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# Axial-vector properties of singly heavy baryons

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We present the results of the axial-vector transition form factors of singly heavy baryons within the framework of the chiral quark-soliton model. The chiral quark-soliton model is a pion mean-field approach in the large-$N_c$ limit, which deals with light and heavy baryon on and equal footing. In the limit of the infinitely heavy mass of the heavy quark, a singly heavy baryon can be regarded as $N_c - 1$ valence quarks bound by the pion mean fields with the heavy quark as a color static source. We include the $1/N_c$ rotational corrections and the effects of SU(3) flavor symmetry breaking. We first compare the results for $C_5^A(q^2)$ of the heavy baryon transitions with those for the well-known $\Delta \to p$ transitions. We also discuss the results for the axial mass for the heavy baryon transitions.

## Present via

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