

Abstract Submitted  
for the APR06 Meeting of  
The American Physical Society

**Comparison of results for  $N + N$  scattering at low energies<sup>1</sup>** G. M. HALE, C. P. LIU, Theoretical Division, Los Alamos National Laboratory — We show comparisons of  $N + N$  scattering observables calculated from the Nijmegen potential with those obtained from an  $R$ -matrix analysis of low-energy measurements for the  $N + N$  system. Of particular interest are the spin-dependent  $S$ -wave scattering lengths for  $n + p$  scattering, and selected observables (with their associated uncertainties) for  $n + p$  capture. We will discuss implications of the comparisons for the nature of phenomenological  $N - N$  interactions.

<sup>1</sup>Work supported by the US DoE/NNSA

Gerald Hale  
Group T-16, Los Alamos National Lab

Date submitted: 13 Jan 2006

Electronic form version 1.4