

deltaR issue

- The efficiency is count in a wrong way
- Forget to add same qflag to truth and matched electron

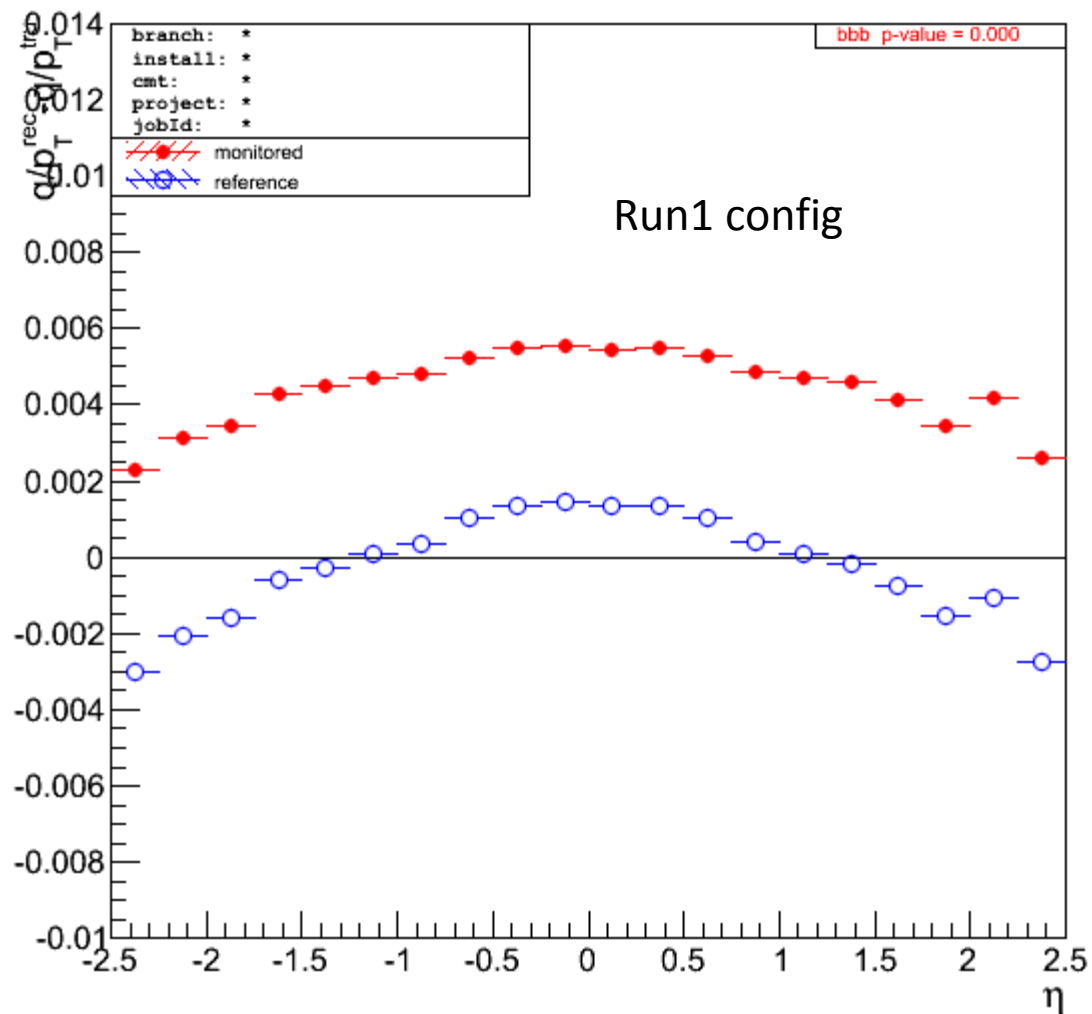
Really a shame....

Validation tasks for 19.X

- Running samples and found many bugs
- Will give a talk on PP week September
- The sides will be done this week [hopefully](#).

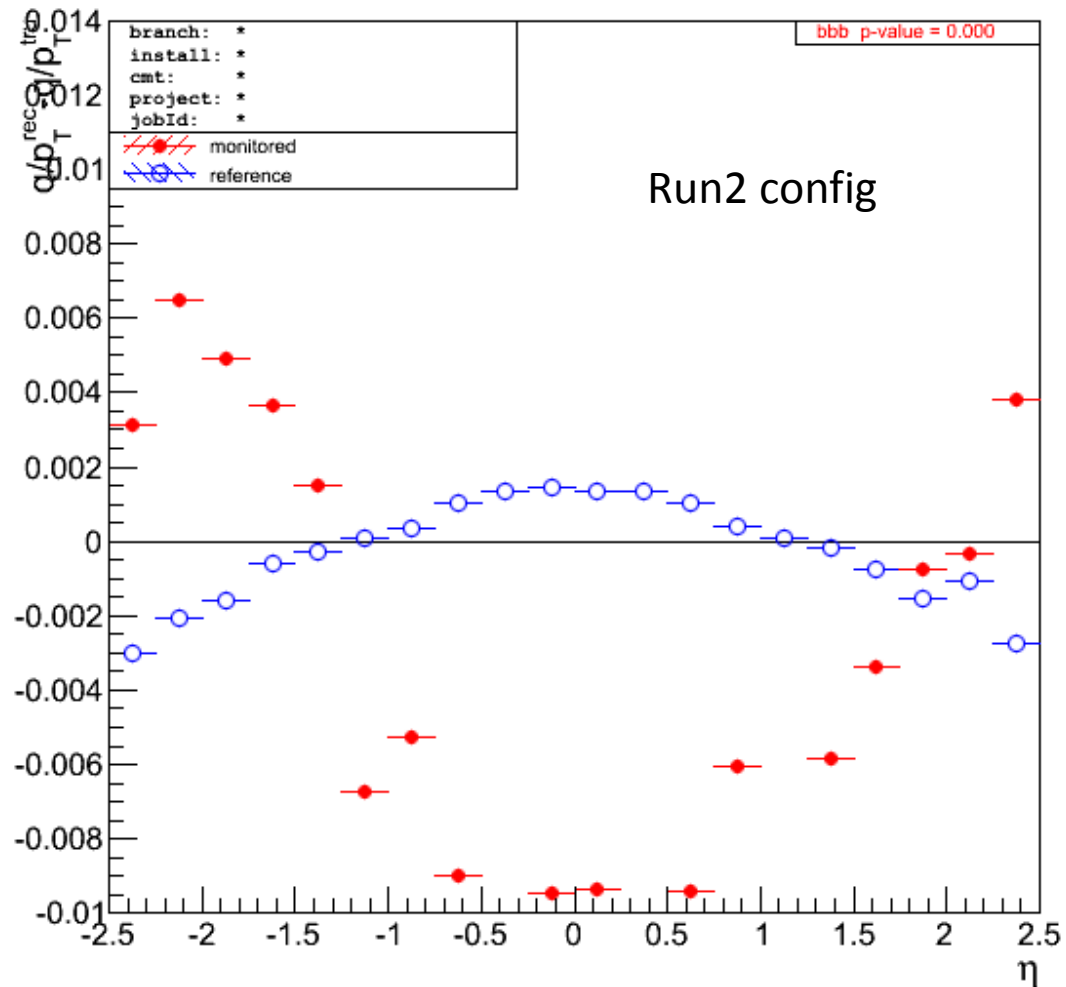
1/p_T

title: Track Measurement Bias: 1/p_T versus η
normal plot



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title: Track Measurement Bias: 1/p_T versus η
normal plot

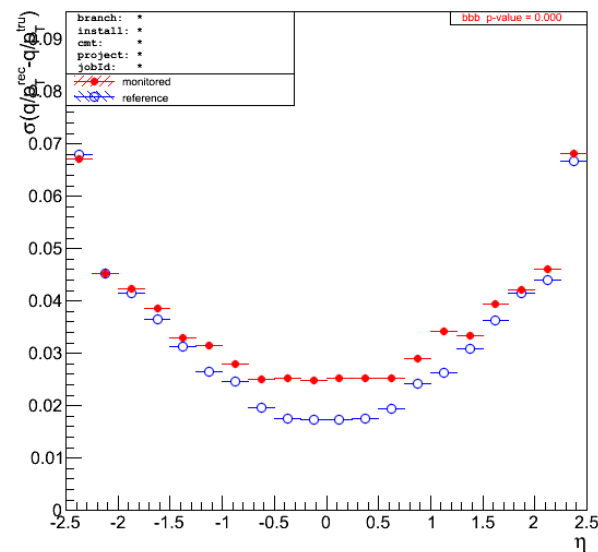


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resolutions

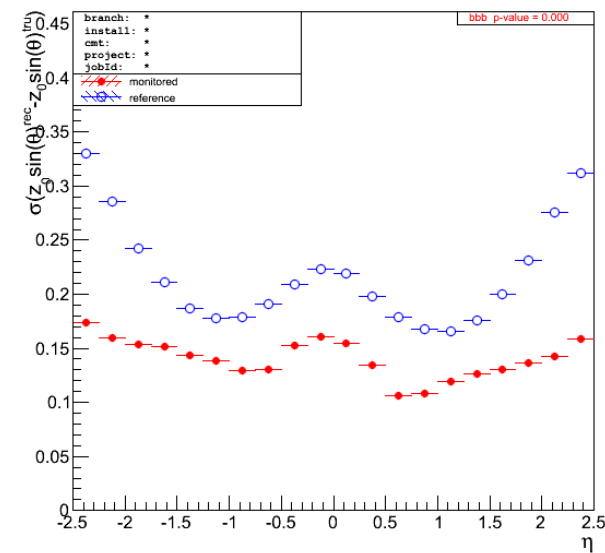
Better resolution as expected except

title: Track Resolution: $1/p_T$ versus η
normal plot



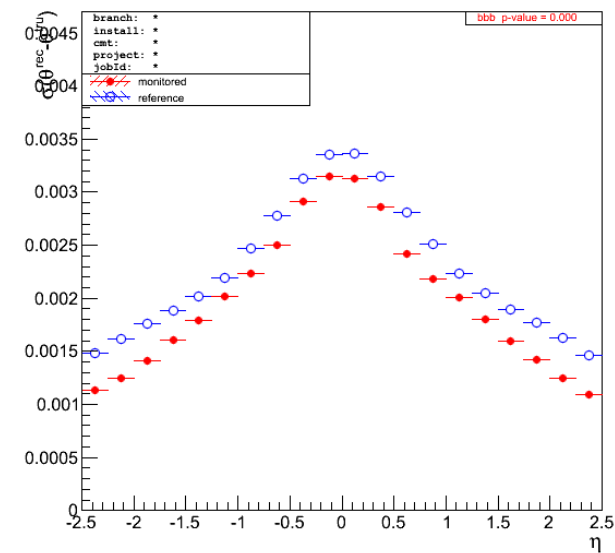
2014-08-19 18:53:26

title: Track Resolution: $z_0 \cdot \sin(\theta)$ versus η
normal plot



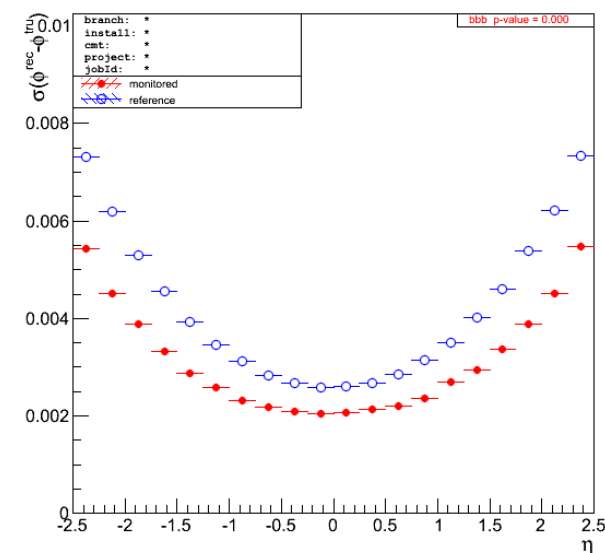
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title: Track Resolution: θ versus η
normal plot



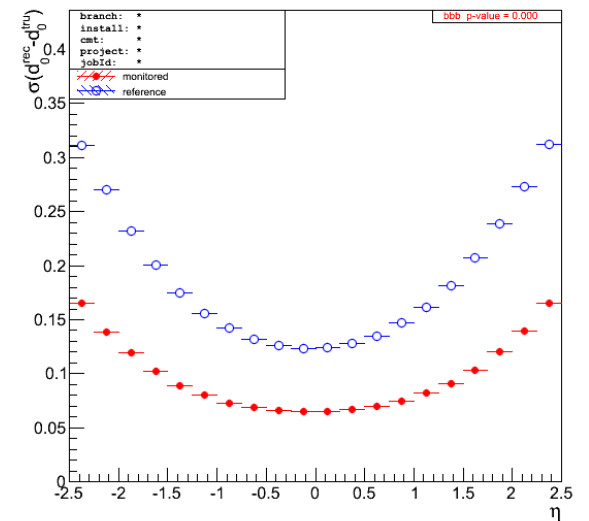
2014-08-19 18:53:27

title: Track Resolution: ϕ versus η
normal plot



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title: Track Resolution: d_0 versus η
normal plot



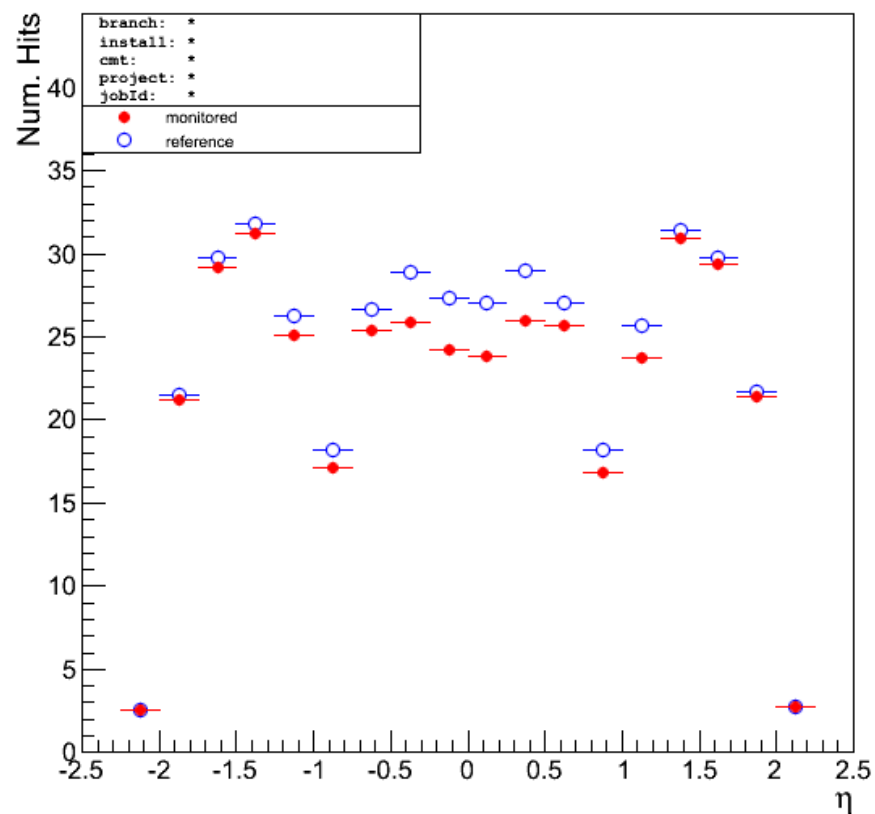
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Run2 issues

Run1 config

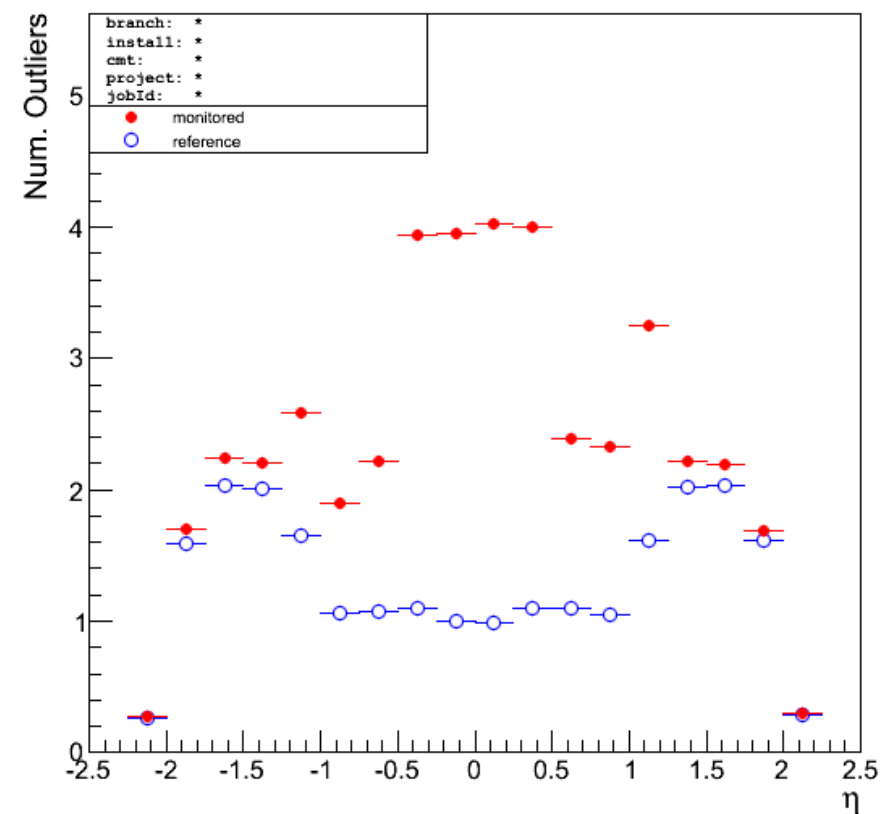
TRT hits and outliers

title: Number of TRT hits vs eta
normal plot



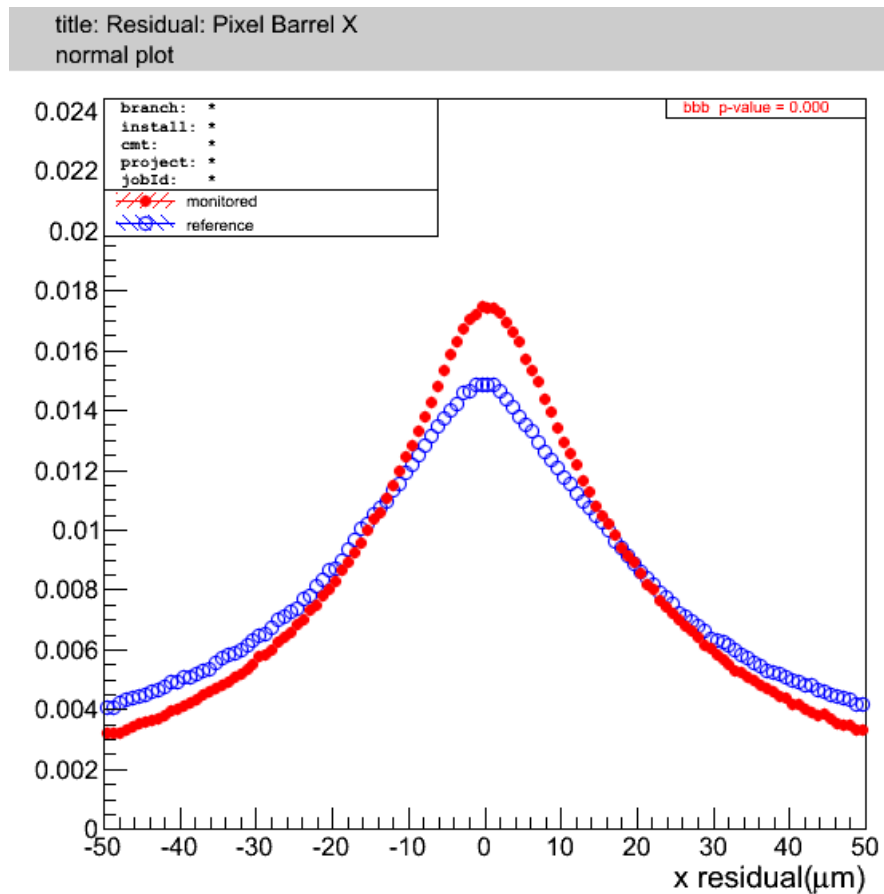
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title: Number of TRT outliers vs eta
normal plot



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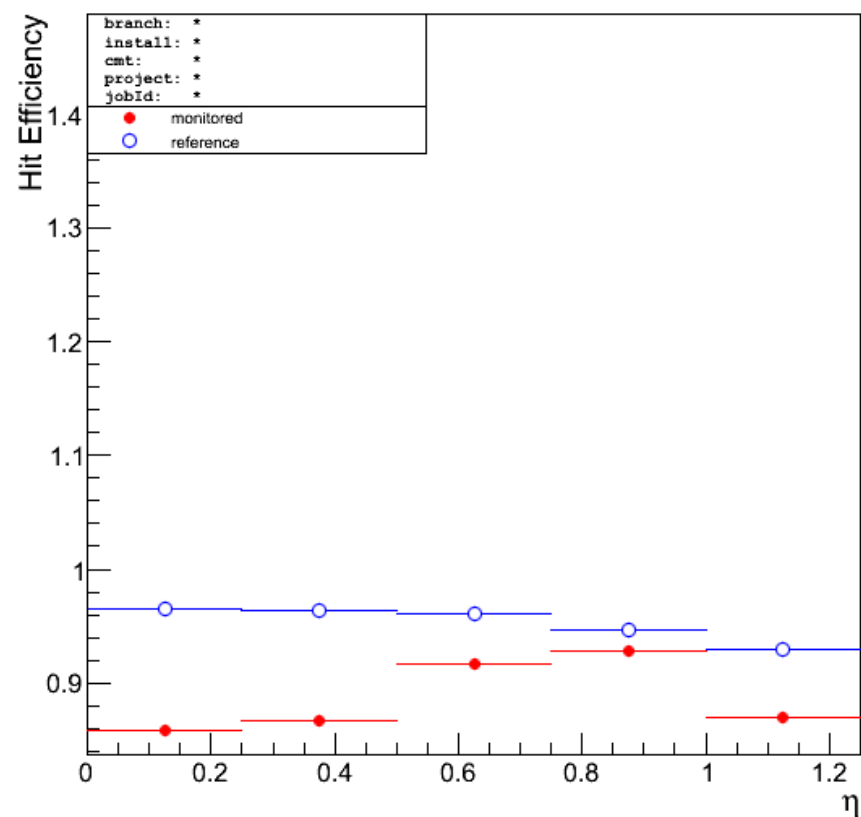
Residuals in pixel barrel



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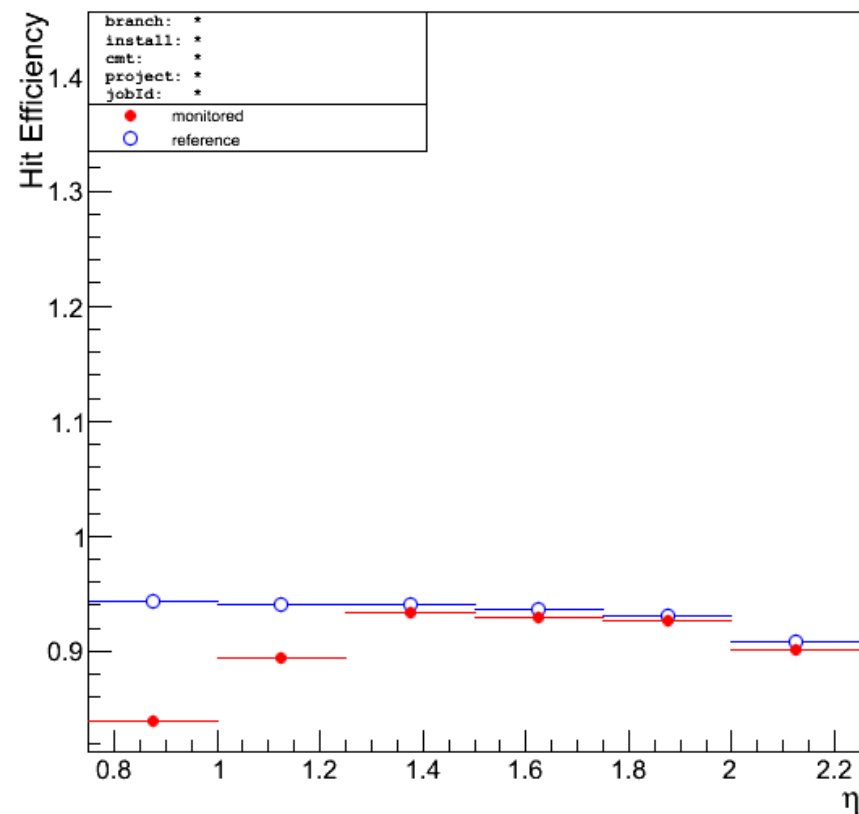
TRT Efficiency

title: Cluster Efficiency: TRT Barrel
normal plot



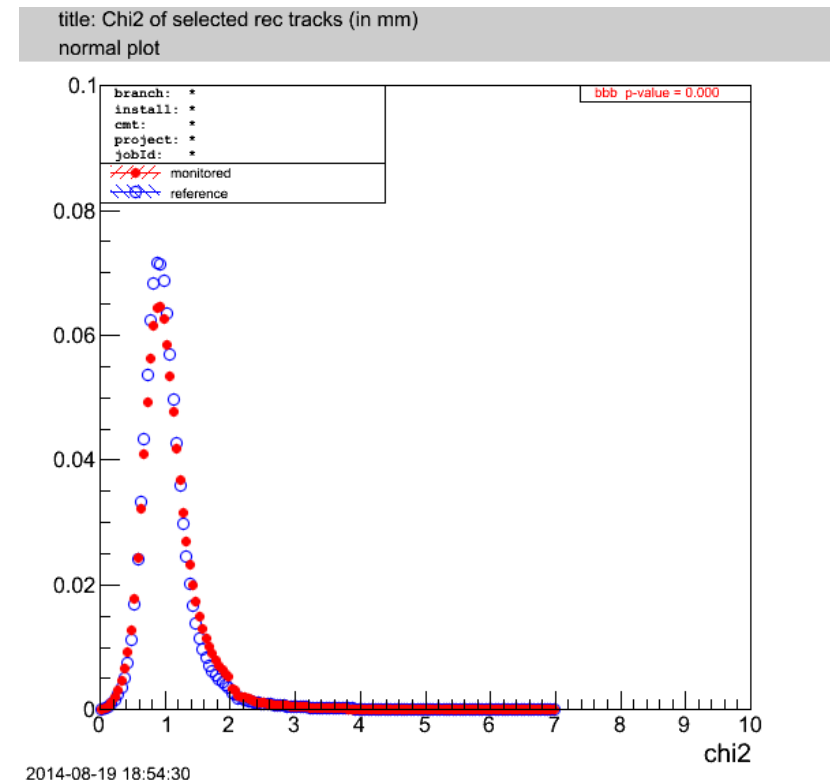
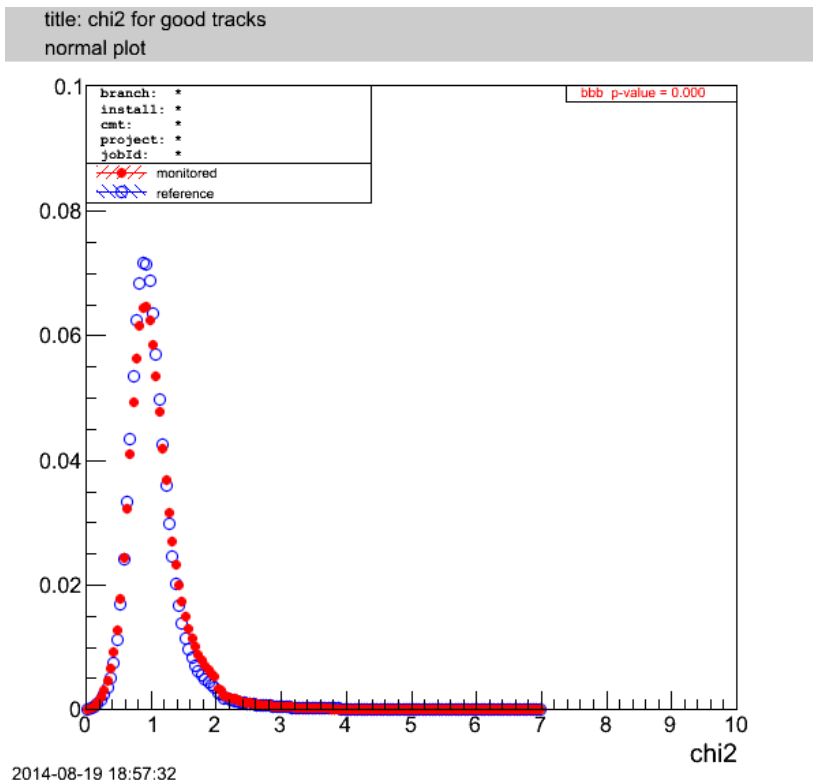
2014-08-19 18:53:50

title: Cluster Efficiency: TRT Endcap
normal plot

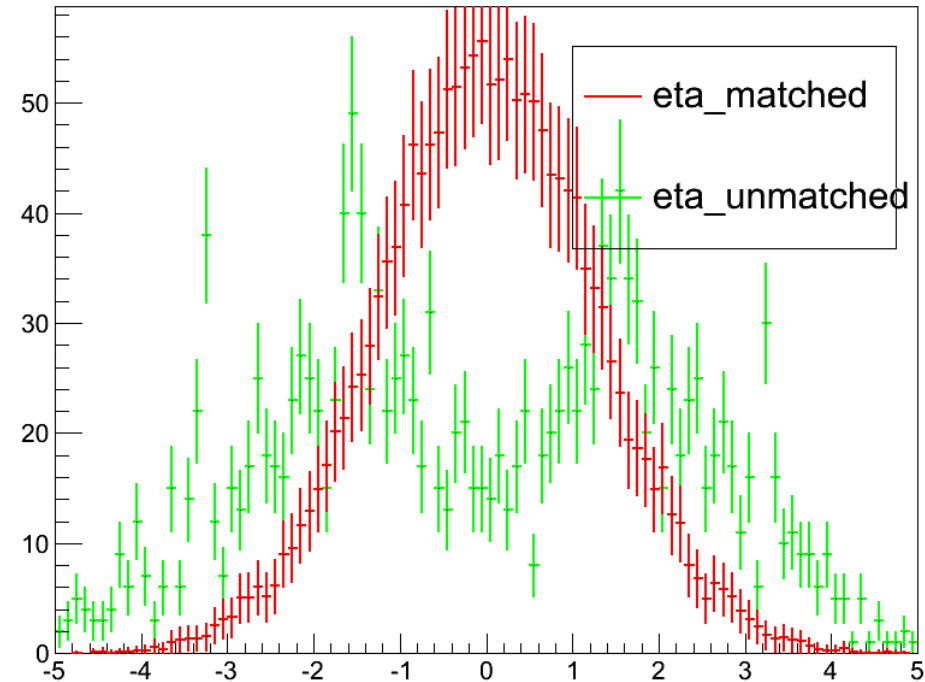
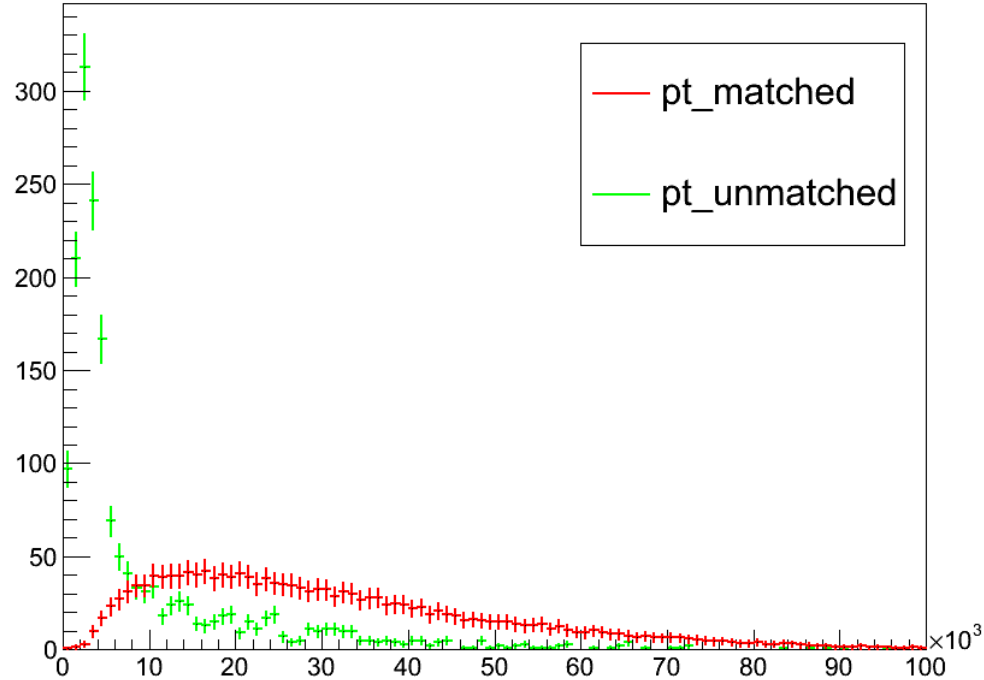


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chi2



- Unmatched electrons tend to be “bad” electrons with big eta small pt
- This deltaR match is quite sensitive to electron zone (el initial)
- The final result is stable regardless the zone size
- For all the truth electron $pt > 15\text{GeV}$ $|\eta| < 2.47$



Zone size 0.6 with pt eta cut on truth el

- el_initial 280
- el_author 218
- el_eta 218
- el_pt 173
- el_quality 173
- el_mediumPP_ID 146
- el_isolation 125
- overlap_remove 125
- N_truth_electron: 290

- Zone size 0.4 with pt eta cut on truth

- el_initial 227
- el_author 190
- el_eta 190
- el_pt 164
- el_quality 164
- el_mediumPP_ID 146
- el_isolation 125
- overlap_remove 125
- N_truth_electron: 290
-

- Zone 0.2 no cuts
- el_initial 271
- el_author 220
- el_eta 219
- el_pt 166
- el_quality 166
- el_mediumPP_ID 148
- el_isolation 127
- overlap_remove 127
- N_truth_electron: 386

- Zone 0.2 with cuts on truth
- el_initial 199
- el_author 172
- el_eta 172
- el_pt 163
- el_quality 163
- el_mediumPP_ID 146
- el_isolation 125
- overlap_remove 125
- N_truth_electron: 290