

## Model potensial pertukaran satu hadron untuk $K^+ p = A$ model of $K^+p$ one hadron exchange potensial

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### Abstrak

Sebuah model potensial  $K p$  diturunkan berdasarkan interaksi  $KN$ . Pada penelitian ini, kami menggunakan model potensial pertukaran satu hadron. Hadron yang dipertukarkan meliputi  $\rho$ ,  $\sigma$ ,  $\omega$ ,  $\delta$ ,  $\lambda$ , and  $\Sigma$ . Parameter model potensial diturunkan berdasarkan fitting terhadap data differential cross section dari energy 21 MeV ndash; 669 MeV. Parameter yang akan di fit adalah cut-off dari faktor bentuk, massa  $\sigma$ , massa  $\delta$ , dan konstanta kopling. Hamburan  $K p$  dihitung berdasarkan teknik 3D untuk hamburan  $KN$ .

.....A model of  $K p$  potential is derived based on  $K N$  interactions. The model is constructed as a one hadron exchange potential for simplicity. The hadrons being exchanged are  $\rho$ ,  $\sigma$ ,  $\omega$ ,  $\delta$ ,  $\lambda$ , and  $\Sigma$ . The potential 39 s parameters are determined by means of fitting processes to  $K p$  scattering data, which are the spin averaged differential cross sections, for energies of about 21 MeV to 669 MeV. These parameters are the cutoff parameters for the form factors,  $\sigma$  mass,  $\delta$  mass, and the coupling constants. Theoretical data are produced without partial wave expansion by employing a three dimensional technique for  $KN$  scattering.