TRD alignment verification central pass2 reconstruction alignment set v4_s0
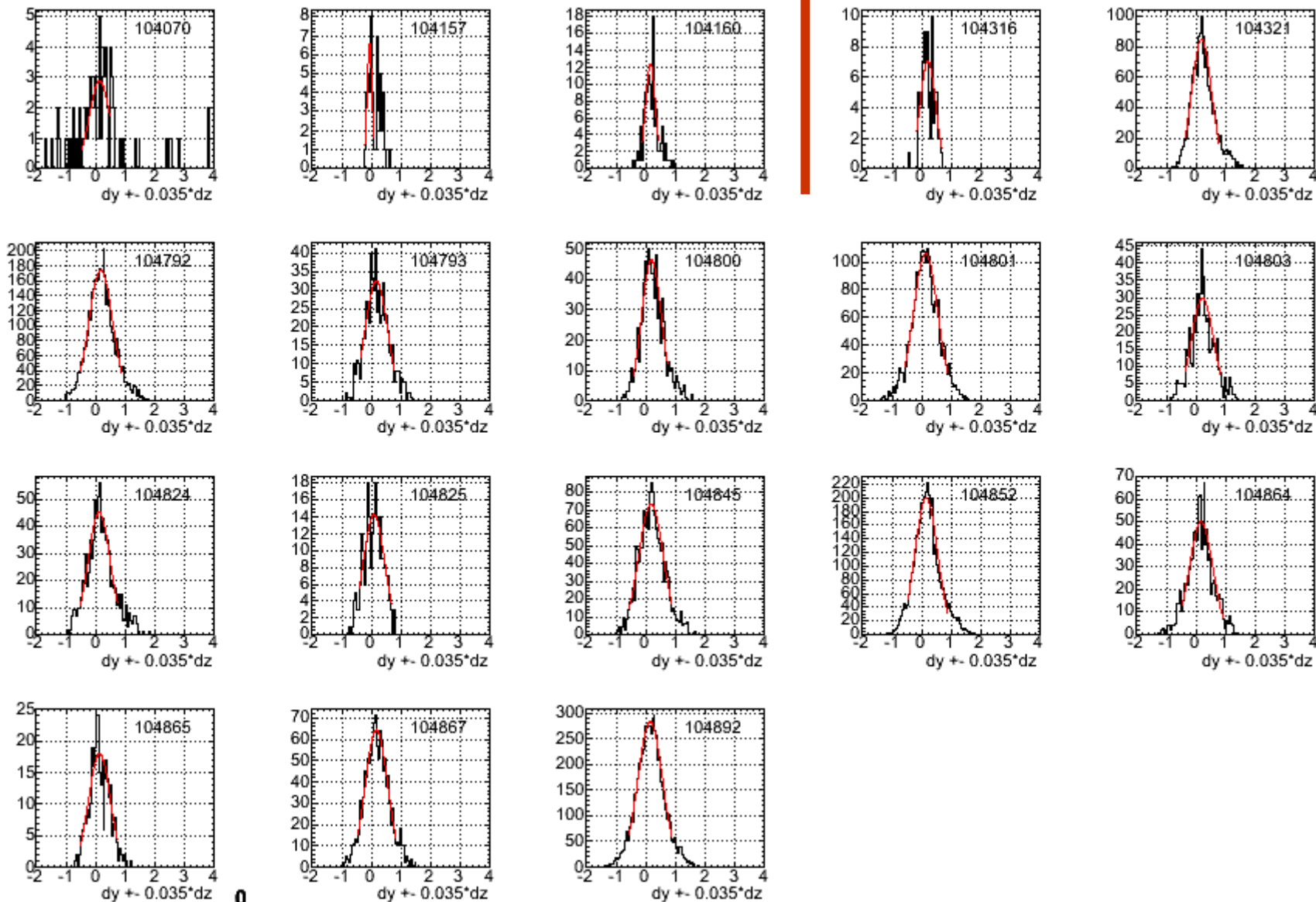
y-residuals for the 7 sm's, corrected for the pad tilt

central pass2, sm00

central pass2, sm01
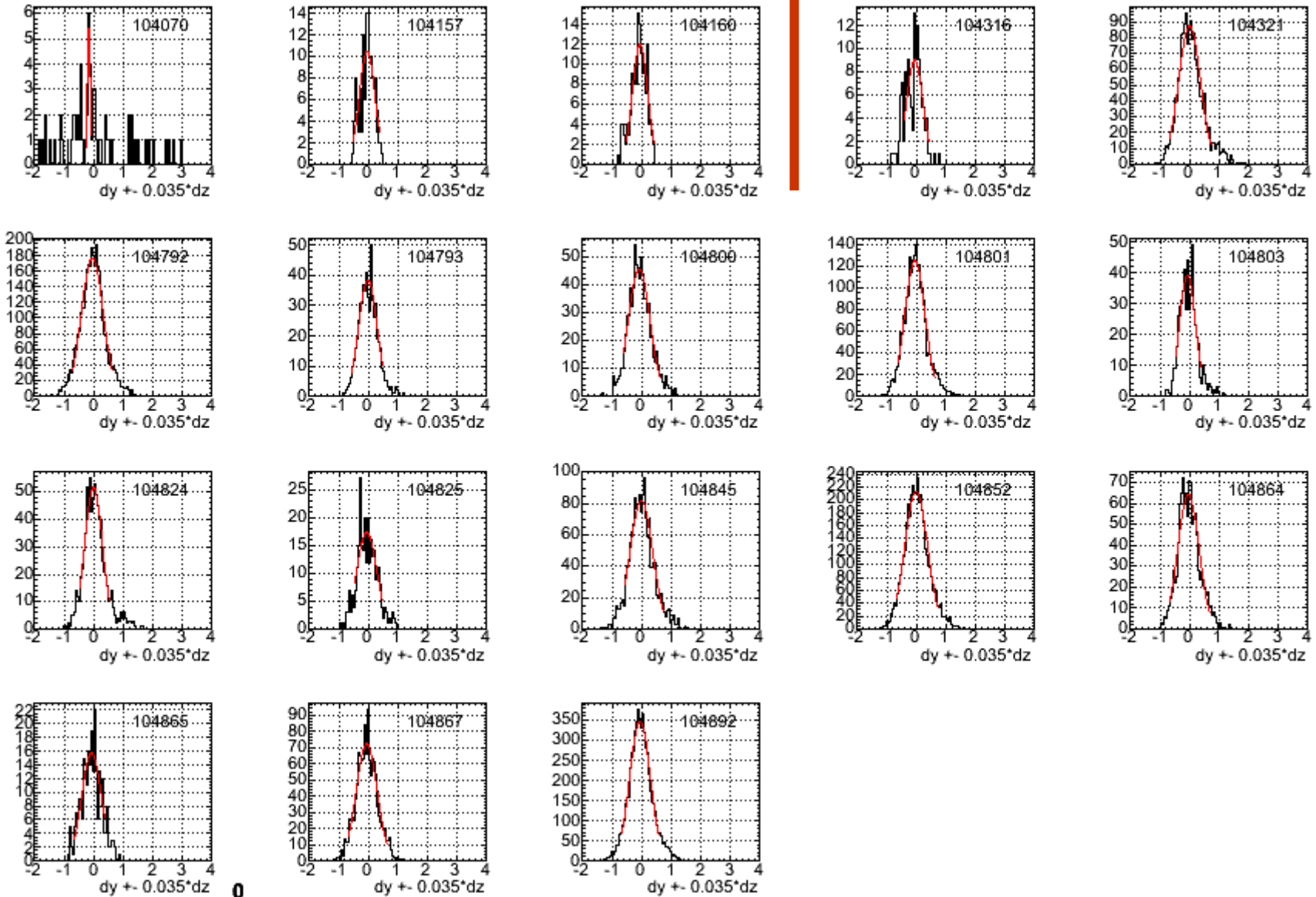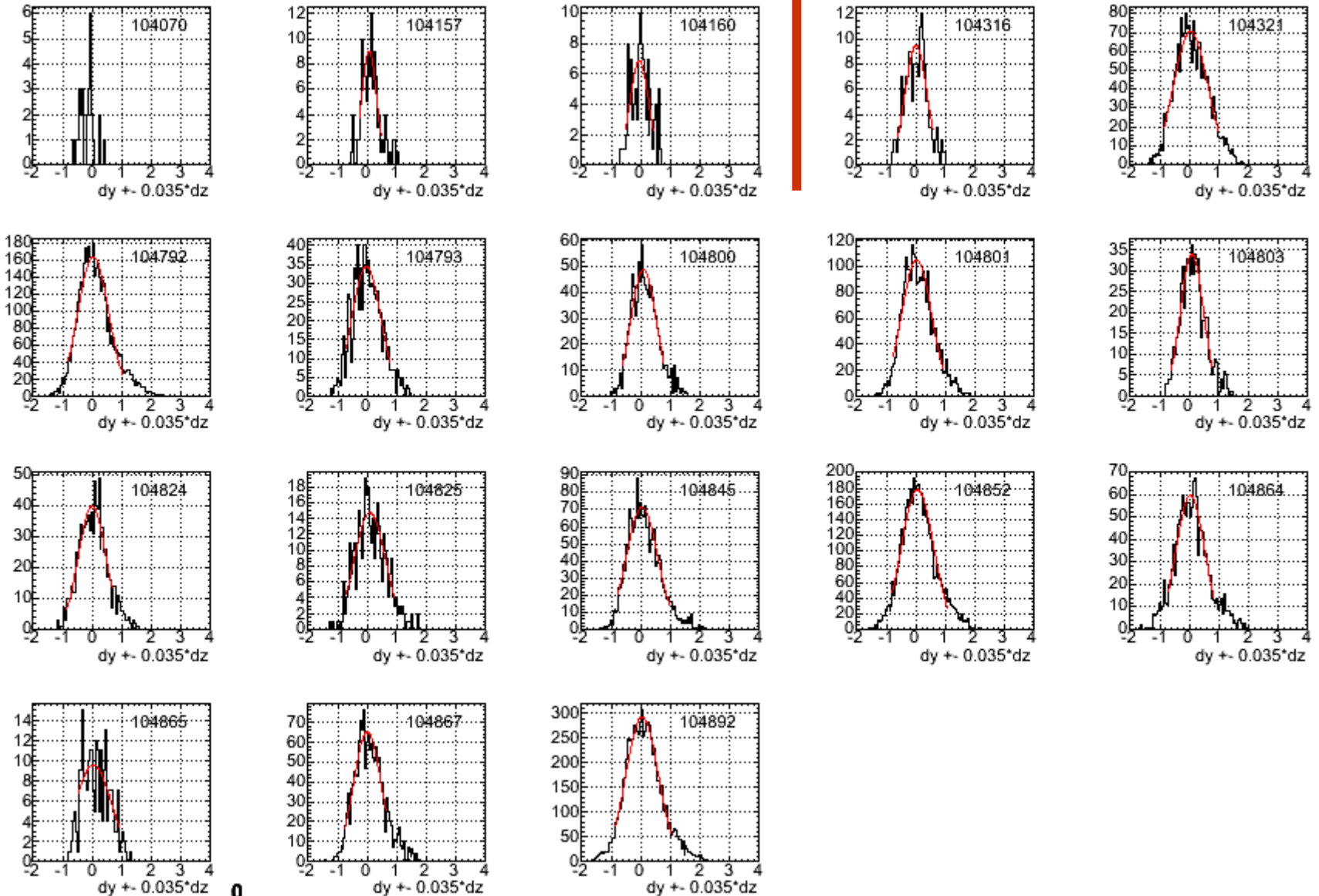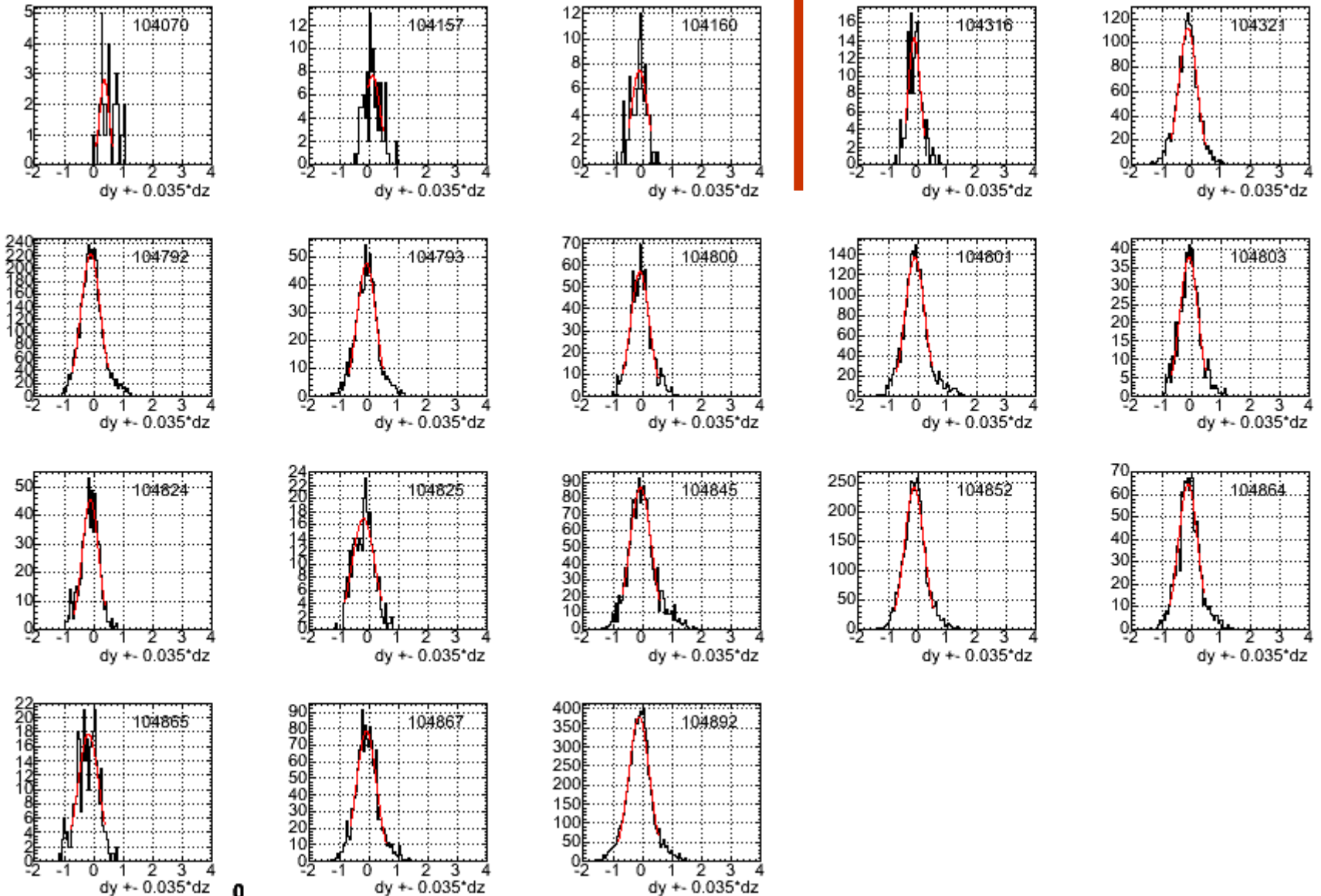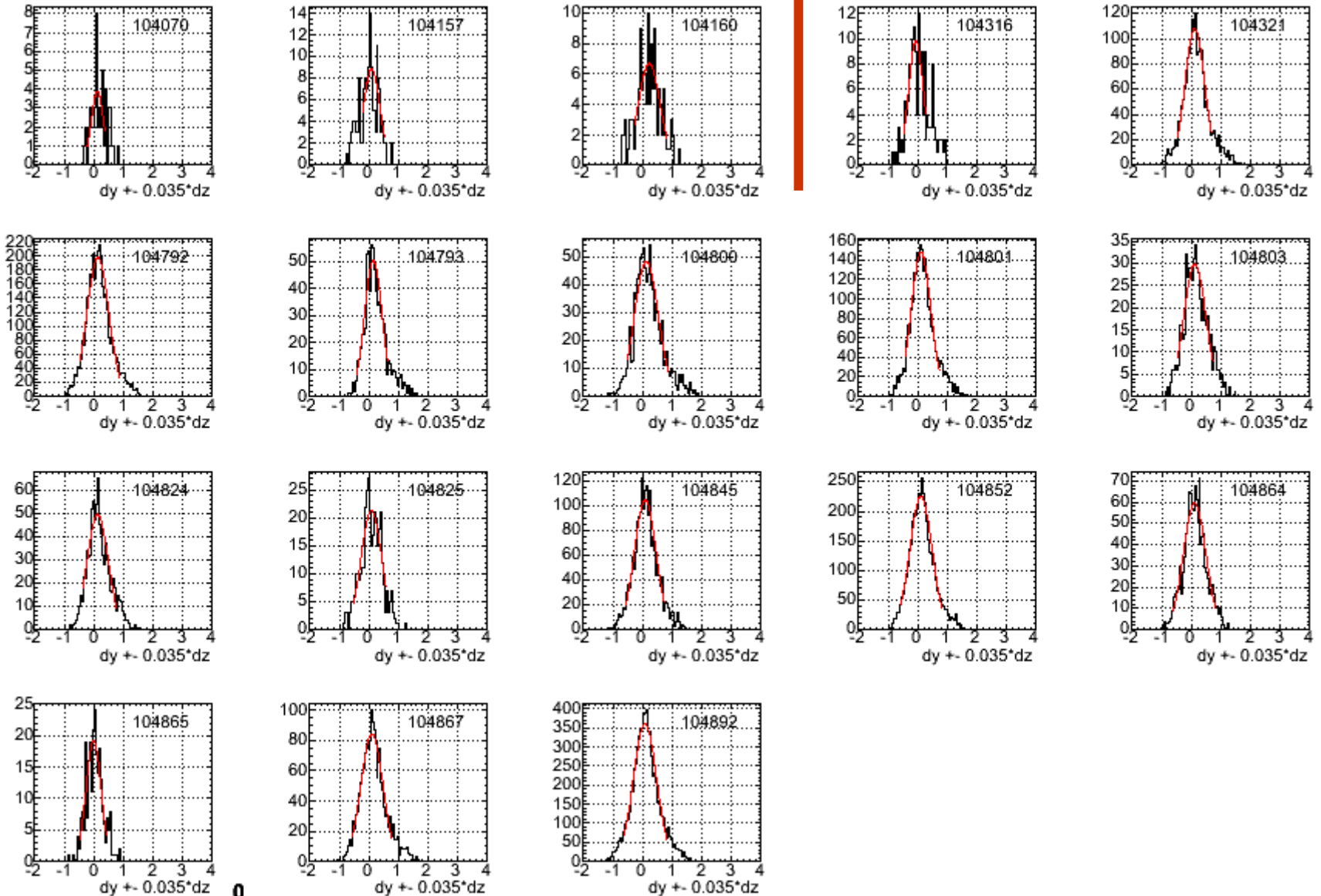
verification of the TRD alignment in central pass2, misko, 06-01-2010

← **L3 current +30 kA** | **-30 kA** →

← L3 current +30 kA | -30 kA →

← **L3 current +30 kA** | **-30 kA** →
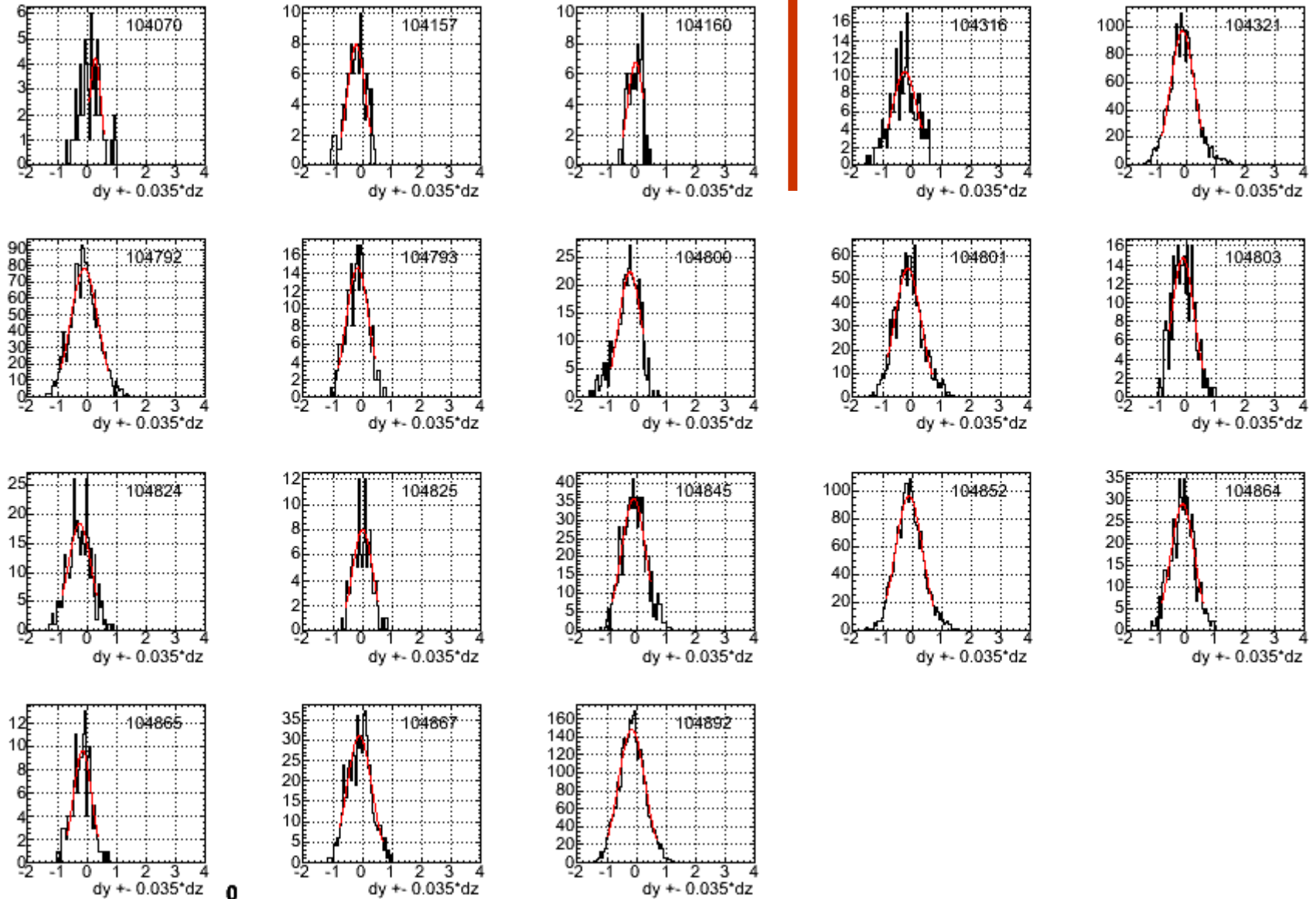
← L3 current +30 kA | *-30 kA →*

← L3 current +30 kA | -30 kA →
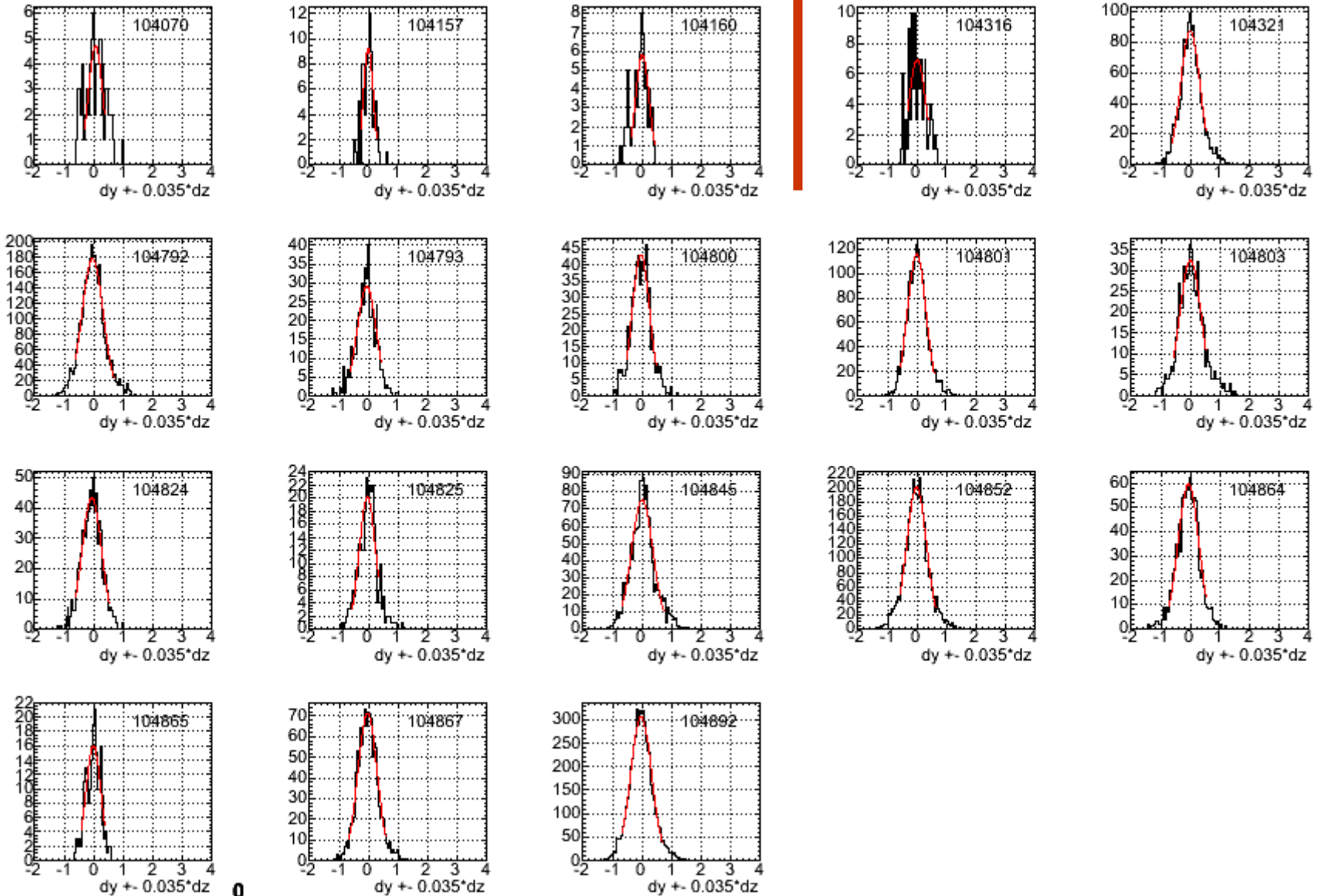
why are the residuals in sm07 broader than in sm08?
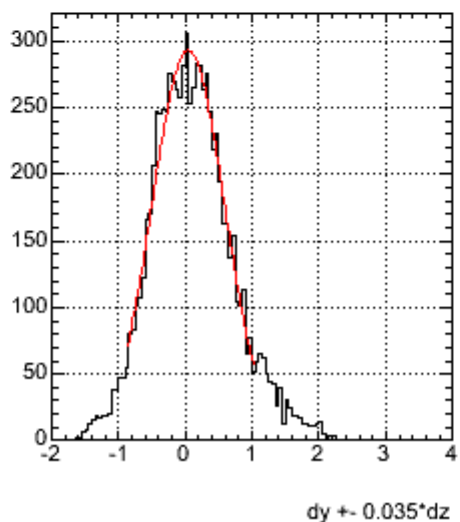
AliTrackResidualsFast

Aligning volumes
18467 (TRD/sm07/st0/pl0)
18468 (TRD/sm07/st1/pl0)
...etc...
28711 (TRD/sm07/st4/pl5)
to reference volumes
14343 (TPC/EndcapA/Sector8/InnerChamber)
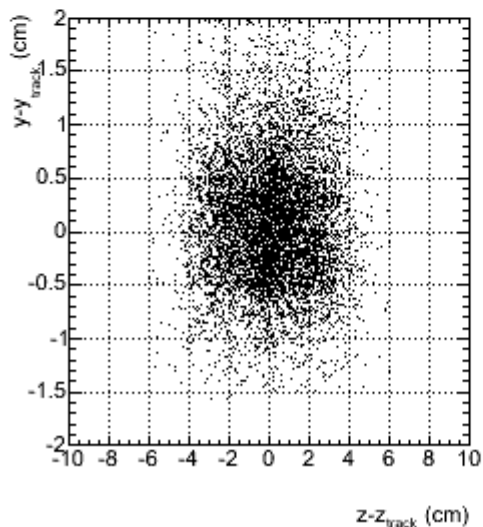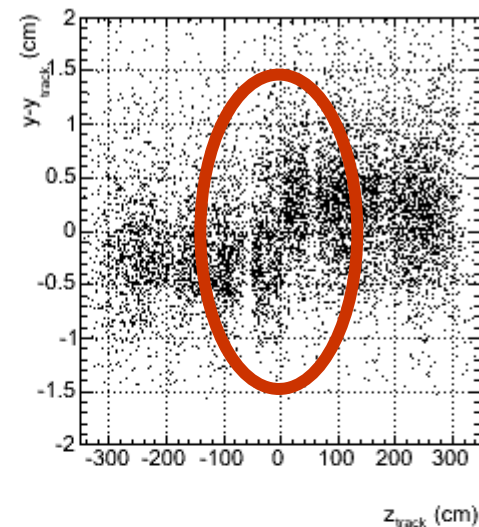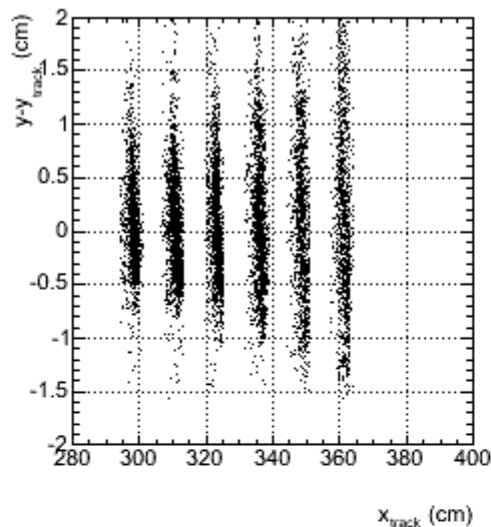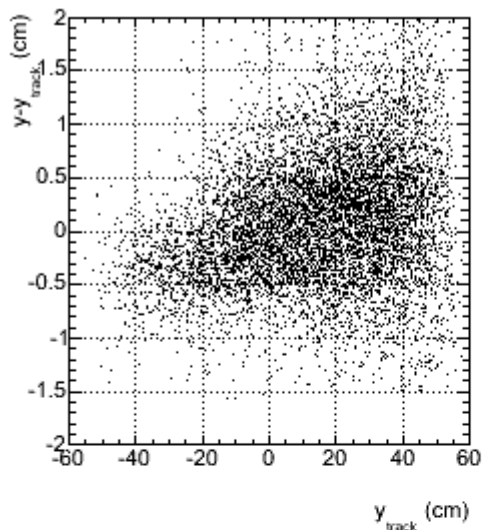16391 (TPC/EndcapA/Sector8/OuterChamber)
14361 (TPC/EndcapC/Sector8/InnerChamber)
16409 (TPC/EndcapC/Sector8/OuterChamber)

Result for the last volume
shift in phi   0.329
shift in z   -0.034
shift in r   0.136
tilt in phi   0.0927
tilt in z   -0.0109
tilt in r   0.0430

Residuals shown before alignment

AliTrackResidualsFast

Aligning volumes
    18472 (TRD/sm08/st0/pl0)
    18473 (TRD/sm08/st1/pl0)
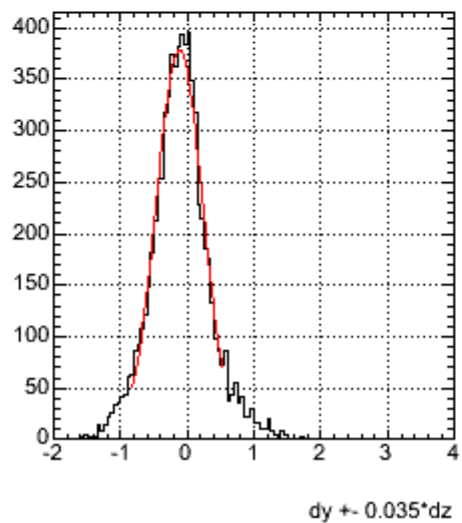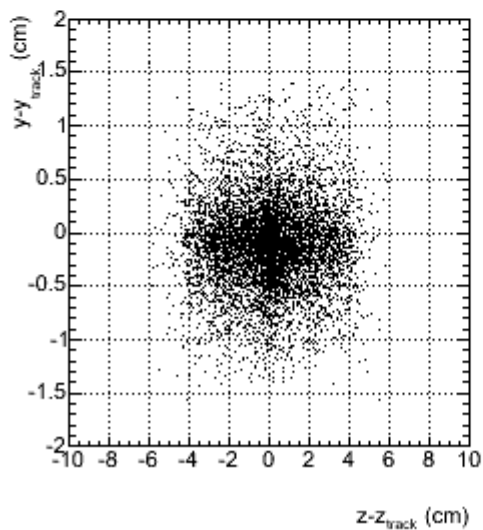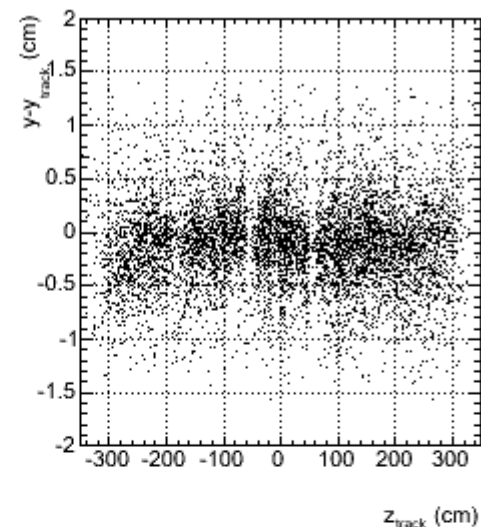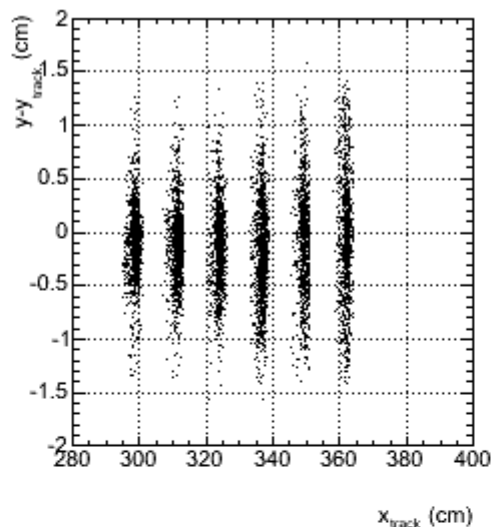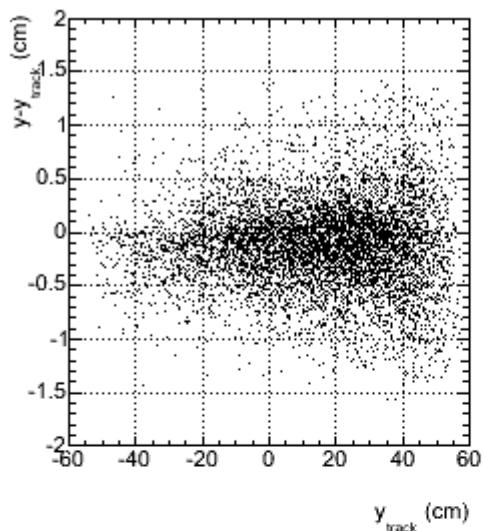   ...etc...
    28716 (TRD/sm08/st4/pl5)
to reference volumes
    14344 (TPC/EndcapA/Sector9/InnerChamber)
    16392 (TPC/EndcapA/Sector9/OuterChamber)
    14362 (TPC/EndcapC/Sector9/InnerChamber)
    16410 (TPC/EndcapC/Sector9/OuterChamber)

Result for the last volume
    shift in phi   0.172
    shift in z   -0.079
    shift in r   0.215
    tilt in phi   -0.0140
    tilt in z   0.0292
    tilt in r   0.0032

Residuals shown before alignment

summary

- alignment set v4_s0 worked reasonably well in the central pass2 reconstruction

- no evidence for magnetic field dependence

- the "alignment with respect to the TPC" strategy is at its limits because the TPC is not yet fully calibrated/aligned

- as the next step we may consider concentrating on internal TRD alignment