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Recent measurements at DRAGON[1] ULRIKE HAGER, Colorado School of Mines, DRAGON COLLABORATION — 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. During the last year two such measurements were conducted, namely ^{17}O(α,γ)^{21}Ne and ^{33}S(p,γ)^{34}Cl. The ^{17}O(α,γ)^{21}Ne reaction plays a potentially important part in the s-process, as the ^{17}O(α,γ) / ^{17}O(α,n) reaction rate ratio determines the efficiency of ^{16}O as a neutron poison through the ^{16}O(n,γ)^{17}O reaction. The ^{33}S(p,γ)^{34} reaction is important for understanding certain elemental abundances in Oxygen Neon (ONe) Novae. Nucleosynthesis calculations predict as much as 150x the solar abundance of ^{33}S in the ejecta of ONe novae. The overproduction factor may, however, vary by factors of at least 0.01 – 3 due to uncertainties in the ^{33}S(p,γ)^{34}Cl reaction rate at nova temperatures.

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