Energy Correction

Maxime Levillain

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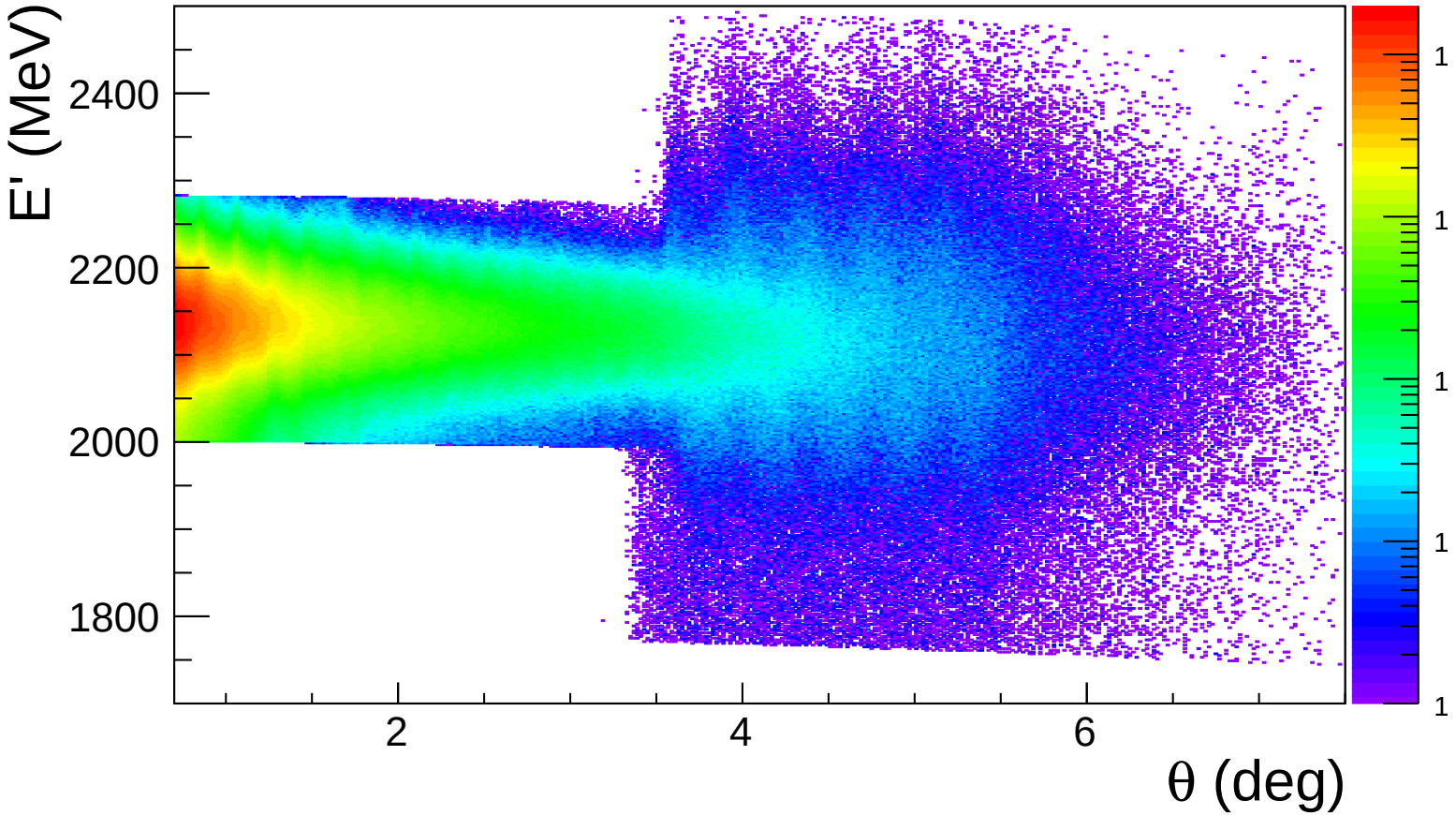
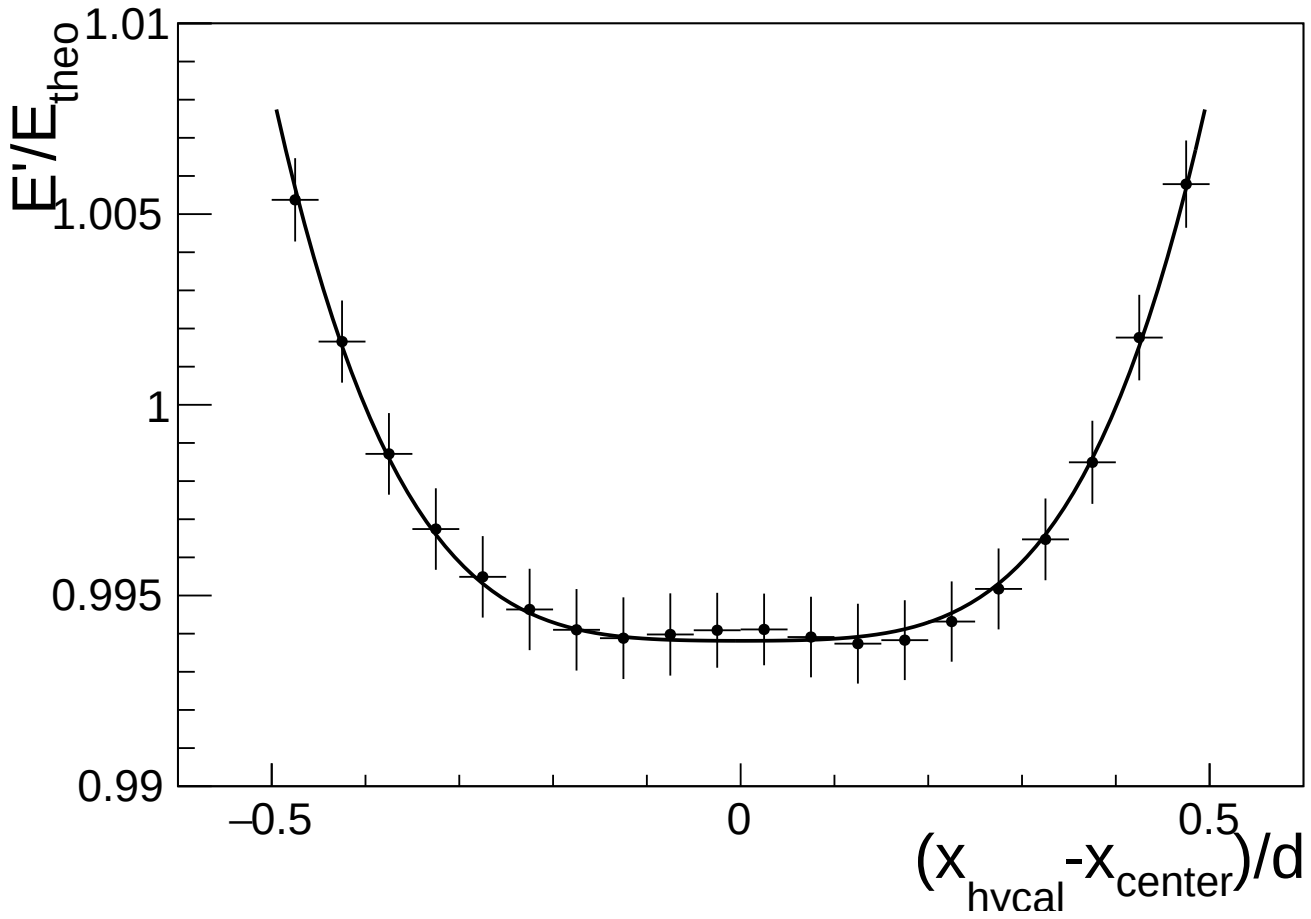
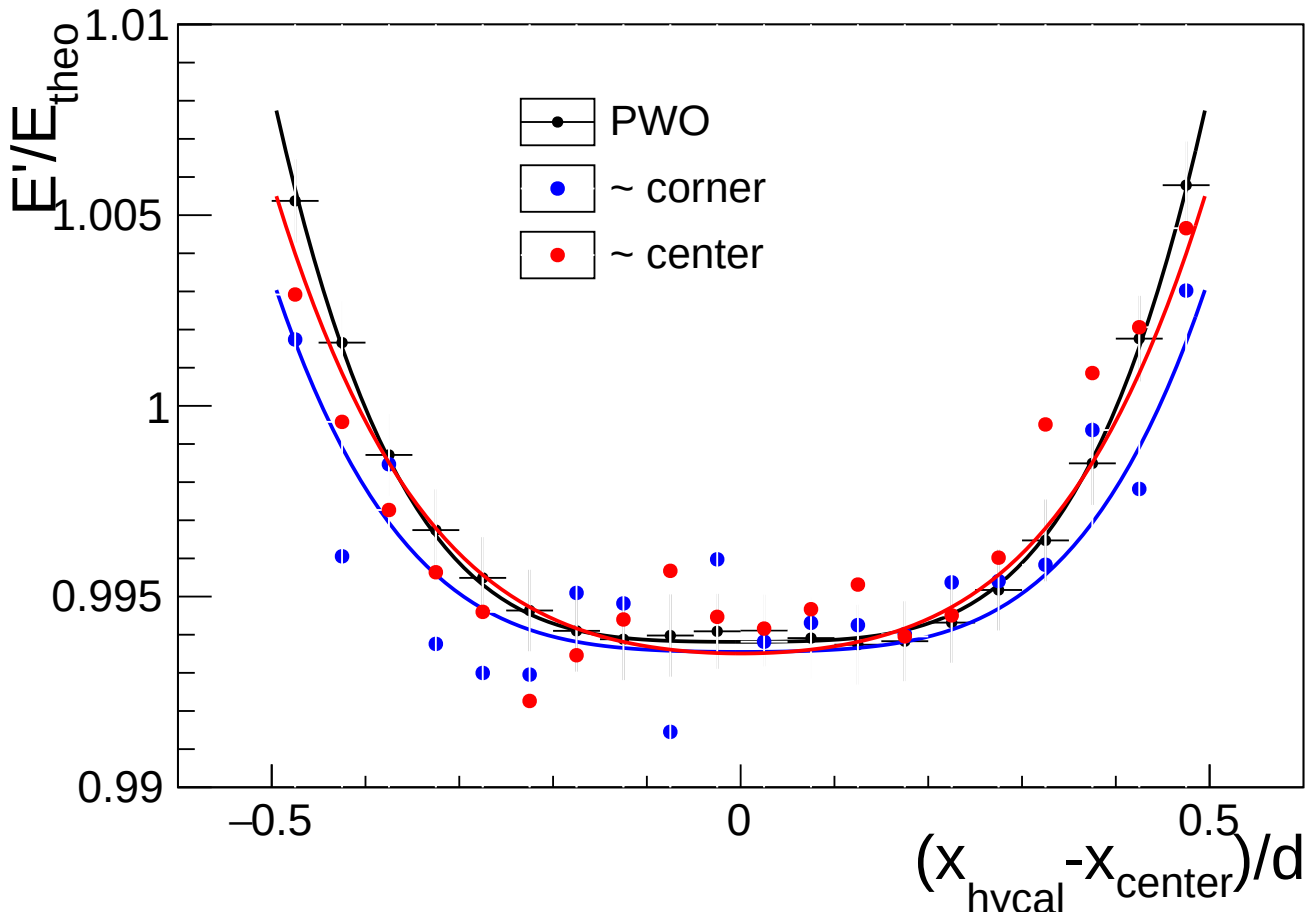
Energy wobbling



Energy Loss Profile for PWO ep

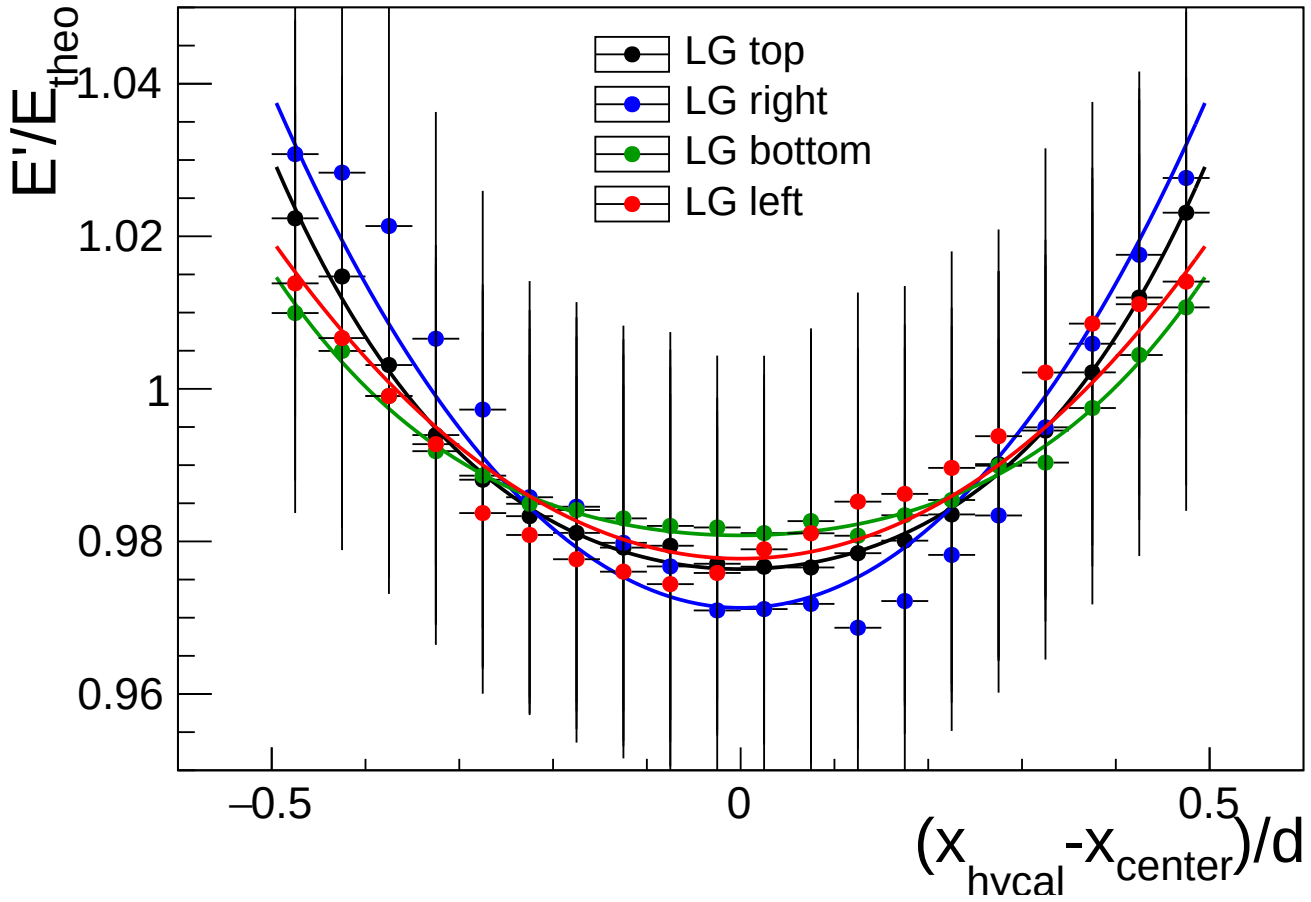


Energy Loss Profile for PWO ep



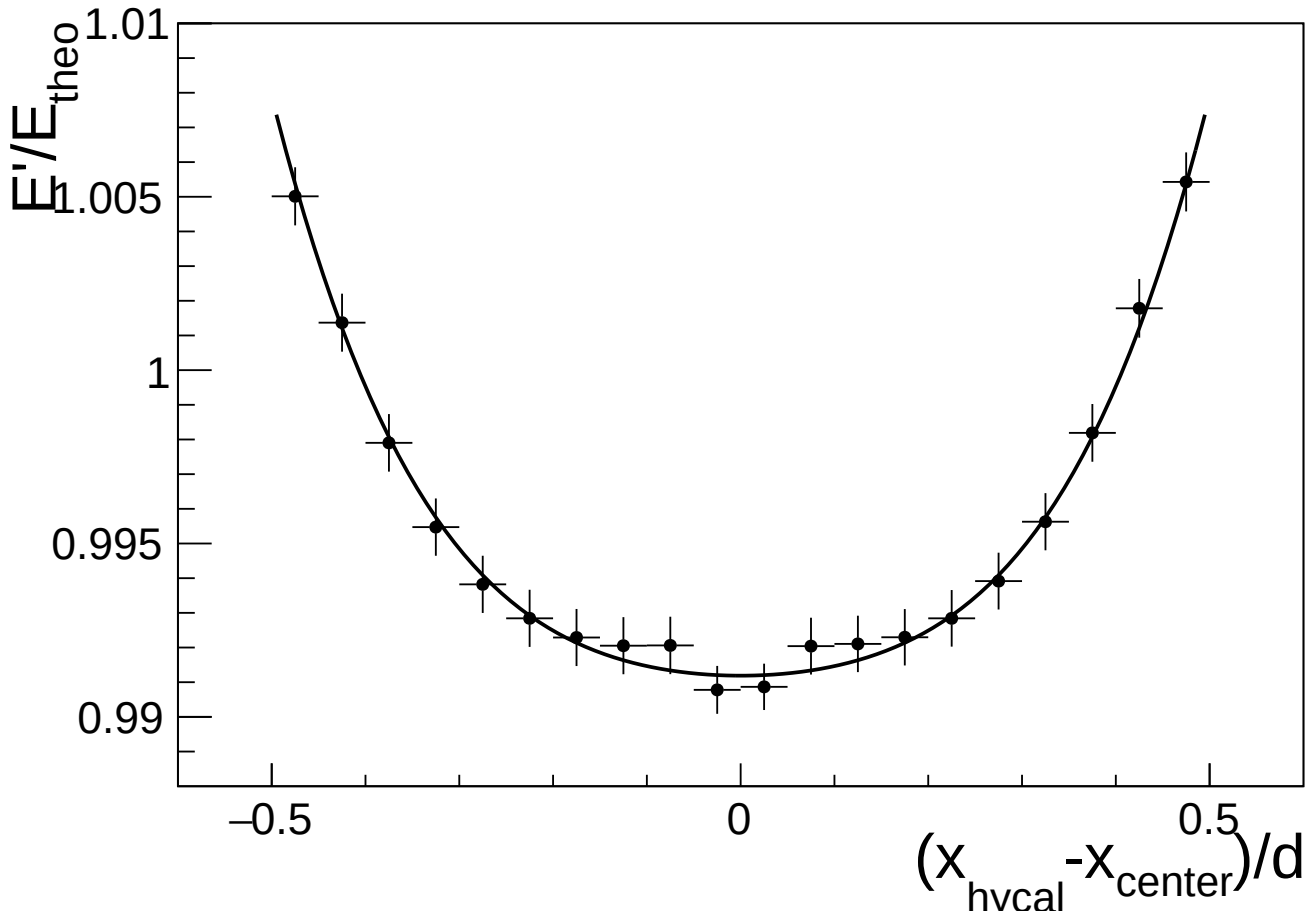
- Some small position dependency

Energy Loss Profile for LG ep



- Disparate amplitudes → needs different corrections

Energy Loss Profile for PWO ee

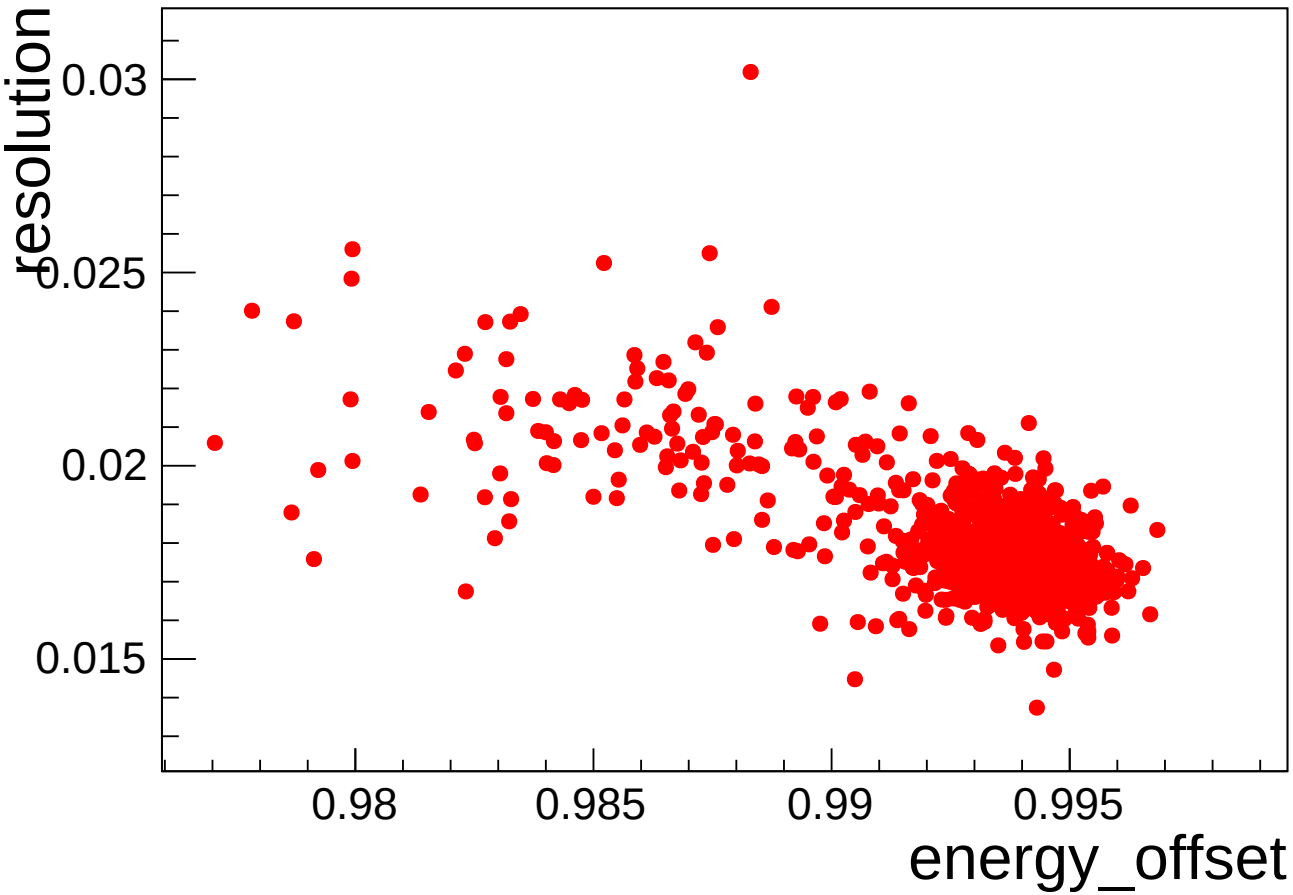


Fit Parameterisation

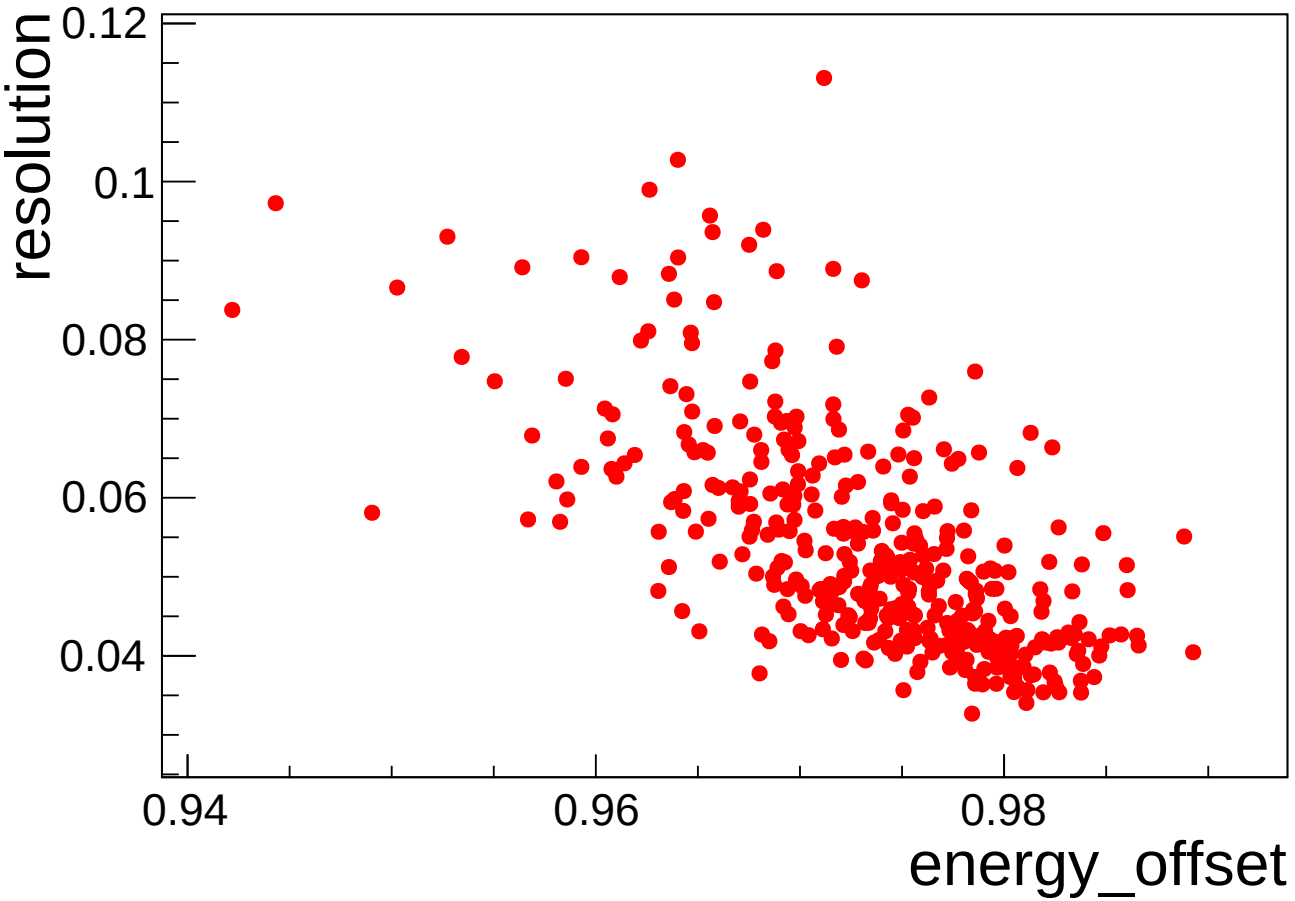
$$
\begin{aligned}
t_x &= (x_{rec} - x_{center})/(cellsize) \\
t_y &= (y_{rec} - y_{center})/(cellsize) \\
E_{corr} &= \frac{E_0}{p_0 \cdot (1 + p_{1x} \cdot t_x^2 + p_{2x} \cdot t_x^4) \cdot (1 + p_{1y} \cdot t_y^2 + p_{2y} \cdot t_y^4)}
\end{aligned}
$$

- Different from Ilya's ($\sim (1 + p_1 \cdot exp(p_2/x^2))$)
- Better suited for LG with a parabolic profile

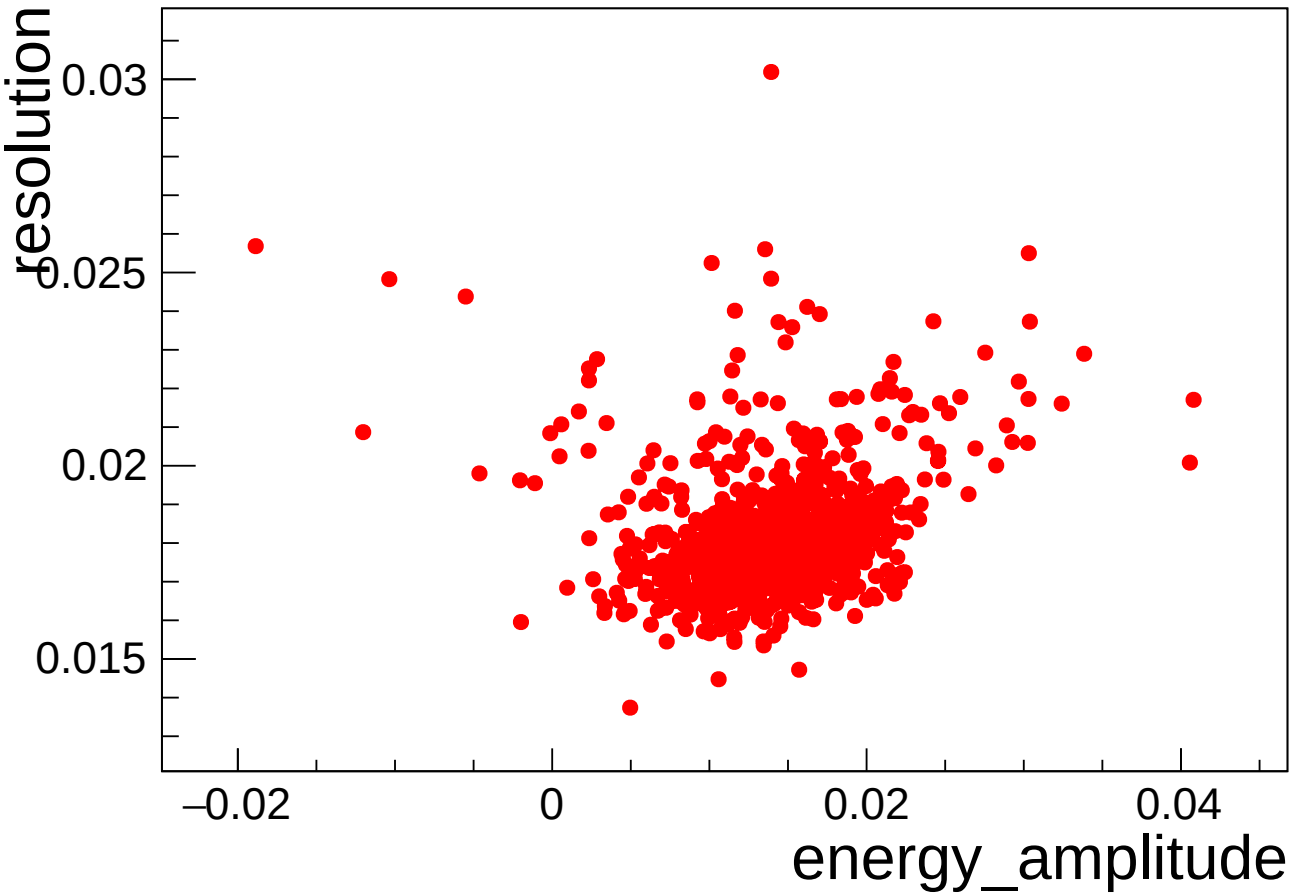
Dependency with Resolution (p_0) pwo



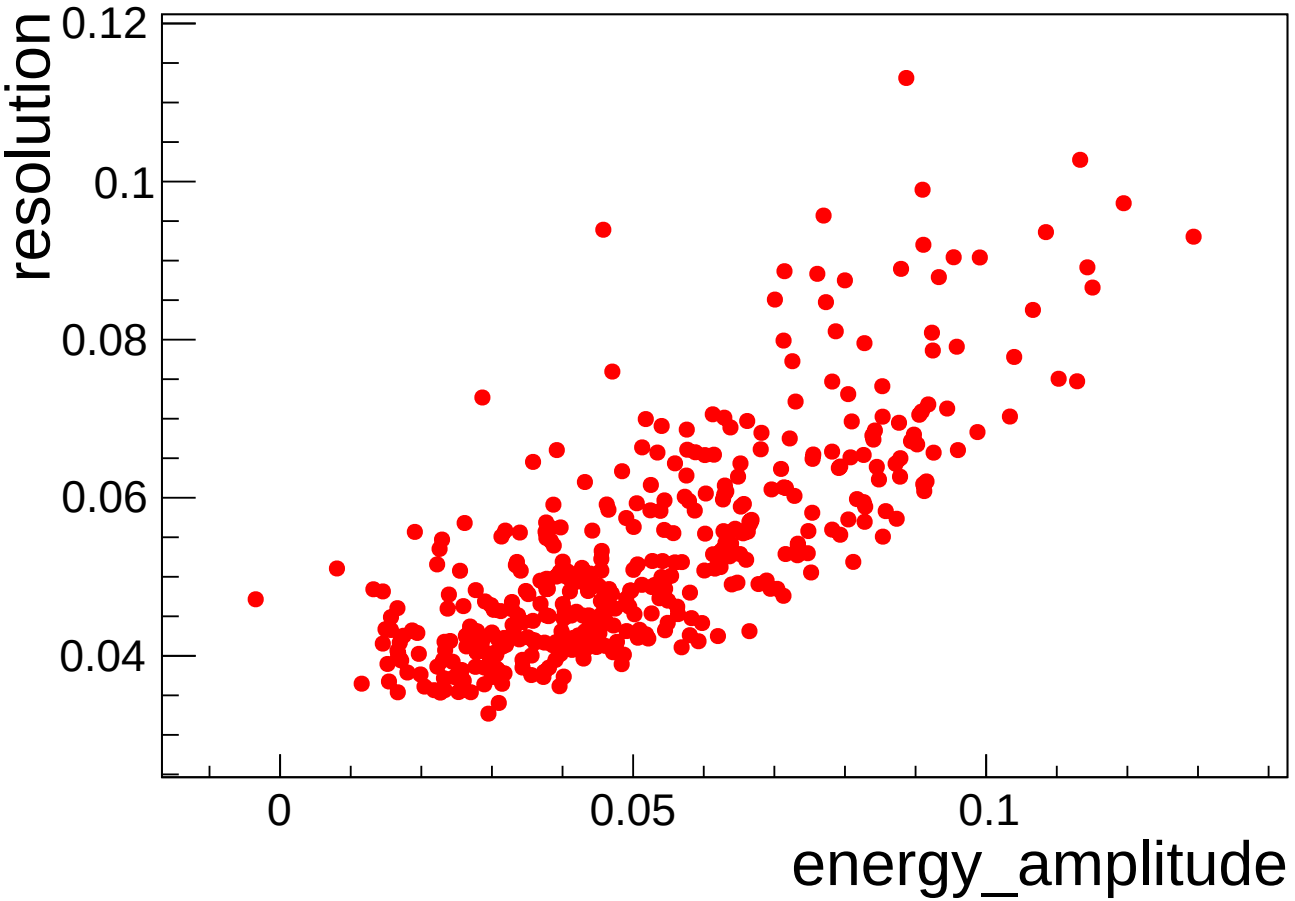
Dependency with Resolution (p_0) lg



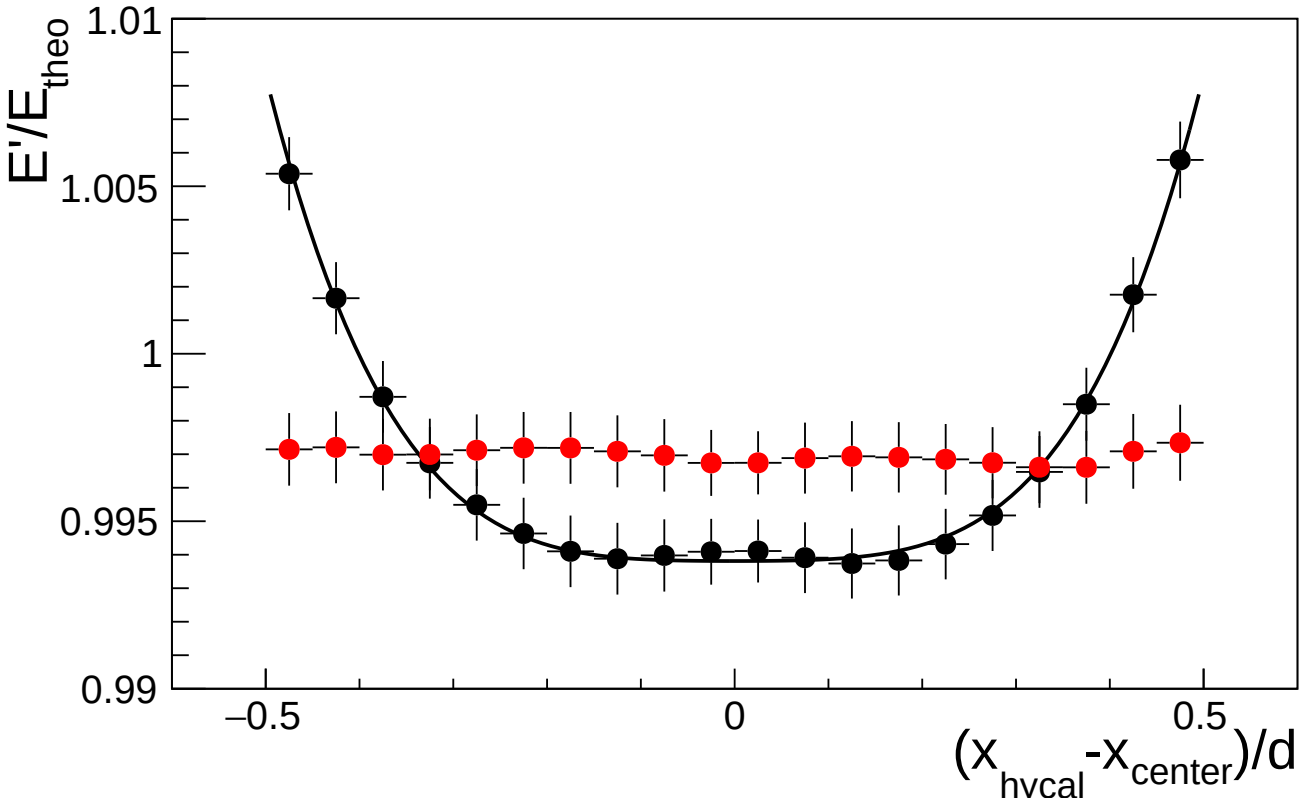
Dependency with Resolution $(p_1/4 + p_2/16)$ pw



Dependency with Resolution $(p_1/4 + p_2/16)$ Is

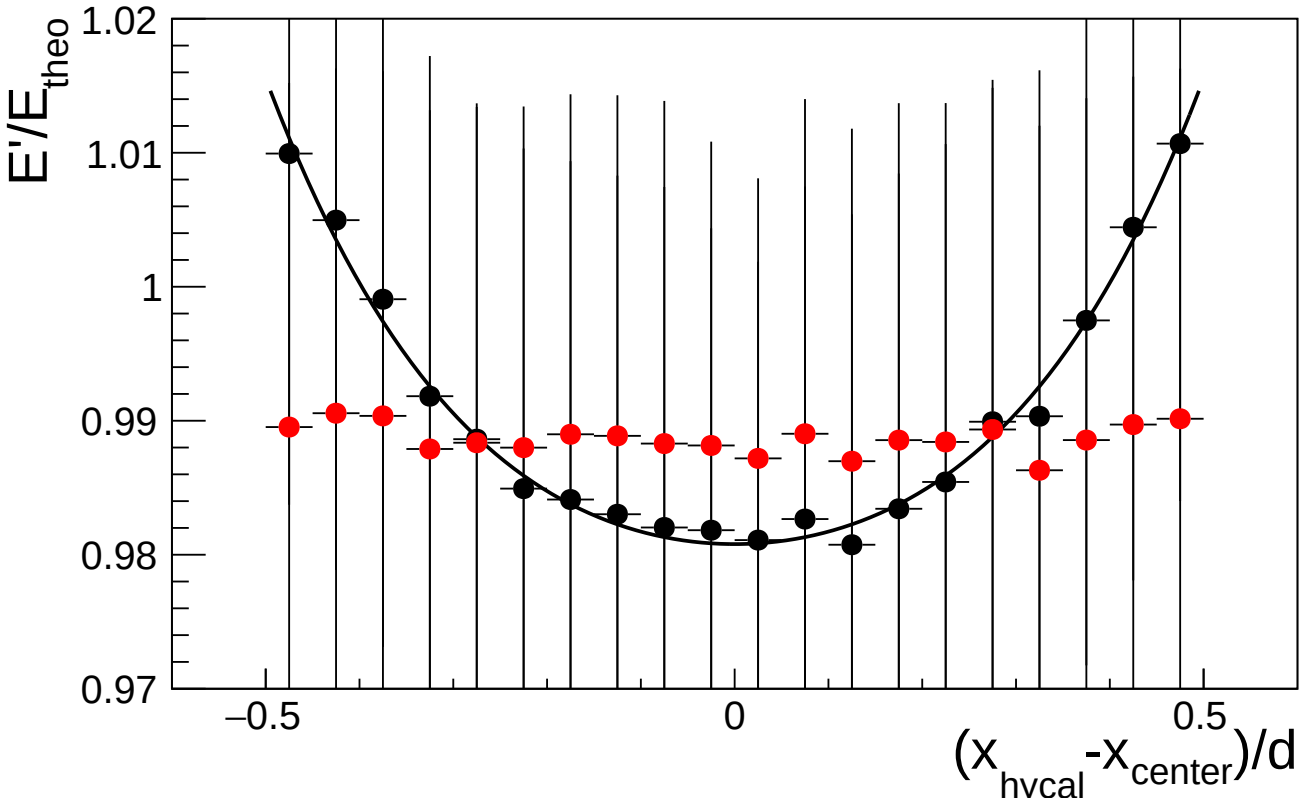


Results of Correction for PWO ep



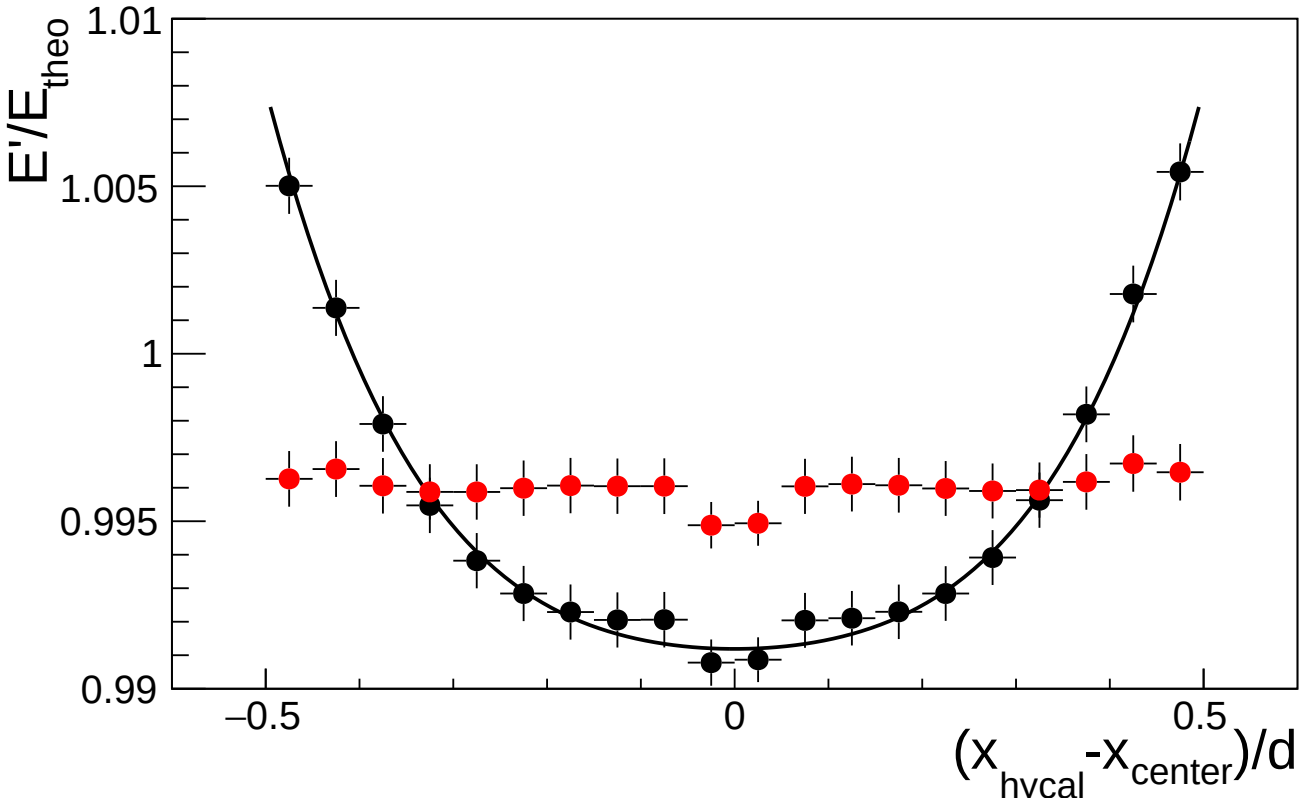
- 0.3% offset from calibration

Results of Correction for LG ep



- 1% offset from calibration

Results of Correction for PWO ee



- 0.4% offset from calibration

Results of Correction for phase space