

Abstract Submitted
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Breakup of proton-rich nuclei ^{24}Si , ^{23}Al , ^{22}Mg , ^{21}Na at intermediate energies for reaction rates in explosive H-burning in novae A. BANU, L. TRACHE, R.E. TRIBBLE, C.A. GAGLIARDI, Cyclotron Institute, Texas A&M University, College Station, TX 77843, N. ORR, LPC, Caen, France, M. CHARTIER, University of Liverpool, UK, P. ROUSSEL-CHOMAZ, GANIL, Caen, France, F. CARSTOIU, IFIN-HH, Bucharest, Romania, A. BONACCORSO, University of Pisa, Italy — We discuss the use of one proton-removal reactions of loosely bound nuclei at intermediate energies as an indirect method in nuclear astrophysics, with particular reference to the results of a GANIL experiment with a cocktail beam around ^{23}Al at 50 MeV/nucleon. Momentum distributions of the core fragments, inclusive and in coincidence with gamma rays, were measured, from which we can determine mixing ratios in the structure of the ground states of the projectile nuclei. The method has the advantage that it can be used for beams of low quality, such as cocktail beams, and intensities as low as a few pps. The breakup reactions provide complementary information to the use of transfer reactions (the ANC method) which require radioactive beams of much better purity and intensity. Results on ^{23}Al , ^{24}Si , ^{22}Mg and ^{21}Na will be discussed.

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