Quick check of the H3/He3 with part of the systematic correction

Basic Procedure

- $Yield = \sum_i \dfrac{N_e * ECC * (1 - \frac{Y_{e+}}{Y_{e-}})_i}{LT_i * Charge_{total} * \rho_i}$

- N_e : PID +ACC

$$\begin{cases} PID \begin{cases} L.cer.asum_c > 2000 \\ \dfrac{L.prl1.e + L.prl2.e}{L.tr.p} > 750 \end{cases} \\[3em] ACC \begin{cases} \theta_{tg} \in (-0.05, 0.06) \\ \varphi_{tg} \in (-0.03, 0.03) \\ \delta \in (-4\%, +4\%) \end{cases} \\[3em] others \begin{cases} L.tr.n == 1 \quad , T2\ trigger \\ vz \in (-0.1, 0.1) \end{cases} \end{cases}$$

Systematic Correction

- **ECC:** (-10cm ,+10cm) for all Kinematic Setting

KIN	Tritium	Helium
KIN1	0.021853892	0.028307946
KIN2	0.020286097	0.026412663
KIN3	0.016302875	0.021025946
KIN5	0.014454685	0.017594063
KIN7	0.01176781	0.013816999
KIN9	0.009388988	0.011232989
KIN11	0.006939431	0.008003037
KIN13	0.0055396	0.006503249
KIN15	0.004362285	0.005162994

- **Positron**

$$\frac{Y_{e+}}{Y_{e-}} = Ae^{-Bx}$$

Target	A	B
Tritium	0.0778	8.026
Helium	0.1009	8.913

- **Density**

$$\rho = \rho_0(p0 - p1 * I_{ave} - p2 * I_{ave}^2)$$

Target	p0	p1	p2
Tritium	0.9999	-0.007399	3.16E-05
Helium	1	-0.004759	8.69E-05