JES/JER
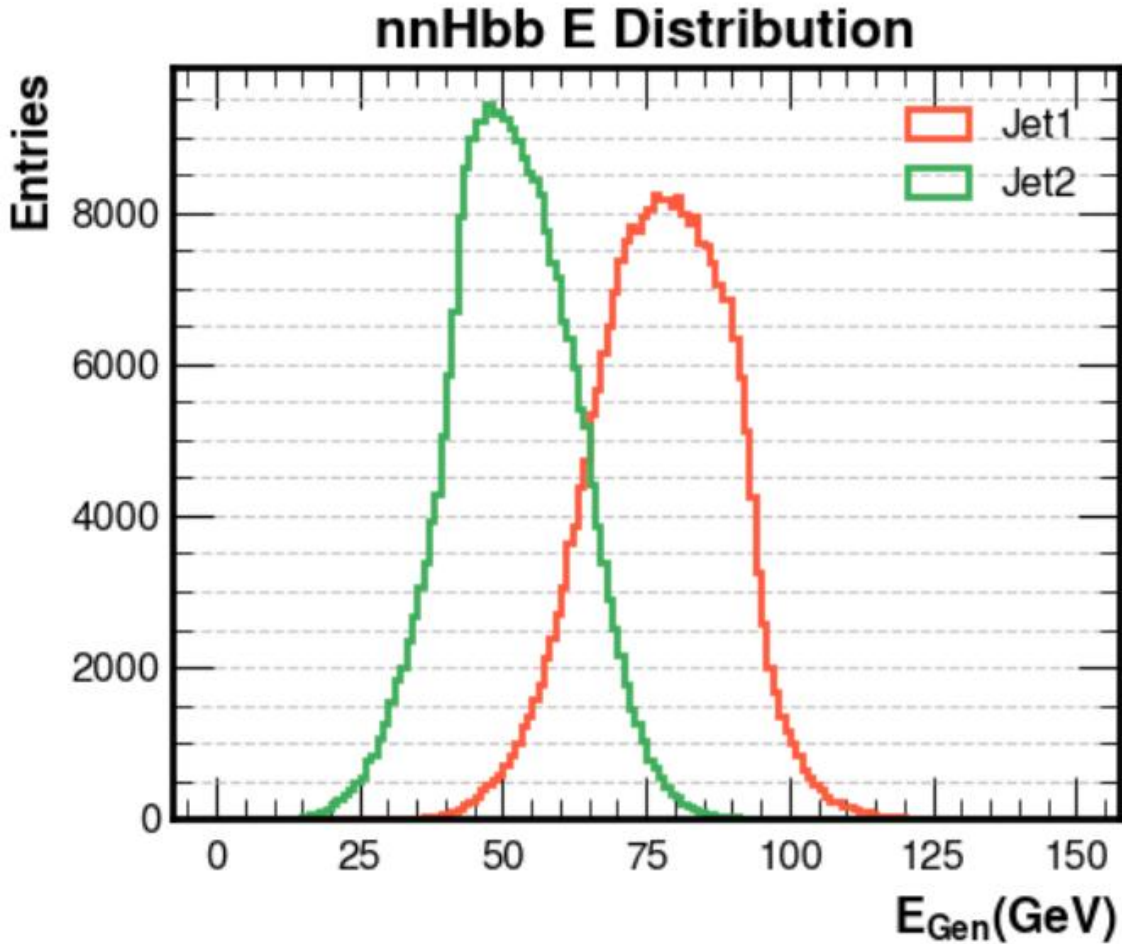
Hou Yingqi

2025/2/12
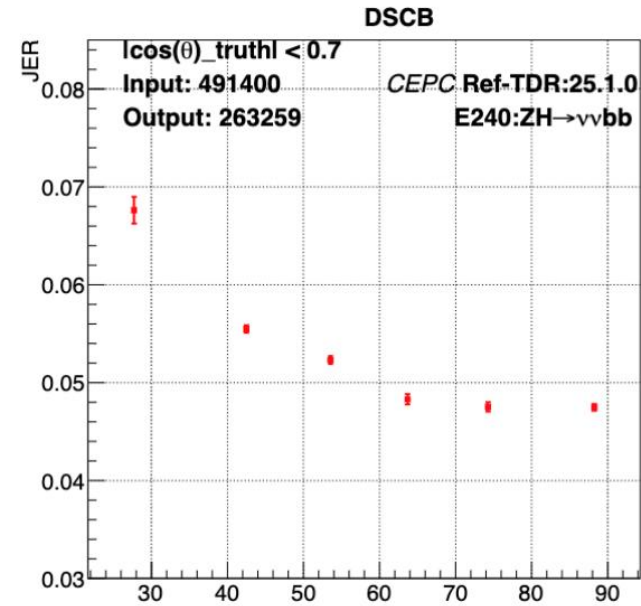
nnHbb jet energy distribution

✓ costheta_truth<0.7

DSCB

JER
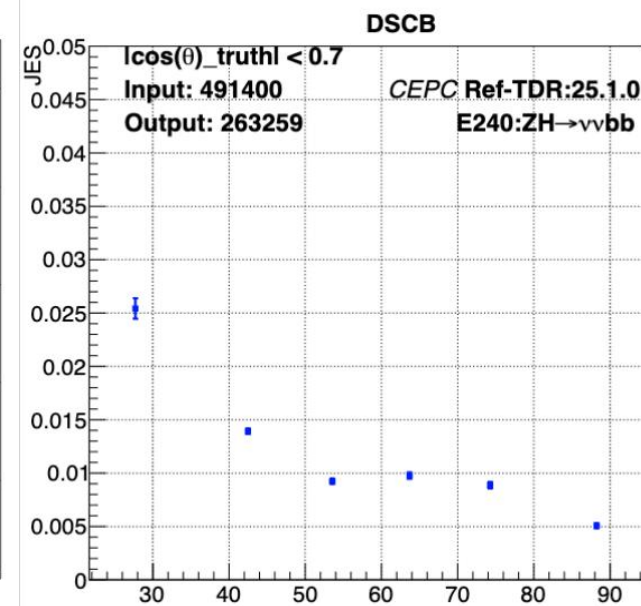
JES

● Each point is at the mean of over that period.

fit result

DSCB Fit — E-E_0~32.01
Mean = 0.0254 ± 0.0010
Sigma = 0.0676 ± 0.0013
χ^2/ndf = 1.40
CEPC Ref-TDR:25.1.0
E240:ZH→ννbb

DSCB Fit — E-E_32.01~48.52
Mean = 0.0139 ± 0.0003
Sigma = 0.0555 ± 0.0004
χ^2/ndf = 7.35
CEPC Ref-TDR:25.1.0
E240:ZH→ννbb

DSCB Fit — E-E_48.52~58.59
Mean = 0.0092 ± 0.0003
Sigma = 0.0523 ± 0.0004
χ^2/ndf = 4.45
CEPC Ref-TDR:25.1.0
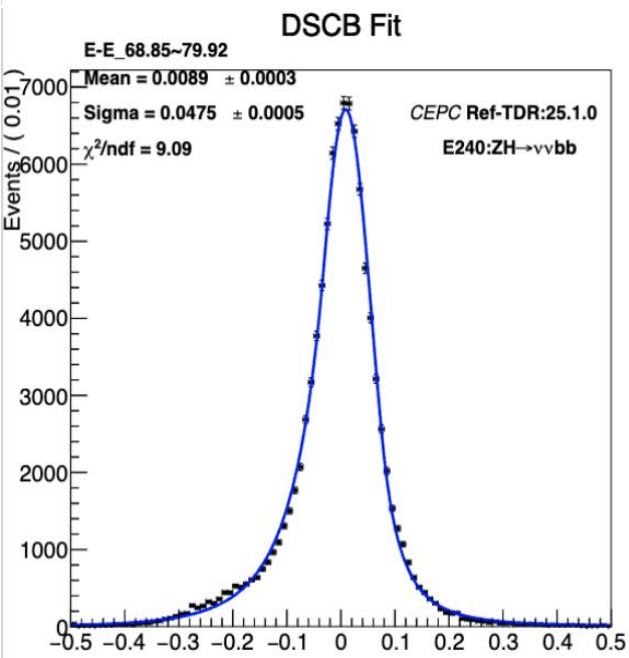E240:ZH→ννbb

DSCB Fit — E-E_58.59~68.85
Mean = 0.0098 ± 0.0003
Sigma = 0.0483 ± 0.0005
χ^2/ndf = 3.55
CEPC Ref-TDR:25.1.0
E240:ZH→ννbb

DSCB Fit — E-E_68.85~79.92
Mean = 0.0089 ± 0.0003
Sigma = 0.0475 ± 0.0005
χ^2/ndf = 9.09
CEPC Ref-TDR:25.1.0
E240:ZH→ννbb

DSCB Fit — E-E_79.92~125
Mean = 0.0051 ± 0.0002
Sigma = 0.0475 ± 0.0003
χ^2/ndf = 6.10
CEPC Ref-TDR:25.1.0
E240:ZH→ννbb

nnHbb jet energy distribution
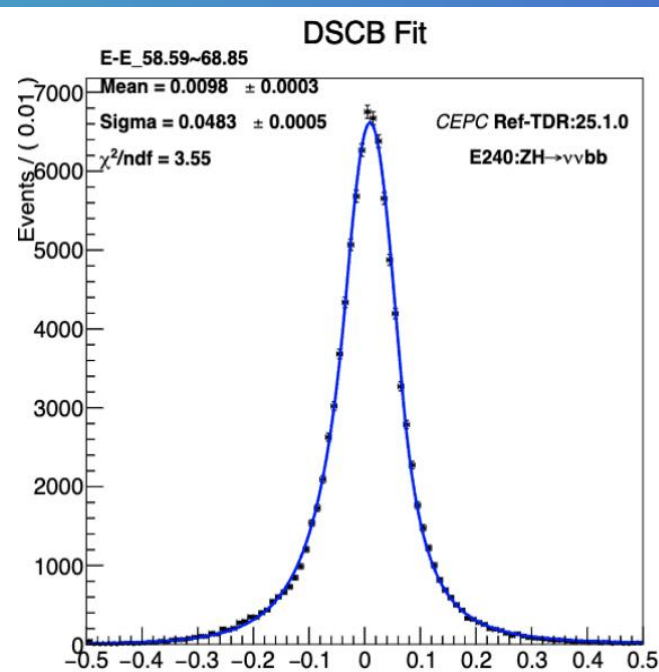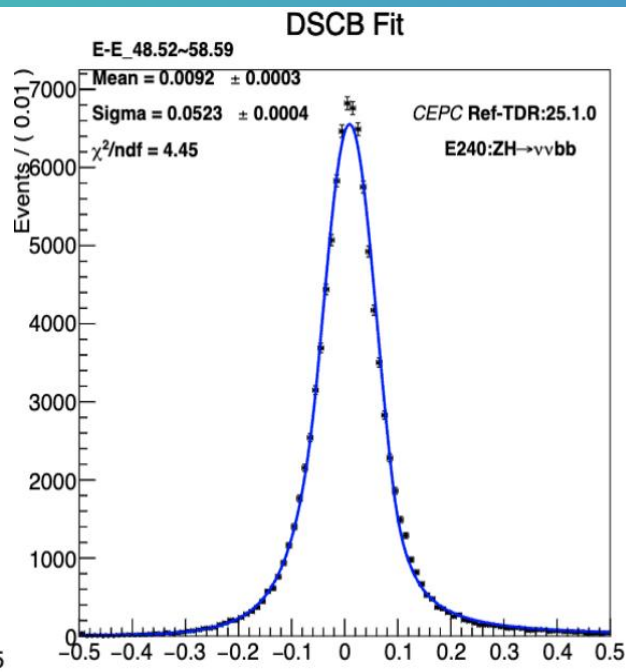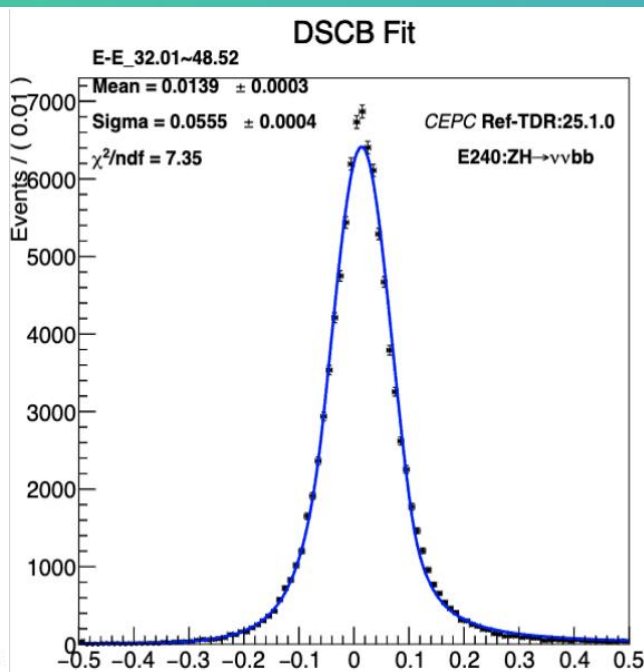
✓ costheta_truth<0.7

RMS90

nnHbb E Distribution

JER

JES

- Each point is at the mean of over that period.
- The JER obtained from RMS90 has no obvious regularity.

RMS90 result

RMS90

E-E_0 to 32.01
Mean = 0.0371 ± 0.0012
RMS90 = 0.0661 ± 0.0007
Entries = 9987.0
CEPC Ref-TDR:25.1.0
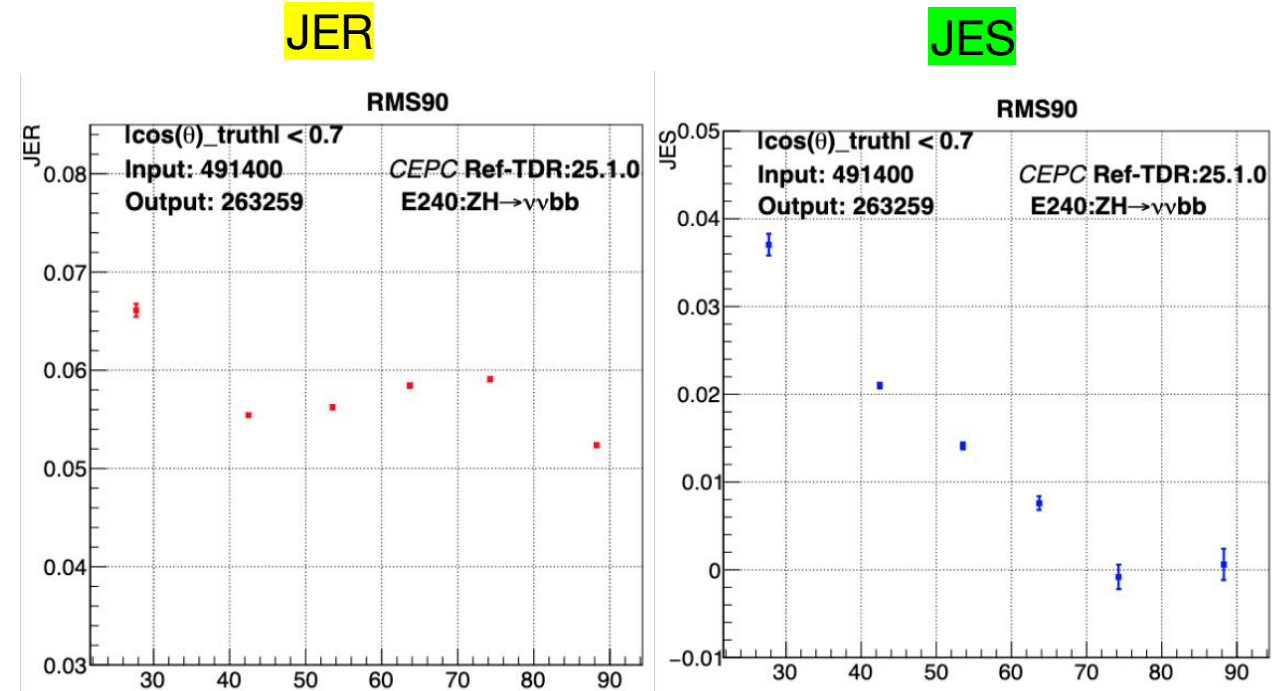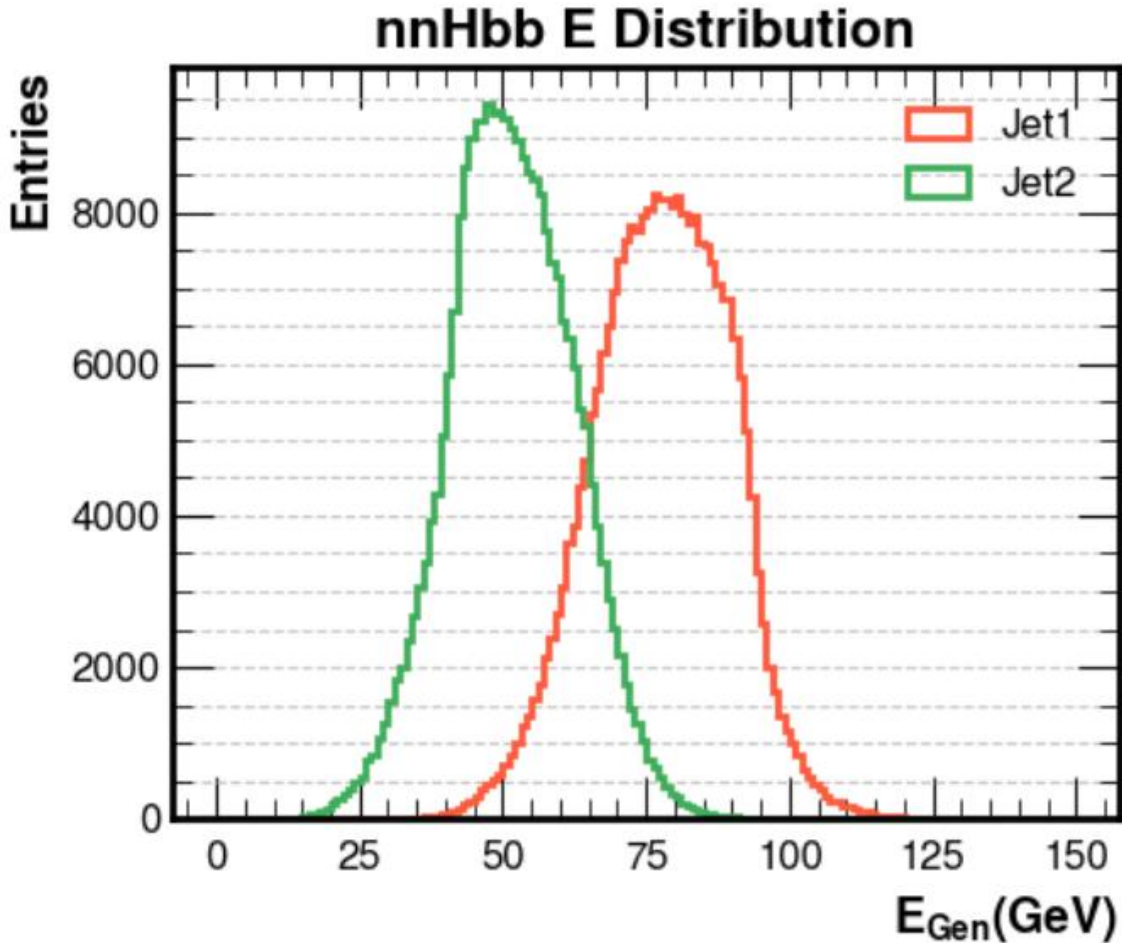E240:ZH→ννbb

RMS90

E-E_32.01 to 48.52
Mean = 0.0210 ± 0.0003
RMS90 = 0.0554 ± 0.0002
Entries = 99960.0
CEPC Ref-TDR:25.1.0
E240:ZH→ννbb

RMS90

E-E_48.52 to 58.59
Mean = 0.0141 ± 0.0004
RMS90 = 0.0563 ± 0.0002
Entries = 99956.0
CEPC Ref-TDR:25.1.0
E240:ZH→ννbb

RMS90

E-E_58.59 to 68.85
Mean = 0.0076 ± 0.0008
RMS90 = 0.0584 ± 0.0002
Entries = 99951.0
CEPC Ref-TDR:25.1.0
E240:ZH→ννbb

RMS90

E-E_68.85 to 79.92
Mean = -0.0008 ± 0.0014
RMS90 = 0.0591 ± 0.0002
Entries = 99897.0
CEPC Ref-TDR:25.1.0
E240:ZH→ννbb

RMS90

E-E_79.92 to 125
Mean = 0.0006 ± 0.0018
RMS90 = 0.0524 ± 0.0002
Entries = 116392.0
CEPC Ref-TDR:25.1.0
E240:ZH→ννbb