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Electroproduction of f0(980) and f2(1270) with CLAS detector

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The Quark Model has predicted meson spectroscopy with great success. However, the nature of some light unflavored mesons is not fully determined yet. The case of f0(980) is particularly puzzling. Its nature remains debatable: it may be a 4-quark state or a KK molecule, rather than a simple q-qbar pair. While f2(1270) is better known, there are suggestions that it could be an intermediate state generated by vector meson-vector meson interactions. The electroproduction of the f0 and f2 (ep \rightarrow epf0/f2) have never been measured so far, and may shed light on their structure. In this work, cross sections for the electroproduction of f0 and f2 have been extracted in the dominant decay channel ep \rightarrow ep π + π -, using data taken at Jefferson Lab with the CLAS detector. In addition to these measurements, a Partial Waves Analysis of the ep π + π - final state is under study. Such technique provides the decomposition of a mass spectrum according to the angular distribution of the decay products, allowing a clearer identification of meson resonances of different spin.

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