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Threshold Photoneutron Cross Sections for 26Mg[1] RICHARD DEBOER, ANDREAS BEST, JOACHIM GOERRES, WANPENG TAN, MICHAEL WIESCHER, University of Notre Dame, RICHARD LONGLAND, University of North Carolina, Duke University, CHRISTIAN ILIADIS, RAJARSHI RAUT, GENCHO RUSEV, ANTON TONCHEV, Triangle Universities Nuclear Laboratory, Duke University — The ^{22}Ne$(\alpha, n)^{25}$Mg reaction rate is of critical importance for the calculation of the available neutron flux in s-process nucleosynthesis scenarios. The precision of the reaction rate is mainly hampered by the limited knowledge of the resonances near the neutron separation energy of ^{26}Mg (S_n=11.093 MeV). The HIγS facility offers a unique possibility for studying these resonances via the ^{26}Mg$(\gamma, n)^{25}$Mg reaction. Preliminary results are presented for neutron measurements using both a high efficiency, nearly 4π, ^{3}He neutron detector setup and a time of flight setup using nine liquid scintillator detectors.

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Richard deBoer
University of Notre Dame

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