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Baryon masses and currents in SU(3) BChPT \times $1/N_c$

Baryon Chiral Perturbation Theory (BChPT) and the $1/N_c$ expansion provide systematic frameworks for the strong interactions at low energy. A combined framework of both expansions has been developed and applied for baryons with three light-quark-flavors. The small scale expansion of the combined approach is identified as the ξ -expansion, in which the power counting of the expansions is linked according to $O(p) = O(1/N_c) = O(\xi)$. Results obtained from applying the combined framework to baryon masses, sigma terms and vector & axial-vector currents in SU(3) will be discussed in this talk.

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