

Abstract Submitted  
for the APR15 Meeting of  
The American Physical Society

**Measurement of  $^{19}\text{Ne}(\text{d},\text{n})^{20}\text{Na}(\text{p})$  reaction at RESOLUT** JOSEPH BELARGE, INGO WIEDENHOVER, LAGY BABY, SEAN KUVIN, JESSICA BAKER, Florida State University, JEFF BLACKMON, CATHERINE DEIBEL, KEVIN MACON, Louisiana State University, DENNIS GAY, KAYLA COLBERT, NATHAN QUAILS, University of North Florida — The  $^{19}\text{Ne}(\text{p},\gamma)^{20}\text{Na}$  reaction is believed to be a link between the hot CNO cycle and the rp-process. States near the proton threshold in  $^{20}\text{Na}$  play a critical role in determining the reaction rate. Most notably, a known state at 450 keV above the proton threshold has yet to be firmly assigned a spin and parity. Using a radioactive  $^{19}\text{Ne}$  beam produced at the RESOLUT radioactive beam facility at FSU we have studied the  $^{19}\text{Ne}(\text{d},\text{n})^{20}\text{Na}(\text{p})$  reaction to identify the spin and parity of near proton threshold states in  $^{20}\text{Na}$ .

Joseph Belarge  
Florida State University

Date submitted: 09 Jan 2015

Electronic form version 1.4