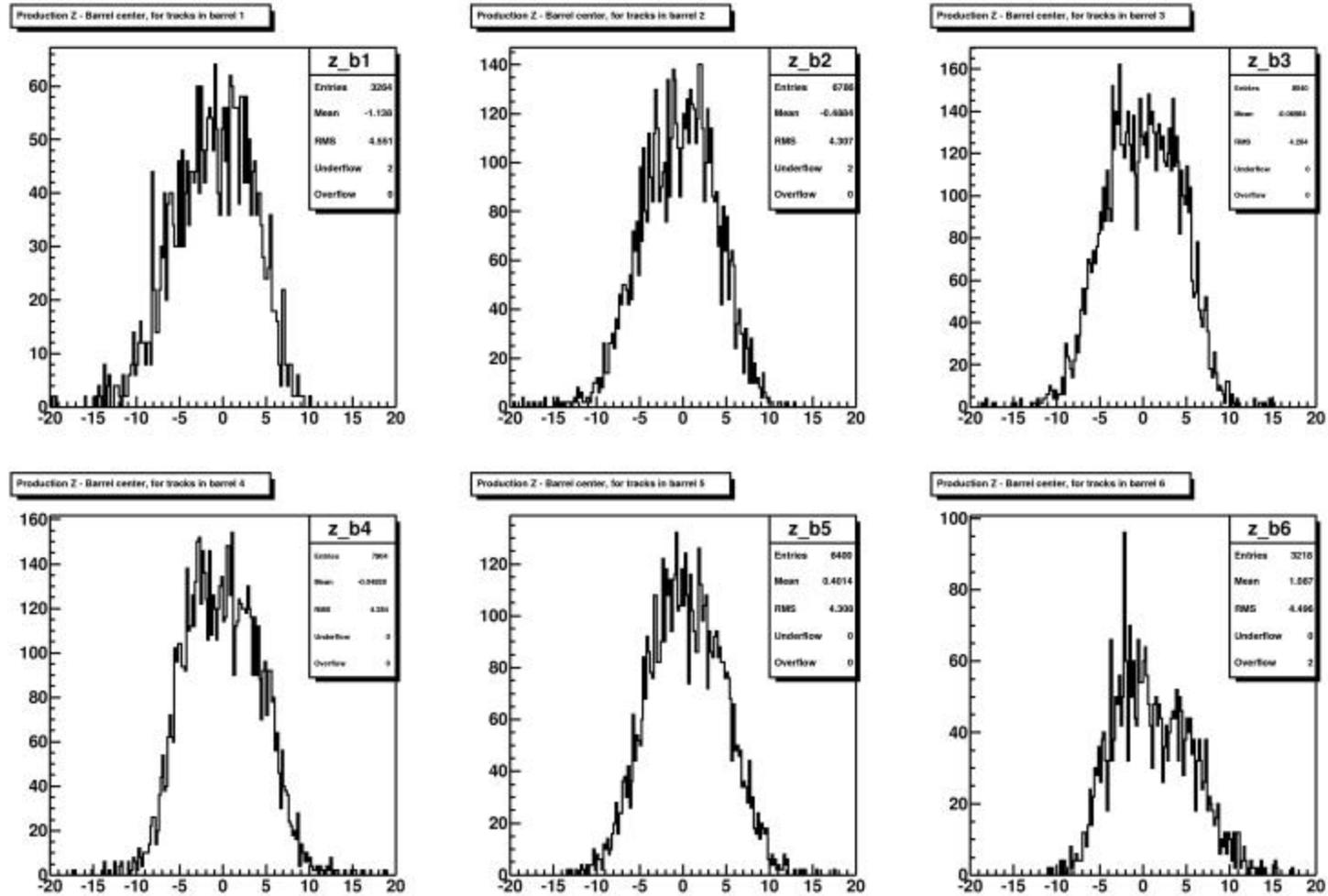


## More on beam tilt correction

- Beam spot: how many and where?
  - 2 sets of plots from single muon MC
  - Ask whether **default correction at barrel center** is best we can do?
    - Also have barrel boundary crossing information
- Conclusion: We can do a bit better
  - Detailed spec very soon. Data now

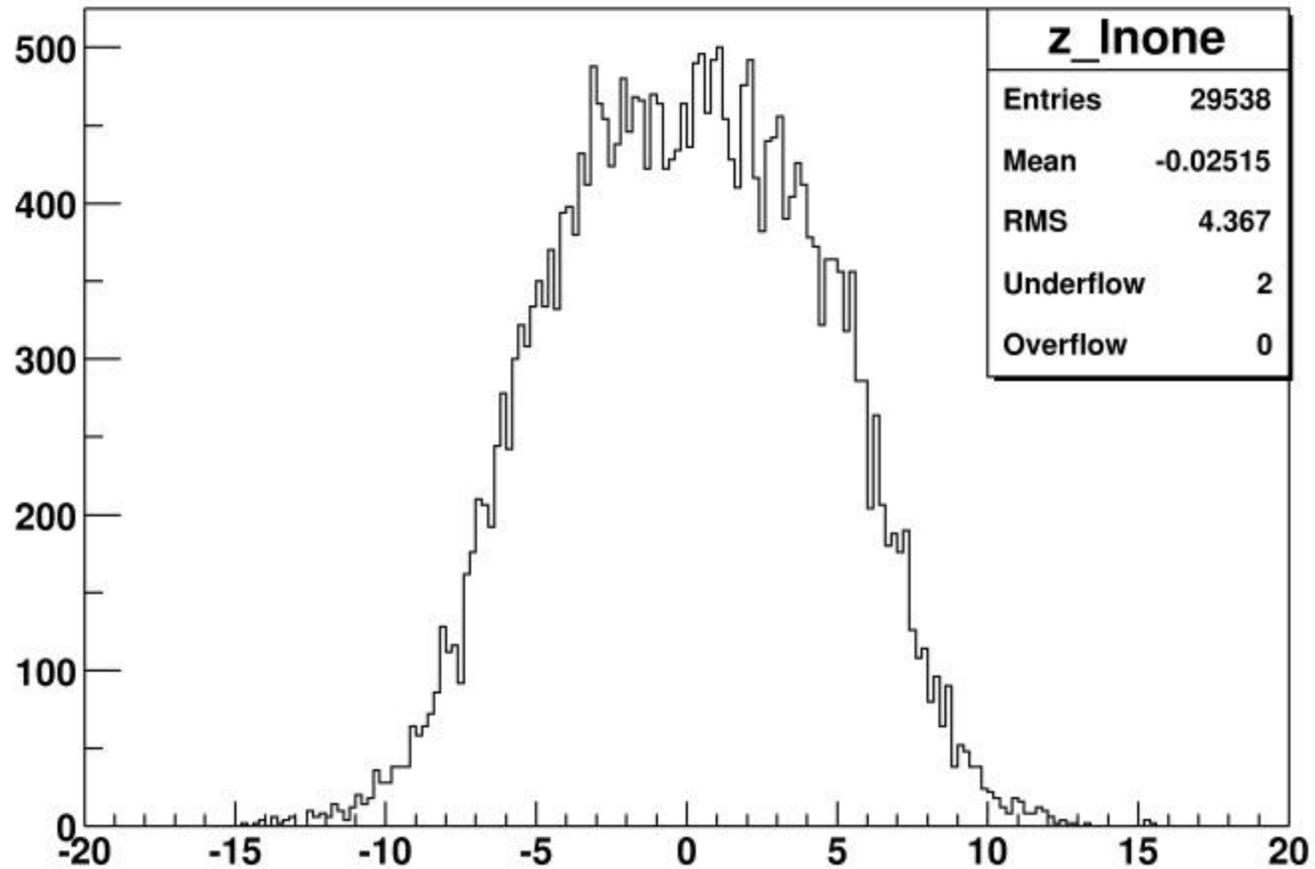
# Production Z by Barrel



Plot  $dz = z(\text{track}) - z(\text{barrel center})$  for each barrel

# All barrels: tracks which stay in barrel

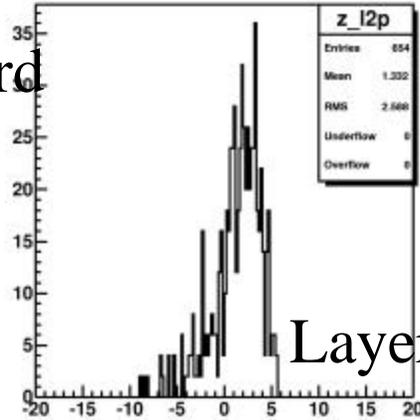
Production Z - Barrel center, tracks in one barrel 1



# Using barrel crossing point

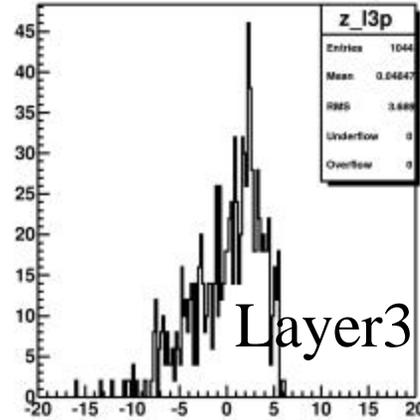
Forward

Production Z - Barrel center, tracks going +1 barrel between layers 1 and 2



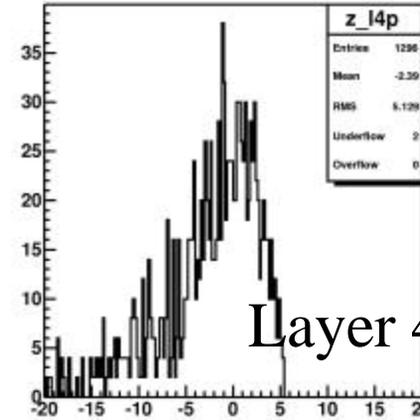
Layer2

Production Z - Barrel center, tracks going +1 barrel between layers 2 and 3



Layer3

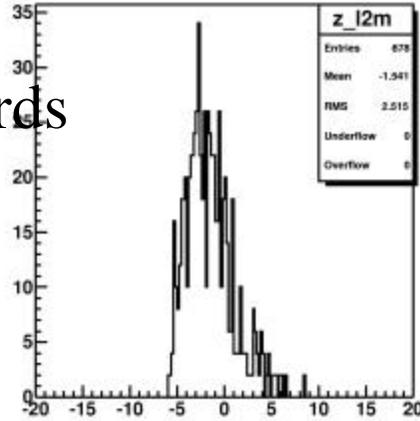
Production Z - Barrel center, tracks going +1 barrel between layers 3 and 4



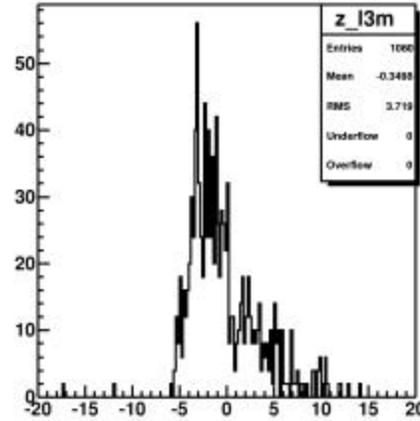
Layer 4

Backwards

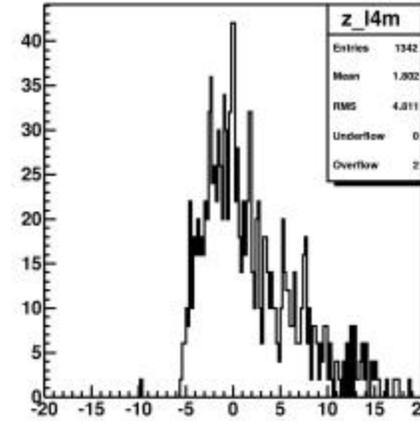
Production Z - Barrel center, tracks going -1 barrel between layers 1 and 2



Production Z - Barrel center, tracks going -1 barrel between layers 2 and 3



Production Z - Barrel center, tracks going -1 barrel between layers 3 and 4



X-axis is  $z(\text{track}) - z(\text{barrel center})$

# Conclusions

The dz means differ by up to 2 cm depending on which layer has the barrel crossing

The RMS values are much smaller if we use the crossing

So we should use this. We'll make a detailed request promptly (hot off the presses)