

NUCLEAR ASTROPHYSICS WITH DRAGON

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The DRAGON recoil separator facility at TRIUMF measures radiative alpha and proton capture reactions of astrophysical importance in inverse kinematics. This is done using radioactive and stable ion beams produced and accelerated using the ISAC (Isotope Separator and ACcelerator) facility. Over the last few years, the DRAGON collaboration has embarked on a programme to measure a variety of reactions considered vital to the understanding of various astrophysical scenarios. In particular, we have tried to focus partly on those reactions involved in the creation and destruction of important astrophysical gamma-emitters such as ^{22}Na , ^{26}Al and ^{44}Ti . Such radionuclides are crucial to the understanding of novae and supernovae through their potential for detection with space-based gamma-ray observatories enabling the validation of stellar models. The methodology behind making such measurements with DRAGON will be outlined, and recent and upcoming experiments discussed.

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