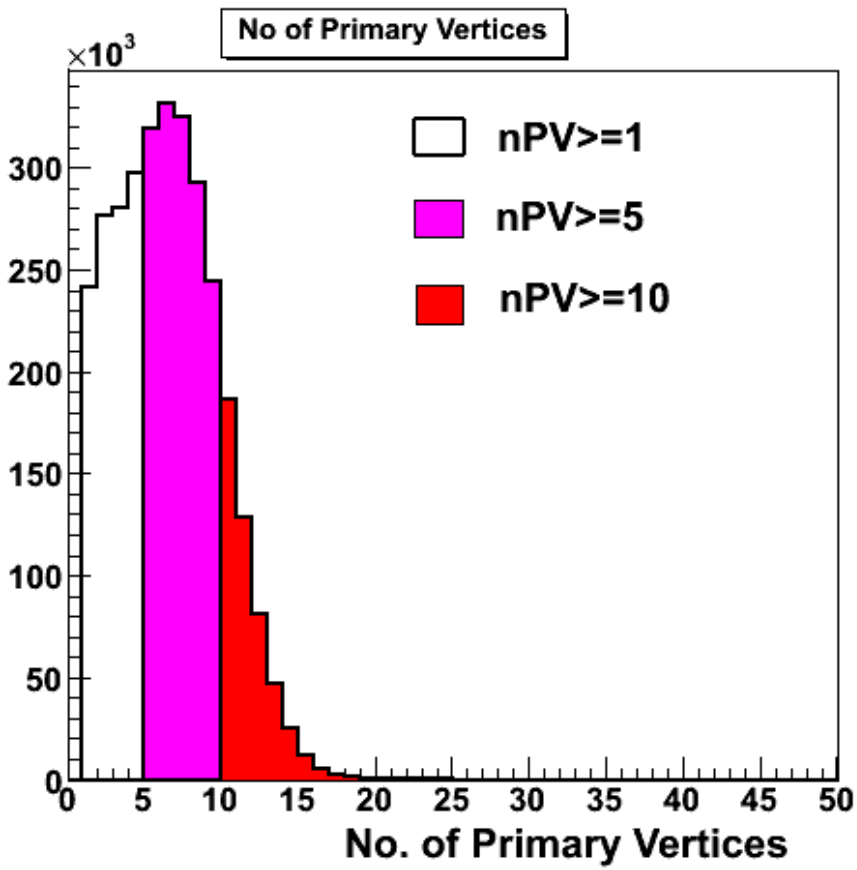
Sensitivity of the chi analysis to pileup

MC Sample looked at:
/QCD_Pt_15to3000_TuneZ2_Flat_7TeV_pythia6/Spring11-E7TeV_FlatDist10_2011EarlyData_50ns_START311_V1G1-v1/GEN-SIM-RECODEBUG

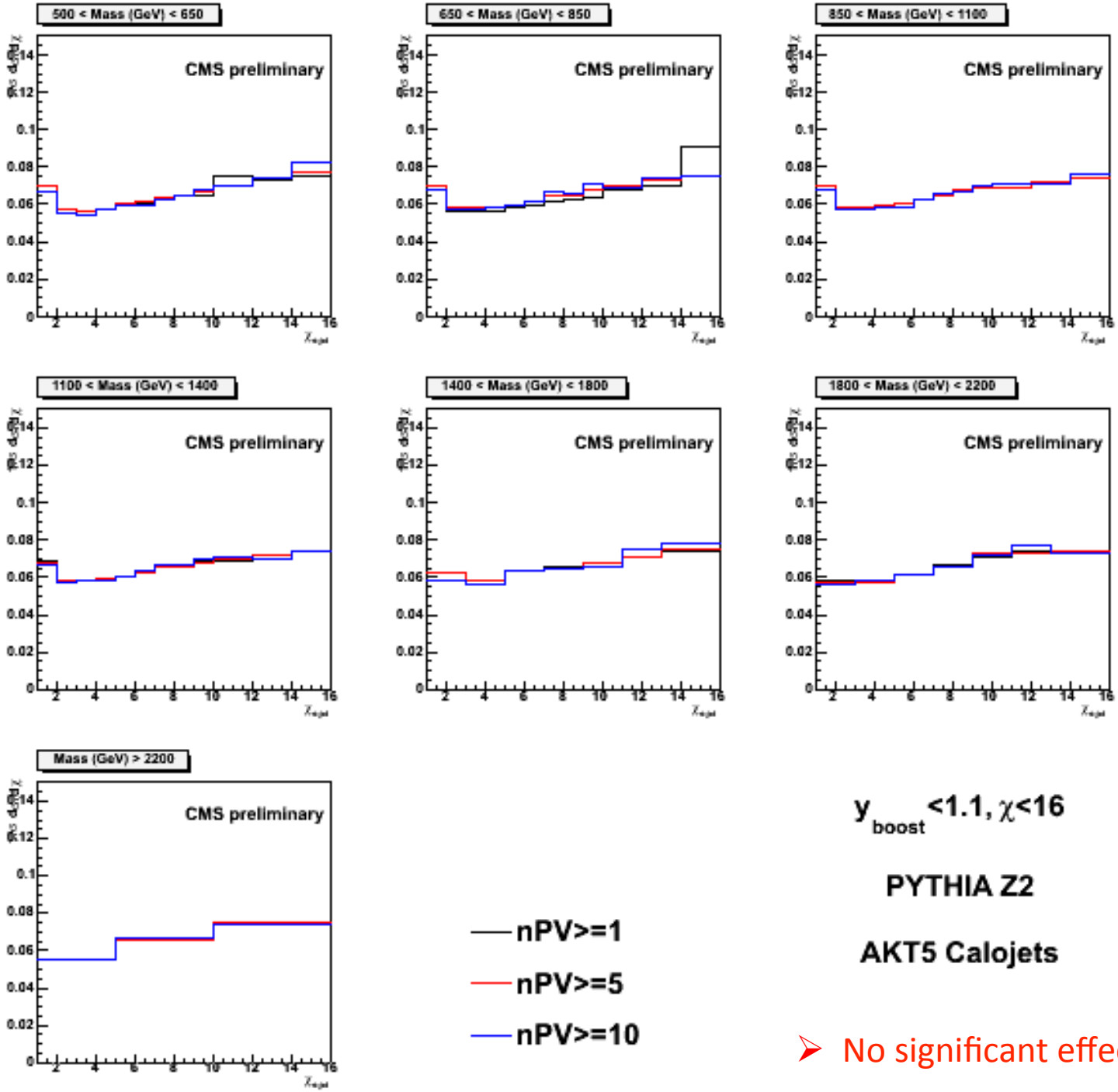


- Jet reconstruction:
  - Anti-kT R=0.5 CaloJets
  - Apply L2+L3+L2L3Residual JEC
- Event selection:
  - not fake, ndof>4, z<24cm, ρ<2cm
  - Leading 2 jets in event pass loose JetID
- Restrict measurement within |y|<2.5

$y_{boost} = 0.5*(y_1+y_2) < 1.11$

$y^* = 0.5*|y_1-y_2| < 1.39$ (or $\chi<16$)

Suvadeep Bose



y_{boost}<1.1, χ<16

PYTHIA Z2

AKT5 Calojets

➢ No significant effect of Pile up