p13.02 jets

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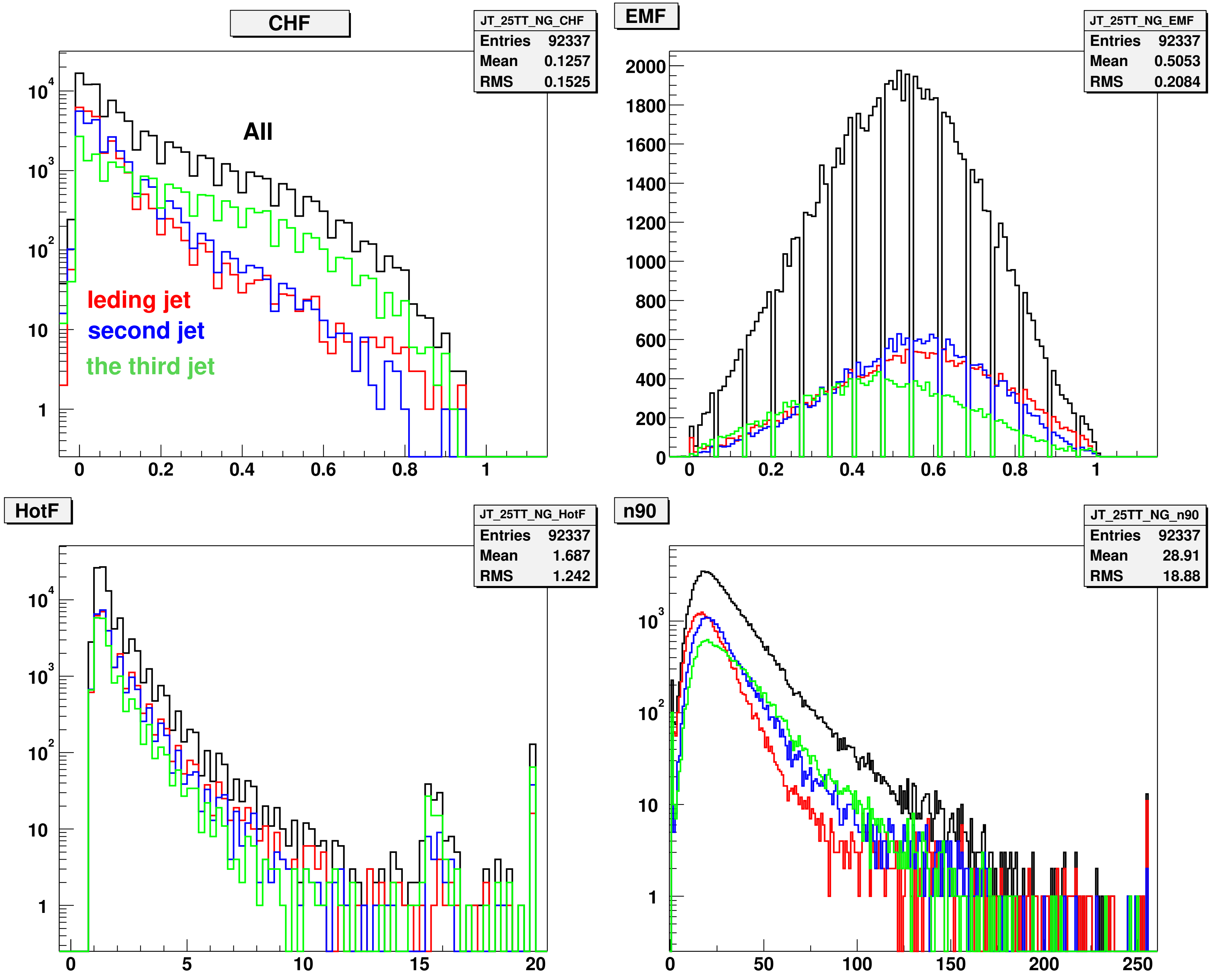
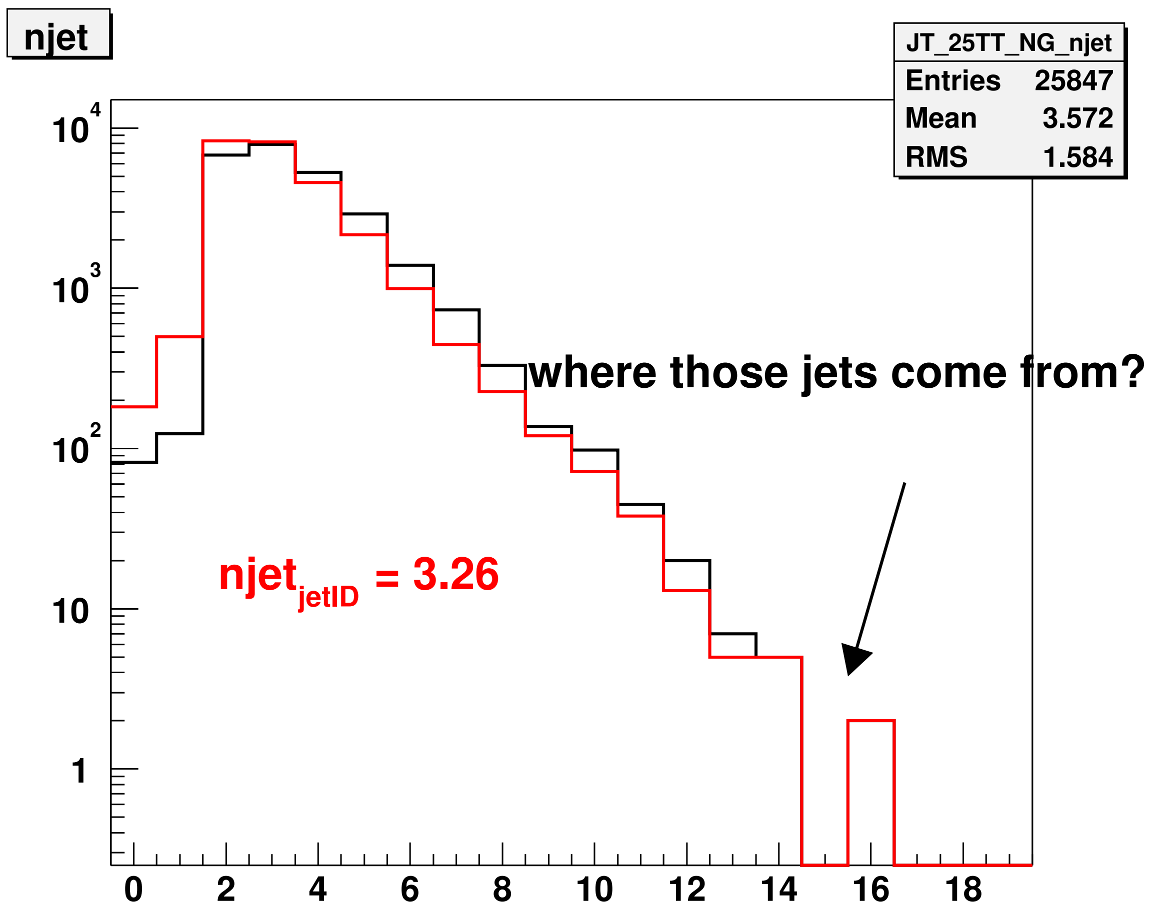
Data sample

- trigger version 9.20
- p13.02 thumbnails
- about 3.4 million events for jet triggers
- 0.4 million events for minimum bias sample
- the same zero suppression as in p10
- the same jetID cuts were applied
  - $0.05 < EMF < 0.95$
  - $CHF < 0.4$
  - $HotF < 10$
  - $n90 > 1$

JT_25TT_NG - jetID variables

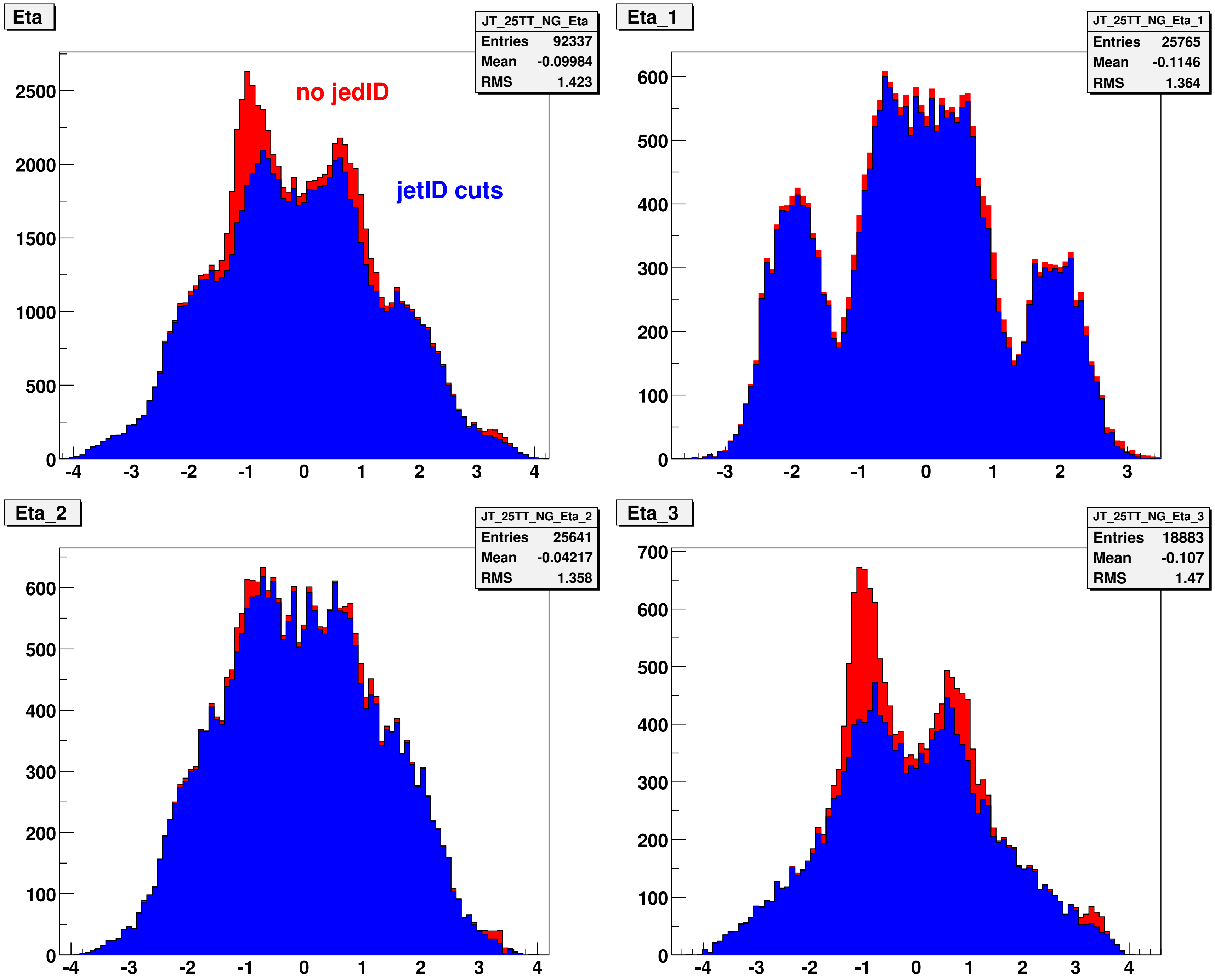


number of jets in JT_25TT_NG

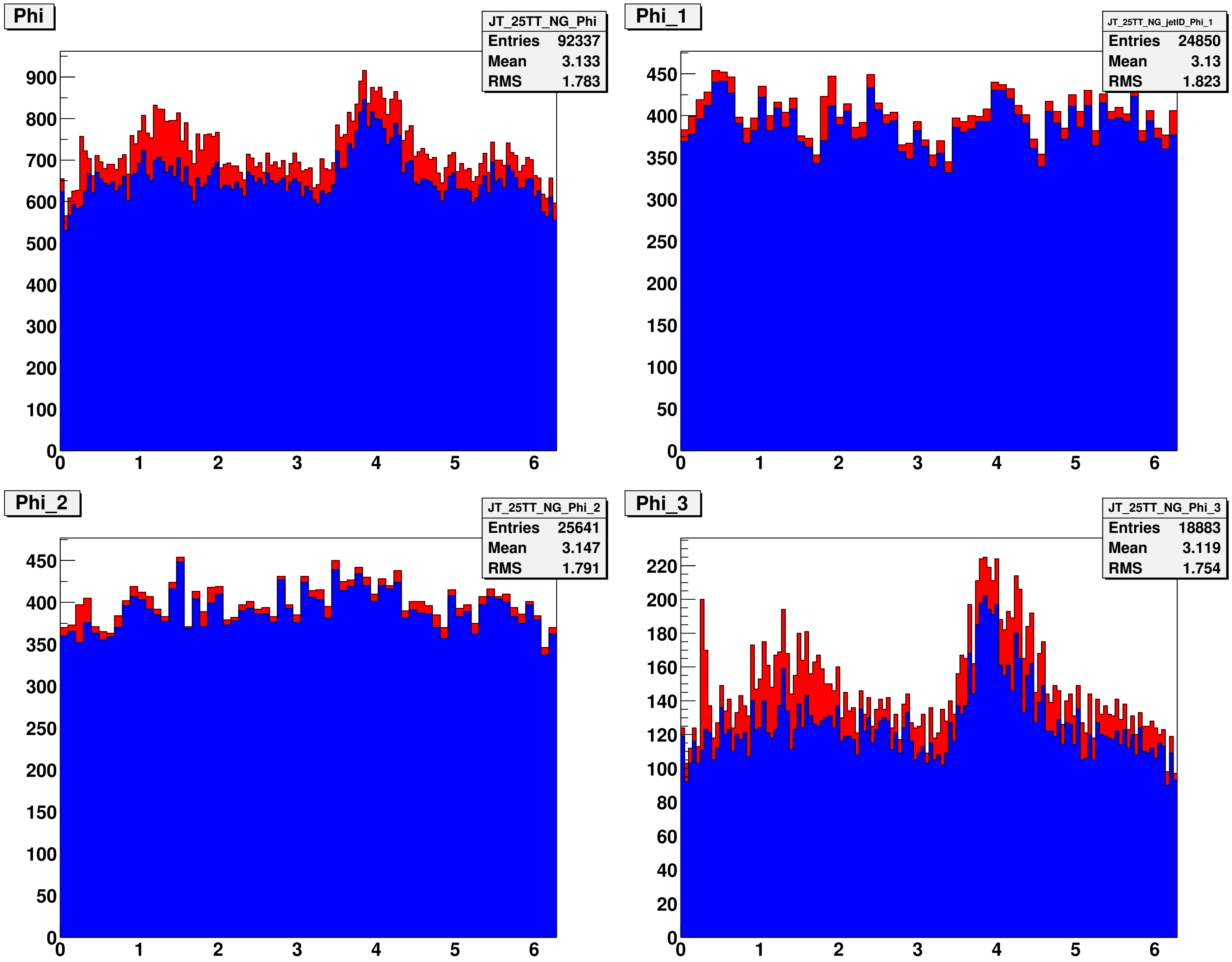


much better then in p11

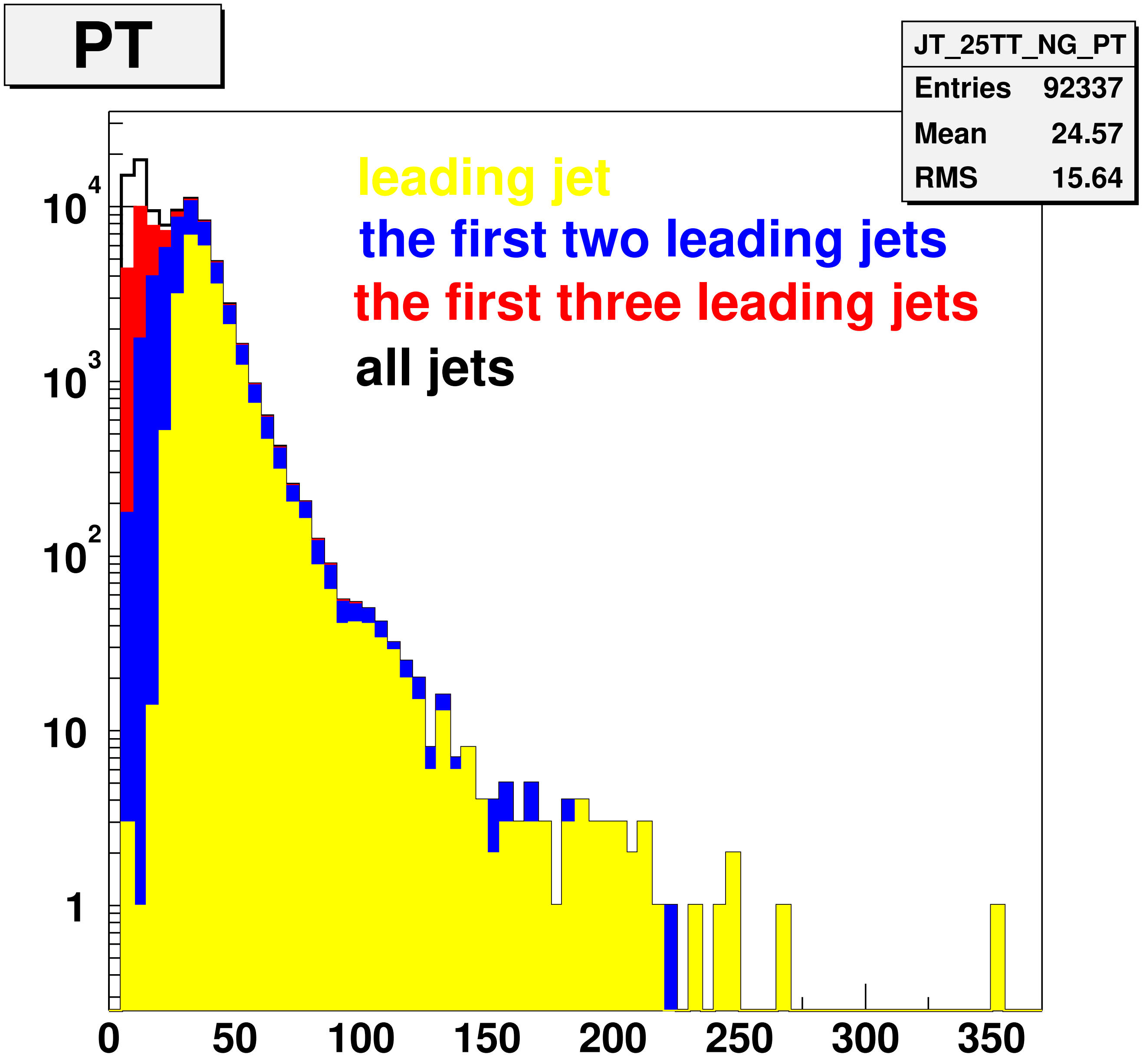
η distribution - JT_25TT_NG



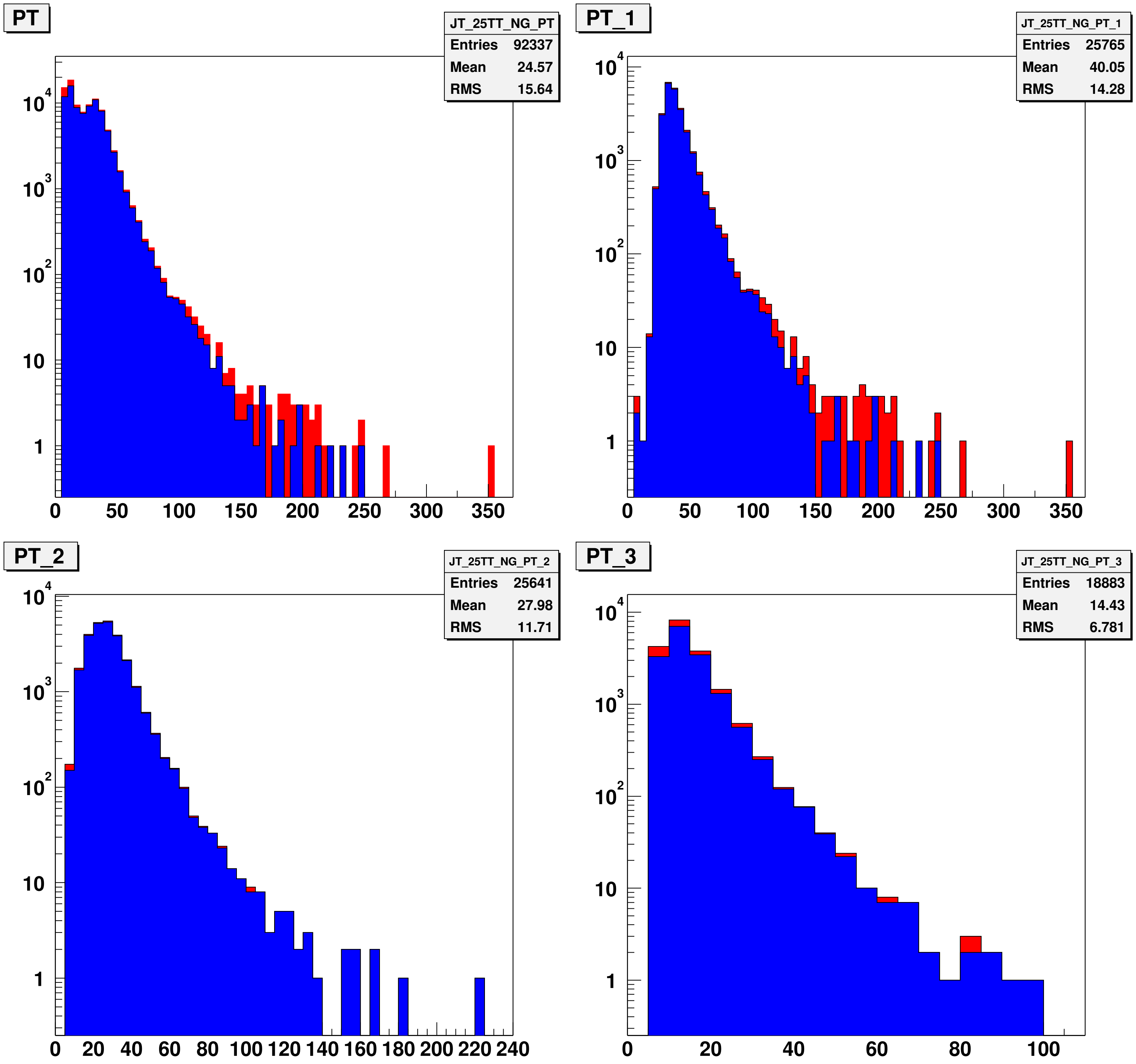
φ distribution - JT_25TT_NG



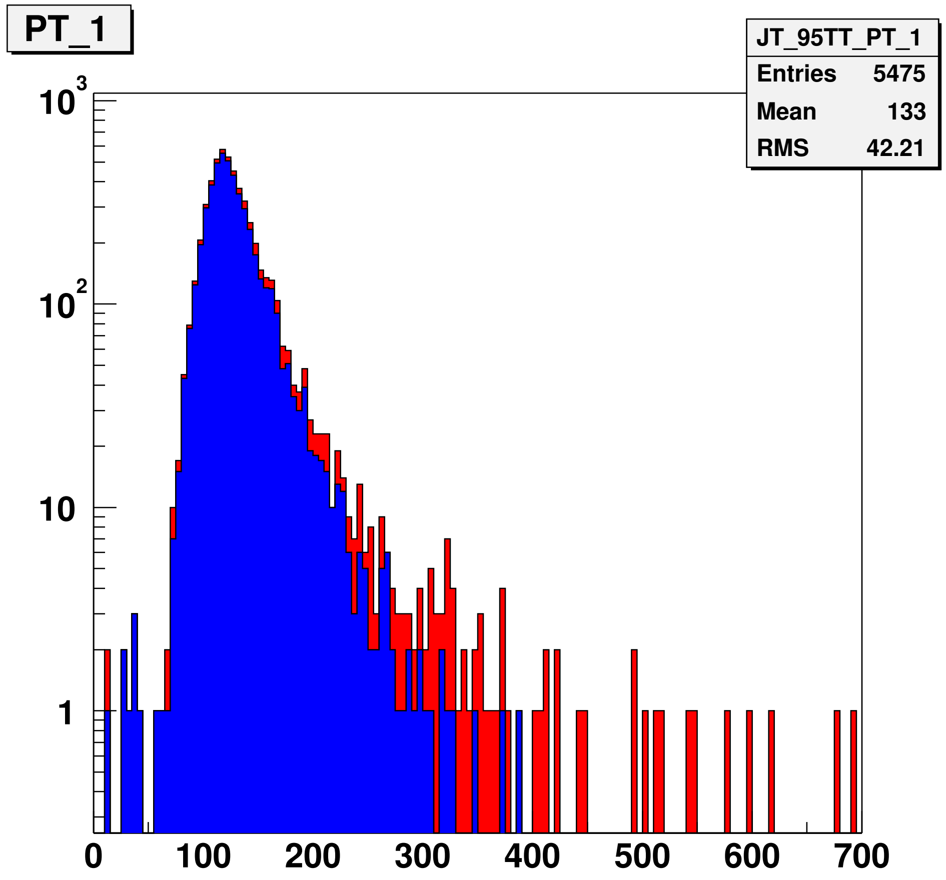
PT distribution JT_25TT_NG

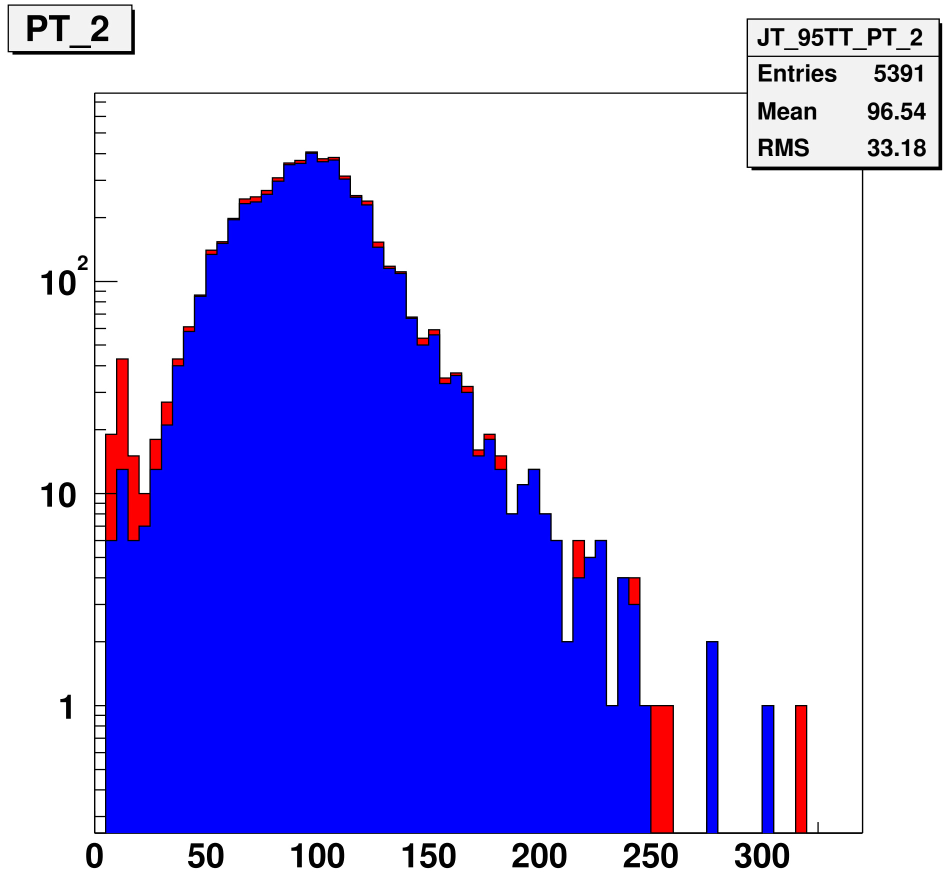


p_T distribution - JT_25TT_NG

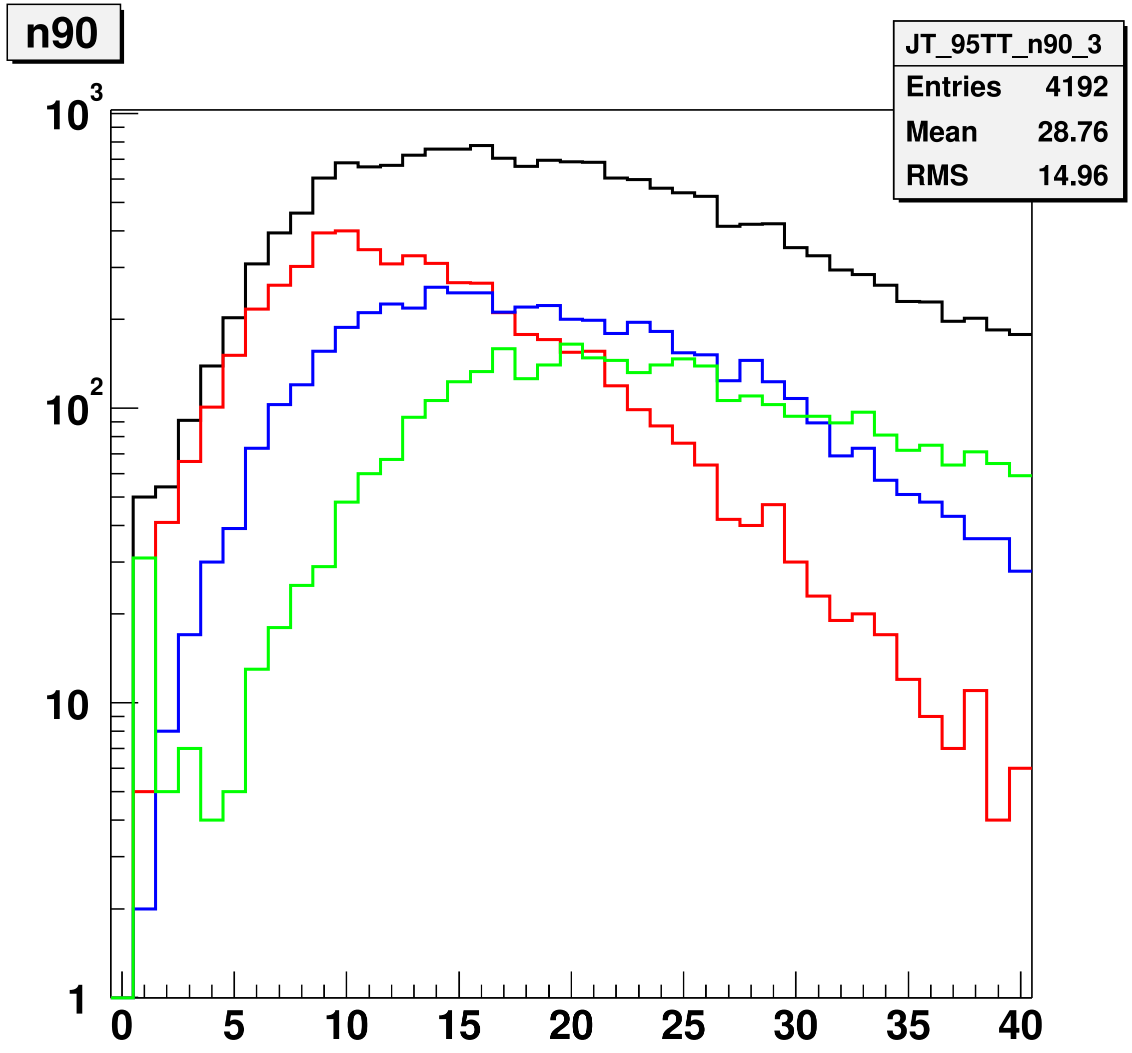


p_T distribution - JT_95TT



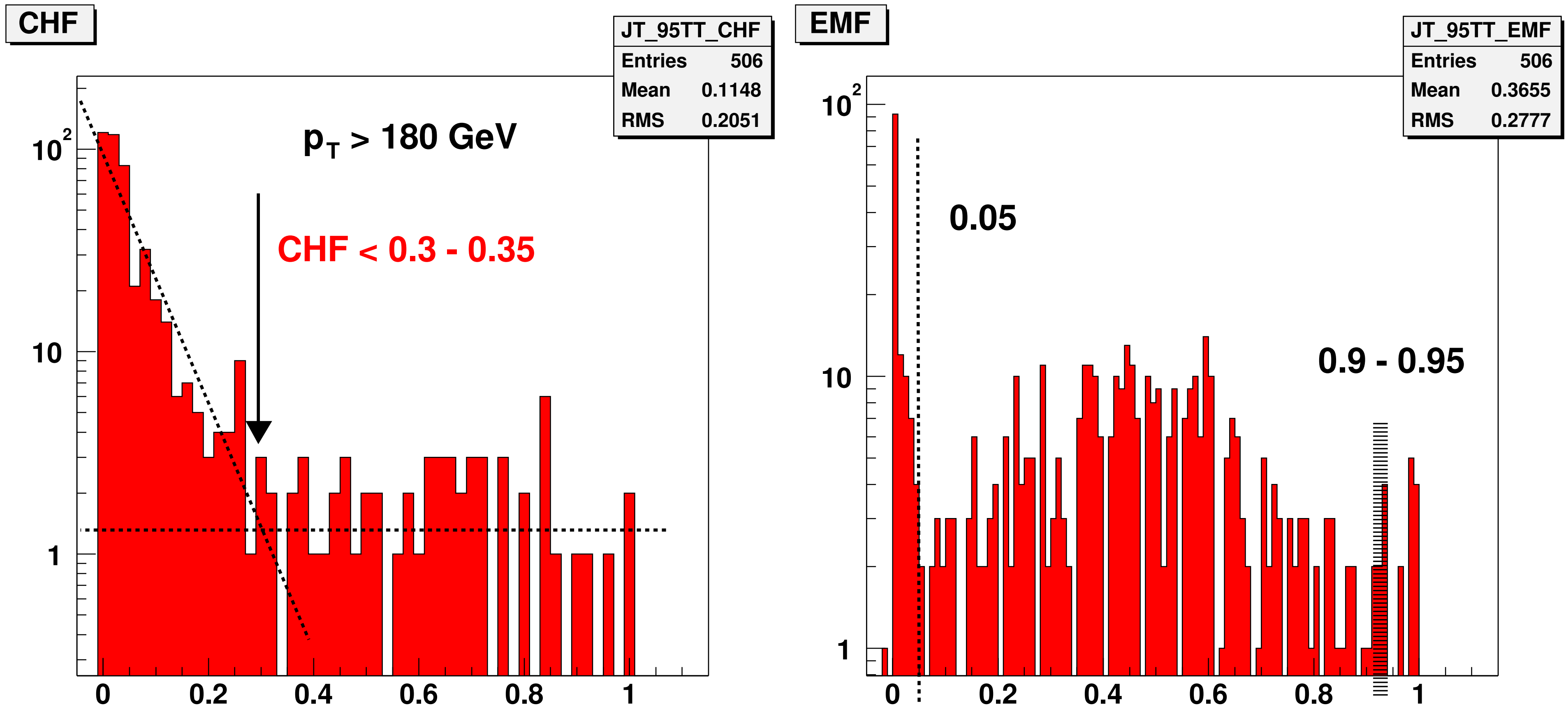


n90 cut

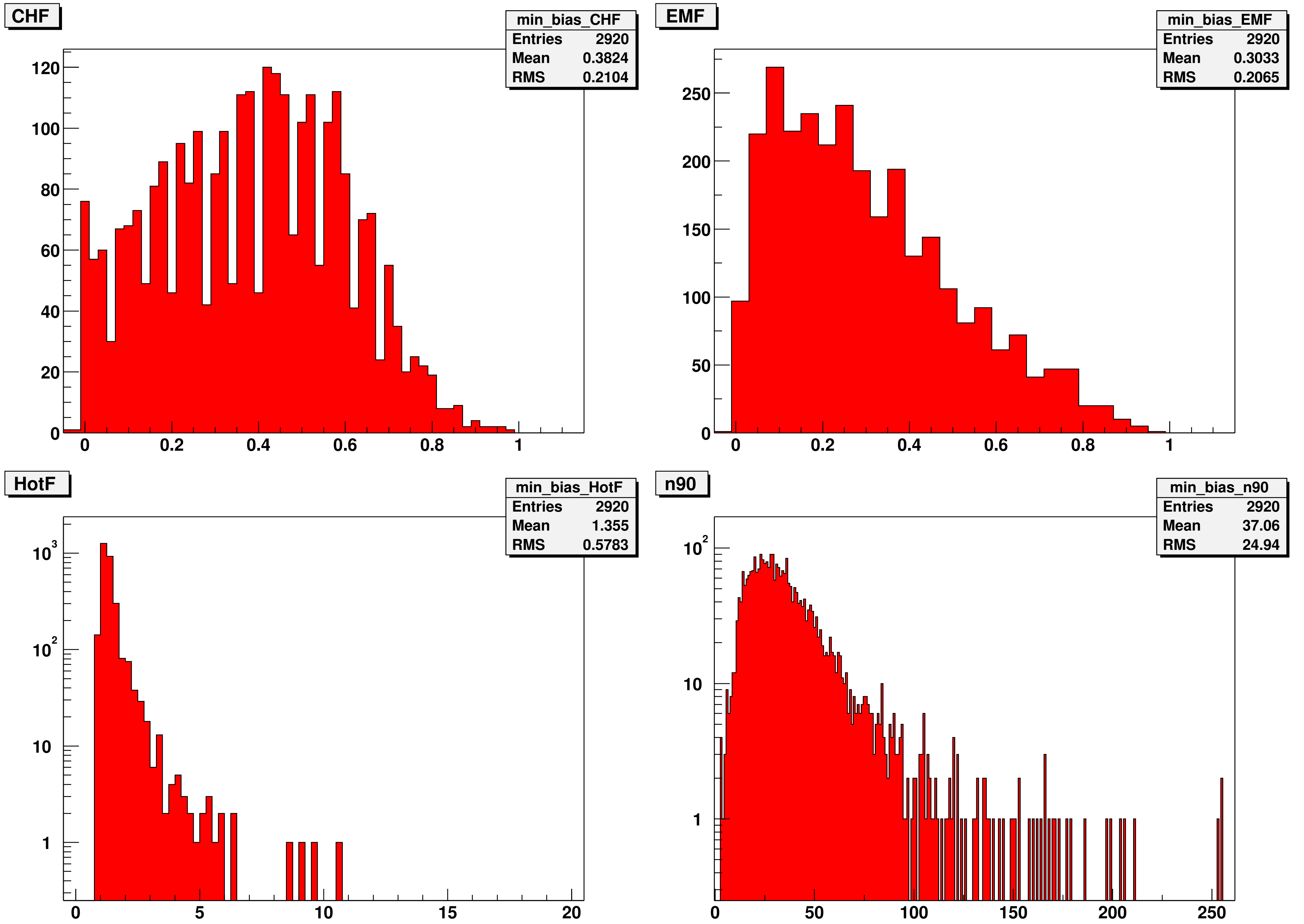


looks like $n90 > 1 \ or \ 2$ might be enough

jets with $p_T > 180\,\mathrm{GeV}$ in JT_95TT

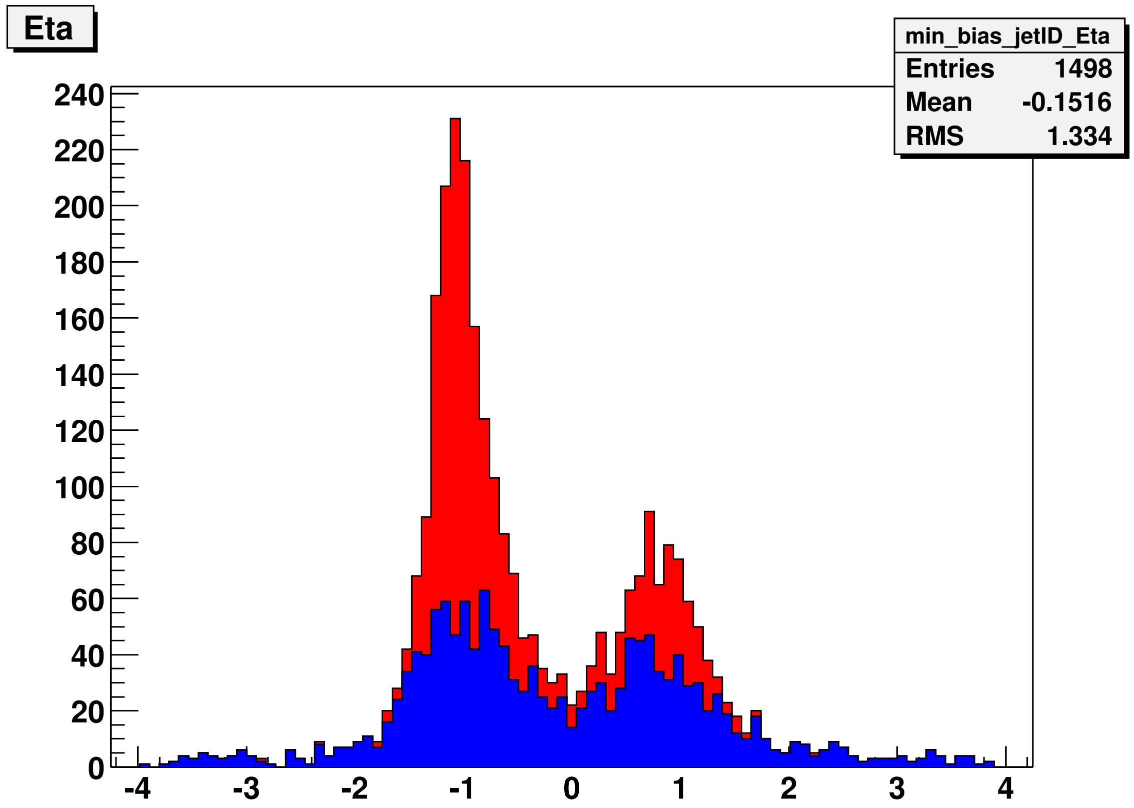


min_bias - jetID variables



real jets in min_bias

- plots looks much better then in p11
- 0.44 jets per minimum bias event (0.23 after jetID cuts)
- how many of minimum bias jets are real?
- would be nice to check properties of jets above $35\,$GeV



Summary

- jet properties in p13 looks much more reasonable then in p11
- mean number of events in single jet trigger is about 3.3
- p10 jetID cuts removes a lot of high p_T jets
  - cut 0.4 on CHF is may be to loose
  - cut 0.05 on EMF is in the right place
  - upper cut on EMF should be somewhere around $0.9 - 0.95$
  - cut on $n90$ might be set slightly higher then 1
- minimum bias events
  - much reasonable number of jets per event - about 0.2 (after p10 jetID cuts)
  - we observe 10 times less jets
  - studies on bigger sample are needed in order to check the jet properties above some higher p_T threshold