

ALCULATION OF CRITICAL TEMPERATURE  
FOR A BOSE GAS WITH LONG-RANGE FORCES

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S u m m a r y

The critical temperature has been calculated for a Bose gas with the power-law dependence of the potential energy of interaction between particles on the interparticle distance. The result obtained satisfies the limiting cases known from the literature. The parameters of the collective excitation spectrum of the model have been analyzed in the random phase approximation (RPA). The long-wavelength asymptote has been derived for the structure factor of the system above the phase transition temperature.