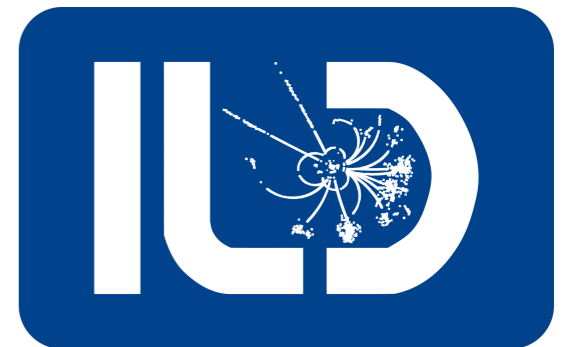


Jet Energy Scale Calibration using $e^+e^- \rightarrow \gamma Z$ process at the ILC

Takahiro Mizuno
SOKENDAI

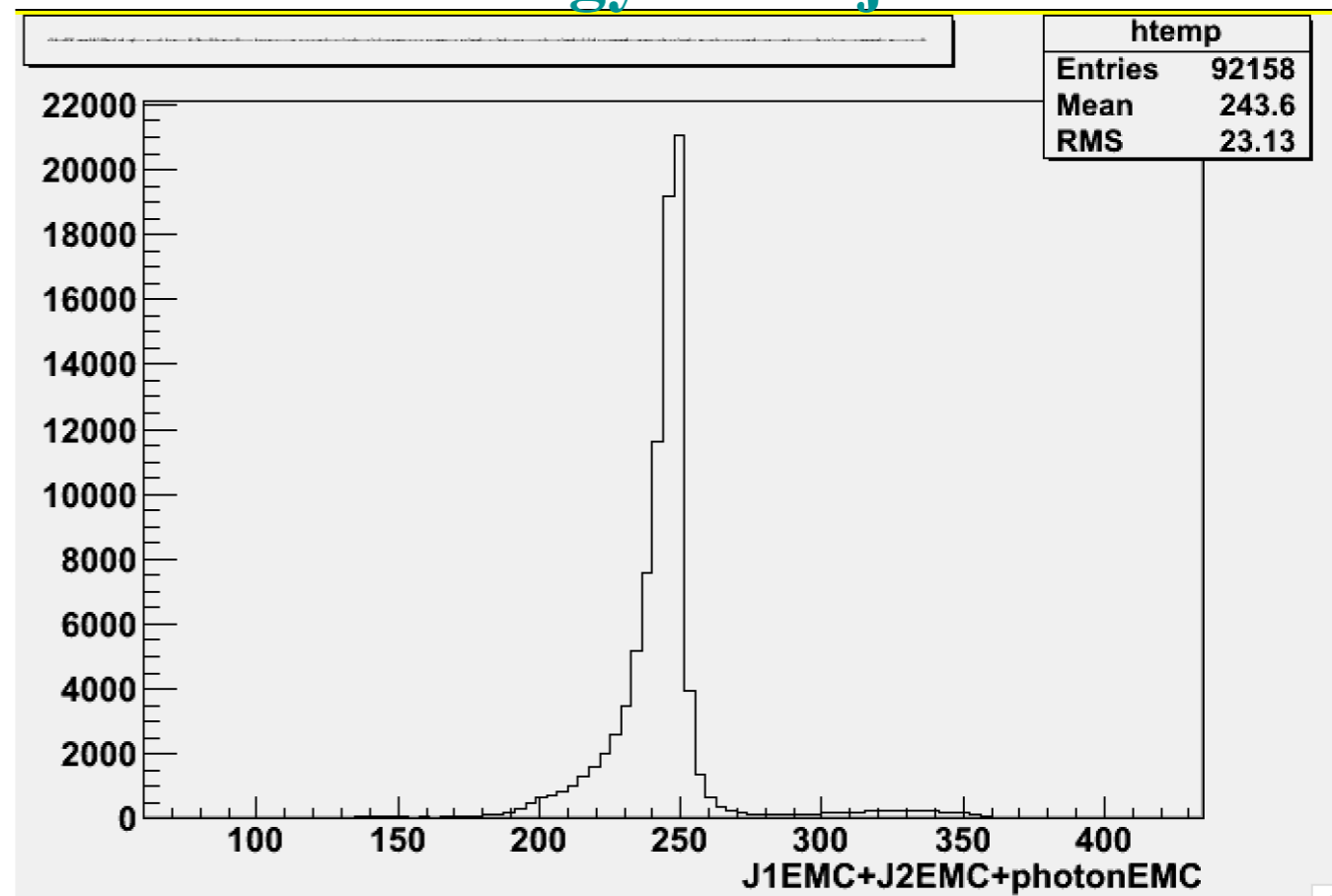


250 GeV DBD analysis

- In order to perform 250 GeV analysis, we decided to use DBD samples instead of current using samples until new sample is validated.
- We see some problem in MCTruth linking.

- Although taking all particles with any weight are linked, wrong counting is seen.
- **According to Mikael-san, “For neutrals, it only contains the link to the true particle that contributes the most to a cluster” -> underestimation**

Total (J1+J2+photon) MCLinked jet Energy in ud jet

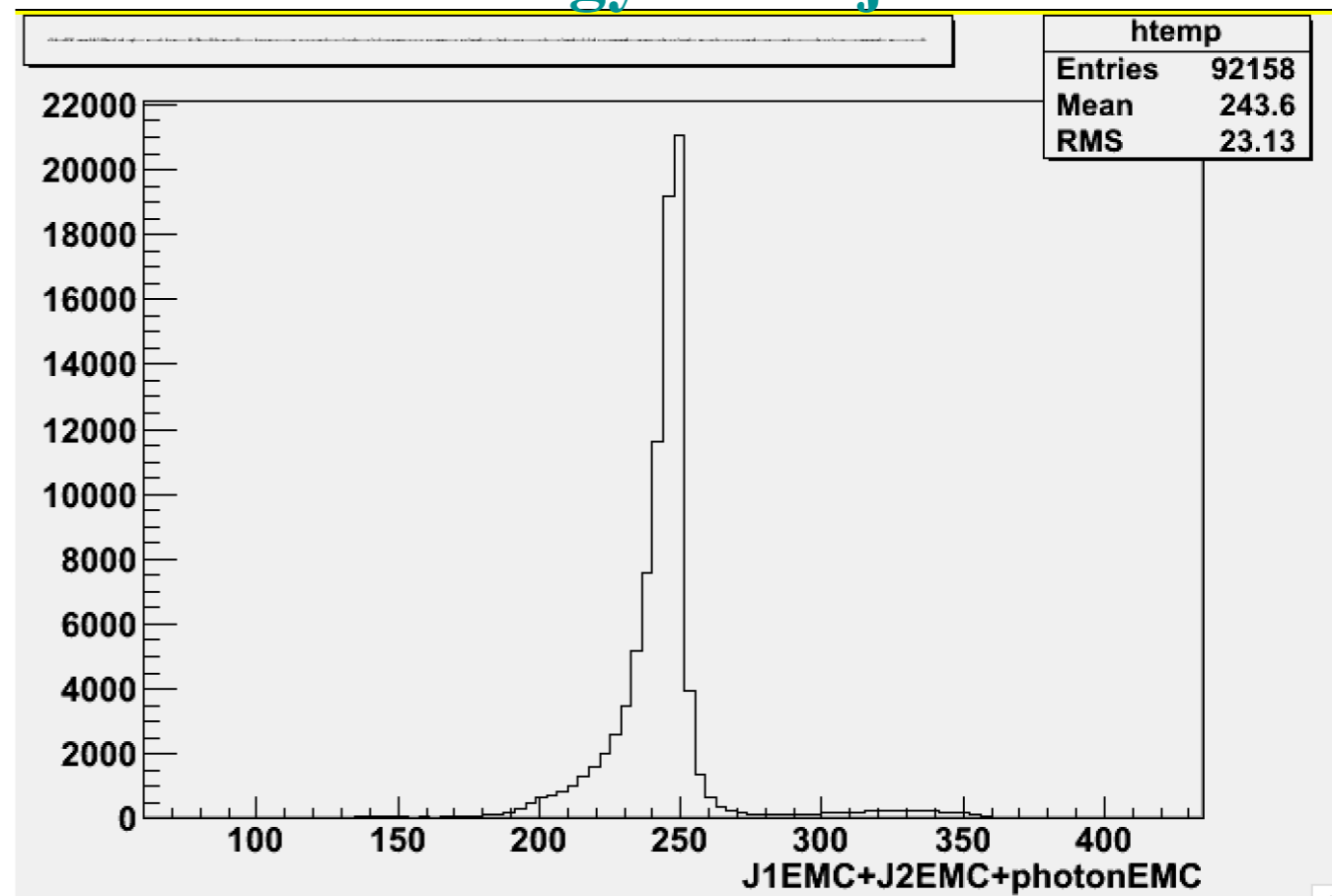


Use new samples!!

- In order to perform 250 GeV analysis, we decided to use DBD samples instead of current using samples until new sample is validated.
- We see some problem in MCTruth linking.

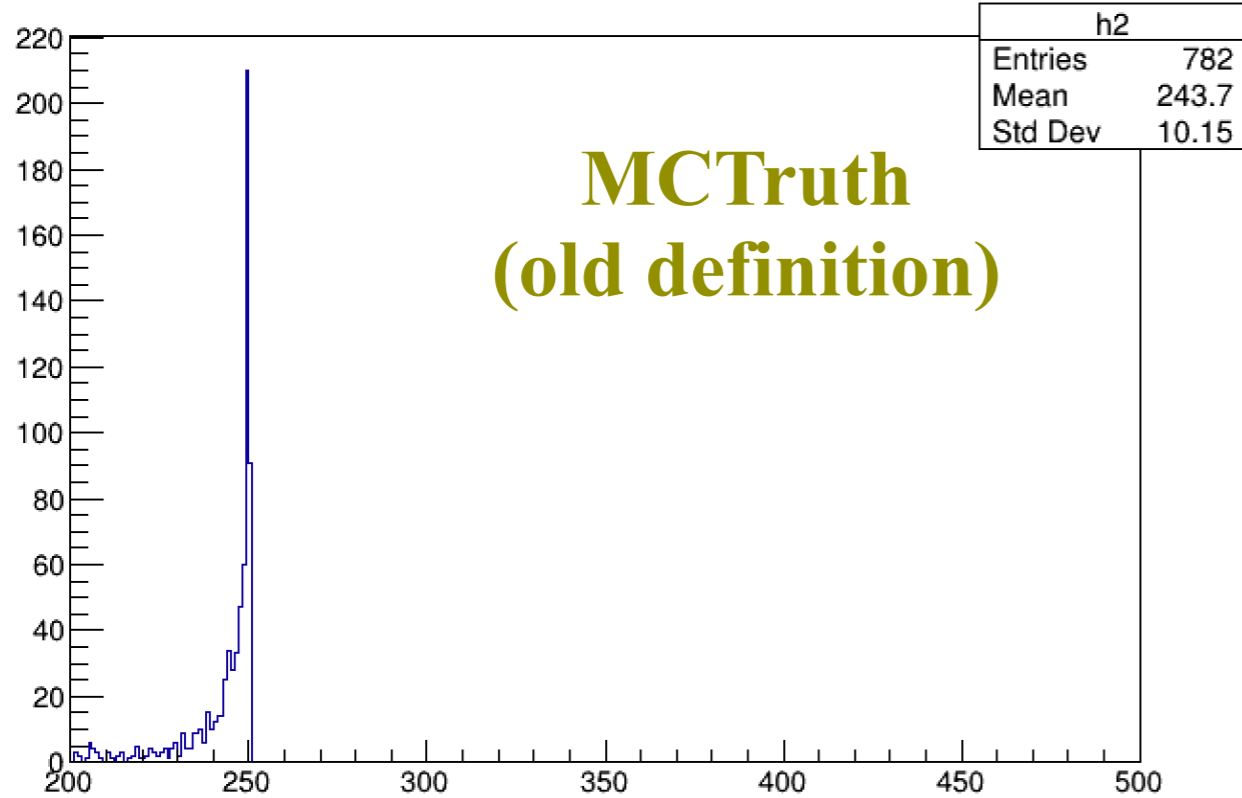
- Although taking all particles with any weight are linked, wrong counting is seen.
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Total (J1+J2+photon) MCLinked jet Energy in ud jet



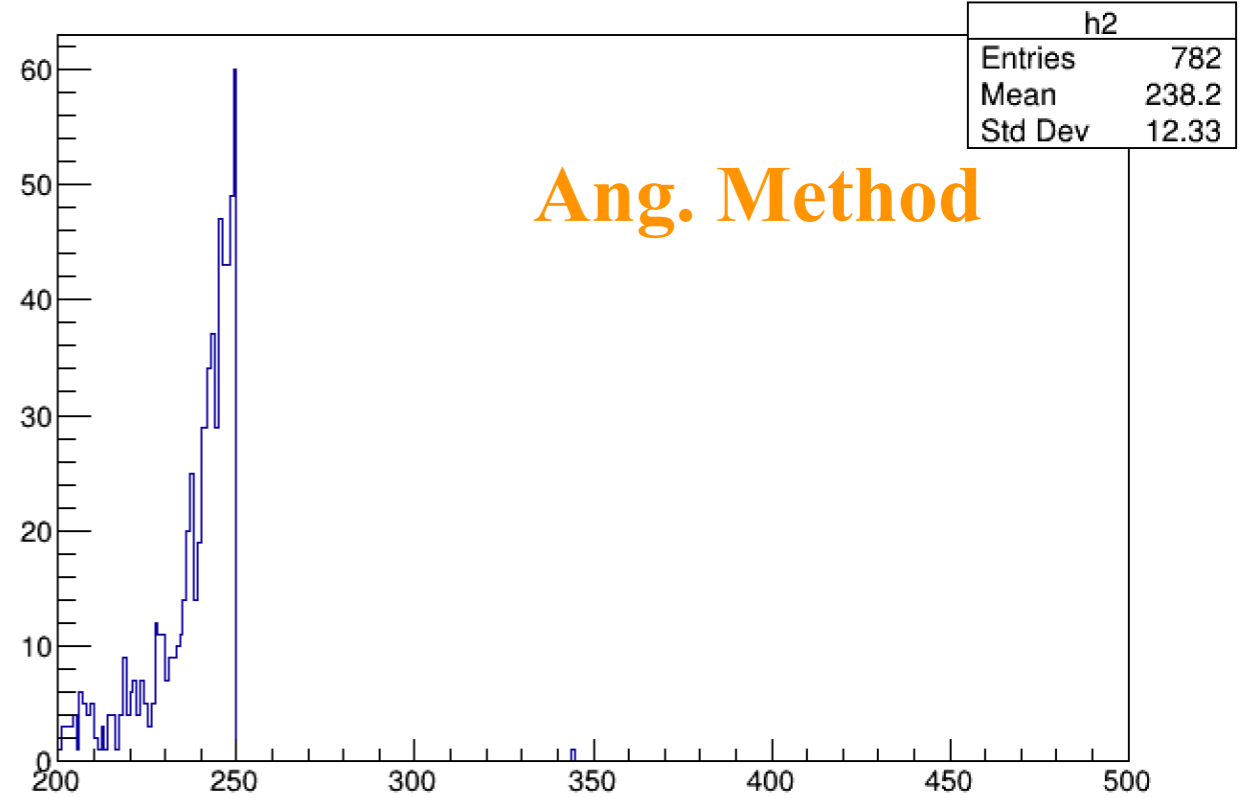
Total (J1+J2+photon) Energy

j1EMC+j2EMC+photonEMC {M3sol>0.}



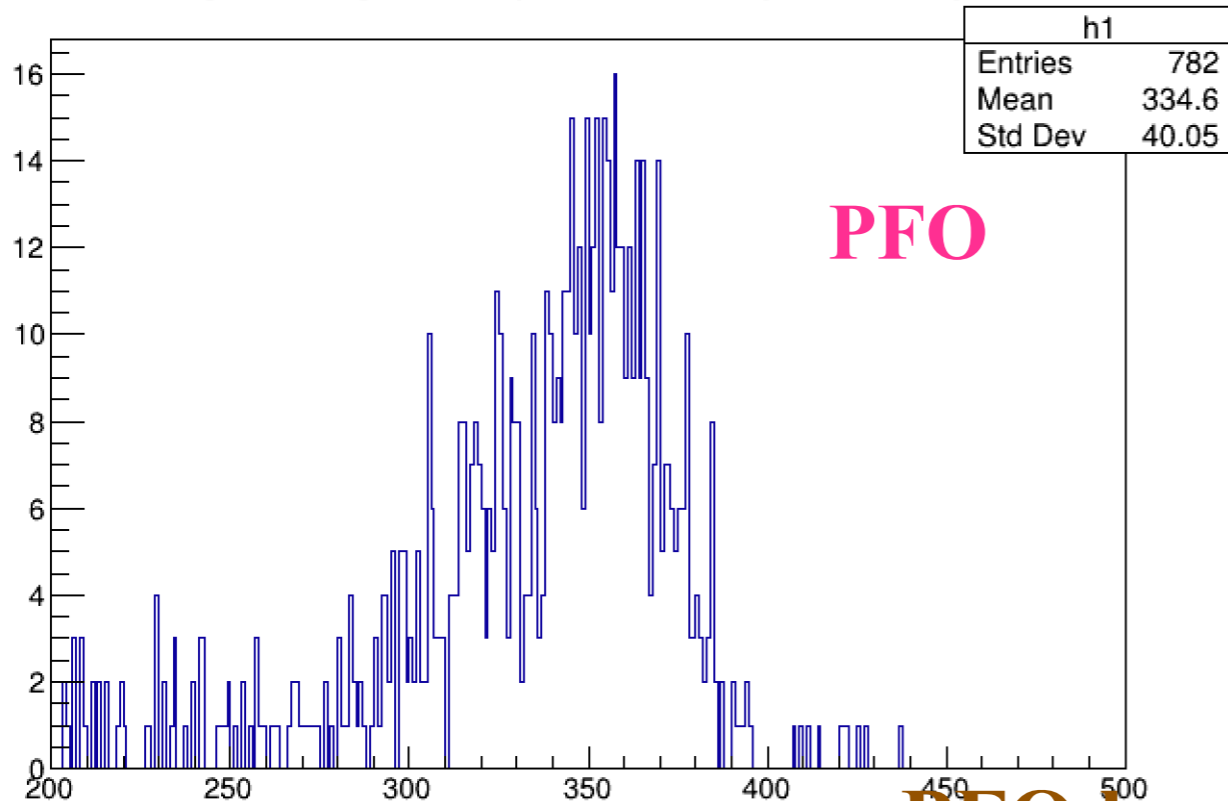
**MCTruth
(old definition)**

M3j1E+M3j2E+M3phE {M3sol>0.}



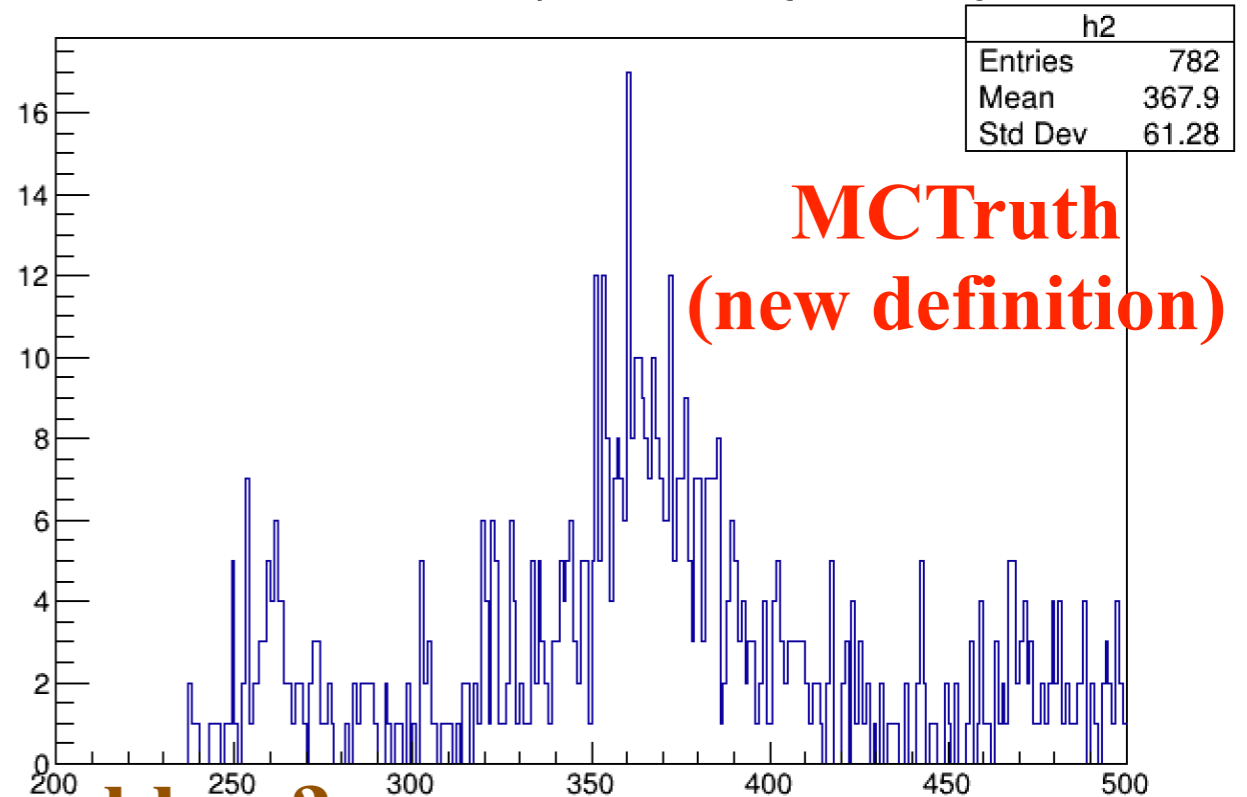
Ang. Method

j1EAnI+j2EAnI+photonEAnI {M3sol>0.}



PFO

M3j1E+M3j2E+M3phE {M3sol>0.}



**MCTruth
(new definition)**

PFO has a problem?

vi problem

Open vi

```

[[mizunot@ccw04 analysis]$ vi mzcomp.cxx
E575: viminfo: 不正な先頭文字です 行目: ^I+^I36^I14
E575: viminfo: 不正な先頭文字です 行目: ^I+^I73^I43
E575: viminfo: 不正な先頭文字です 行目: ^I+^I77^I42
E575: viminfo: 不正な先頭文字です 行目: ^I+^I82^I42
E575: viminfo: 不正な先頭文字です 行目: ^I+^I73^I36
E575: viminfo: 不正な先頭文字です 行目: ^I+^I77^I35
E575: viminfo: 不正な先頭文字です 行目: ^I+^I82^I35
E575: viminfo: 不正な先頭文字です 行目: ^I+^I86^I43
E575: viminfo: 不正な先頭文字です 行目: ^I+^I90^I35
E575: viminfo: 不正な先頭文字です 行目: ^I+^I93^I42
E136: viminfo: エラーが多過ぎるので、以降はスキップします
続けるにはENTERを押すかコマンドを入力してください

```

Close vi

```

E575: viminfo: 不正な先頭文字です 行目: ^I+^I36^I14
E575: viminfo: 不正な先頭文字です 行目: ^I+^I73^I43
E575: viminfo: 不正な先頭文字です 行目: ^I+^I77^I42
E575: viminfo: 不正な先頭文字です 行目: ^I+^I82^I42
E575: viminfo: 不正な先頭文字です 行目: ^I+^I73^I36
E575: viminfo: 不正な先頭文字です 行目: ^I+^I77^I35
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E575: viminfo: 不正な先頭文字です 行目: ^I+^I86^I43
E575: viminfo: 不正な先頭文字です 行目: ^I+^I90^I35
E575: viminfo: 不正な先頭文字です 行目: ^I+^I93^I42
E136: viminfo: エラーが多過ぎるので、以降はスキップします
続けるにはENTERを押すかコマンドを入力してください

```