Polarization Overlaps using the Reaction $\gamma p \to p\,\pi^+\pi^-$

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Florida State University
Tallahassee, FL

g8b Meeting

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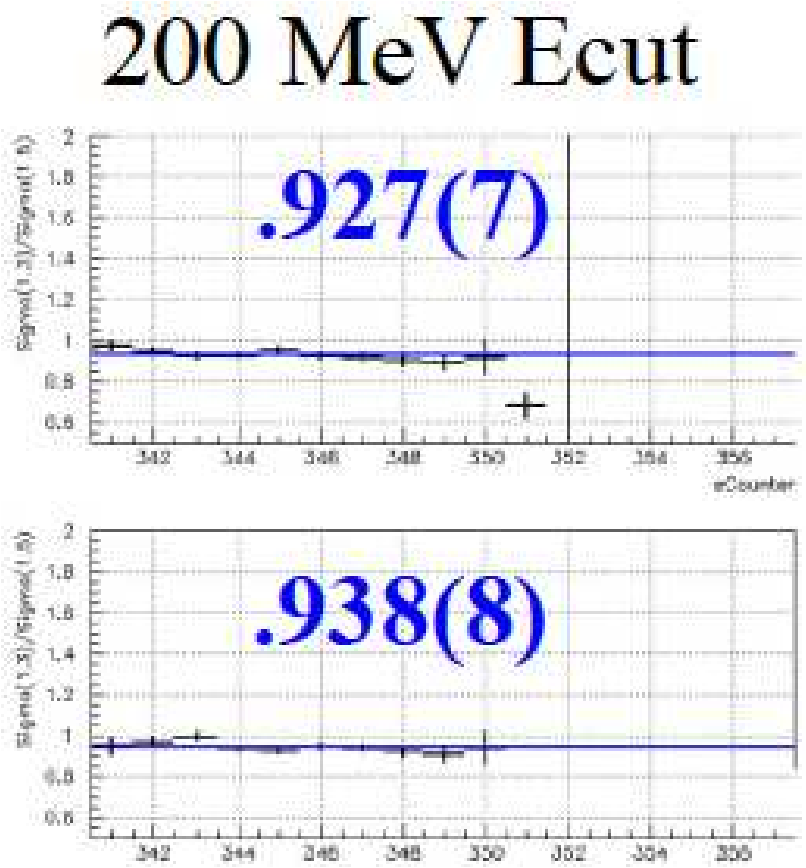
Study of Overlap Regions using $\gamma p \to p\,\pi^+\pi^-$

A word of caution: The $\pi^+\pi^-$ channel has usually good statistics.

➜ Statistics used for the comparisons is cut out in regular analysis.



Consistent with Mike's studies:

- Events with $(\mathrm{Ecut} = 200\ \mathrm{MeV})$

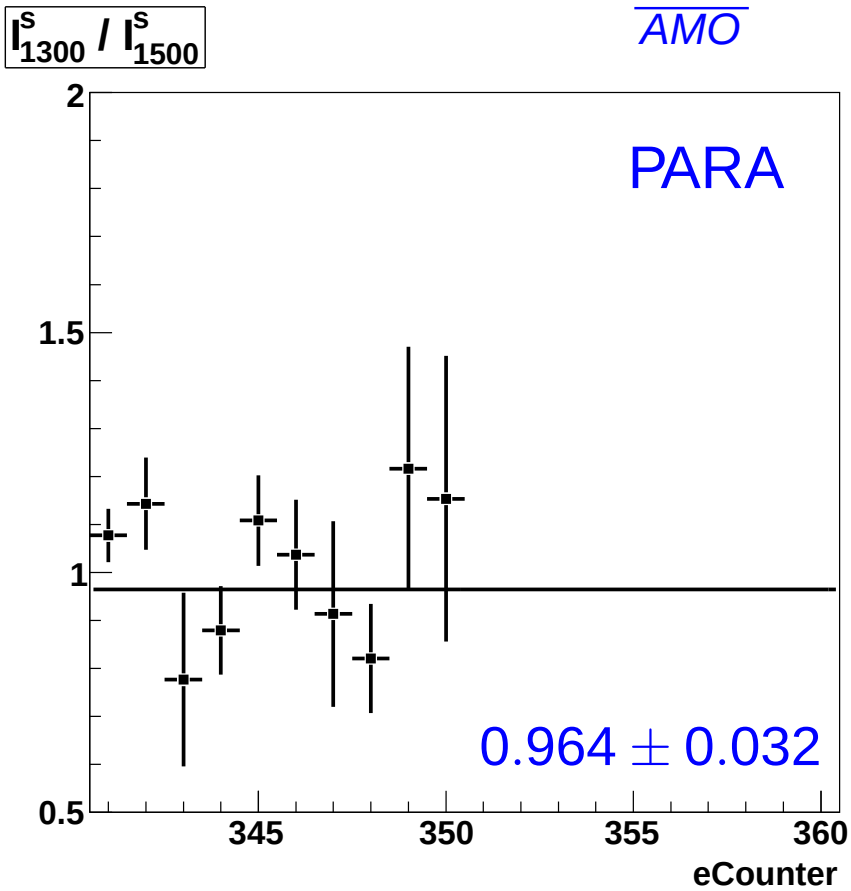
  $E_\gamma < (eventEdge - Ecut)$

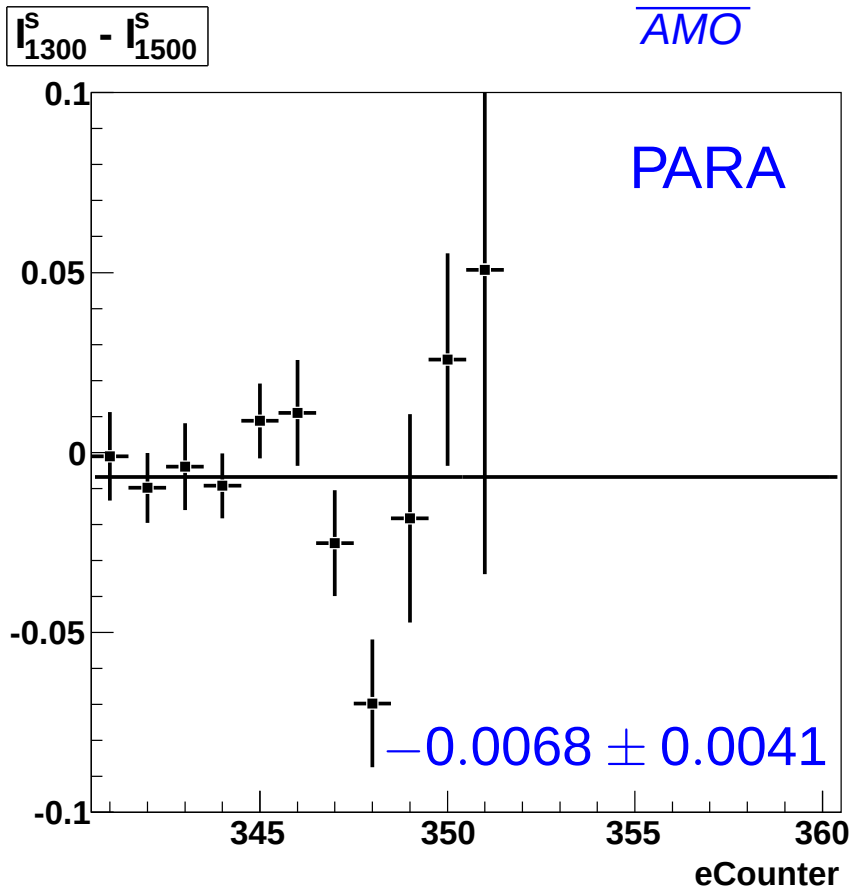
  removed from analysis.
- x-axis is *eCounter*.
- I have not studied any other *Ecut* values.
- I have not studied any of the 1700 and 1900 AUTO files.

Study of Overlap Regions using $\gamma p \to p\,\pi^+\pi^-$

1.3 / 1.5

$$I = I_0\,(1 + \delta_I\,(\sin 2\beta \cdot I^S + \cos 2\beta \cdot \Sigma))$$





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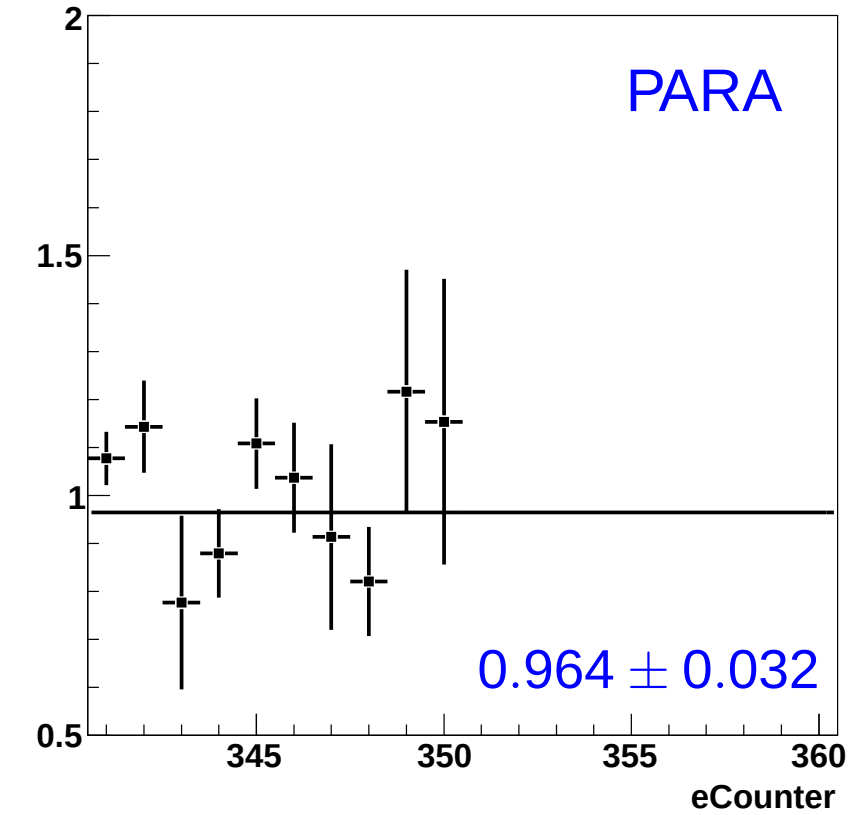
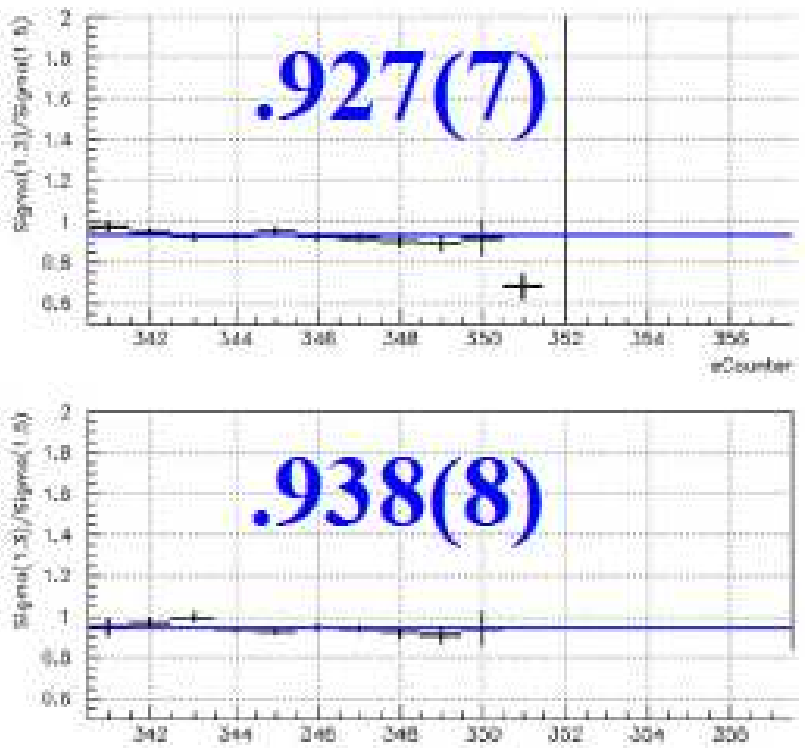
I^S_{1300} / I^S_{1500}

PARA / *AMO*



200 MeV Ecut



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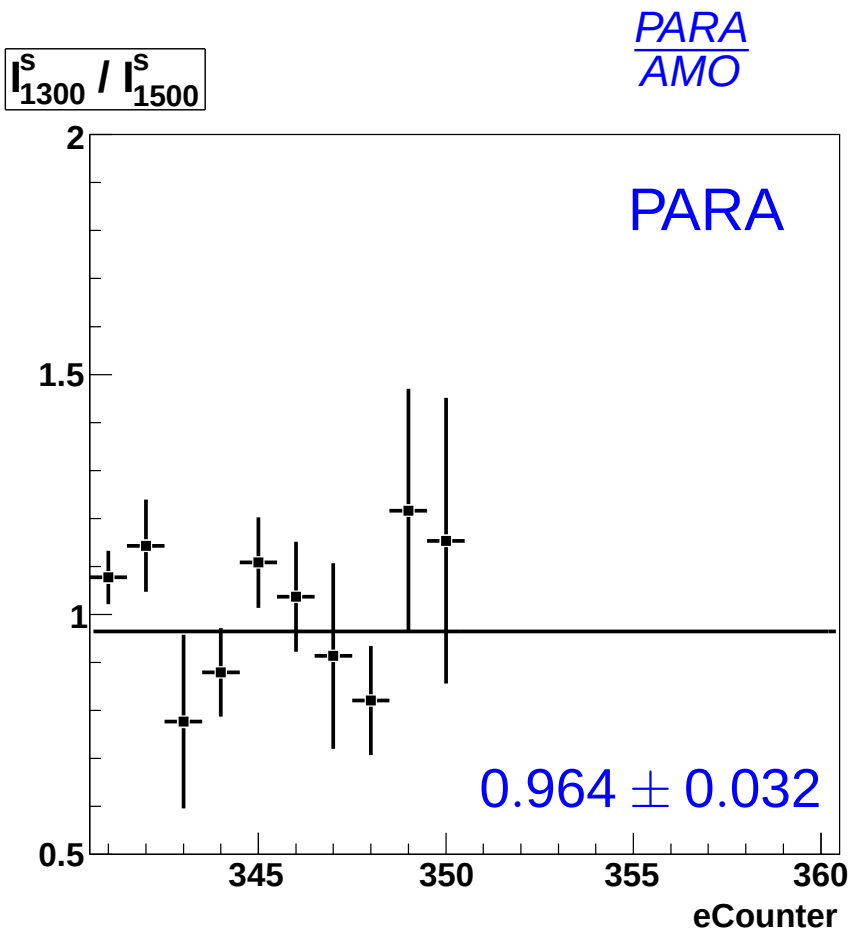

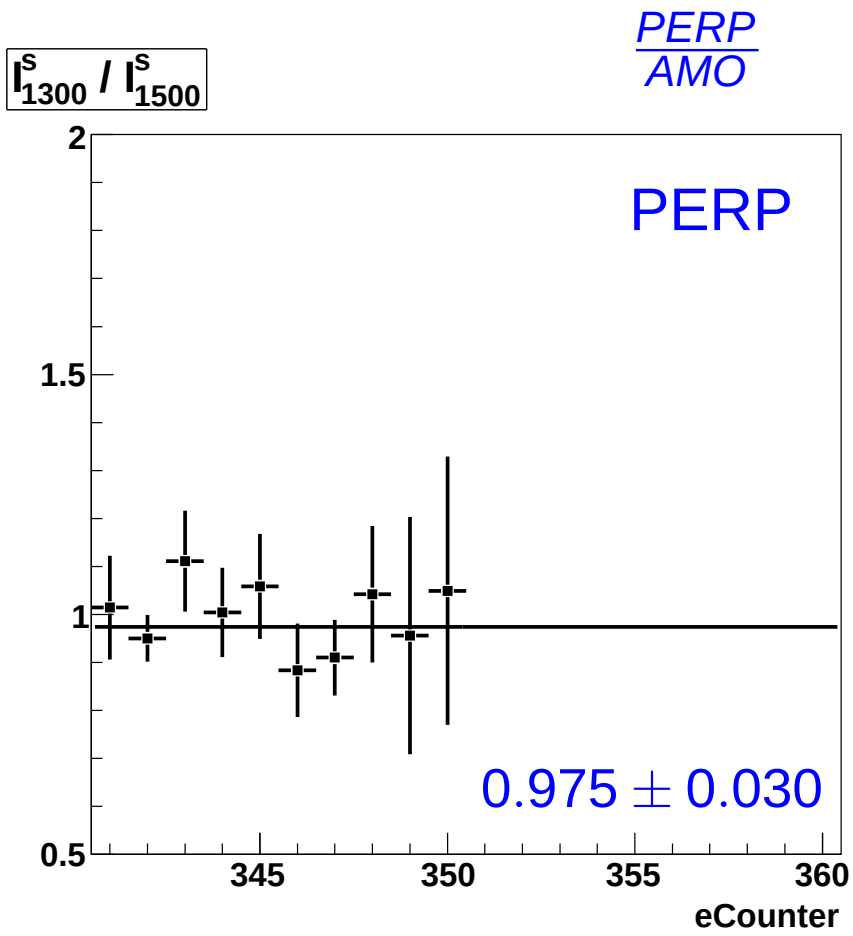

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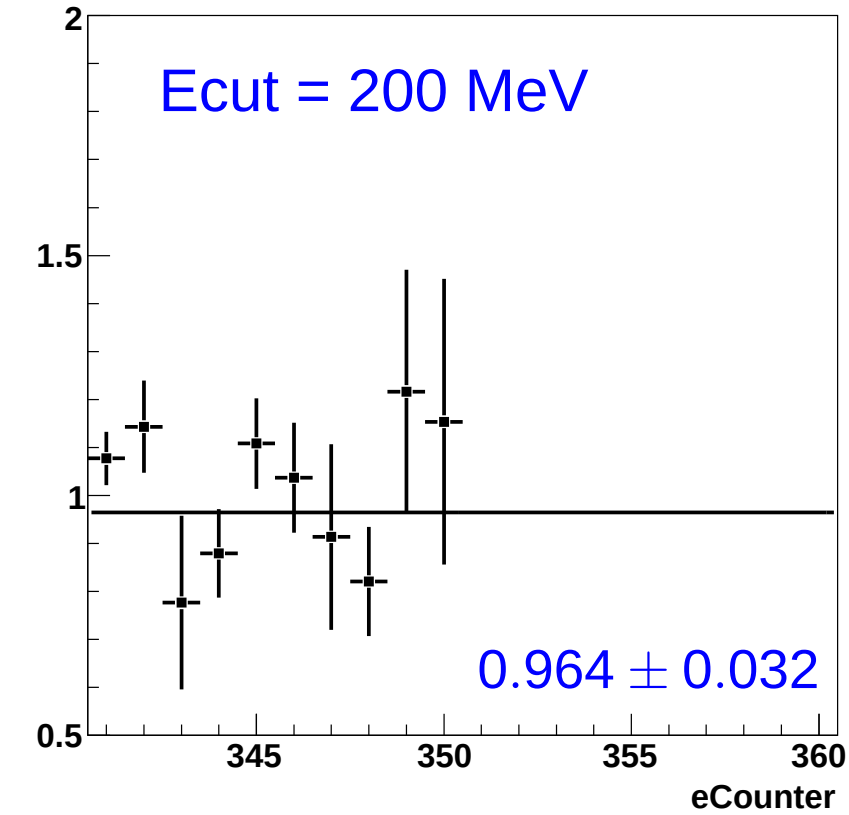

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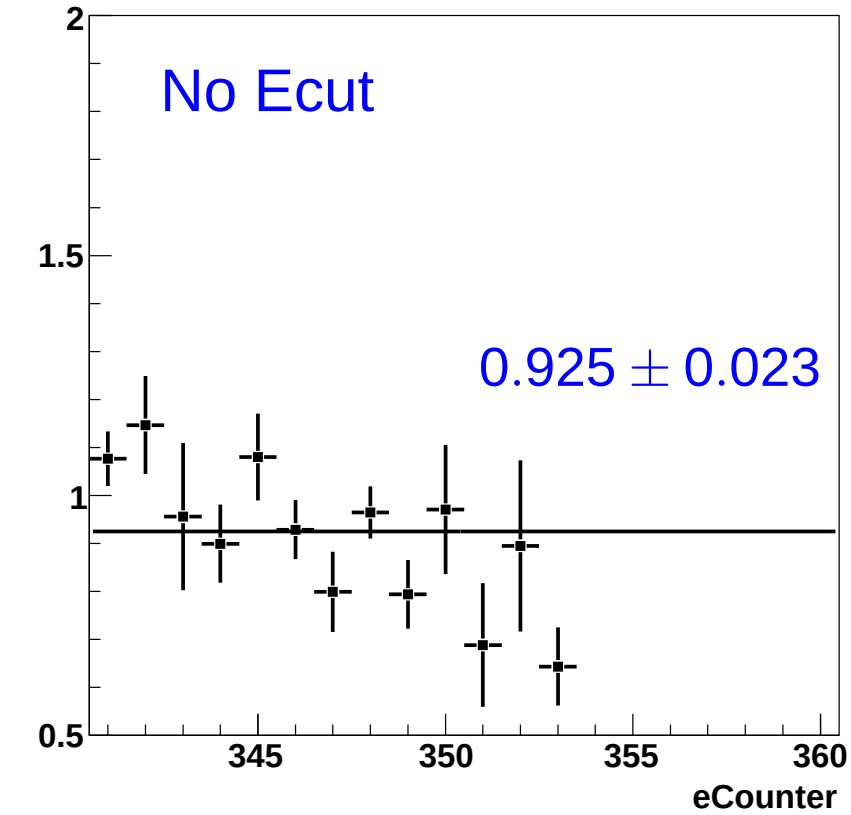

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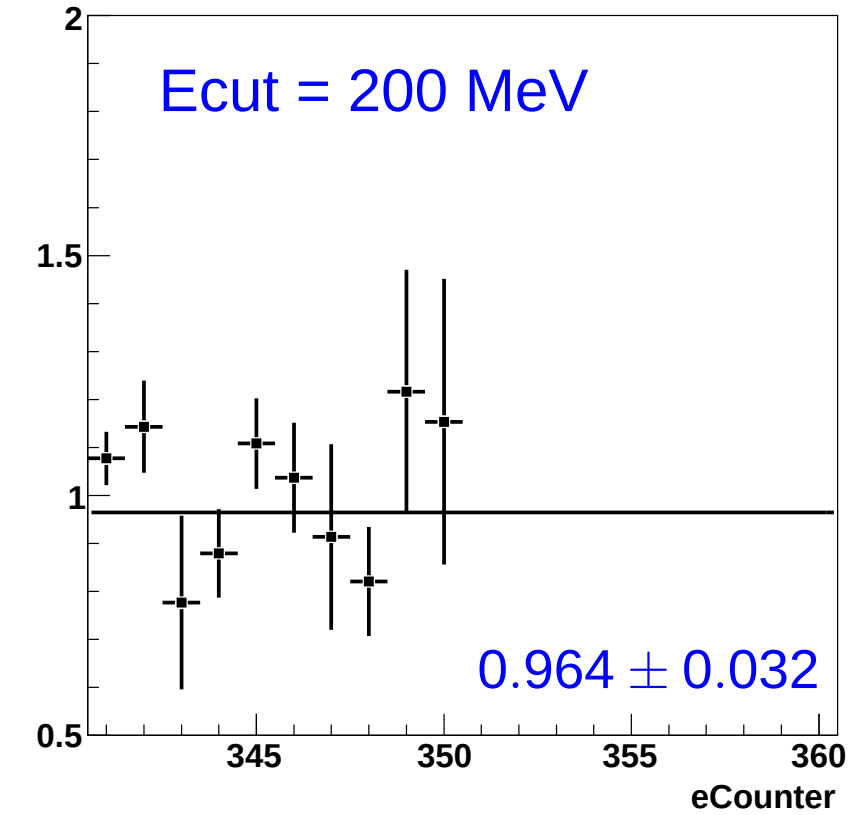

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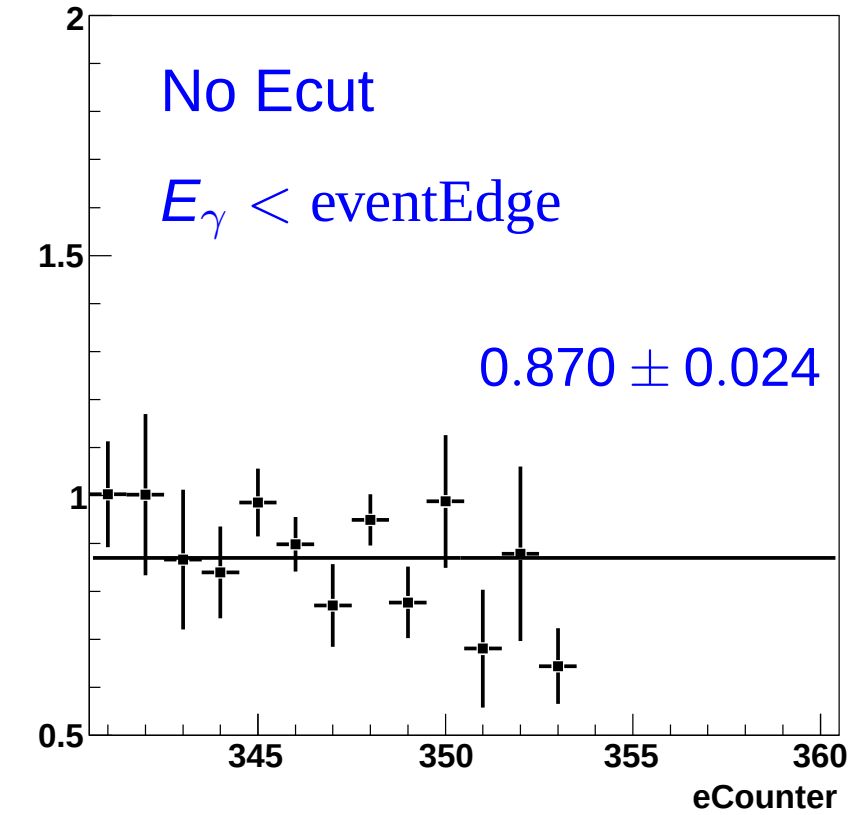

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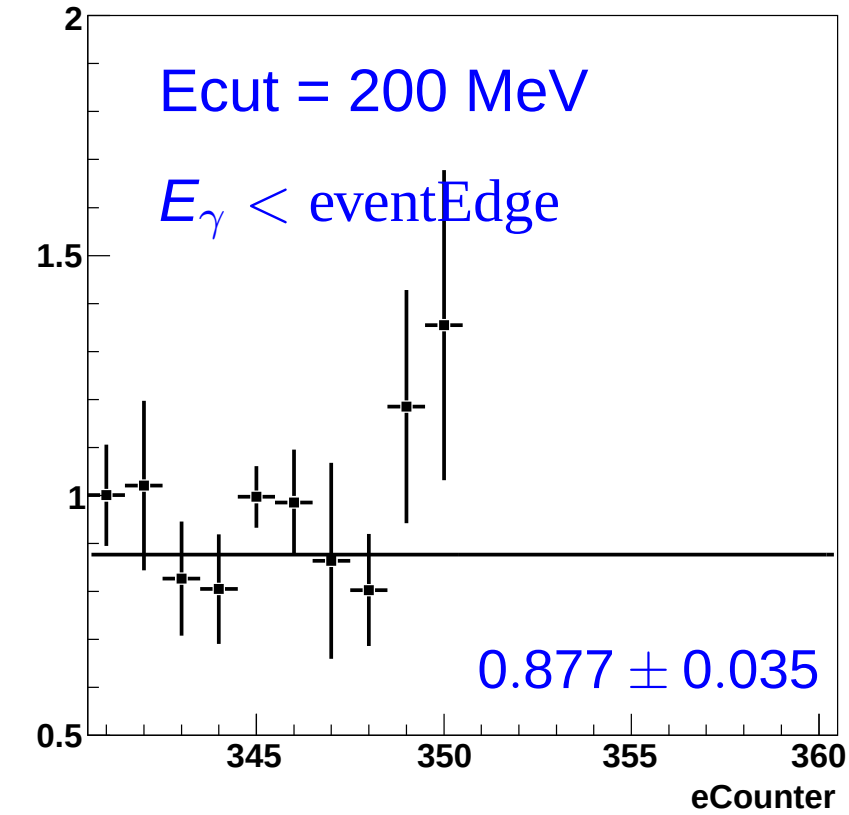

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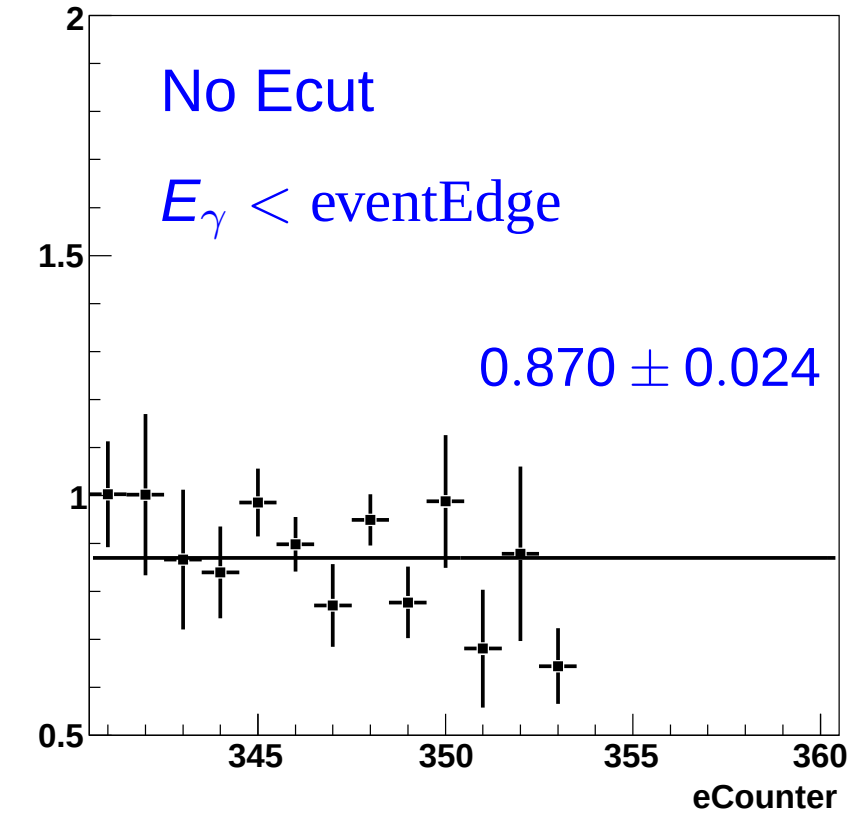

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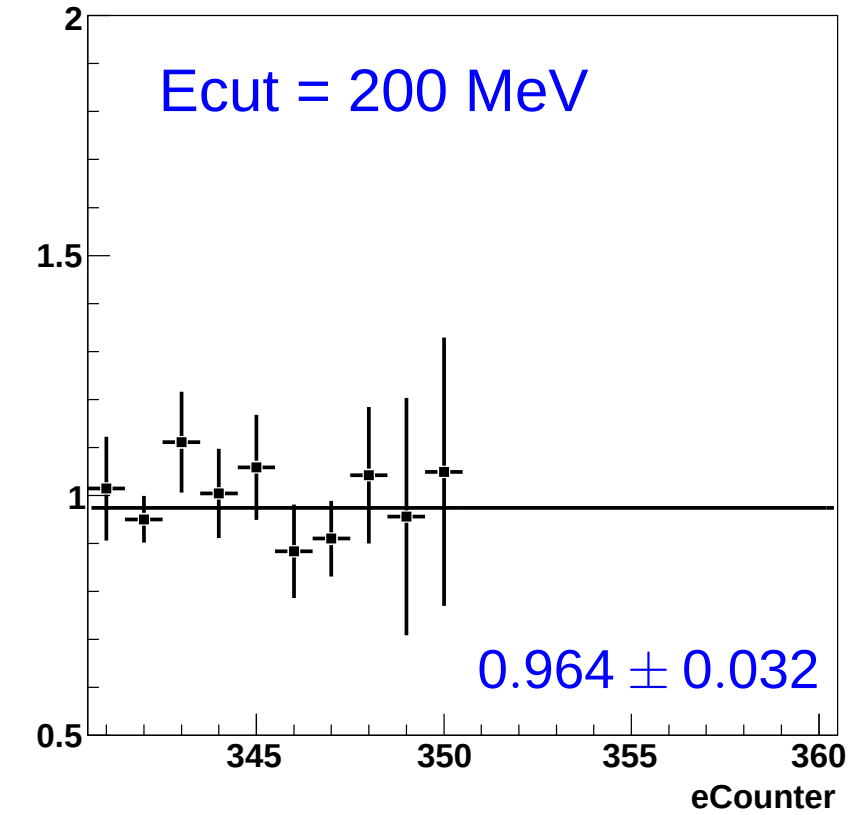

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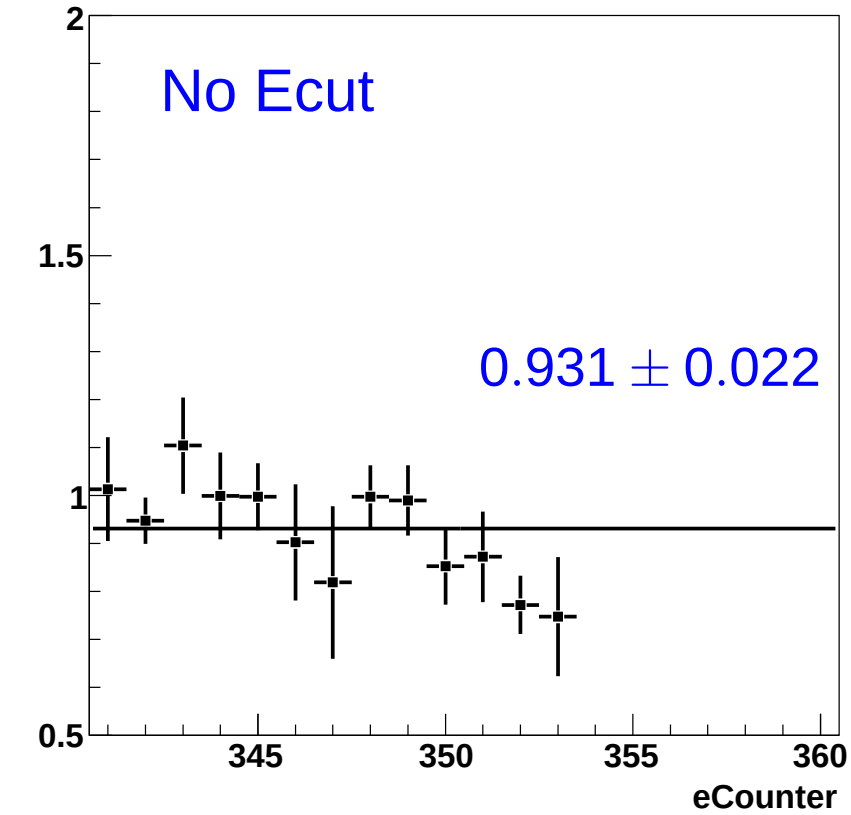

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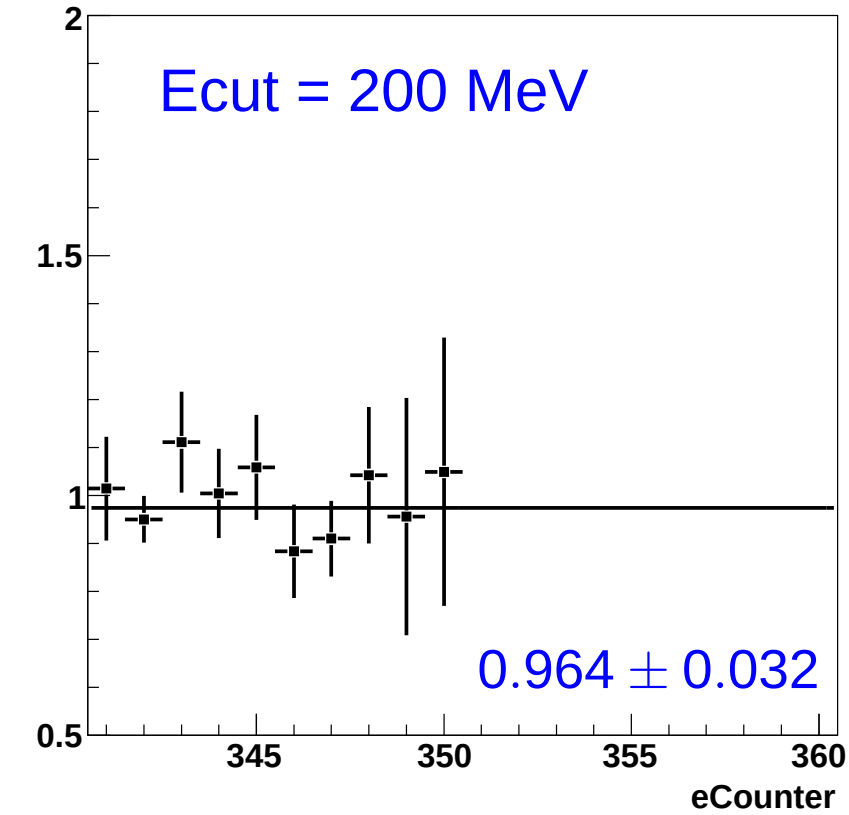

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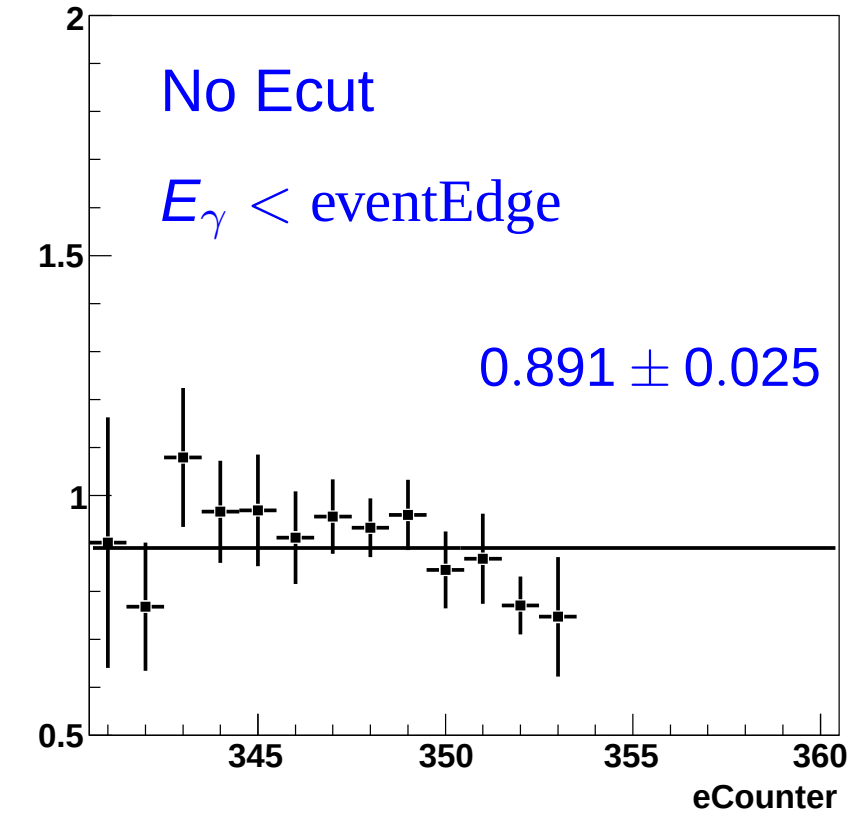

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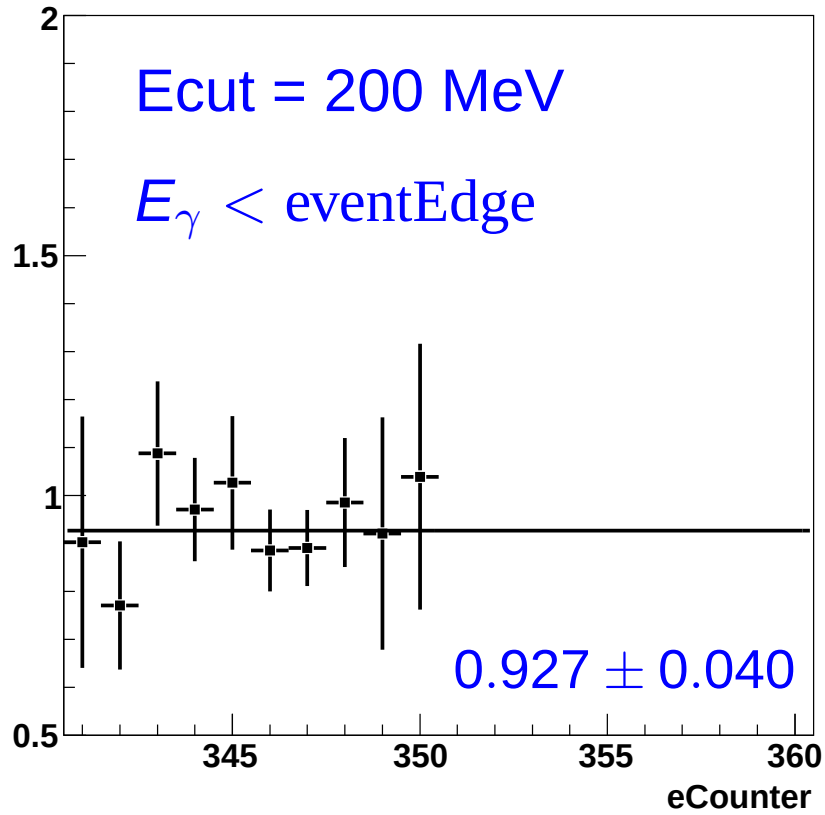

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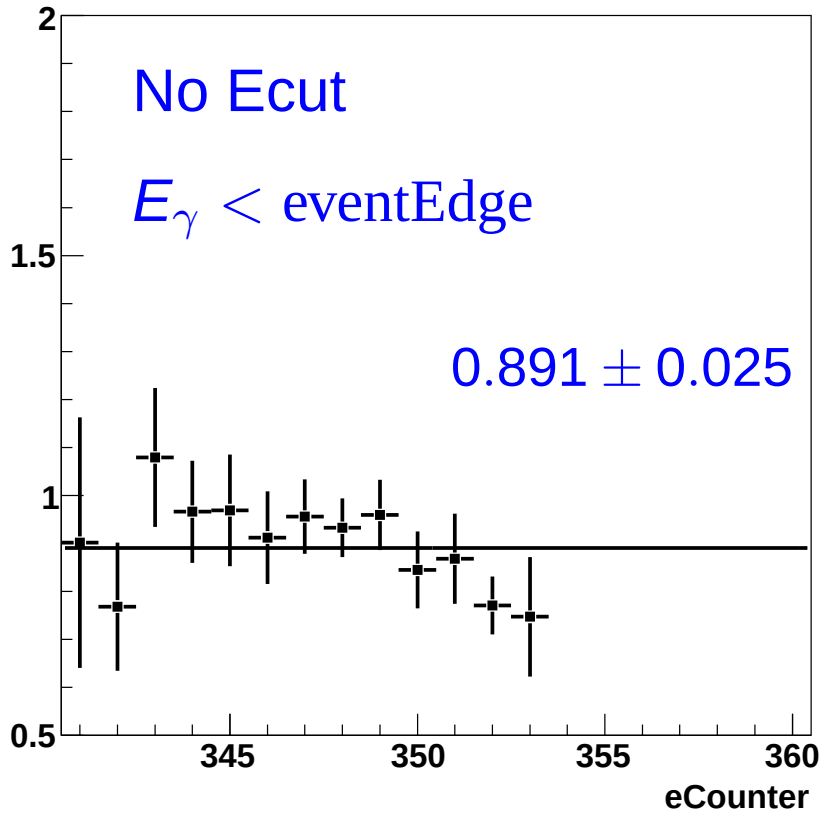

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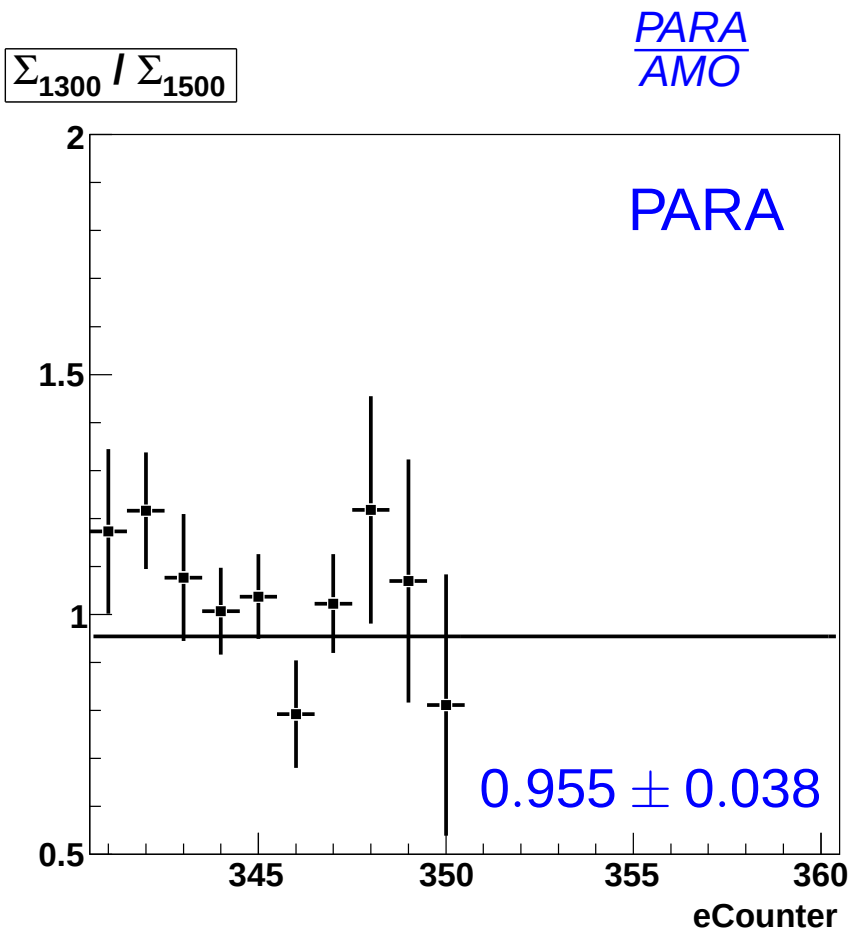

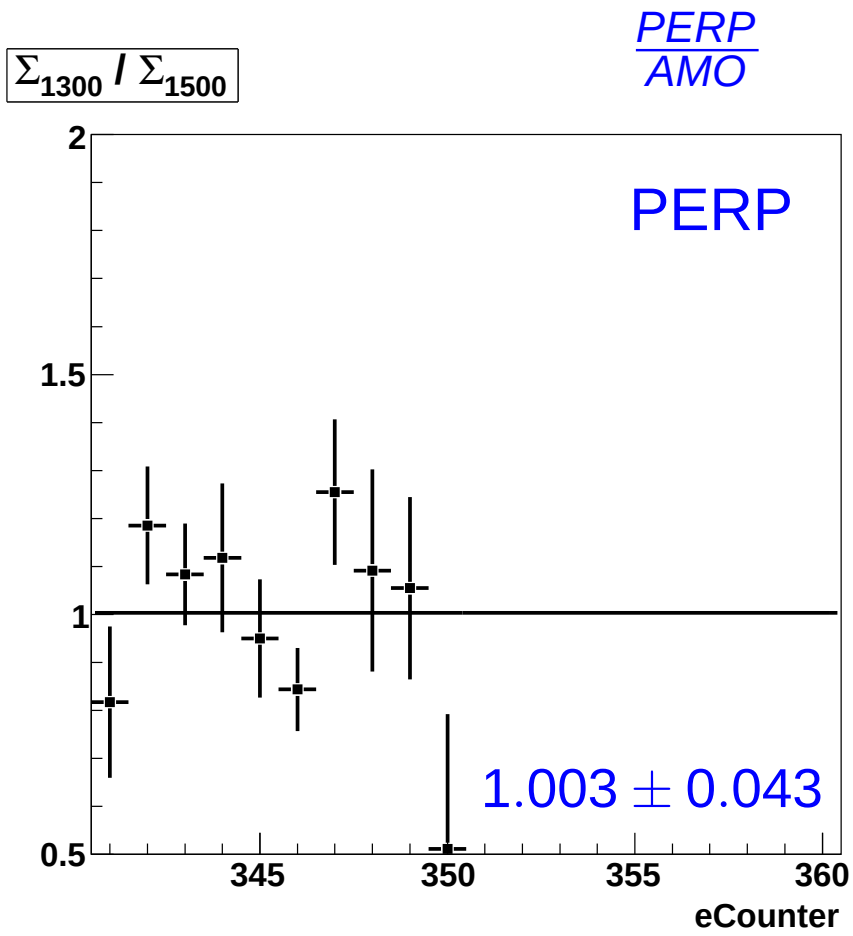

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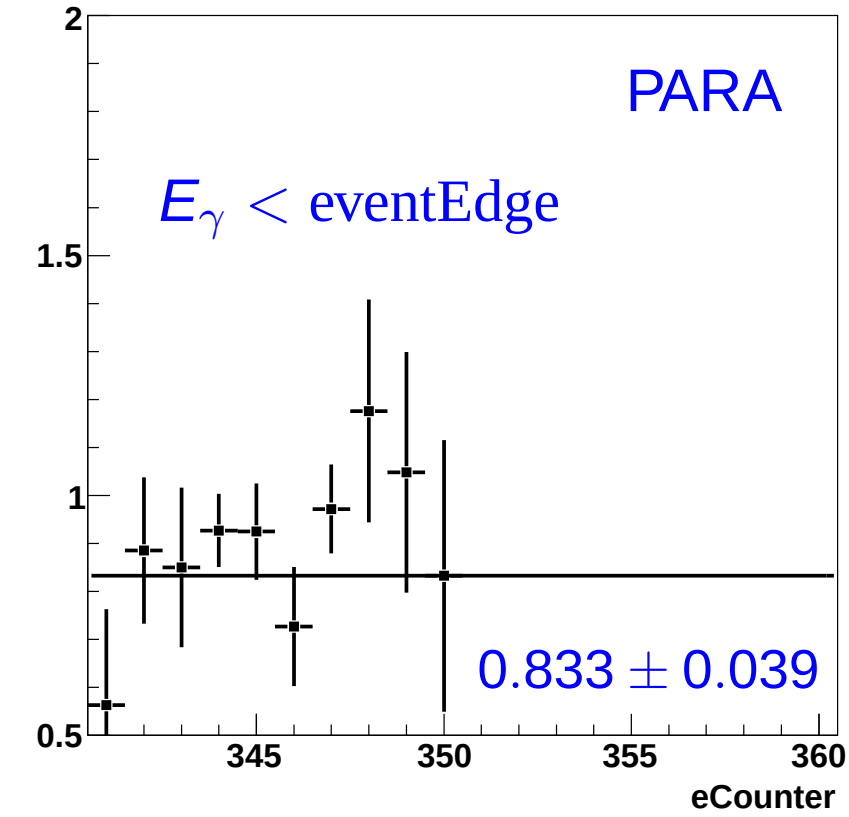
$\Sigma_{1300}\,I\,\Sigma_{1500}$ $\frac{PARA}{AMO}$



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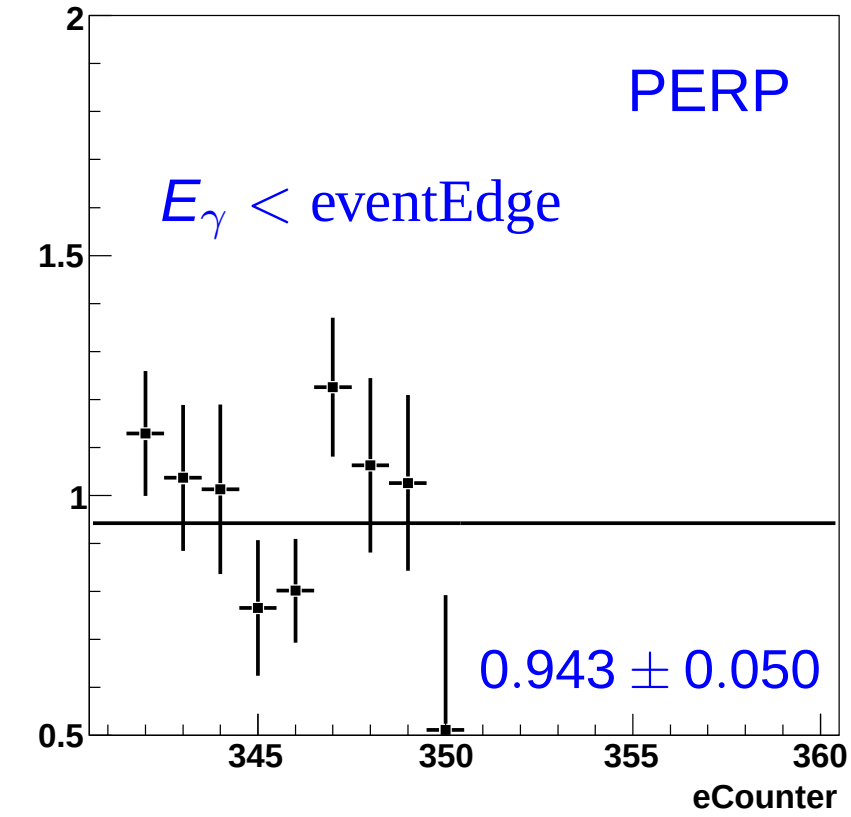

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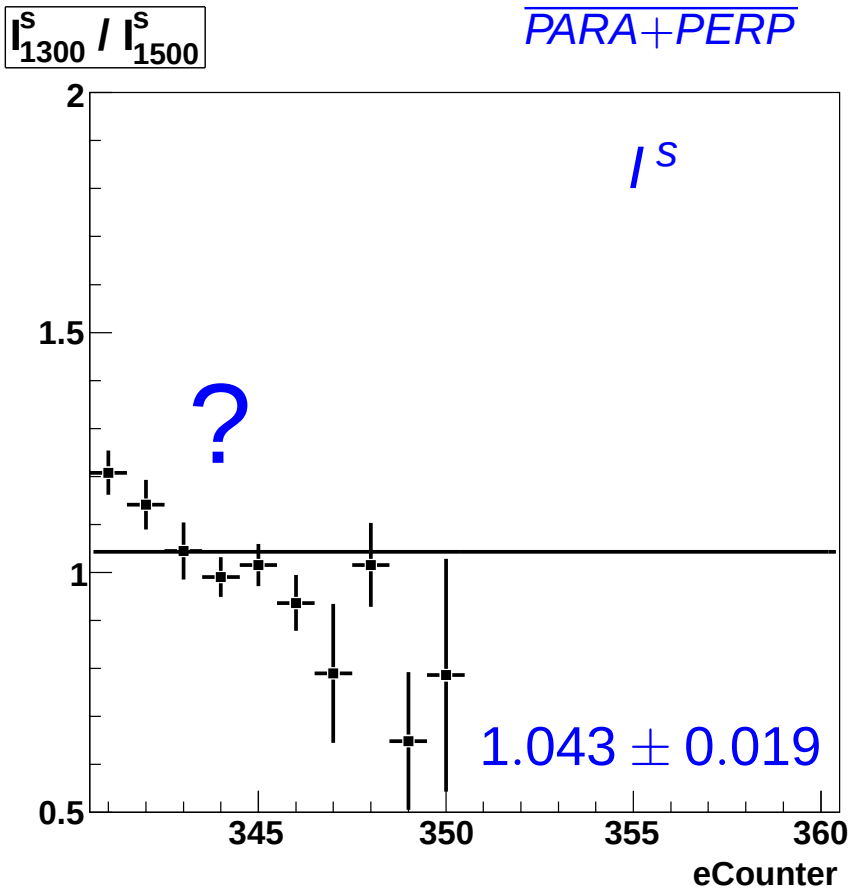

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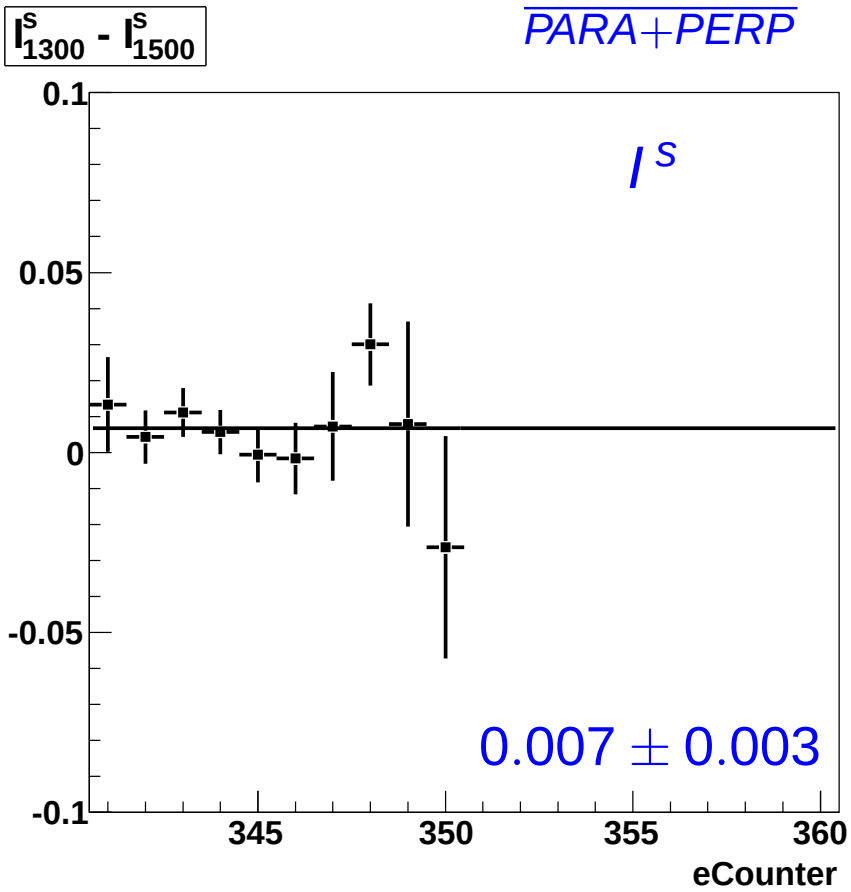

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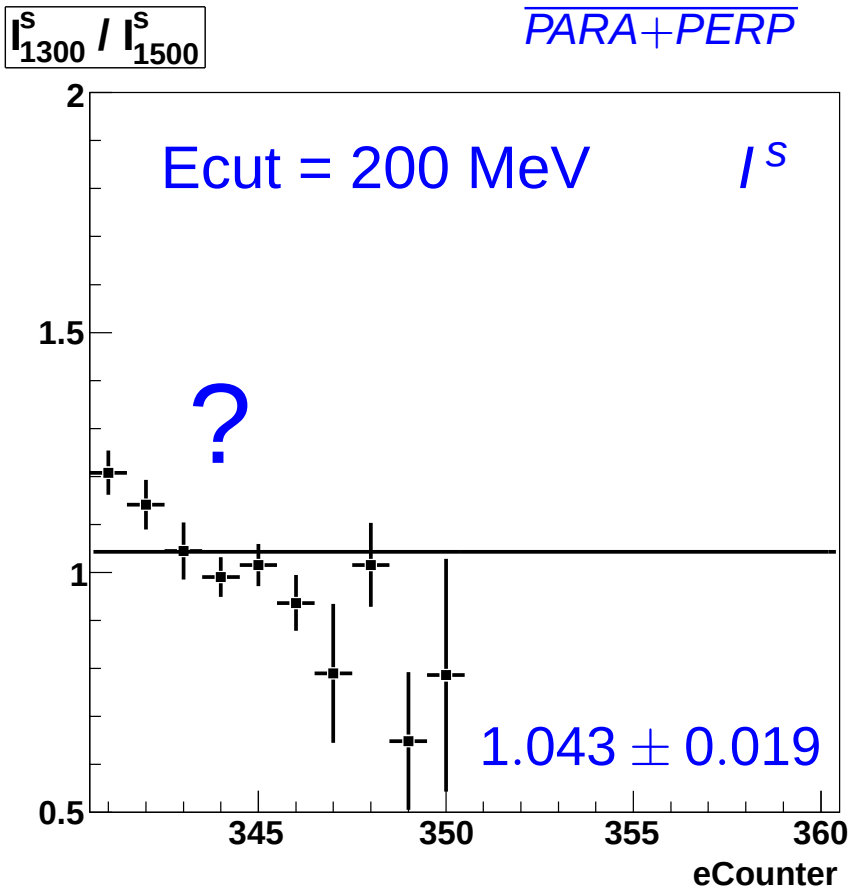

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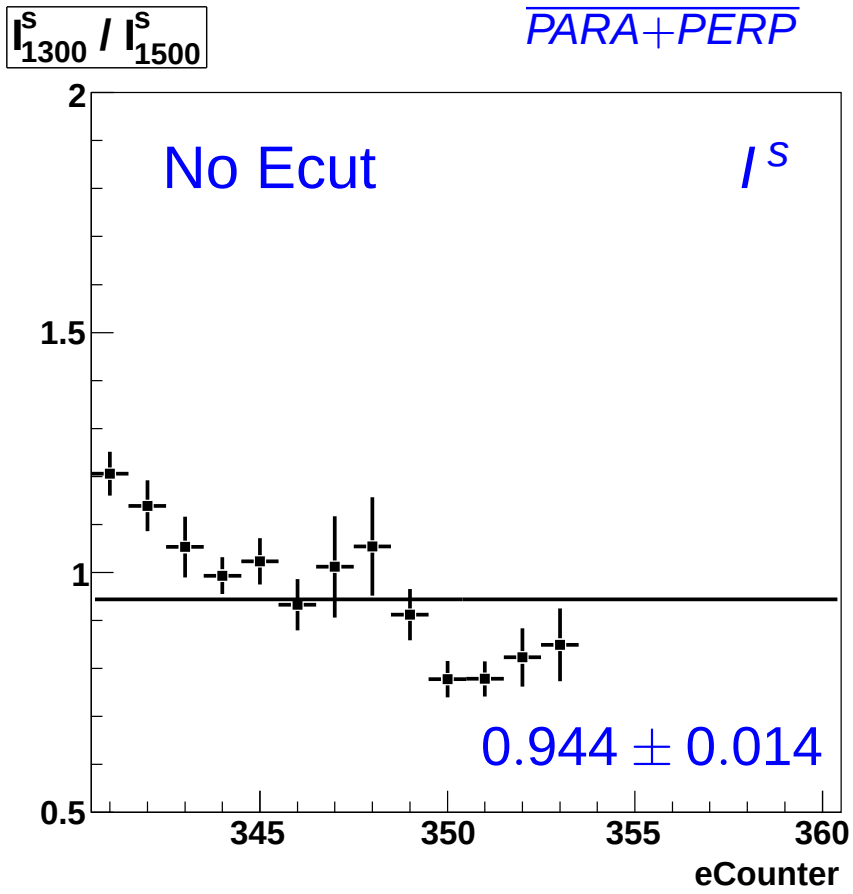

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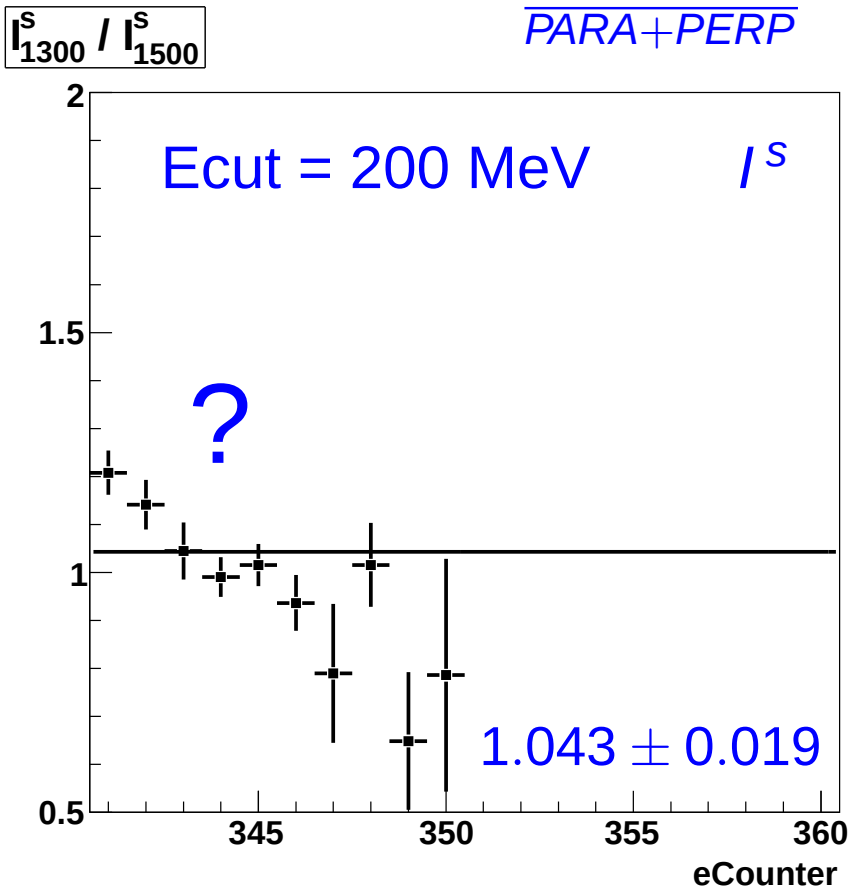

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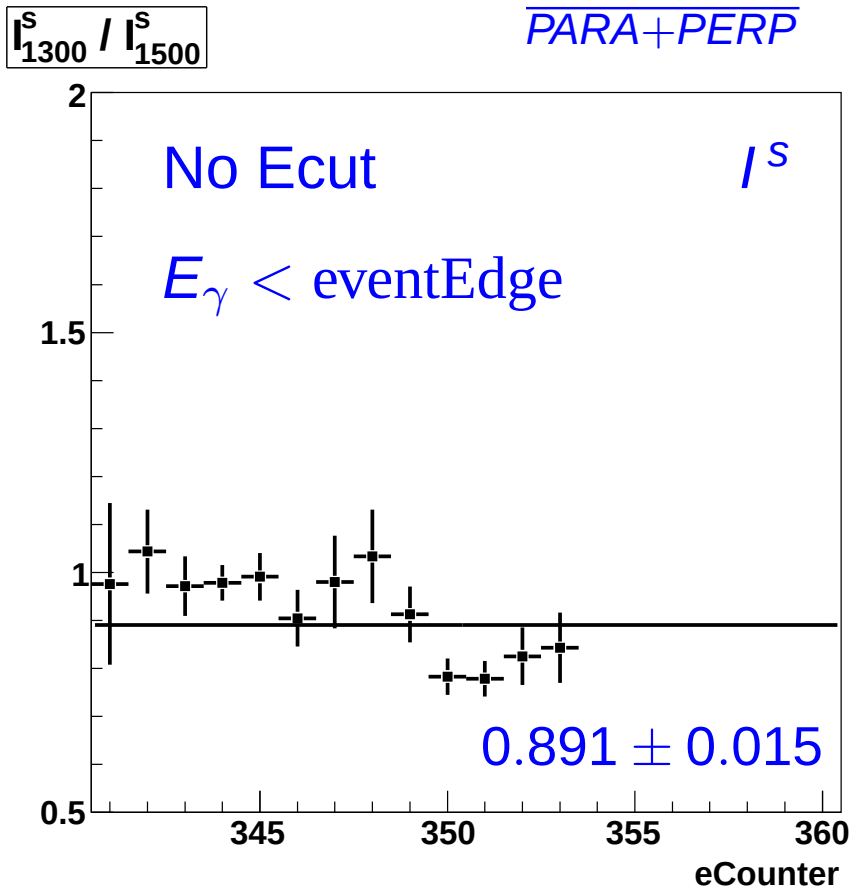

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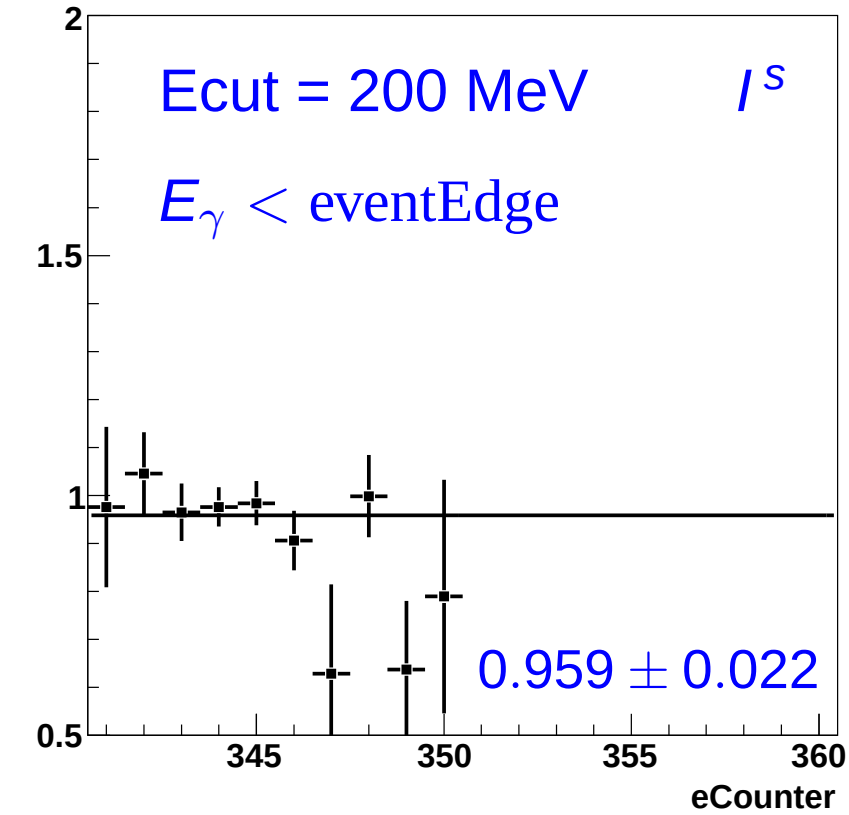

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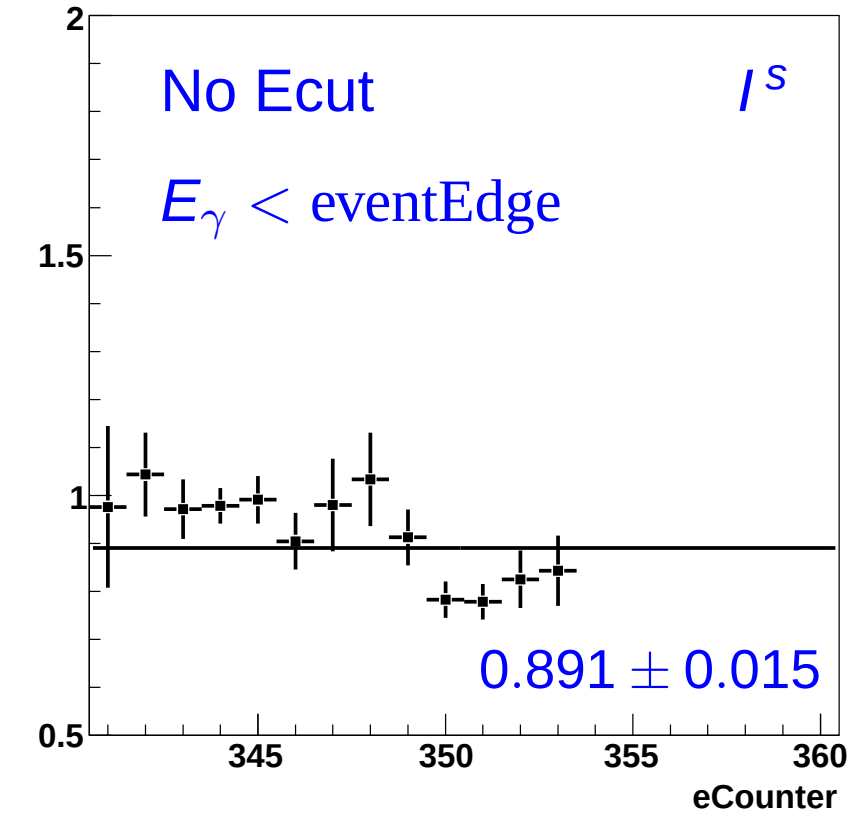

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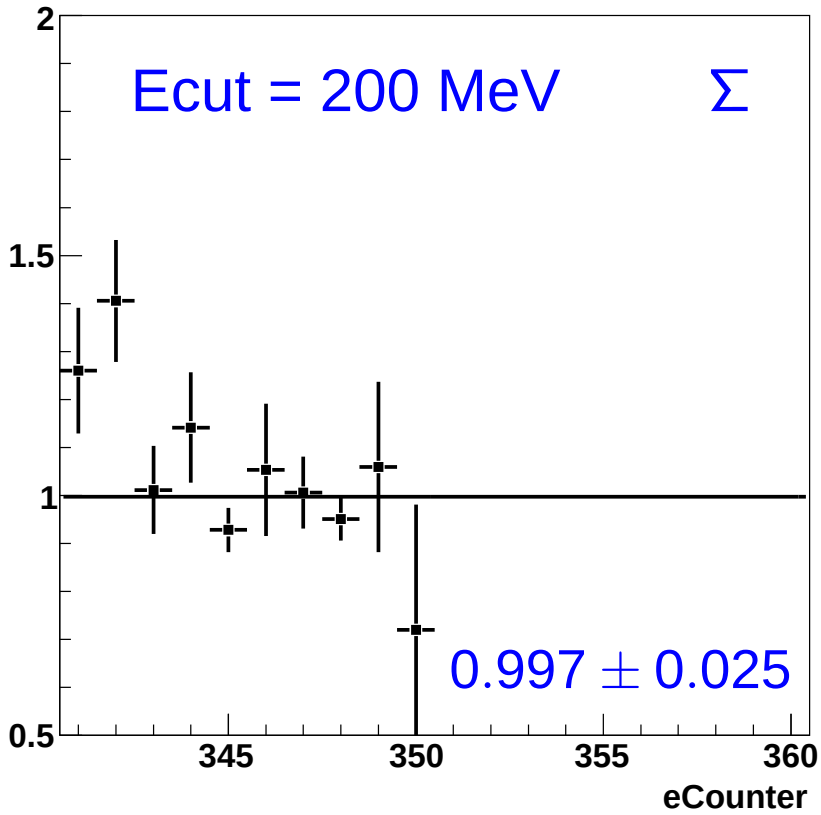

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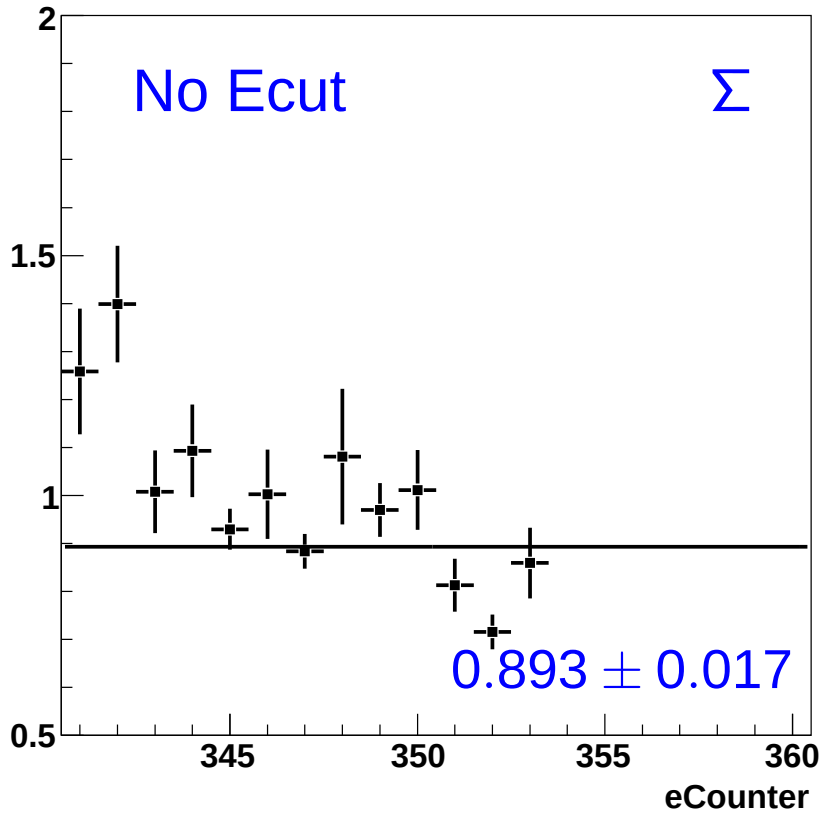

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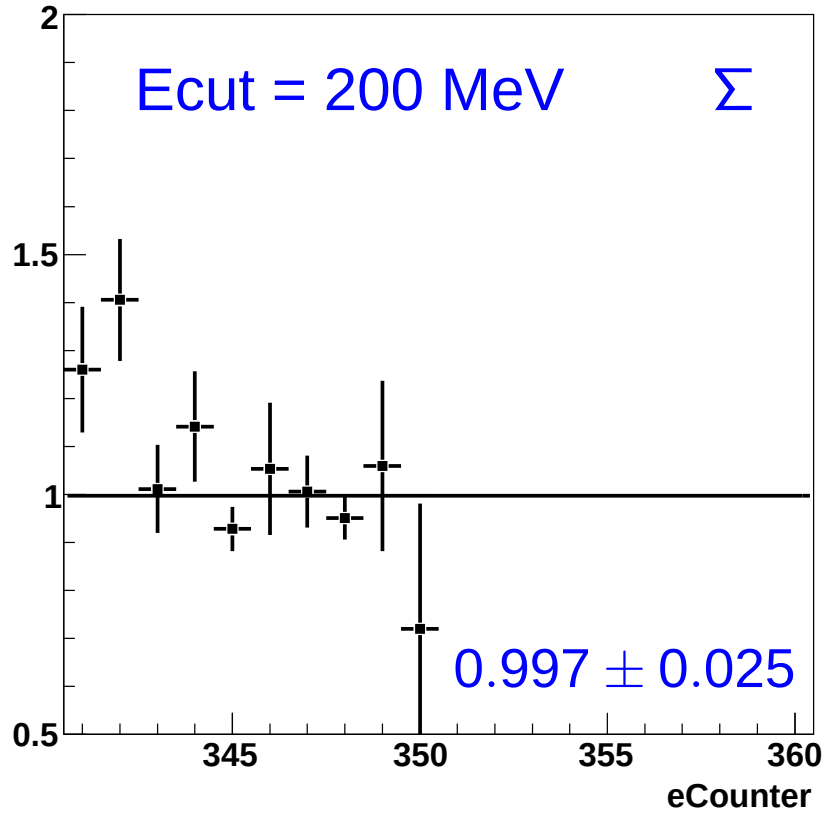

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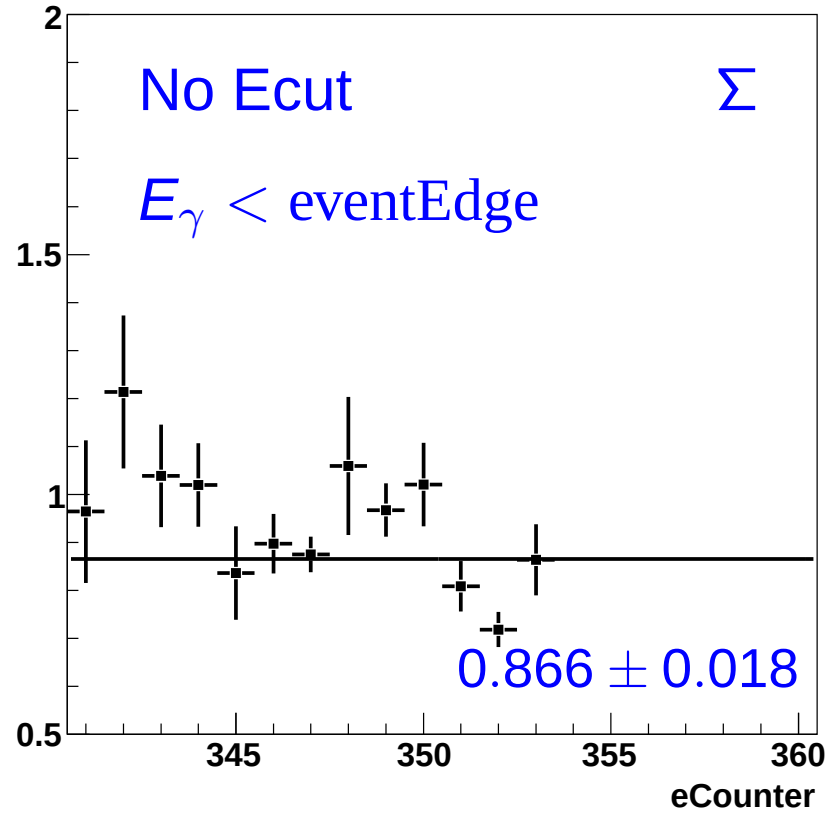

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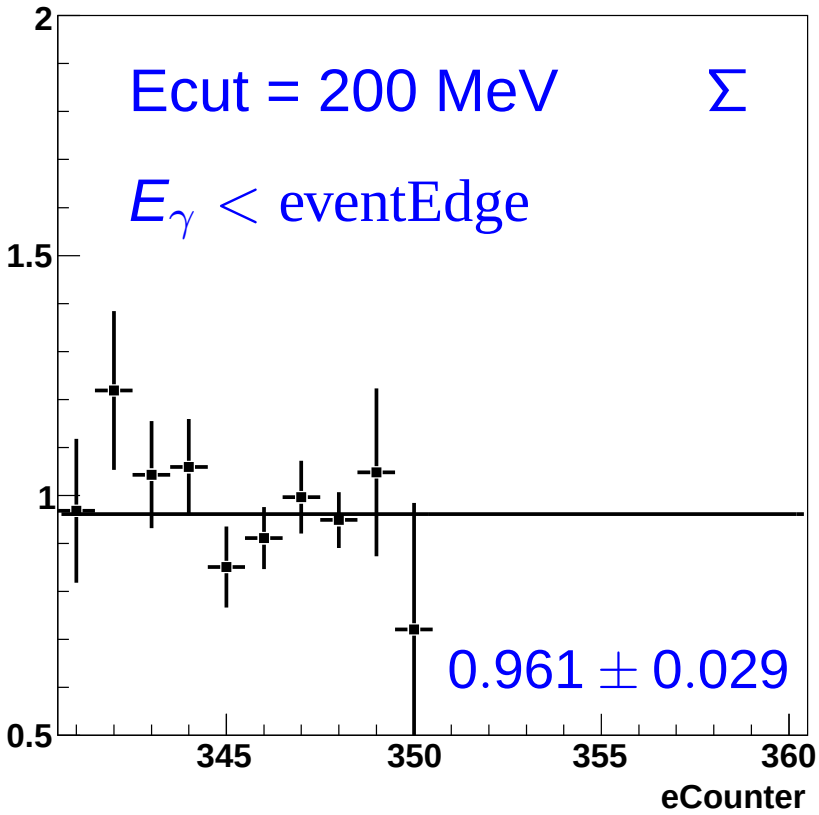

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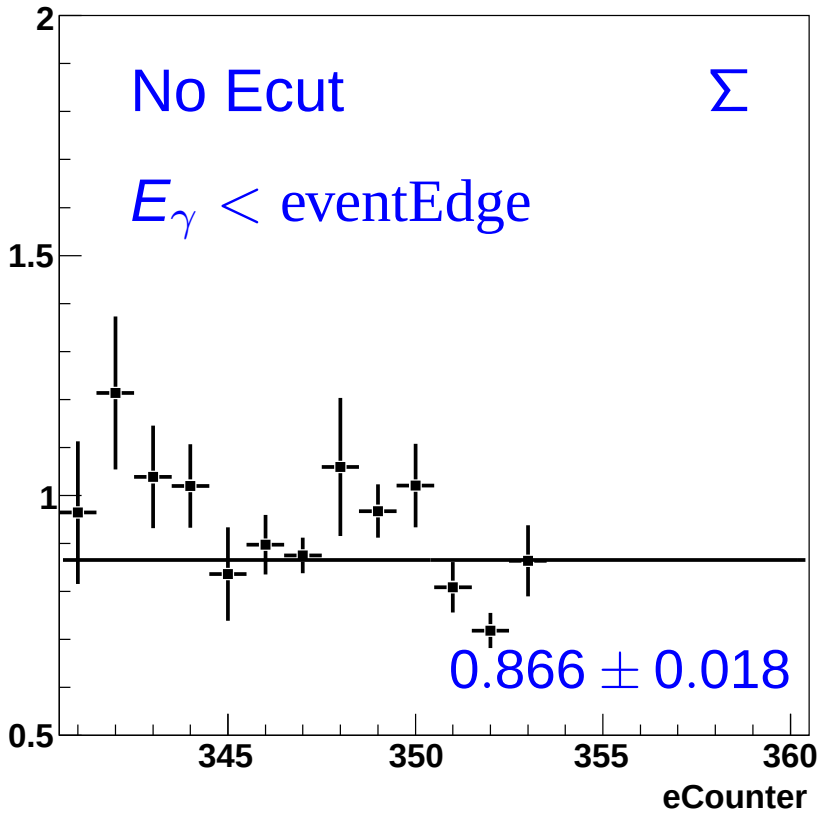

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1.5 / 1.7

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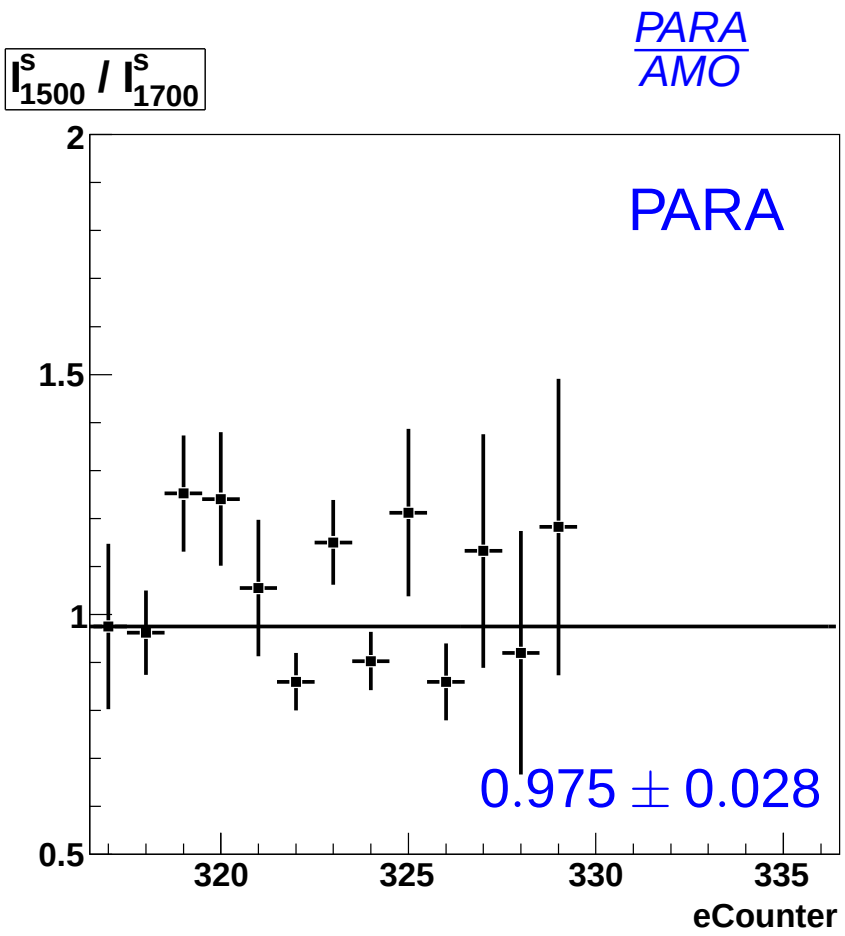

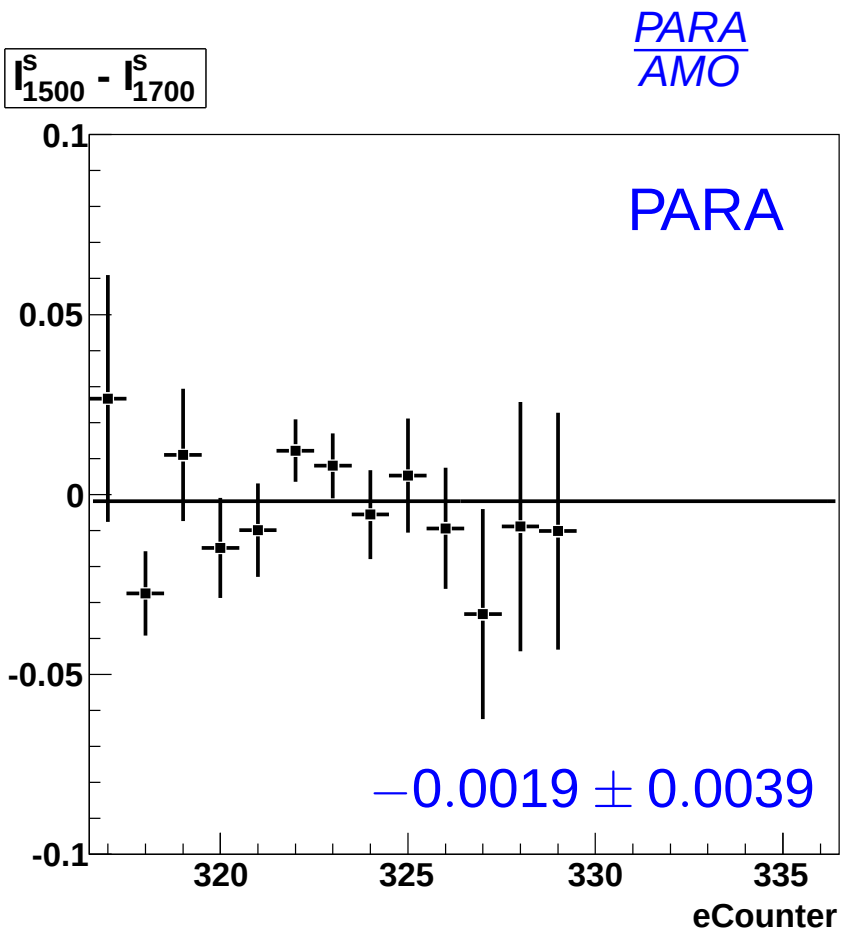

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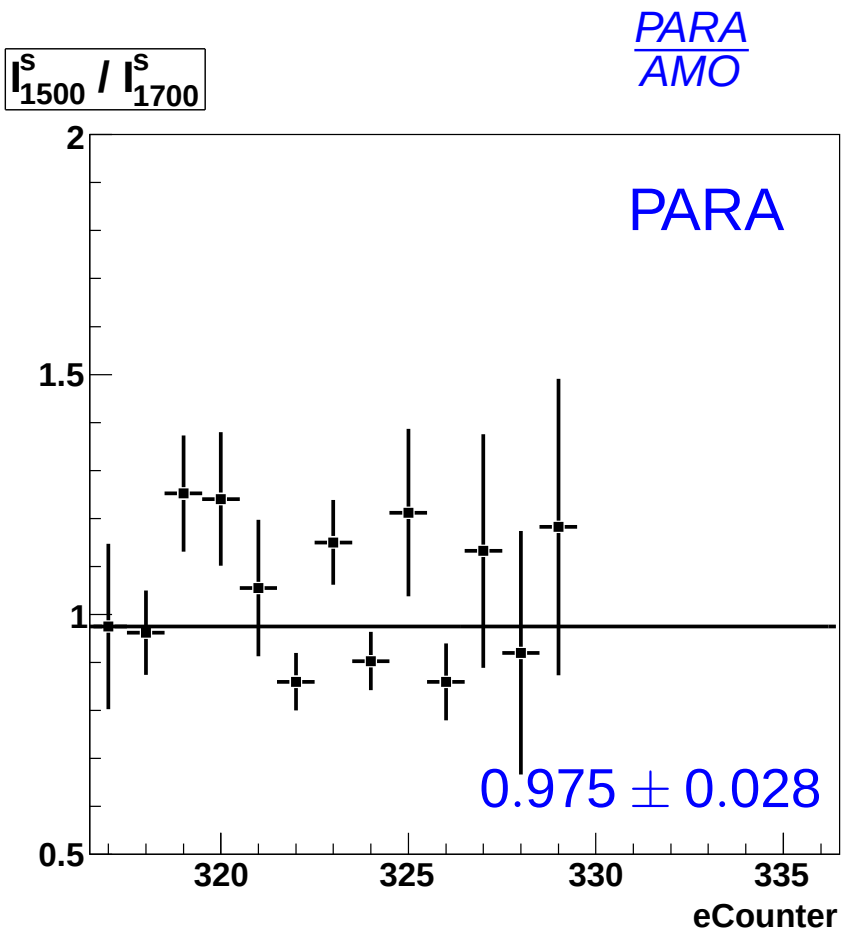

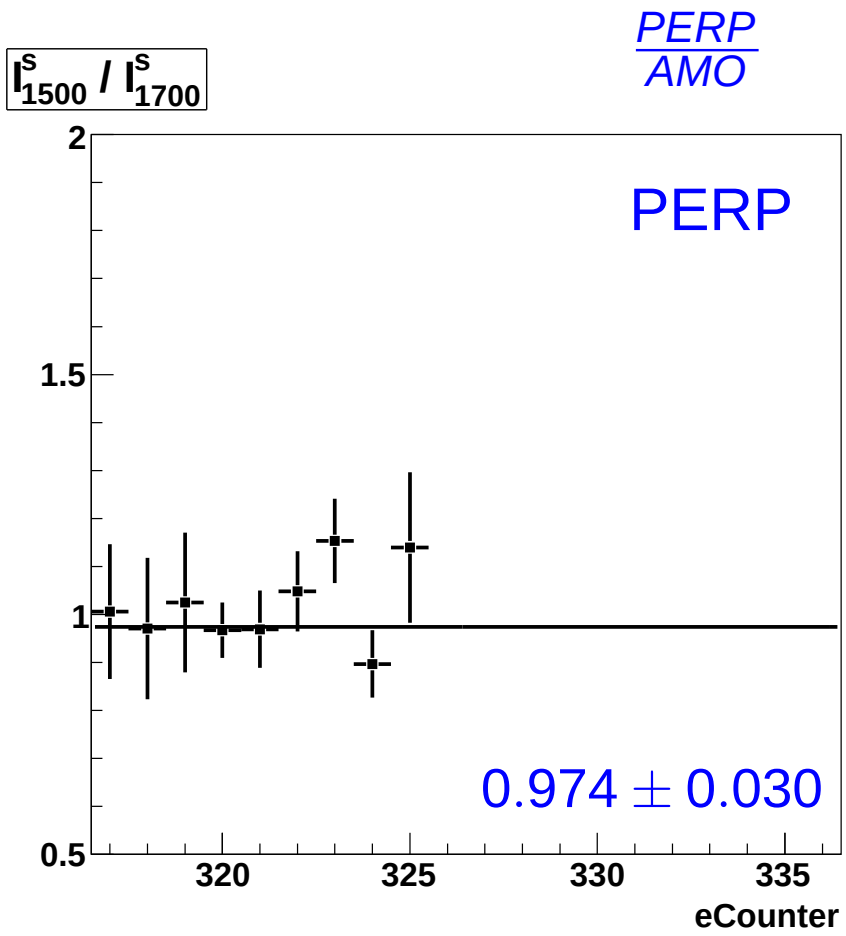

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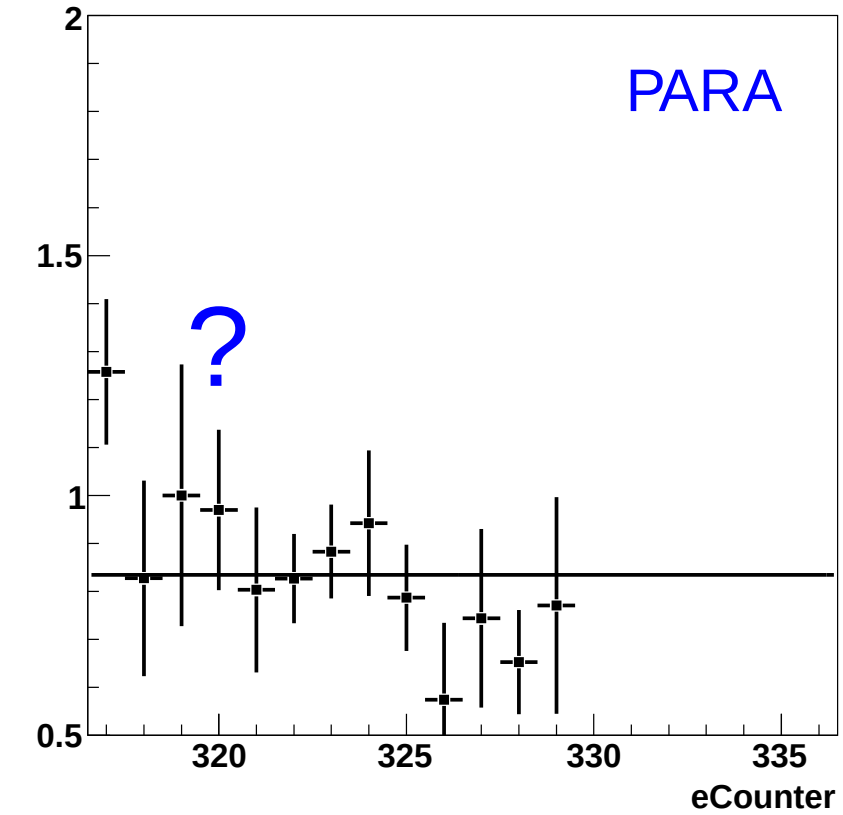
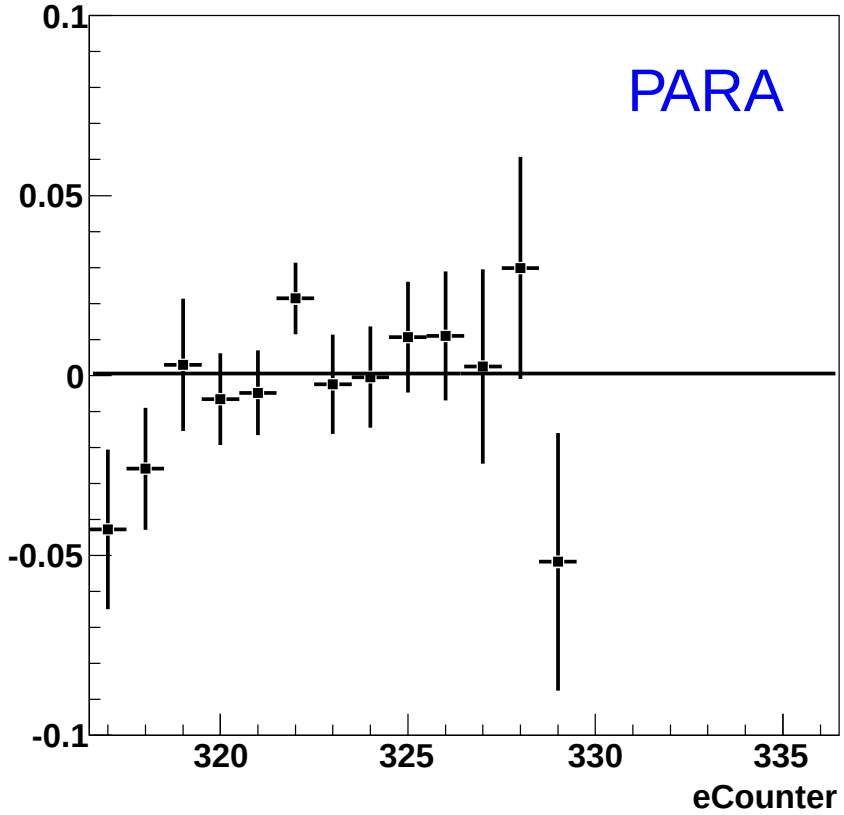
$\Sigma_{1500}\,/\,\Sigma_{1700}$

PARA / AMO



Σ_{1500} - Σ_{1700}

PARA / AMO



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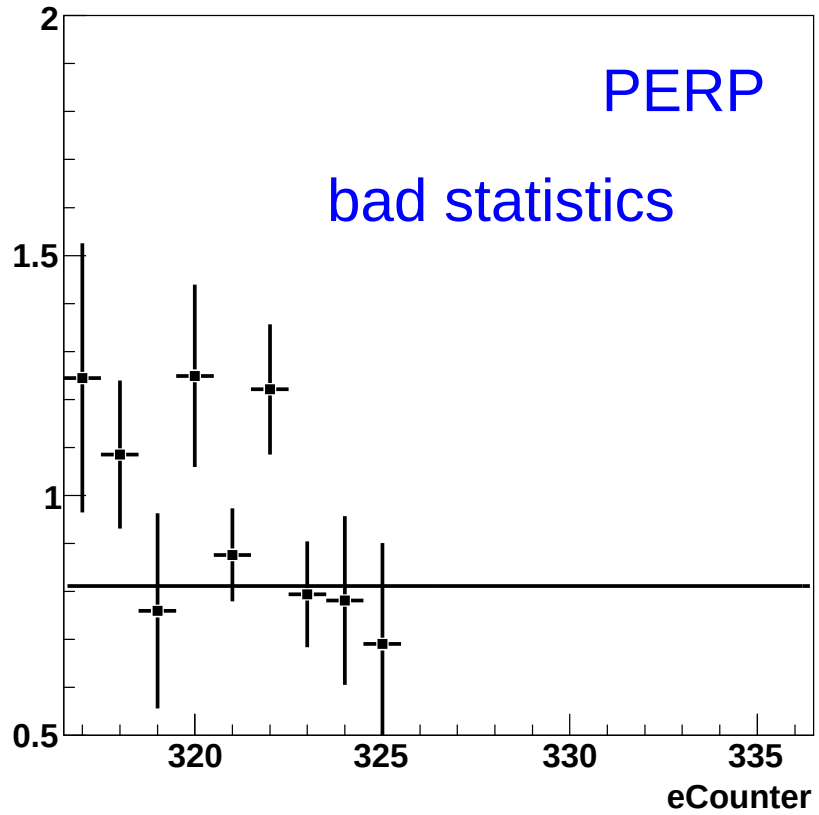
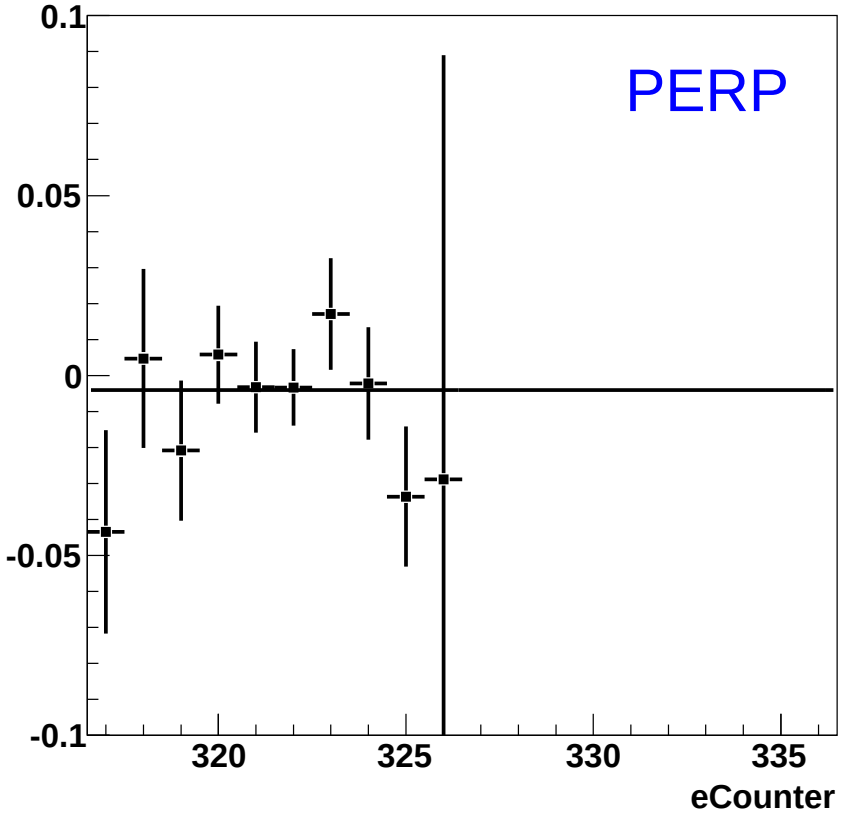
$\Sigma_{1500}\,/\,\Sigma_{1700}$ — $\frac{PERP}{AMO}$



$\Sigma_{1500} - \Sigma_{1700}$ — $\frac{PERP}{AMO}$



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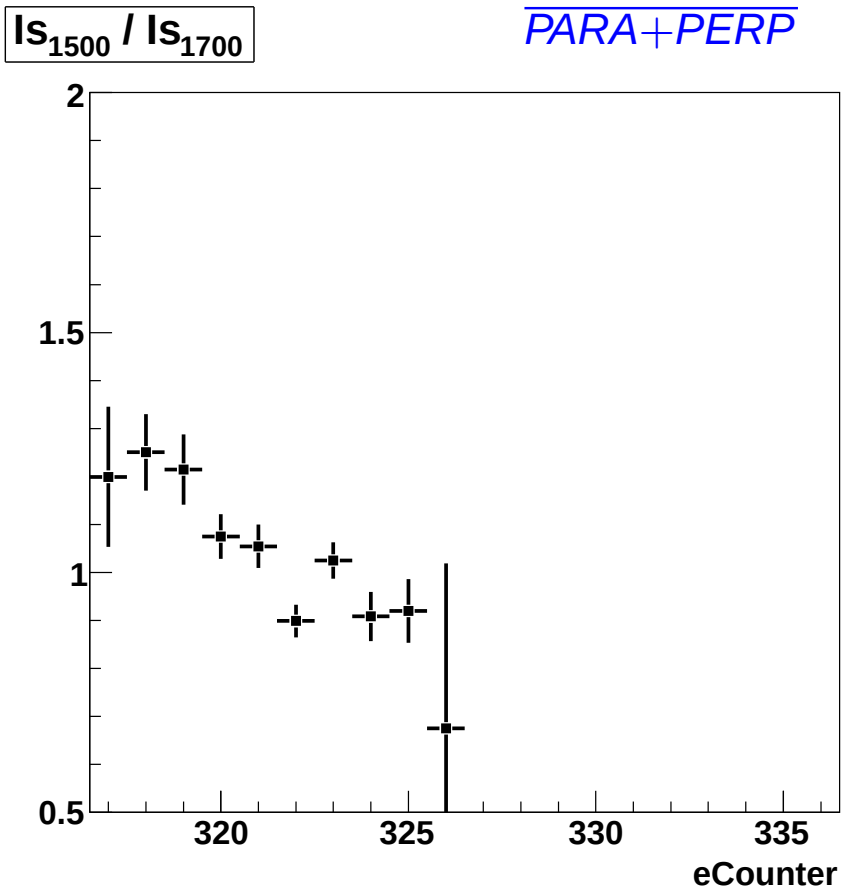
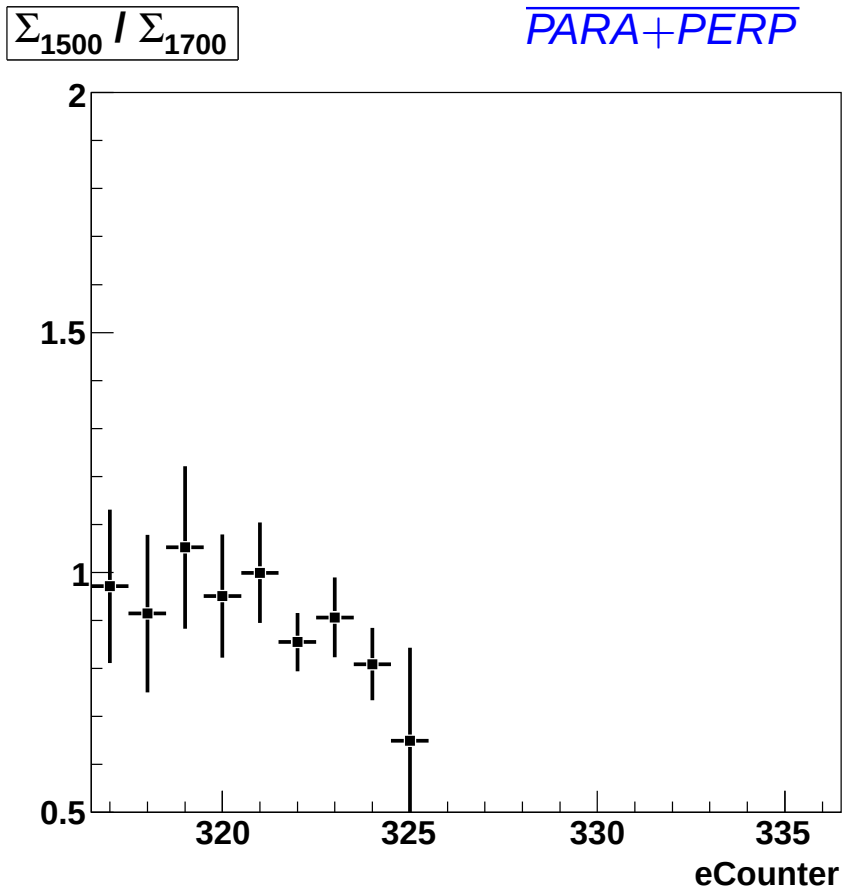
$$I = I_0\,(1 + \delta_I\,(\sin 2\beta \cdot I^S + \cos 2\beta \cdot \Sigma))$$

$\frac{PARA-PERP}{PARA+PERP}$



$\frac{PARA-PERP}{PARA+PERP}$

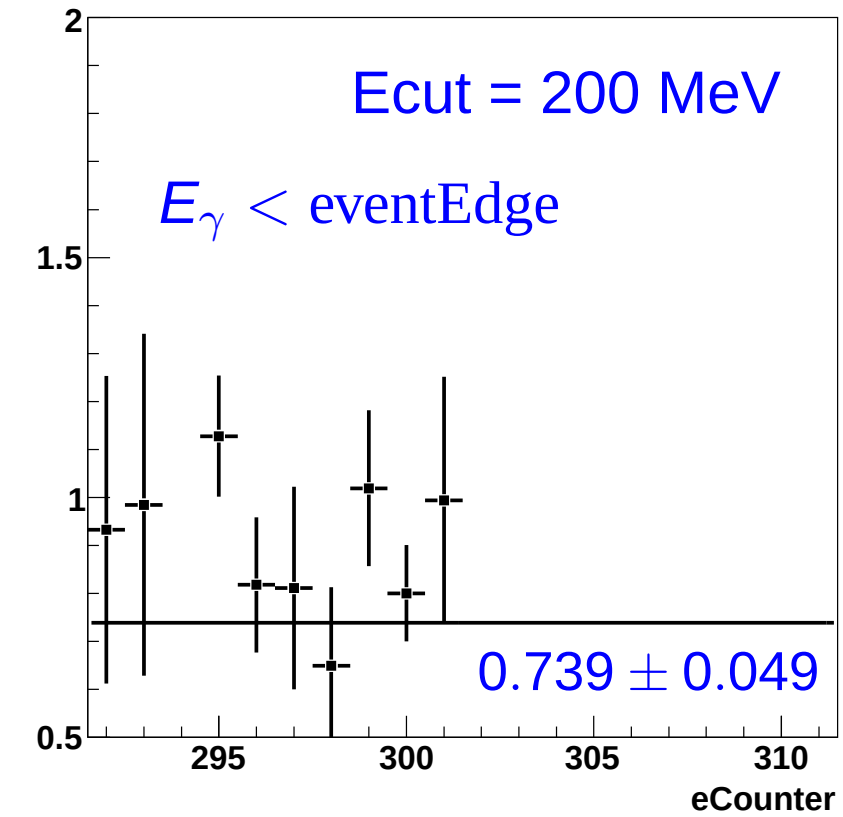


1.7_{manual} / 1.9_{auto}

$$I = I_0\,(1 + \delta_I\,(\sin 2\beta \cdot I^S + \cos 2\beta \cdot \Sigma))$$

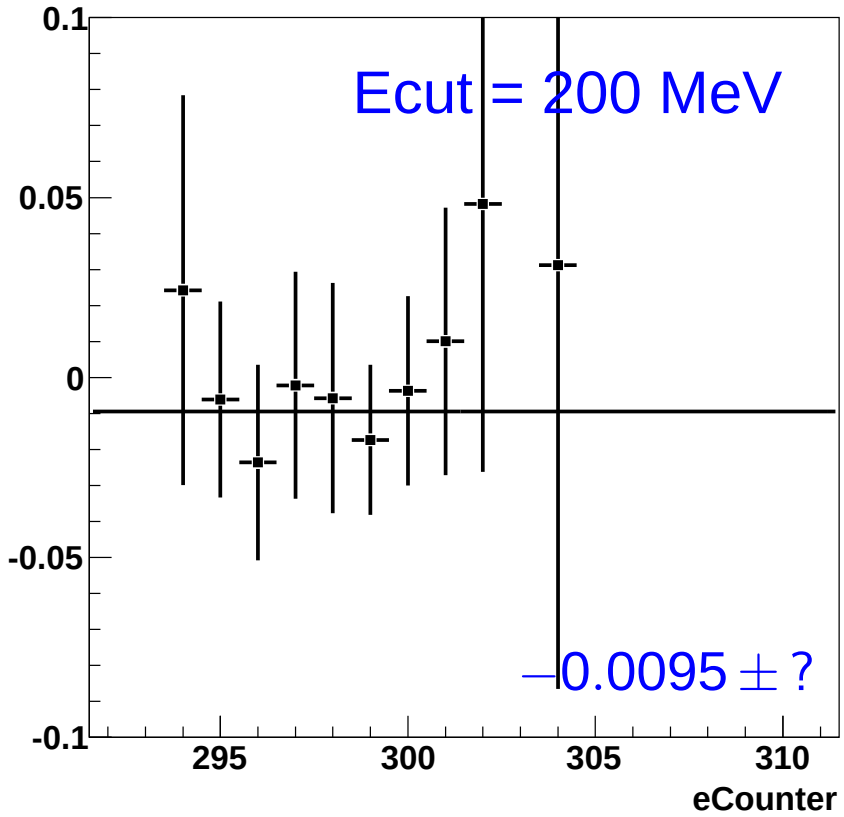
PARA / AMO

I^S_{1700} / I^S_{1900}



PARA / AMO

I^S_{1700} - I^S_{1900}

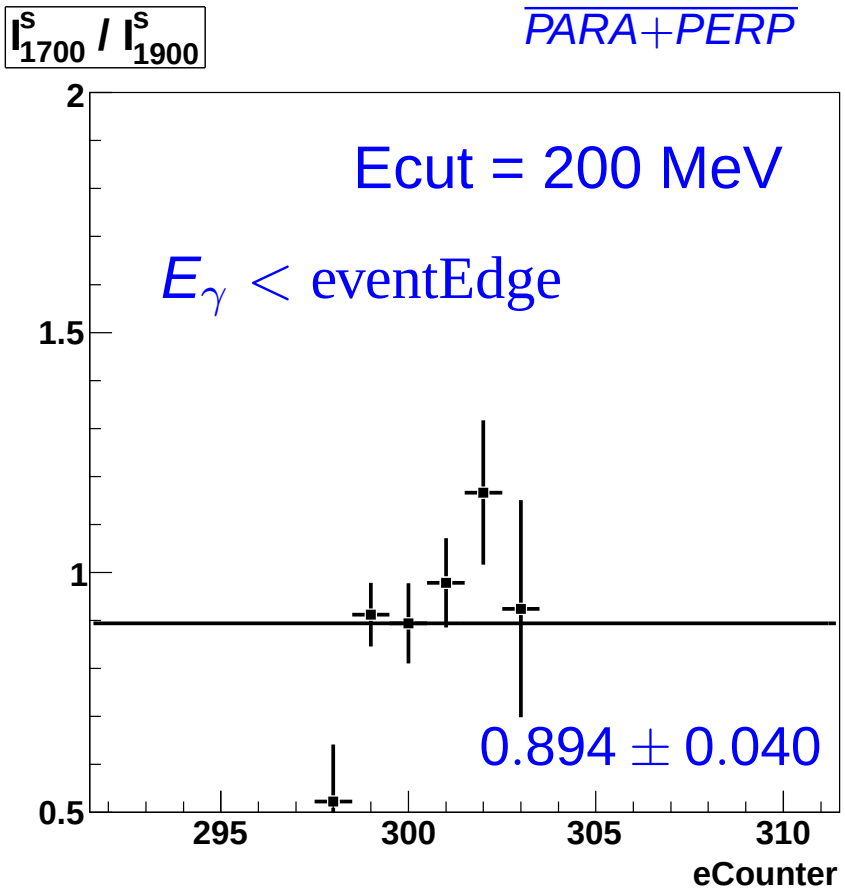


Study of Overlap Regions using $\gamma p \to p\,\pi^+\pi^-$ ***

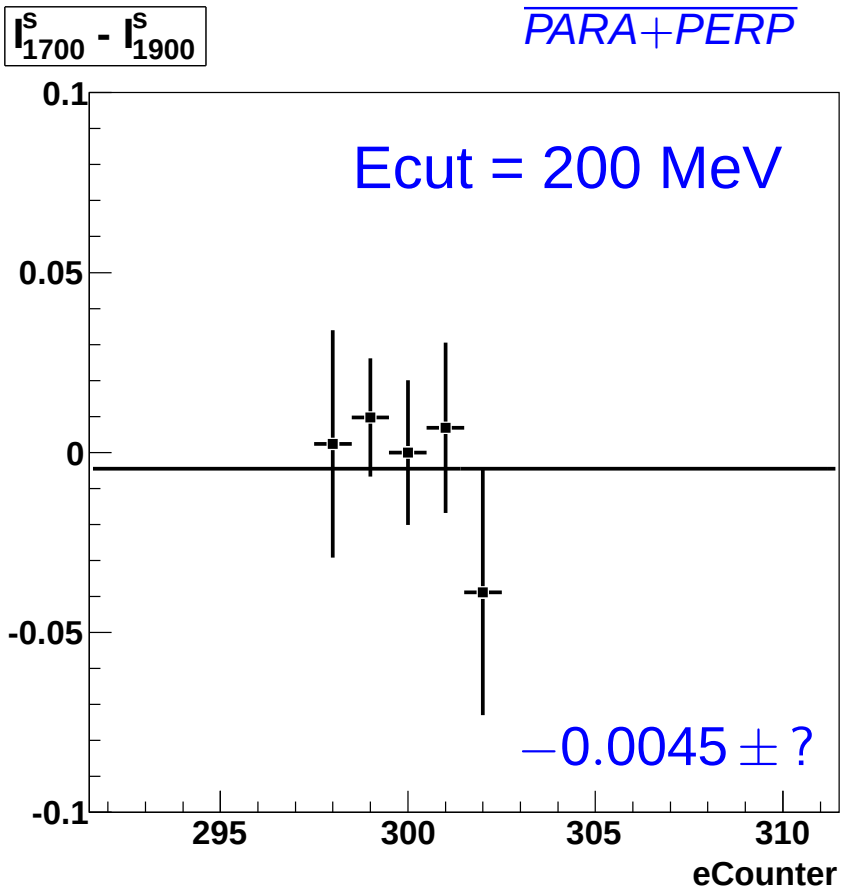
1.7_{manual} / 1.9_{auto}

$$I = I_0\,(1 + \delta_I\,(\sin 2\beta \cdot I^S + \cos 2\beta \cdot \Sigma))$$

$\frac{PARA-PERP}{PARA+PERP}$

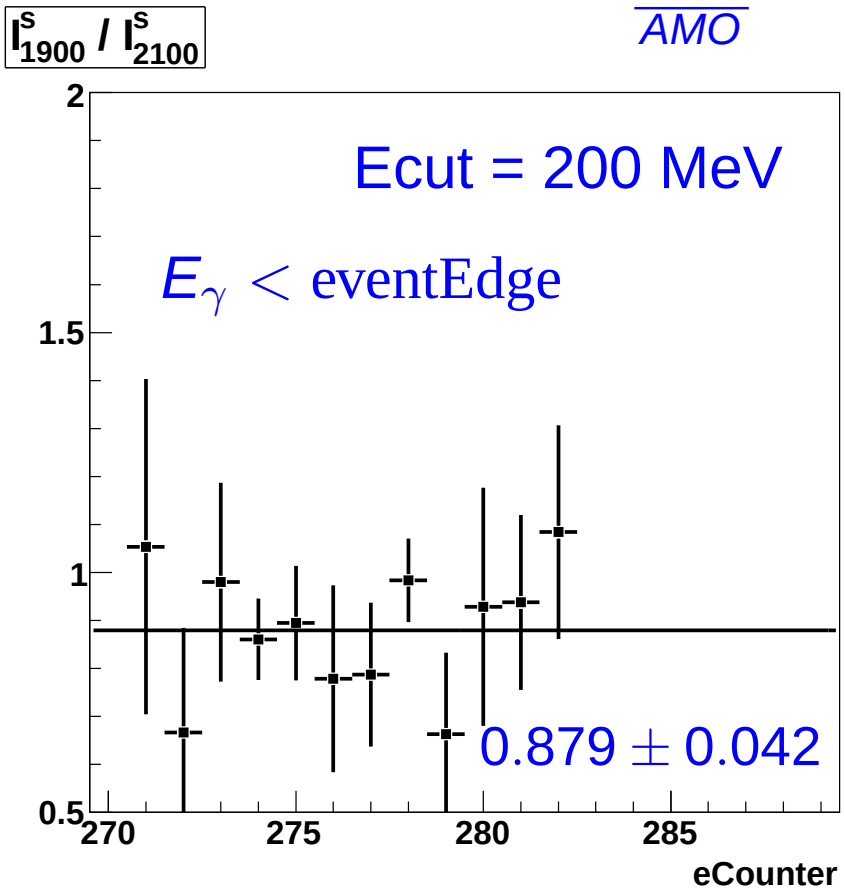


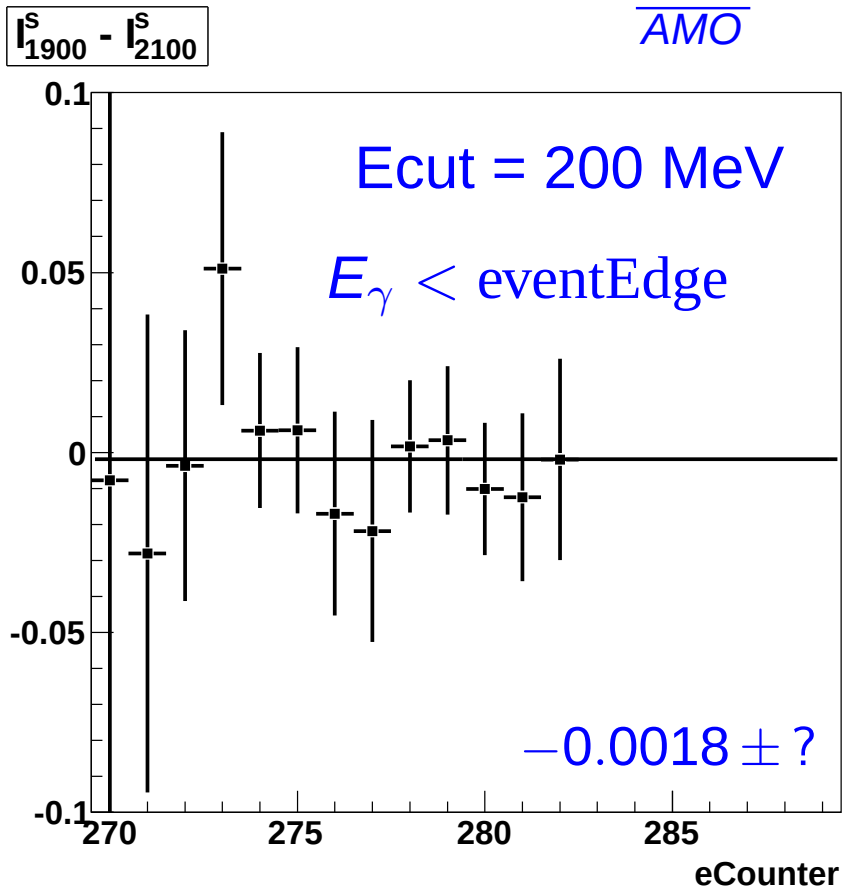
$\frac{PARA-PERP}{PARA+PERP}$



1.9 auto / 2.1

$$I = I_0\,(1 + \delta_I\,(\sin 2\beta \cdot I^S + \cos 2\beta \cdot \Sigma))$$



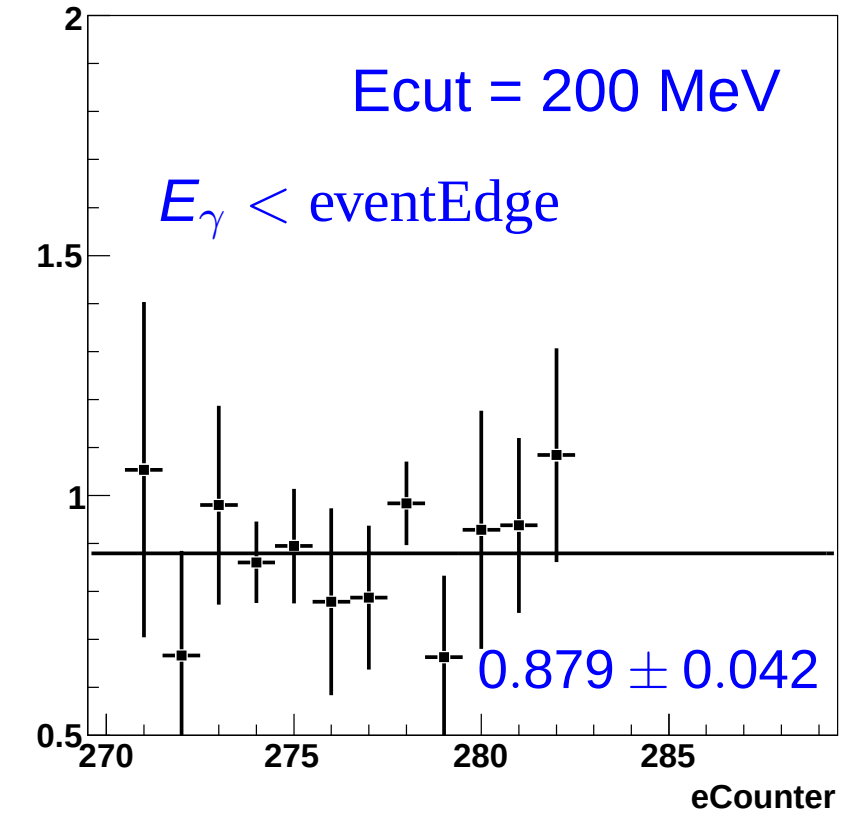


1.9 auto / 2.1

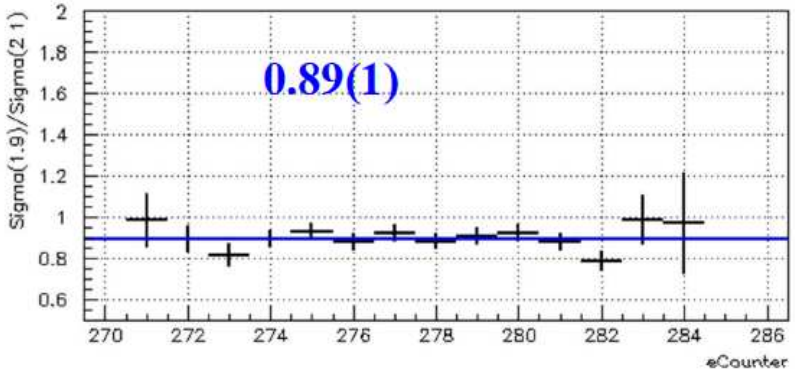
$$I = I_0\,(1 + \delta_I\,(\sin 2\beta \cdot I^S + \cos 2\beta \cdot \Sigma))$$

PARA / AMO

I^S_{1900} / I^S_{2100}



PARA →

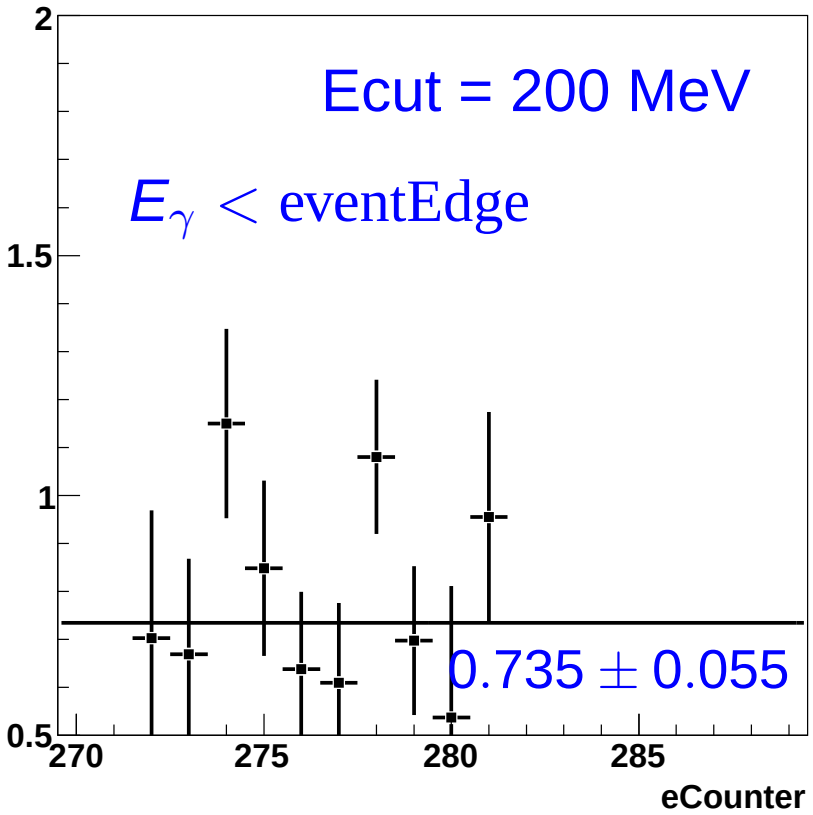


1.9 auto / 2.1

$$I = I_0\,(1 + \delta_I\,(\sin 2\beta \cdot I^S + \cos 2\beta \cdot \Sigma))$$

Σ_{1900} / Σ_{2100}

PARA / AMO



Σ_{1900} - Σ_{2100}

PARA / AMO