

A Possible Observation of Λ nn Continuum Structures and a Bound Σ nn State using the $(e, e'K^+)$ Reaction

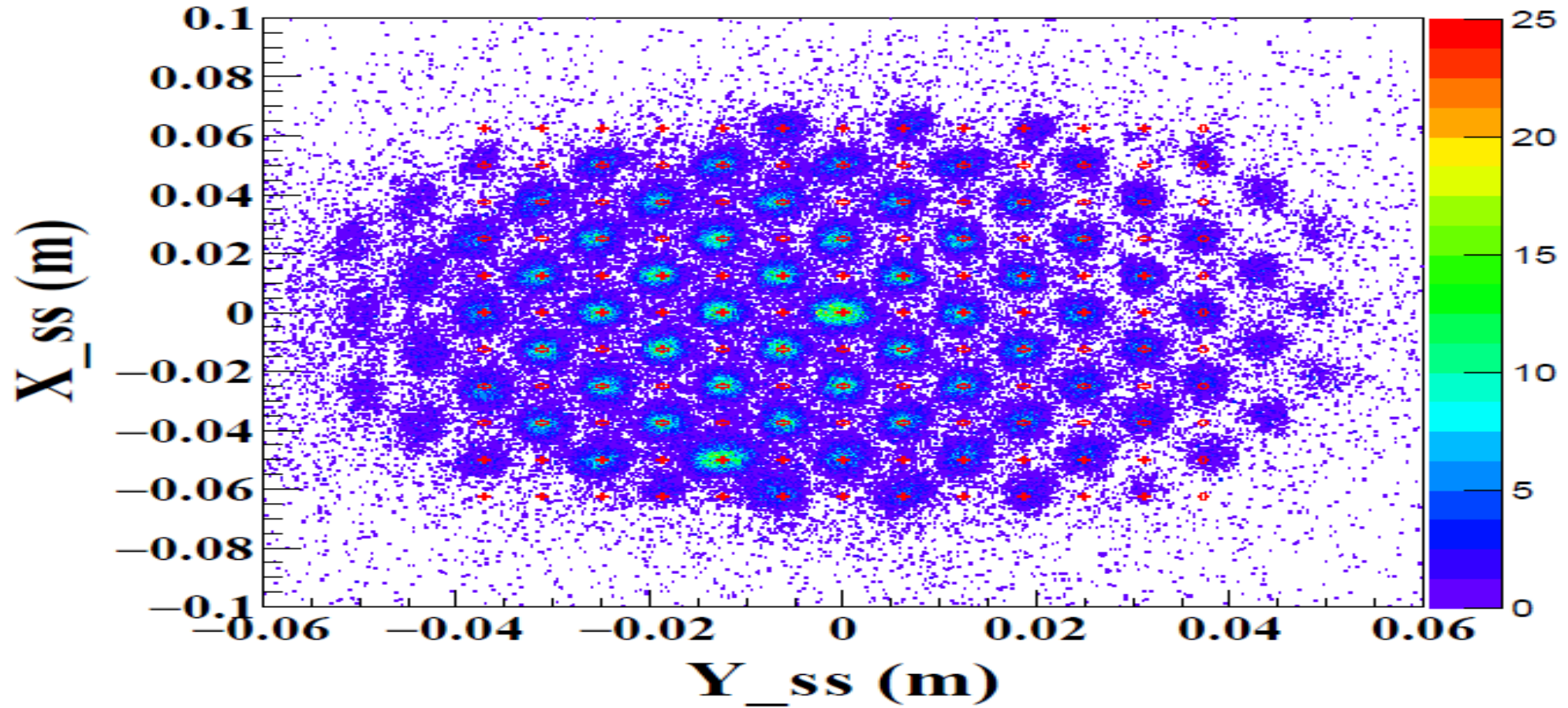
Bishnu Pandey
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Jefferson Lab Experiment: E12-17-003
Data Taken: November 2018

nn Λ analysis meeting
April 14, 2021

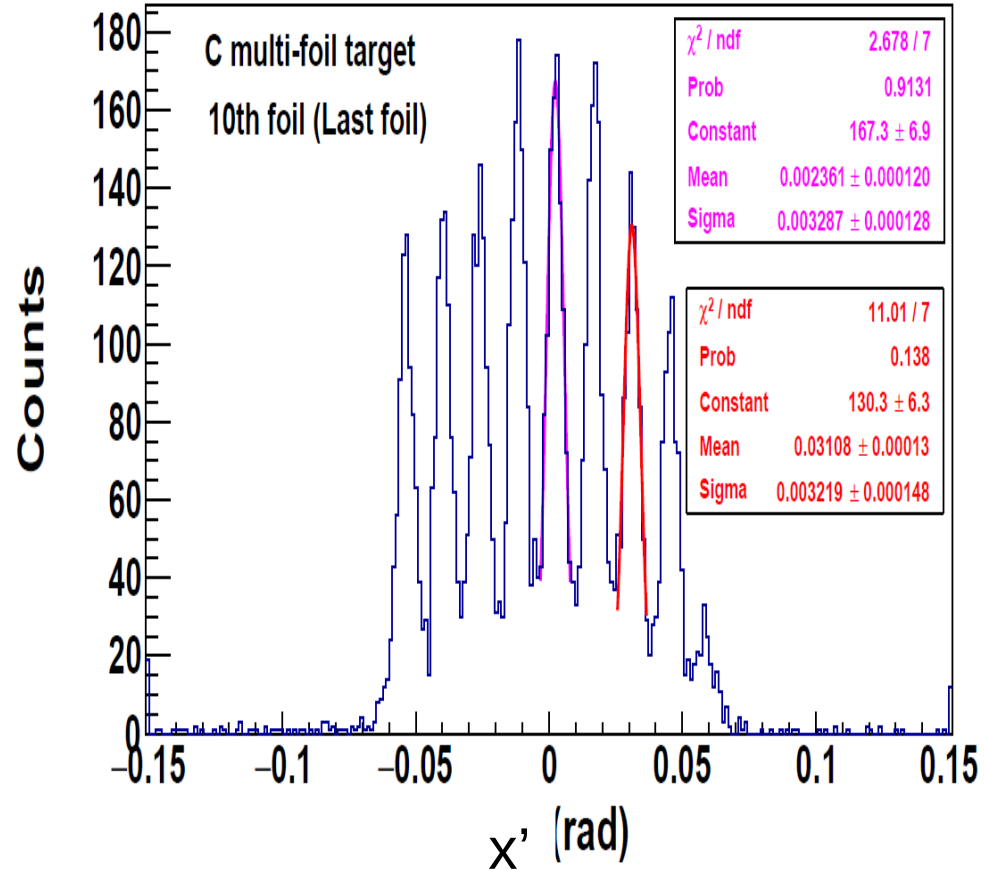
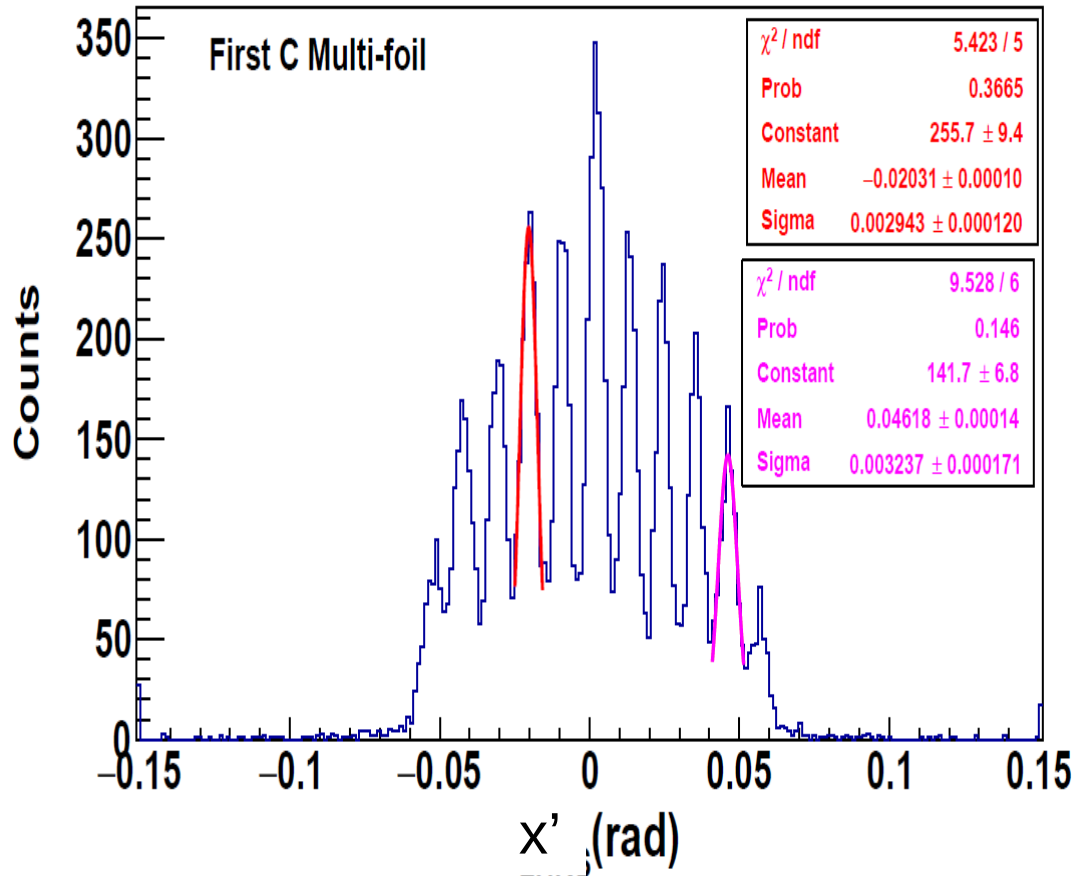


LHRS Reconstructed angles with Optimized Matrices:



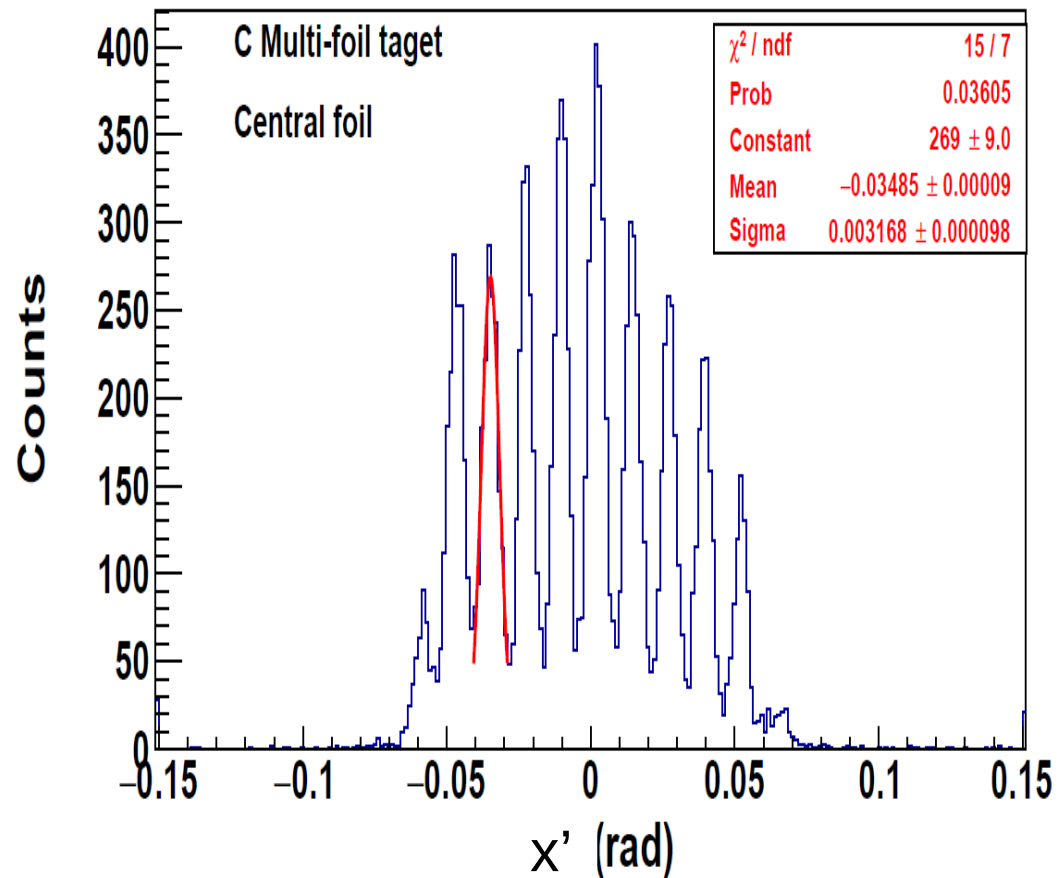
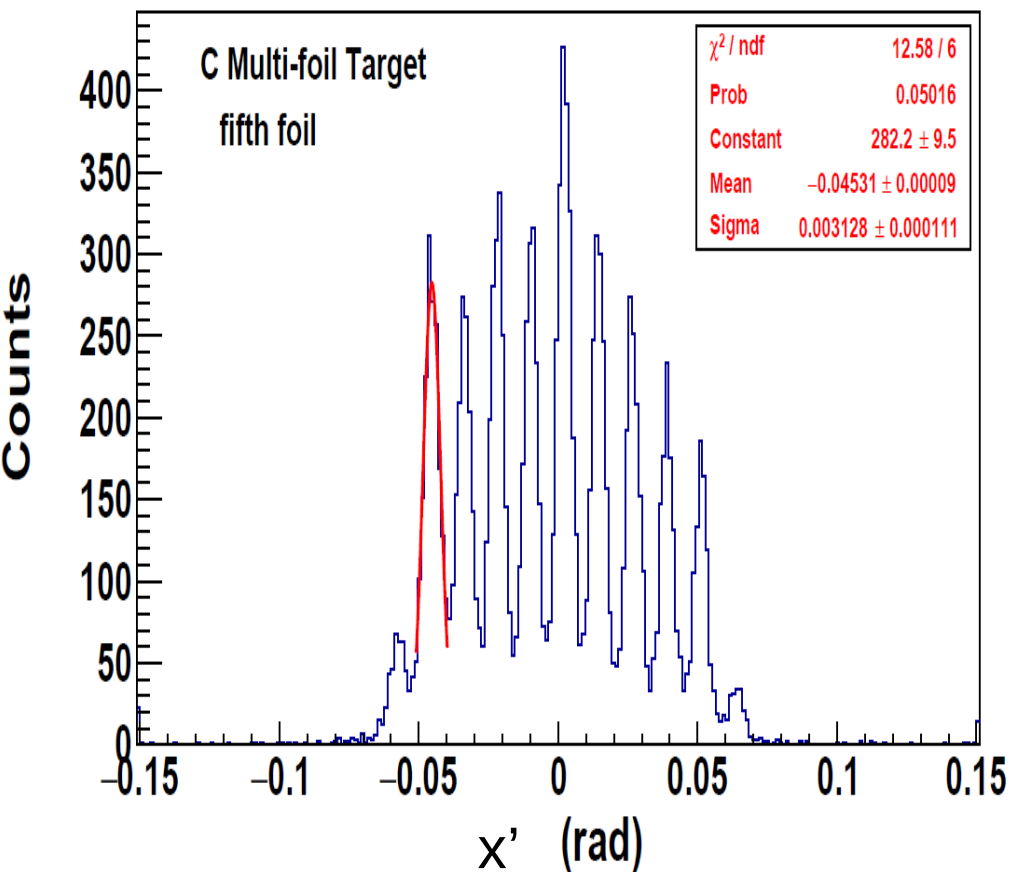
- Reconstructed angles (LHRS theta and phi) in terms of SS holes.

The LHRS Theta Angle



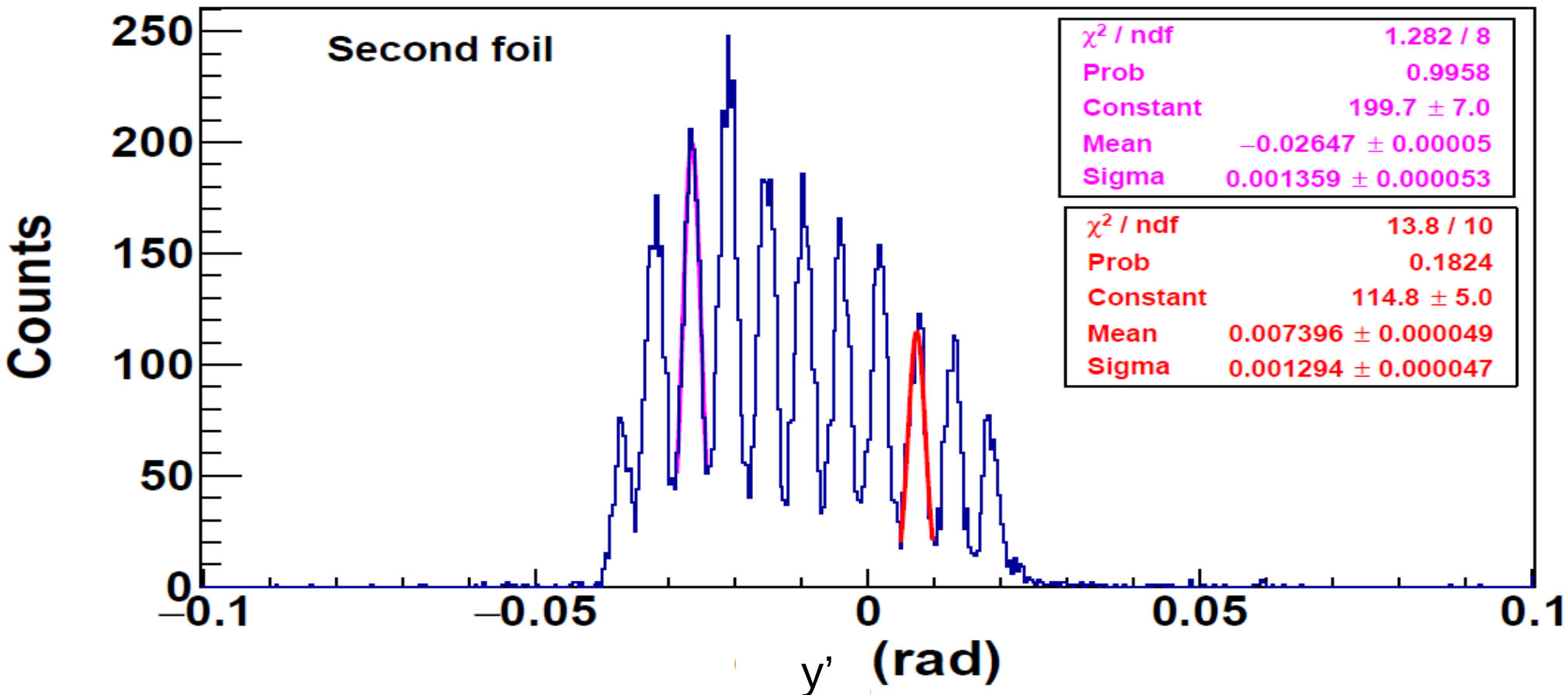
- Some peaks are randomly selected and fitted with a gaussian.

The LHRS Theta Angle Continue



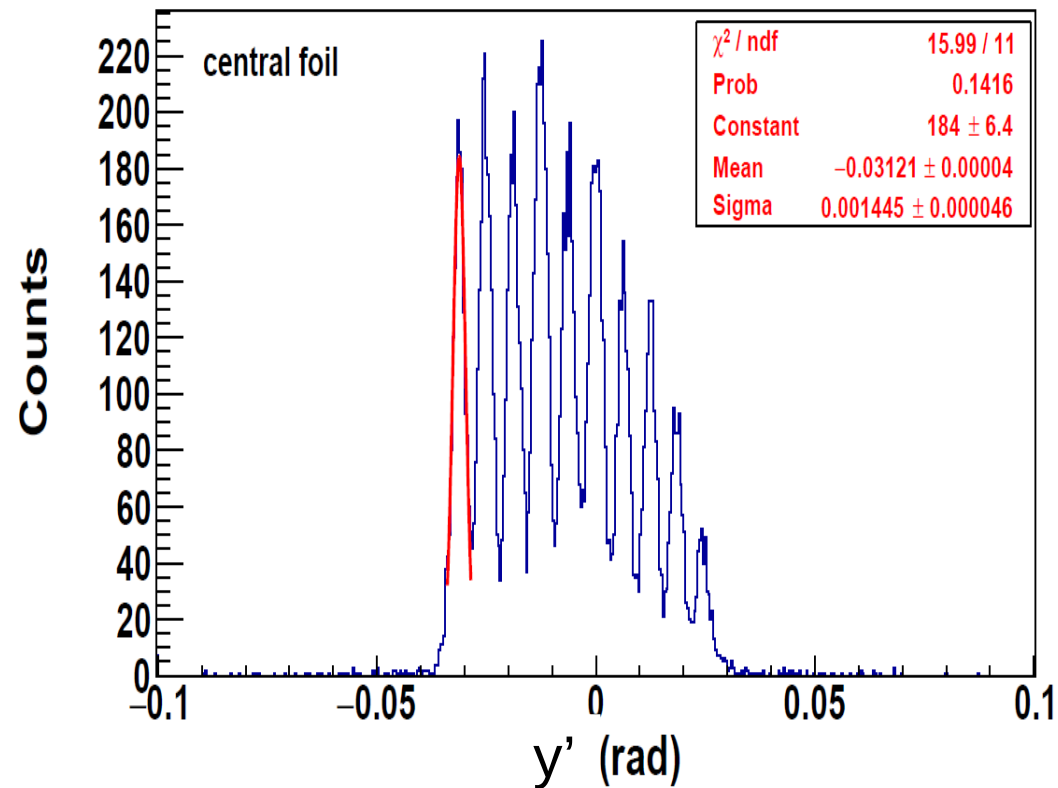
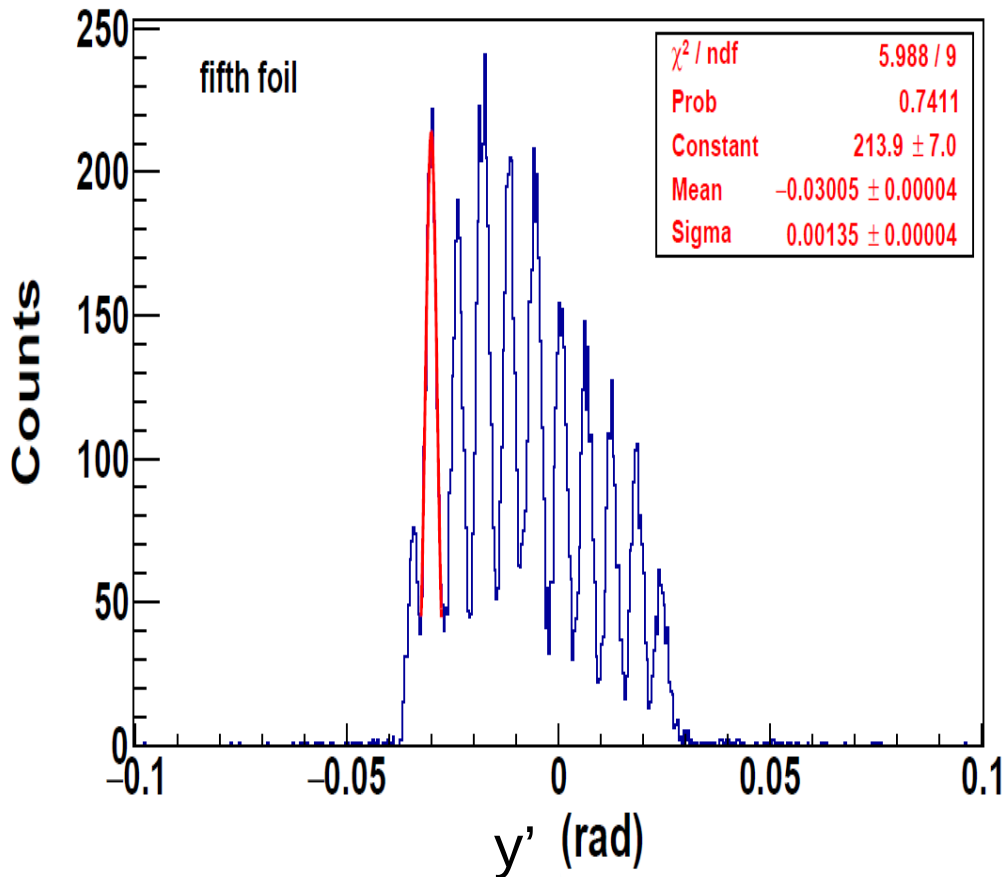
- The angular resolution is obtained by taking the average of the fitted sigmas values.
- For LHRS theta angle, the angular resolution of about 3.2 mrad is obtained.

The LHRS Phi Angle



- Some peaks are randomly selected and fitted with a gaussian function.

The LHRS Phi Angle Continue



- The angular resolution is obtained by taking the average of the fitted sigma values.
- For LHRS phi angle, the angular resolution of about 1.35 mrad is obtained.

Thank you!

Backup slides

Hall A Annual report 2014

RMS	LHRS	RHRS	Nominal performance [6]
δ [dp]	1.5×10^{-4}	2.4×10^{-4}	1.1×10^{-4}
θ [out of plane angle]	1.59 mrad	1.57 mrad	2.55 mrad
y	3.3 mm	2.9 mm	1.7 mm
ϕ [in plane angle]	0.99 mrad	0.82 mrad	0.85 mrad

Table 6: Performance summary of RMS values for optics study without target field