



Mathematical Physics

Exact expressions for the intercepts of r-particle momentum correlation functions in μ -Bose gas model

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Recently, the deformed μ -Bose gas model based on so called μ -deformed oscillators was proposed. For that model, the intercepts of r-particle momentum correlation functions (correlation functions at coinciding momenta of particles) were treated for $r=2,3$, within certain order of approximation in μ . In this work, we derive for μ -Bose gas model the exact expressions for r-particle correlation function intercepts, for all r, through Lerch transcendent and find their asymptotics (as functions of μ). For 2-, 3-particle intercepts and deformed distribution function $\langle a^{\dagger}_k a_k \rangle$ the dependence on particles momentum is presented graphically.

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