



**GLOBAL EXISTENCE AND BLOW UP OF SOLUTIONS FOR
WAVE EQUATION WITH NONLINEAR BOUNDARY
DAMPING AND SOURCE TERM UNDER
CRITICAL ENERGY**

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Received August 25, 2017

Abstract

In this paper, we study the initial boundary value problem of wave equations with nonlinear source and boundary damping terms. However, the classical methods used to study qualitative studies are no longer entirely applicable. We concern with the global existence and blow-up solution under critical initial energy. Then we prove all the results still hold in extended assumptions by potential well and Sobolev embedding theory.

Keywords and phrases: nonlinear wave equation, potential well, global existence solution, blow-up.

**Pioneer Journal
of Mathematics
and Mathematical
Sciences**



Pioneer Scientific
Publisher