

Abstract Submitted
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Measurement of capture reactions with the recoil mass spectrometer DRAGON CHRISTOF VOCKENHUBER, TRIUMF, DRAGON COLLABORATION — DRAGON is a state-of-the-art recoil mass spectrometer located at the radioactive beam facility ISAC at TRIUMF in Vancouver/Canada. It is designed to measure proton and alpha-capture reactions of light nuclei in inverse kinematics. In the last few years several astrophysically important reactions have been successfully measured, among them $^{21}\text{Na}(p,\gamma)^{22}\text{Mg}$ and $^{26g}\text{Al}(p,\gamma)^{27}\text{Si}$ using the high intensity radioactive beams available at ISAC. In addition, reactions with stable beams have been also investigated. Besides the astrophysical context, the wider range of available beams and the higher intensities allow to explore the limits of the current setup. With the recently measured $^{40}\text{Ca}(\alpha,\gamma)^{44}\text{Ti}$ reaction we could demonstrate the capabilities of DRAGON in the mass 40 range. Another important reaction is $^{12}\text{C}(\alpha,\gamma)^{16}\text{O}$ which makes high demands on the acceptance of the recoil spectrometer. In this talk I will report on our experience with these for astrophysics important, but difficult measurements.

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