



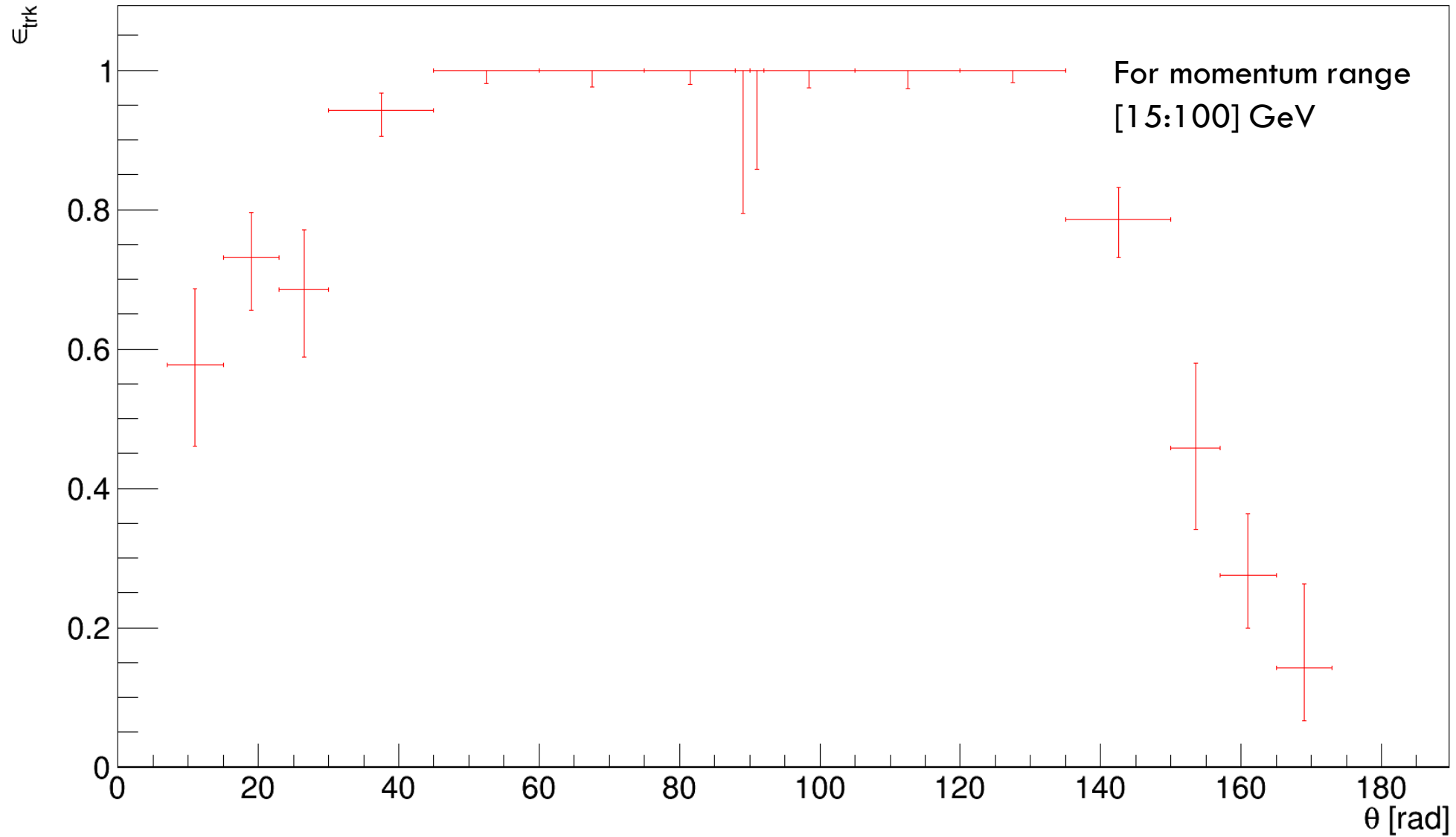
TRACKING PERFORMANCE OF SID DETECTOR

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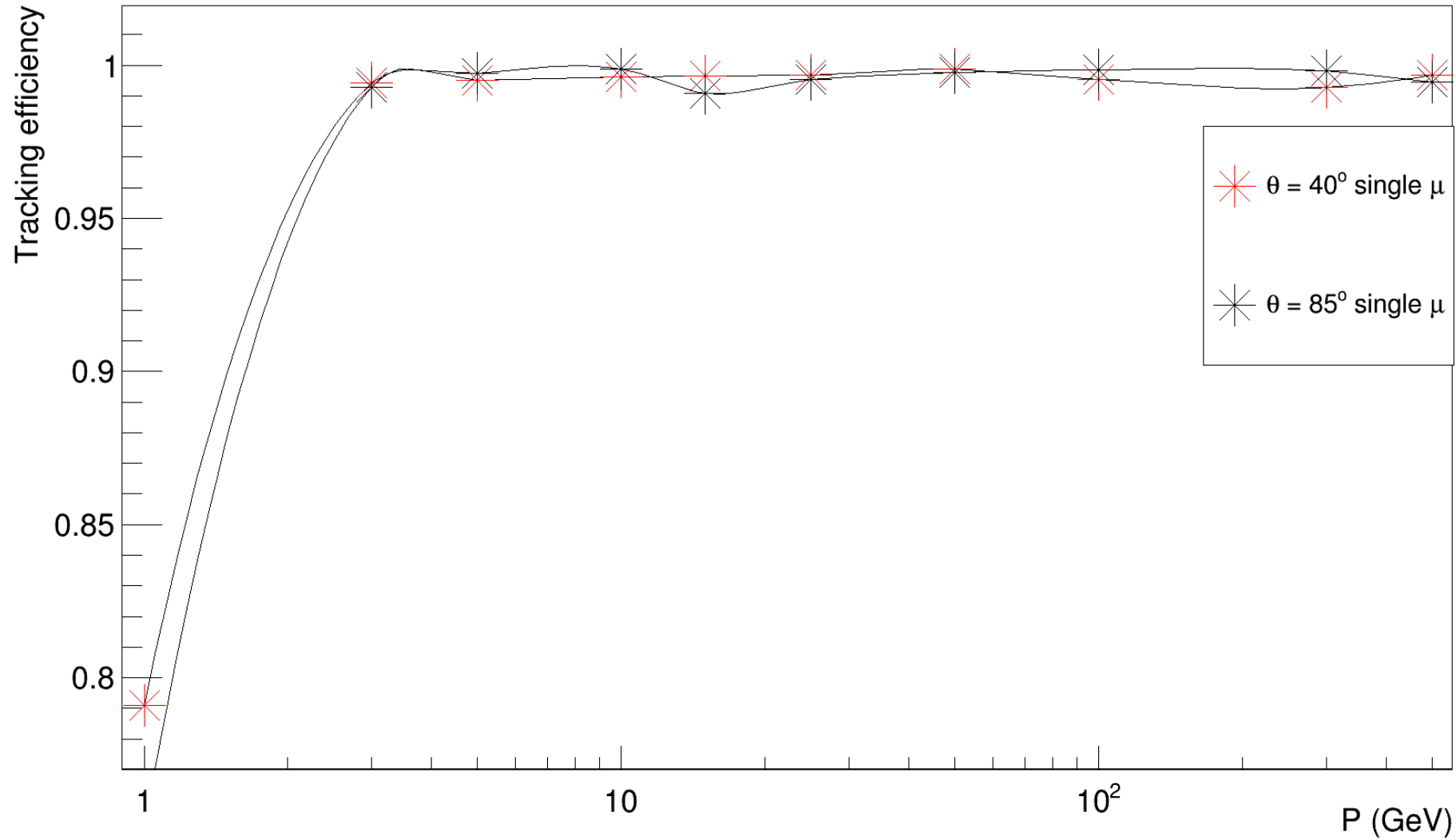
EFFICIENCIES (1)

Tracks reconstruction Efficiency vs Theta for SiD_o2_v01



EFFICIENCIES (2)

Efficiency for SiD_o2_v01



SOME DEFINITIONS:

- Residuals for track parameters:

- $R(T_i) = T_i^{reco} - T_i^{truth}$

- Pulls for residuals:

- $P(T_i) = \frac{R(T_i)}{\sigma T_i}$

- Resolution for residuals:

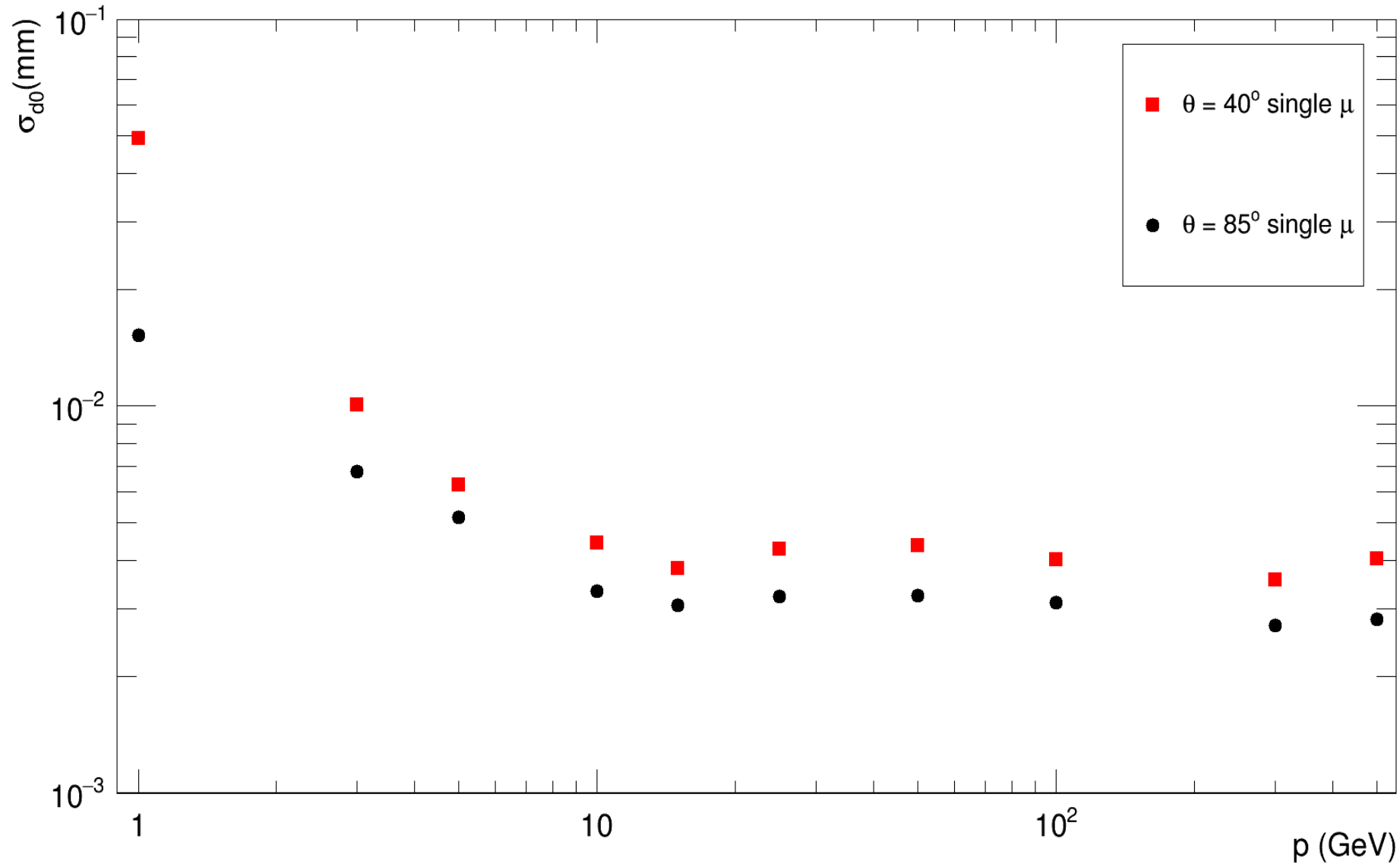
- $\sigma(R(T_i))$ (from fitting with Gauss[N,μ,σ])

- Resolution for momentum:

- $\sigma_{\frac{1}{p_t}} = \frac{p_{t\ reco} - p_{t\ true}}{p_{t\ true}^2}$ (from fitting with Gauss[N,μ,σ])

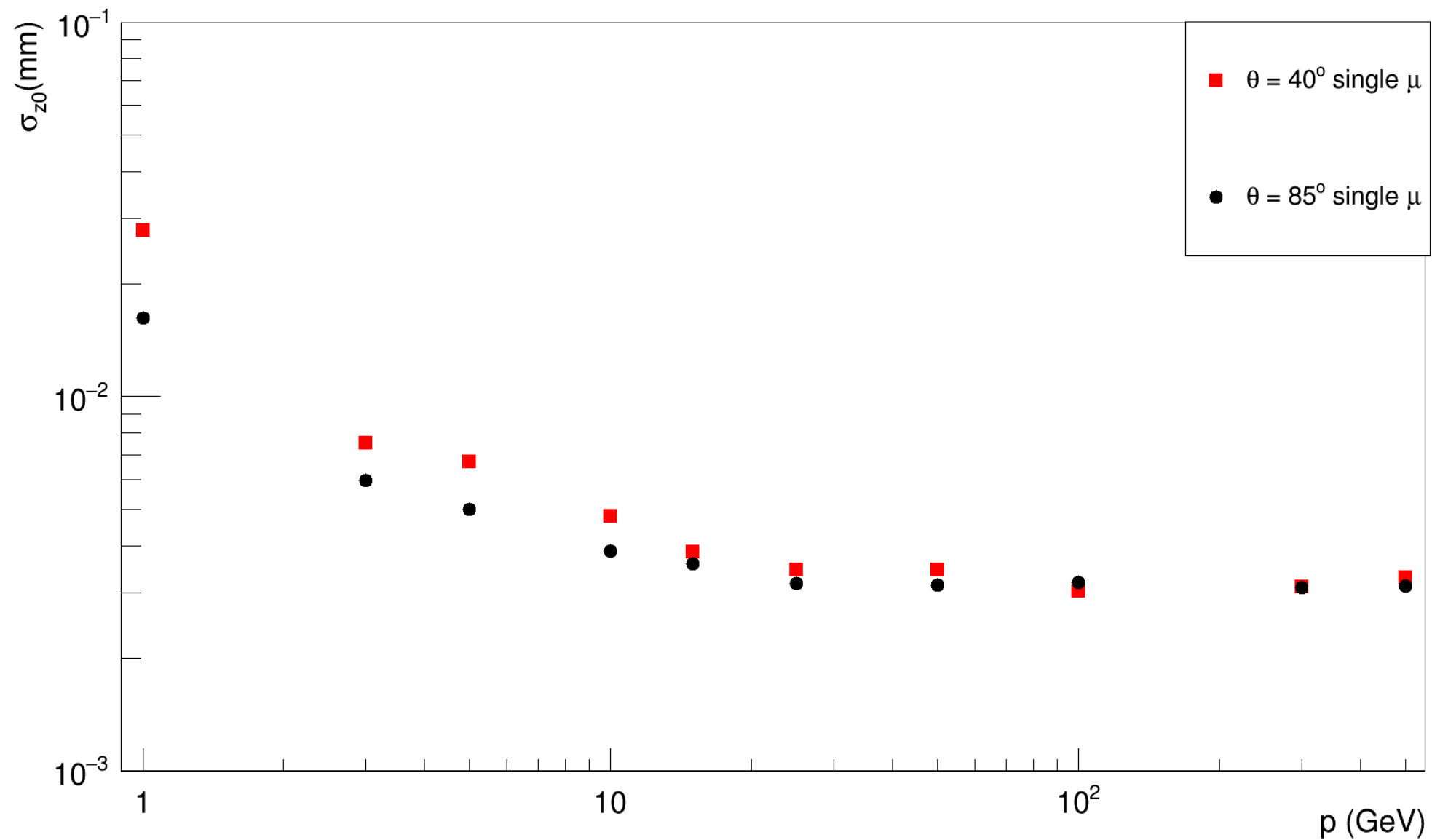
TRANSVERSE IMPACT MOMENTUM RESOLUTION:

Impact Parameter(D0) Resolution for SiD_o2_v01

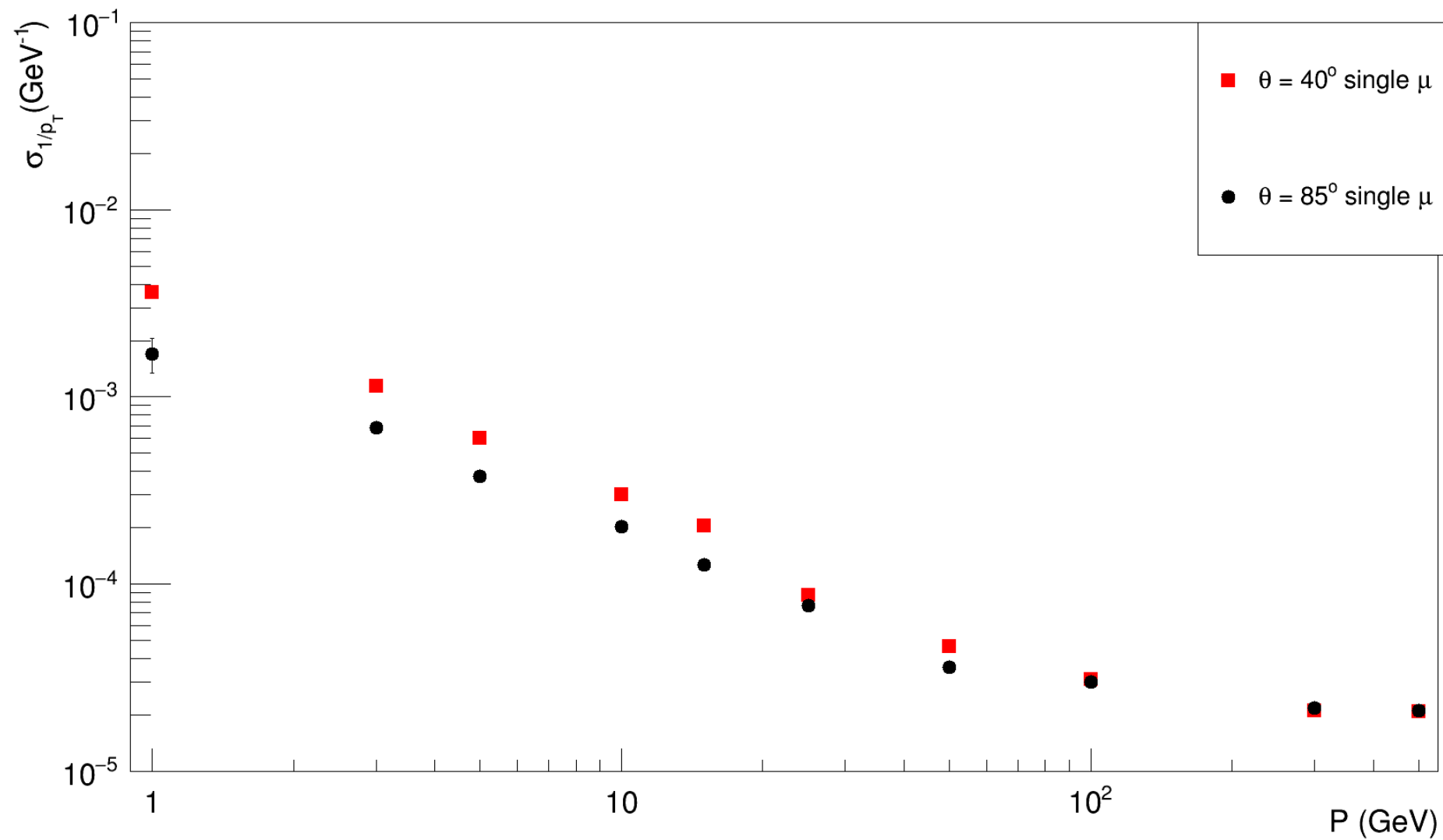


LONGITUDINAL PARAMETER RESOLUTION:

Impact Parameter(Z_0) Resolution for SiD_o2_v01



Momentum Resolution for SiD_o2_v01



The background is a dark blue gradient. In the corners, there are white line-art illustrations of circuit boards or neural networks, consisting of lines and small circles.

THANKS FOR ATTENTION!