

Updated study of meson-baryon dynamics with strangeness -1 in a chiral framework

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I discuss the meson-baryon scattering processes with strangeness -1 within the unitarized chiral perturbation theory. Ten coupled channels are included in the discussion. By performing several sophisticated fits to a large amount of data, it enables us to give a strong constraint on the free parameters and the meson-baryon scattering amplitudes. We then study the uncertainty that is caused by using different strategies in the fits. We find that large error bars in the sub-threshold region of the K- p amplitude show up by either employing one weak pseudo-Goldstone decay constant or distinguishing between the decay constants of pi, K and eta. Finally, we study the poles from the S-wave amplitudes and pay special attention to the Lambda(1405) resonance.

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