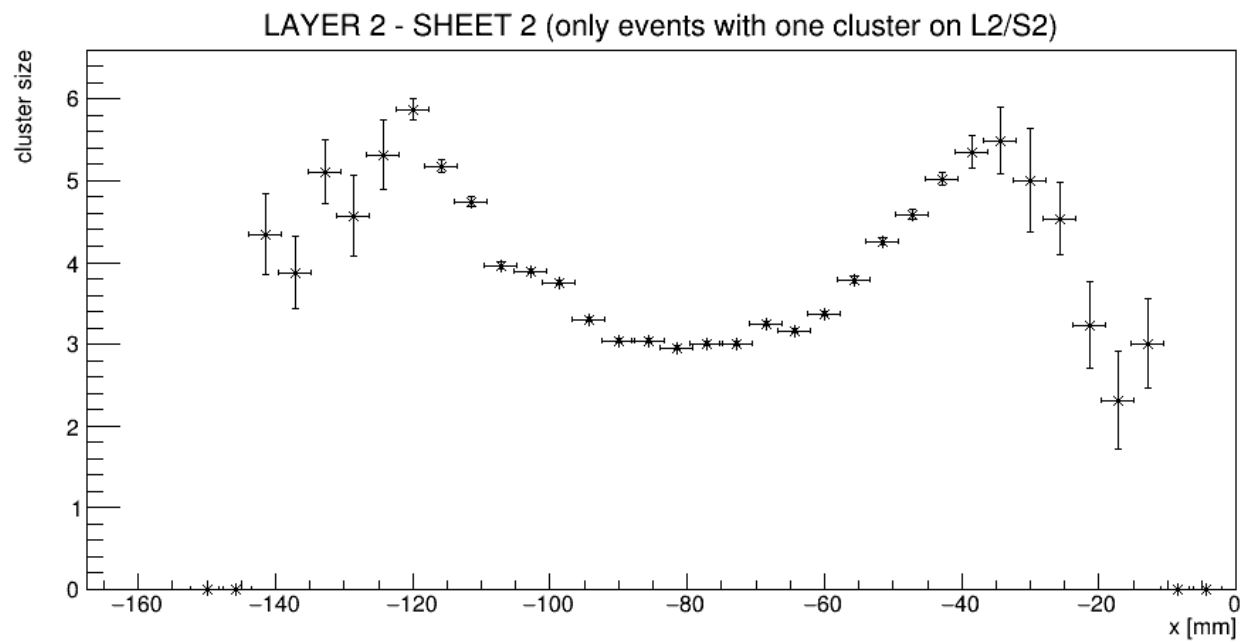# RUN 4 in CgemBoss

vidyo, 2019-12-18

MEAN CHARGE & CL. SIZE of 1D clusters – view x

LAYER2 - SHEET2 (only events with one cluster in L2/S2)

LAYER 2 - SHEET 2 (only events with one cluster on L2/S2)
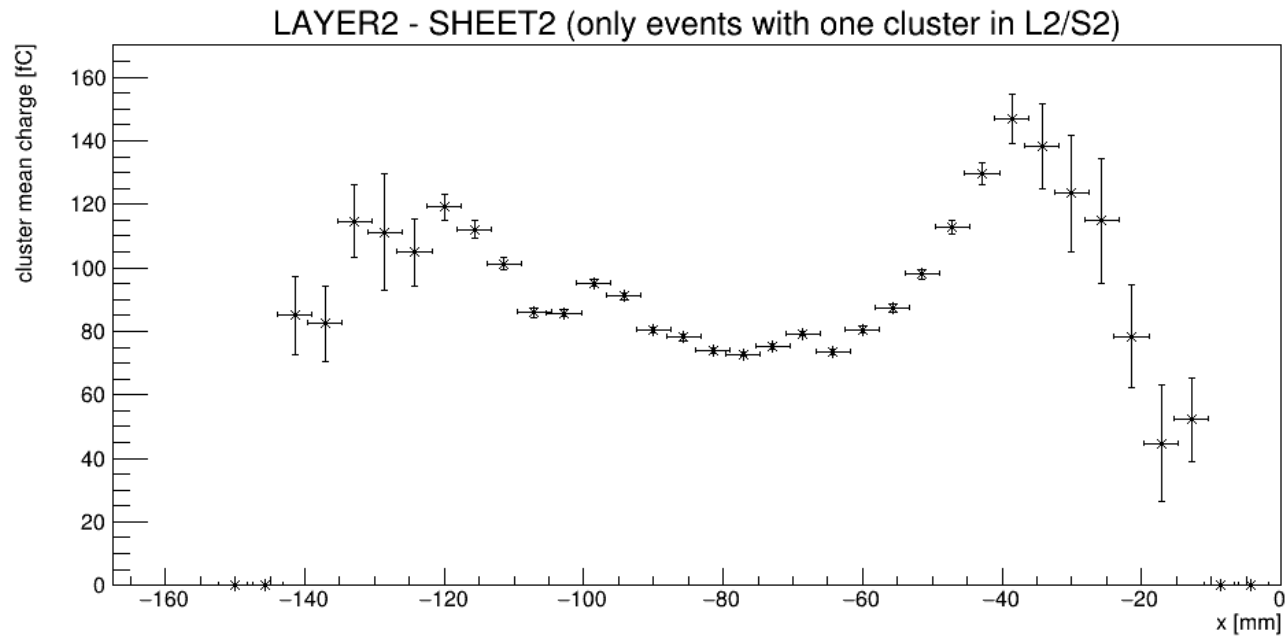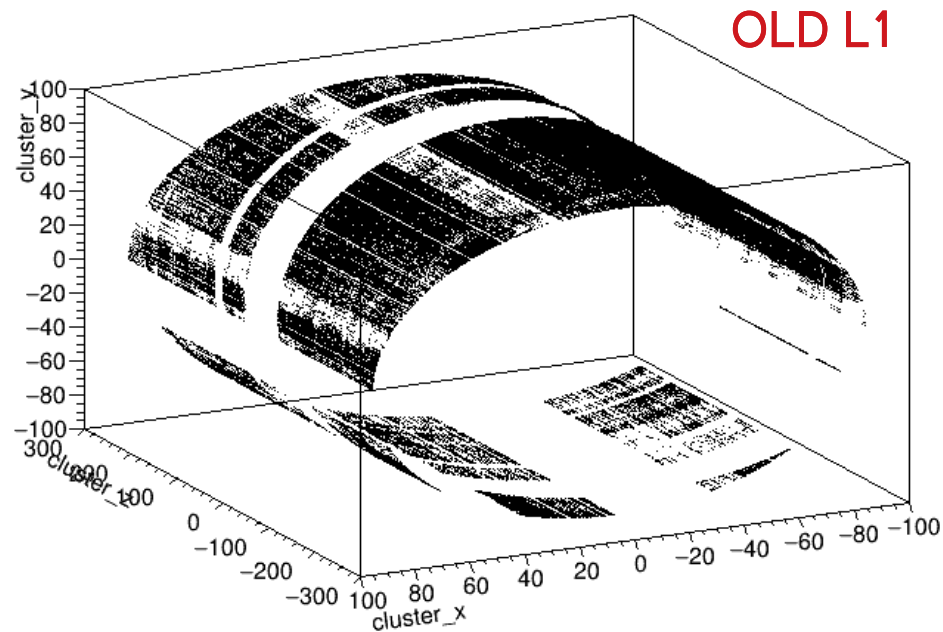
plot ALL the combinations of cluster X and V
→ combinatorial and no selection

3D view - L1

OLD L1

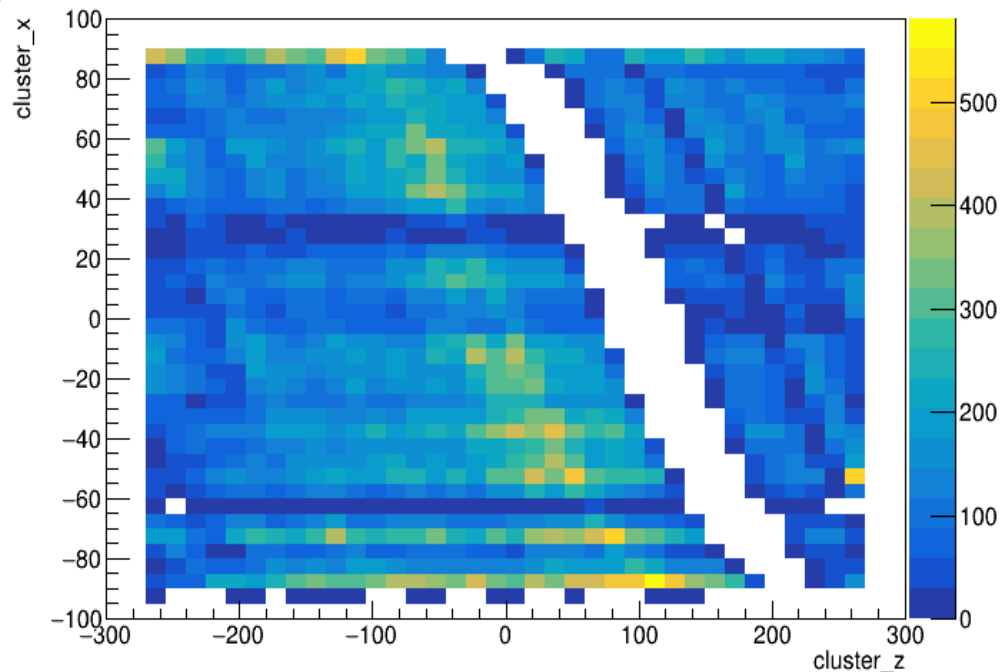*xy* view - L1+L2
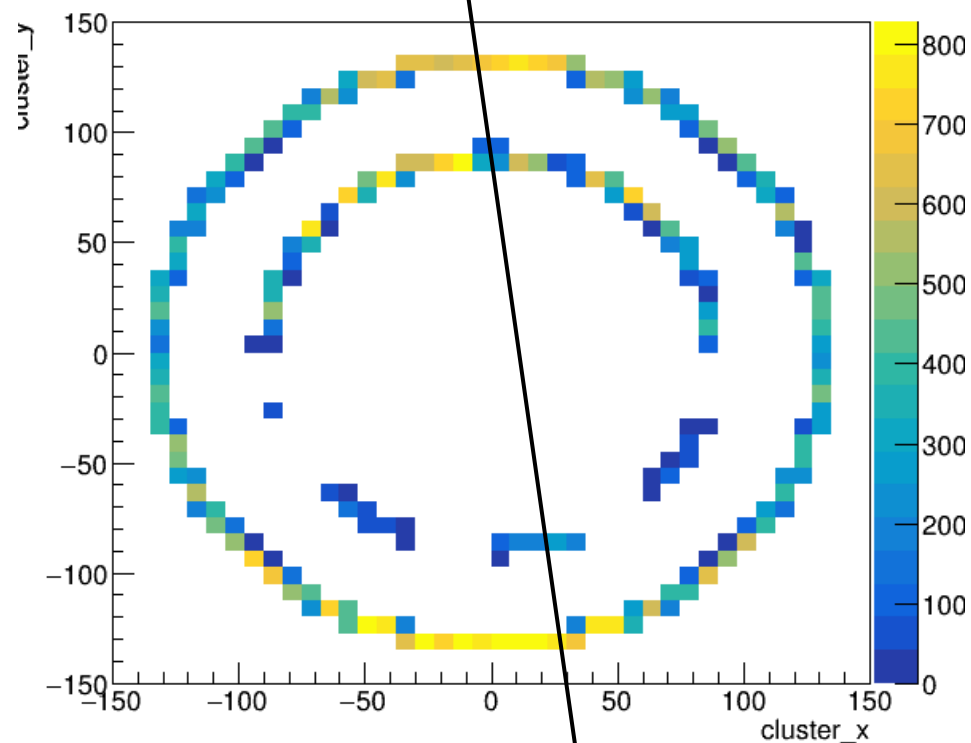
3D view - L2

NEW L2

Dead strips

LAYER 1

x vs z – L1 TOP

y vs z - L1

x vs z – L1 BOTTOM

LAYER 2
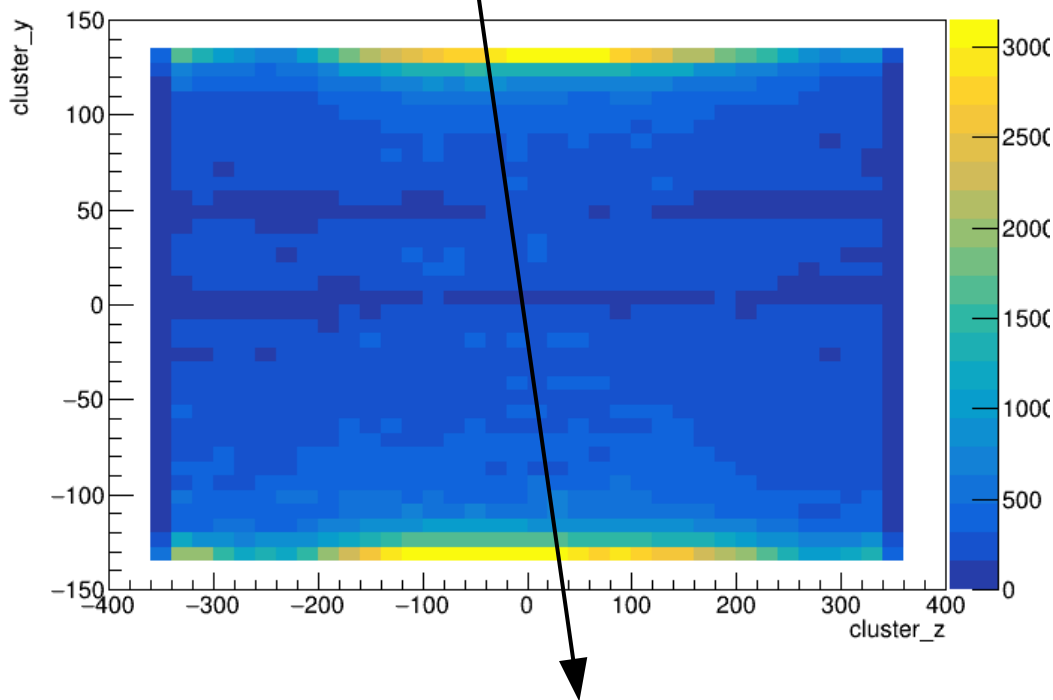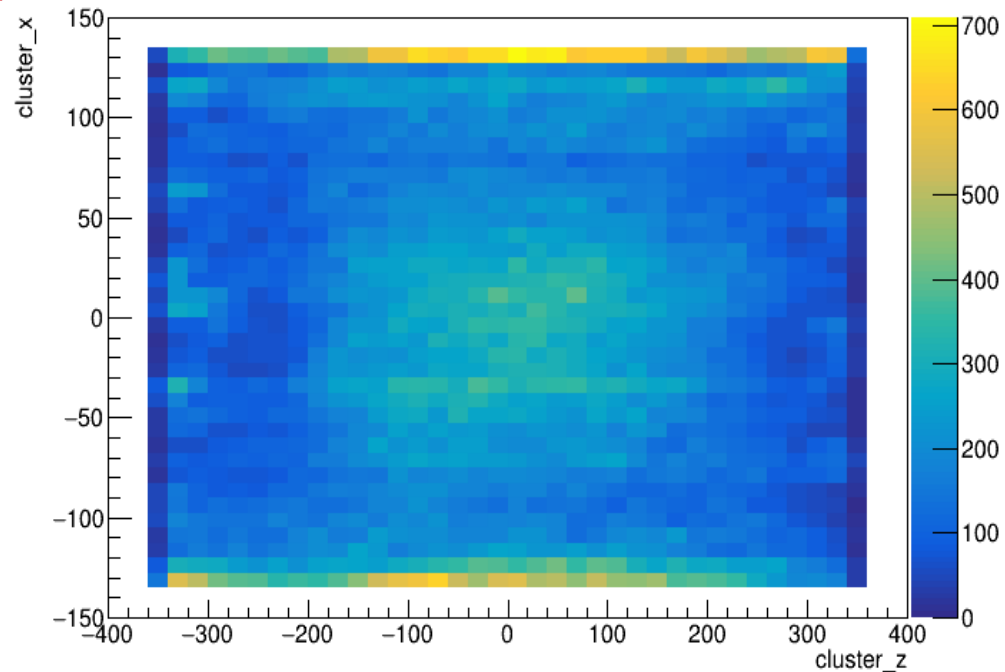
x vs z – L2 TOP

y vs z - L2

x vs z – L2 BOTTOM
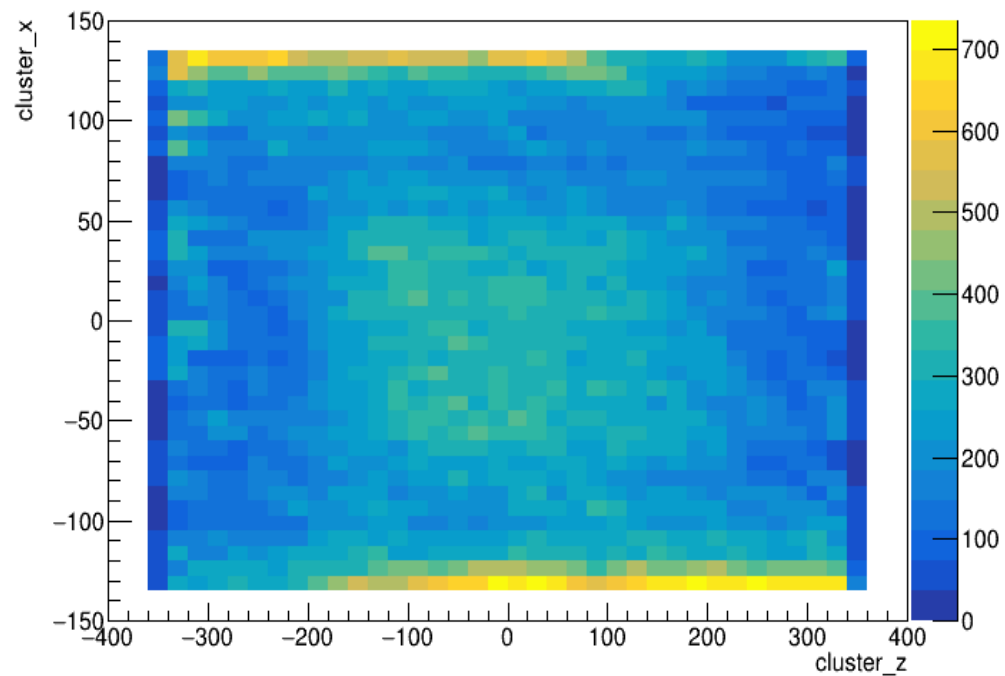
RESIDUAL DISTRIBUTIONS of 2D clusters

Select events:
- at least one cluster on L1_S1 and on L2_S1 and on L2_S2
- no selection on cluster size
- no selection on total cluster charge

- Trace the 3D line between points **P1** and **P2** on L2 top (S2) and bottom (S1)
  - Find the point of intersection **I3** with L1 →
  - Residuals in: phi and z
- Find the shift in phi and z → *ROUGH ALIGNMENT*

P1

P3

I3

P2

residual φ

RES. phi on L1

hresphi	
Entries	21882
Mean	0.05038
Std Dev	0.04238

on L1 [mm]

residual z

RES. z on L1

hresz	
Entries	21882
Mean	−1.367
Std Dev	4.24

on L1 [mm]
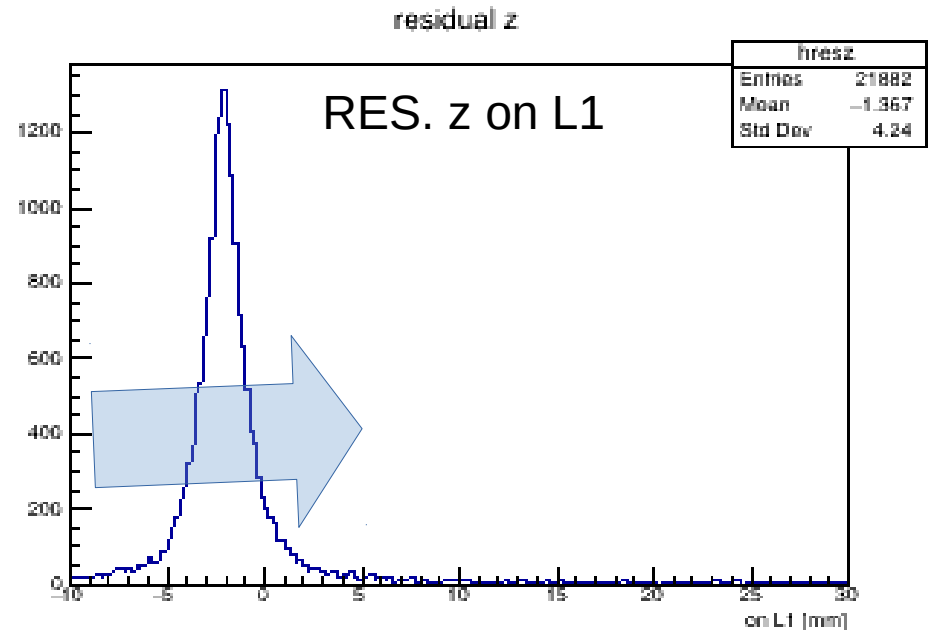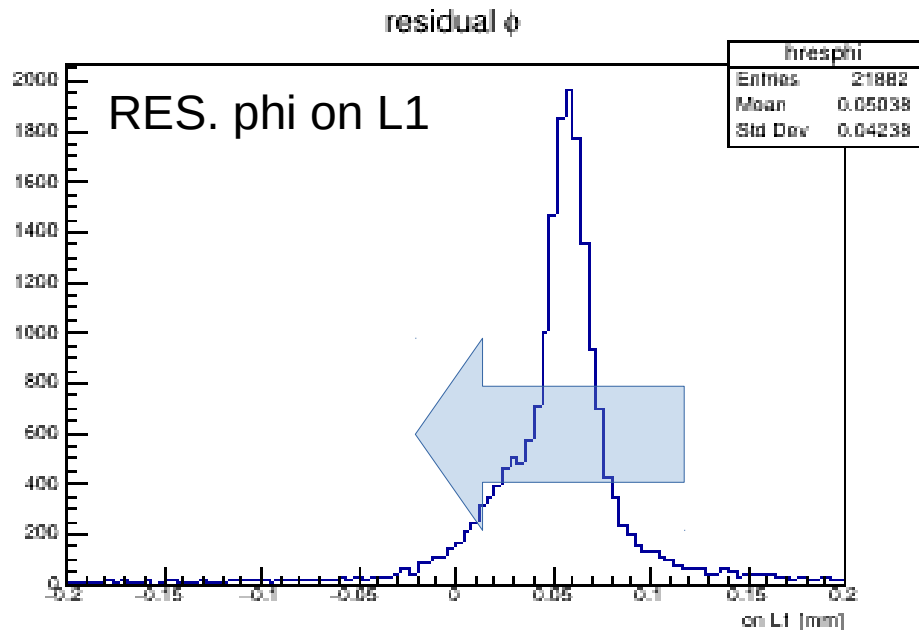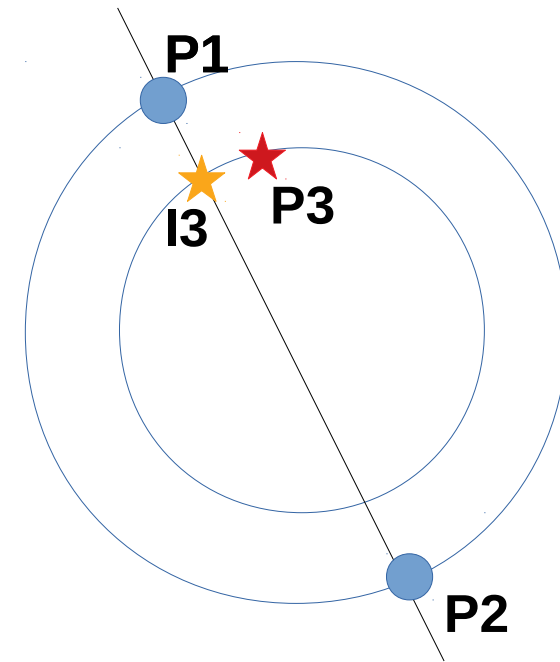
RESIDUAL DISTRIBUTIONS
on LAYER2, TOP after alignment

residual x

hresx	
Entries	22496
Mean	0.6815
Std Dev	4.677
Constant	829.4 ± 0.4
Mean	0.02556 ± 0.00073
Sigma	1.586 ± 0.001

residual y

hresy	
Entries	22496
Mean	1.081
Std Dev	3.534

residual φ

hresphi	
Entries	22496
Mean	0.0007695
Std Dev	0.0409
Constant	2103 ± 0.6
Mean	−0.0002461 ± 0.0000036
Sigma	0.01223 ± 0.00000

residual z

hresz	
Entries	22496
Mean	0.8424
Std Dev	4.556
Constant	1054 ± 0.4
Mean	−0.03283 ± 0.00048
Sigma	1.151 ± 0.001