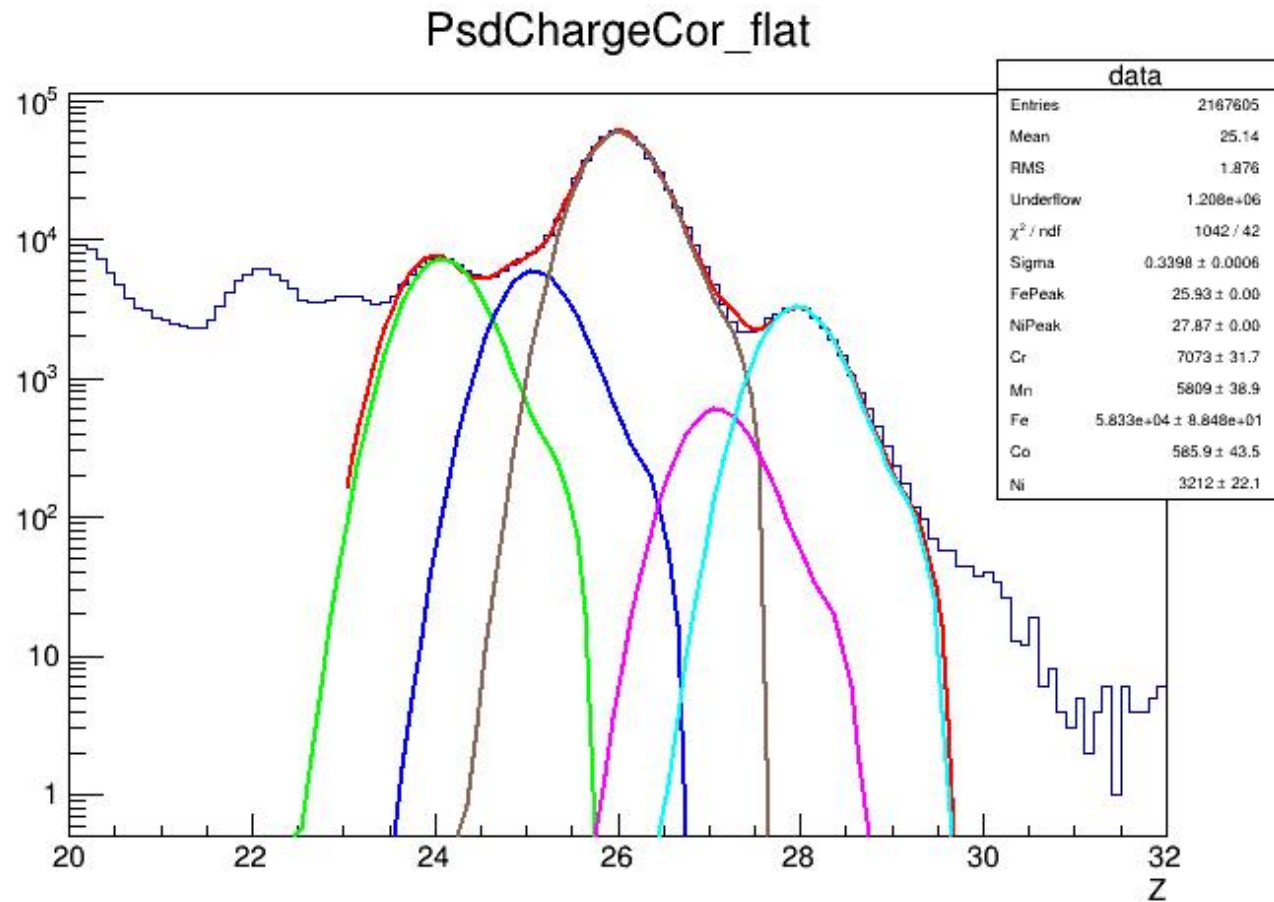


Heavy Nuclei beyond Fe in Cosmic Ray

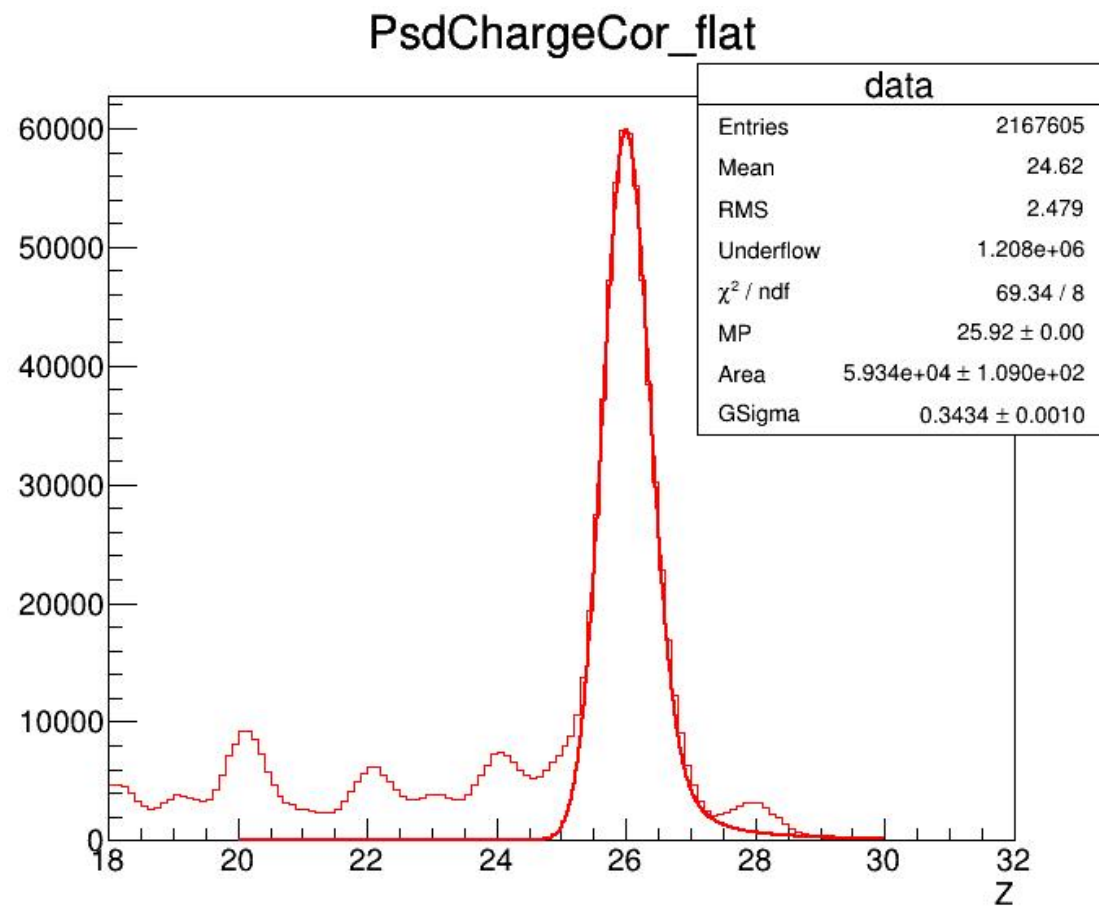
孙浩然

2024/04/01

Smear

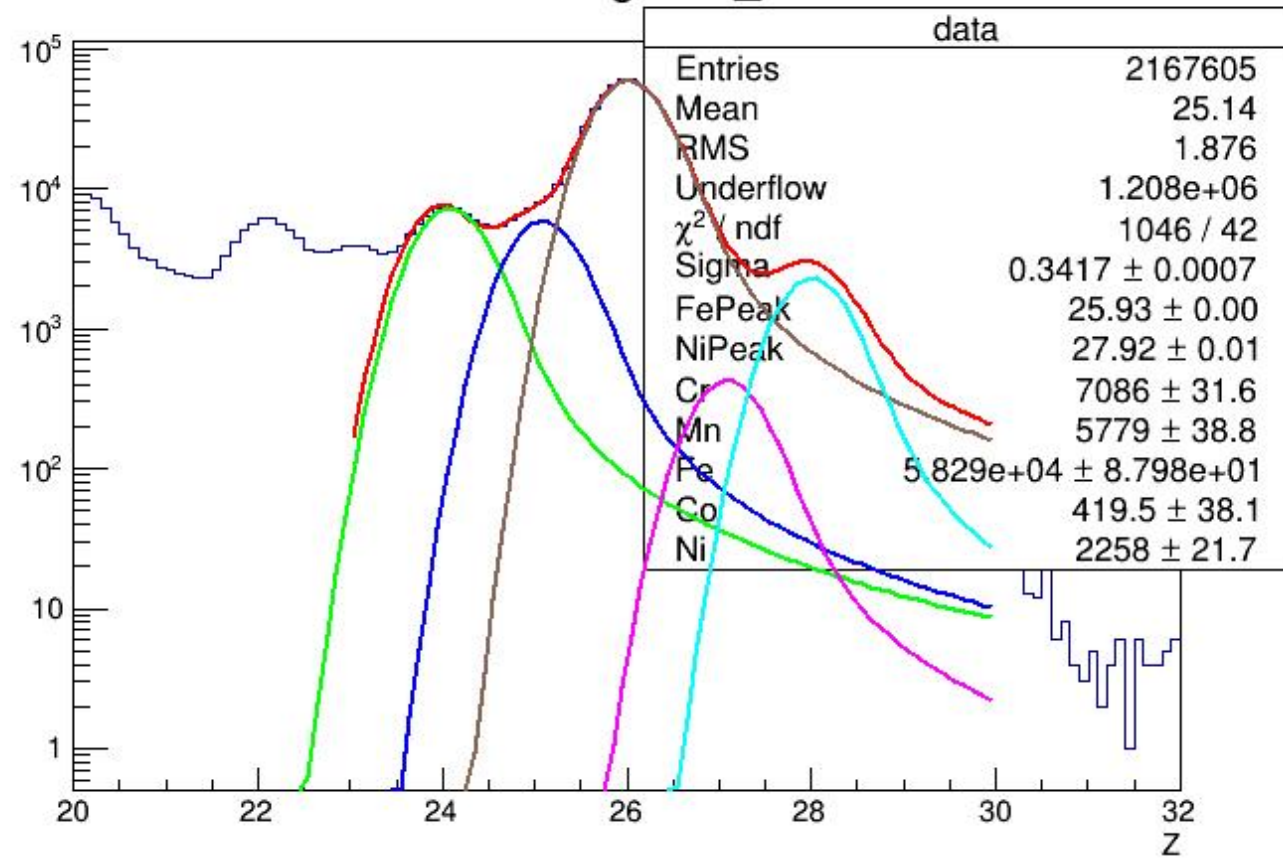


sigma: 0.3398
FWHM:0.8713



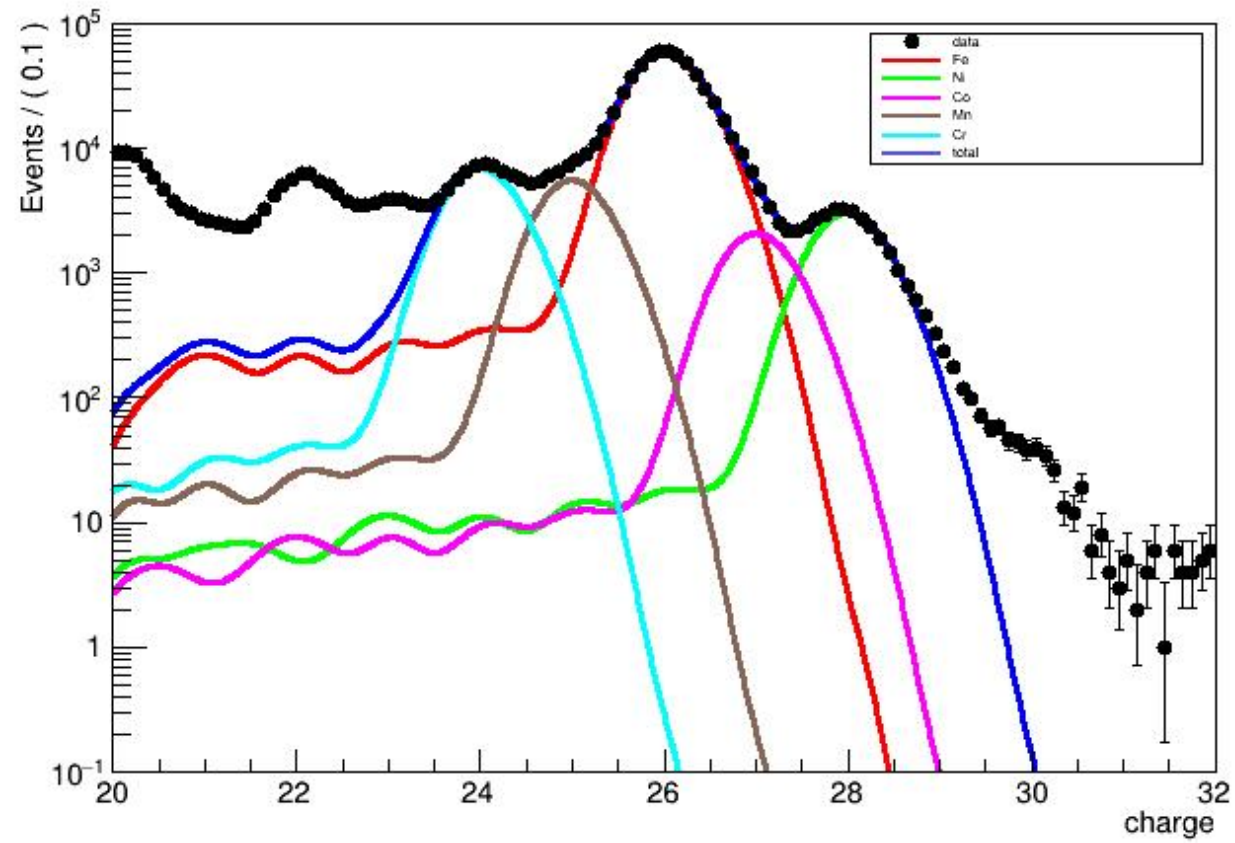
sigma: 0.3434
FWHM:0.8798

PsdChargeCor_flat



sigma: 0.3417
FWHM:0.8758

A RooPlot of "charge"



sigma: 0.3344

FWHM: 0.8587

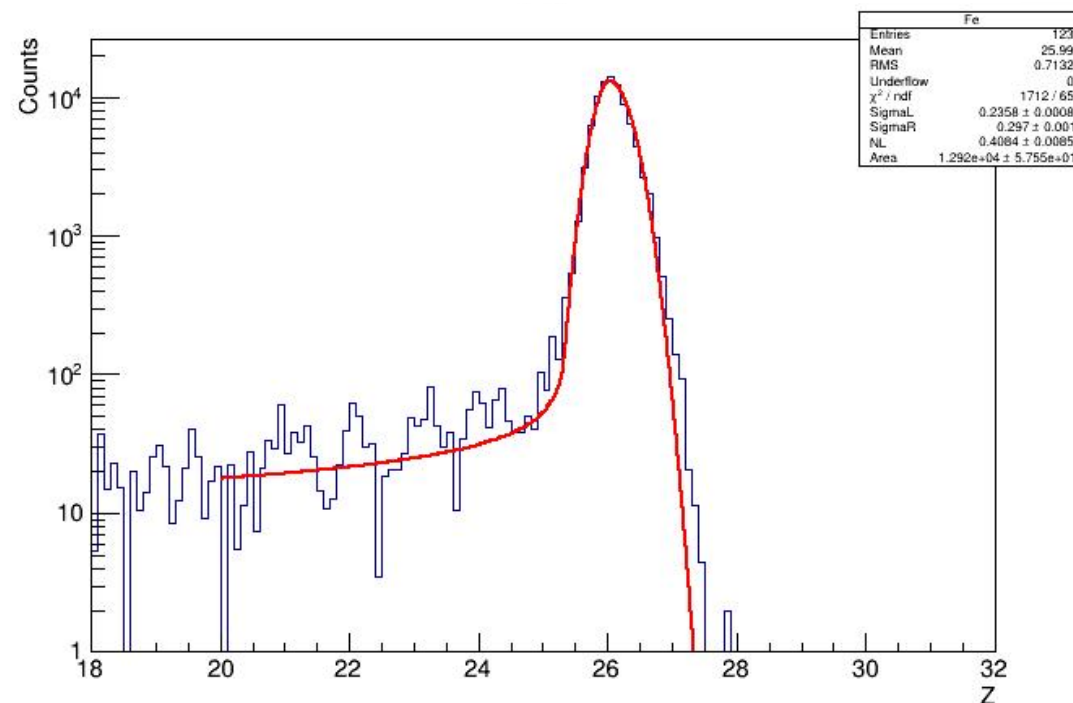
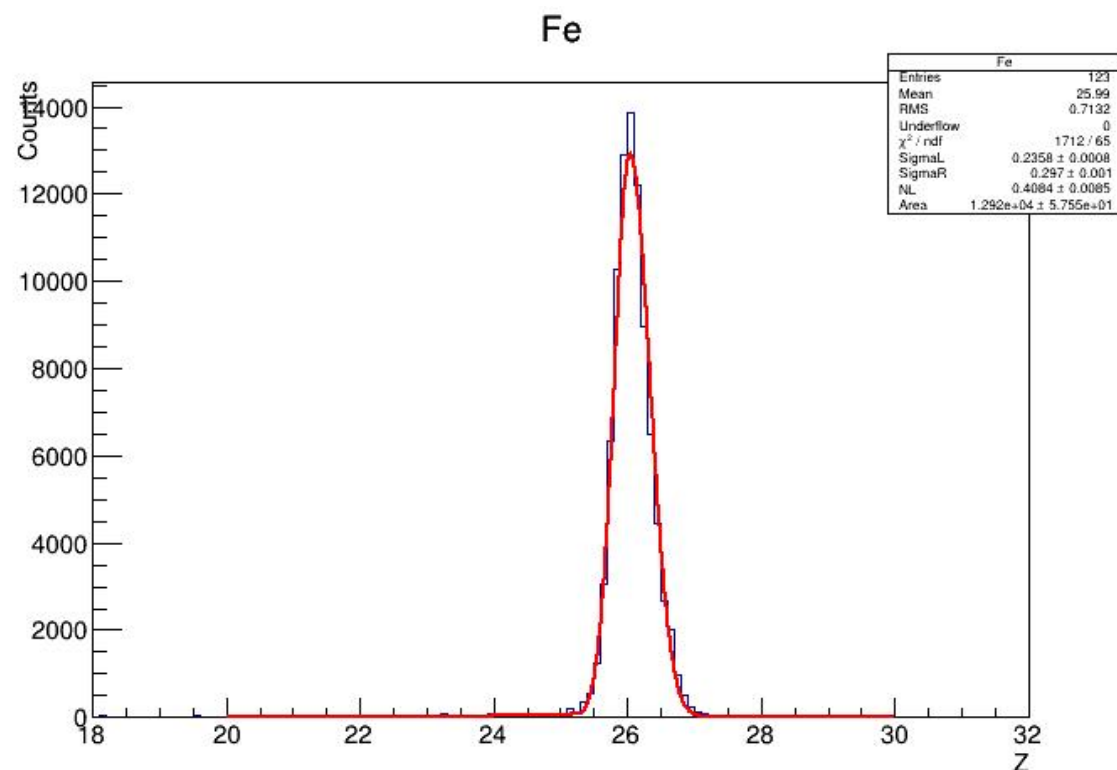
CrystalBall

$$Z = \frac{\text{FWHM}}{\text{FWHMMC}} (Q - \text{Peak}_{\text{MC}}) + \text{Peak}_{\text{MC}}$$

$$f(m; m_0, \sigma, \alpha_L, n_L, \alpha_R, n_R) = \begin{cases} A_L \cdot (B_L - \frac{m-m_0}{\sigma_L})^{-n_L}, & \text{for } \frac{m-m_0}{\sigma_L} < -\alpha_L \\ \exp\left(-\frac{1}{2} \cdot \left[\frac{m-m_0}{\sigma_L}\right]^2\right), & \text{for } \frac{m-m_0}{\sigma_L} \leq 0 \\ \exp\left(-\frac{1}{2} \cdot \left[\frac{m-m_0}{\sigma_R}\right]^2\right), & \text{for } \frac{m-m_0}{\sigma_R} \leq \alpha_R \\ A_R \cdot (B_R + \frac{m-m_0}{\sigma_R})^{-n_R}, & \text{otherwise,} \end{cases}$$

$$A_i = \left(\frac{n_i}{|\alpha_i|}\right)^{n_i} \cdot \exp\left(-\frac{|\alpha_i|^2}{2}\right)$$

$$B_i = \frac{n_i}{|\alpha_i|} - |\alpha_i|$$



FWHM 0.8583

