

# SOME REMARKS ON A NONLINEAR SCHRÖDINGER EQUATION

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In this talk we consider existence and multiplicity of solutions to a nonlinear Schrödinger equation, which appears in the Bopp-Podolsky theory. The equation depends upon a parameter  $q$ . We show a nonexistence result depending on  $q$  and emphasize the indefiniteness of the problem, which seems to be cause of multiplicity of solutions. An analysis of the associated fiber maps shows interesting properties of the equation.

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