

Abstract Submitted
for the PSF15 Meeting of
The American Physical Society

Spectroscopic strengths of low-lying levels in ^{18}Ne ¹ PATRICK O'MALLEY, DAN BARDAYAN, JAMES KOLATA, MATTHEW HALL, University of Notre Dame, MICHAEL FEBBRARO, University of Michigan, STEVEN PAIN, Oak Ridge National Laboratory, KATE JONES, KARL SMITH, CORY THORNSBERRY, University of Tennessee, STAN PAULAUSKAS, University of Michigan, VANDLE COLLABORATION — Much effort has been made to understand the origins of ^{18}F . Due to its relatively long half-life (~ 2 hours) it is a likely source of the 511 keV gamma line often seen as novae envelopes begin to become transparent. It is likely produced through the beta decay of ^{18}Ne , which is itself produced (largely) through the $^{17}\text{F}(p,\gamma)$ reaction. Understanding the direct capture contribution to the $^{17}\text{F}(p,\gamma)$ reaction is important to accurately model it. As such, the spectroscopic strengths of low-lying states in ^{18}Ne are needed. At the University of Notre Dame a measurement of the $^{17}\text{F}(d,n)$ reaction has been performed using a beam produced with TwinSol. The neutrons were detected using a combination of VANDLE and UMDSA arrays. Data will be shown and preliminary results discussed. Work supported by the National Science Foundations and the DOE Office of Nuclear Physics.

¹Spectroscopic strengths of low-lying levels in ^{18}Ne

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Date submitted: 20 Oct 2015

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