JER/JES

Hou Yingqi

2024/12/18

Status

- nnHgg without event cleaning.
- nnHbb without event cleaning.
- nnHbb with event cleaning.

Selection:

- GEN_jet_costheta < 0.7
- jet_GENMatch_mindR < 0.6
- deltaR of jet1jet2 > = 2

Event cleaning selection:

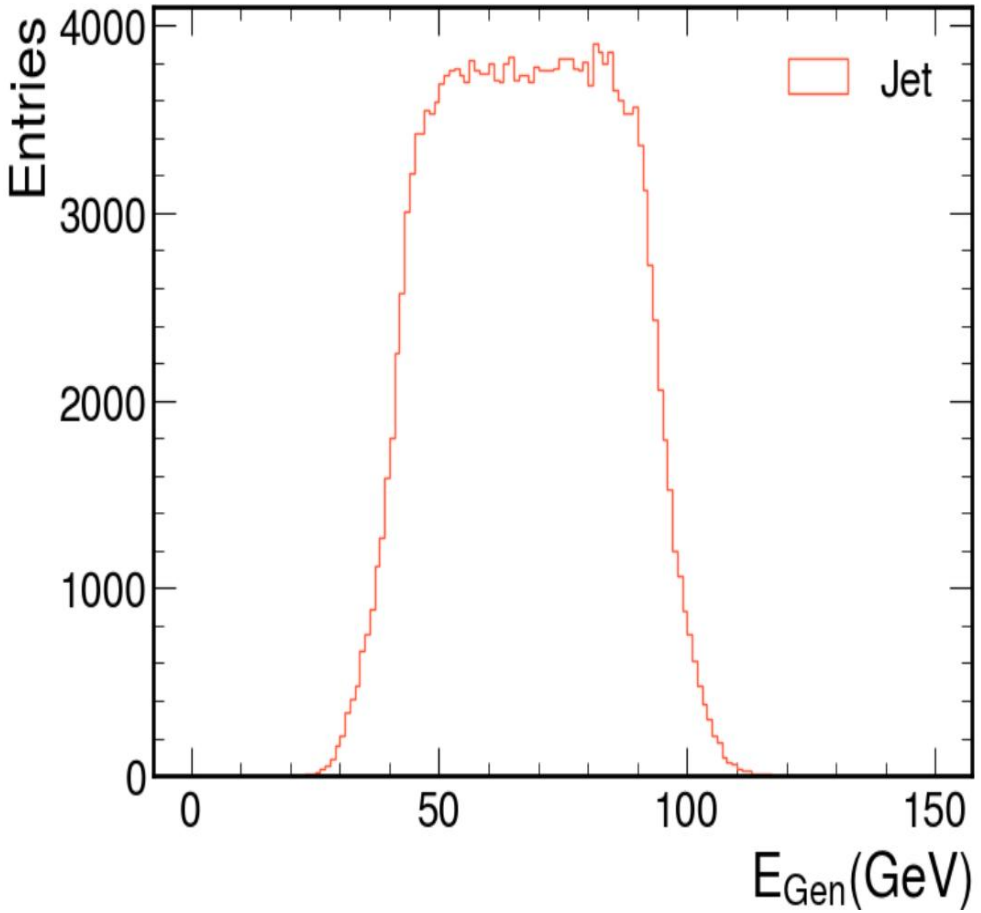
- tot_p_ISR < 1
- tot_p_nu < 1

Selection:

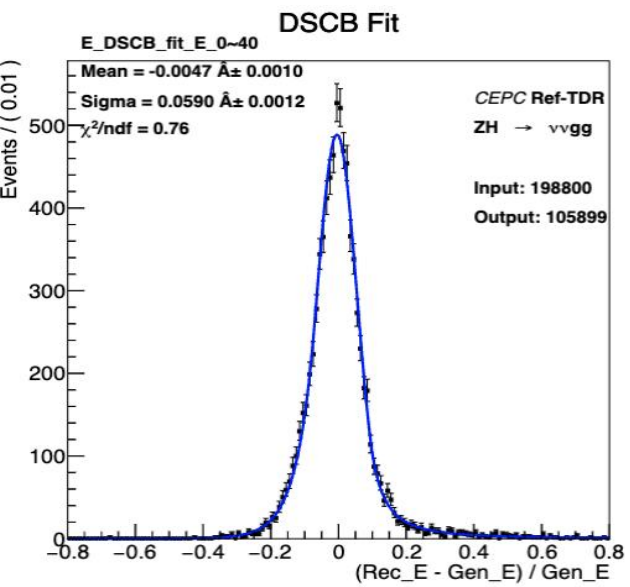
- GEN_jet_costheta < 0.7
- jet_GENMatch_mindR < 0.6
- deltaR of jet1jet2 > = 2

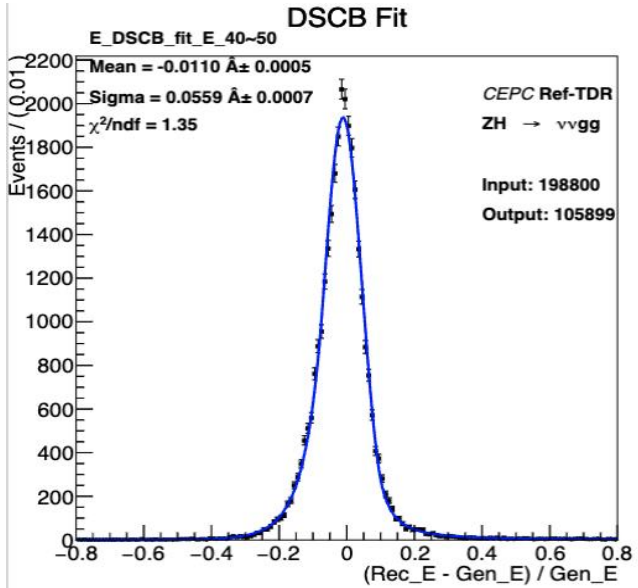
Process:

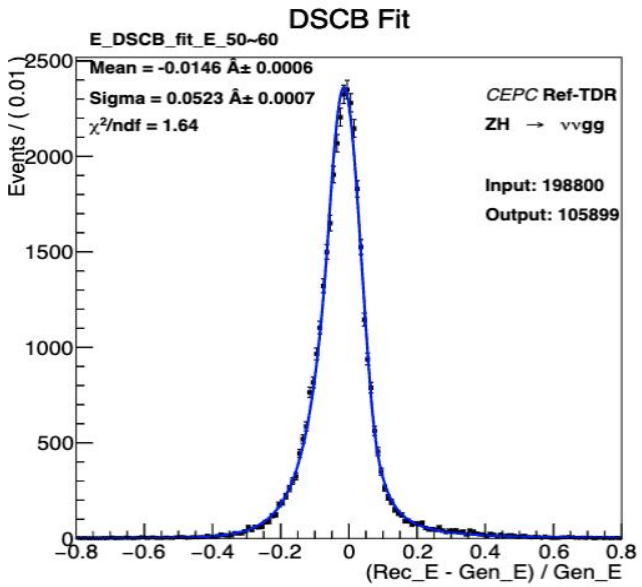
- nnHgg from kaili.

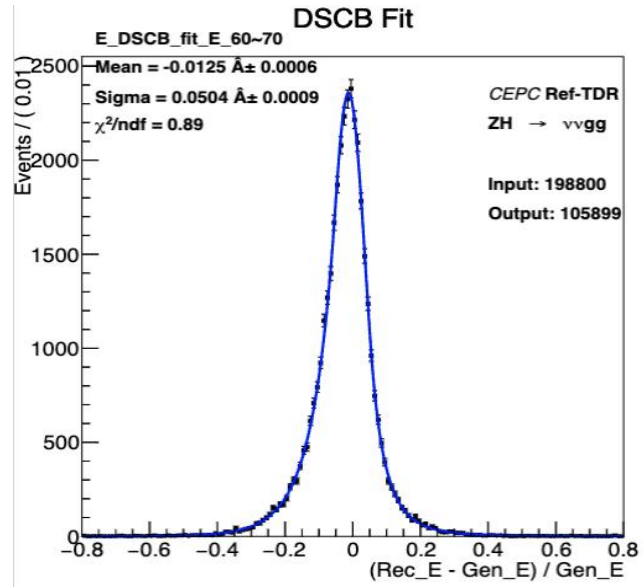


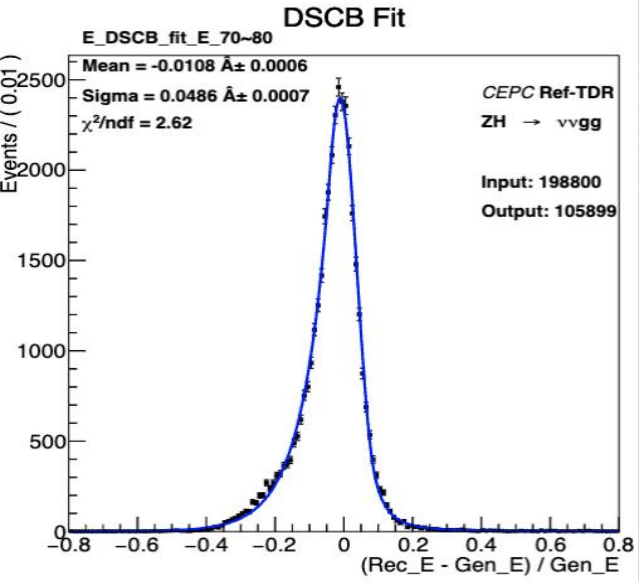
JER/JES performance study of nnHgg

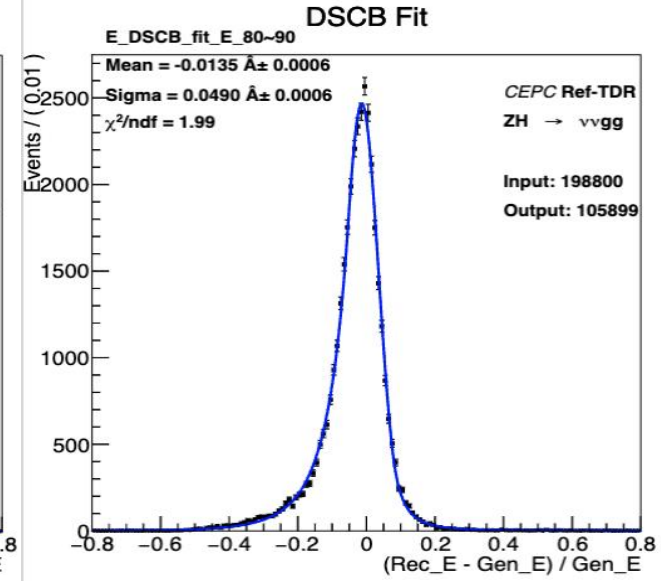


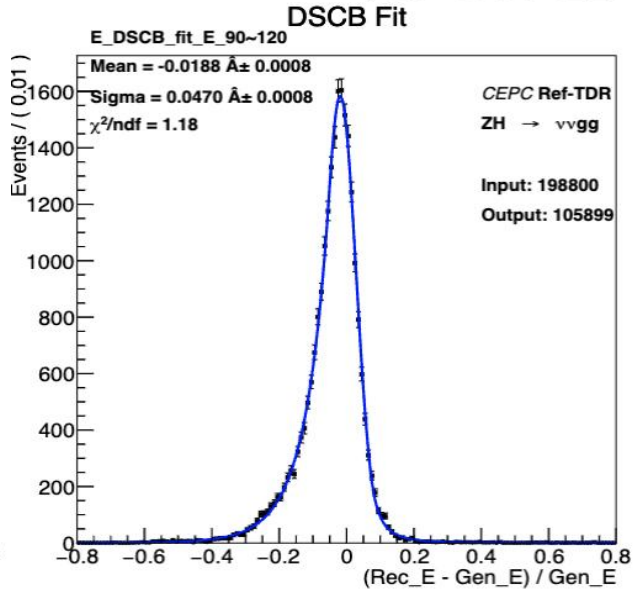






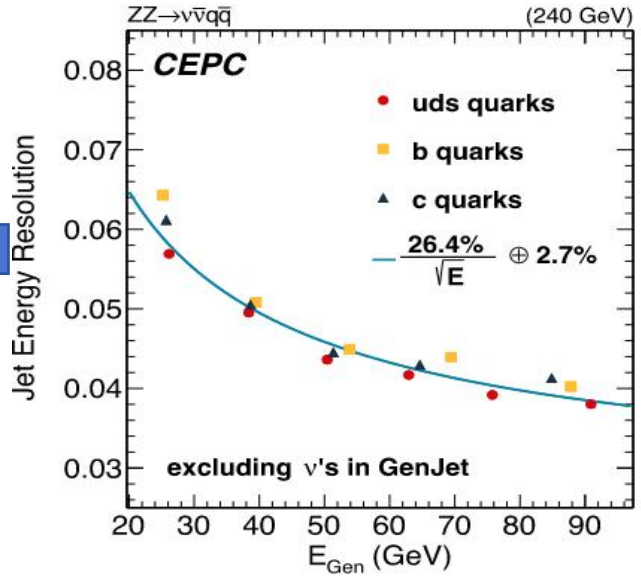


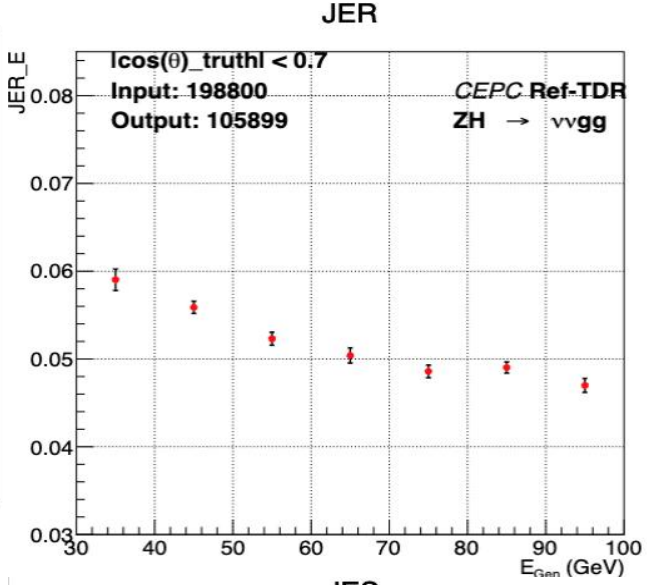




JER/JES performance study of nnHgg

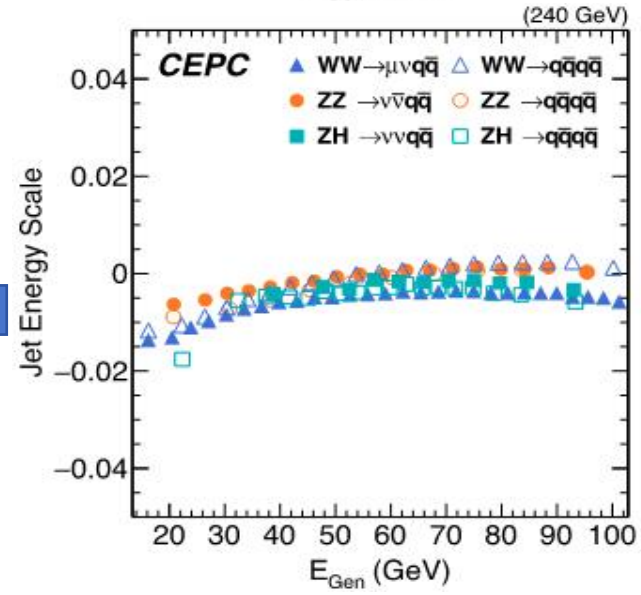
CDR from Peizhu

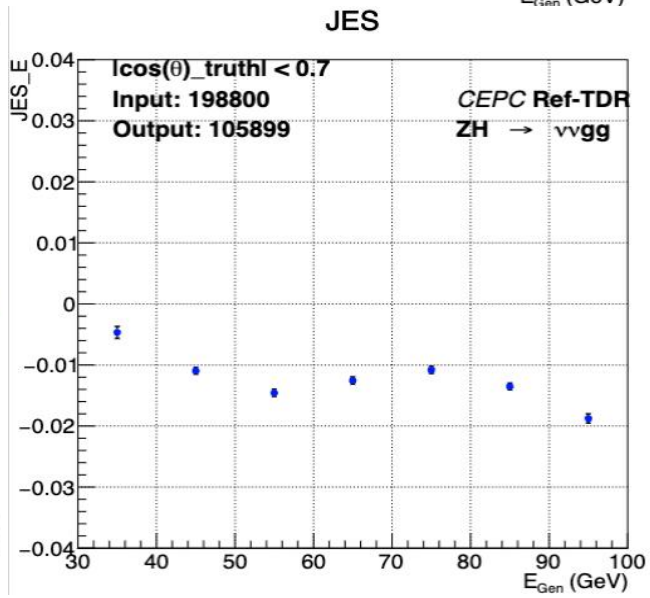




- JER meets expectations compared with CDR.

CDR from Peizhu





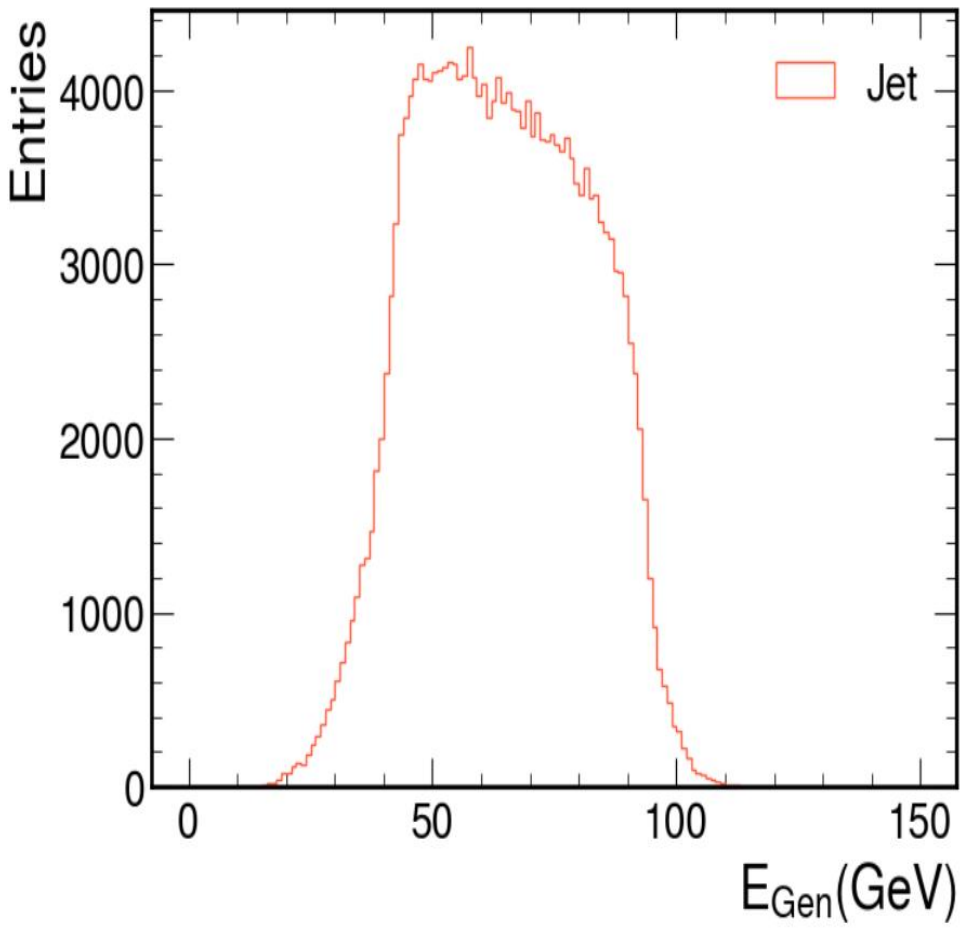
- JES deviates greatly from the expectation.

Selection:

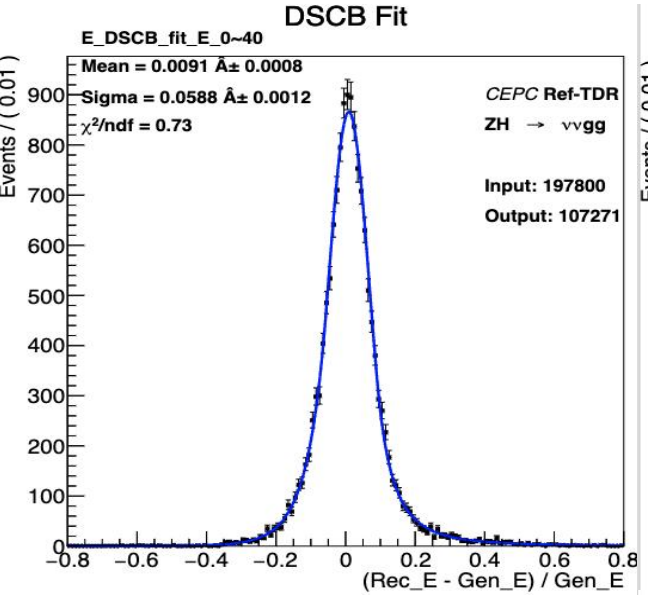
- GEN_jet_costheta < 0.7
- jet_GENMatch_mindR < 0.6
- deltaR of jet1jet2 > = 2

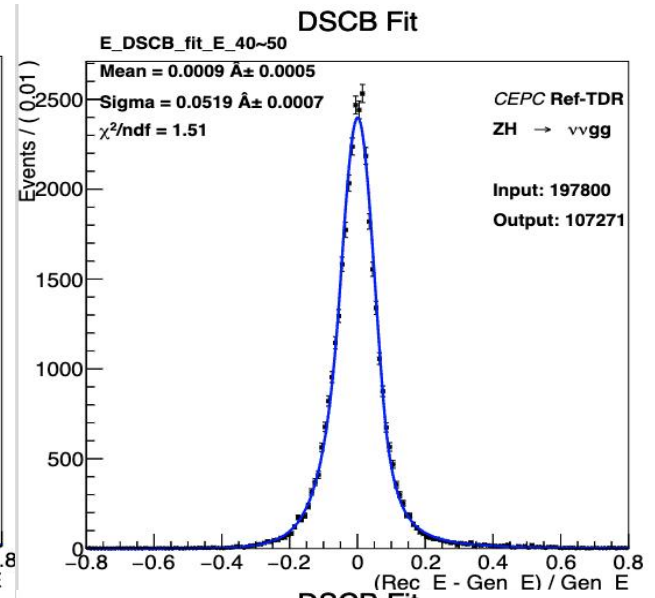
Process:

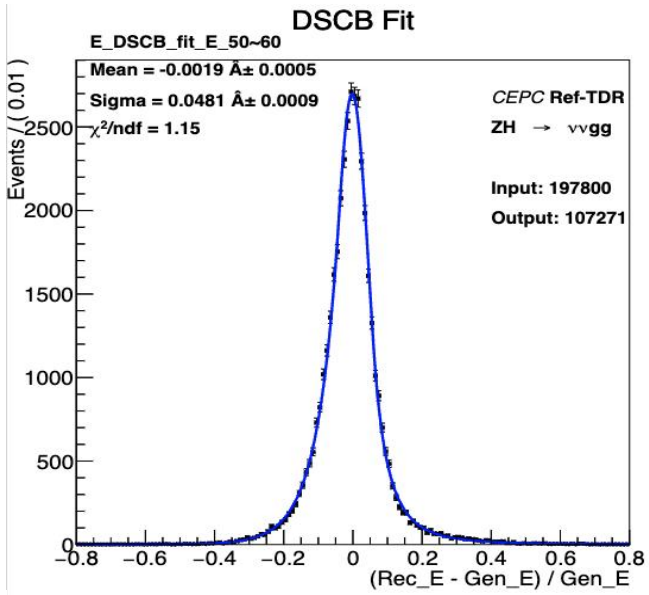
- nnHbb from kaili.

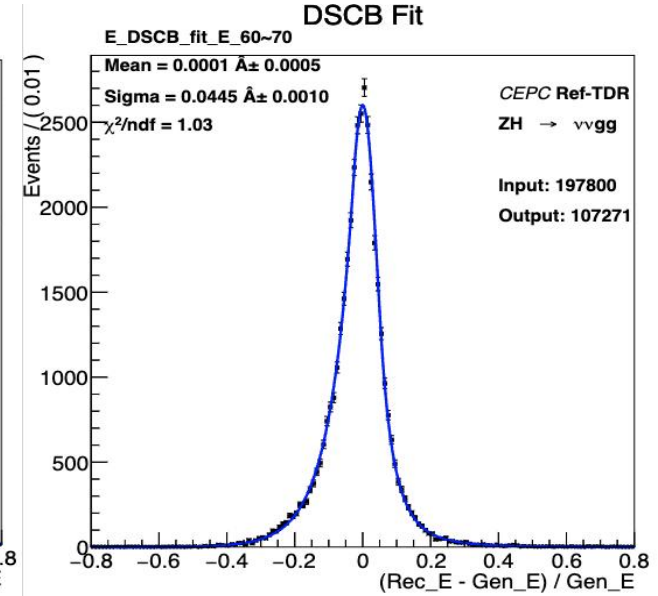


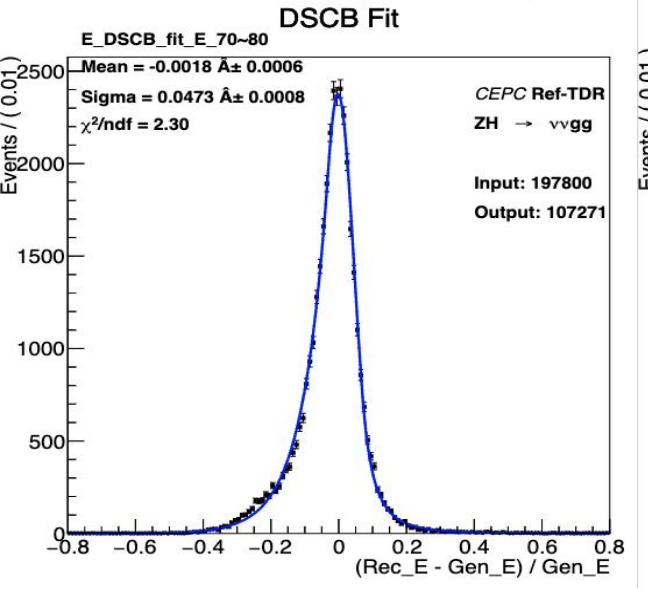
JER/JES performance study of nnHbb

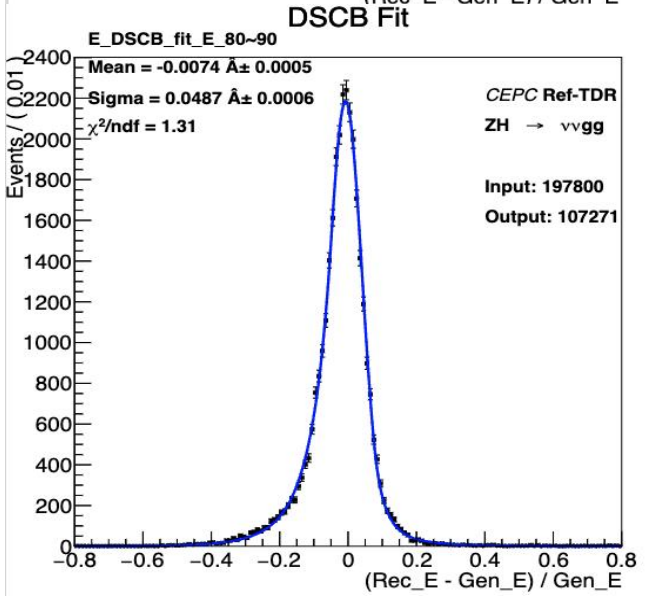


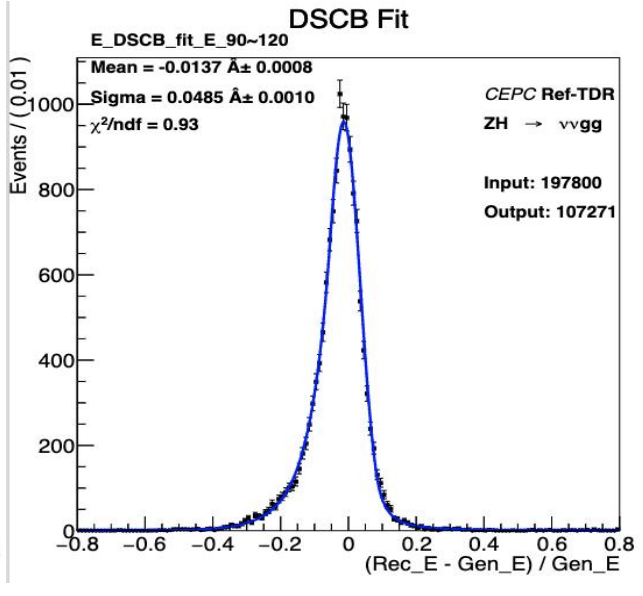




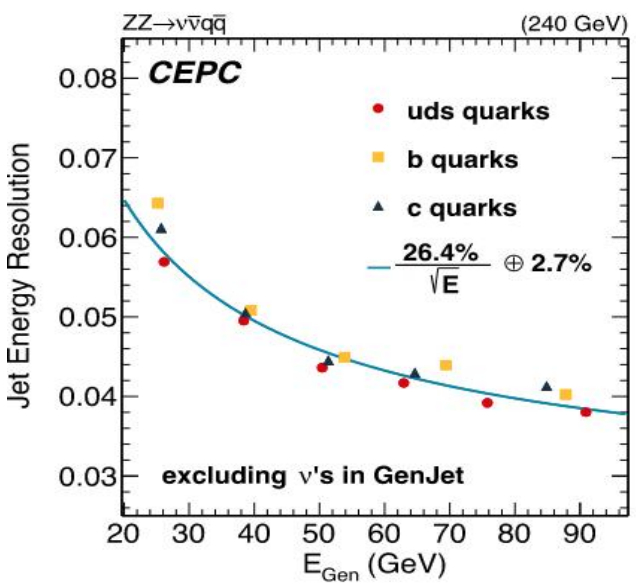


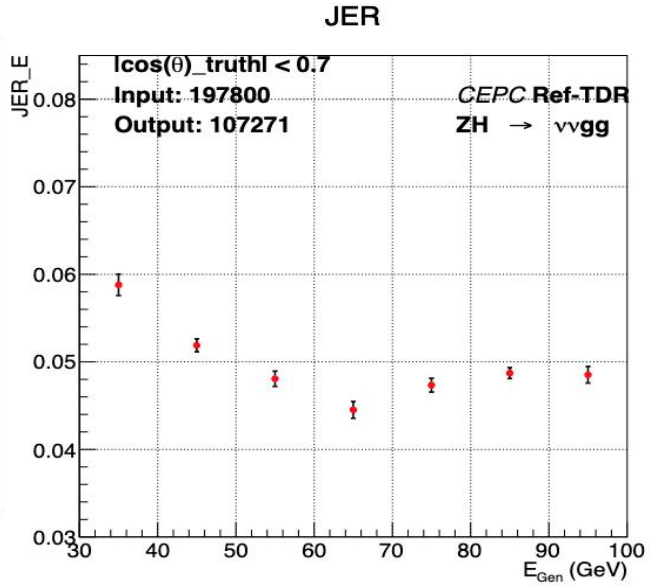


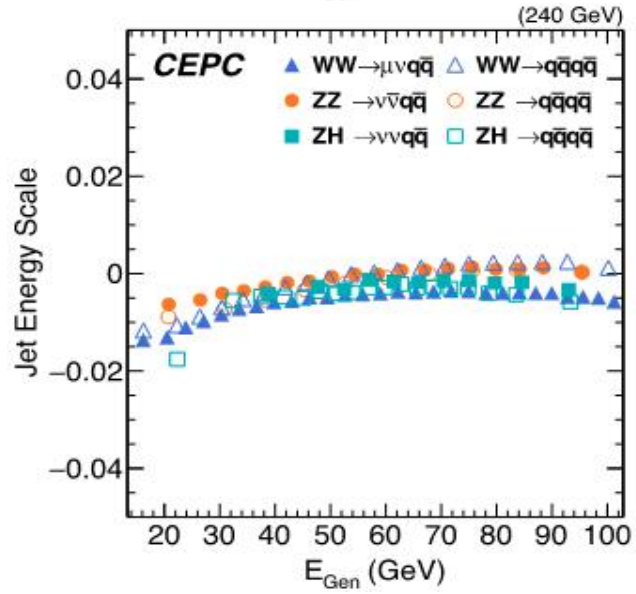


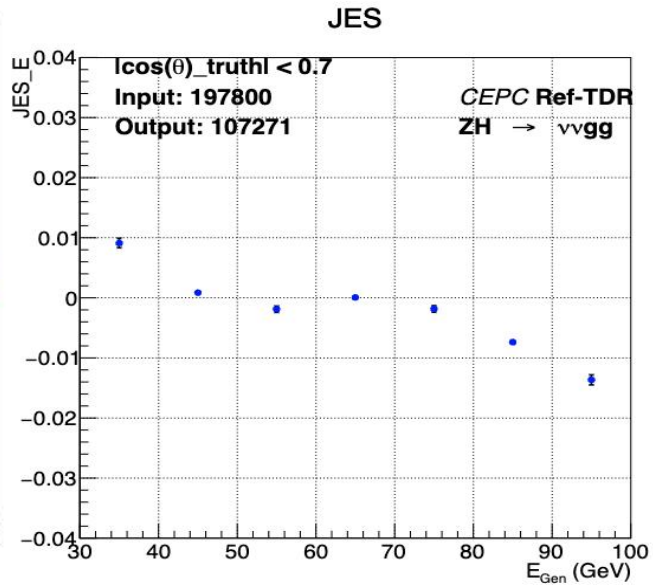


JER/JES performance study of nnHbb









- JER of nnHbb is not smooth as expected.

Selection:

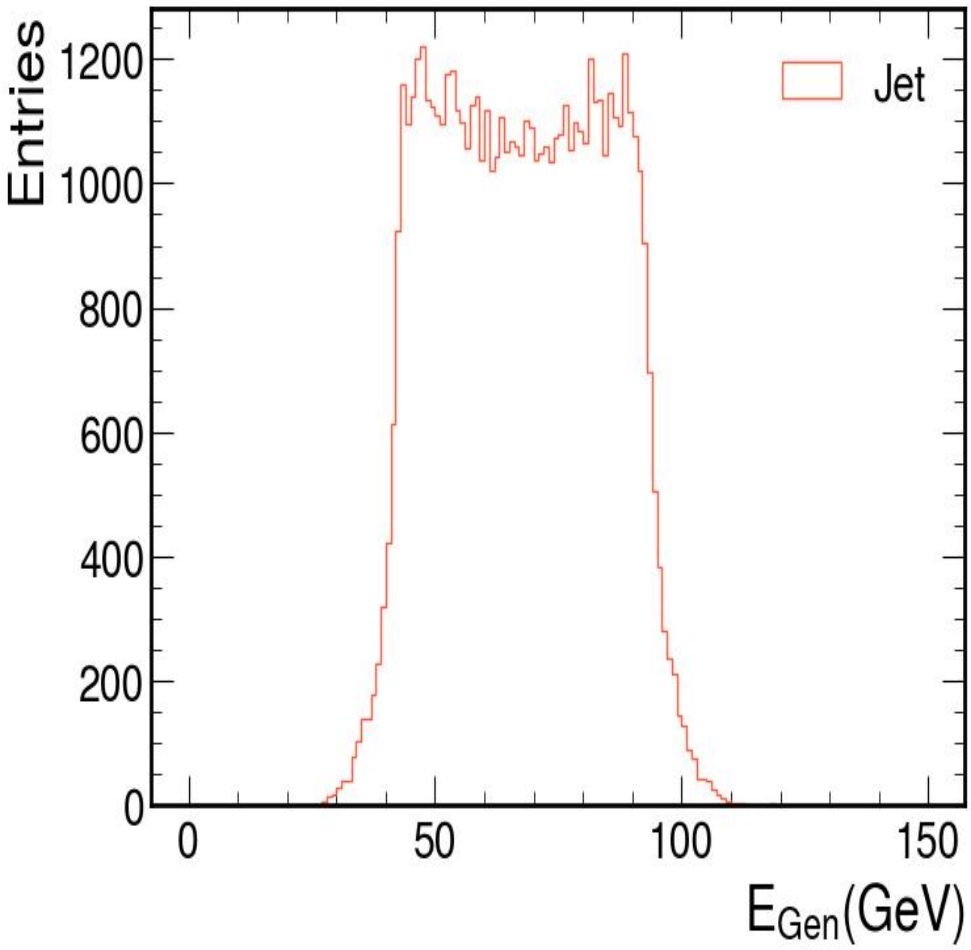
- GEN_jet_costheta < 0.7
- jet_GENMatch_mindR < 0.6
- deltaR of jet1jet2 > = 2

Add event cleaning:

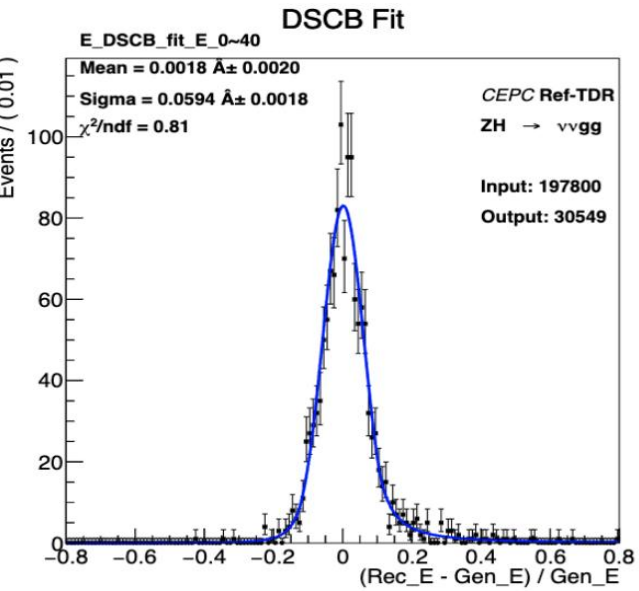
- tot_p_ISR < 1
- tot_p_nu < 1

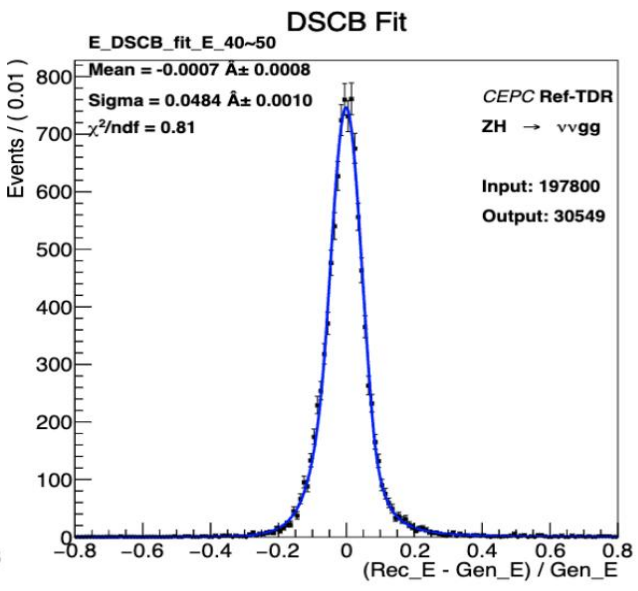
Process:

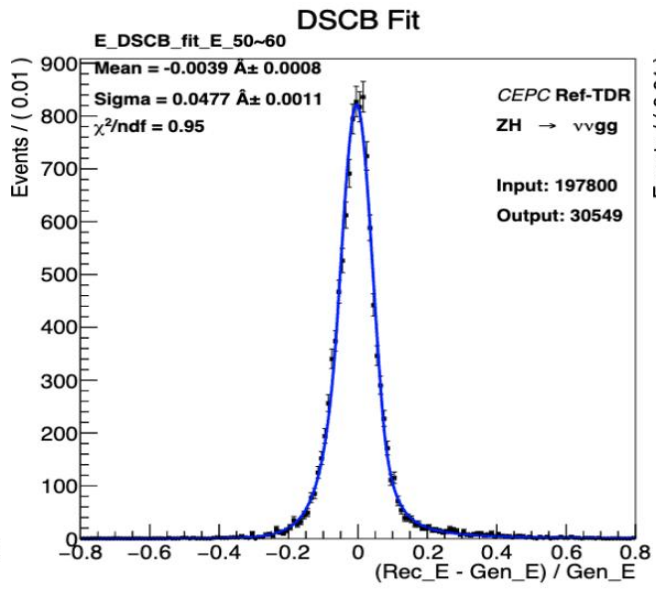
- nnHbb from xiaotian.

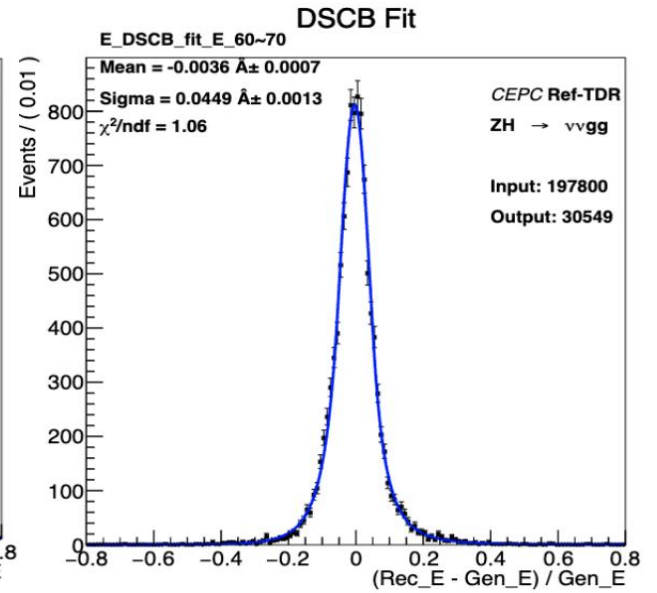


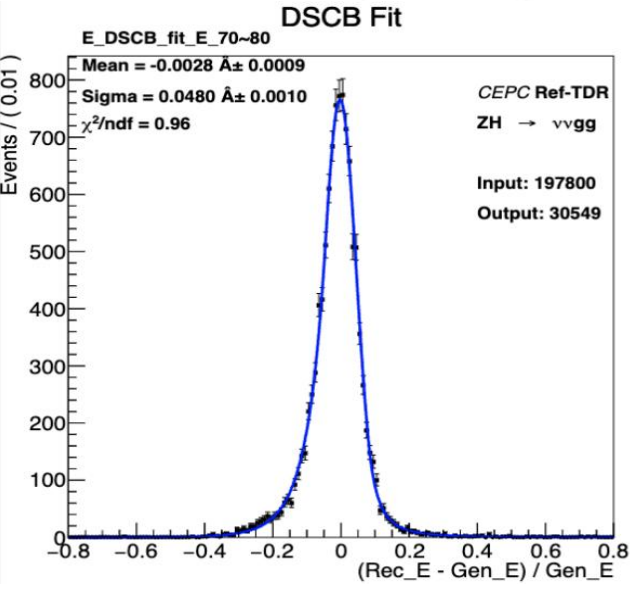
JER/JES performance study of nnHbb

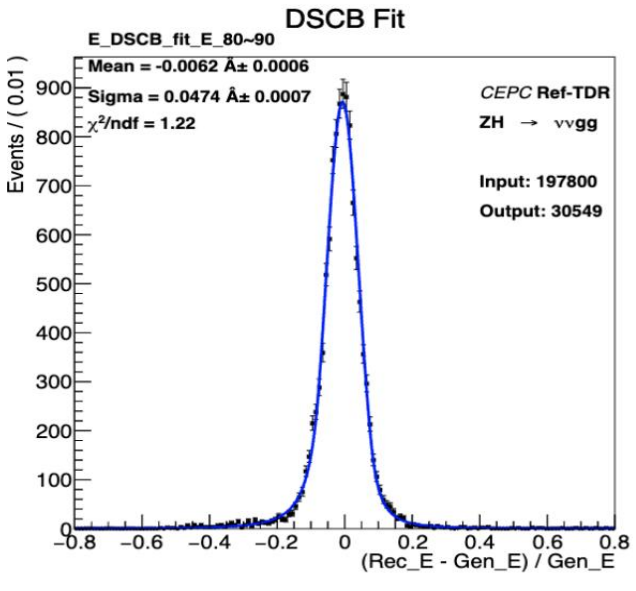


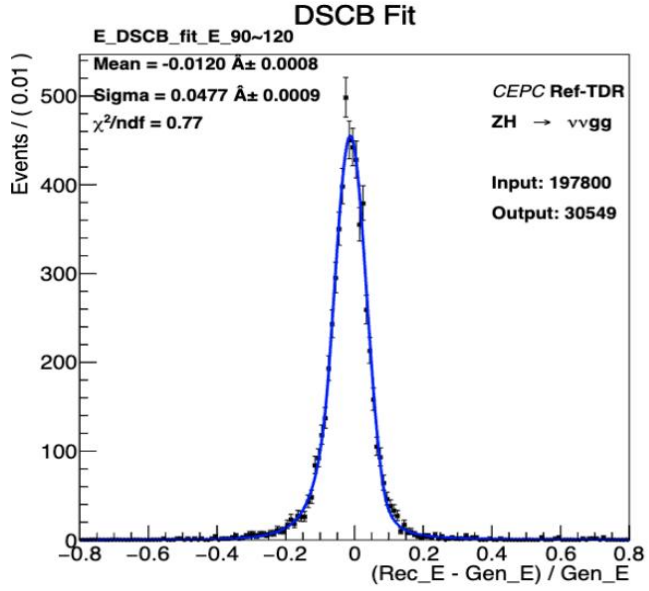






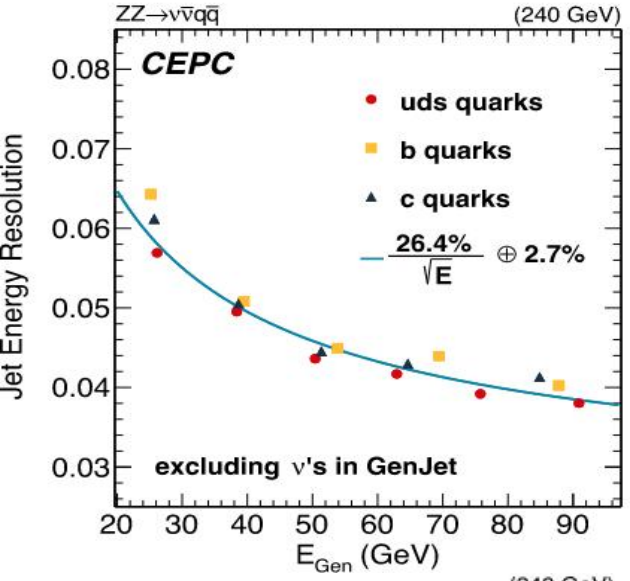


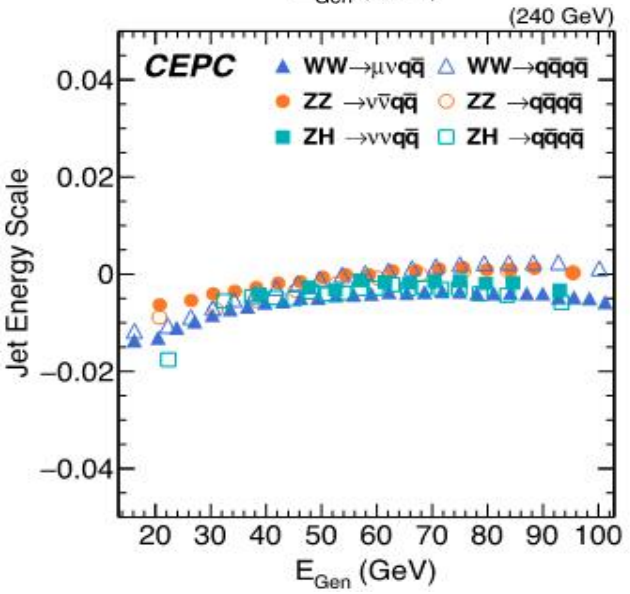


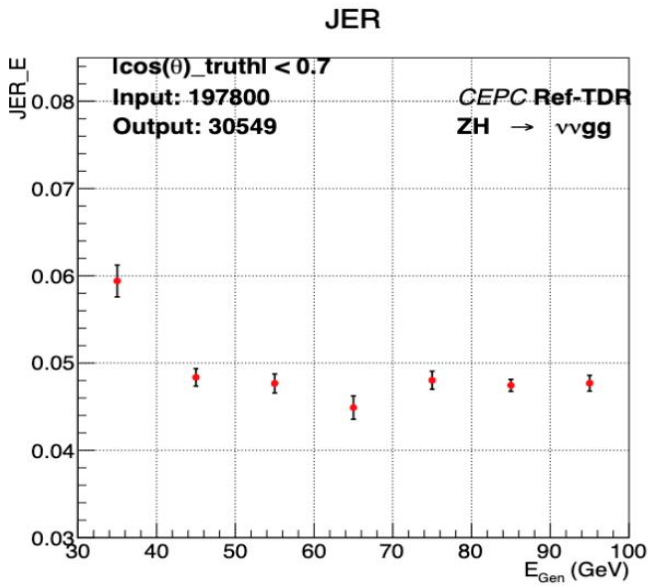


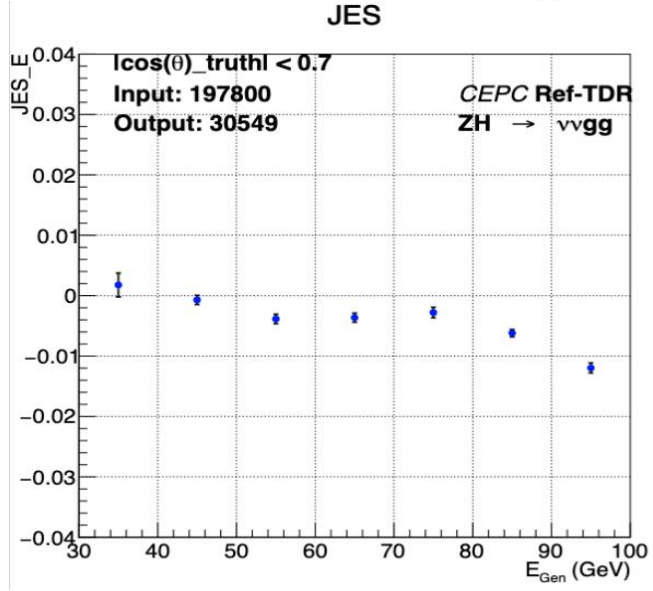
JER/JES performance study of nnHbb

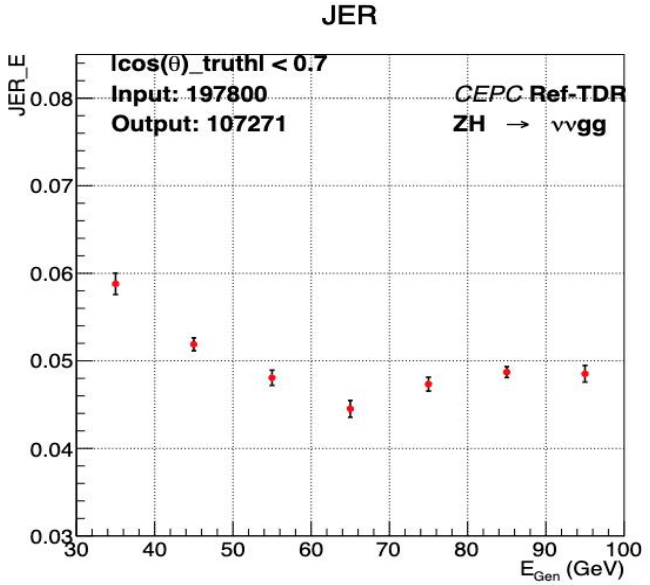
with event cleaning

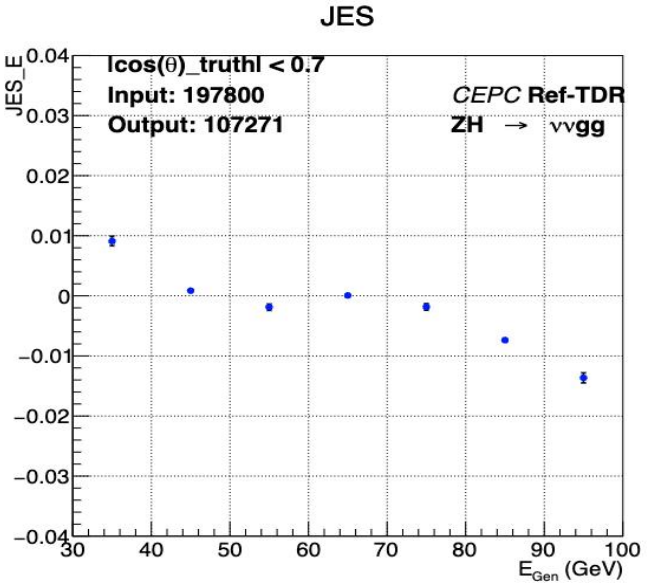






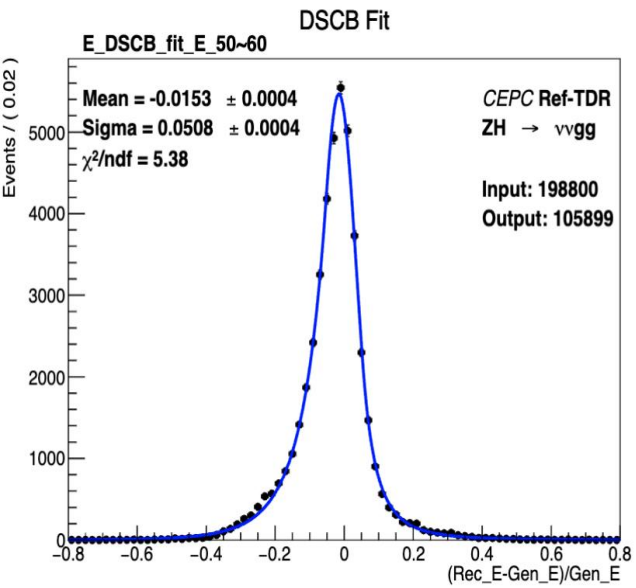


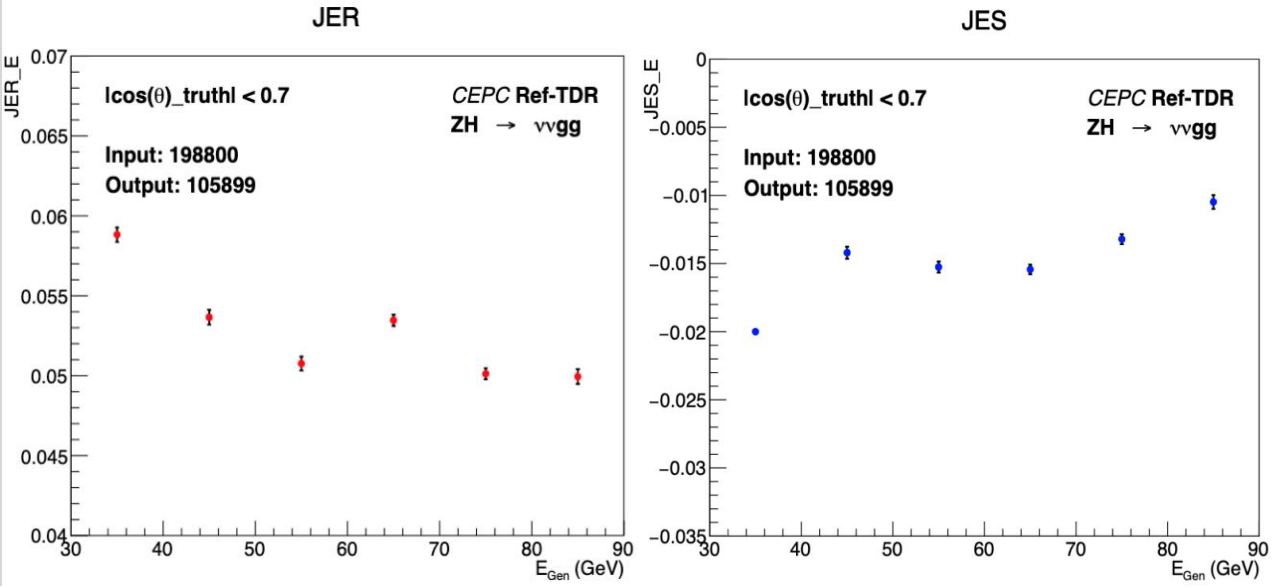




Back up

JER/JES performance study of nnHgg



Correct:

- ✓ JER/JES change with p.
- ✓ The number of bins is small.
- ✓ Use binfit, which rely heavily on number of bins.