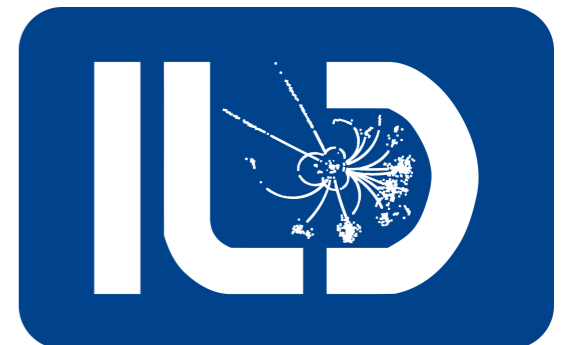


Jet Energy Scale Calibration using $e^+e^- \rightarrow \gamma Z$ process

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Calibration Factors

- In deriving the calibration factor, the binning changed.
- Source code is refined very much.
- Error bar is also introduced.

Binning: 115 bins

Energy [GeV]	Upperbound of $ \cos\theta $
20-30	0.2,0.4,0.6,0.8,0.9,0.95,1.0
30-40	0.2,0.4,0.6,0.8,0.9,0.94,0.97,1.0
40-50	0.2,0.4,0.6,0.8,0.9,0.94,0.97,1.0
50-60	0.2,0.4,0.6,0.8,0.9,0.92,0.94,0.96,0.98,1.0
60-70	0.2,0.4,0.6,0.8,0.9,0.92,0.94,0.96,0.98,1.0
70-80	0.2,0.4,0.6,0.8,0.9,0.92,0.94,0.96,0.98,1.0
80-90	0.2,0.4,0.6,0.8,0.9,0.92,0.94,0.96,0.98,1.0
90-100	0.2,0.4,0.6,0.8,0.9,0.92,0.94,0.96,0.98,1.0
100-110	0.2,0.4,0.6,0.8,0.9,0.92,0.94,0.96,0.97,0.98,0.985,0.99,0.995,1.0
110-120	0.2,0.4,0.6,0.8,0.9,0.92,0.94,0.96,0.97,0.98,0.985,0.99,0.995,1.0
120-130	0.2,0.4,0.6,0.8,0.9,0.92,0.94,0.96,0.97,0.98,0.985,0.99,0.995,1.0

Calibration Factor

Fit the $(E_{\text{PFO}} - E_{\text{Ang.Method}}) / E_{\text{Ang.Method}}$ and derive the mean values of Core-Gaussian “ μ ” as a function of energy and $|\cos\theta|$
 Calibration Factor := $E_{\text{Ang.Method}} / E_{\text{PFO}} = 1 / (\mu + 1)$

