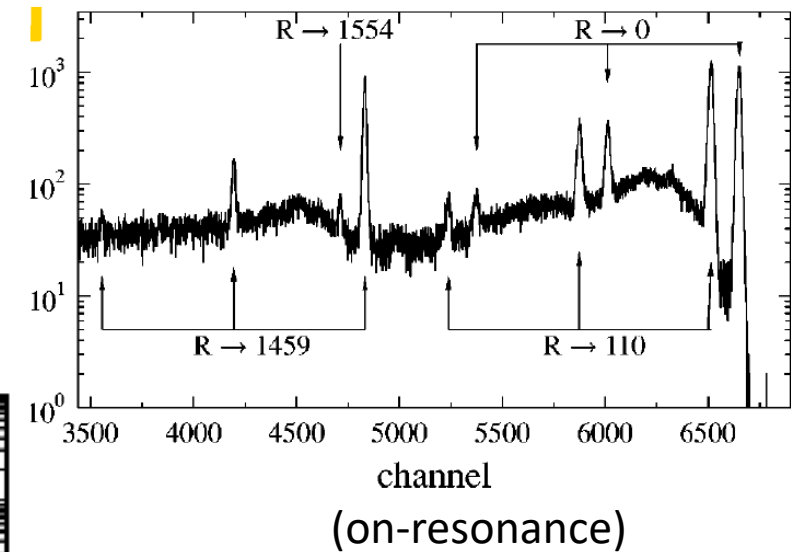
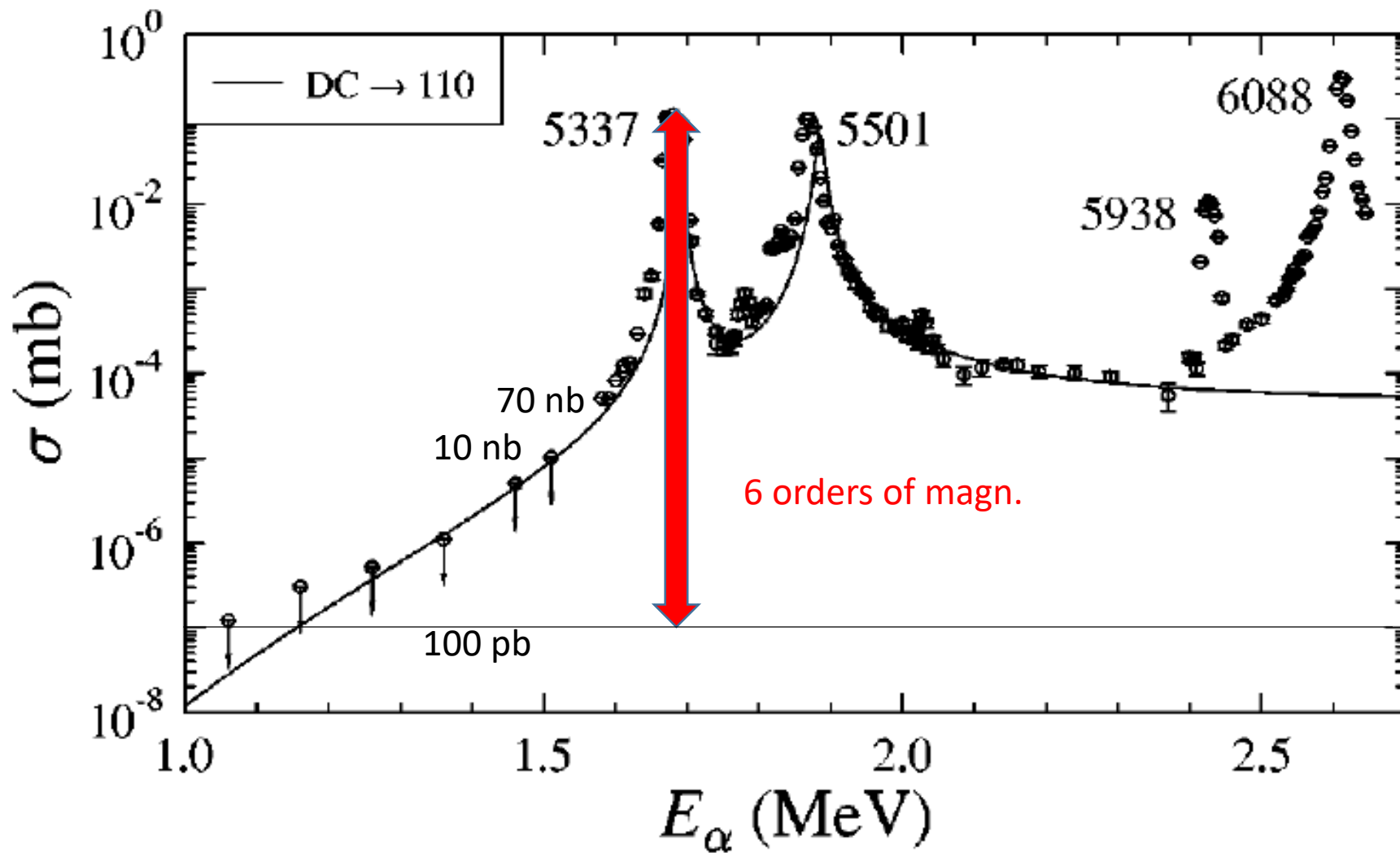
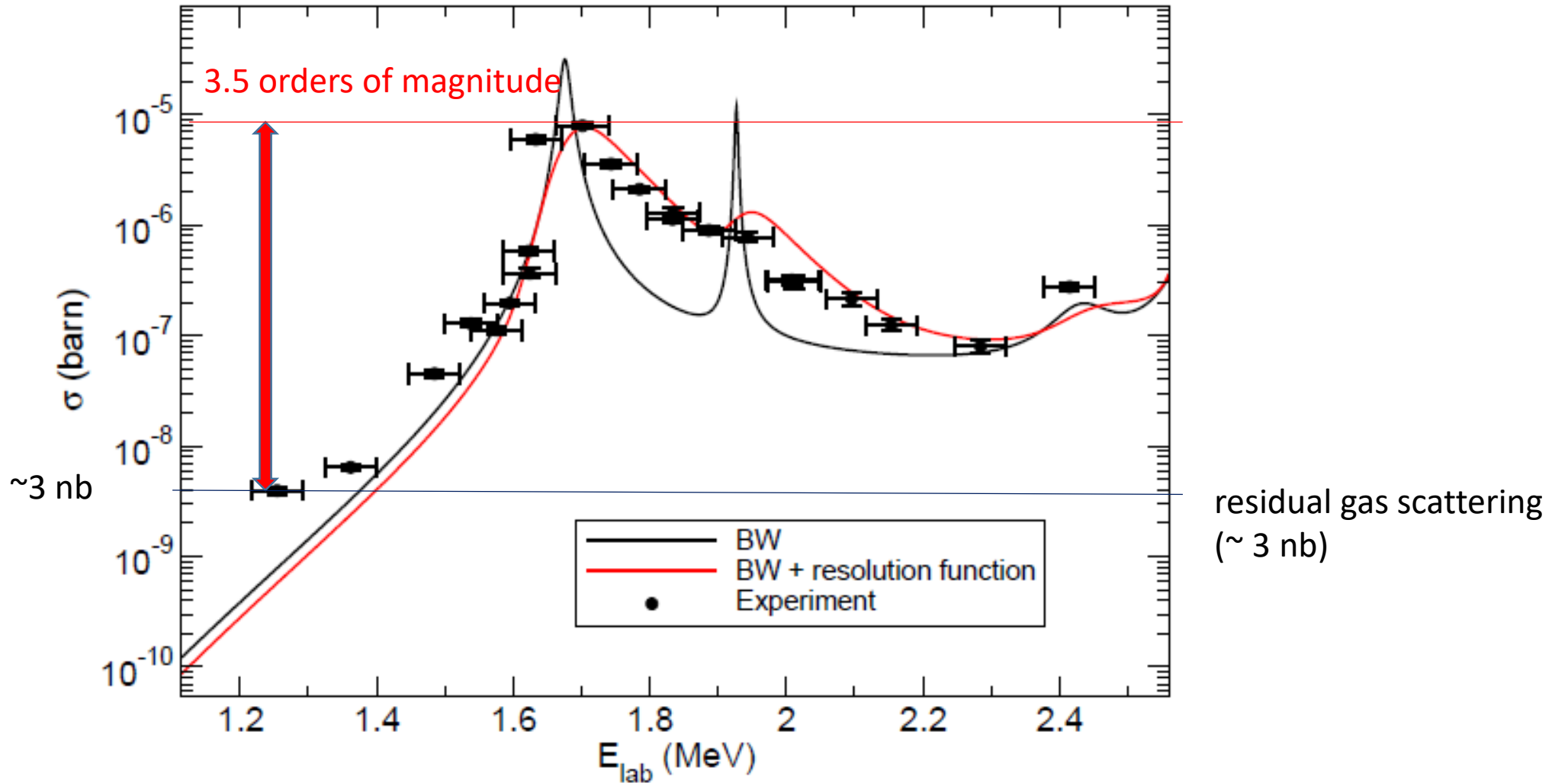


S. Wilmes et al 2002 (α,γ), PRC 66,065802(2002)

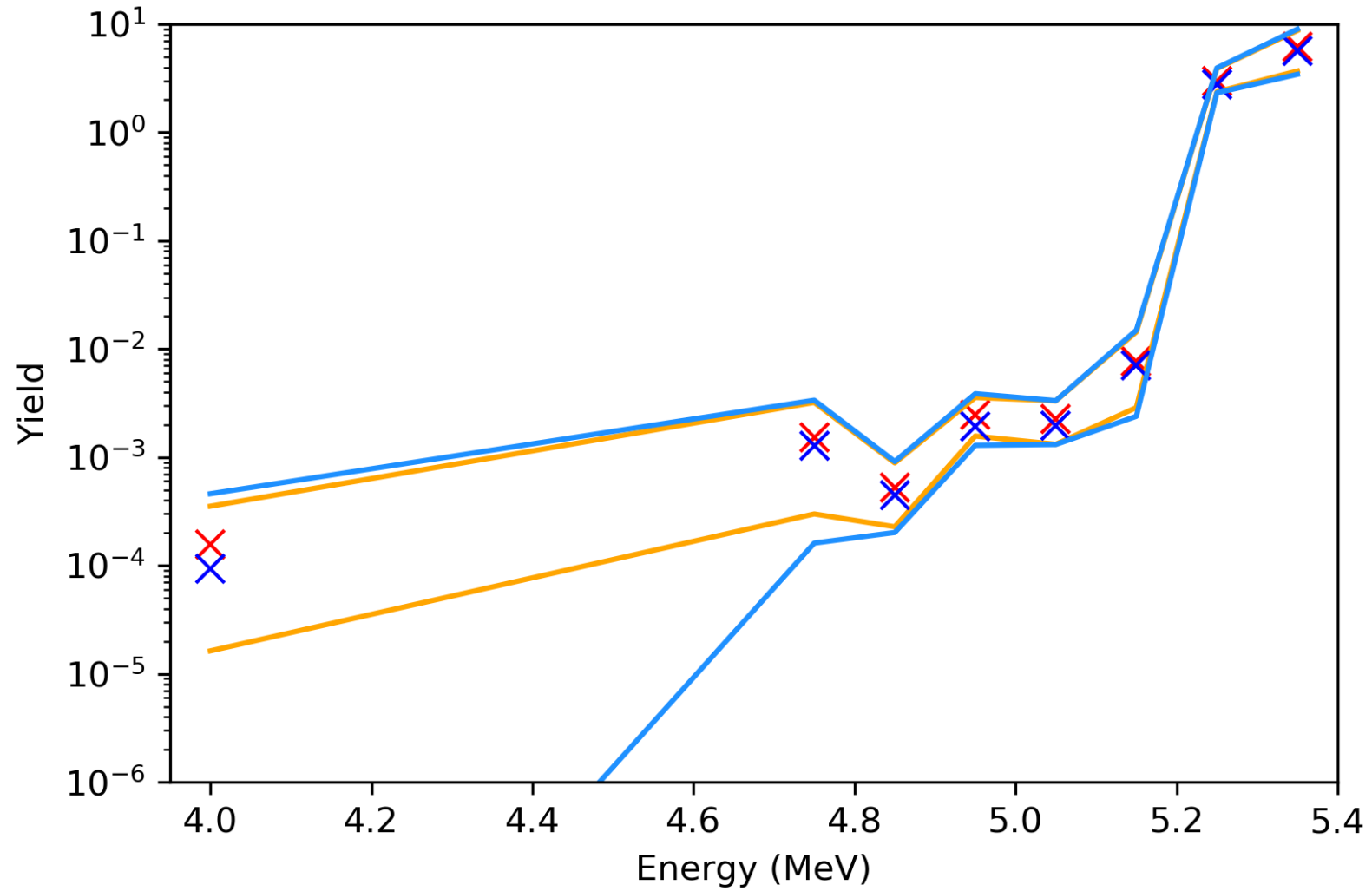
High resolution, low efficiency γ -detection



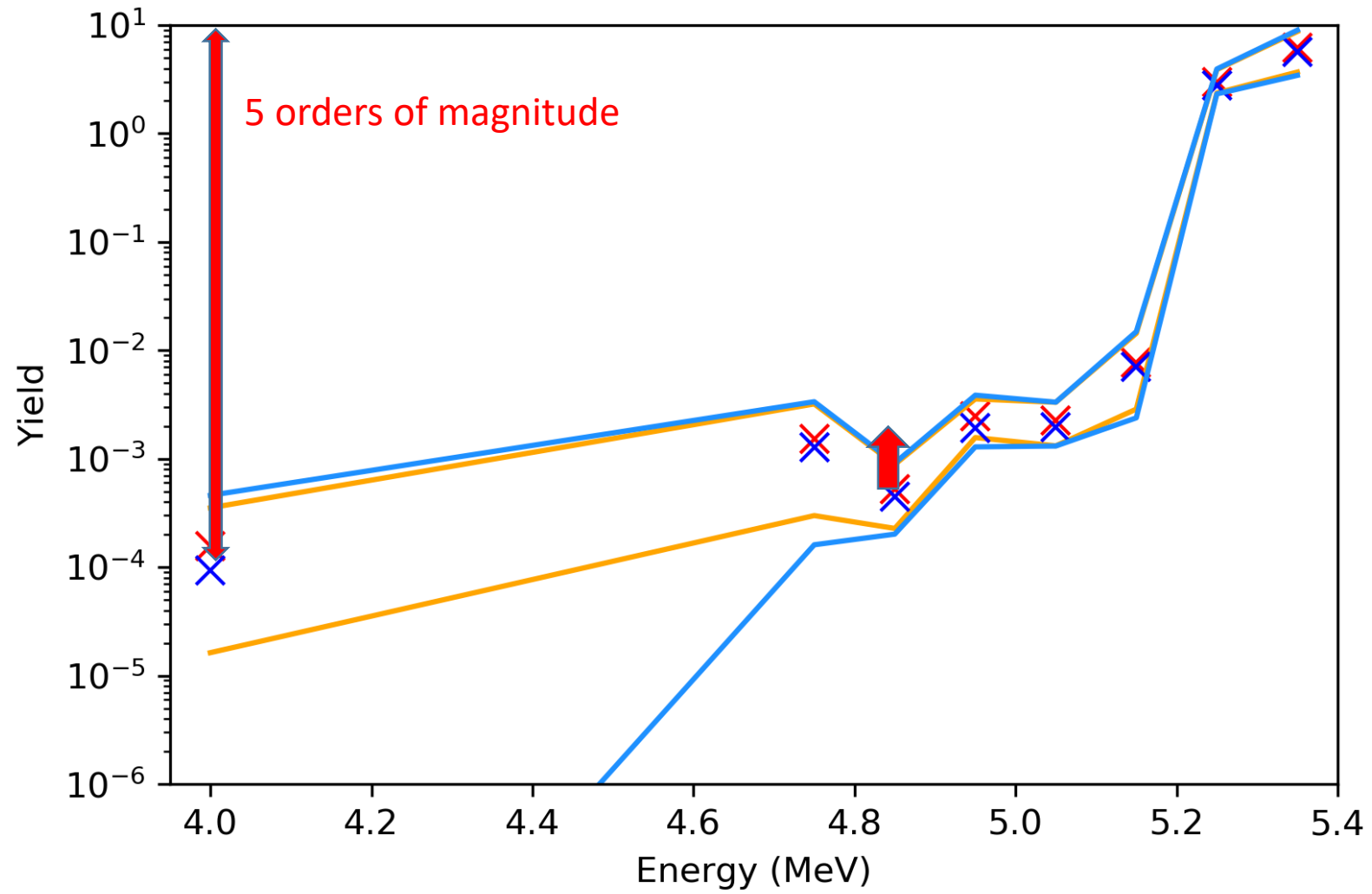
C. Ugalde et al. (γ,α) HIγS, 2013, PLB719, 74(2013)



D. Neto et al. (γ, α) JLAB, 2021

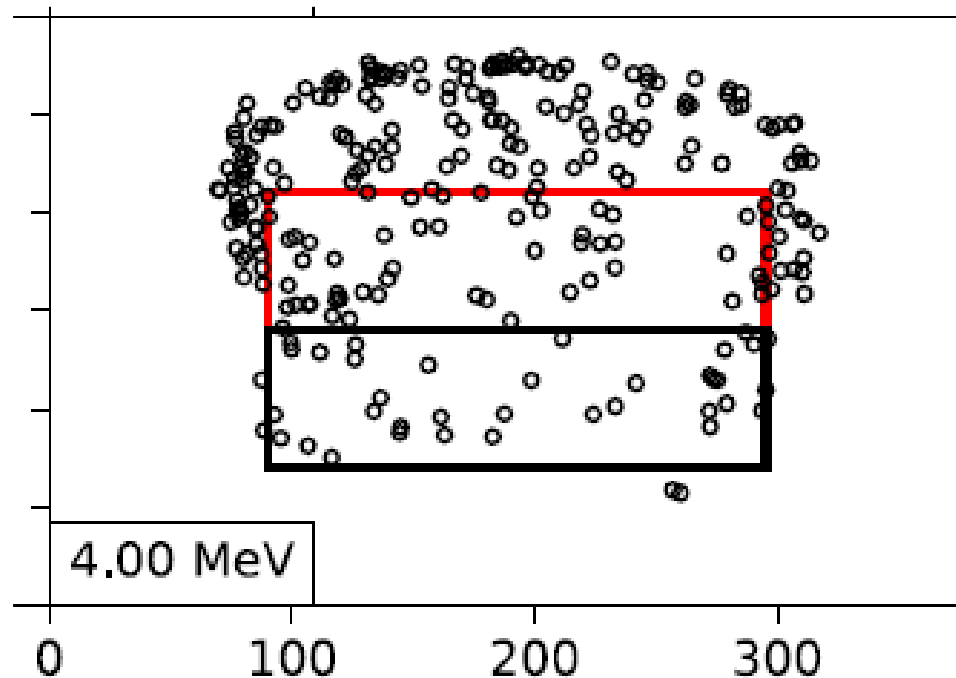


D. Neto et al. (γ,α) JLAB, 2021



Need:

1. Unfold yield to σ : what is the smallest cross section we have measured?
2. How long does it take to do a measurement at xx pb?
3. How do the cross sections compare to the theoretical values?
4. Are we sensitive to the other states below the 5.337 MeV state?
5. Can we understand the neutron background from cosmic's? Make spectrum and compare to GEANT.
6. Can we understand the background from beam-induced neutrons at 4 MeV? How does it compare with cosmic (no beam)?



0.9 fiducial volume??

5. What can we do better? Replace glass vessel, replace oil with fluorinated oil, two cameras,...
6. Other reactions ($^{16}\text{O}(\text{g},\text{a})$, $^{26}\text{Mg}(\text{g},\text{a})$, ...)