

CEPC SET Reconstruction Efficiency

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SET Reconstruction Efficiency

Purpose: to evaluate the significance of the SET subdetector

- Generator : particle gun
- Particle : muon
- Energy : 1, 3, 5, 7, 10, 20, 30, 40, 50, 70, 90, 125GeV
- Direction: centered on x axis, phi smearing 180 deg, theta smearing 10 deg, uniform distribution
- Number of particles in each simulation: 1million

SET reconstruction efficiency: $\text{eff} = (\text{Num of MarlinTrk w/SET hits}) / (\text{Num of MCTruthTrk})$

SET Reconstruction Efficiency

GeV	MarlinTrk	MarlinTrkWithSETHits
1	998260	703268
3	998793	765591
5	998940	767464
7	999055	768359
10	999301	767623
20	999680	768006
30	999826	767599
40	999895	768873
50	999995	768876
70	1000029	767996
90	1000064	768384
125	1000111	768904

