

1026-35-199

Nader Masmoudi*, 251 Mercer Street, NY, NY 10012-1185. *Energy convergence for singular limits of Zakharov type systems.*

We prove existence and uniqueness of solutions to the Klein-Gordon-Zakharov system in the energy space $H^1 \times L^2$ on some time interval which is uniform with respect to two large parameters c and α . These two parameter correspond to the plasma frequency and the sound speed. In the simultaneous high-frequency and subsonic limit, we recover the nonlinear Schrödinger system at the limit. We are also able to say more when we take the limits separately. This a joint work with Kenji Nakanishi (Received February 27, 2007)