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Few-body results for $^{12}\text{C}(p,pN)$ at high energies

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Nucleon knockout reactions have been used to extract single particle information from nuclei. The analysis of nucleon knockout from a stable projectile in the collision with a proton target and the comparison with the experimental data is a key test for the reaction and structure models used to evaluate the reaction observables.

Three-body Faddeev/Alt-Grassberger-Sandhas (Faddeev/AGS) equations for transition operators [1,2] have been solved for p- and n-knockout from ^{12}C at 400 MeV/u, assuming that only the heavy fragment or core C (taken as inert), the knockout particle N, and the proton target p participate in the collision process [3].

We present calculated kinematically fully exclusive, semi-inclusive and inclusive cross sections and an analysis of the

- (i) dominant kinematic conditions of the emitted particles;
- (ii) isospin dependence (here p- and n- knockout) of the calculated reaction cross sections.
- (iii) Final state interaction (FSI) to the calculated observables

A comparison with available data [4] is shown. Future developments are discussed.

REFERENCES

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