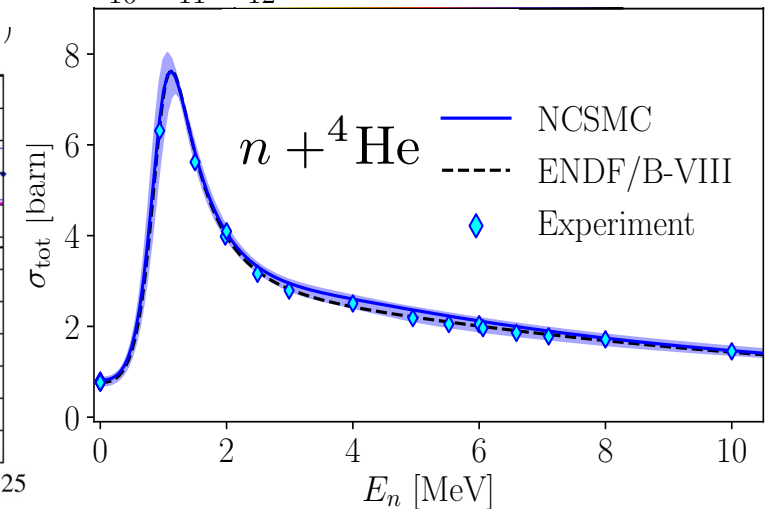
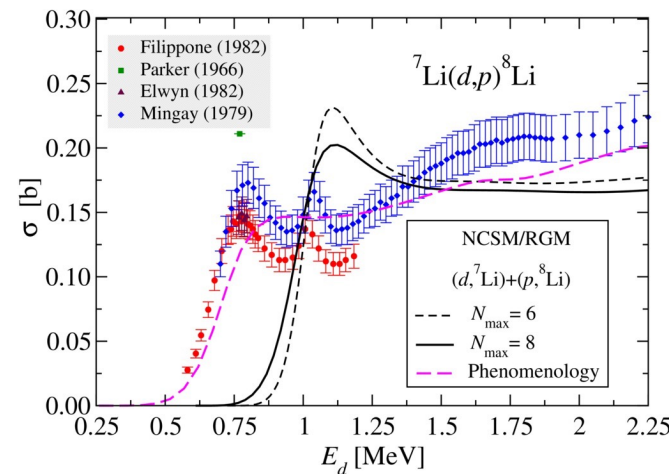
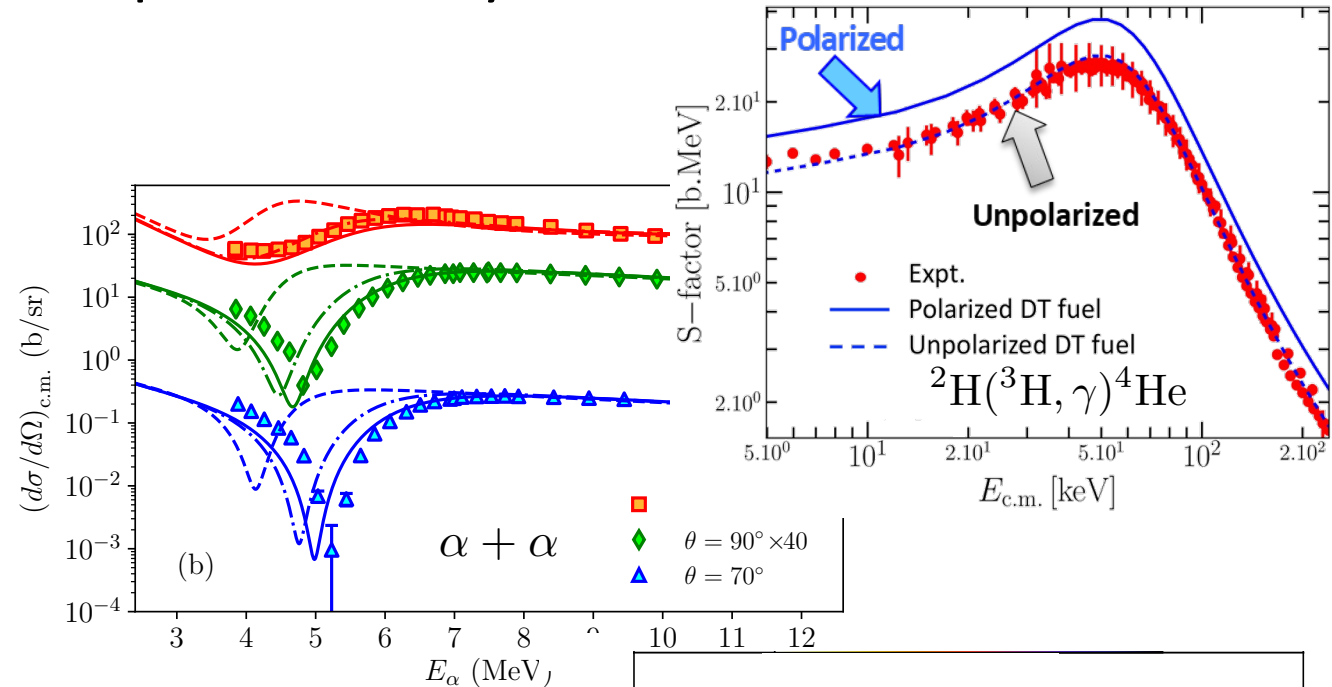


Progress in the ab initio description of light-ion reactions in the past few years

- Precision calculations of nuclear reactions with NN+3N interactions
- Increased complexity of reaction fragments and types of reactions
- Studies both for input (statistical) uncertainty and chiral truncation (systematic) uncertainty
- Ab initio-guided evaluations of nuclear data
- Theory robustness is key to making predictive calculations



Future directions & what will it take to get there.

- Chiral EFT interactions constrained from lattice QCD -> increased precision (hopefully).
- Ab initio calculations of helium-burning chain within reach.
- Reaction network-level consistent calculations can shine a spotlight on cross-correlations that will drive future experiments.
- Description of near-threshold phenomena (clustering, halos) arising from a microscopic description and matching to relevant EFTs.