

Baryonspektroskopie – $\text{pp} \rightarrow \text{p}\pi^0\text{p}$

Kinematische Plots

Tobias Weisrock

15. Juli 2013

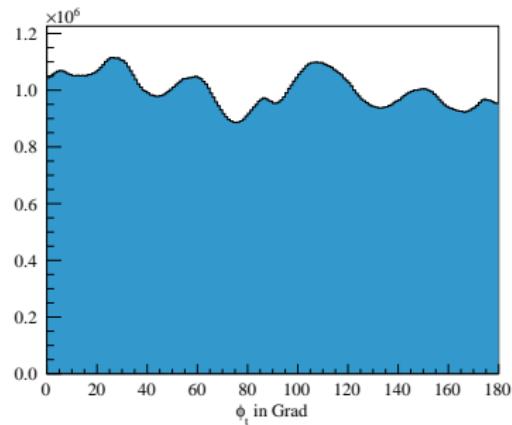
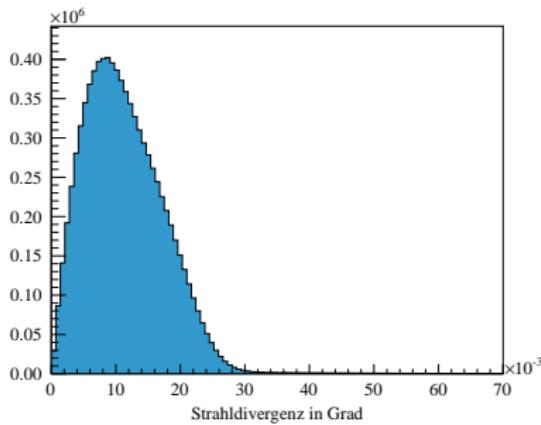


JOHANNES GUTENBERG
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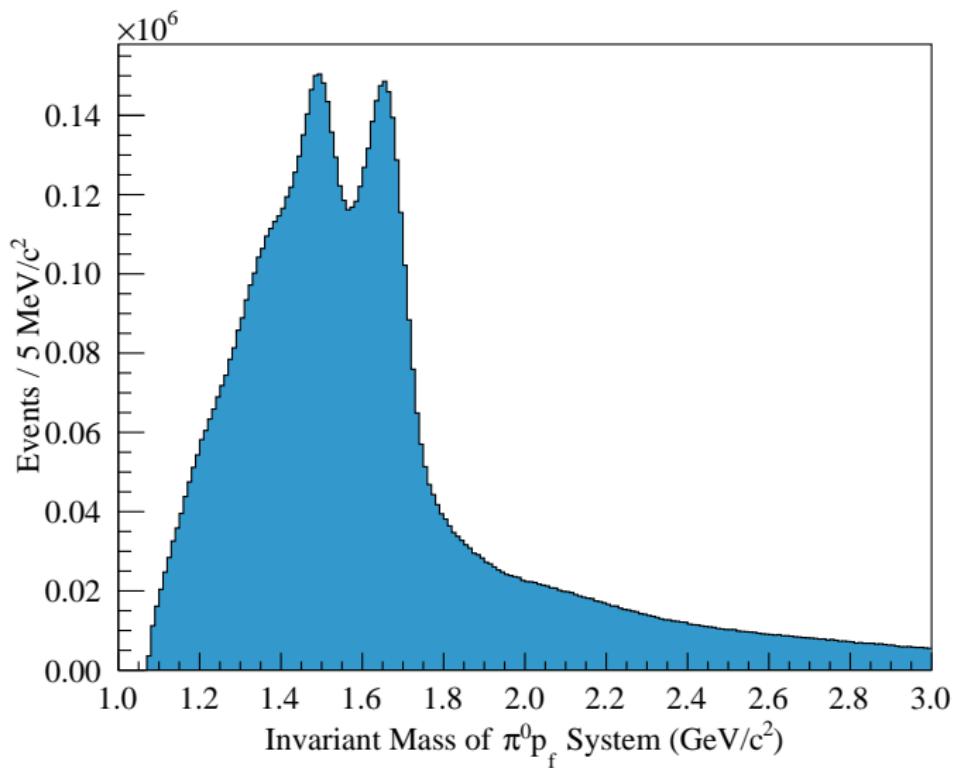
Koordinatensystem

Drei Schritte:

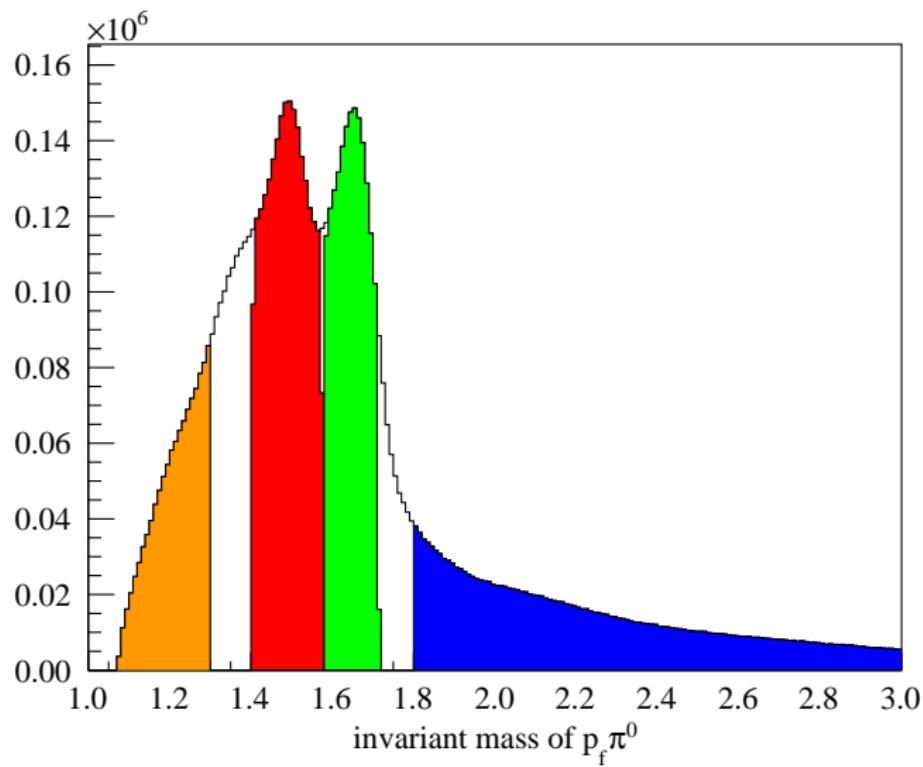
1. z-Achse in Strahlrichtung (Korrektur auf Strahldivergenz)
2. Boost ins $p\pi^0p$ -Ruhesystem
3. x-Achse in Richtung des transversalen Impulsübertrags $\Rightarrow \vec{t}$ in x-z-Ebene
(Drehung um Winkel ϕ_t um die z-Achse)



Massenspektrum



Massenspektrum – Einteilung in Bereiche

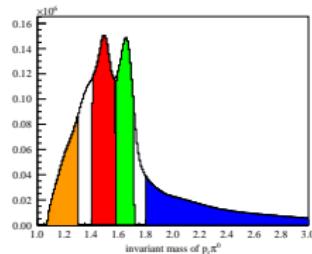
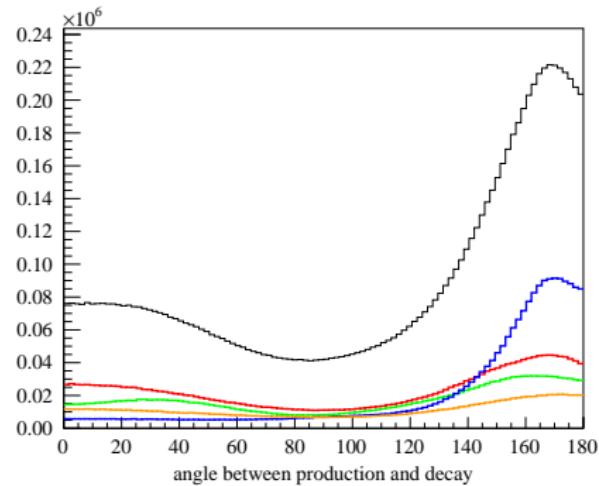
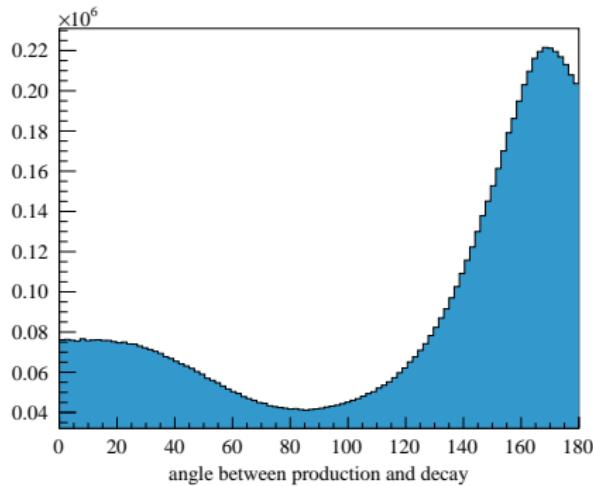


Was kann man anschauen?

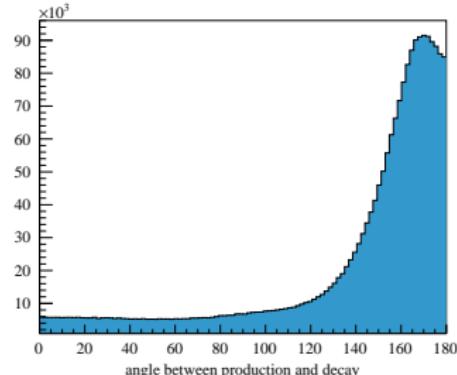
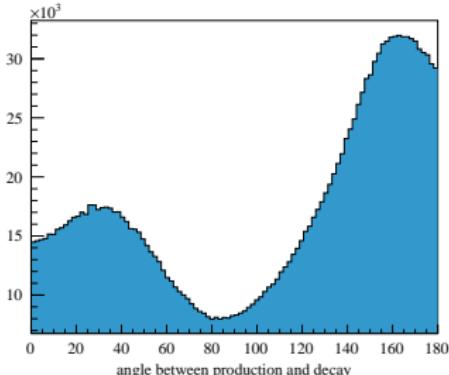
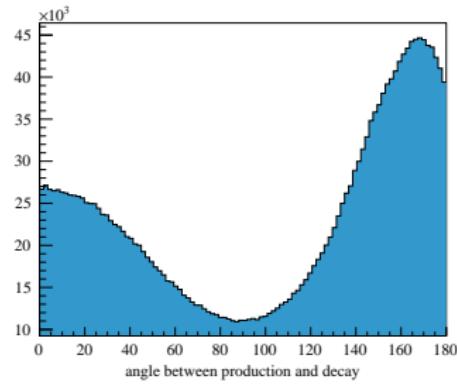
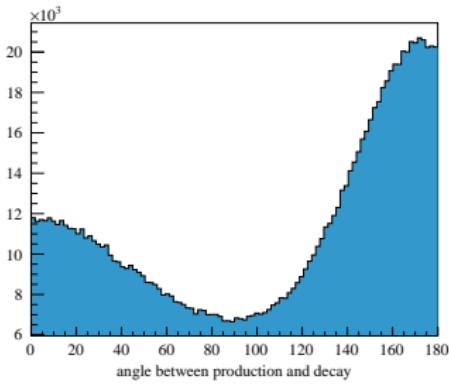
- ▶ Winkel zwischen Produktionsebene (Strahl – $X - t$) und Zerfallsebene ($X - p - \pi^0$)
- ▶ Kinematische Variablen der auslaufenden Teilchen
 - ▶ Rapiditäten
 - ▶ Impulse
 - ▶ Energien
 - ▶ Winkel



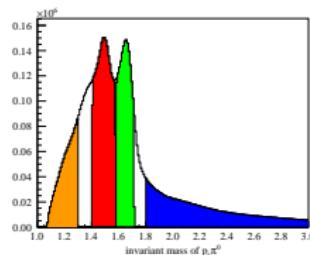
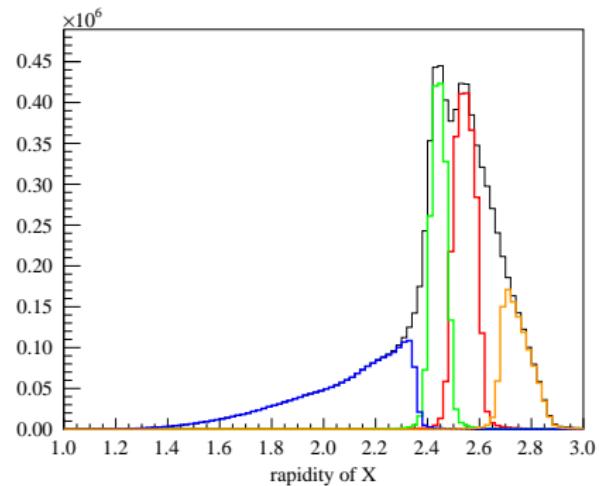
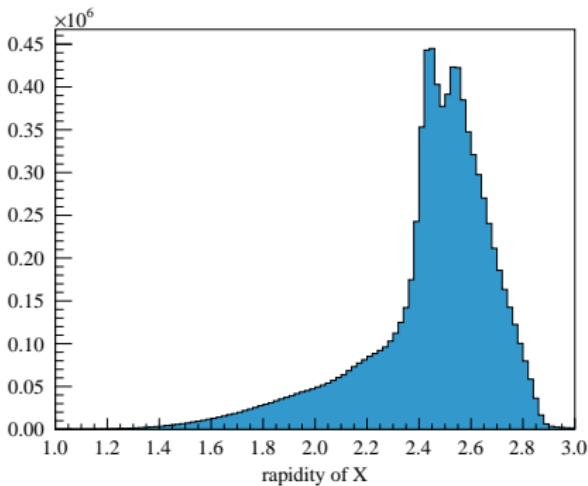
Winkel γ zw. Produktions- und Zerfallsebene



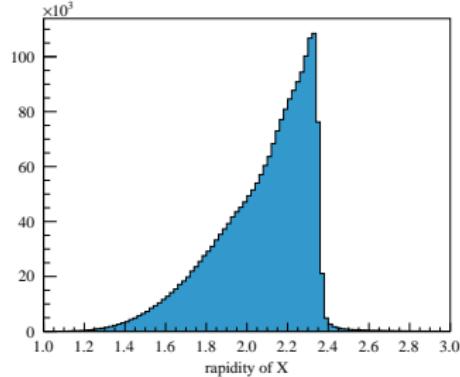
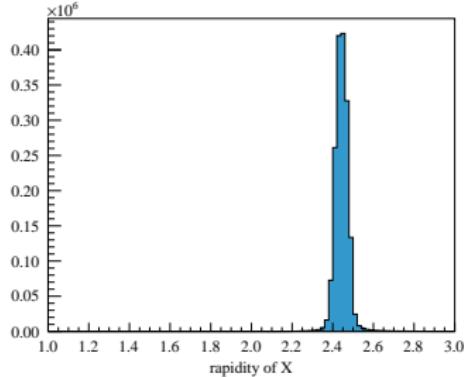
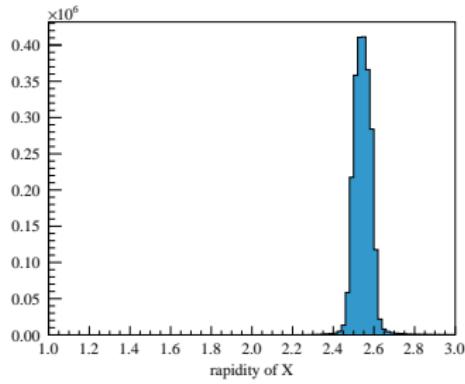
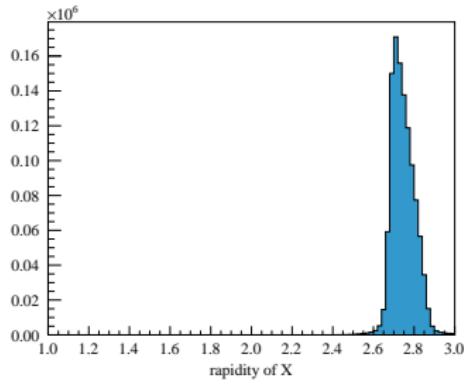
Winkel γ zw. Produktions- und Zerfallsebene



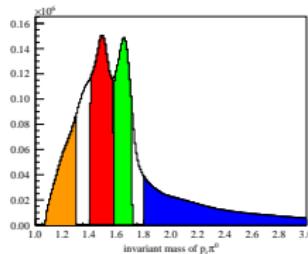
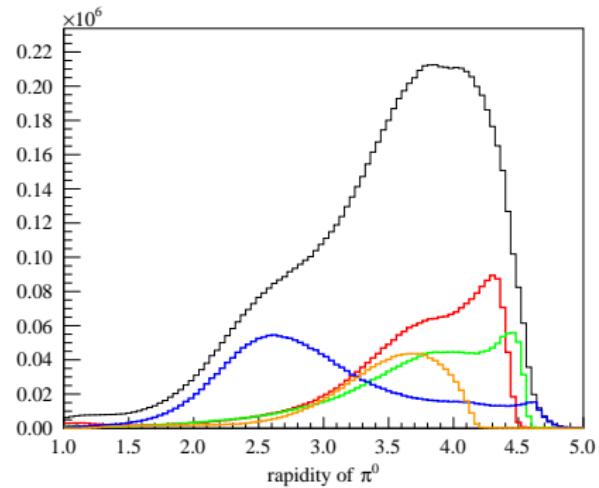
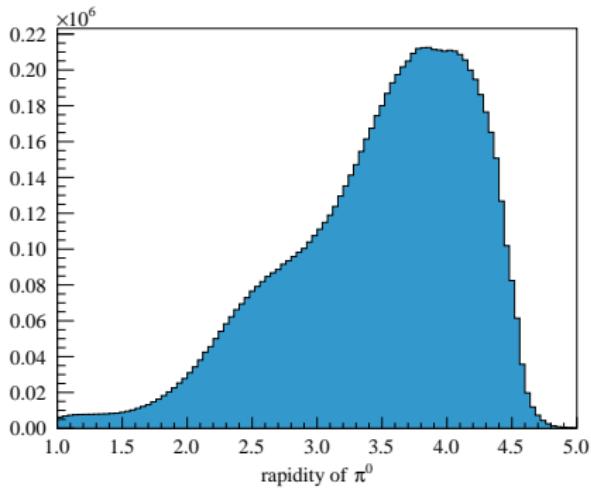
Rapidität der Resonanz(?) X



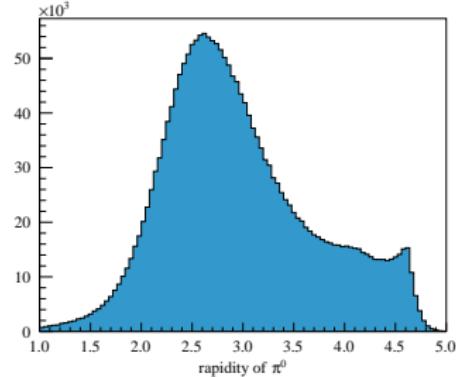
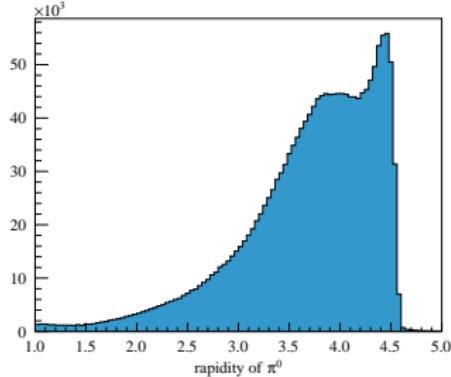
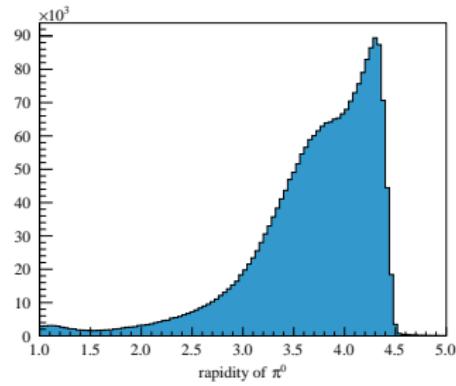
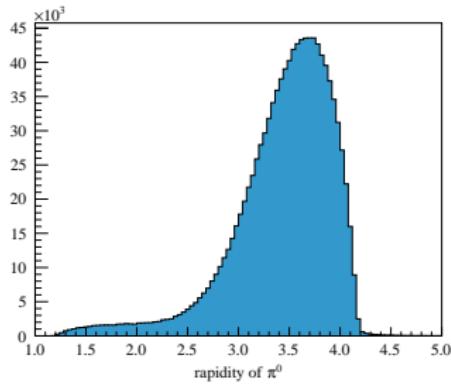
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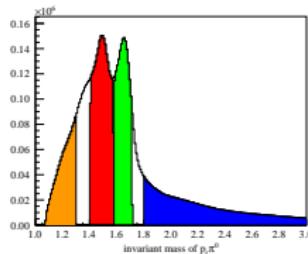
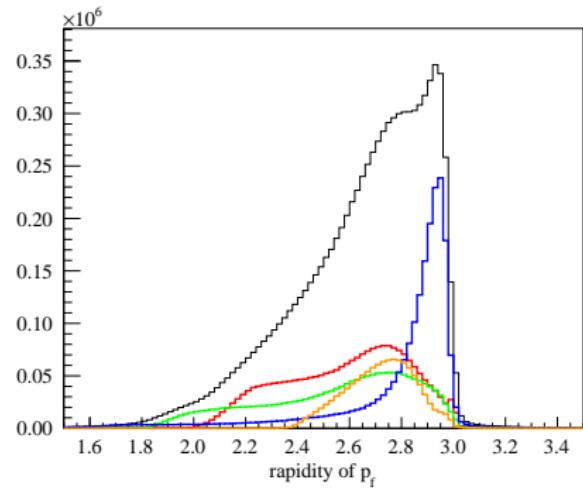
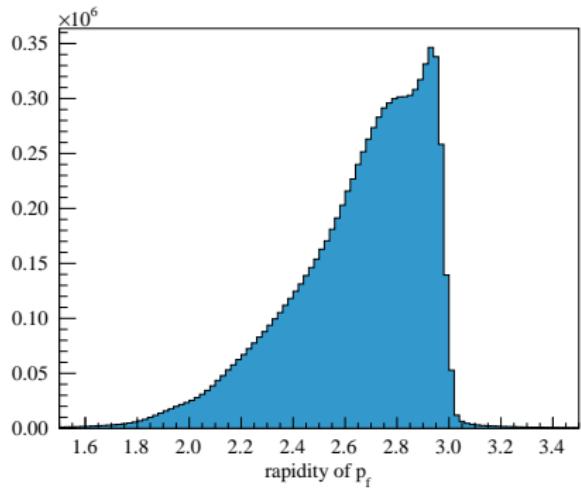
Rapidität des π^0



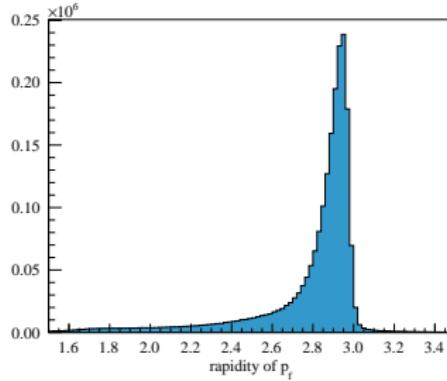
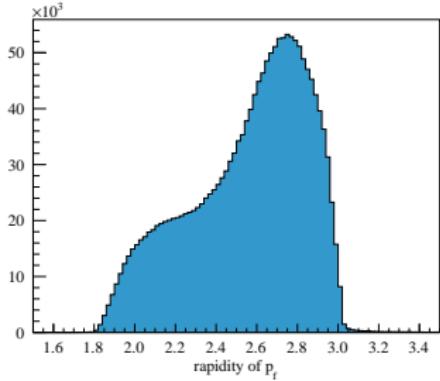
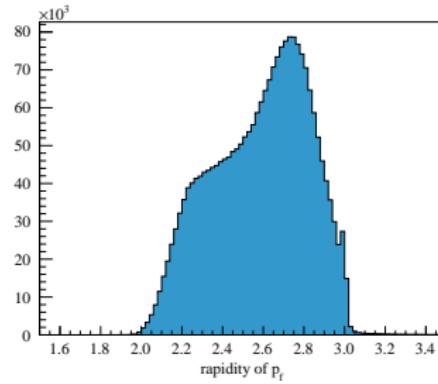
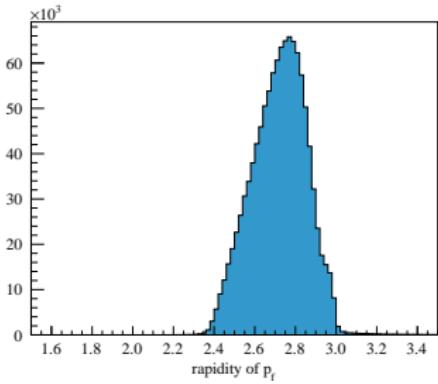
Rapidität des π^0



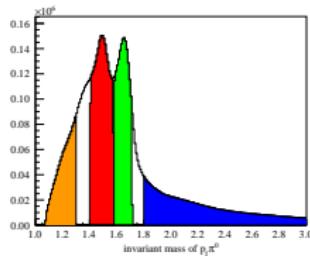
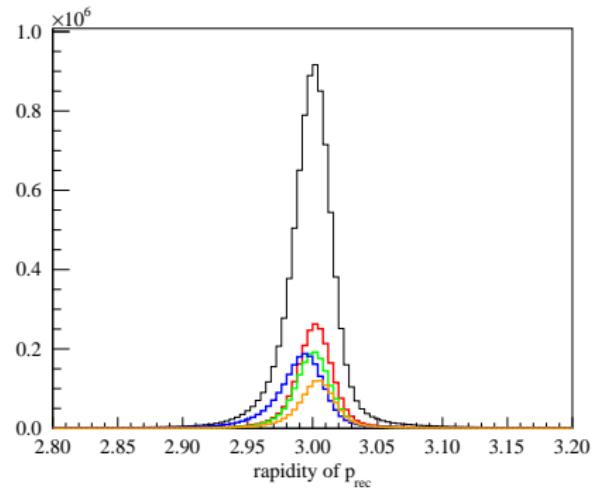
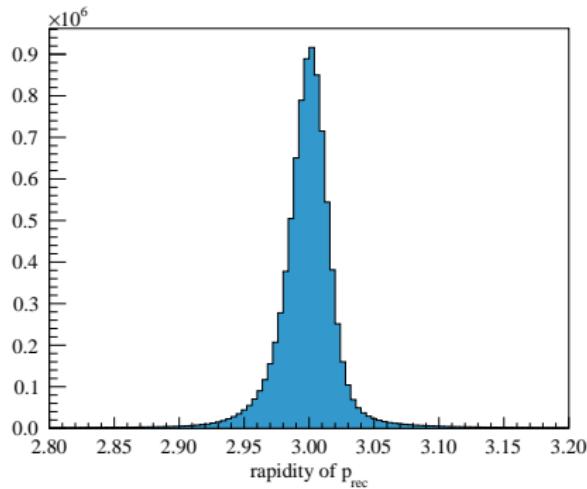
Rapidität des p_f



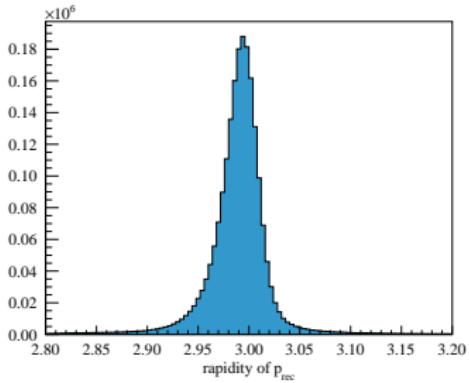
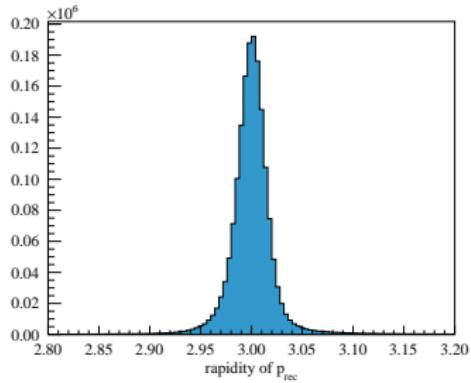
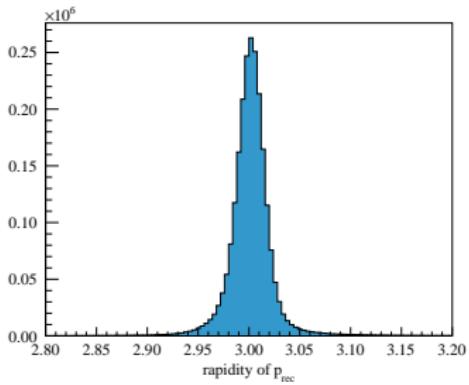
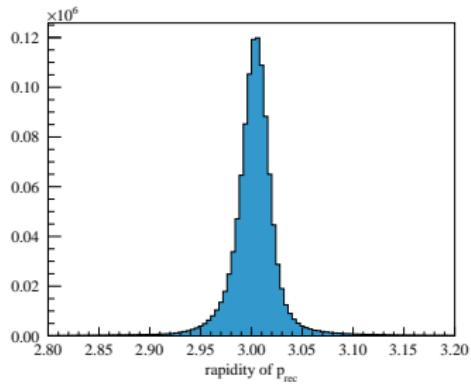
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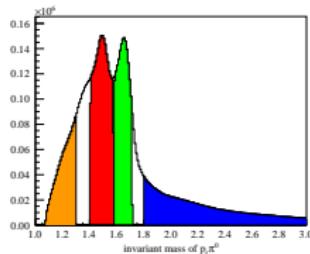
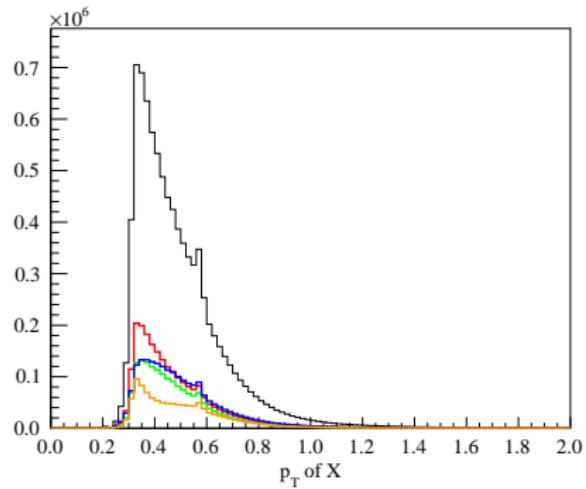
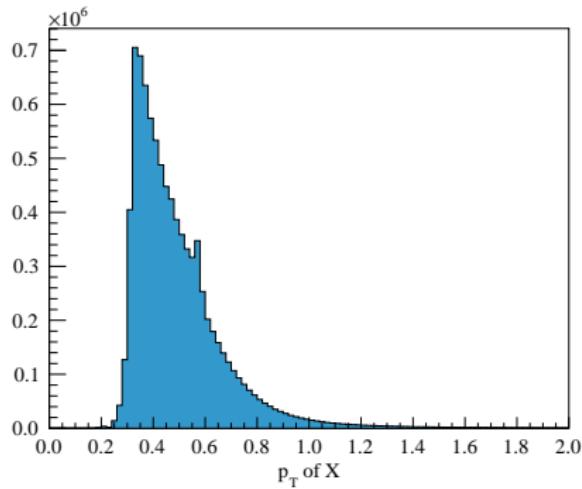
Rapidität des p_{recoil}



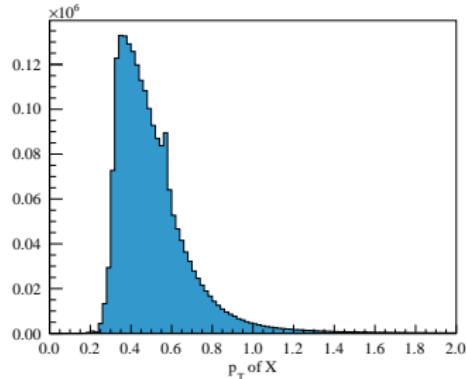
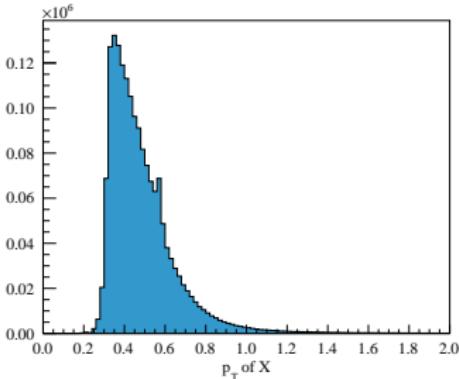
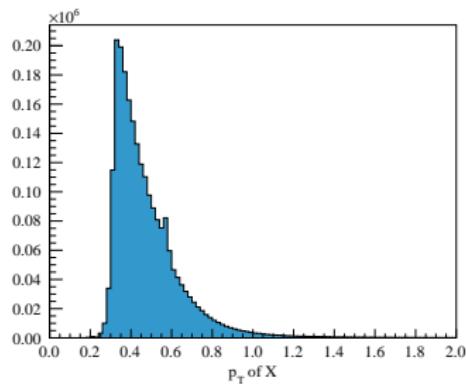
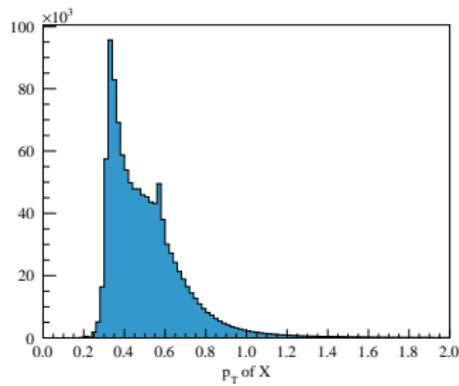
Rapidität des precoil



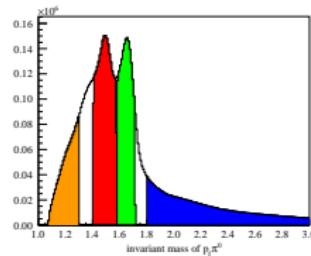
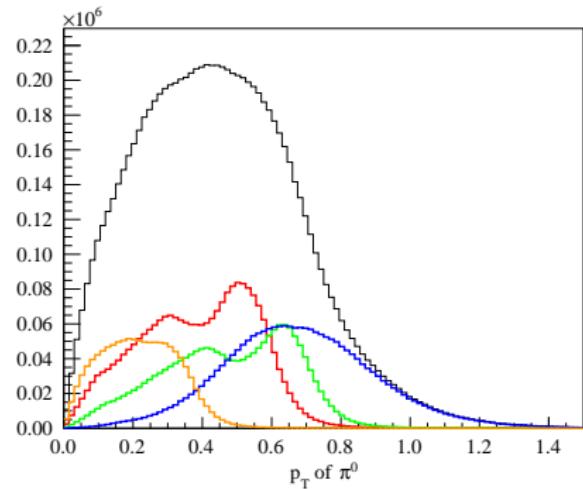
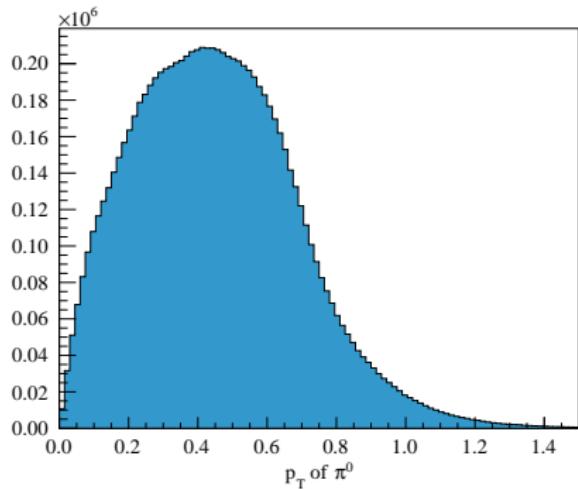
Transversalimpuls der Resonanz(?) X



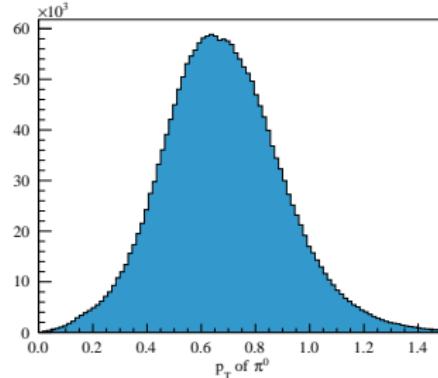
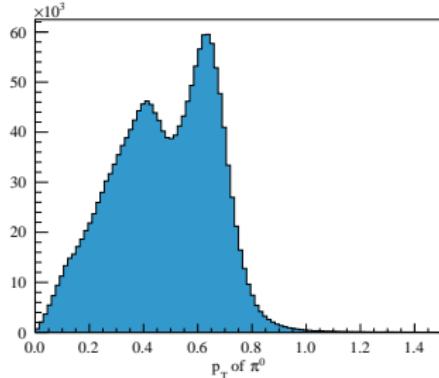
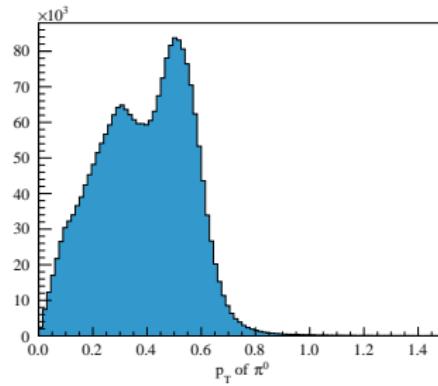
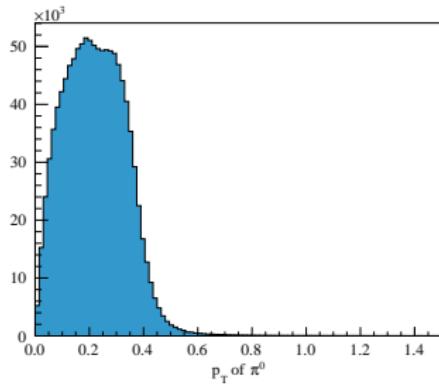
Transversalimpuls der Resonanz(?) X



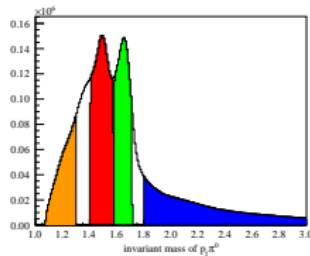
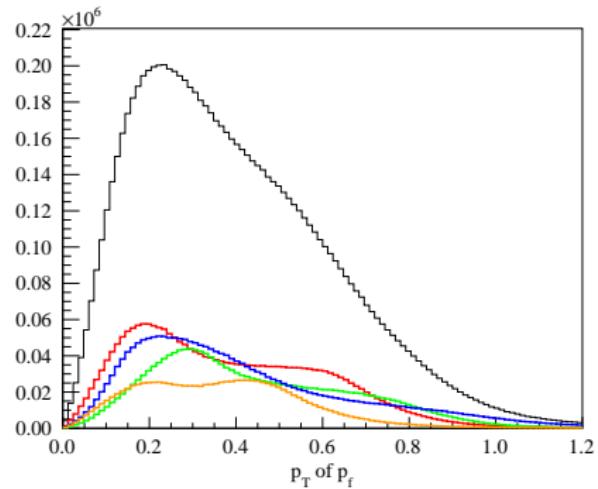
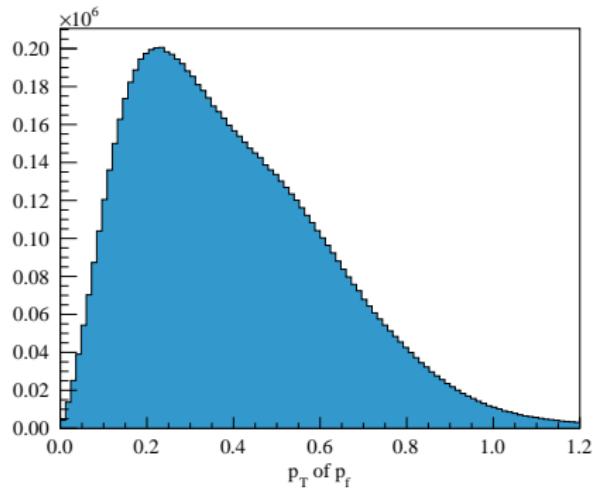
Transversalimpuls des π^0



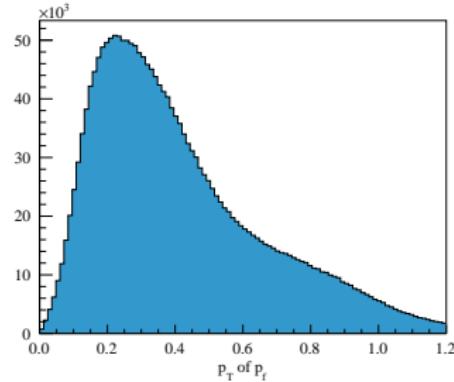
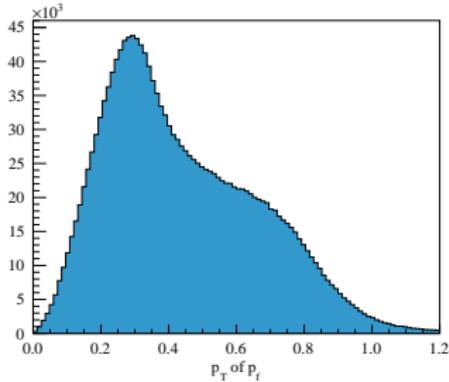
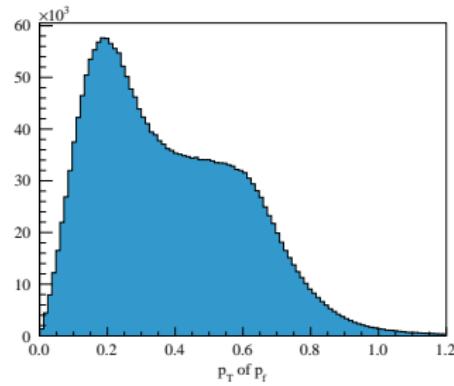
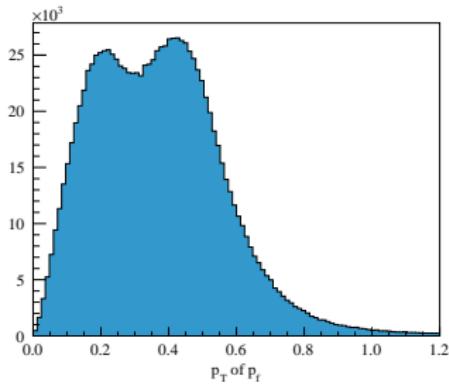
Transversalimpuls des π^0



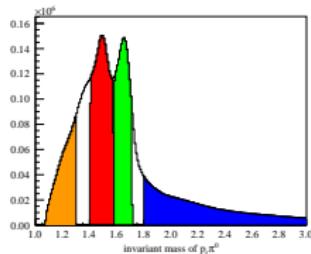
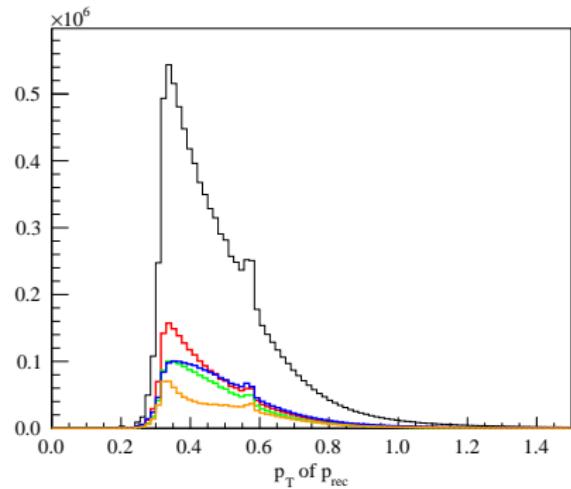
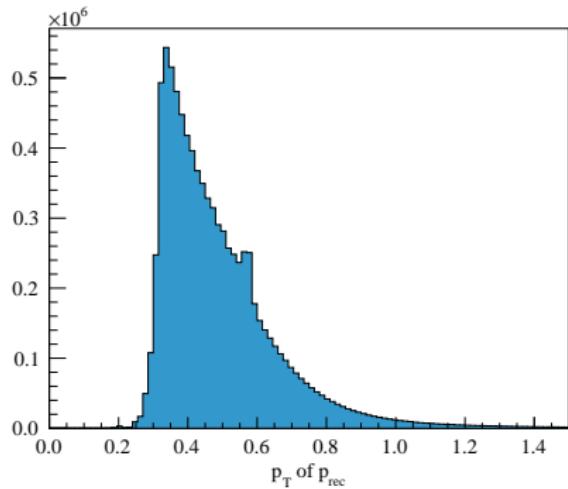
Transversalimpuls des p_f



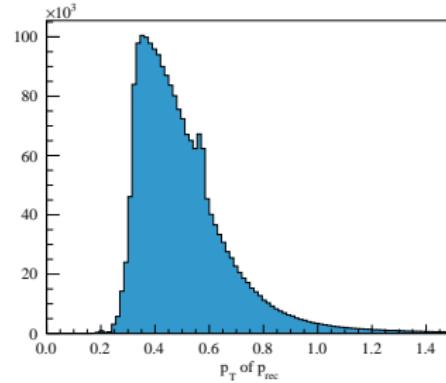
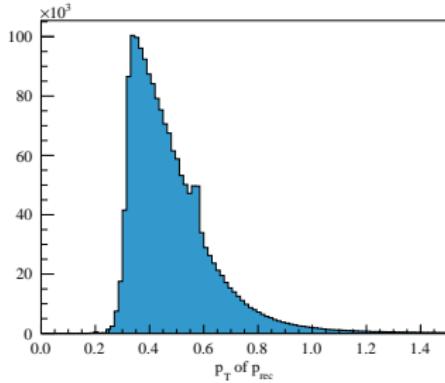
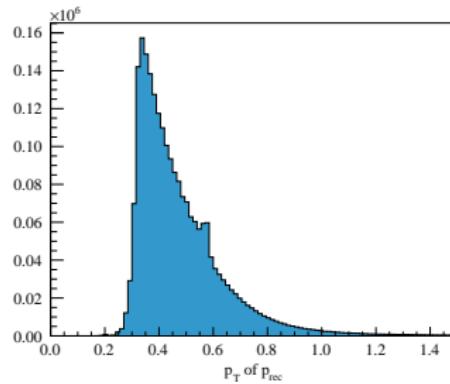
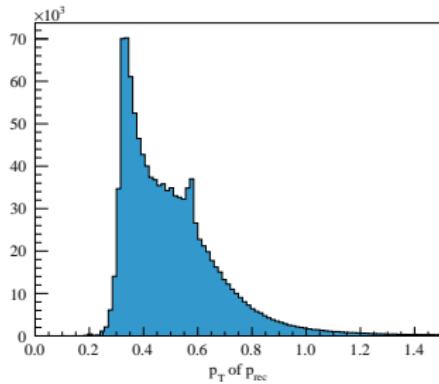
Transversalimpuls des p_f



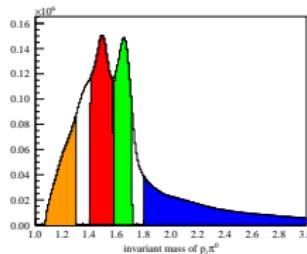
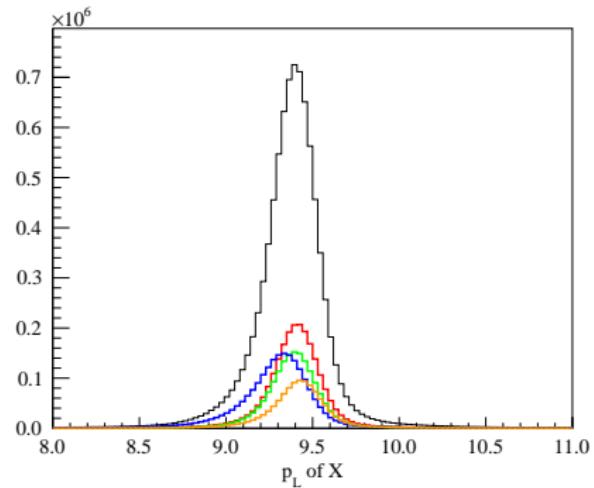
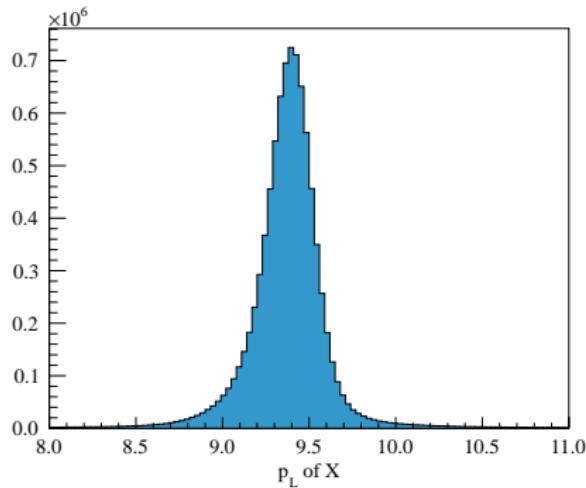
Transversalimpuls des p_{recoil}



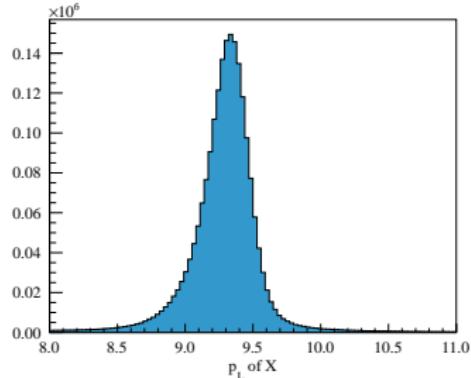
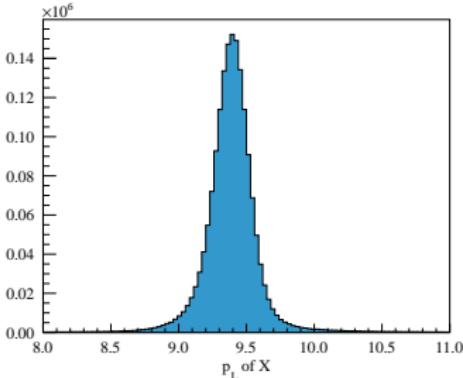
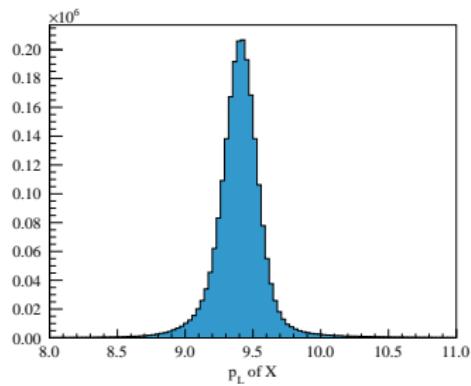
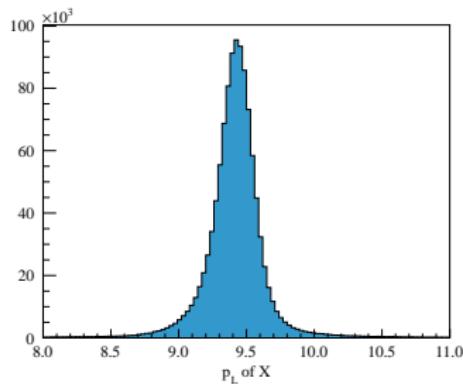
Transversalimpuls des $\mathbf{p}_{\text{recoil}}$



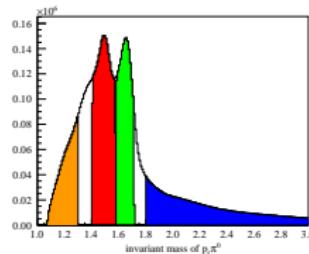
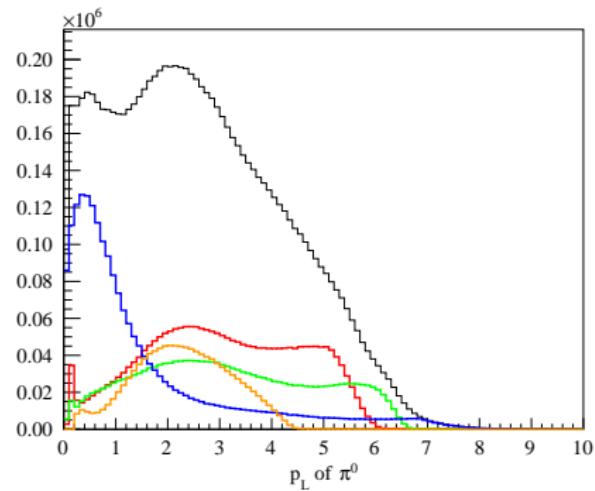
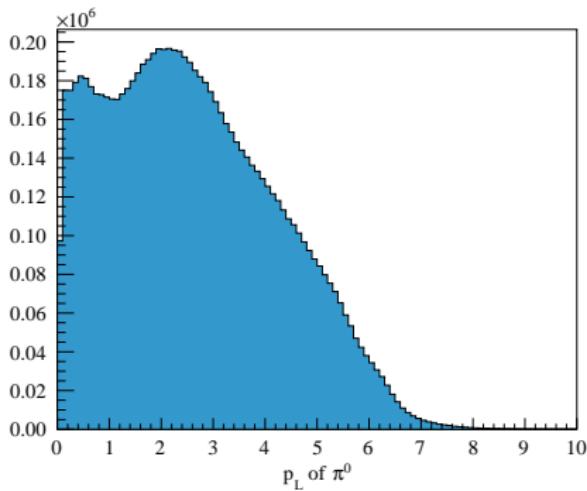
Longitudinalimpuls der Resonanz(?) X



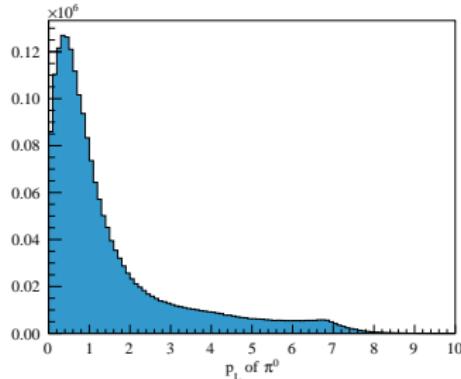
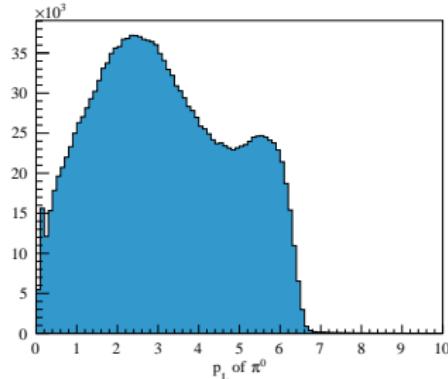
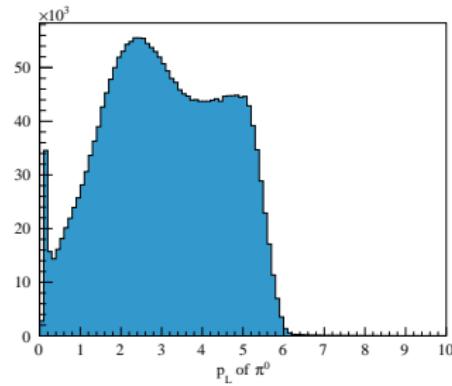
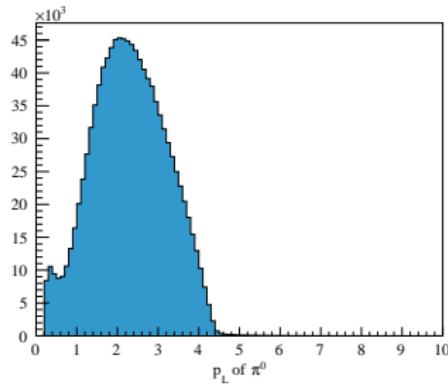
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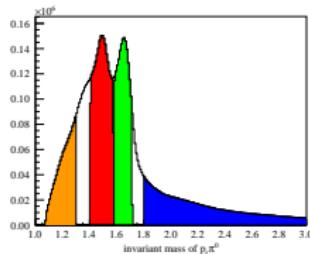
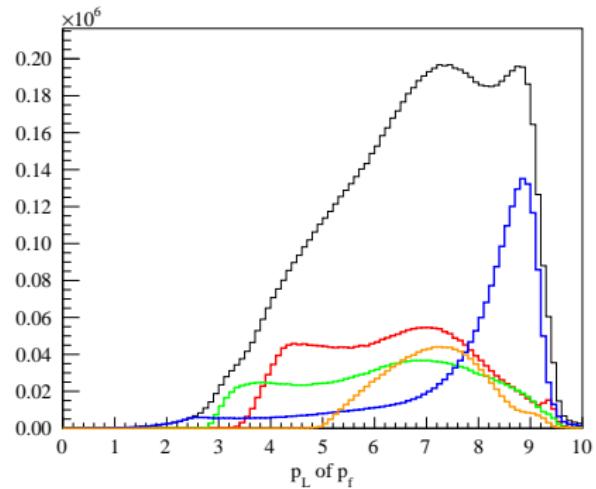
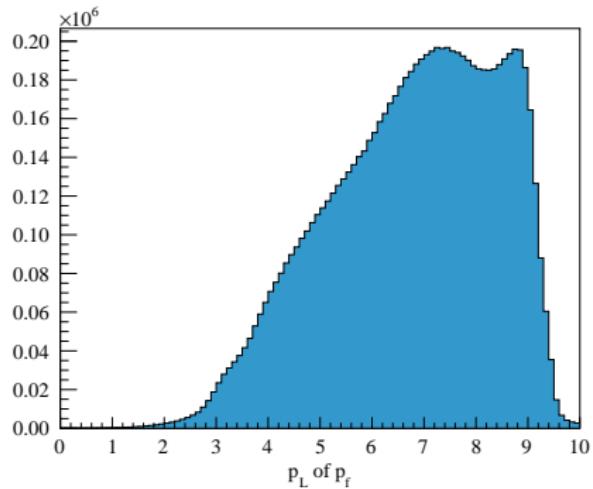
Longitudinalimpuls des π^0



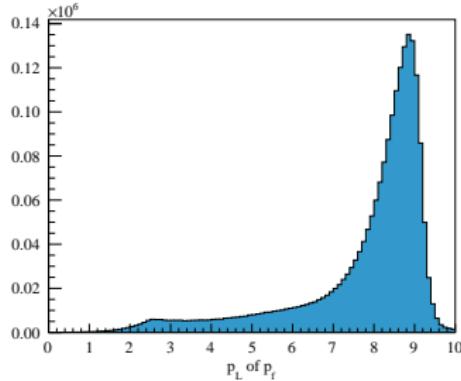
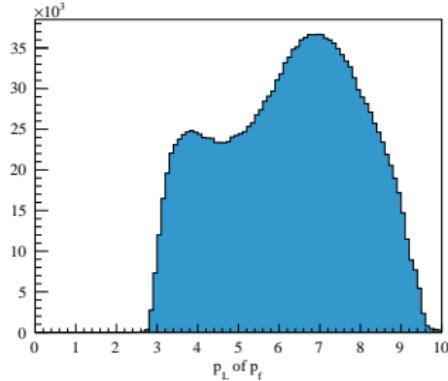
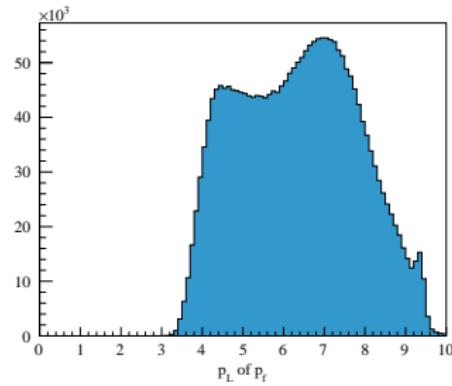
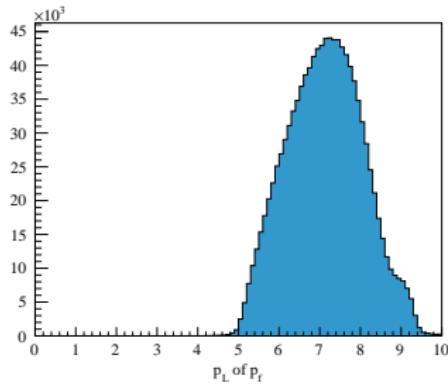
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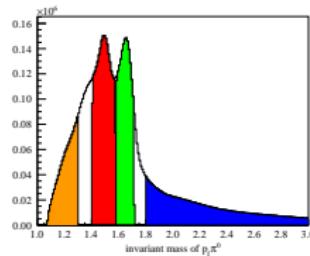
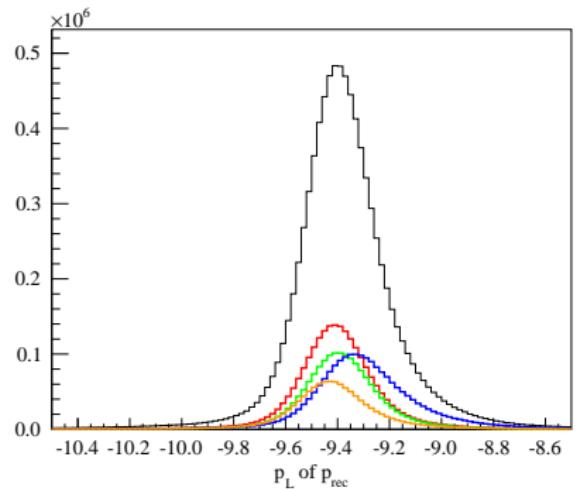
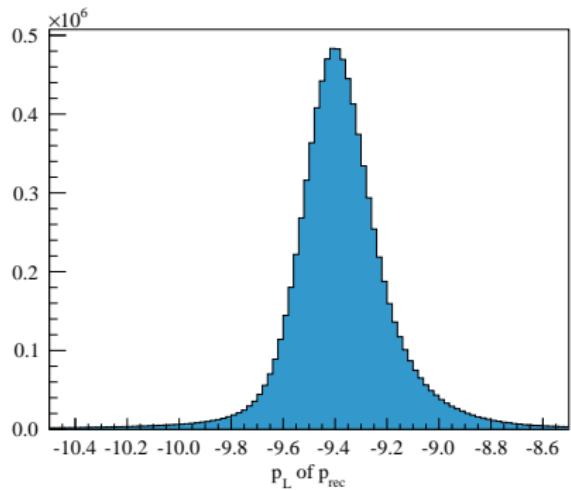
Longitudinalimpuls des p_f



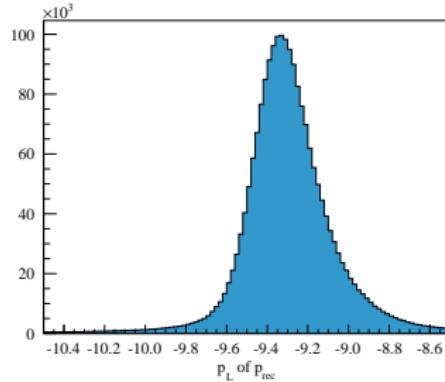
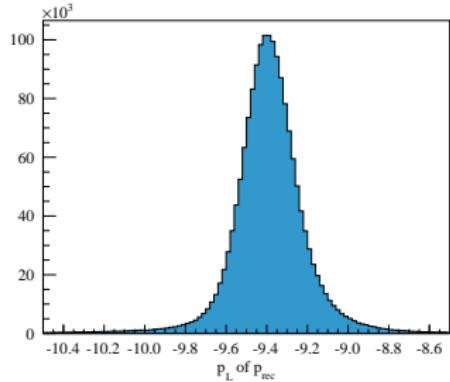
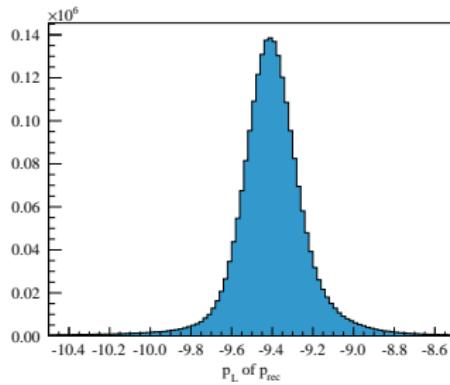
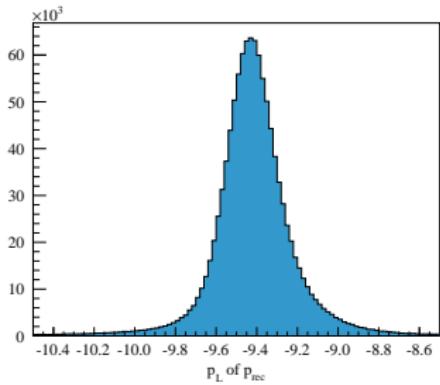
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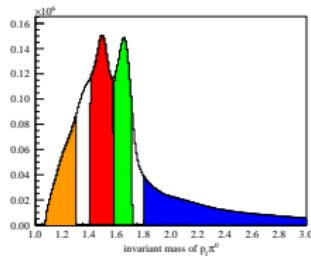
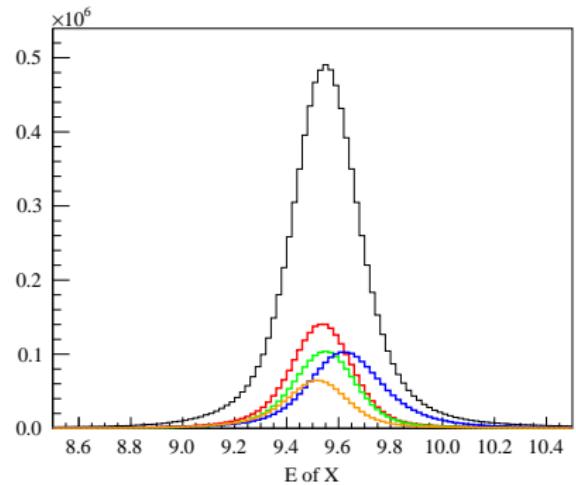
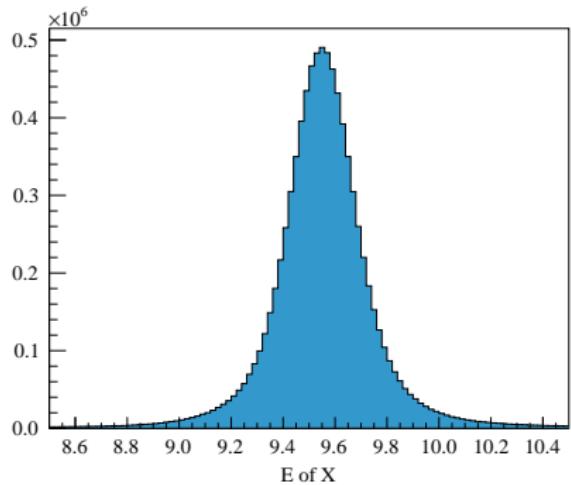
Longitudinalimpuls des p_{recoil}



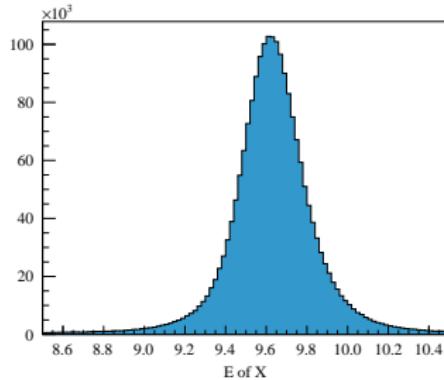
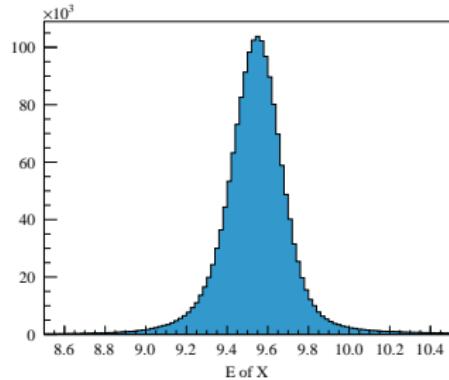
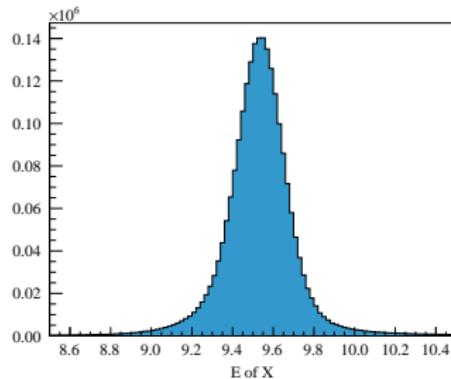
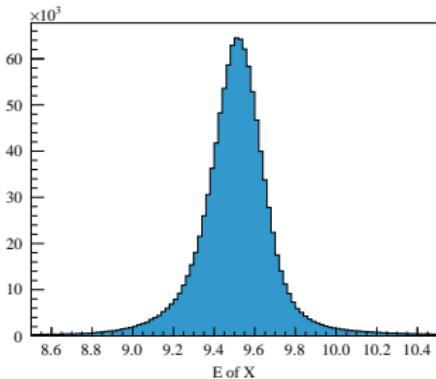
Longitudinalimpuls des p_{recoil}



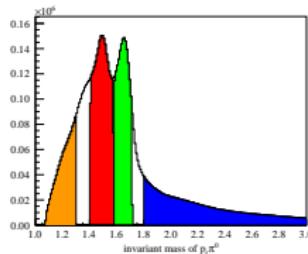
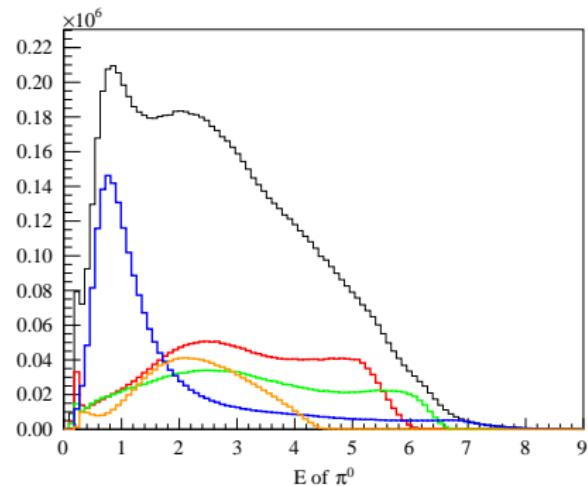
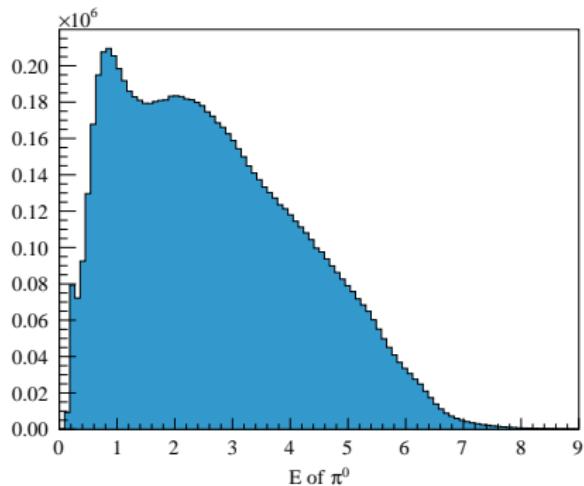
Energie der Resonanz(?) X



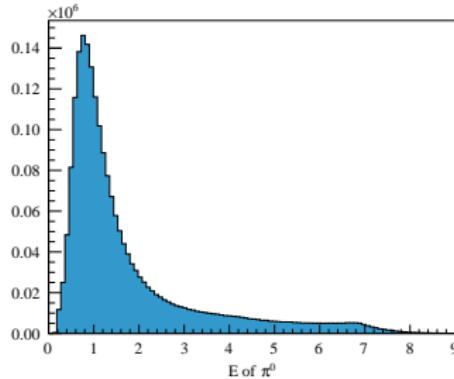
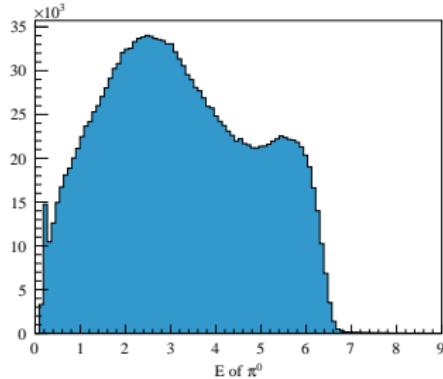
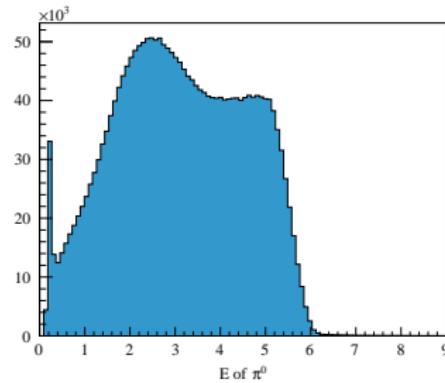
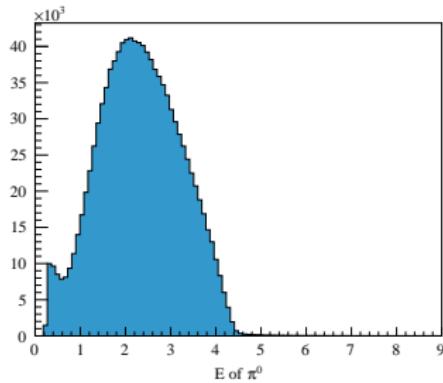
Energie der Resonanz(?) X



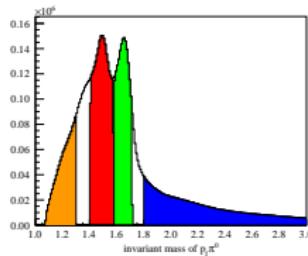
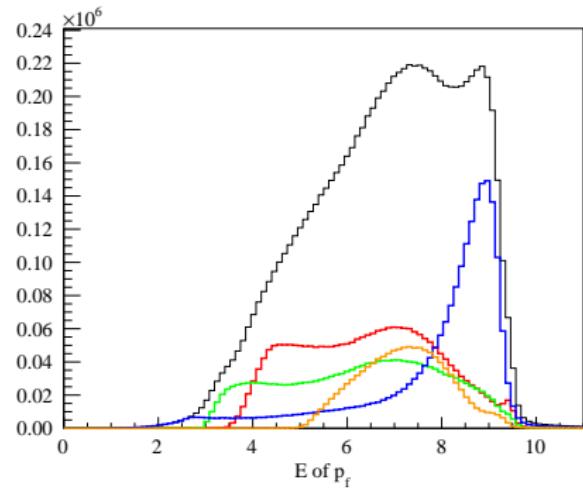
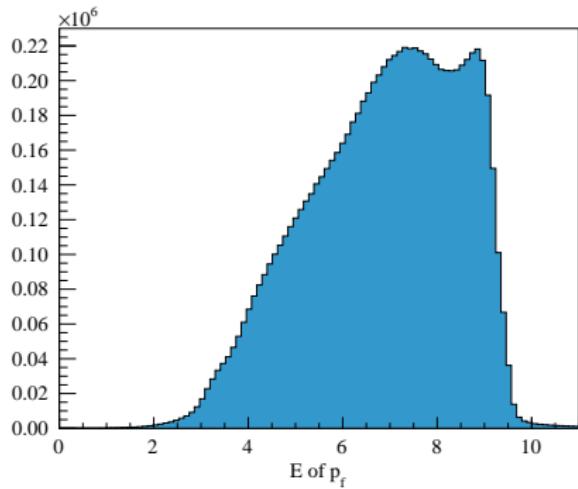
Energie des π^0



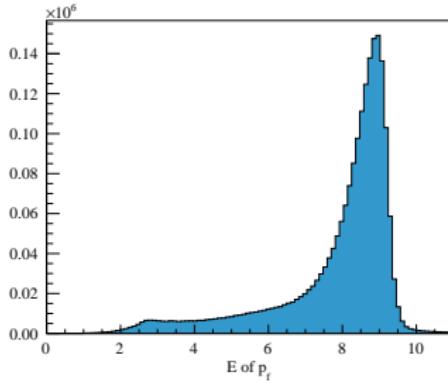
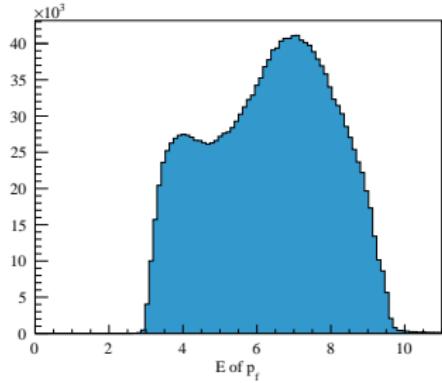
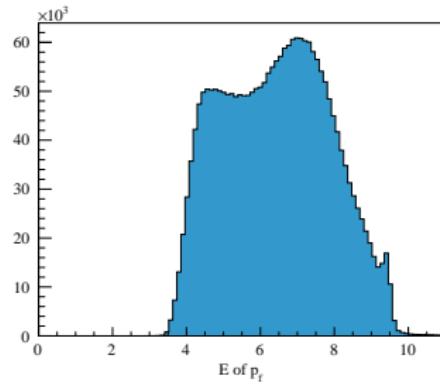
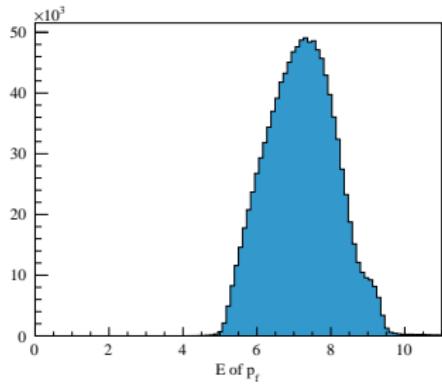
Energie des π^0



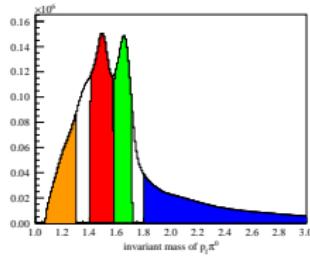
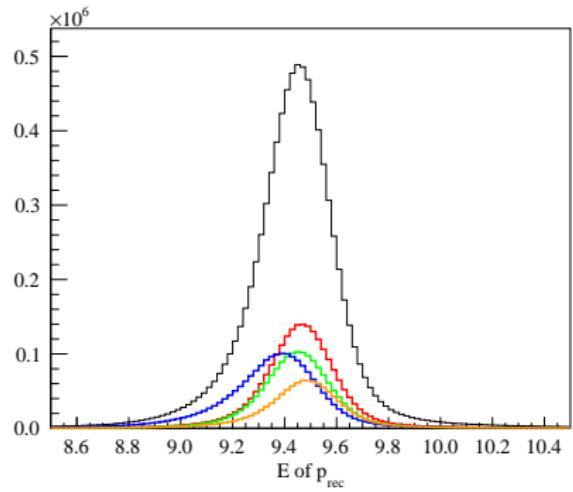
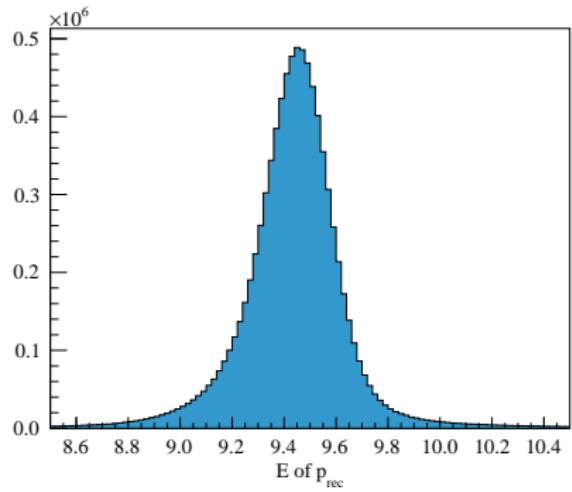
Energie des p_f



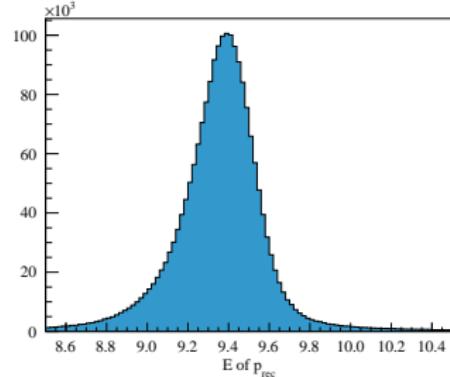
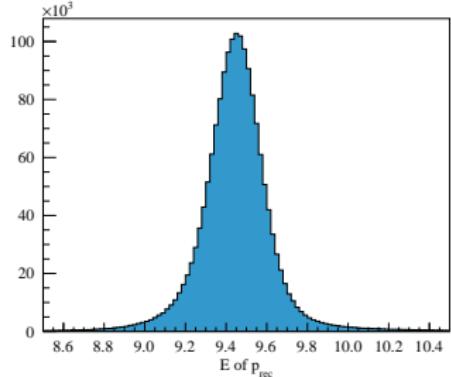
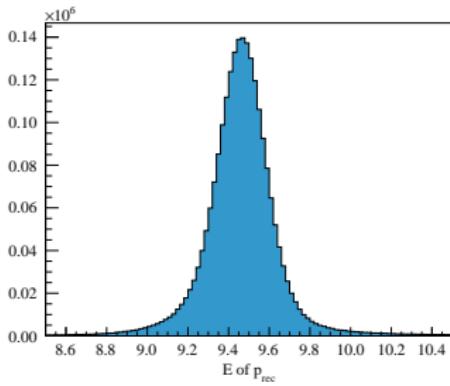
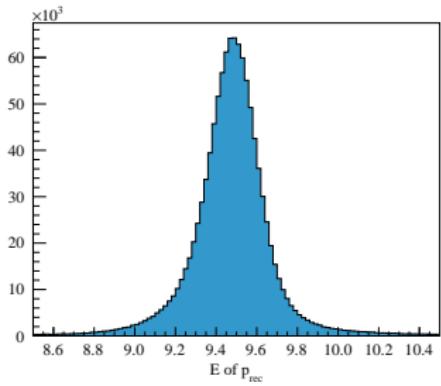
Energie des p_f



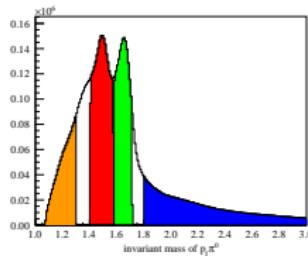
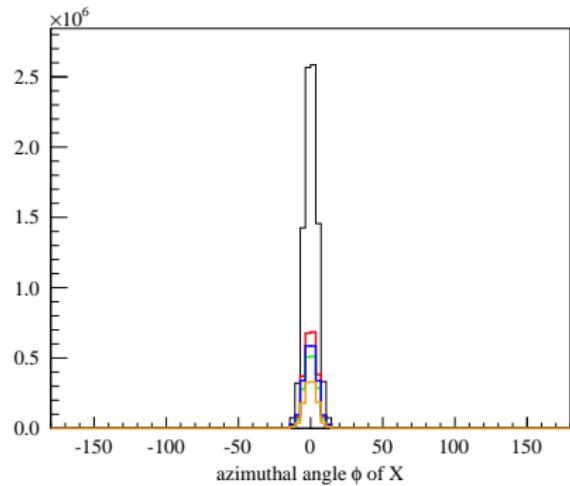
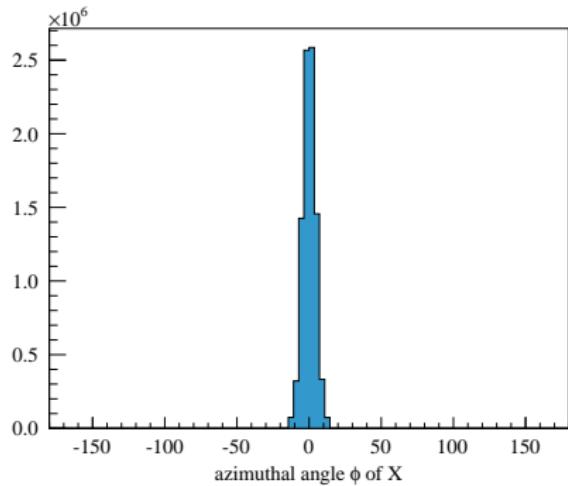
Energie des p_{recoil}



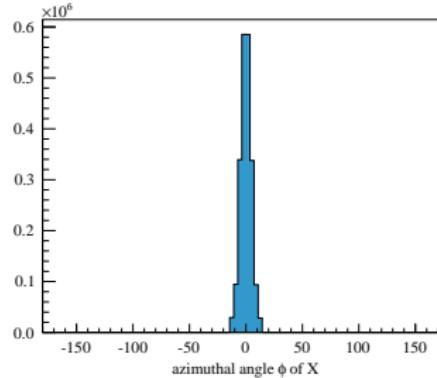
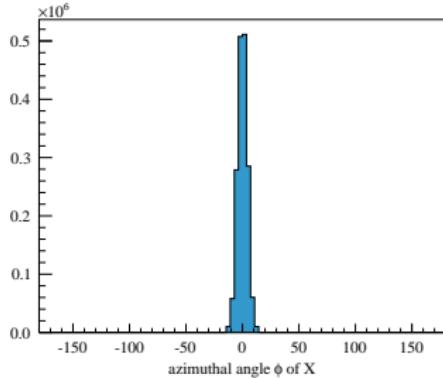
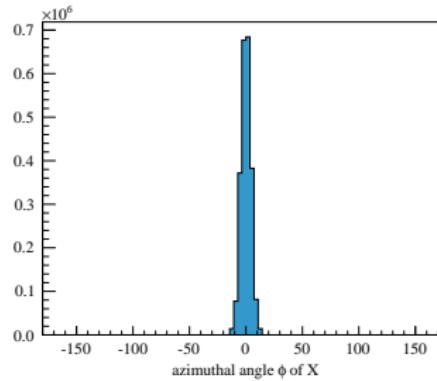
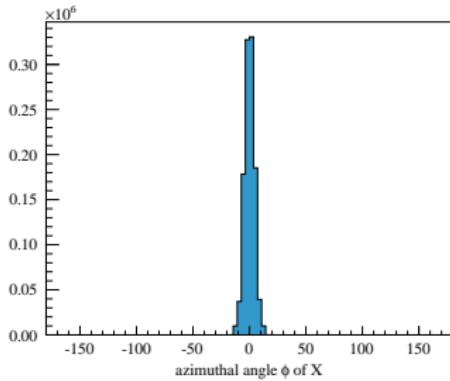
Energie des p_{recoil}



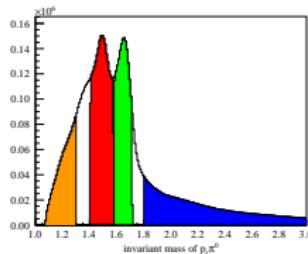
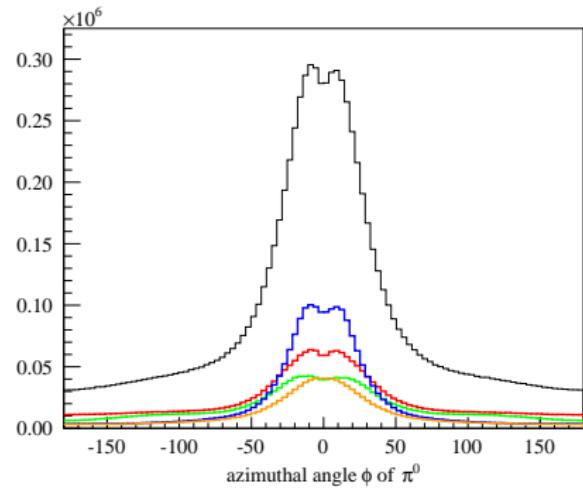
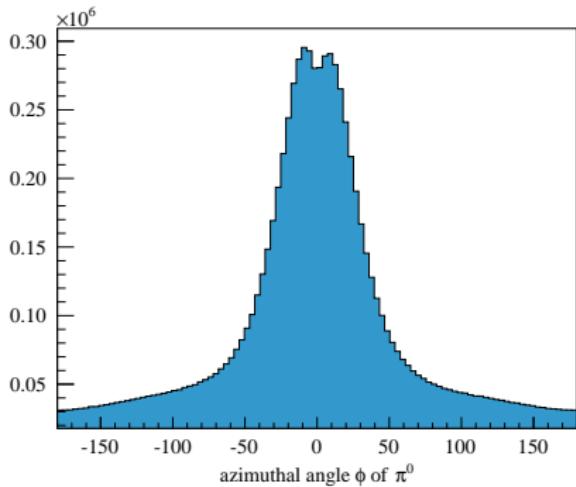
Azimuthwinkel der Resonanz(?) X



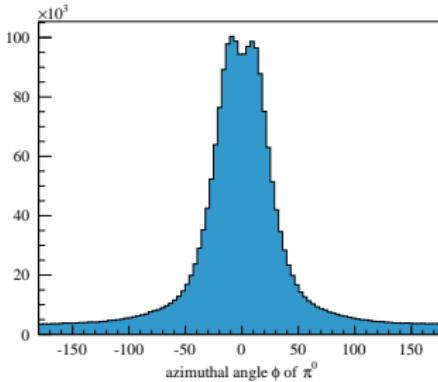
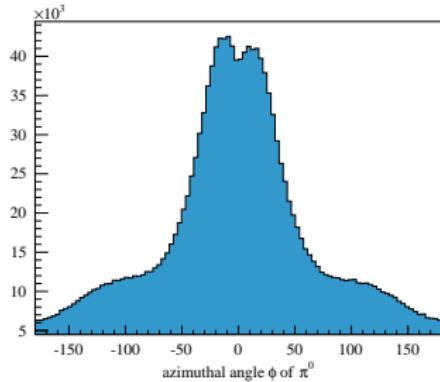
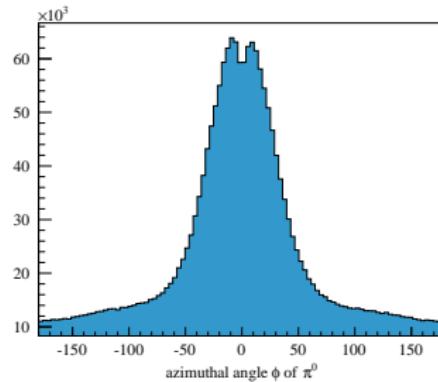
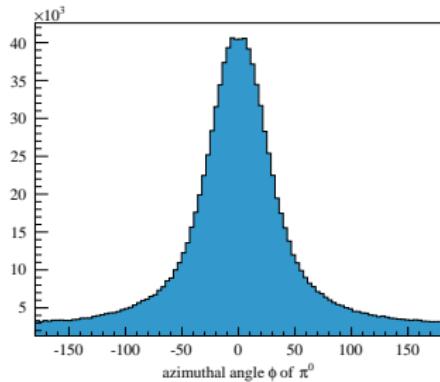
Azimuthwinkel der Resonanz(?) X



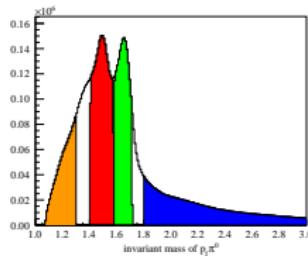
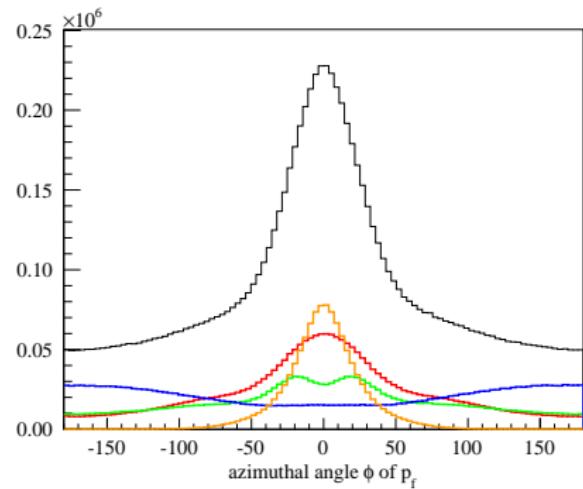
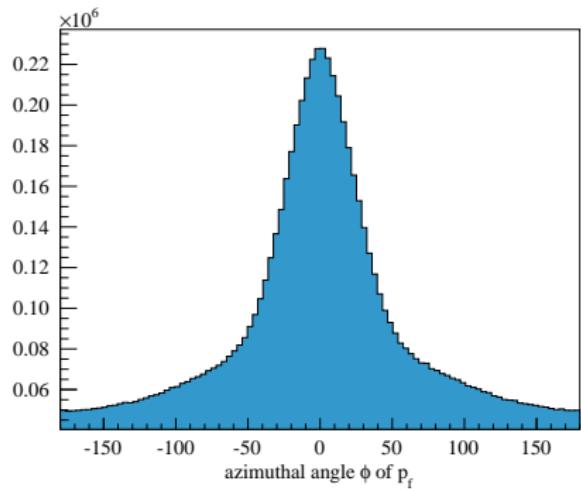
Azimuthwinkel des π^0



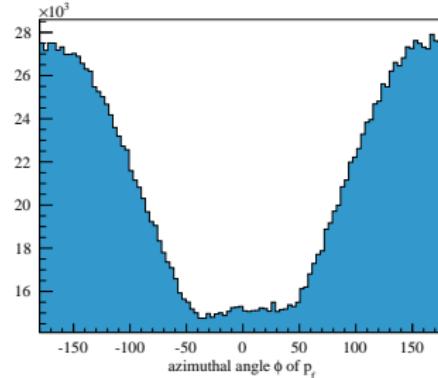
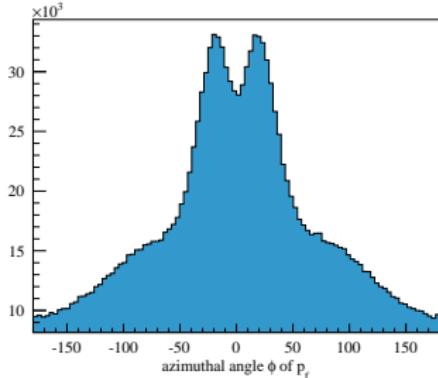
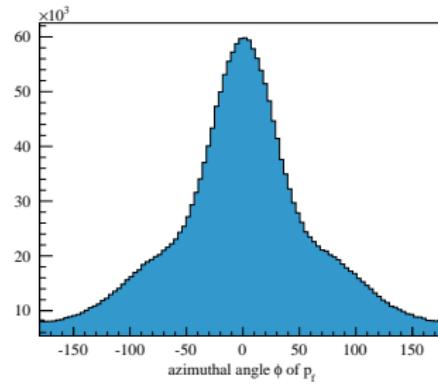
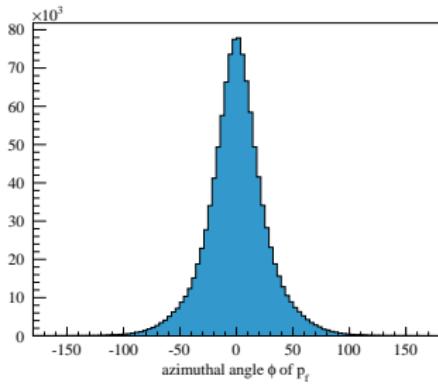
Azimuthwinkel des π^0



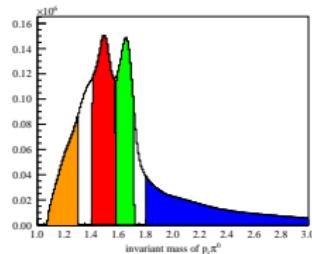
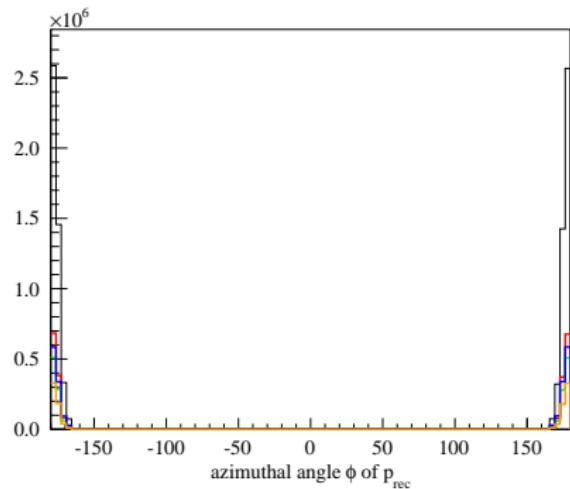
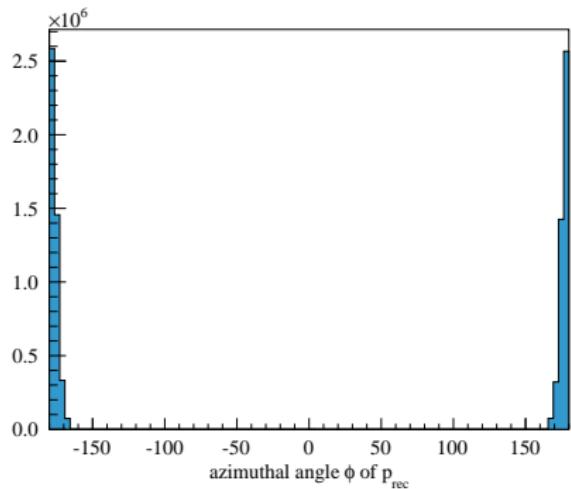
Azimuthwinkel des p_f



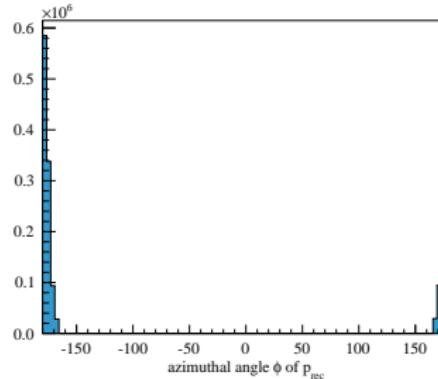
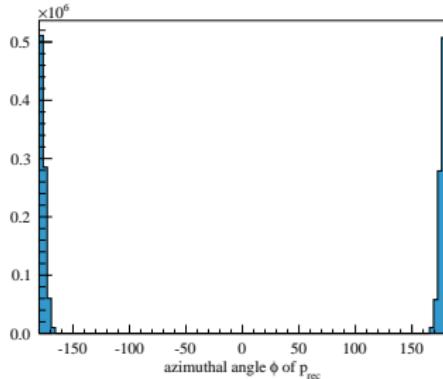
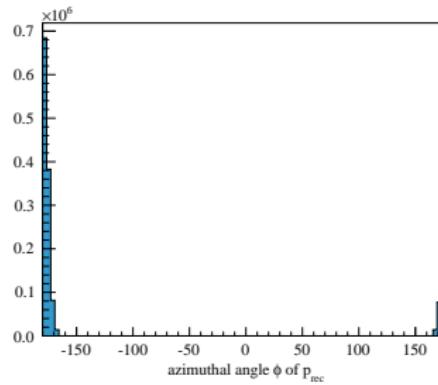
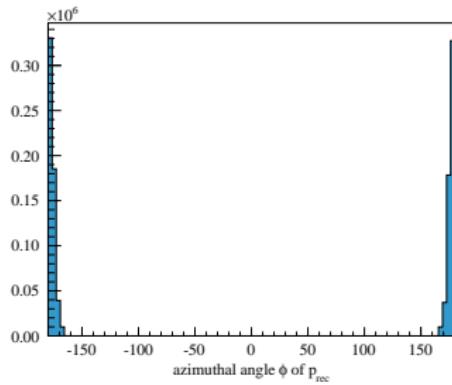
Azimuthwinkel des p_f



Azimuthwinkel des p_{recoil}



Azimuthwinkel des p_{recoil}



BACKUP

