

ELEMENTS OF μ -CALCULUS
AND THERMODYNAMICS OF μ -BOSE GAS MODEL

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S u m m a r y

We review on and give some further details about the thermodynamical properties of the μ -Bose gas model (arXiv:1309.1363) introduced by us recently. This model was elaborated in connection with μ -deformed oscillators. Here, we present the necessary concepts and tools from the so-called μ -calculus. For the high temperatures, we obtain the virial expansion of the equation of state, as well as five virial coefficients. In the regime of low temperatures, the critical temperature of condensation is inferred. We also obtain the specific heat, internal energy, and entropy for a μ -Bose gas for both low and high temperatures. All thermodynamical functions depend on the deformation parameter μ . The dependences of the entropy and the specific heat on the deformation parameter are visualized.