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KN Phase Shifts in Chiral SU(3) Quark Model

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Abstract: The isospin I=0 and I=1 kaon-nucleon S and P partial waves phase shifts have been studied in the chiral I=0 quark model by solving a resonating group method equation. When the parameters of the chiral fields are taken in a reasonable region, the numerical results of S-wave are in good agreement with the experimental data, and the P-wave phase shifts can also be explained qualitatively by the calculation of only central force considered.

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Key words: KN scattering, quark model, chiral symmetry

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