

Oral contribution

## Study of nucleon resonances in a chiral quark model via $\eta$ productions

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摘要

In this report we investigate  $\eta$ -meson productions on the proton via electromagnetic and hadron probes in a chiral quark model approach. The observables, such as, differential cross section and beam asymmetry for the two productions are calculated and compared with the experiment. The five known resonances  $S_{11}(1535)$ ,  $S_{11}(1650)$ ,  $P_{13}(1720)$ ,  $D_{13}(1520)$ , and  $F_{15}(1680)$  are found to be dominant in the reaction mechanisms in both channels. Significant contribution from a new  $S_{11}$  resonances are deduced. For the so-called “missing resonances”, no evidence is found within the investigated reactions. The partial wave amplitudes for  $\pi^-p \rightarrow \eta n$  are also presented.

关键词 [N\\*, chiral quark model, photoproduction](#)

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