

The background of the slide is a photograph of York Minster, a large Gothic cathedral, seen from a distance. In the foreground, there are several red-brick buildings with white window frames and dark roofs. The sky is blue with scattered white clouds. The text is overlaid on semi-transparent white boxes.

DEMP Analysis Update

**Stephen JD Kay
University of York**

**ePIC EDT Analysis Meeting
30/06/25**

**Stephen JD Kay, Garth Huber, Love Preet
Meson Structure WG**

DEMP Analysis Updates

- Previously had 10×130 $e(p, e' \pi^+ n)$ events generated
- Generated new sample of 10×250 $e(p, e' \pi^+ n)$ events
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- All required QA plots completed, some may need tweaking
 - Binning, axes labels etc...
 - Also, some “extra” plots
- Adding text to analysis note now

QA Status

Kinematic reconstructions	quantity	Reco	Truth	Response (2D)	Purity/bin migration	detector acceptance-only corrected	Unfolding/full correction
(electron_ID, DA,sigma, e-sigma)	Q2						
	x						
	y						
	dQ2/Q2						
	dx/x						
	dy/y						
	e' energy						
	e' theta						
	HFS (E-pz)						
HFS (pT)							
Event level							
	E-pz (e'+HFS)						
	E/p for calorimeter						
	Calo clusters						
Observable of interest		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	e.g., t, etc.					<input type="checkbox"/>	
Detector specific variables	Depends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PID quantities:	Add when it comes						

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- Applies to both beam energies under study
- Code produces a pdf of main (green) QA plots, will tidy up and add to note

Thanks for listening, any questions?



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of York



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Science and
Technology
Facilities Council



With thanks to the Meson Structure Working Group

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This research was supported by UK Research and Innovation: Science and Technology Facilities council (UKRI:STFC) grant ST/W004852/1 and the Natural Sciences and Engineering Research Council of Canada (NSERC) grant SAPPJ-2023-00041