

# PrimEx- $\eta$ updates

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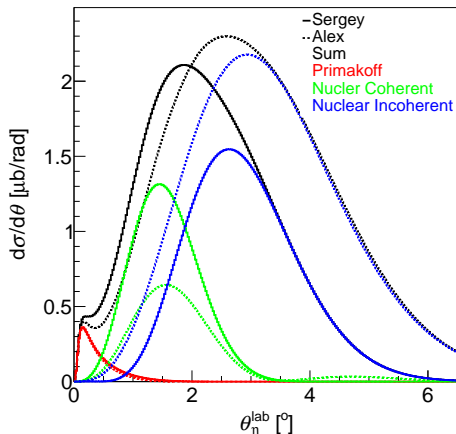
on behalf of the PrimEx group

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# Theory, Sergey vs. Alex

- For  $8 \text{ GeV} \leq E_\gamma \leq 10.965 \text{ GeV}$
- $\Gamma = 510 \text{ eV}$  and  $\phi = 57.5^\circ$



- Nuclear Coherent shape fairly similar indicates the difference is not coming from the formfactor
- Formfactor for Alex's Nuclear Coherent used phenomenological wave function from [H.S. Sherif, et al., Phys. Rev. C 27 (1983) 2759]
- Nuclear Coherent size difference suggests a difference in the single nucleon amplitude
- In the Nuclear Incoherent, Alex only considers
  - ▶  $\gamma^4\text{He} \rightarrow \eta p^4\text{H}$
  - ▶  $\gamma^4\text{He} \rightarrow \eta n^3\text{He}$
  - ▶ With  $\sigma(\eta + p + {}^3\text{H}) : \sigma(\eta + n + {}^3\text{He}) = 4 : 1$
- Explain impact of BCAL veto in our analysis
- I working on a Nuclear Incoherent simulation where the recoil nucleons are also thrown