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Electroexcitation of the $S_{11}(1535)$ and $D_{13}(1520)$ up to $Q^2 = 4.2 \ GeV^2$ from CLAS data. INNA AZNAURYAN, Yerevan Physics Institute and Jefferson Lab, VOLKER BURKERT, Jefferson Lab, VICTOR MOKEEV, Jefferson Lab and Moscow State University — We present the helicity amplitudes for the electroexcitation of the resonances $S_{11}(1535)$ and $D_{13}(1520)$ on protons extracted from CLAS data on the π , 2π , and η electroproduction at $Q < 1 \ GeV^2$ and from π^+ data at $1.7 < Q^2 < 4.2 \ GeV^2$. The analysis of the π and η electroproduction data was made using two approaches: dispersion relations and unitary isobar model, which give consistent results. For the first time definite results are obtained for the longitudinal transition amplitudes for these states. Accurate results are also obtained for the transverse transition amplitudes. The results provide stringent tests for existing quark models calculations. None of the models gives a satisfactory description over the entire Q^2 range covered by the data.

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