

Soft Spin Dipole Giant Resonances Observed in the $^{40,42,44,48}\text{Ca}(^3\text{He},t)$ Reactions

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High resolution experimental data has been obtained for the $^{40,42,44,48}\text{Ca}(^3\text{He},t)$ charge exchange reaction at 420 MeV beam energy, which favors the spin-isospin excitations. The measured angular distributions were analyzed for each state separately, and the relative spin dipole strength has been extracted for the first time. The low-lying spin-dipole strength distribution shows a strong peak around 9-11 MeV, which might be associated to the “pigmy” part of the spin dipole giant resonance. The interpretation of the data will be discussed.