

Abstract Submitted
for the APR13 Meeting of
The American Physical Society

Consistency in Quenching of “Absolute” Spectroscopic Factors from Transfer Reactions J.P. SCHIFFER, Argonne National Laboratory, B.P. KAY, University of York, S.J. FREEMAN, University of Manchester — The strengths of single-particle transitions in $(e, e'p)$ knockout reactions on closed-shell nuclei are lower than expected,¹ due to limitations of the mean-field description imposed by correlations. This quenching of single-particle strength by ~ 0.5 appeared to be a general property of nuclei from ^{16}O to ^{208}Pb . In our work, the combined sums of neutron-adding and neutron-removing strengths from (d, p) and (p, d) transfer reactions on four Ni isotopes yield very similar quenching factors of ~ 0.53 (varying by $\sim 10\%$ with reasonable choices of optical-model parameters).² Recently, spectroscopic overlaps between ^4He and ^3He were extracted from GFMC calculations.³ With these, our data on $(\alpha, ^3\text{He})$ and $(^3\text{He}, \alpha)$ on the Ni isotopes yields ~ 0.62 . Additional data for proton transfer on Ni and transfer on other nuclei are also being analyzed. This work was supported by the U.S. Department of Energy, Office of Nuclear Physics, under Contract No. DE-AC02-06CH11357 and the U.K. Science and Technology Facilities Council.

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²J. P. Schiffer *et al.*, Phys. Rev. Lett. **108**, 022501 (2012).

³I. Brida *et al.*, Phys. Rev. C **84**, 024319 (2011).

B. P. Kay
University of York

Date submitted: 08 Jan 2013

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