Abstract Submitted for the DNP07 Meeting of The American Physical Society

Nuclear energy levels of ³¹S and astrophysical implications¹ C. WREDE, Yale U., J.A. CAGGIANO², TRIUMF, J.A. CLARK, C. DEIBEL, Yale U., D.A. HUTCHEON, TRIUMF, R. LEWIS, U. of York, A. PARIKH³, P.D. PARKER, Yale U., C. WESTERFELDT, Duke U. — Nucleosynthesis in the mass range from silicon to calcium in oxygen-neon novae is heavily influenced by the unmeasured strength of the ${}^{30}P(p,\gamma){}^{31}S$ reaction. We have studied the ${}^{31}P({}^{3}\text{He},t){}^{31}S$ and ${}^{31}P({}^{3}\text{He},t){}^{31}S^{*}(p){}^{30}P$ reactions to measure resonance energies and proton branching ratios in the ${}^{30}P(p,\gamma){}^{31}S$ reaction is planned for the future.

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