

Bose condensates in interaction with excitations – a kinetic model.

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Mathematical questions for Bose gases below the temperature where Bose-Einstein condensation sets in are considered. The model is of two-component type, consisting of a kinetic equation for the distribution function of a gas of (quasi-)particles interacting with a Bose condensate, which is described by a Gross-Pitaevskii equation. Existence results and moment estimates are proved in the space-homogeneous, isotropic case.