

# Isolated Lepton Tagging for new samples

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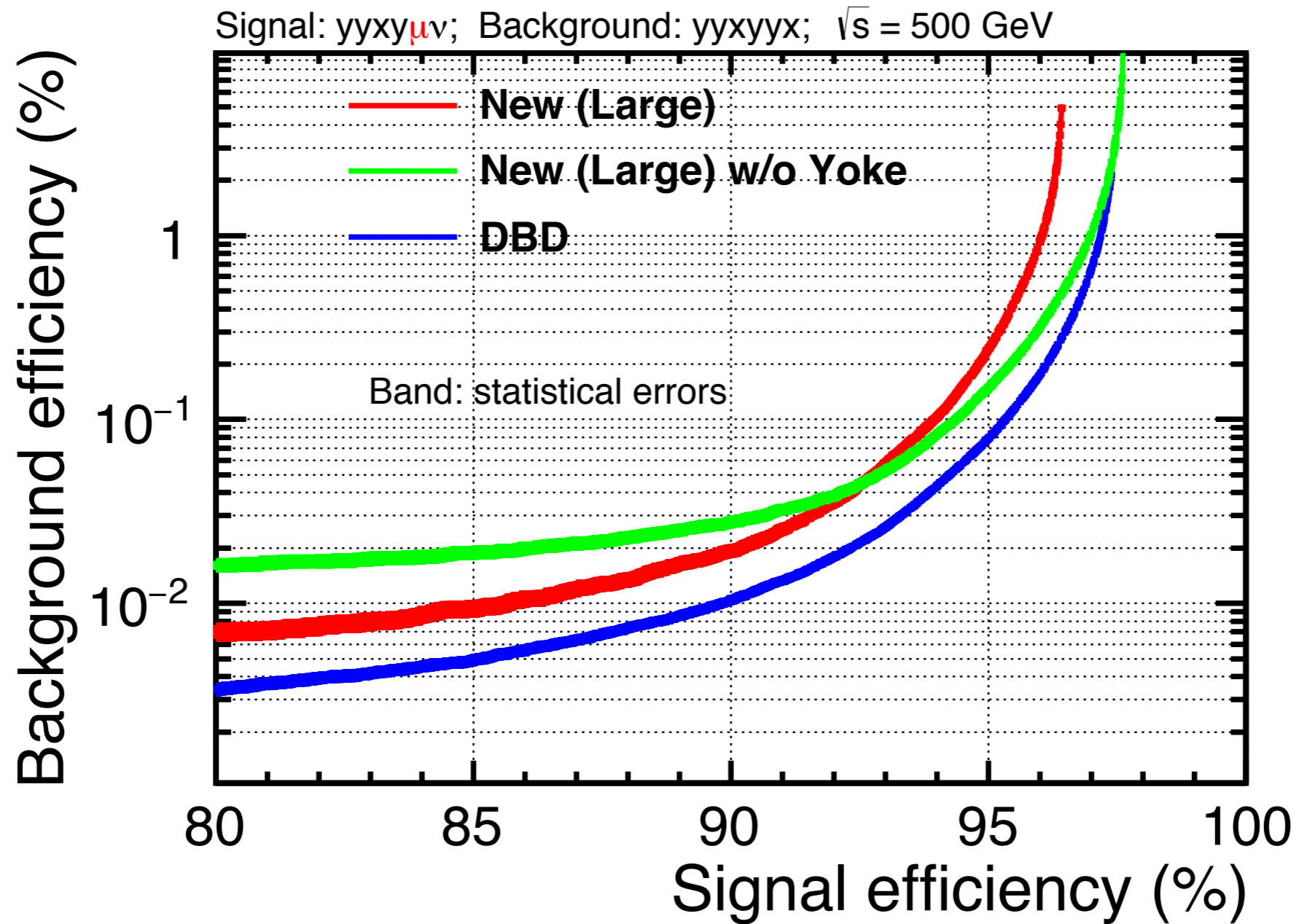
ILD Software conveners Meeting, July 11, 2018

## news

- the problem at  $\cos\theta=0.8$  is understood and fixed by Frank and Shaojun
- the problem at  $55\pm 5$  degree is still under investigation
- in order not to get significant efficiency loss, a new option is provided in IsolatedLeptonTagging without using energy in Yoke (committed to GitHub, as default option); it is recommended to use this new option for benchmark analysis until problems get finally fixed

# Isolated Lepton Tagging performance

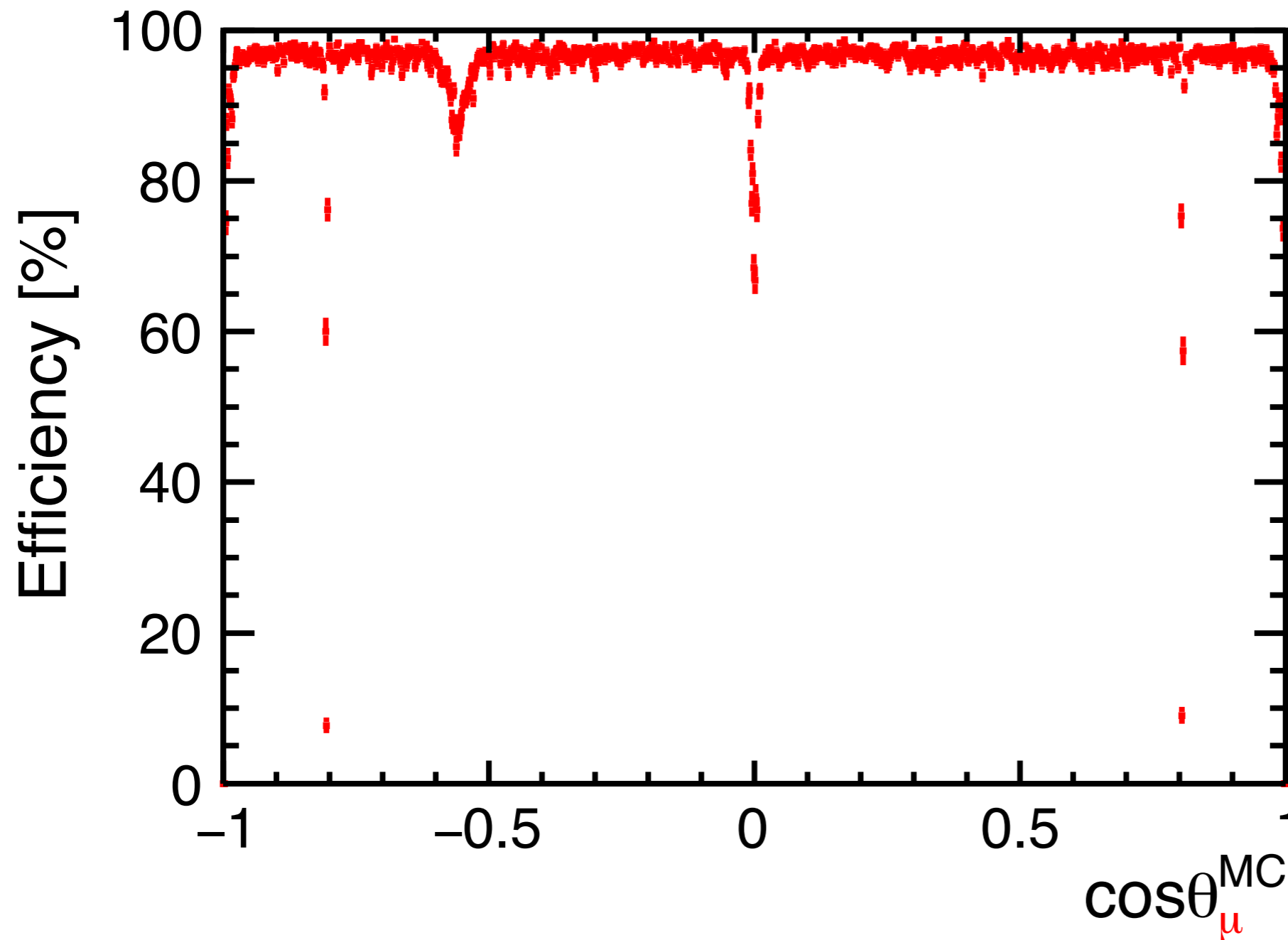
(muon)



recommended working point: ~96-97%

# Efficiency deficit in the new samples

(muon)



$$\theta_1 = 89.5^\circ \pm 0.5^\circ$$

$$\theta_2 = 36.4^\circ \pm 0.2^\circ$$

$$\theta_3 = 55^\circ \pm 5^\circ$$

(main reason)

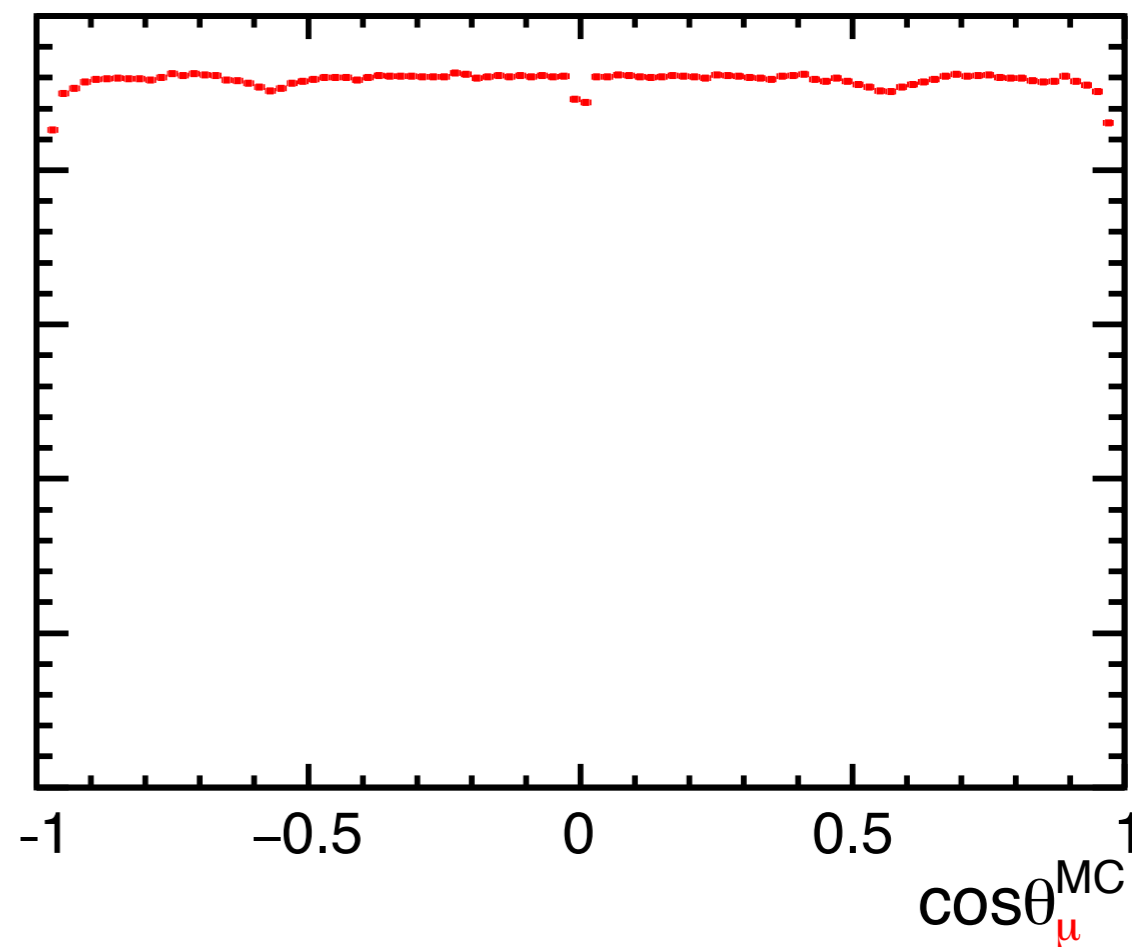
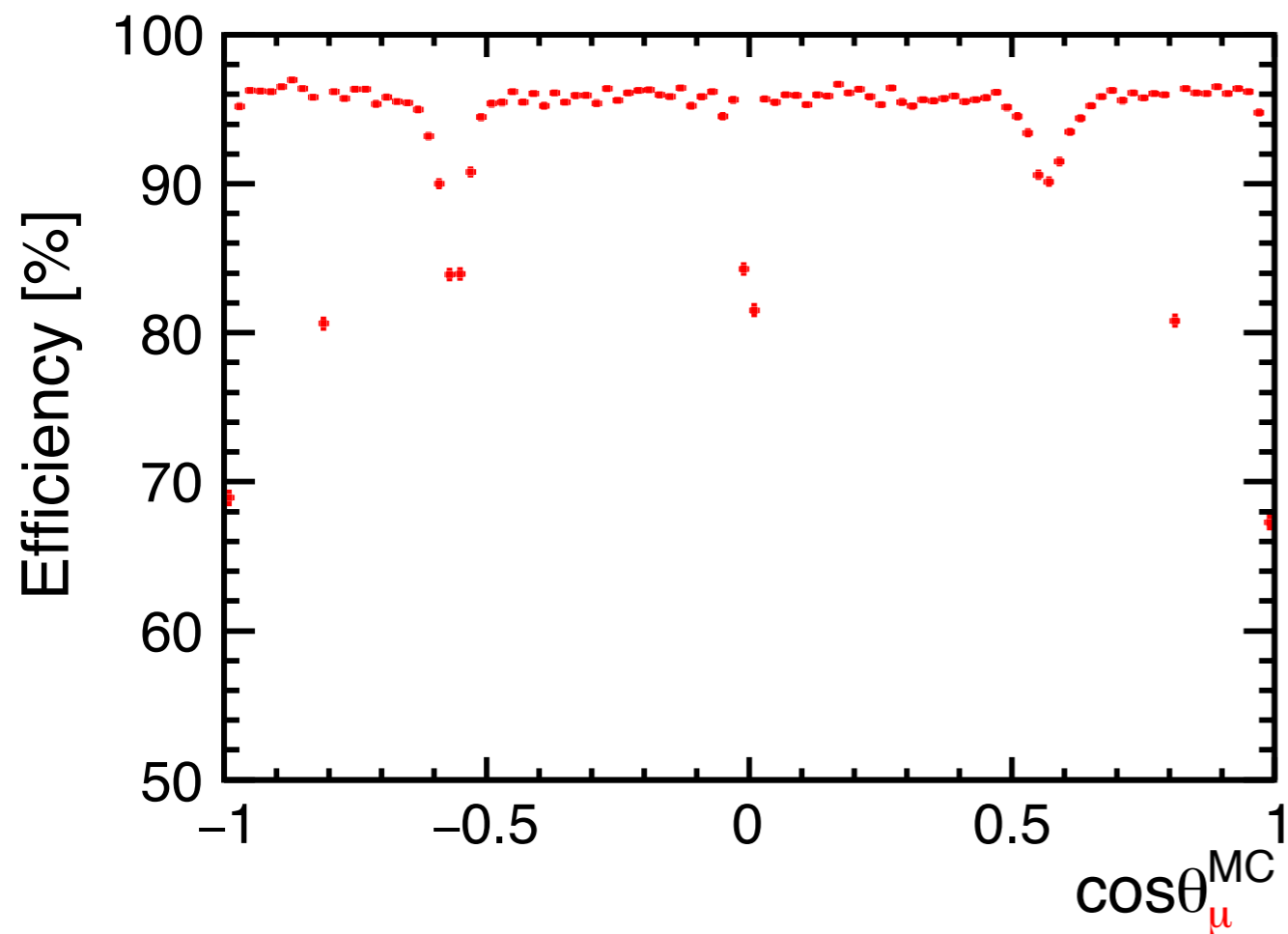
backup

# Efficiency versus polar angle

(muon)

New (Large)

DBD

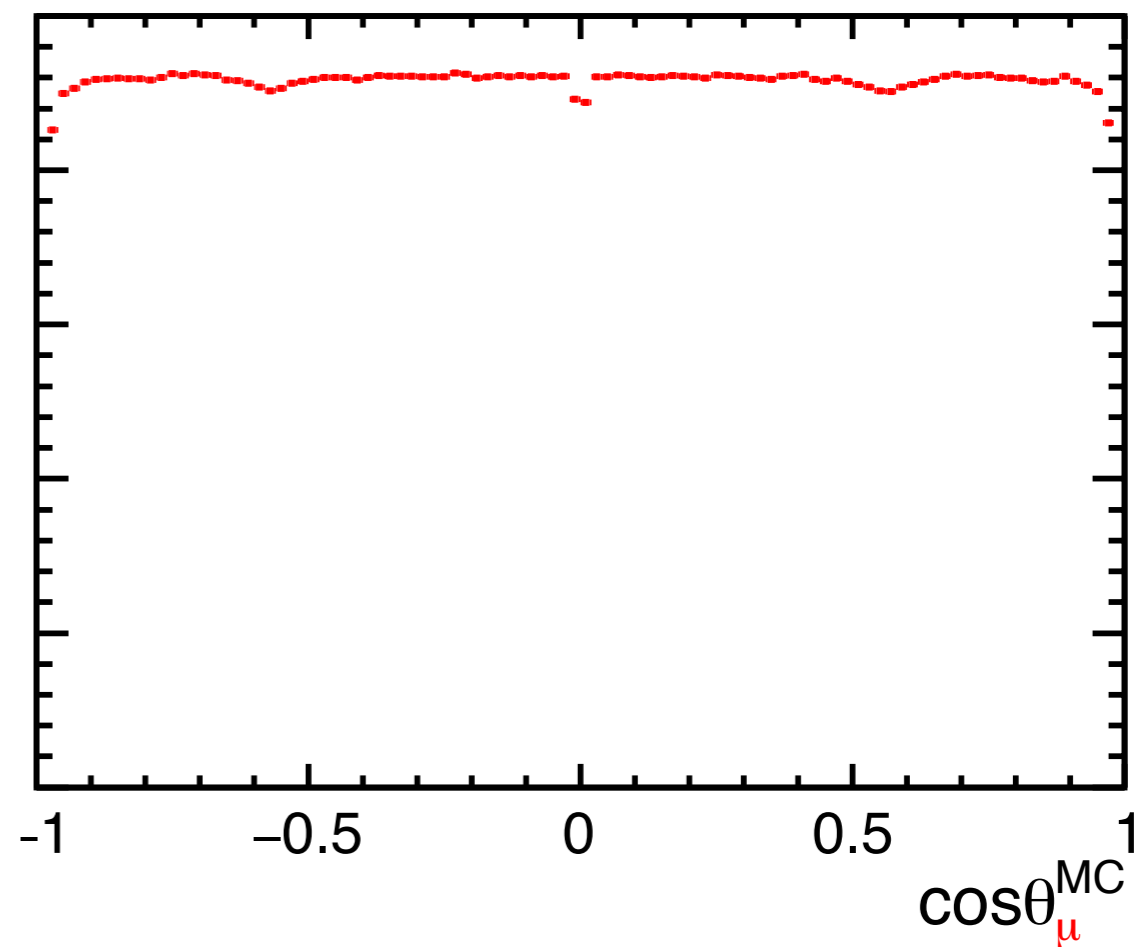
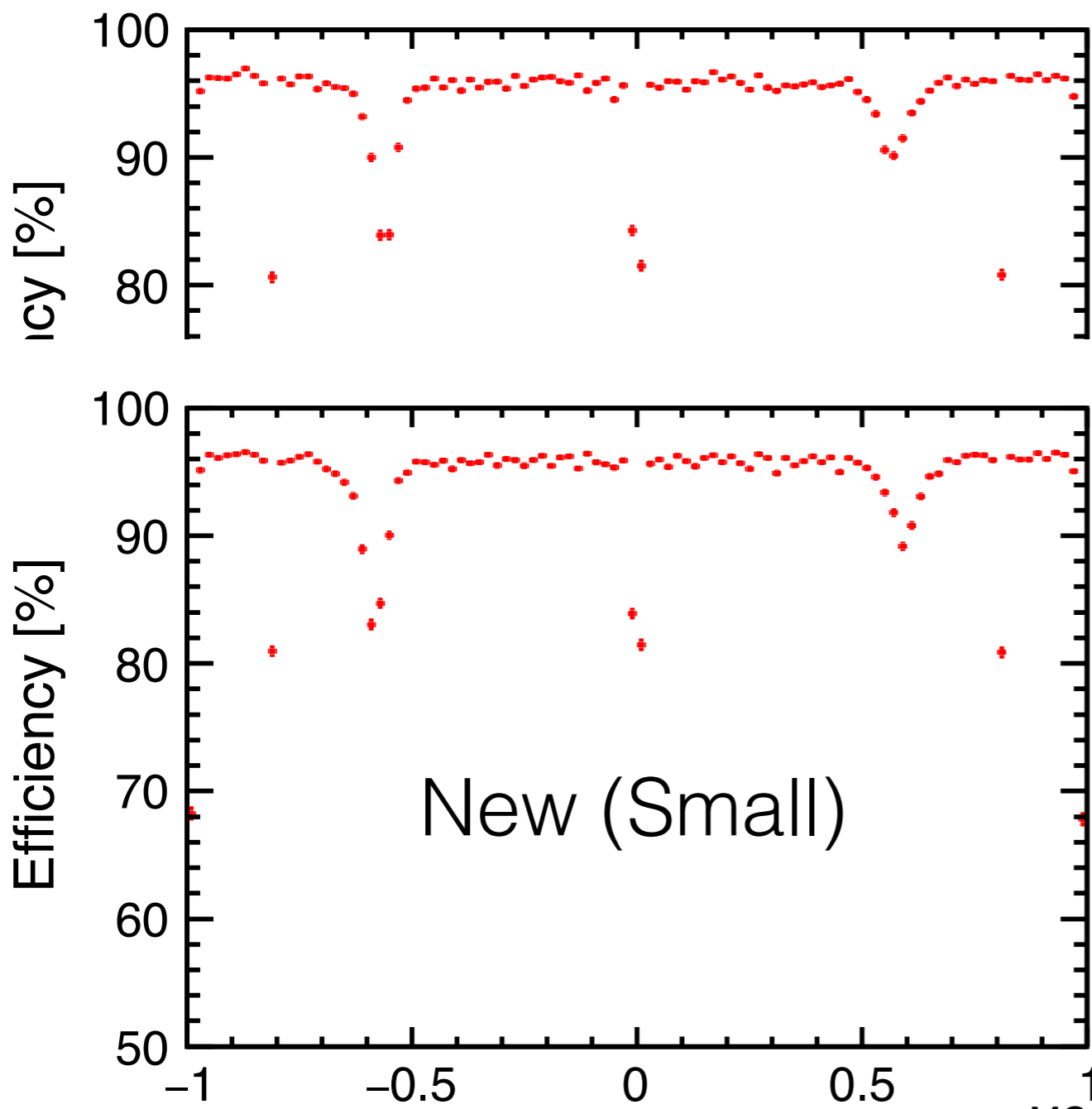


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(muon)

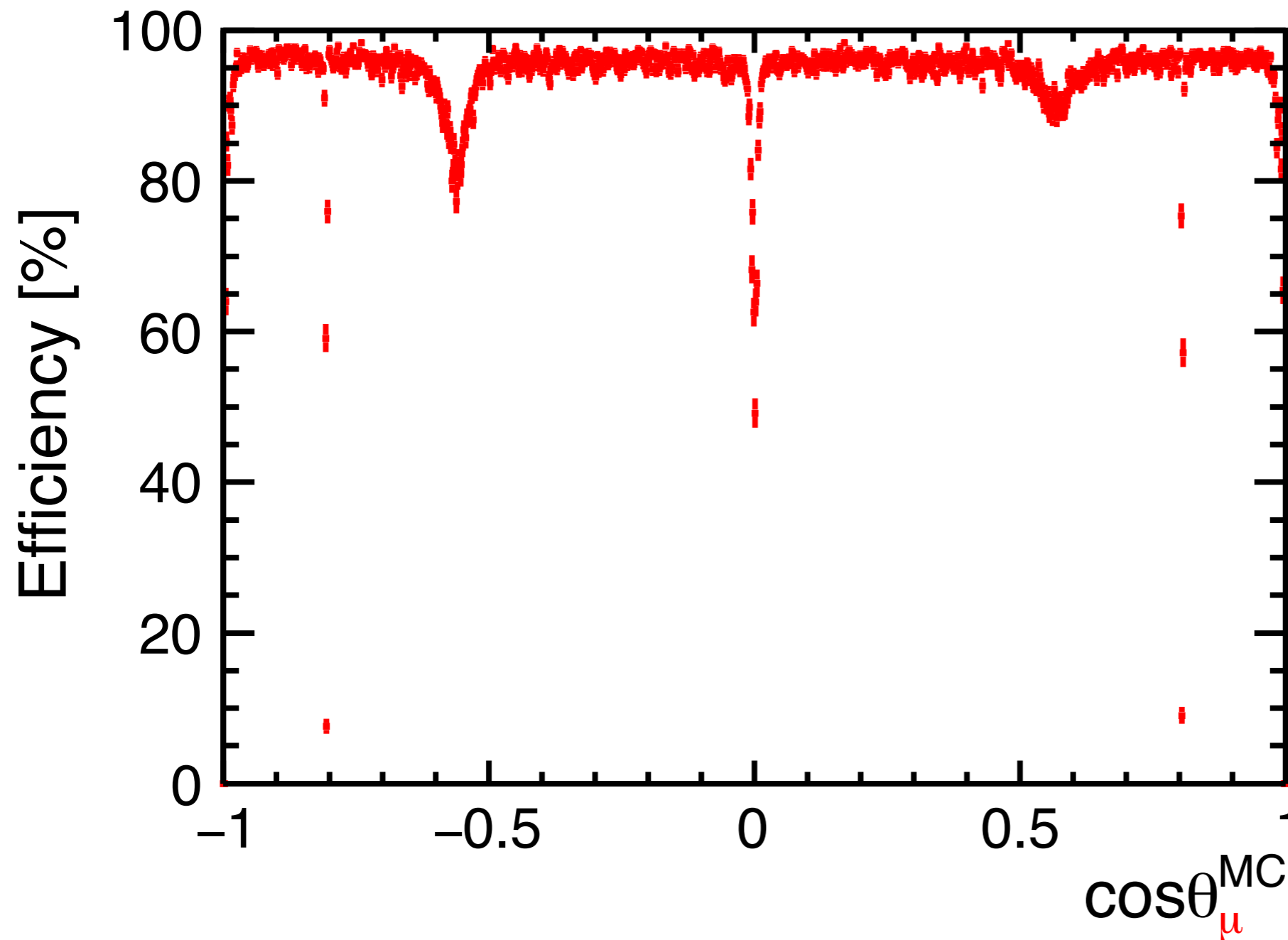
New (Large)

DBD



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