

Abstract Submitted  
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**$^{24}\text{Mg}(\alpha,\gamma)^{28}\text{Si}$  Resonance Parameters at Low Alpha Energies** ELIZABETH STRANDBERG, HEIDE COSTANTINI, JOACHIM GOERRES, HYE YOUNG LEE, EDWARD STECH, MICHAEL WIESCHER, University of Notre Dame, AARON COUTURE, Los Alamos National Laboratory, KENT SCHELLER, University of Southern Indiana —  $^{28}\text{Si}$  is formed by successive alpha captures during later stages of stellar burning; for carbon burning, the relevant alpha energy range is 1.0 to 1.5MeV. Previous measurements of the  $^{24}\text{Mg}(\alpha,\gamma)^{28}\text{Si}$  reaction observed only one resonance in this energy range, although there are several  $^{28}\text{Si}$  states that appear favorable for formation by this reaction. Using a high efficiency coincidence detection system, several new resonances were observed between 1.1 and 1.5MeV, and an upper limit for any lower energy resonances was obtained. Newly calculated resonance parameters and reaction rates will be discussed.

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