

AN APPLICATION OF THE U -MATRIX
APPROACH TO HIGH ENERGY
PROTON-PROTON SCATTERING

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We consider elastic proton-proton scattering at high energies and small momentum transfer. The expressions for the pp-scattering helicity amplitudes are obtained using the model of pomeron as an $SU(3)$ -scalar photon with helicity-non-conserving interaction vertex. On the basis of the U -matrix method, we calculate unitarized helicity amplitudes in elastic pp-scattering at high energies and small momentum transfer. The isoscalar formfactor of proton is shown to give the main contribution into helicity-flip amplitudes. The momentum transfer dependence of amplitudes is analyzed. It is shown that the ratio of the single-flip amplitude to the non-flip amplitude r_5 equals to a half of the nucleon isoscalar anomalous magnetic moment.