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Nuclear astrophysics at the DRAGON recoil separator[1]

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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 in conjunction with a windowless gas target. 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. An overview of DRAGON's separation, beam suppression, and detection capabilities will be given. In addition, examples of recent reaction cross section measurements will be discussed, such as the ^{16}O(α,γ)^{20}Ne reaction, which plays an important part in the He-burning in massive stars.

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