
Universal dynamics for the logarithmic Schrödinger equation

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Résumé

We shall consider the Schrödinger equation with a logarithmic nonlinearity and show that this type of nonlinearity affects strongly the long time behaviour of the solution : the dispersion is faster, by a logarithmic factor, than the dispersion of the free equation, and the solutions behave asymptotically, in modulus, according to a universal Gaussian profile. This corresponds to a joint work with Rémi Carles.

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