

Meson-baryon Scattering in Extended-on-mass-shell Scheme up to NNLO

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In this present work, we study the scattering of a pseudoscalar meson off one ground state octet baryon in covariant baryon chiral perturbation theory up to the next-to-next-to-leading order. We remove the power counting breaking terms with the extended-on-mass-shell scheme. We perform the first combined study of the pion-nucleon and kaon-nucleon scattering data and show that the covariant baryon Chiral perturbation theory can provide a reasonable description of the experimental data for both channels.

Primary authors: LU, Junxu; GENG, Li-Sheng (Beihang University); Dr REN, Xiu-lei (RuHR-UNIVERSITÄT BOCHUM); Dr DU, Menglin (Bonn university)

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