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Threshold pi- Photoproduction on the Neutron near Threshold[1]
IGOR STRAKOVSKY, WILLIAM BRISCOE, George Washington Univ — Recent data from the PIONS@MAX-lab Collaboration, measuring the total cross sections of the pion incoherent photoproduction gamma d–>pi-pp near threshold, have been used to determine the E0+ multipole and total cross sections of the reaction gamma n–>pi-p, also near threshold. These are the first measurements of the reaction gamma d–>pi-pp in the threshold region. The value of E0+ is extracted through a fit to the deuteron data in a photoproduction model accounting for final-state interactions. The model takes an S-wave approximation for the elementary reaction gamma n–>pi-p with E0+ = const in the threshold region. The obtained value E0+ = (-31.86+-0.8) x 10ˆ-3/m_pi+ is in agreement with other existing results. Model predictions for the total cross section are also given.

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