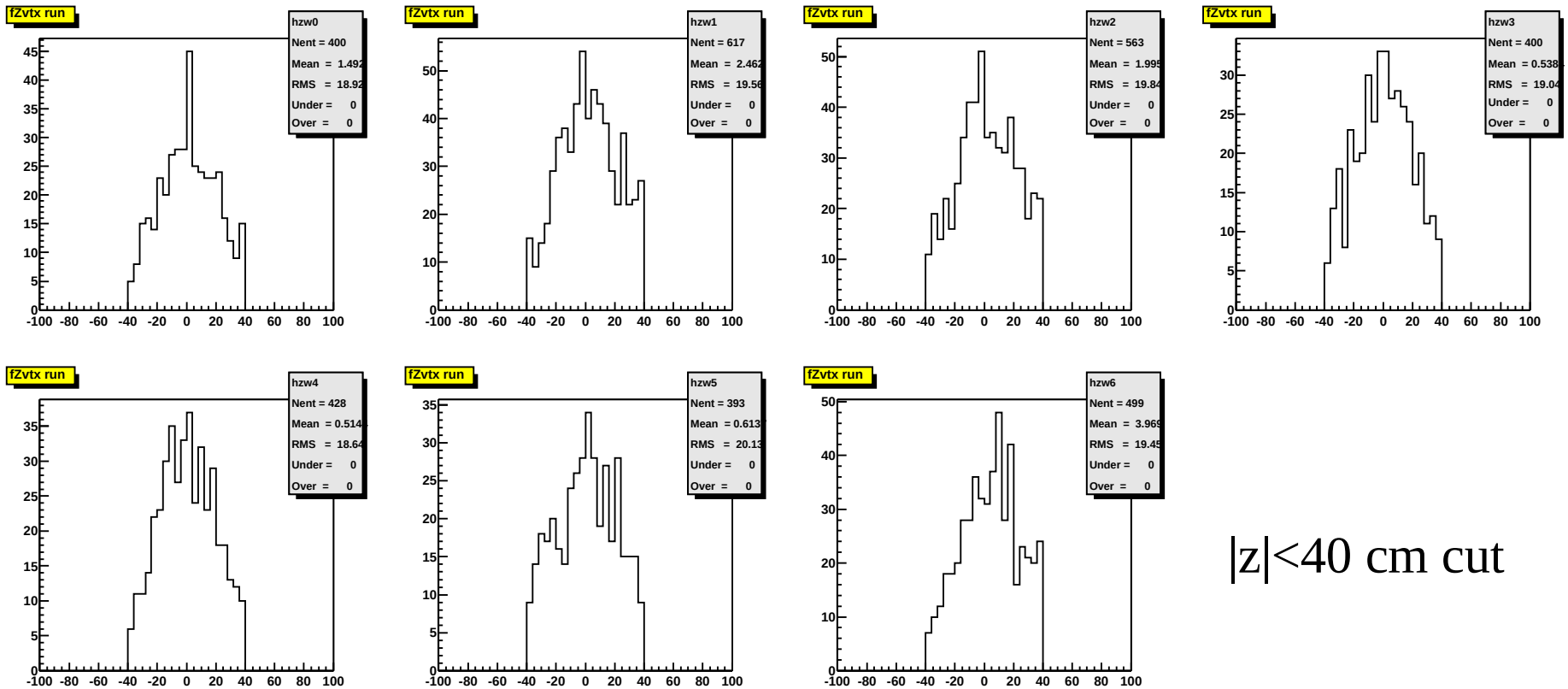
Dijet balance run/run with #events > 12k



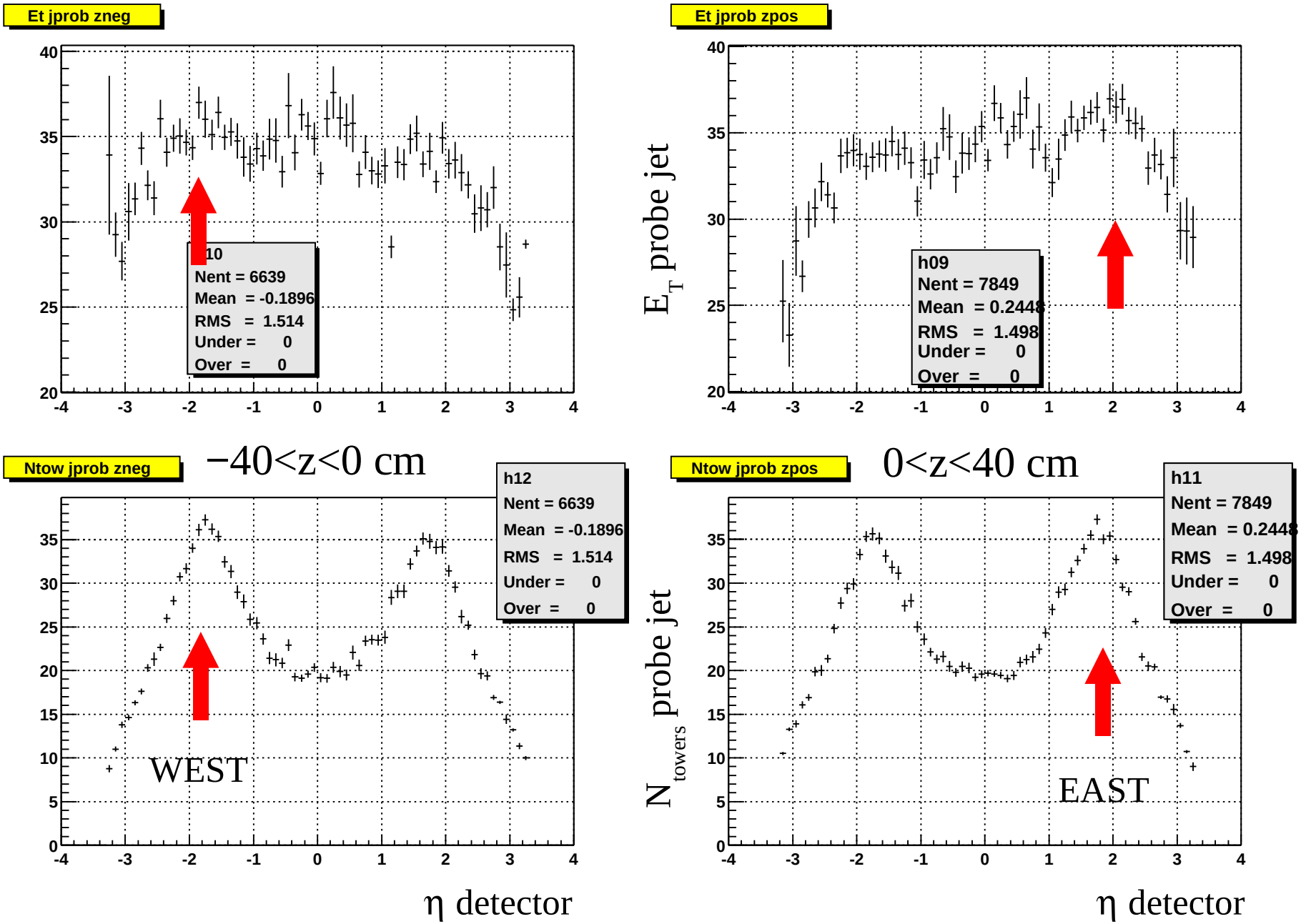
η detector

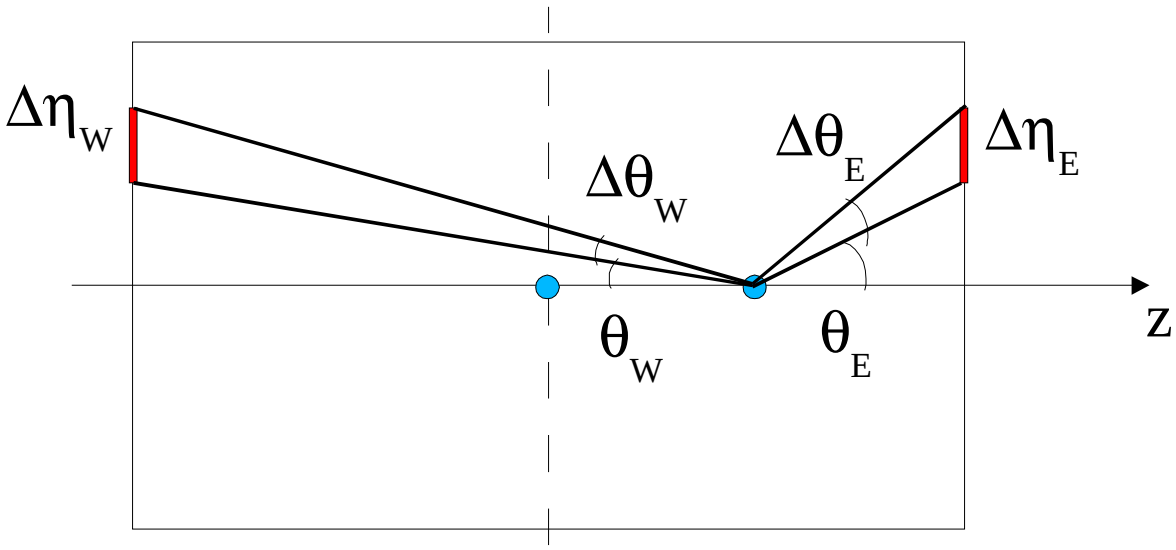
fit 1.6<|η|<2.5 plateau

Z distribution (fast Z vertex) run/run with #events > 12k from events selected for dijet balancing



|z|<40 cm cut


Et jprob zneg
h10
Nent = 6639
Mean = -0.1896
RMS = 1.514
Under = 0
Over = 0
Et jprob zpos
h09
Nent = 7849
Mean = 0.2448
RMS = 1.498
Under = 0
Over = 0
E_T probe jet
−40<z<0 cm
0<z<40 cm
Ntow jprob zneg
h12
Nent = 6639
Mean = -0.1896
RMS = 1.514
Under = 0
Over = 0
Ntow jprob zpos
h11
Nent = 7849
Mean = 0.2448
RMS = 1.498
Under = 0
Over = 0
N_{towers} probe jet
WEST
EAST
η detector
η detector



In detector frame (η detector, z=0):

R_{cone} ⇨ jet

$$\Delta\eta_W \equiv \Delta\eta_E$$

In "event" frame: illustration with z>>0

$\theta_E > \theta_W$

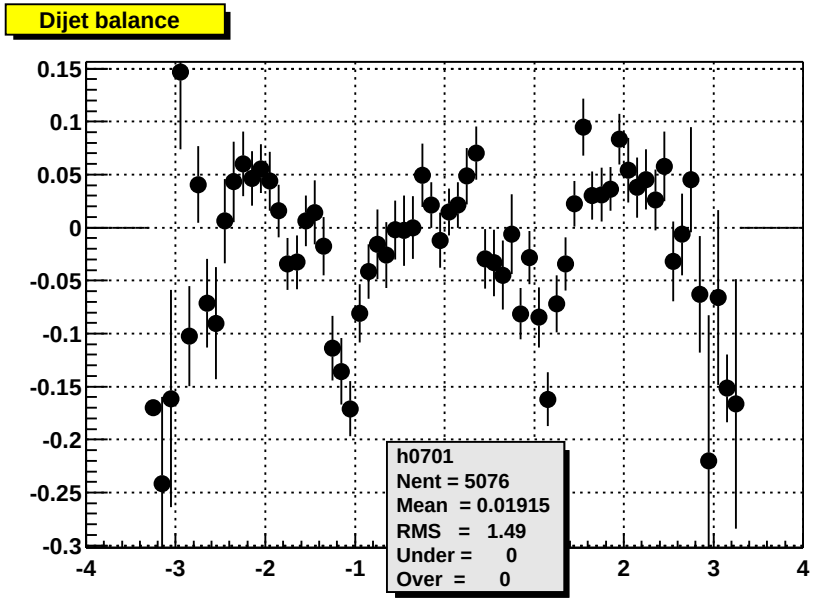
$\Delta\theta_E > \Delta\theta_W$

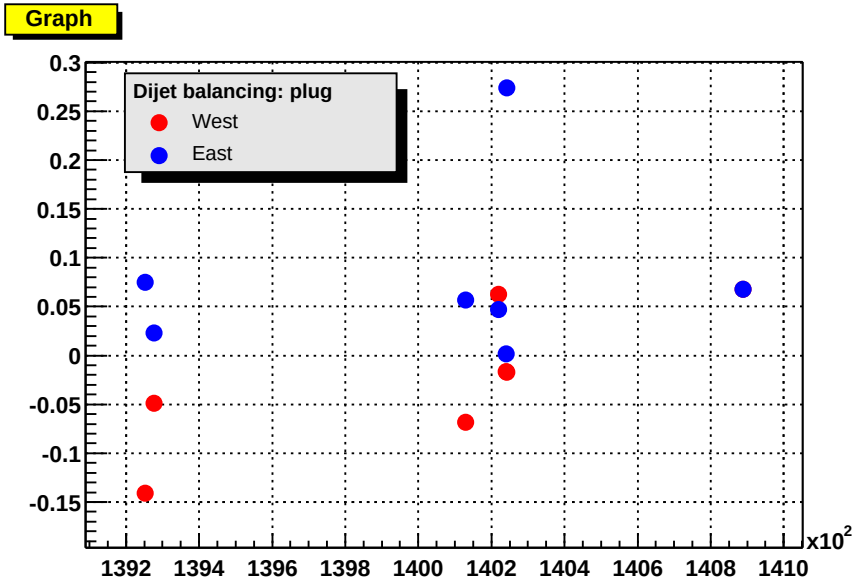
⇨

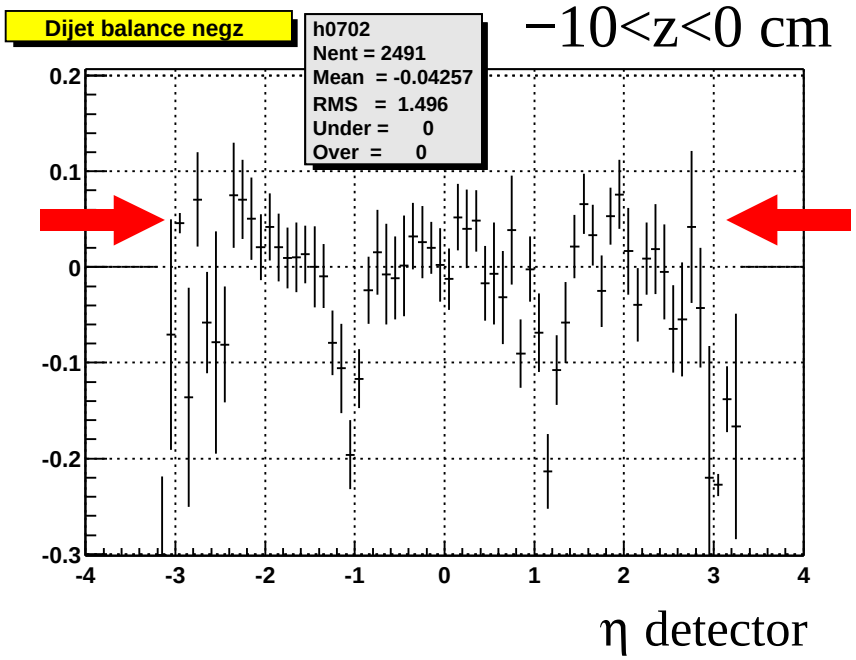
$E_T(jet)_E > E_T(jet)_W$

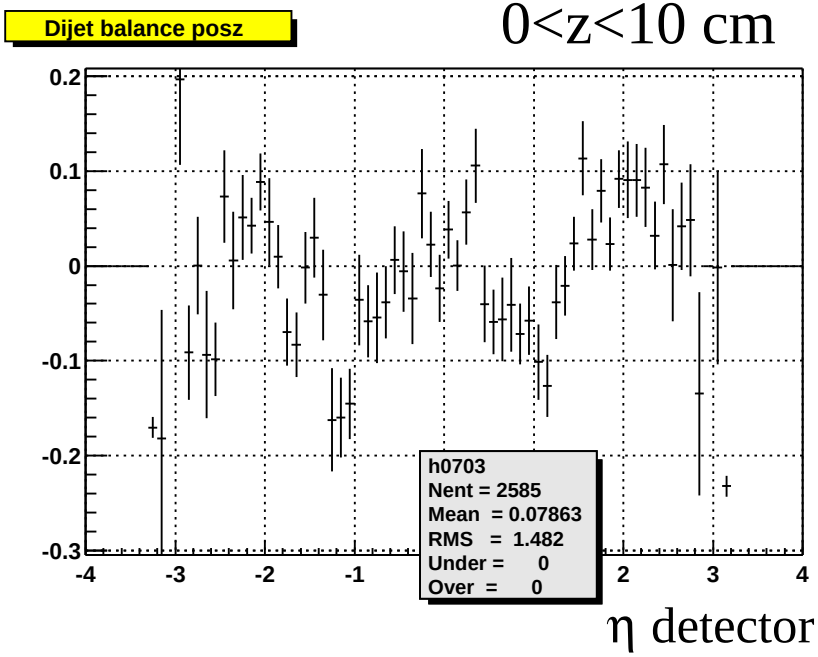
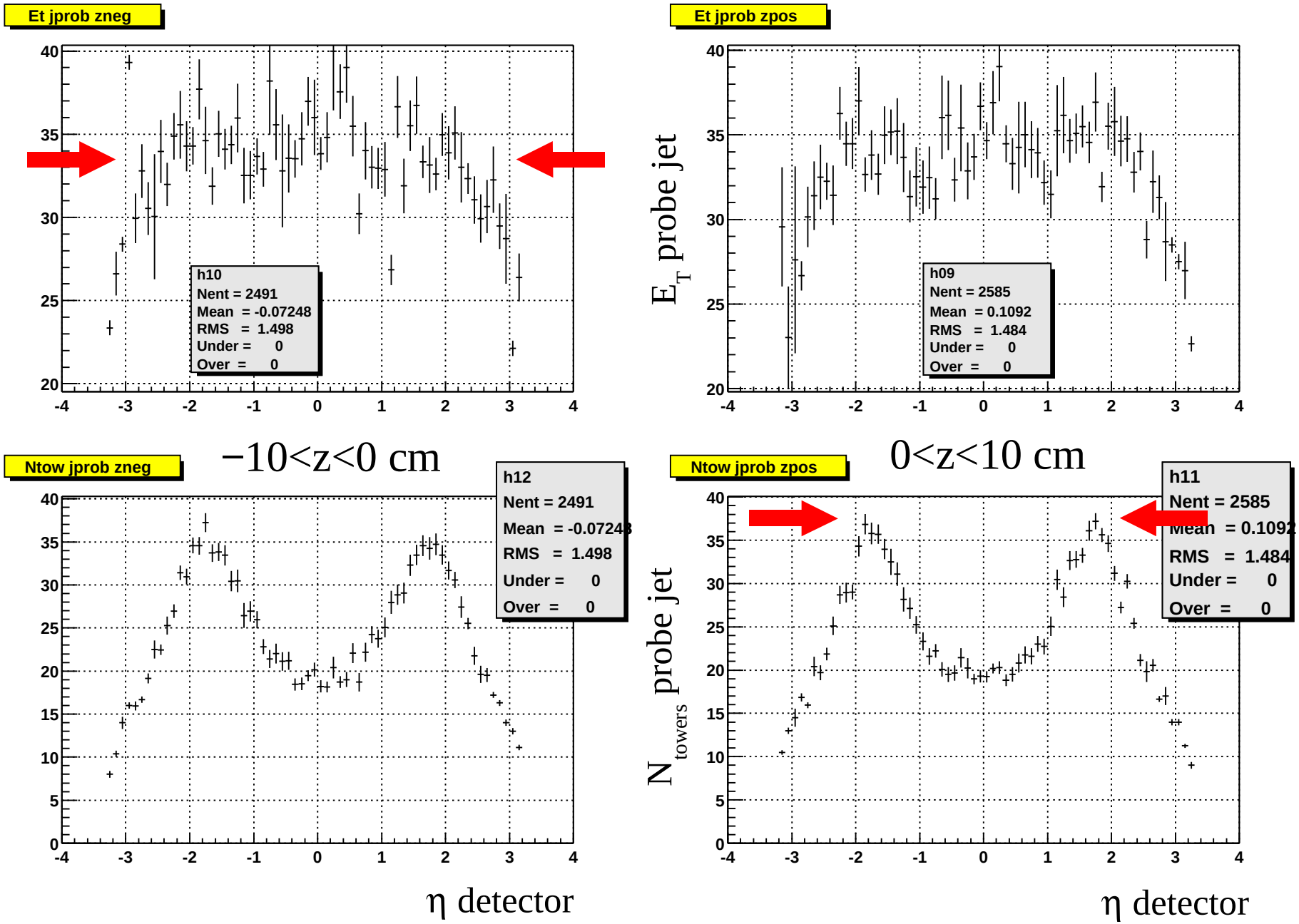
$N_{towers}(j)_E > N_{towers}(j)_W$

Same exercise, but with |z|<10 cm (cf p.3)









Same exercise, but with |z|<10 cm (cf p.6)