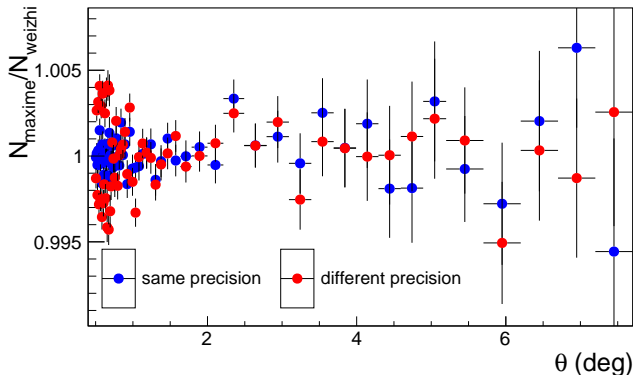


# Weizhi/Maxime ESEPP Simulation Comparison for 2GeV

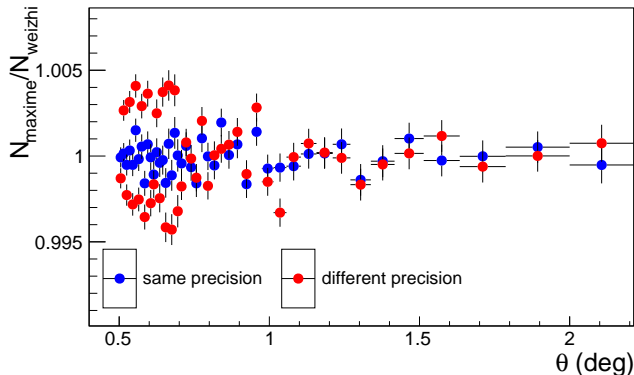
Maxime Levillain

July 21, 2017

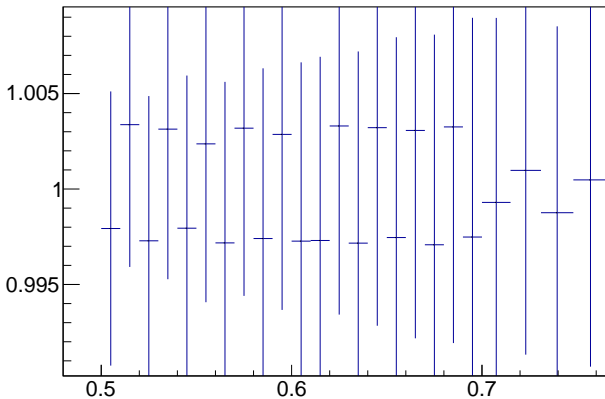




- ▶ Different precision causes instability in yield
- ▶ Bad coupling between random generator/rounding/binning



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- ▶ Same jumping patterns using the same seed with different precisions

- ▶ Looking at yields from 300 files with 1M events
- ▶ extracting pulls distribution and systematics associated to it

$$pulls_i = \frac{N_i(\theta) - N(\bar{\theta})}{\sigma_{N_i(\theta)}}$$

$i$  = file index

$$\sigma_{syst}(\theta) = \sigma_{stat}(\theta) \cdot \sqrt{(\max(1, \sigma_{pulls(\theta)}) + \delta_{\sigma_{pulls(\theta)}})^2 - 1}$$

# Pulls distributions

