# Probing the effectiveness: chiral perturbation theory calculations of low-energy electromagnetic reactions on deuterium

Daniel Phillips

Department of Physics and Astronomy
Ohio University, Athens, OH 45701, U.S.A.
e-mail: phillips@phy.ohiou.edu

## Abstract

I will provide a brief review of the application of effective field theory to low-energy electromagnetic reactions on the deuteron. I will discuss electron-deuteron scattering for virtual photon momenta below 1 GeV, and photon-deuteron scattering for incident photon energies of order 100 MeV. I will also mention work on neutral pion photoproduction on deuterium at threshold. In all of these reactions the connection of the theoretical work to both previous and future experiments will be emphasized. I will try to point out similarities and differences between the effective field theory approach and "standard" potential-model techniques.