

Abstract Submitted
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Energy Independent Phase Shift Analyses of Light Nuclear Systems TIMOTHY BLACK, University of North Carolina - Wilmington, ROBERT HAUN, CHANDRA SHAHI, FRED WIETFELDT, Tulane University, MICHAEL HUBER, MUHAMMAD ARIF, National Institute of Standards and Technology — Our research group, which has carried out high precision scattering length measurements of the $n + d$, $n + {}^3\text{He}$, and $n + {}^4\text{He}$ systems, is now undertaking energy independent phase shift analyses of these systems, as well as the $p + d$ system. The aim of these analyses, which will utilize all extant low energy data for these systems, is to determine scattering lengths, effective range parameters, and shape parameters, as well as spin-mixing parameters, where relevant, in order to help develop uniform NN, 3N and 4N models that also account for charge symmetry and charge independence breaking. Preliminary results will be presented.

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