

# All-loop calculations of total, elastic and diffractive cross sections in RFT via the stochastic approach

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## Summary

The evolution equations for the exact Green functions of the Reggeon Field Theory (RFT) are equivalent to those for the inclusive probability distributions for a reaction-diffusion system of classical particles. This equivalence can be used to obtain numerically the RFT Green functions and amplitudes with account of all loops and enhanced graphs. We developed a numerical approach based on this equivalence which allows us to compute the elastic scattering amplitude and its single-diffractive cut. Using it we perform all-loop calculation of the total, elastic and single diffractive (high- and low-mass) cross sections and compare results with the experimental data.

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