

Measurement of R_b of Z hadronic decay

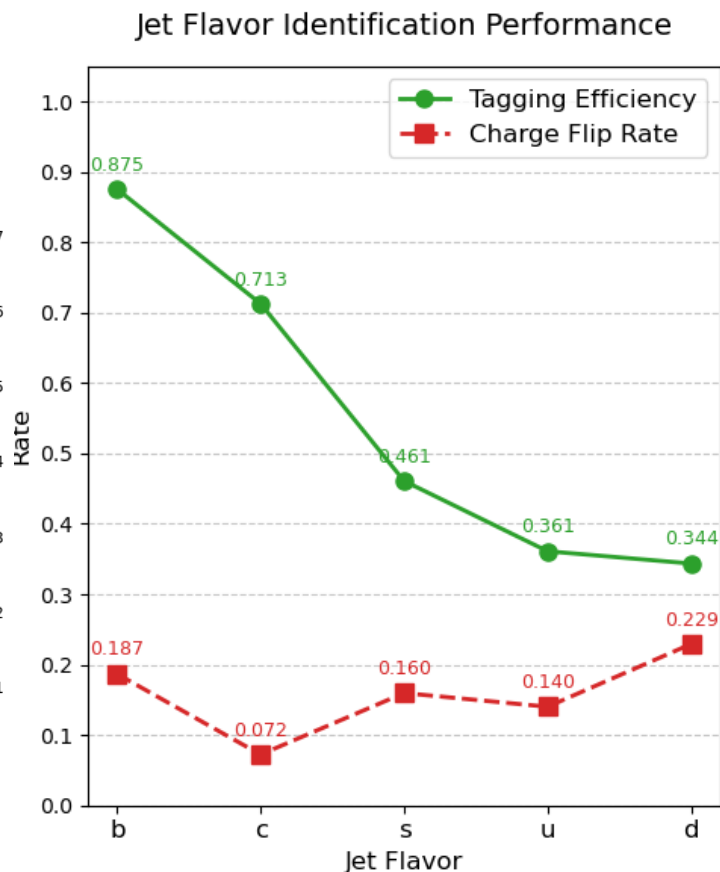
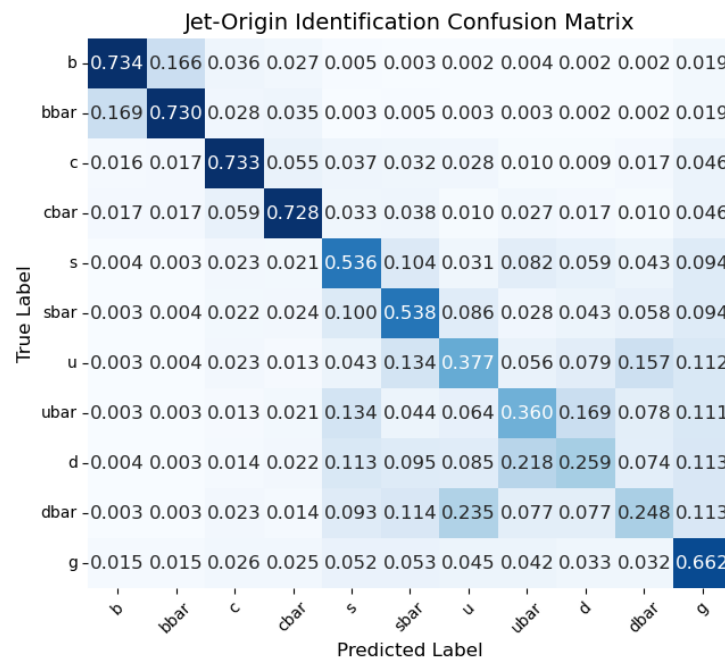
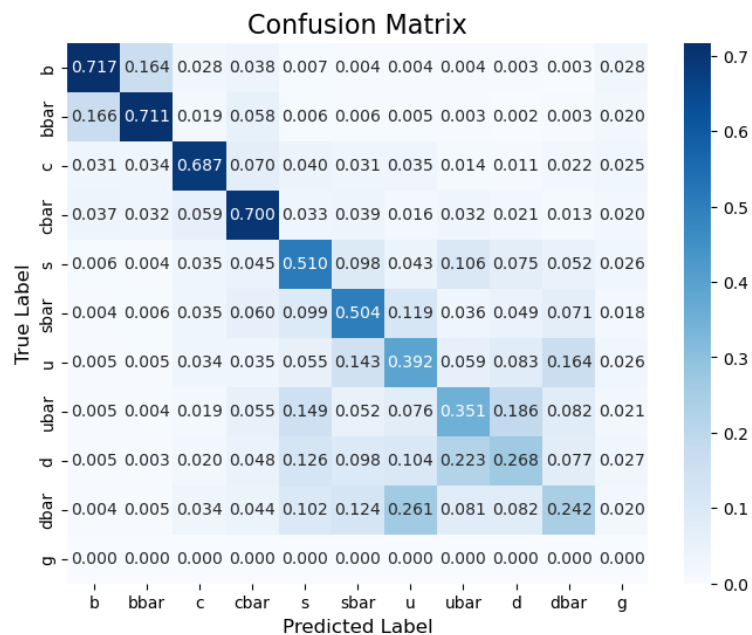
Hancen LU, Mohan PI, Zizi KANG, Bo LIU

Status:

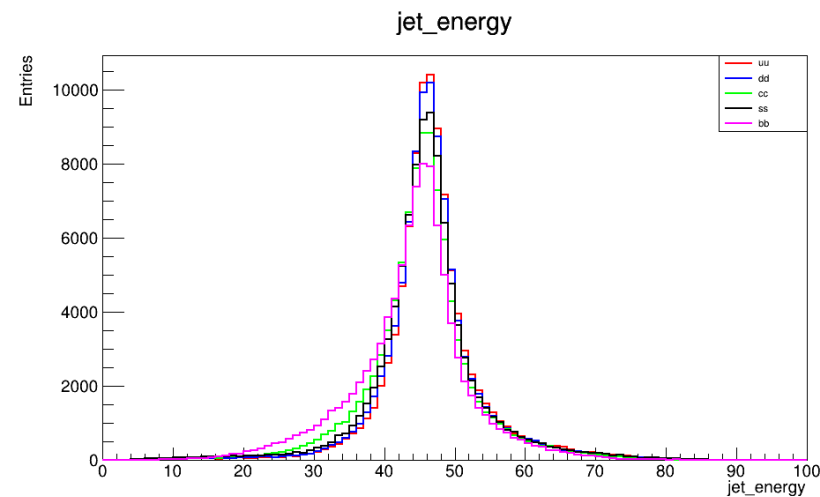
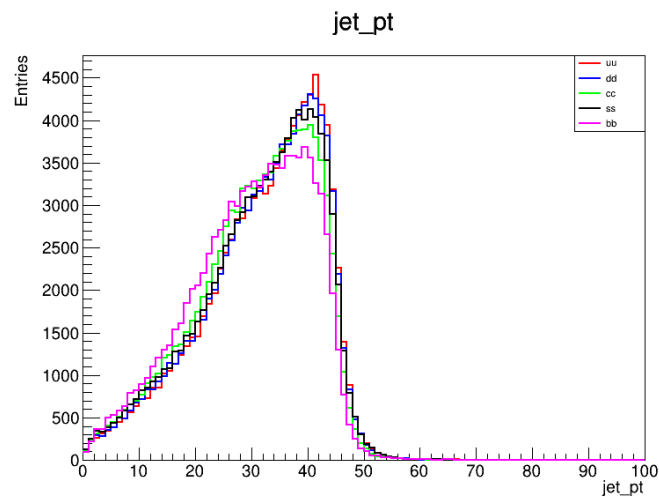
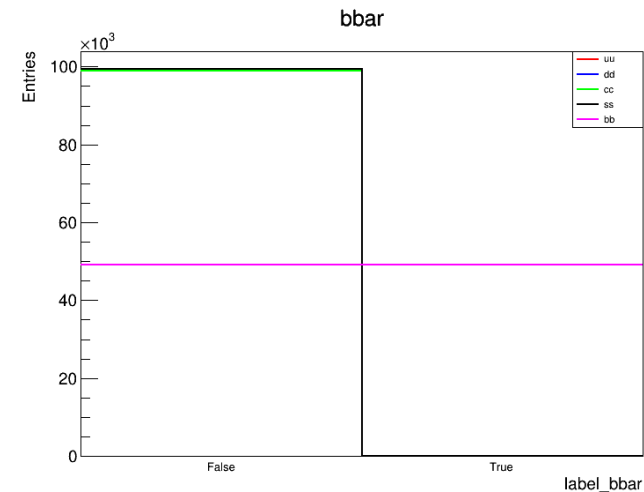
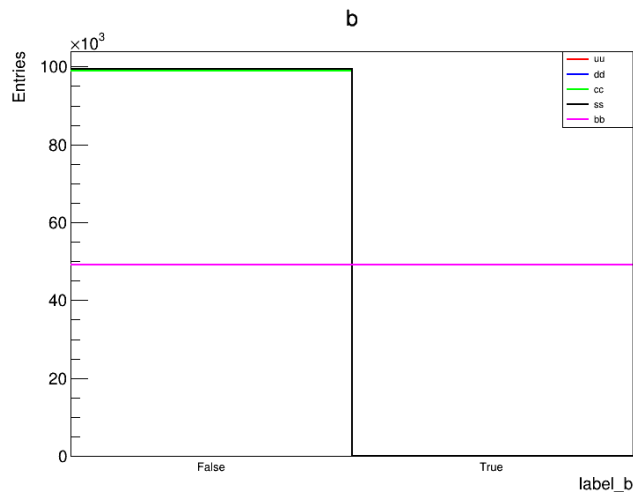
- ✓ Samples (250*200 for each flavor, not enough)
- ✓ Pre-processing
- ParticleNet Training (Undergoing)
-

/cefs/higgs/zhangkl/AI/datasets

Pre-training model result



- tree;1
 - part_px
 - part_py
 - part_pz
 - part_energy
 - part_pt
 - part_deta
 - part_dphi
 - part_d0val
 - part_d0err
 - part_dzval
 - part_dzerr
 - part_charge
 - part_isChargedHadron
 - part_isNeutralHadron
 - part_isPhoton
 - part_isElectron
 - part_isMuon
 - part_isPion
 - part_isChargedKaon
 - part_isProton
 - label_b
 - label_bbar
 - label_c
 - label_cbar
 - label_u
 - label_ubar
 - label_d
 - label_dbar
 - label_s
 - label_sbar
 - label_g
 - jet_nparticles
 - jet_label
 - jet_costheta
 - jet_pt
 - jet_eta
 - jet_energy
 - jet_px
 - jet_py
 - jet_pz



Newly added

Jet label: negative for antiquark, positive for quark. Abs value is event label.

Next step:

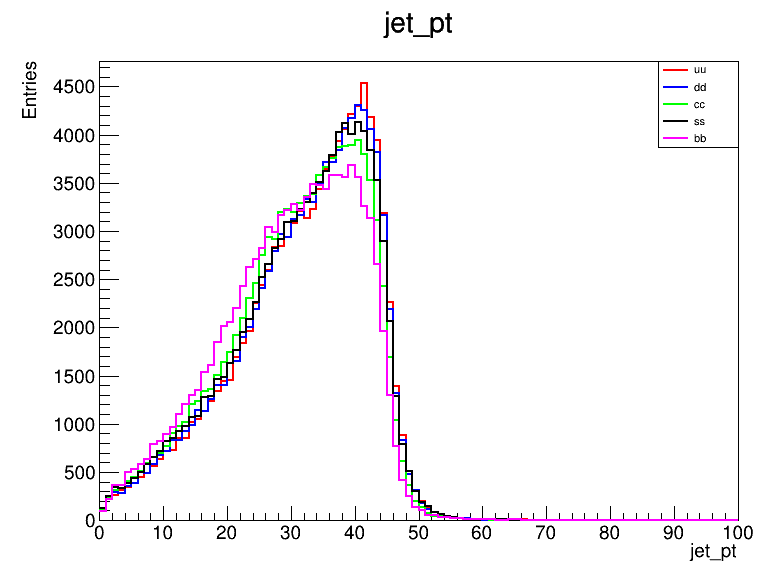
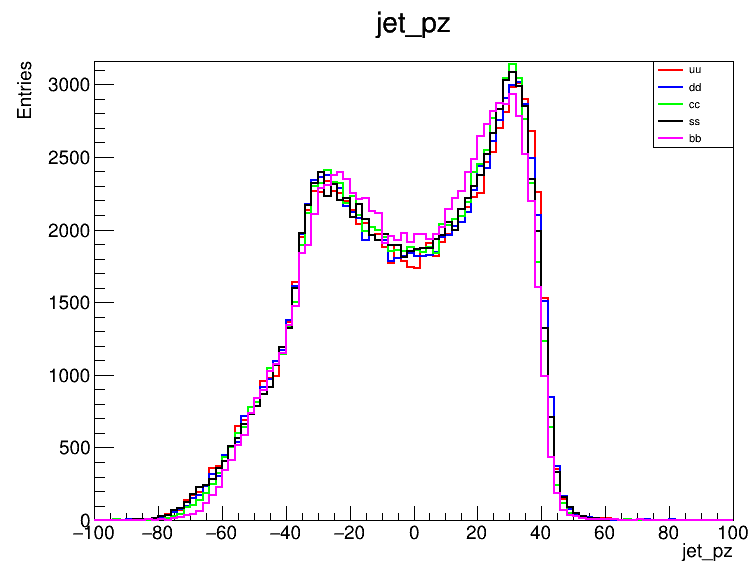
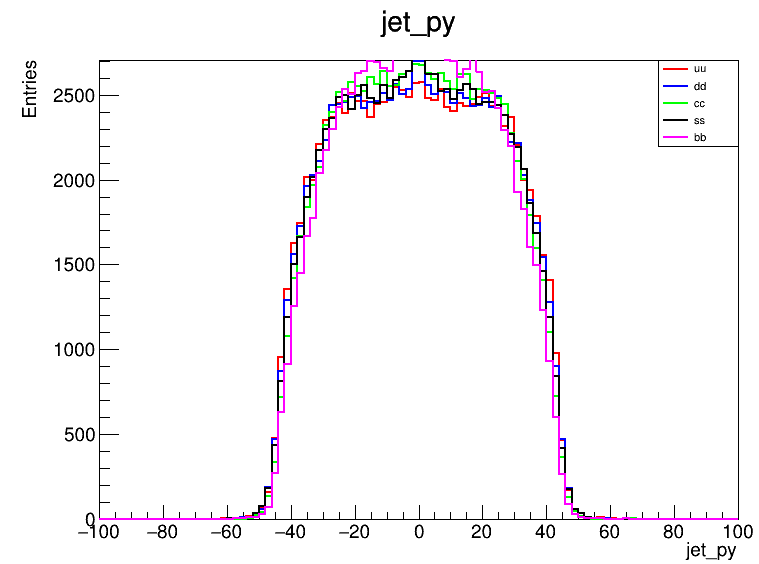
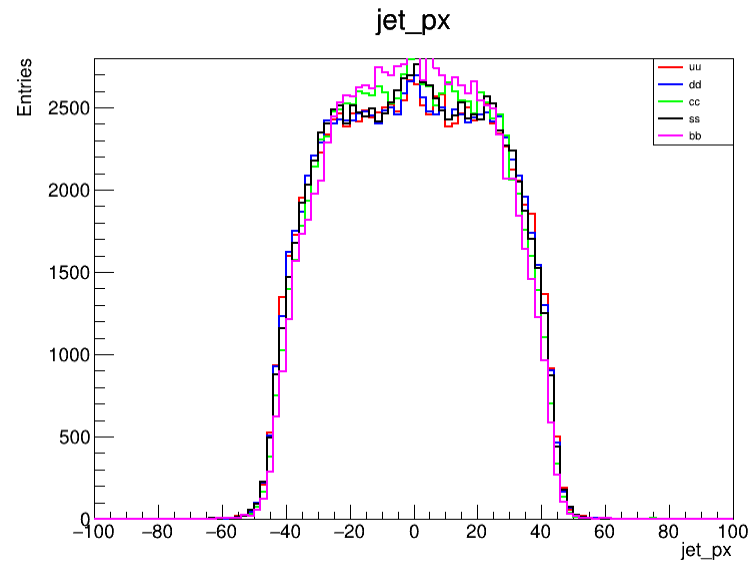
- More samples
- Particle Net training
- Roughly estimation on Rb
-

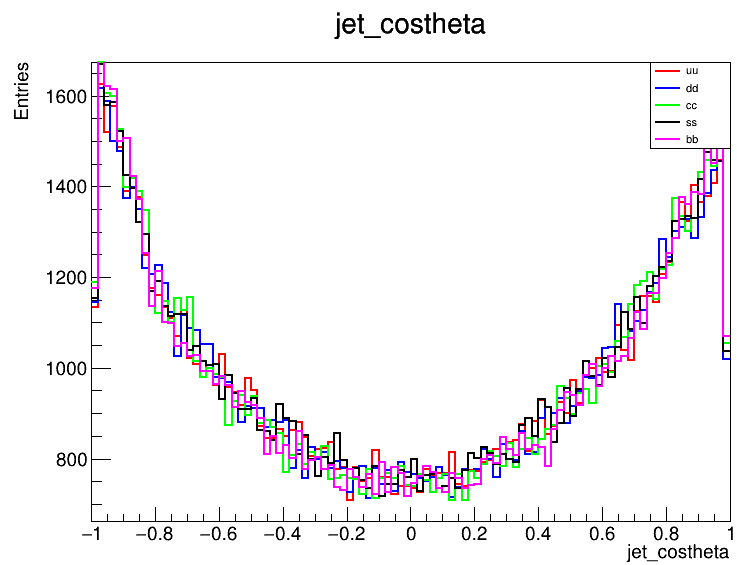
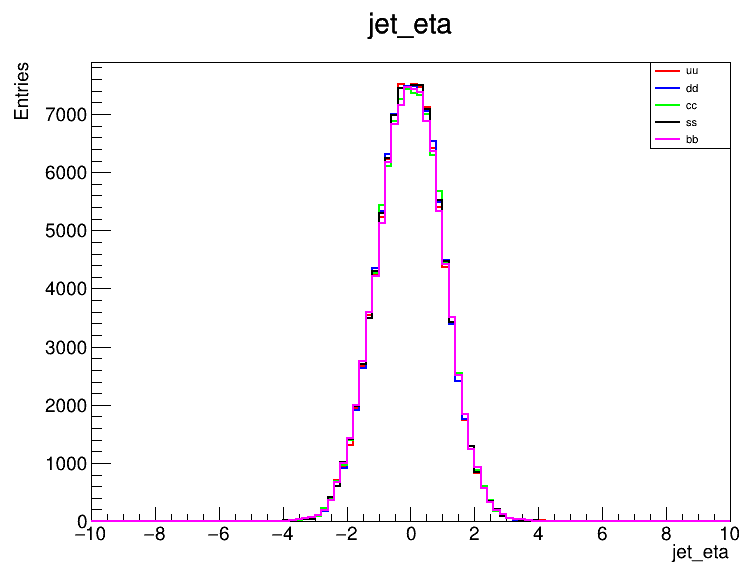
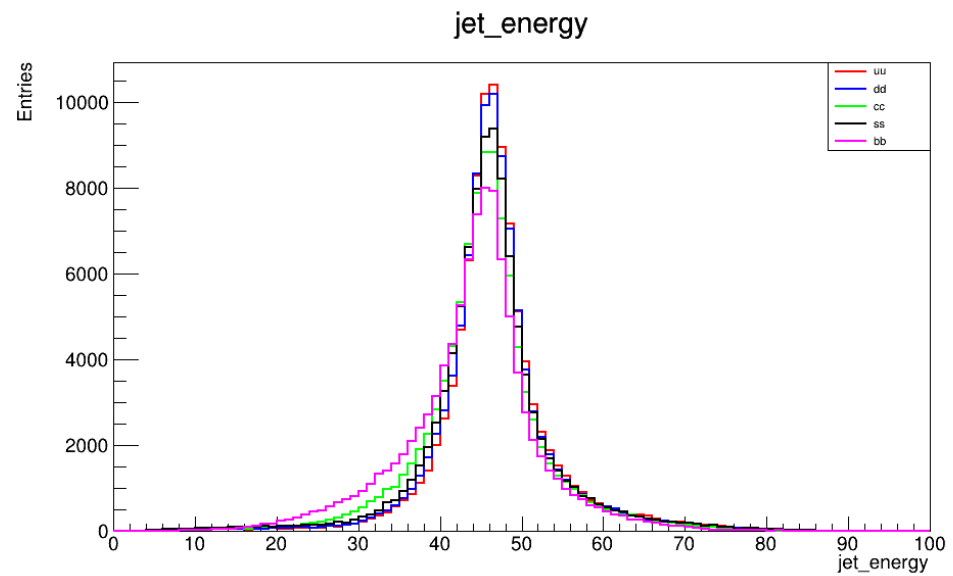
From Kaili

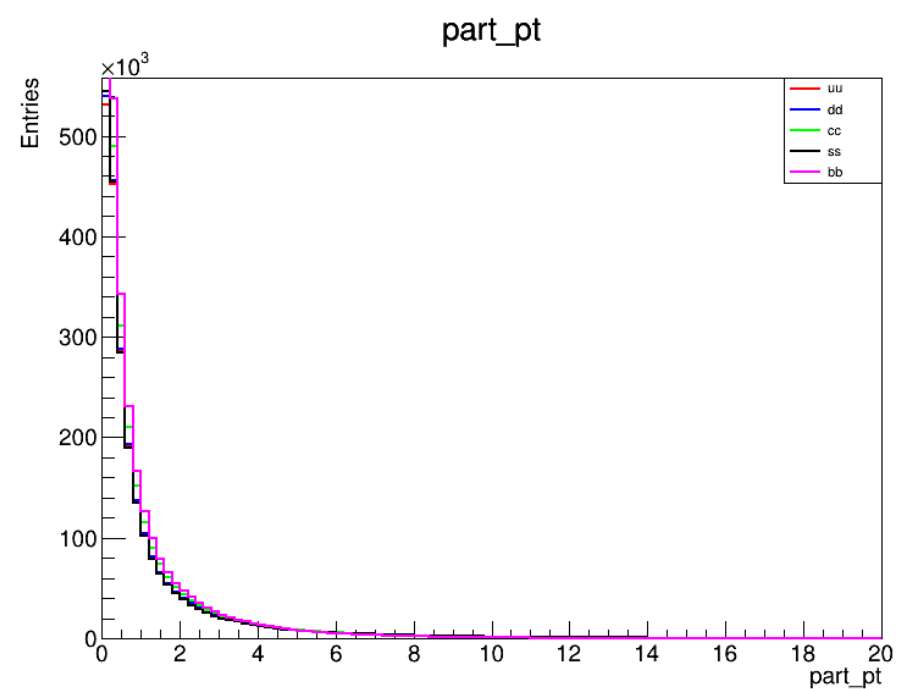
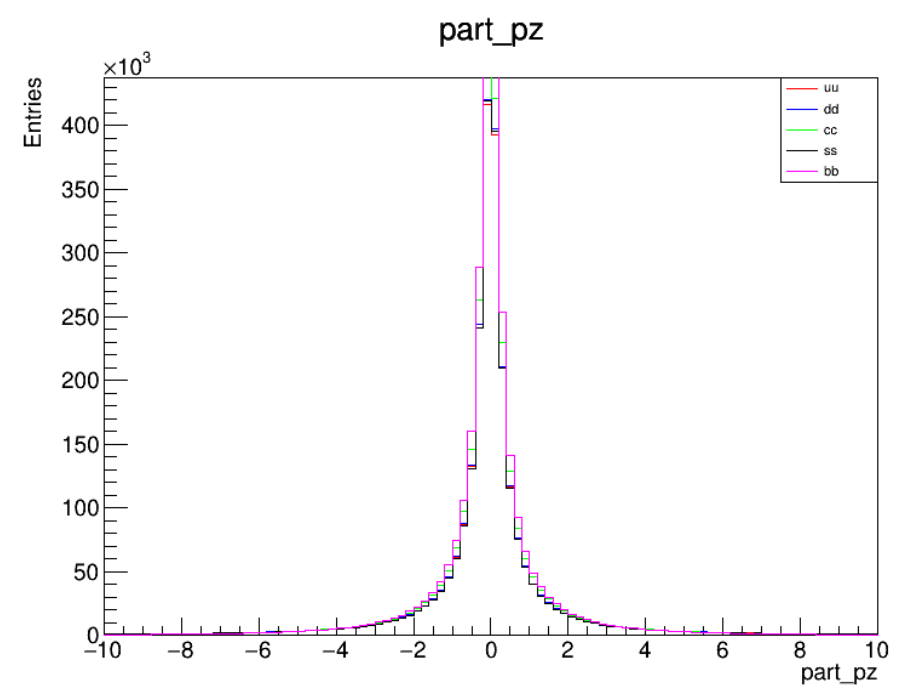
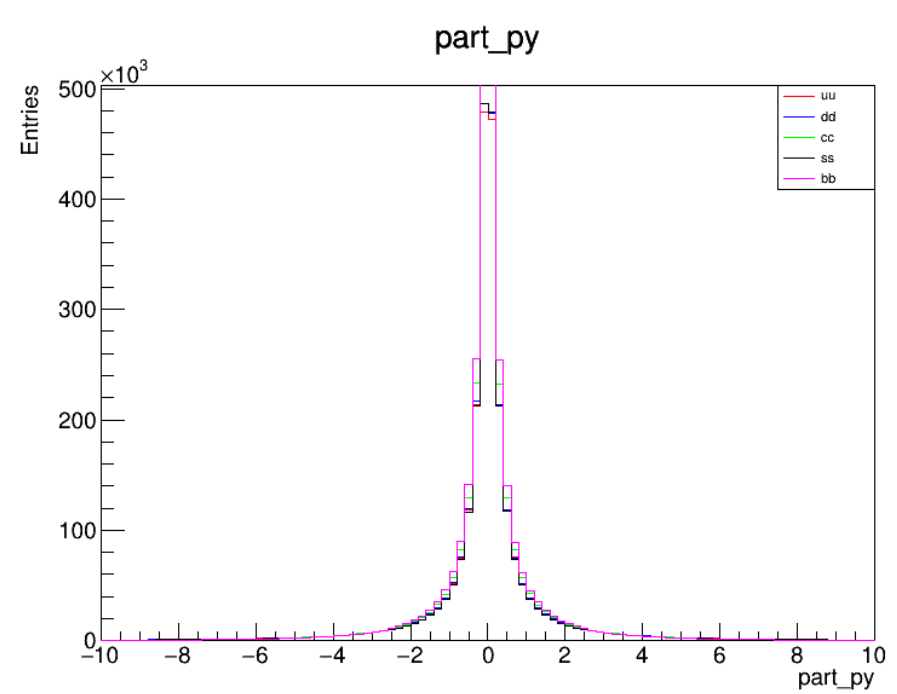
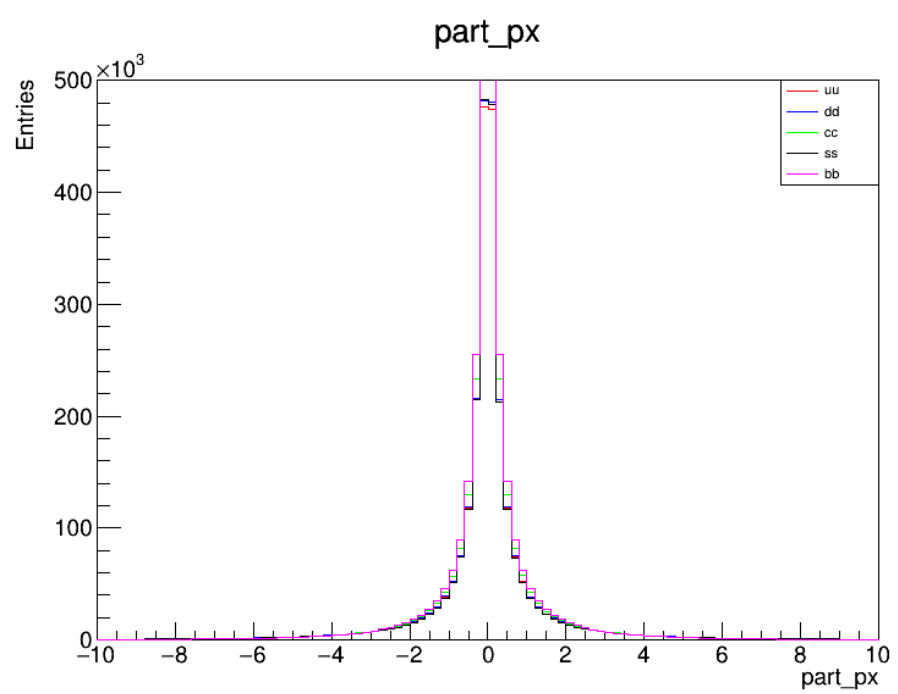
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91.2	dd	/cefs/higgs/zhangkl/Production/25036/E91.2_eedd	25.3.6	2M	D	D
91.2	uu	/cefs/higgs/zhangkl/Production/25036/E91.2_euuu	25.3.6	2M	D	D
...						

Waiting for more data

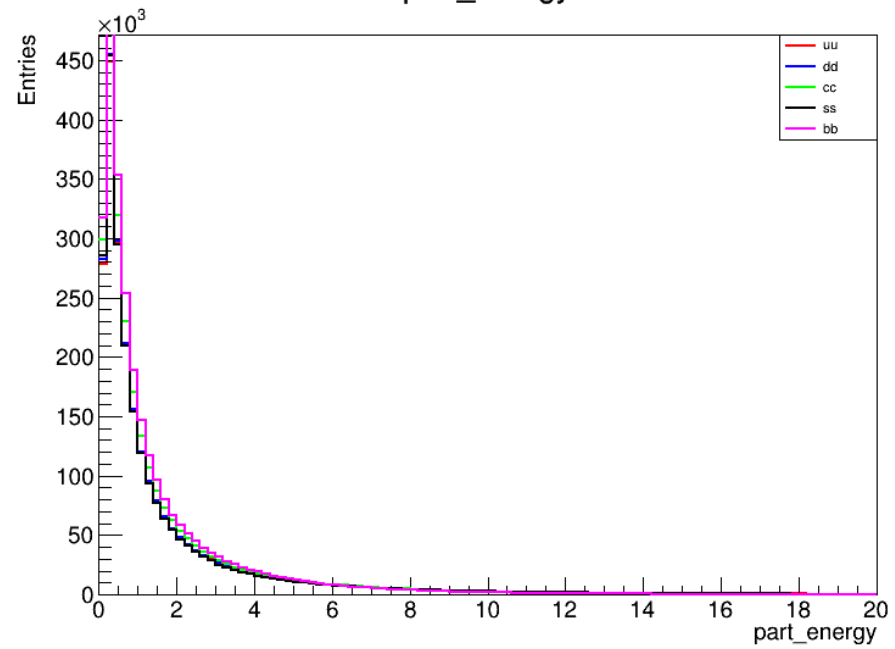
Backup: pre-process results



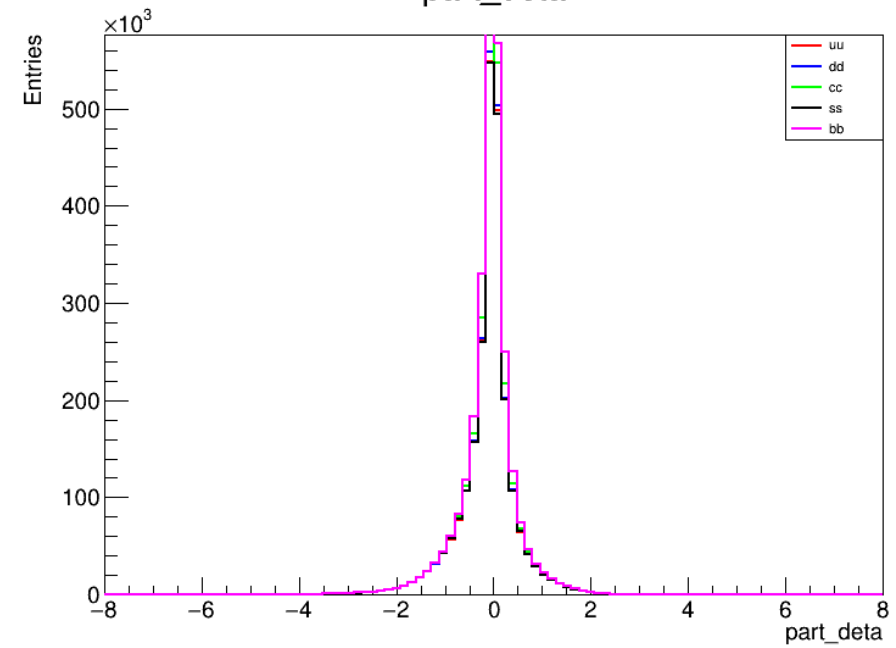




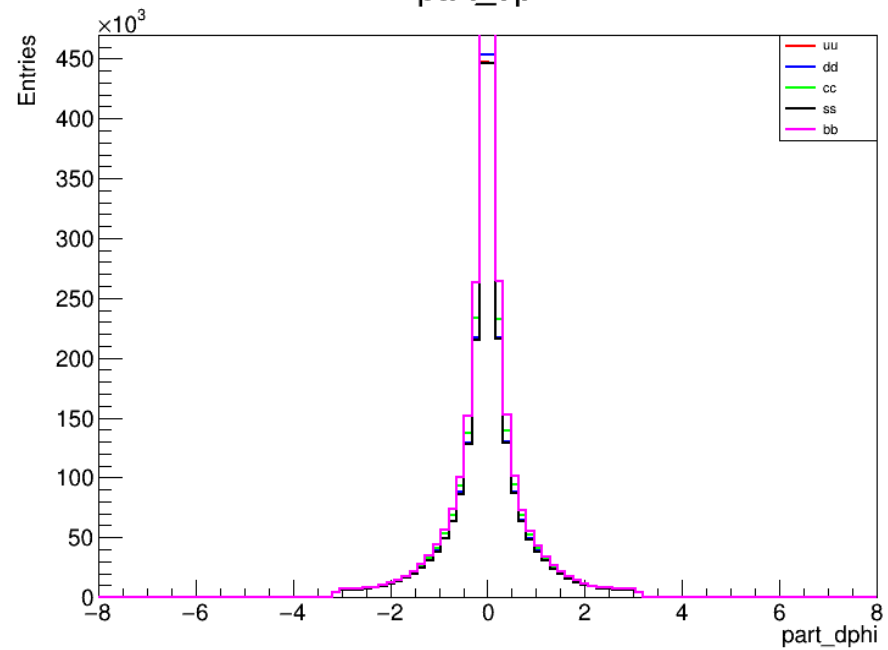
part_energy

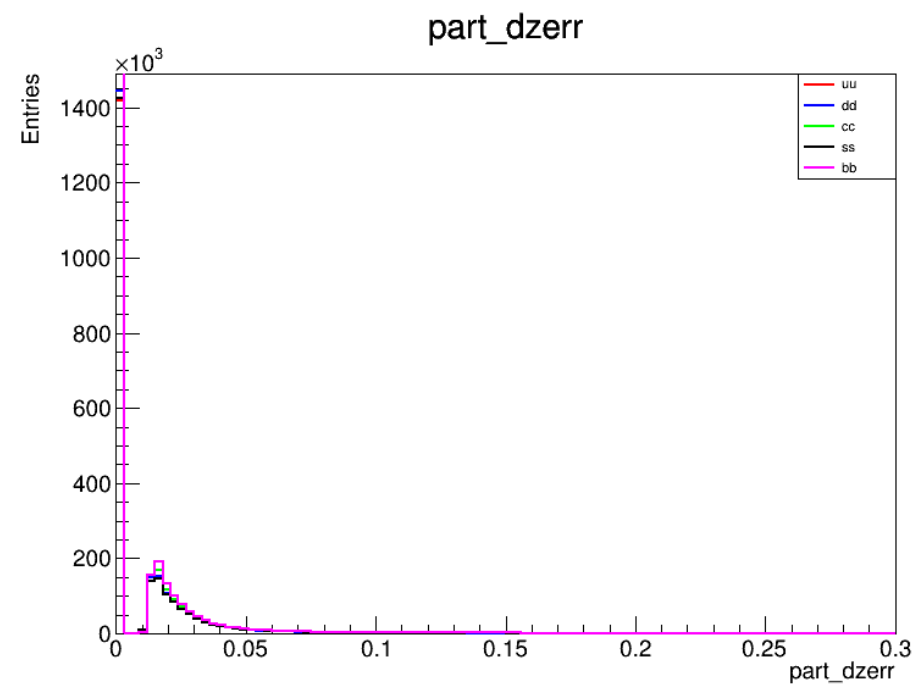
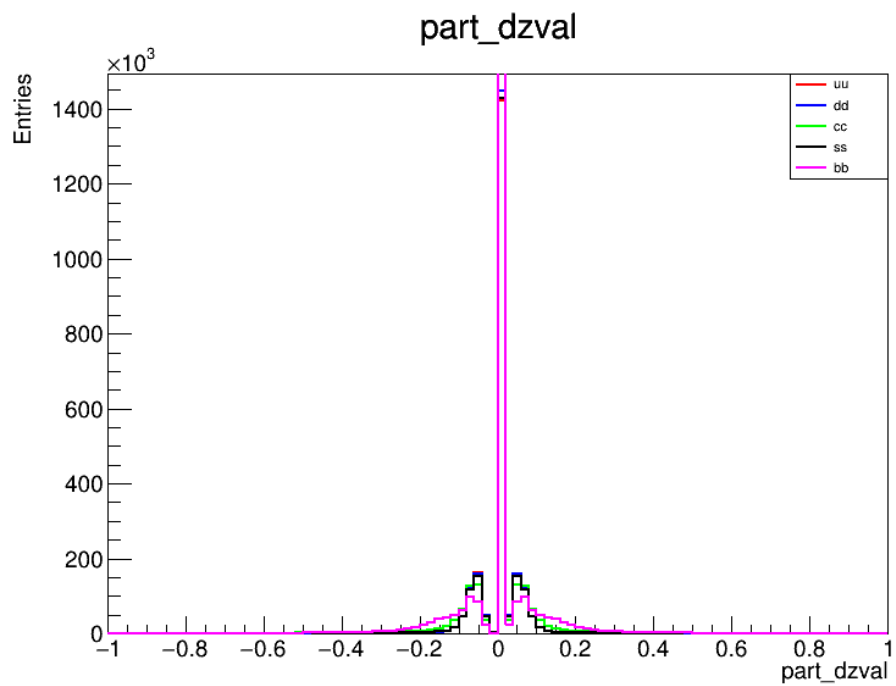
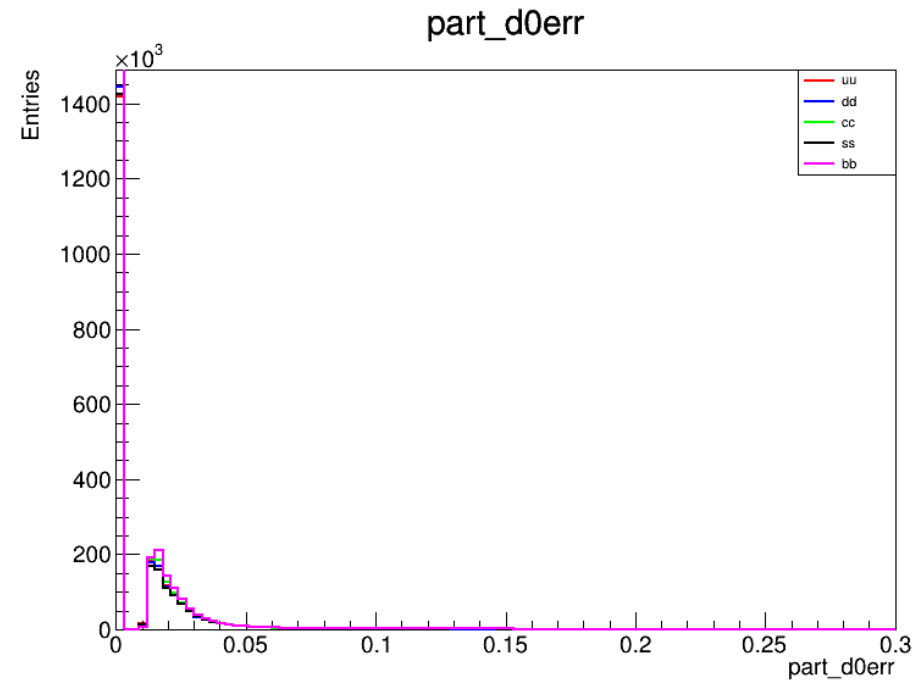
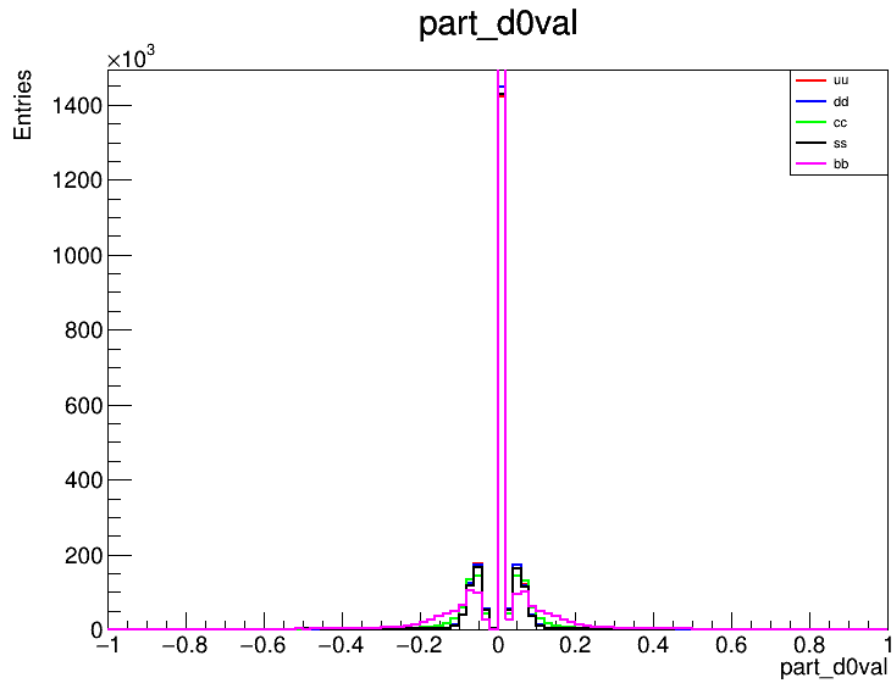


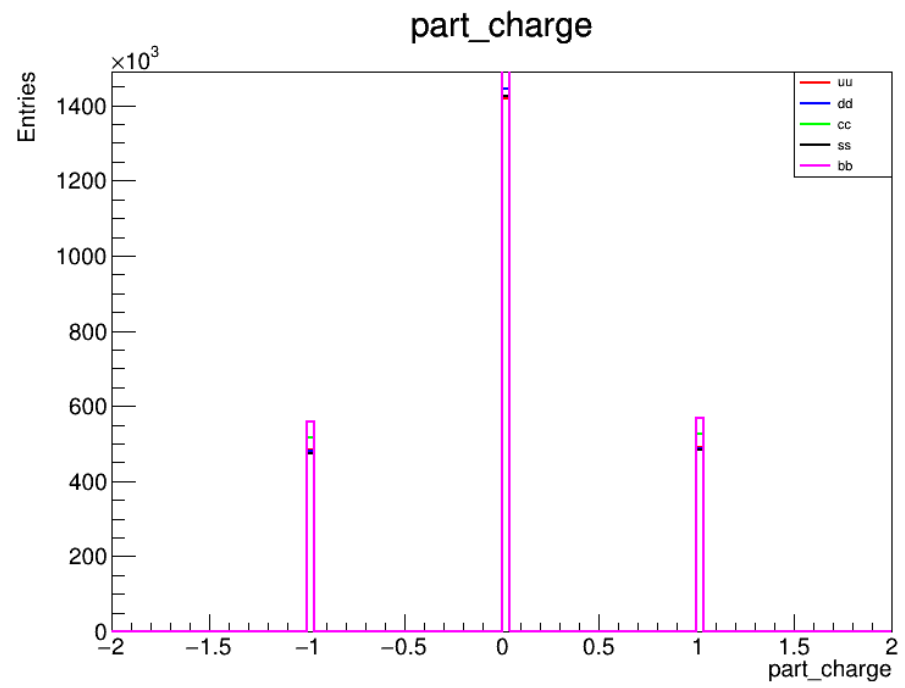
part_delta

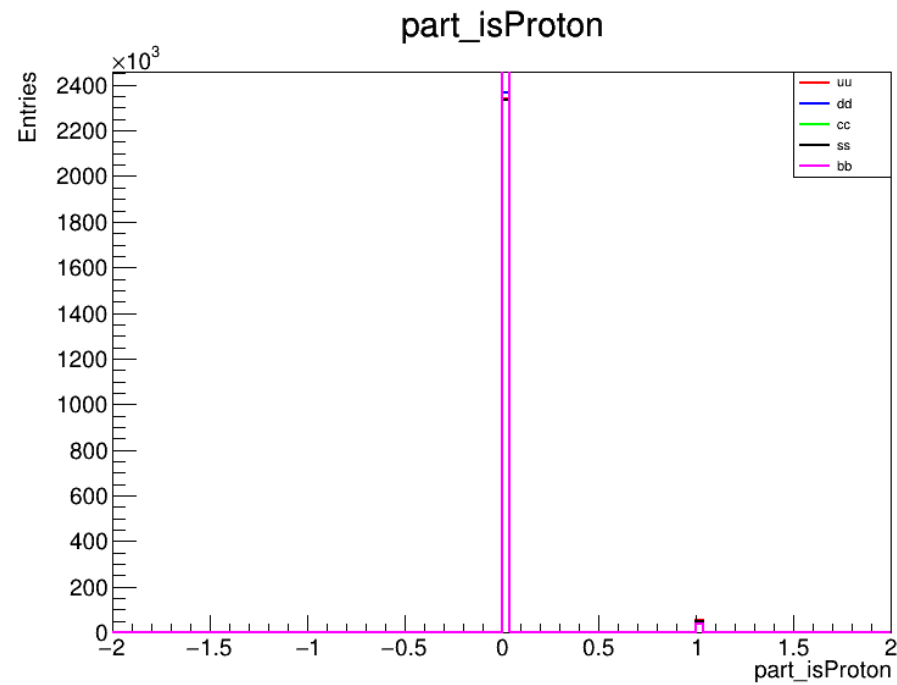
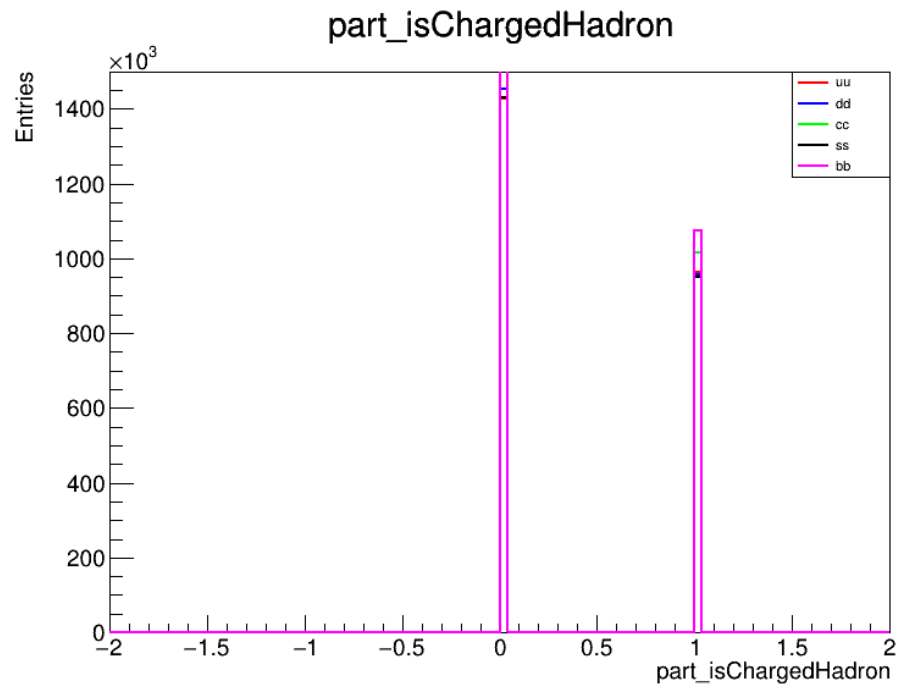
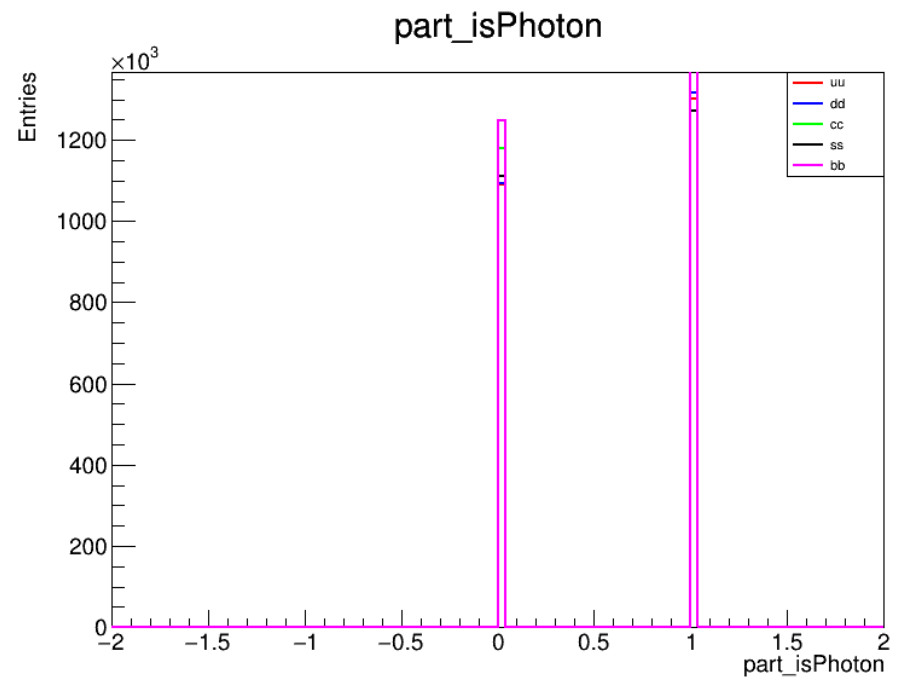
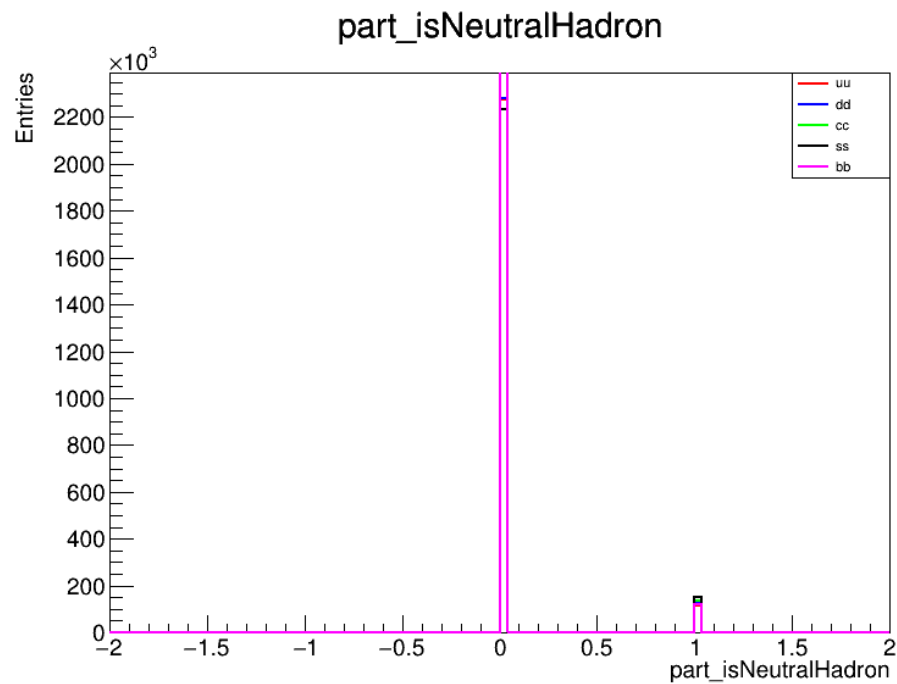


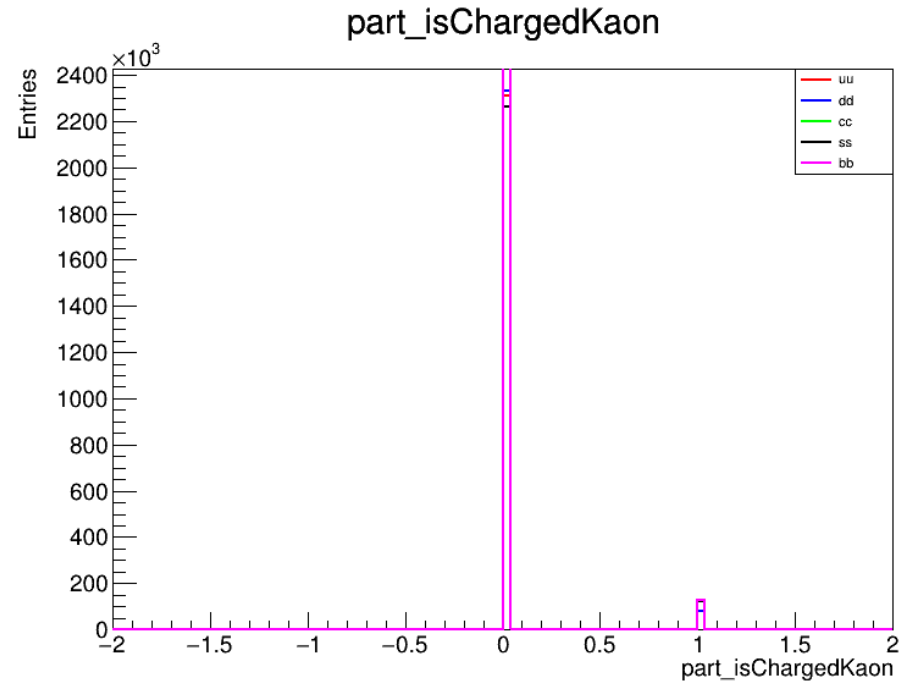
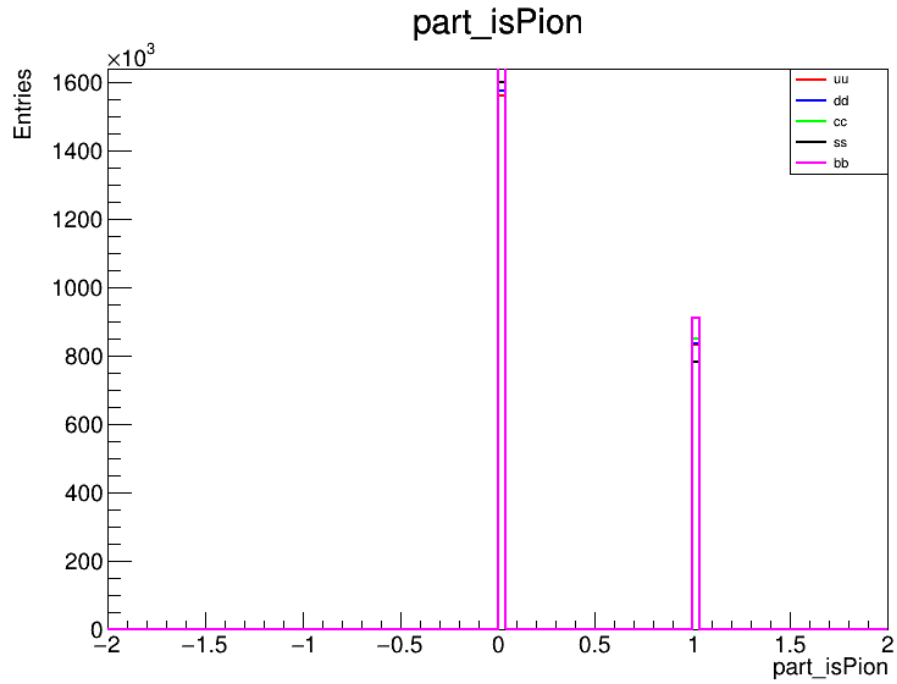
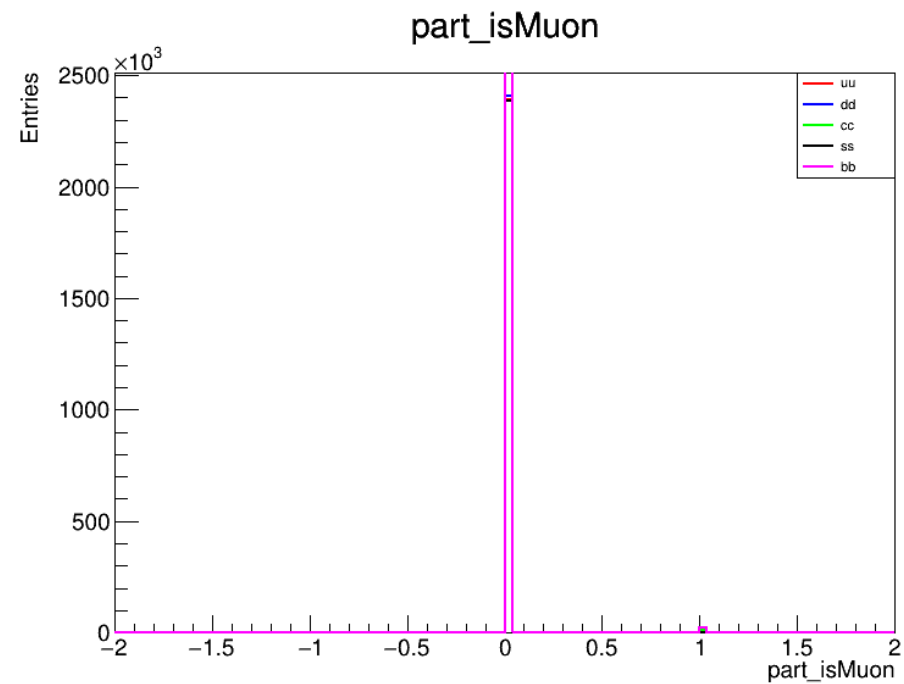
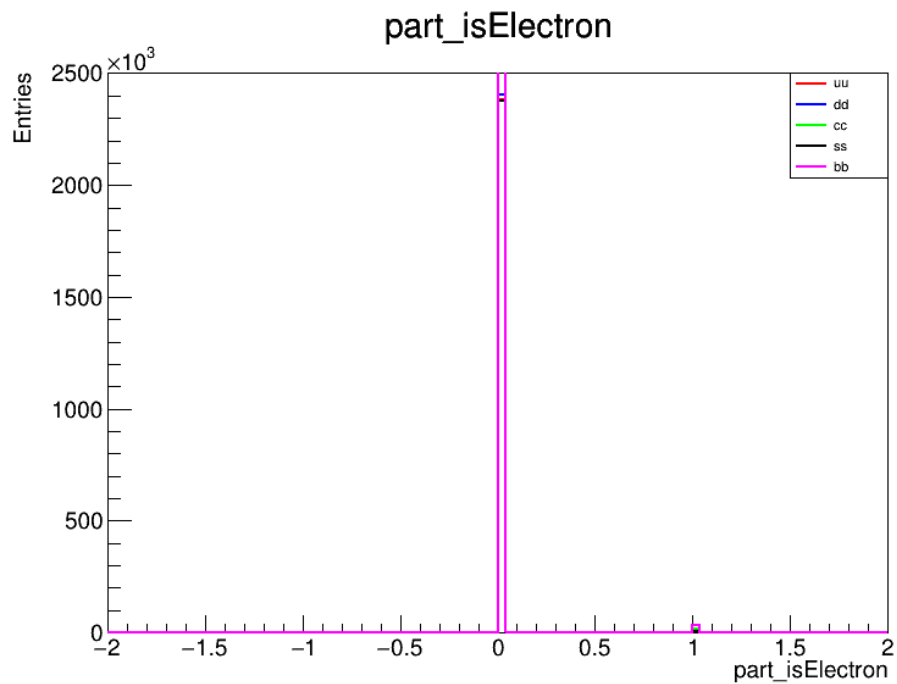
part_dphi

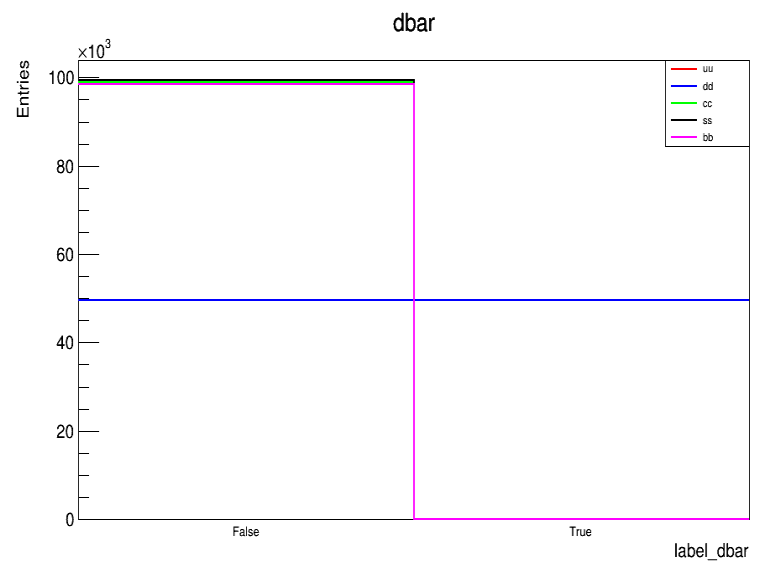
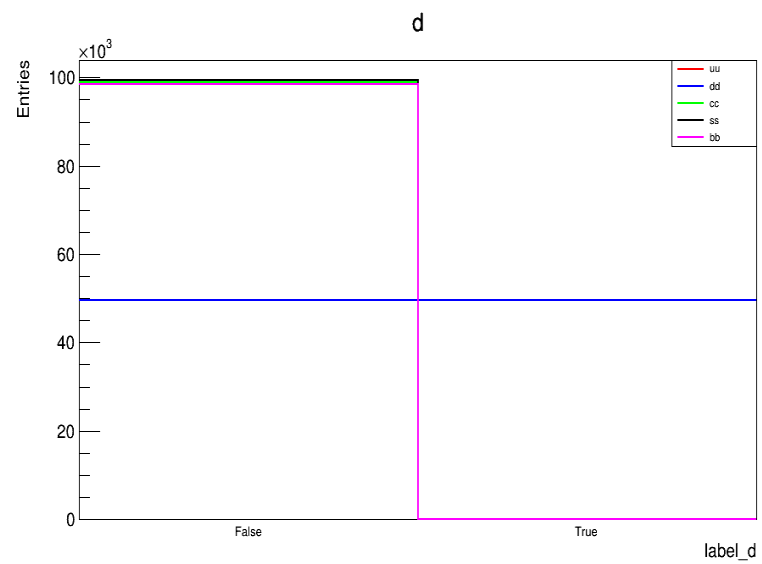
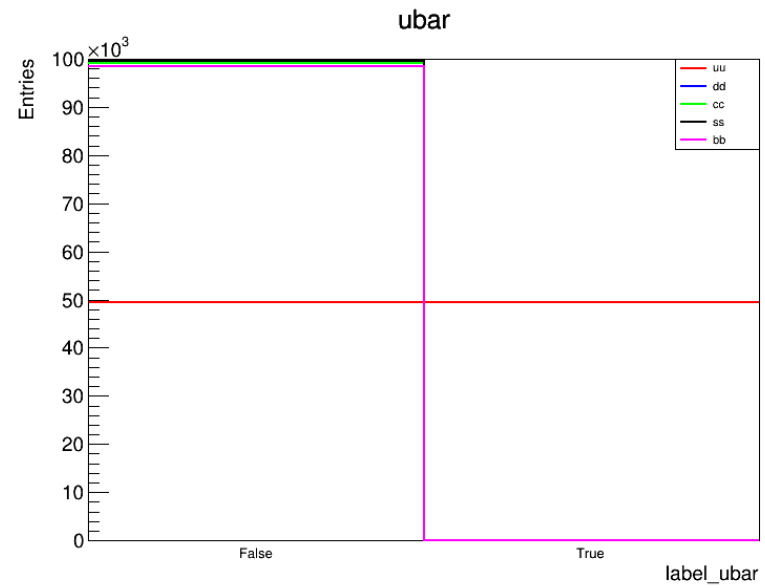
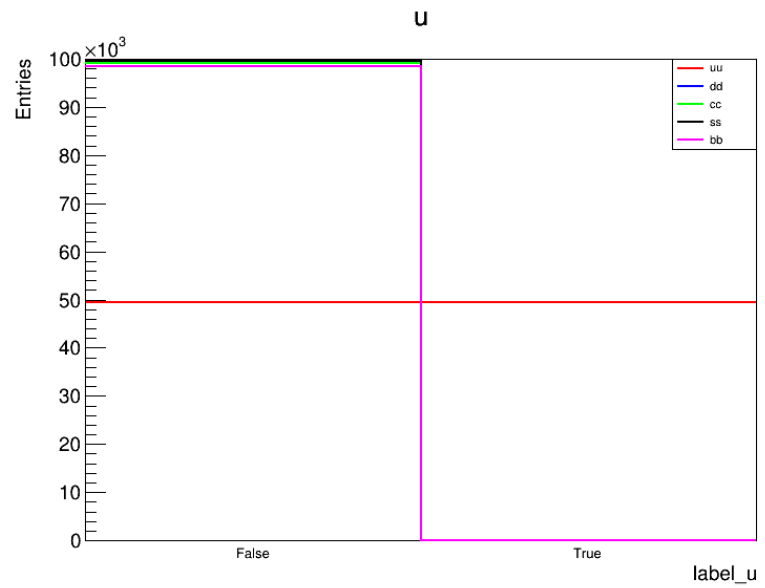


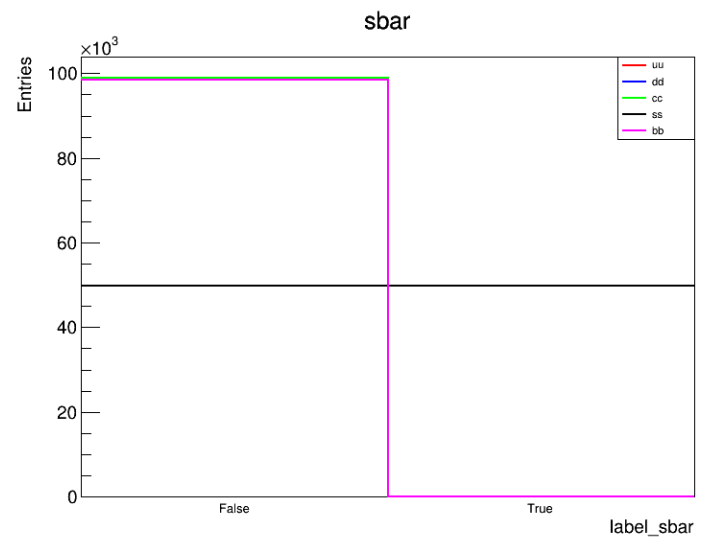
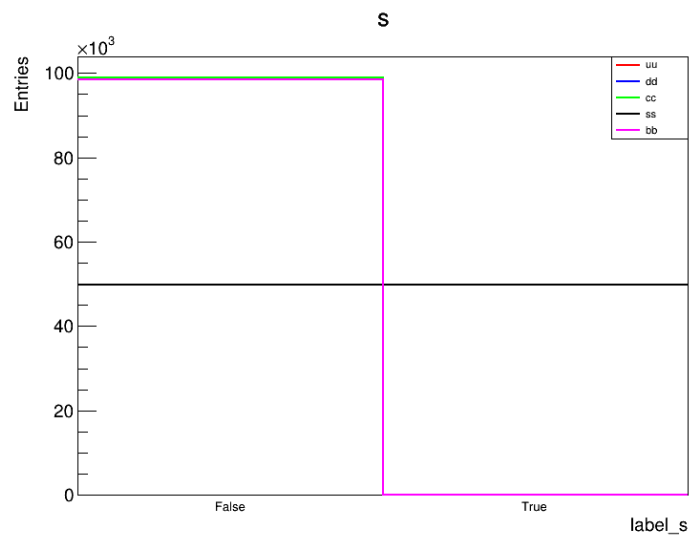
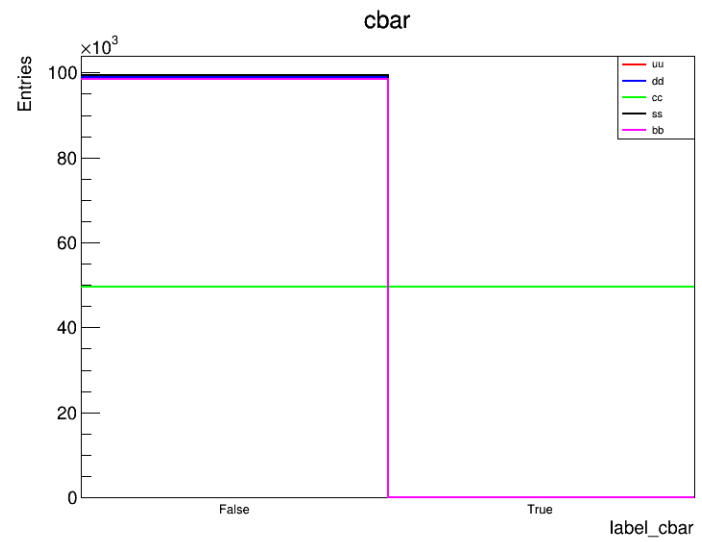
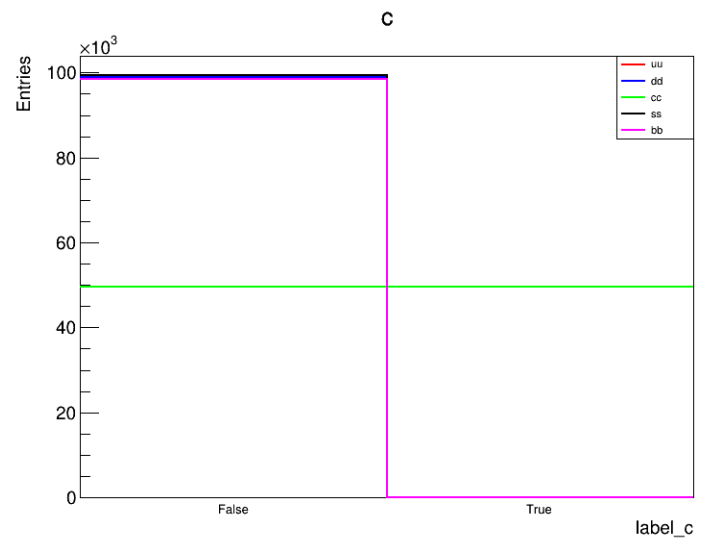


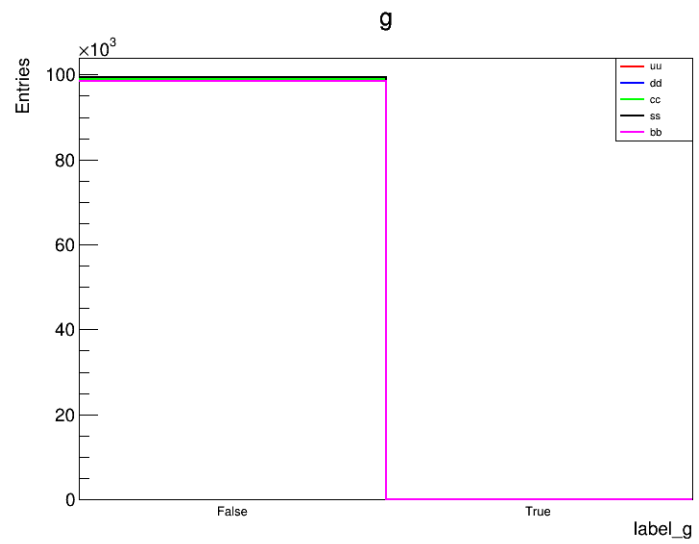
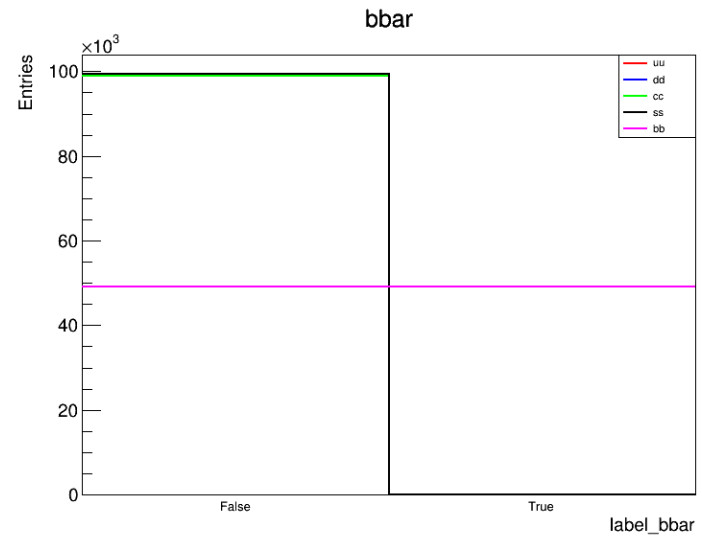
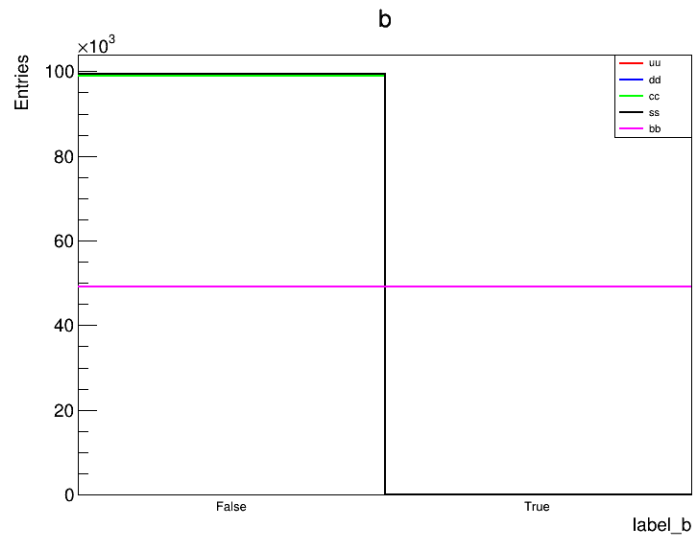




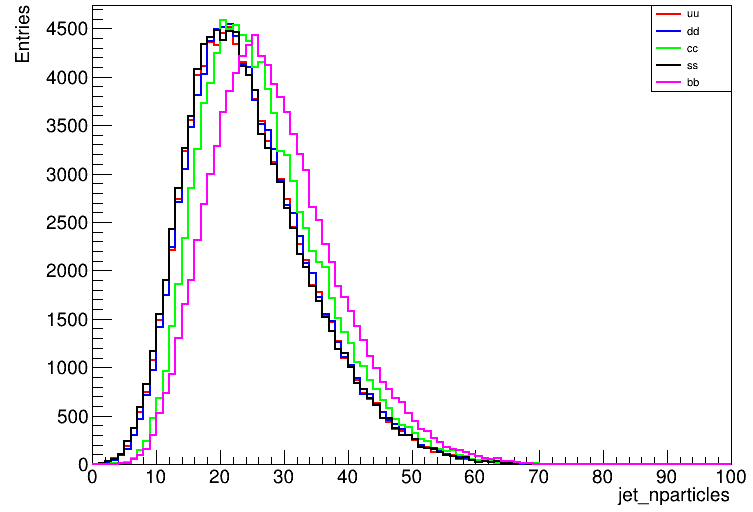








jet_nparticles



jet_label

