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Radiative Neutron Capture on Lithium-7 GAUTAM RUPAK, Mississippi State University, RENATO HIGA, KVI Groningen — The radiative neutron capture on lithium-7 is calculated model independently using a low energy halo effective field theory. The cross section is expressed in terms of scattering parameters directly related to the S-matrix element. The cross section depends on the poorly known p-wave effective range parameter r_1. This constitutes the leading order uncertainty in traditional model calculations. It is explicitly demonstrated by comparing with potential model calculations. A single parameter fit describes the low energy data extremely well and yields $r_1 \approx -1.47$ fm^{-1}.

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