

Critical Exponent for Nonlinear Dissipative Wave Equations with Space-Dependent Potential

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We study the balance between the effect of spatial inhomogeneity of the potential in the dissipative term and the focusing nonlinearity. Sharp critical exponent results will be presented in both cases of fast and slow decaying potential. The tools for the global existence part of the proof include sharp decay estimates for the corresponding linear problem with space-dependent coefficients, which by itself is a delicate problem in R^n .