

## Physics &gt; Optics

# On the effect of random inhomogeneities in Kerr-media modelled by non-linear Schrodinger equation

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We consider propagation of optical pulses under the interplay of dispersion and Kerr non-linearity in optical fibres with impurities distributed at random uniformly on the fibre. By using a model based on the non-linear Schrodinger equation we clarify how such inhomogeneities affect different aspects such as the number of solitons present and the intensity of the signal. We also obtain the mean distance for the signal to dissipate to a given level.

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