



**BLOW UP IN FINITE TIME OF SOLUTIONS FOR A  
COUPLED KLEIN-GORDON EQUATIONS WITH  
NONLINEAR DAMPING TERM**

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Received July 30, 2016

**Abstract**

In this paper, we consider the Cauchy problem for a class of coupled Klein-Gordon equations with nonlinear damped term at low initial energy level. By using Sobolev inequality and potential wells and introducing a new unstable set, we derive the result that certain solutions with sub-critical initial energy blow up in finite time.

**Keywords and phrases:** potential well, blow up, Klein-Gordon equations, nonlinear damped, Cauchy problem.

