

Abstract Submitted  
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**Inelastic Proton Scattering on  $^{21}\text{Na}$  in Inverse Kinematics**<sup>1</sup> ROBY AUSTIN, Saint Mary's University — R.A.E. Austin, R. Kanungo, S. Reeve, Saint Mary's University; D.G. Jenkins, C.Aa.Diget, A. Robinson, A.G. Tuff, O. Roberts, University of York, UK; P.J. Woods, T. Davinson, G. J. Lotay, University of Edinburgh; C.-Y. Wu, Lawrence Livermore National Laboratory; H. Al Falou, G.C. Ball, M. Djongolov, A. Garnsworthy, G. Hackman, J.N. O'Keefe, C.J. Pearson, S. Triambak, S.J. Williams, TRIUMF; C. Andreiou, D.S. Cross, N. Galinski, R. Kshetri, Simon Fraser University; C. Sumithrarachchi, M.A. Schumaker, University of Guelph; M.P. Jones, S.V. Rigby, University of Liverpool; D. Cline, A. Hayes, University of Rochester; T.E. Drake, University of Toronto; We describe an experiment and associated technique [1] to measure resonances of interest in astrophysical reactions. At the TRIUMF ISAC-II radioactive beam accelerator facility in Canada, particles inelastically scattered in inverse kinematics are detected with Bambino, a  $\Delta E$ -E silicon telescope spanning 15-40 degrees in the lab. We use the TIGRESS to detect gamma rays in coincidence with the charged particles to cleanly select inelastic scattering events. We measured resonances above the alpha threshold in  $^{22}\text{Mg}$  of relevance to the rate of break-out from the hot-CNO cycle via the reaction  $^{18}\text{Ne}(\alpha, p)^{21}\text{Na}$ . [1] P.J. Woods et al. Rex-ISOLDE proposal 424 Cern (2003).

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