CP Figure of Merit

Assume that total measured rate from oscillations

$$N = N_0 + N_{cp}$$

per energy bin.

Additional rate due to CP violation

$$f = N_{cp}/N \propto \alpha/E$$

Error on CP rate after subtraction of N_0

$$\delta N_{cp} = \sqrt{N}$$

Figure of merit per energy bin is deviation is sigma-squared

$$F.O.M. = (N_{cp}/\delta N_{cp})^2 = f^2 \times N$$