

# Model Non-Relativistik Potensial K+p Berdasarkan Pertukaran Satu Hadron = One Hadron Exchange Non-Relativistic Model for K+p Potential

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## Abstrak

Potensial K+p dimodelkan sebagai pertukaran satu hadron. Pada interaksi K +p ini, hadron yang dipertukarkan adalah meson skalar (K<sup>0</sup>), meson vektor (K<sup>-</sup>, K<sup>+</sup>), hiperon (K<sup>0</sup>L, K<sup>0</sup>S), dan resonannya ((1600), (1385)). Model interaksi ini dibuat untuk perhitungan non-relativistik, untuk itu model potensialnya diformulasikan dengan reduksi Blankenbecler-Sugar. Nilai parameter model dicari dengan melakukan fitting pada data eksperimen, yaitu differential cross section untuk rentang energi lab 422.66 MeV hingga 3683.22 MeV. Hamburan dihitung dengan menggunakan teknik 3D tanpa ekspansi partial wave.

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K +p potential is modeled as one hadron exchange. In this K+p interaction, the hadrons being exchanged include scalar meson ( $K^0$ ), vector mesons ( $K^-$ ,  $K^+$ ), hyperons ( $K^0_L$ ,  $K^0_S$ ), and their resonances((1600), (1385)). This interaction model is made for non-relativistic calculation and for that purpose the potential model is formulated within Blankenbecler-Sugar reduction. The values of the model parameters are found by fitting to the experimental data of differential cross section for energy from 422.66 MeV to 3683.22 MeV. Scattering calculations are performed using a 3D technique without partial wave expansion.