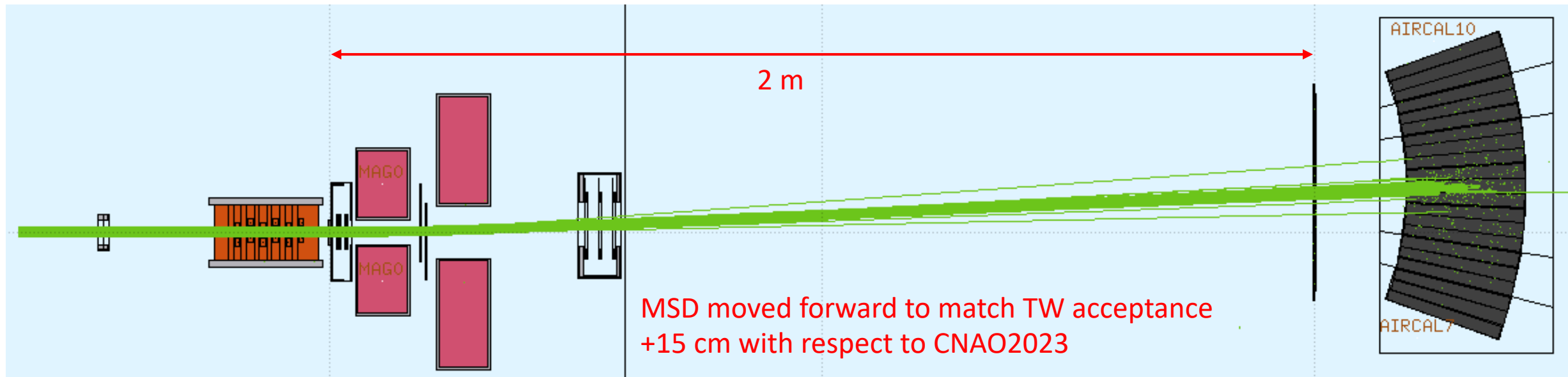


GSI2025 Simulation

S.M. & G.B.

GSI25PS_MC Campaign

^{16}O @ 500 MeV/u



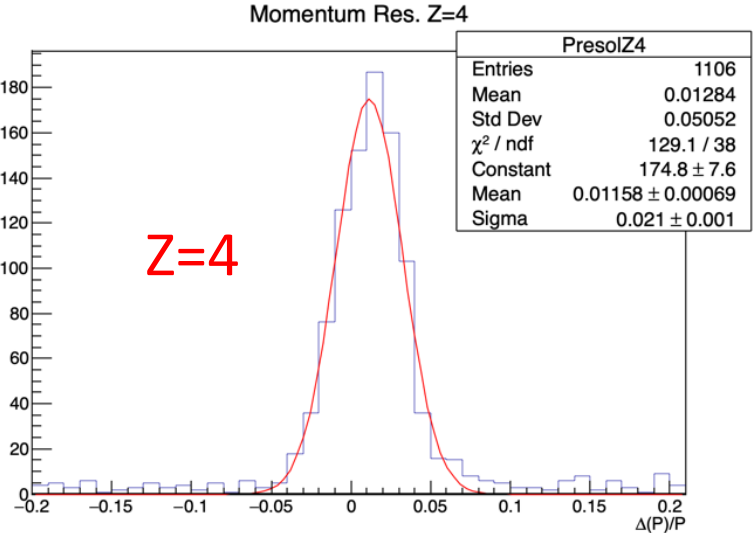
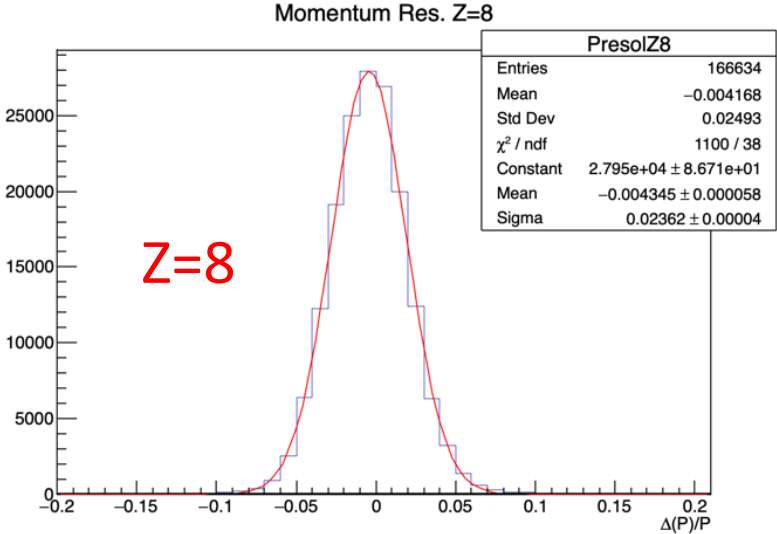
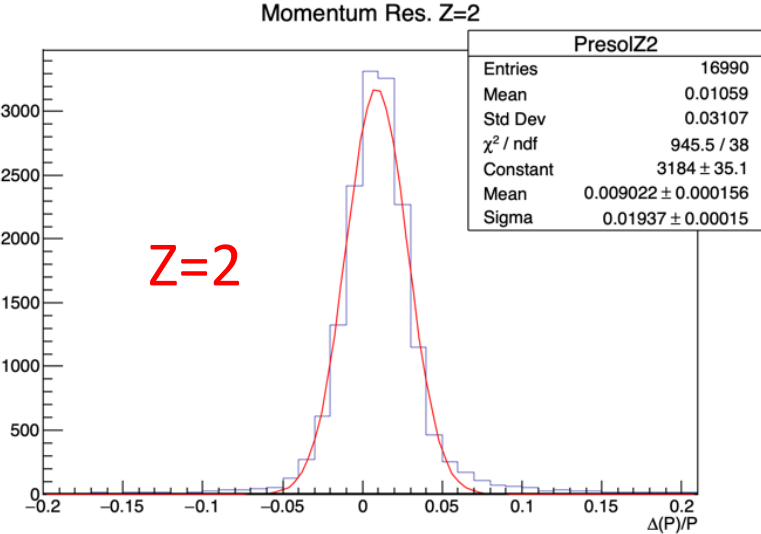
10^6 events - Shoe Genfit reconstruction

Warning: Z-id calibration not yet ready, we rely upon MC-truth Z

Momentum Resolution

`glbtrack->GetTgtMom()` to obtain P from reconstructed track evaluated at production in target

$$\Delta P/P = (P_{rec} - P_{true})/P_{true}$$

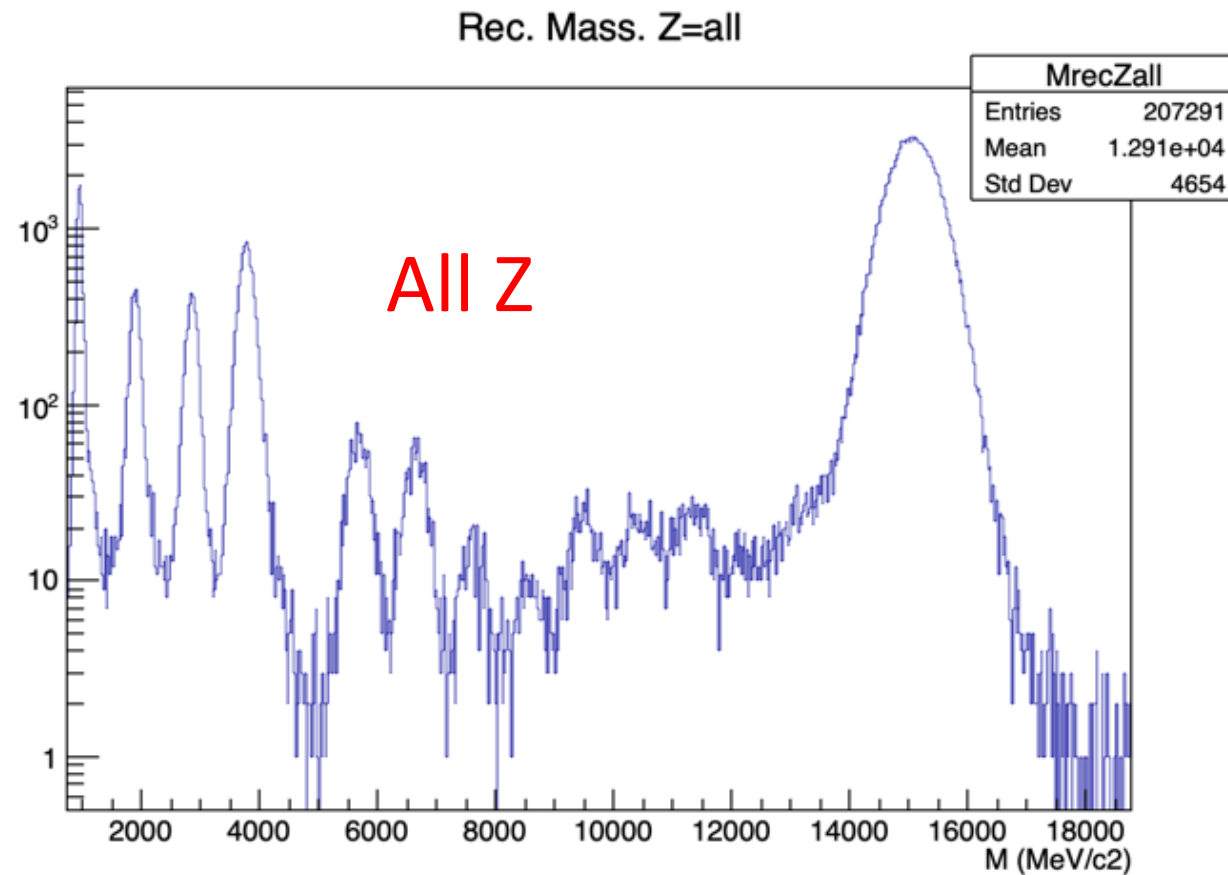


$\sigma_p/P < 3\%$

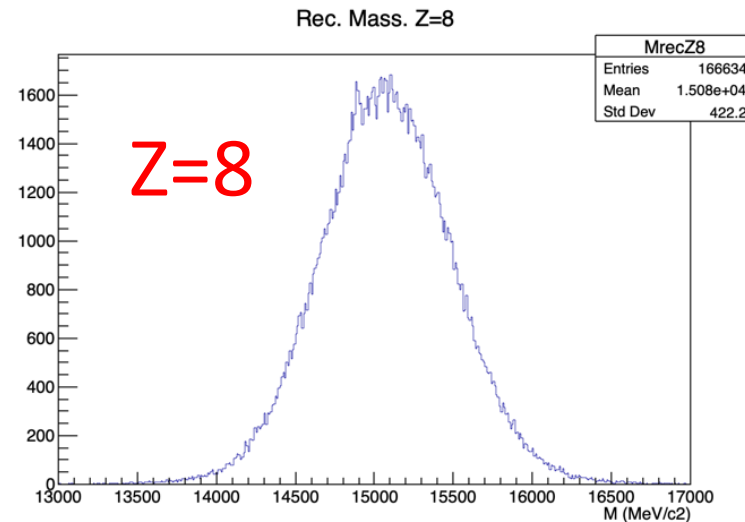
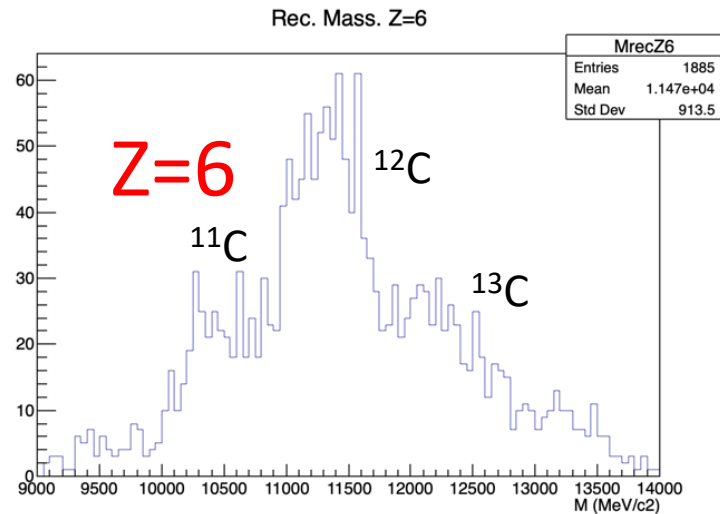
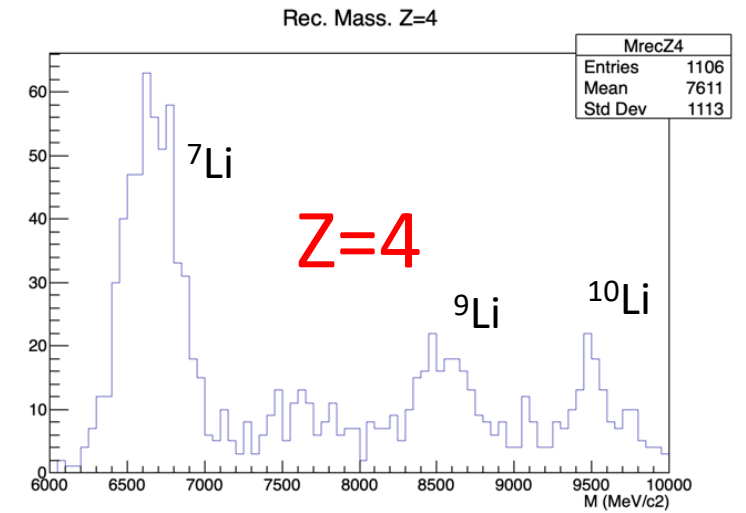
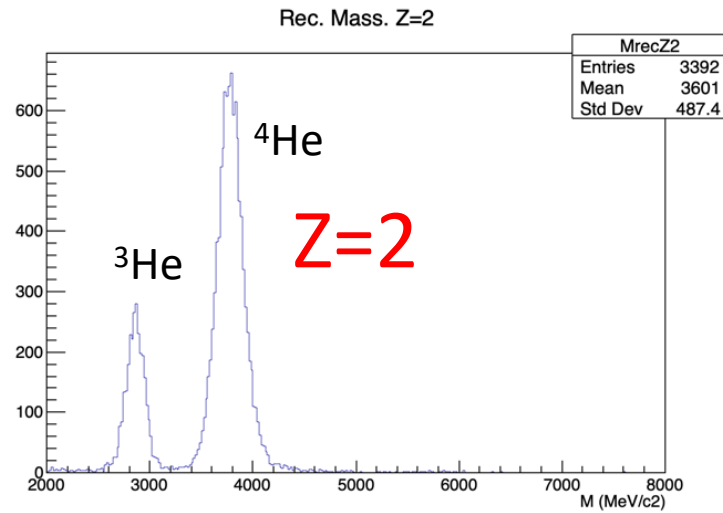
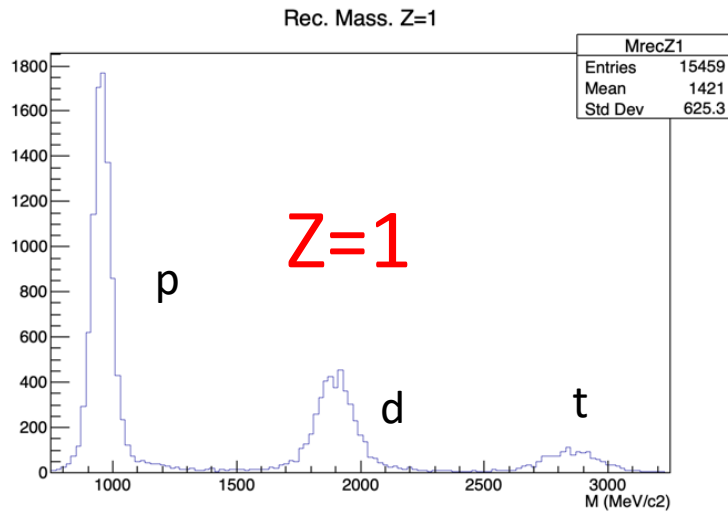
Isotopic Mass-Id using P and ToF

`glbtrack->GetTwTof()` to obtain ToF resolution in MC from the parametrization of exp. data

$$M = P/(c\beta\gamma)$$

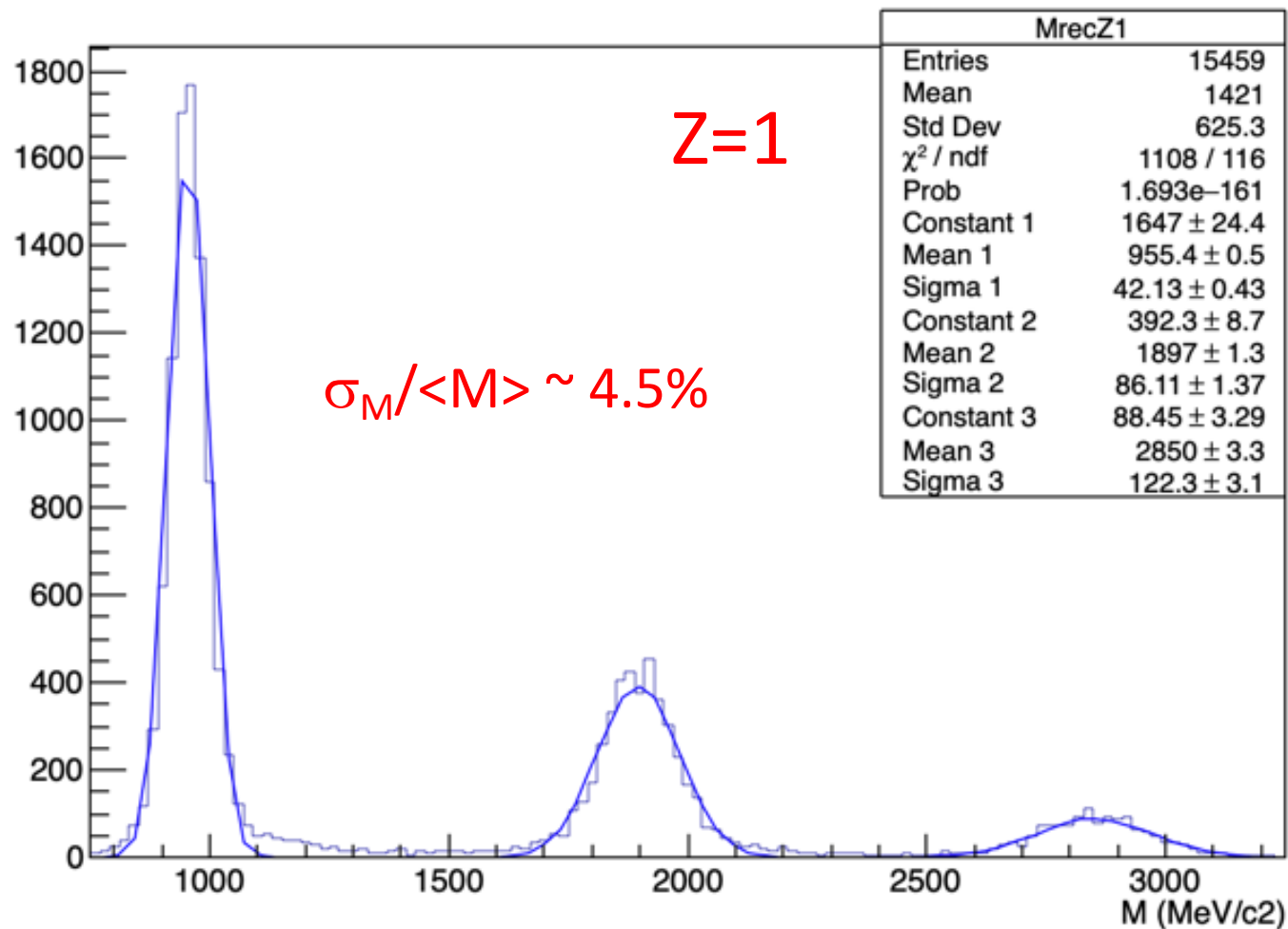


Mass reconstruction using P and ToF



Warning: at present not yet Z-id. $Z = Z(\text{MC-truth})$

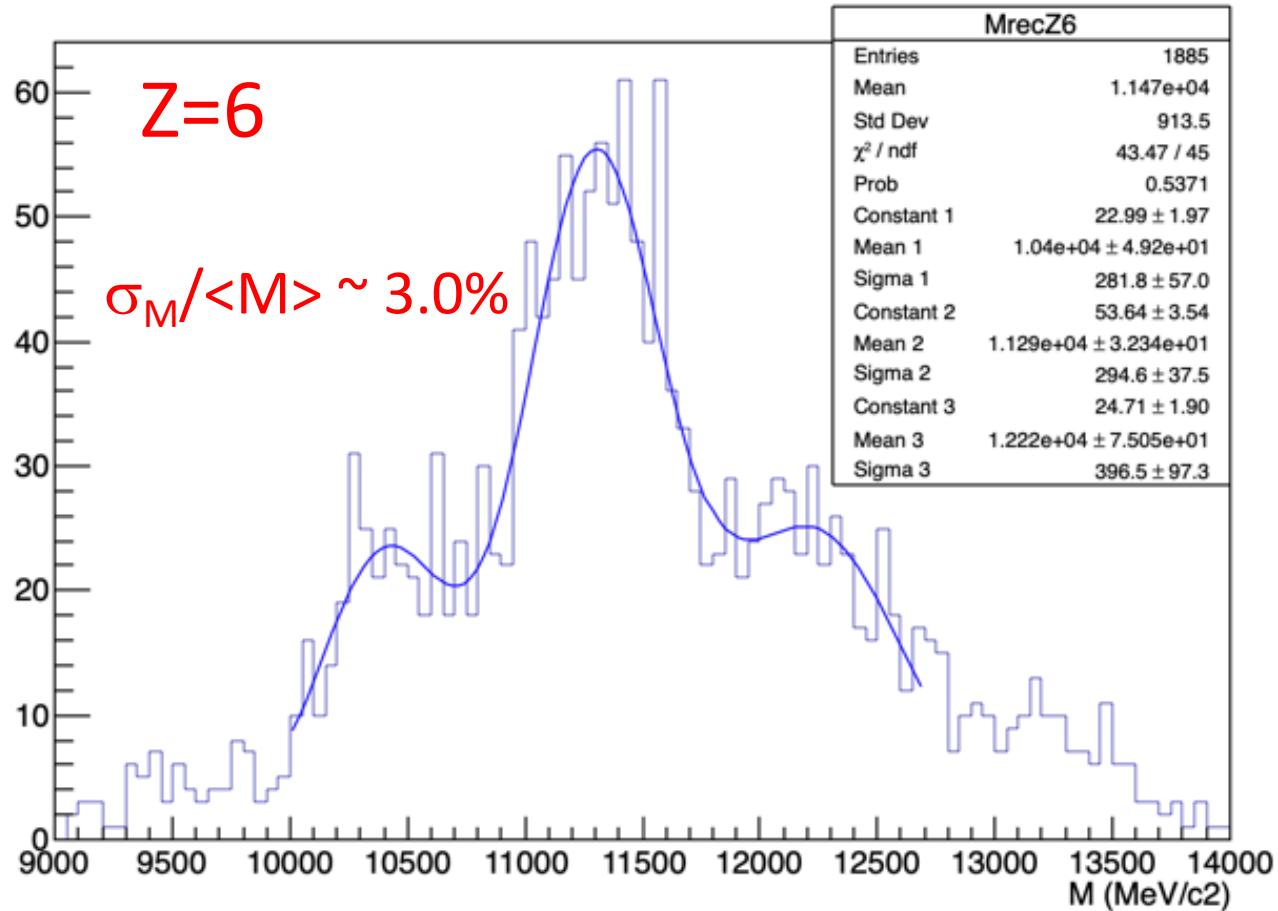
Rec. Mass. Z=1



<M> in excess of ~1.5 - 2%
with respect to true value

Warning: at present not yet Z-id. Z = Z(MC-truth)

Rec. Mass. Z=6



$\langle M \rangle$ in excess of ~1% with respect to true value

Warning: at present not yet Z-id. Z = Z(MC-truth)