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**Title:** Remarks on nonlinear Schrödinger equations with the harmonic potential

**Author(s):** Hongzi Cong and Qidi Zhang

We show that the small solution for a type of nonlinear Schrödinger equation with the harmonic potential exists over a longer time interval than the one given by local existence theory. We also get a control of the Sobolev norm of the solution on that time interval. We exploit the structure of nonlinearity to estimate the small divisor and perform a normal form process.

**Address:**

Hongzi Cong  
School of Mathematical Sciences  
Dalian University of Technology  
No. 2 Linggong Road  
Dalian City, Liaoning Province, 116024  
China

**Address:**

Qidi Zhang  
Department of Mathematics  
East China University of  
Science and Technology  
No. 130 Meilong Road  
Shanghai, 200237  
China