ME1/1 Reconstruction Issues Seen in CSA08 Alignment

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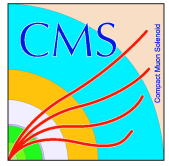
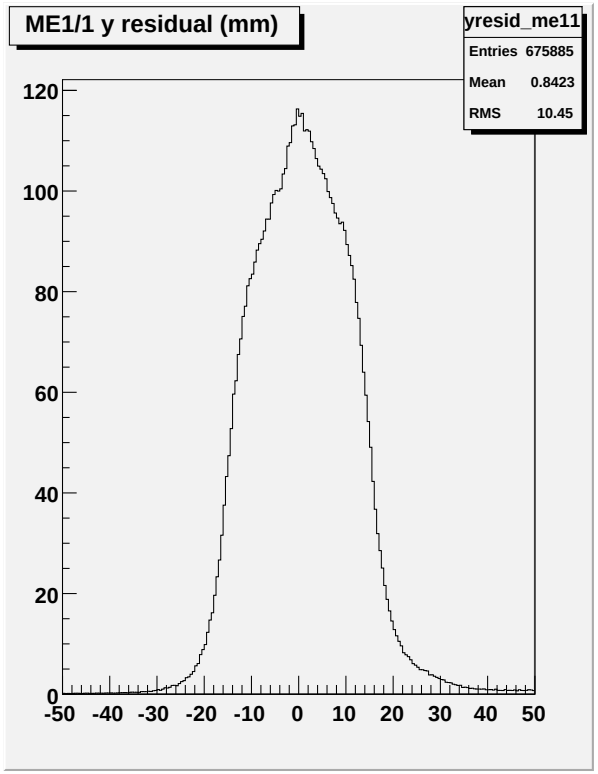


- Working on the iCSA08 alignment exercise, I found two strange features in ME1/1 residuals in CMSSW_2_0_7
- It doesn't jeopardize the alignment
- But it's something that should be made known, if it is not already

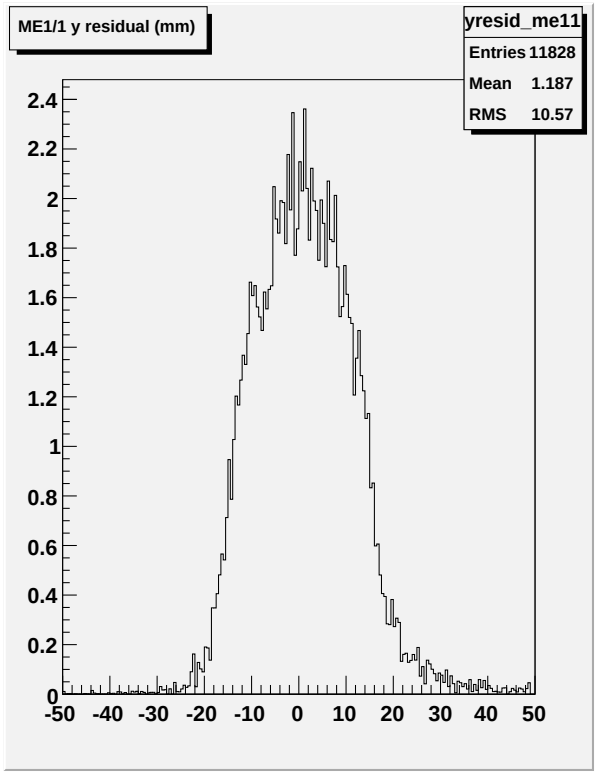
ME1/1a *y* "residual" asymmetry

- These "residuals" are the distance between a track extrapolated from the tracker to the muon hit (track *y* position minus hit)
- They are not with respect to a best-fit track to the muon hits
- That's why the distribution is wide, but unbiased by the hit
- Note the high-side tail, in 1_6_7 and 2_0_7

CMSSW_1_6_7



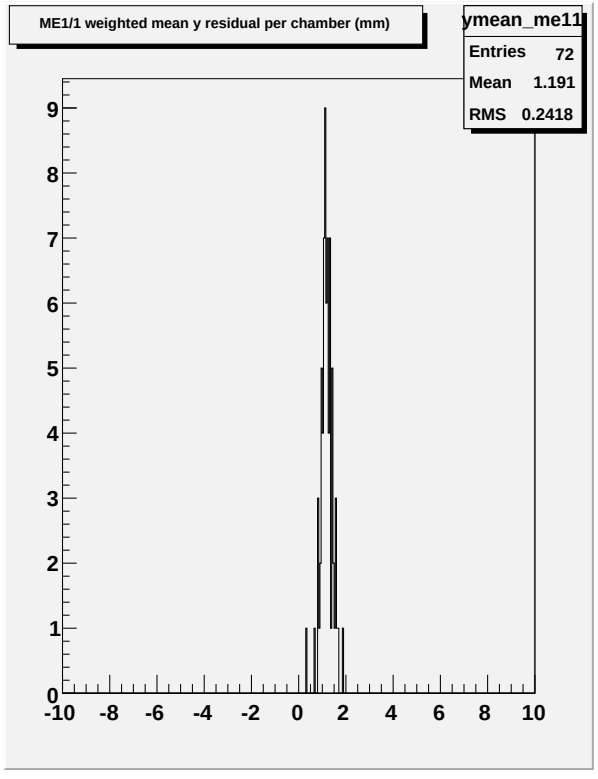
CMSSW_2_0_7



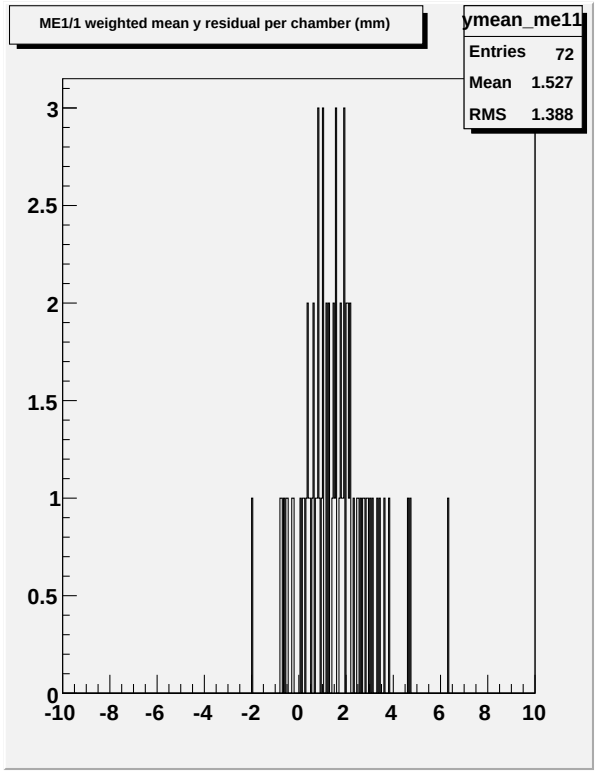
ME1/1a y asymmetry

- The high-side tail is on every chamber (I checked individually); you can see that the y residual means of each chamber (histogrammed below) are offset from zero
- This is with ideal geometry (tracker and muon system)

CMSSW_1_6_7



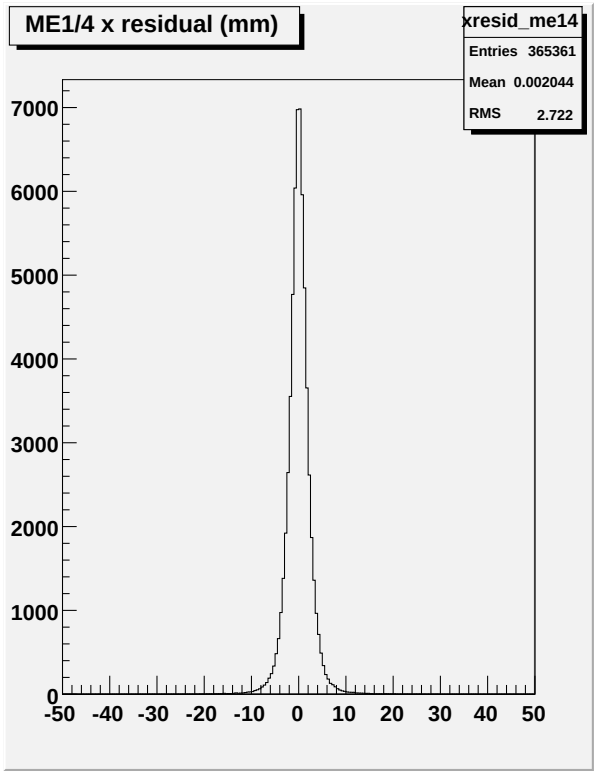
CMSSW_2_0_7



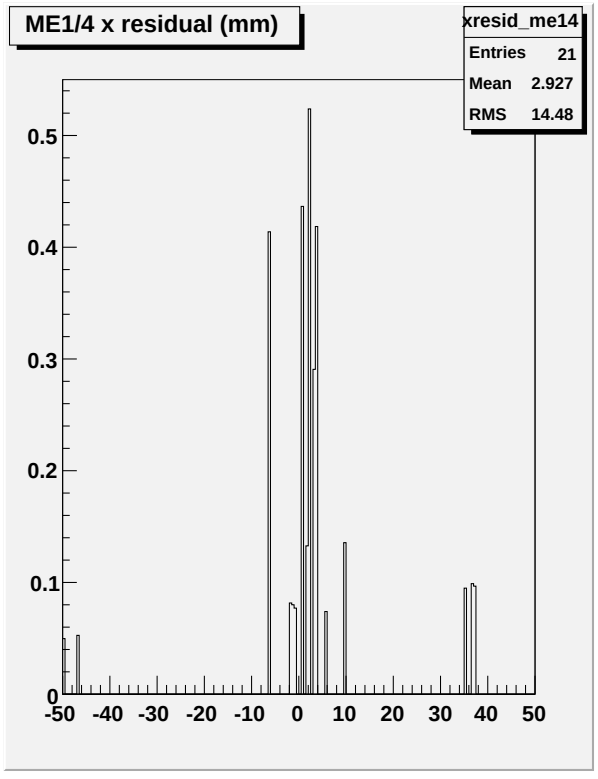
ME1/1b efficiency

- There's a new problem with efficiency on ME1/1b
- The 2_0_7 subsample shown below has 11,828 hits on ME1/1a, but 21 hits on ME1/1b
- This was not present in 1_6_7

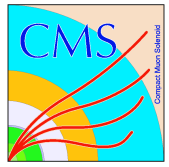
CMSSW_1_6_7



CMSSW_2_0_7



Conclusions



- None; I just wanted to make these two points!
- Thanks!