

Abstract Submitted
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Spectroscopic factors of excited states for sd shell nuclei¹ JENNY LEE, BETTY TSANG, BILL LYNCH, National Superconducting Cyclotron Laboratory and Department of Physics and Astronomy, Michigan State University, East Lansing, Michigan 48824, USA, SHI CHUN SU, Physics Department, The Chinese University of Hong Kong, Shatin, Hong Kong, China — Numerous experiments have been performed to extract spectroscopic factors (SFs) in the last 40 years. However, the criteria used to extract SFs differ from experiments to experiments, making comparison of experimental SFs to theoretical calculations difficult. Recently, a consistent criterion has been adopted to analyze the neutron ground state SFs from a wide range of nuclei from $Z=3-24$ [1]. We have extended this method to analyze the neutron SF from excited states for sd shell nuclei as well as for Ni and Sn isotopes. Preliminary results suggest that the systematic agreement between the experimental SF and shell model predictions may be used to confirm the spin of some excited states when there are ambiguities in the spin assignments. Comparisons of the results with shell model calculations with different residual interactions will be presented. Reference: [1] M.B. Tsang et al., Phys. Rev. Lett. 95 (2005) 222501

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