

A METHOD TO EVALUATE THE SIZE
OF A CRITICAL REGION OF TEMPERATURES
FOR A 3D LATTICE SYSTEM
WITH EXPONENTIALLY DECAYING
INTERACTION POTENTIAL

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S u m m a r y

A new procedure for calculation of the size of a critical region under the second order phase transition (PT) is proposed, and the formula for the quantity τ^* ($\tau^* = (T^* - T_c)/T_c$ defining this size is obtained, where T^* is the temperature and T_c is the PT temperature. For $\tau < \tau^*$, thermodynamic function of the system reveal a particular behaviour which can be described by using critical indices. It is shown that τ^* depends on the ratio of the lattice constant to the radius of action of the interparticle potential b and decreases as b increases