



From PDG:

$$\beta = \frac{v}{c} = \frac{pc}{E} \quad \text{and} \quad \gamma = \frac{1}{\sqrt{1 - \beta^2}}$$

⟨ ⟩ ⟨ ⟩

Should be true, if the following terms are zero:

From () simulation and reconstruction (all momenta):

Covariance term		
⟨ ⟩	20.06	-12.07
⟨ ⟩	-0.029	0.006
⟨ ⟩	-10.4	0.006
⟨ ⟩	0.47	0.061
⟨ ⟩	0.35	0.091
⟨ ⟩	0.009	0.001
⟨ ⟩	-0.001	-5.06e-5
⟨ ⟩	0.004	0.0002

From () simulation and reconstruction (1Mev slice around $p_z = 229\text{MeV}/c$):

Covariance term		
⟨ ⟩	20.9	-12.71
⟨ ⟩	-0.024	0.03
⟨ ⟩	-11.83	0.03
⟨ ⟩	0.42	-0.033
⟨ ⟩	0.36	0.058
⟨ ⟩	0.008	0.0007
⟨ ⟩	-0.0009	-1.01e-6
⟨ ⟩	0.003	7.48e-7