

Abstract Submitted
for the DNP07 Meeting of
The American Physical Society

Neutron-Proton Bremsstrahlung; with explicit correction terms at 225 MeV¹ VIRGINIA BROWN, MIT and University of MD/College Park, JERROLD FRANKLIN, Temple University, PERRY ANTHONY, SLAC/Stanford, VRB COLLABORATION — Neutron-proton bremsstrahlung ($np\gamma$) with explicit correction terms including, higher partial waves, higher rescattering effects, longer-range integrations, out-of-plane contributions, neutron and proton relativistic spin effects, charge form-factor contributions, and meson-exchange effects included to order K in the photon momentum [1] are calculated with the Argonne nucleon-nucleon potential to compare to experimental results at 225 MeV obtained by Y. Safkan et al. [2] at LANCE. The data include various coplanar nucleon exit angles. These are the first experimental ($np\gamma$) data to explicitly measure the photon angular distribution. Finite-size detector effects are determined with the out-of-plane calculations.

References

- [1] V. R. Brown and J. Franklin, Phys. Rev. C **8**, 1706 (1973).
- [2] Y. Safkan et al., Phys. Rev. C **75**, 031001 (2007).

¹DOE

Virginia Brown
MIT and University of MD/College Park

Date submitted: 11 Jul 2007

Electronic form version 1.4