

HIGH-SPIN SHELL-MODEL STATES NEAR ^{56}Ni ¹

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High-spin states of nuclei near doubly magic ^{56}Ni were studied with the reaction $^{28}\text{Si}(^{36}\text{Ar}, \text{xpynz}\alpha)$ at 136 MeV beam energy. The GAMMASPHERE array in conjunction with the 4π charged-particle detector array MICROBALL and neutron detectors were used to detect γ rays in coincidence with evaporated light particles. The extensive decay schemes of ^{54}Fe , $^{54,55}\text{Co}$, $^{56,57}\text{Ni}$, and ^{58}Cu are compared to shell model calculations in the fp shell.

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