

Abstract Submitted
for the APR08 Meeting of
The American Physical Society

Survey of Neutron Spectroscopic Factors for $Z=8$ to 28 nuclei¹

JENNY LEE, NSCL, JINA, and Dept of Physics and Astronomy, Michigan State University, East Lansing, Michigan, 48824, USA, P. DAI, Physics Department, Chinese University of Hong Kong, Shatin, Hong Kong, China, M. HOROI, Department of Physics, Central Michigan University, Mount Pleasant, Michigan 48859, USA, W.G. LYNCH, NSCL, JINA, and Dept of Physics and Astronomy, Michigan State University, East Lansing, Michigan, 48824, USA, S.C. SU, Physics Department, Chinese University of Hong Kong, Shatin, Hong Kong, China, M.B. TSANG, S. WARREN, NSCL, JINA, and Dept of Physics and Astronomy, Michigan State University, East Lansing, Michigan, 48824, USA — Spectroscopic factor (SF) is a fundamental quantity in nuclear physics. SFs are extensively used from nuclear structure to astrophysical network calculations. They provide an important probe to test how well shell models describe the structure of nuclei. In this talk, we will compare neutron spectroscopic factors obtained for the sd shell nuclei, Ca, Ti, Cr and Ni isotopes to shell models. Of particular interests are the comparisons of data with different shell model interactions in these regions including the evolution of single particle states around $Z=20$, $N=27$ and $N=29$ regions.

¹This work is supported by the National Science Foundation under Grants PHY-0555893, PHY-0606007 and PHY 0216783.

Jenny Lee
NSCL, JINA, and Dept of Physics and Astronomy,
Michigan State University, East Lansing, Michigan, 48824, USA

Date submitted: 14 Jan 2008

Electronic form version 1.4