

Theoretical Analysis of the Neutron Double Differential Cross Section of $n+^{16}\text{O}$ at $E_n=14.1$ MeV

ZHANG Jing-Shang,¹ HAN Yin-Lu¹ and FAN Xiao-Li²

¹ China Nuclear Data Center, CIAE, Beijing 102413, China

² Department of Physics, Northwest University, Xi'an 710069, China

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Abstract: Based on the unified Hauser-Feshbach and exciton model, a new model has been developed for the light nucleus reactions. The analysis of the neutron energy-angular spectra of $n+^{16}\text{O}$ reaction has been performed. The fitting of the experimental data indicates that this method is successful for calculating the double-differential cross section of the light nucleus.

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Key words: pre-equilibrium mechanism, discrete level, energy-angular spectrum

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