ePIC Light Meson Form Factors: Early Physics

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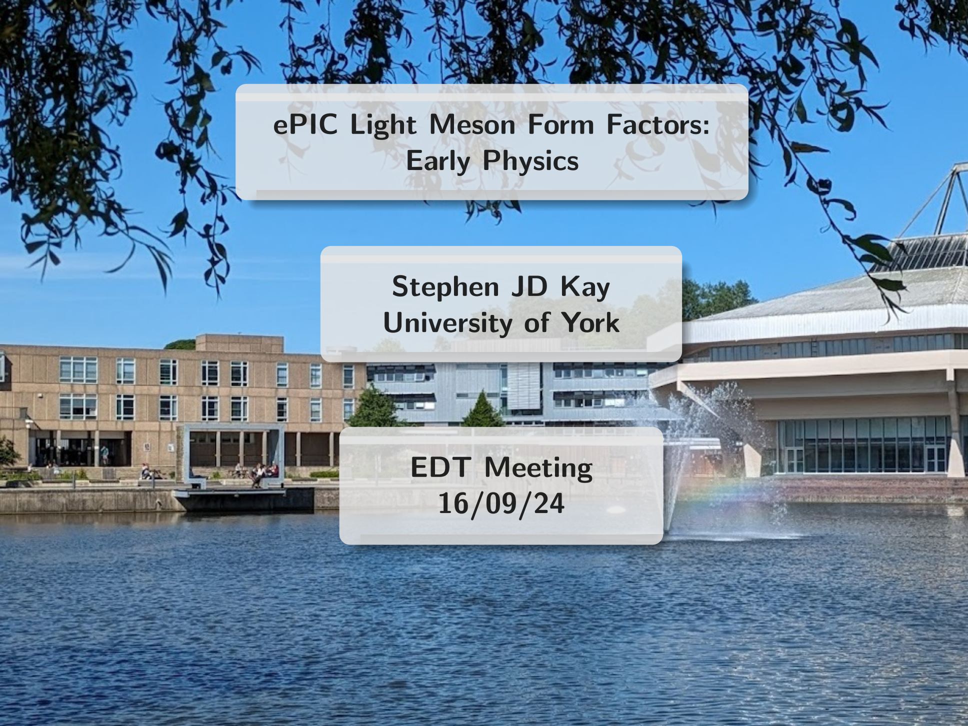
University of York

EDT Meeting
16/09/24



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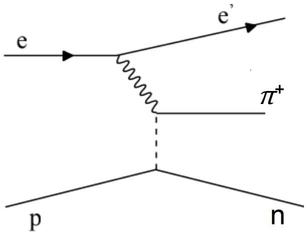
- π^{+} production from proton, main DEMP reaction of interest for F_{π}



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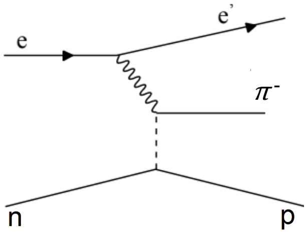

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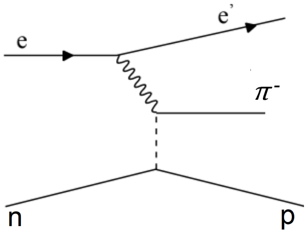

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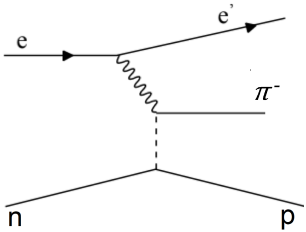

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- Also interesting physics in π^+/π^- ratios from deuterium
  - Hard-soft factorisation and GPD insights

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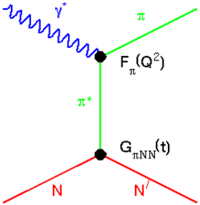

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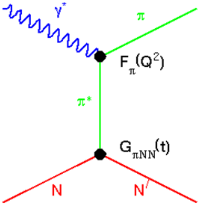

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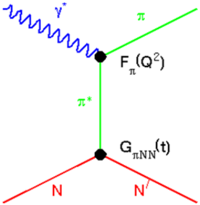

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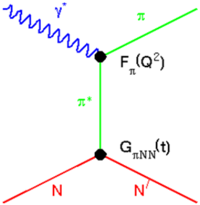

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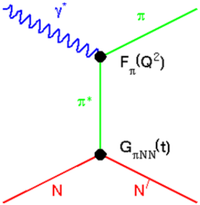

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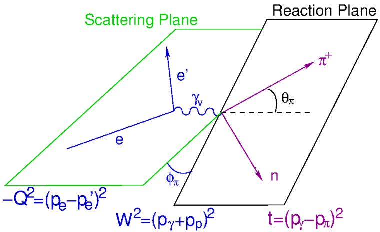

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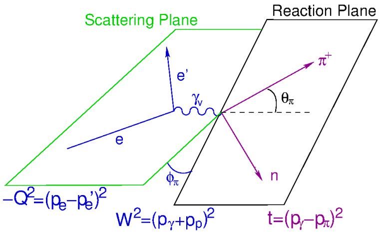

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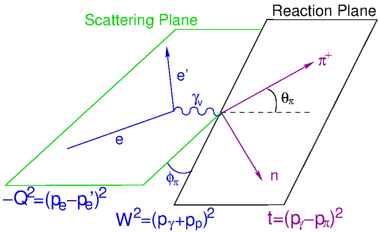

Isolating σ_L from σ_T in an e-p Collider

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- **Conventional L-T separation not practical, need another way to determine σ_L**

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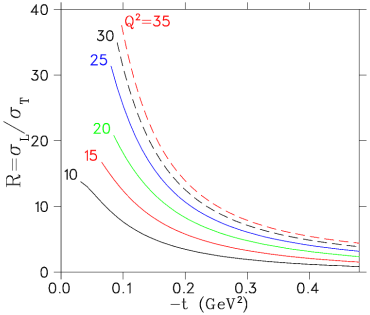

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T.Vrancx, J. Ryckebusch, PRC 89(2014)025203

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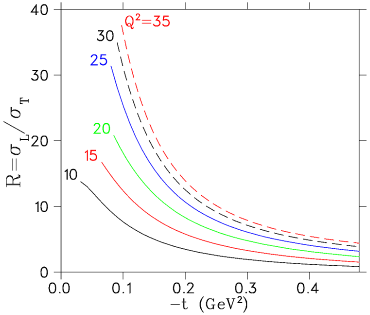

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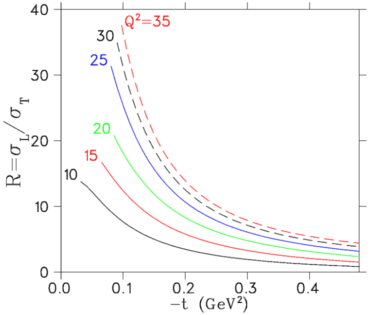
- Examine π^+/π^- ratios as a test of the model → Deuterium data



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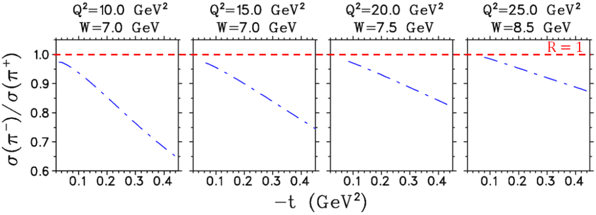

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- Proposed programme promising for light meson form factors
- Good early challenge for FF detectors

Thanks for listening, any questions?

With thanks to Garth Huber and Love Preet at the University of Regina, as well as the Meson Structure Working Group.

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