Analysis of ρ Photoproduction

- Comparison of 2016-02 ver01, ver03 and ver04 -

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- **Version 01**: June 2016, presented at DNP
- Version 02: September 2016, bad tracking
- **Version 03**: November 2016
- **Version 04**: May 2017

$\gamma\,p \to \rho^0(770)p, \ \rho^0(770) \to \pi^+\pi^-$

- Golden Period, 52 runs (11366 - 11555)
- Basic PID and convergence of kinematic fit
- | Missing Mass Squared | $< 0.02\,(\text{GeV}/c^2)^2$
- $-0.4 < $ Missing Energy $< 0.5\,\text{GeV}$
- $0.60 < $ Invariant Mass $< 0.88\,\text{GeV}/c^2$
- $50 < $ Vertex Z $< 74\,\text{cm}$
- | Vertex Time - Tagger Time | $< 2.004\,\text{ns}$ (Accidentals $\in [2.004, 6.012]\,\text{ns}$)
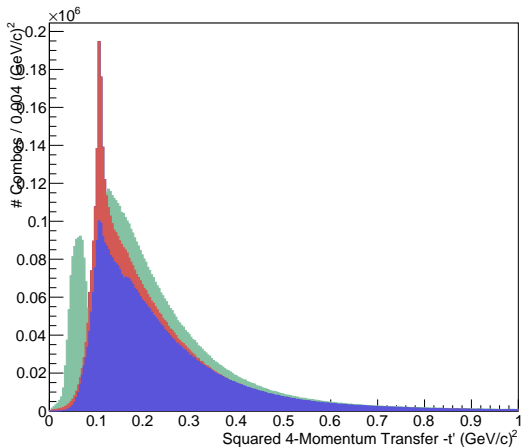- 4-momentum transfer squared $< 1\,(\text{GeV}/c)^2$
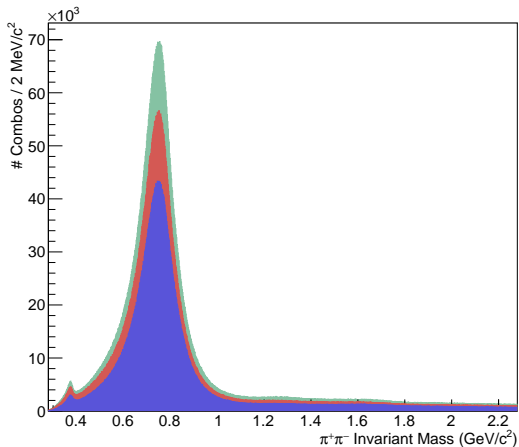
- Version 01
- Version 03
- Version 04

- Version 01
- Version 03
- Version 04

(*t* from target proton)
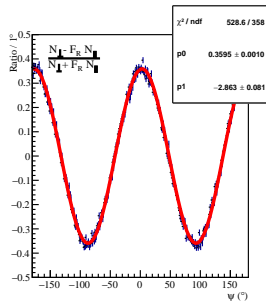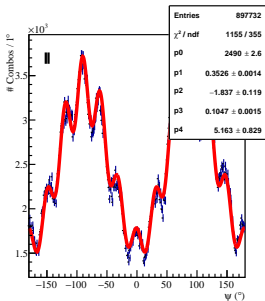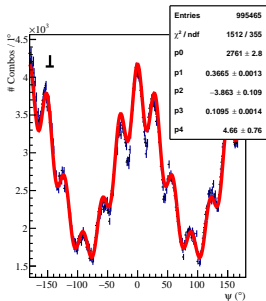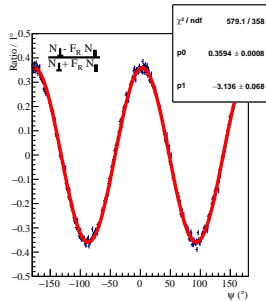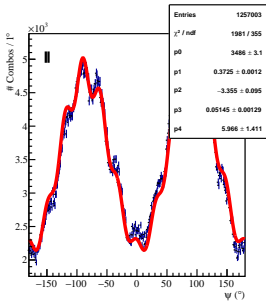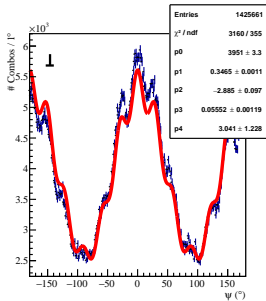
Version 01

Version 03

Version 04

Version 01

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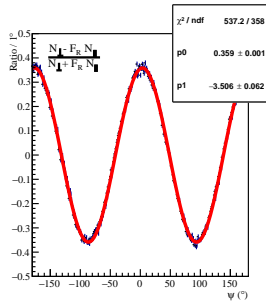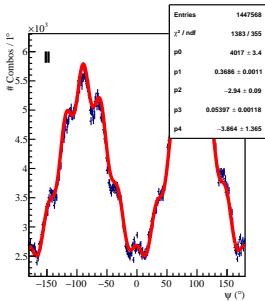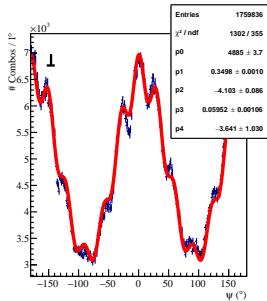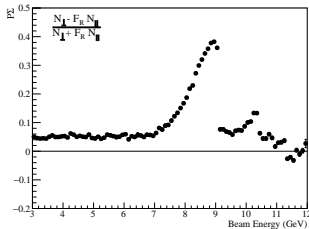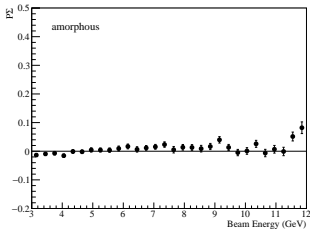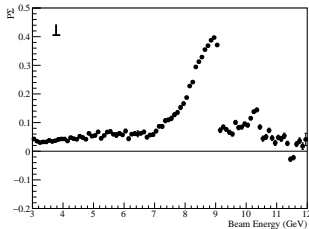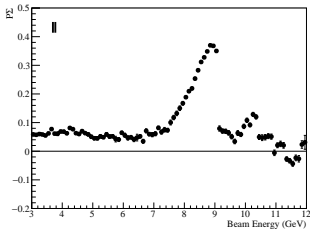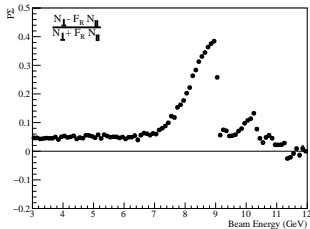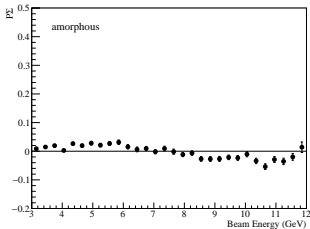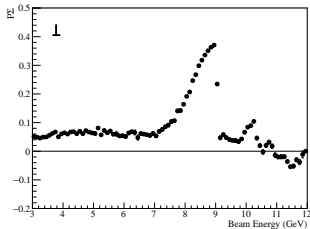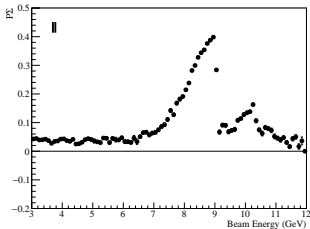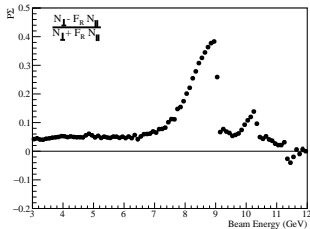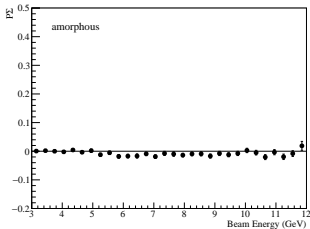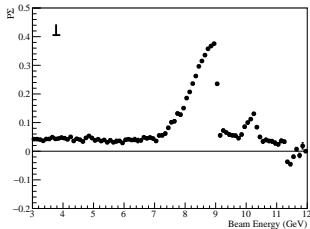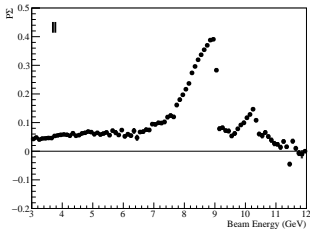
Version 03

Version 04
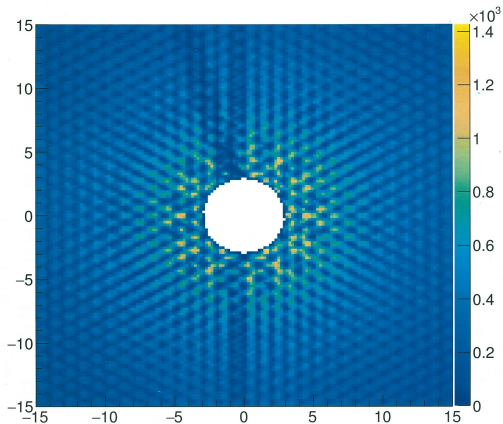
Projected to FDC Plane (XY coordinates)

Projected to FDC Plane (Rφ coordinates)