Fitting the costheta distribution

- Set costheta function = [0]*(1 + [1]*x + x*x), where [1] = 8/3 * A_FB
- With MCP, fitted [1] = 0.04463 ± 0.00251, so AFB = 0.01674 ± 0.00094
- Counting AFB = (503202-486798)/(503202+486798) = 0.01657 ± 0.00100
- Compatible within statistical uncertainty
- Present it as an alternative method?
 - Statistical uncertainty of each fit is large (only 1M events), so it's hard to estimate syst. Un.
 compared with the counting method

$$\sigma_F = \int_0^1 \frac{d\sigma}{d\cos\theta} d\cos\theta \quad \sigma_B = \int_{-1}^0 \frac{d\sigma}{d\cos\theta} d\cos\theta \quad (9)$$

and $\cos\theta$ is the angle of the outgoing fermion measured relative to the incident electron direction. The experiments determine A_{FB} from fits to the angular distribution which can be written as

$$\frac{1}{\sigma} \frac{d\sigma}{d\cos\theta} = \frac{3}{8} \left(1 + \cos^2\theta \right) + A_{FB} \cos\theta \qquad (10)$$

