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Analysis of four-body breakup reactions using Faddeev-Yakubovsky formalism

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Abstract content
   (Max 300 words)

Four-body breakup processes at astrophysical energies are crucial in understanding dynamical properties of weakly bound nuclei. In this work we calculate cross-sections for four-body reactions involving light nuclei such as 6He on heavy nuclei via the Faddeev-Yakubovsky formalism, as well as the astrophysical factor for the 7Be(p,gamma)8B accurately. The results obtained are in agreement with other competing methods and in good agreement with experimental data.

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