Abstract Submitted
for the HAW05 Meeting of
The American Physical Society

The 26Al(p,g)27Si Reaction at DRAGON HEATHER CRAWFORD, Simon Fraser University — The 26Al(p,g)27Si reaction is important for nuclear astrophysics, as 26Al is directly observable in supernovae explosions due to its decay with a characteristic gamma. This allows comparison of observational data with models, the accuracy of which depends on how well known the reaction rates for the processes involved are. As the only direct destruction pathway for 26Al aside from its beta decay, the 26Al(p,g)27Si reaction is an integral part of the 26Al system, and an accurate measure of its rate, determined mainly by the strength of available resonance reactions, is critical. The strength of the 188 keV resonance is currently being directly studied for the first time in inverse kinematics, using the DRAGON facility at TRIUMF. A 26Al radioactive beam incident on a windowless H2 gas target gives rise to 27Si recoils, which are detected through the coincidence of a prompt gamma, and a heavy ion signal at the end detectors. Data is being analyzed to separate true events from background and determine the thick target yield. Also important is an analysis of beam intensity and composition, using data from DRAGON detectors and faraday cups. Results from these latter aspects of the study will be reported on.

Heather Crawford
Simon Fraser University

Date submitted: 05 Jul 2005 Electronic form version 1.4