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# Unitarity in multi-Higgs production

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In spontaneuosly broken scalar theories perturbative and semi-classical calculations show that multi-particle production grows rapidly with the number of scalar particles at sufficiently high energies. According to recent computations, for $\lambda n \gg 1$, where $n$ is the multiplicity and $\lambda$ is the self-coupling, the amplitude grows exponentially with the energy, resulting in a divergent propagator and predicting the violation of perturbative unitarity. In this talk I present the self-consistent solution of the Schwinger-Dyson equation of the scalar theory in the spectral representation and the transition rate is calculated. We find an amplitude growing quadratically with the energy which leads to an asymptotically decreasing propagator.

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