

1089-35-324

Sergey A Dyachenko* (sdyachen@unm.edu), 1 University of New Mexico, Albuquerque, NM 87131, and **Pavel M Lushnikov**. *Solitons in dipolar BEC with $1/r$ interatomic potential*. Preliminary report.

Dipolar atoms in gas under special conditions can be made to exhibit $1/r$ interatomic potential. The resulting system can be modelled with Nonlocal Nonlinear Schrodinger equation. The system has a number of remarkable features, such as the soliton solutions and long-range interactions. (Received February 18, 2013)