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ABSTRACT

Inclusive as well as exclusive energy spectra of the light charged particles emitted in the $^{28}\text{Si}(E_{\text{lab}} = 112.6 \text{ MeV}) + ^{28}\text{Si}, ^{12}\text{C}$ reactions have been measured at the Strasbourg VIVITRON facility in a wide angular range $15^\circ - 150^\circ$, using the ICARE multidetector array. The observed α -particle energy spectra are generally well reproduced by the statistical model using a spin-dependent level density parameterisation. The results suggest significant deformation effects at high spin.