

Look at DiJets with Kalibri

Hartmut Stadie

December 9, 2010

Data Samples and Preselection

Data:

- data sets:
/Jet/Run2010B-Nov4ReReco_v1/RECO
/JetMET/Run2010A-Nov4ReReco_v1/RECO
/JetMETTau/Run2010A-Nov4ReReco_v1/RECO
- good runs:
Cert_132440-149442_7TeV_StreamExpress_Collisions10_JSON_v3
- int. luminosity: 33.7 pb^{-1}
- triggers: or of HLT_DiJetAve triggers
- further cuts: L1 bits, vertex, scraping
- jet corrections: Spring10

MC:

- data set: /QCD_Pt_15to3000_TuneZ2_Flat_7TeV_pythia6/Fall10-START38_V12-v1/GEN-SIM-RECO
- jet corrections: Fall10

Dijet-Selection

Event Selection:

- two highest p_T jets:
 - pass loose jet id
 - $\Delta\varphi(j1, j2) > 2.7$
 - $p_{T,ave} = (p_{T,1} + p_{T,2})/2$
- $p_{T,j3} < 0.2 \cdot p_{T,ave}$

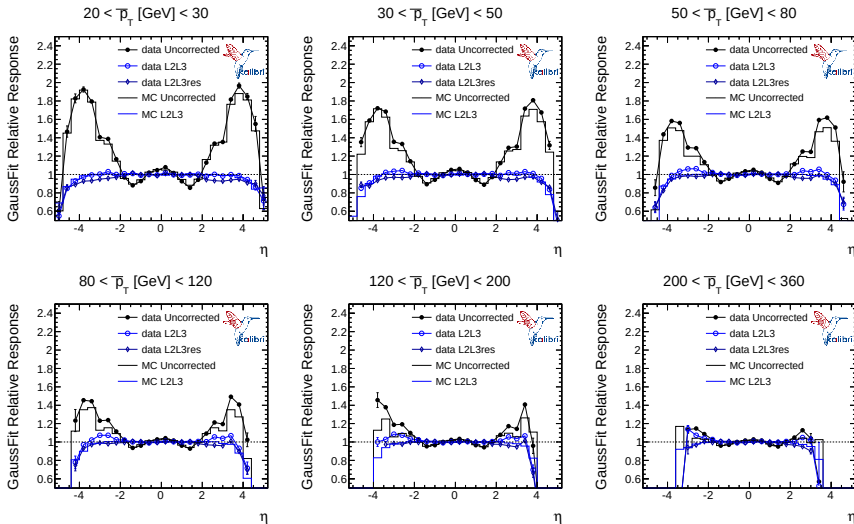
Relative Response:

- use both combinations:
 - jet 1 = tag; jet 2 = probe
 - jet 2 = tag; jet 1 = probe
- require $|\eta_{tag}| < 1.3$
- plot relative response versus p_T, η, JW of probe jet:

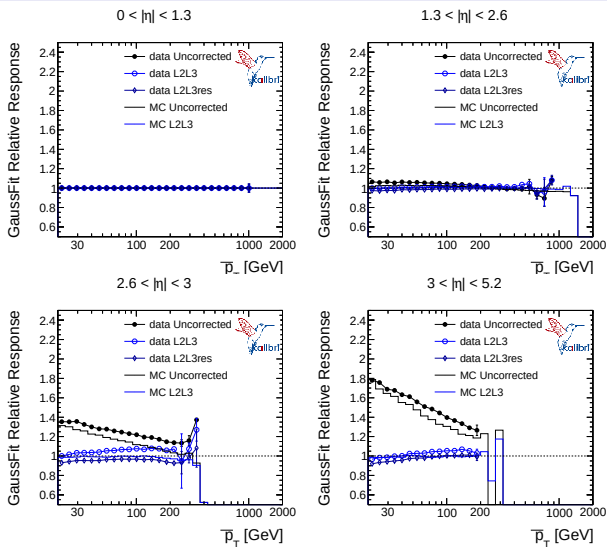
$$\text{Asymmetry: } A = \frac{p_{T,probe} - p_{T,tag}}{p_{T,probe} + p_{T,tag}}$$

$$\text{relative Response: } R = \frac{1 + \langle A \rangle}{1 - \langle A \rangle}$$

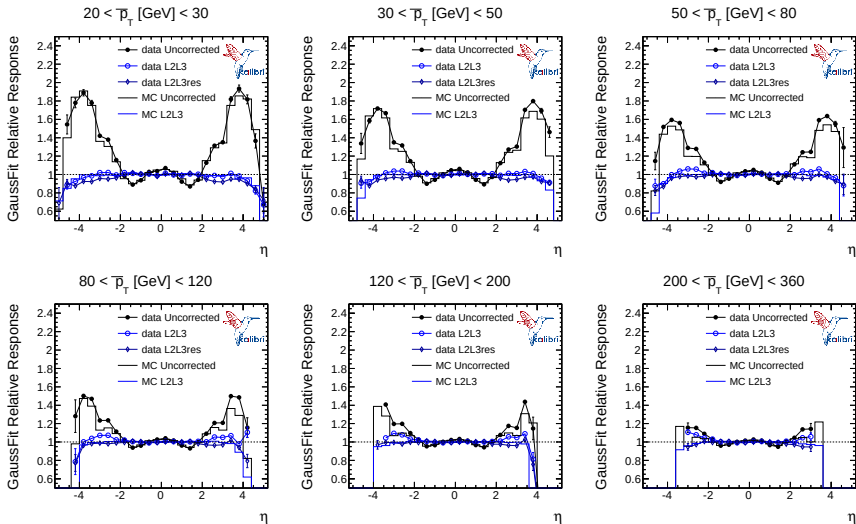
Relative Response vs η for ak5Calo Jets



Relative Response vs p_T for ak5Calo Jets



Relative Response vs η for ak5Calo Jets for 0.1-cut



Relative Response vs p_T for ak5Calo Jets for 0.1-cut

