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Klein-Gordon type wave models with non-effective time-dependent potential

Abstract

We consider the Cauchy problem for Klein-Gordon type models,

$$u_{tt} - \Delta u + m(t)^2 u = 0, \quad u(0, x) = u_0(x), \quad u_t(0, x) = u_1(x),$$

with $tm(t) \rightarrow 0$, i.e., $m(t)^2 u$ is so-called non-effective time-dependent potential. We define and describe the long time behavior for some appropriate energy. A scattering result will complete our considerations.

The results presented in this talk can be found in the recent accepted paper [1].

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