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Alpha-capture reaction rates for 22Ne(alpha,n) via sub-Coulomb alpha-transfer HESHANI JAYATISSA, GRIGORY ROGACHEV, YEVGEN KOSHCHIY, VLADILEN GOLDBERG, SHADI BEDOOR, JOSHUA HOOKER, CURTIS HUNT, CORDERO MAGANA, BRIAN ROEDER, ANTTI SAASTAMOINEN, ALEXANDRIA SPIRIDON, SRITEJA UPADHYAYULA, Texas AM University — Direct measurements of α-capture reactions at energies relevant to astrophysics is extremely difficult to carry out due to the very small reaction cross section. The large uncertainties introduced when extrapolating direct measurements at high energies down to the Gamow energies can be overcome by measuring the Asymptotic Normalization Coefficients (ANC) of the relevant states using (^{6}Li,d) α-transfer reactions at sub-Coulomb energies to reduce the model dependence. The study of the ^{22}Ne(^{6}Li,d) reaction was carried out at the Cyclotron Institute at Texas A&M University. The α-ANC measurements for the near α-threshold resonances of ^{26}Mg will provide constraints for the reaction rate of the ^{22}Ne(α,n) reaction.

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