1135-35-1009 **F. Linares**, **G. Do Nascimento** and **G. Ponce*** (ponce@math.ucsb.edu), Department of Mathematics, UCSB, Santa Barbara, CA 93106. *Special solution for the generalized Schrödinger equation.*

We consider the initial value problem associated to the generalized derivative Schrödinger equations

$$\partial_t u = i\partial_x^2 u + \lambda |u|^\alpha \partial_x u, \quad x, t \in \mathbb{R}, \ \ |\lambda| = 1, \ \ 0 < \alpha \leq 1, \tag{1}$$

and

$$\partial_t u = i\partial_x^2 u + \lambda \partial_x (|u|^\alpha u), \quad x, t \in \mathbb{R}, \ \ |\lambda| = 1 \ \ 0 < \alpha \leq 1. \tag{2}$$

Following an argument introduced by Cazenave and Naumkin we shall establish the local well-posedness for a class of small data in an appropriate weighted Sobolev space.

The other main tools in the proof include the homogeneous and inhomogeneous versions of Kato smoothing effect for the linear Schrödinger equation obtained by Kenig-Ponce-Vega.

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