Sigma Terms and Strangeness Contents of Baryon Octet inModified Chiral Perturbation Theory

LI Xiao-Ya[1] and LÜ Xiao-Fu[1,2,3]

[1] Department of Physics, Sichuan University, Chengdu 610064, China
[2] Institute of Theoretical Physics, the Chinese Academy of Sciences, Beijing 100080, China
[3] China Center of Advanced Science and Technology (World Laboratory), Beijing 100080, China
(Received: 2006-2-16; Revised:)

Abstract: In the frame work of chiral perturbation theory, a modified effective Lagrangian for meson-baryon system is constructed, where the SU(3) breaking effect for meson is considered. The difference between physical and chiral limit decay constants is taken into account. Calculated to one loop at $O(p^3)$, the sigma terms and strangeness contents of baryon octet are obtained.

[Full text: PDF]

Close