CALCULATION OF PAIR CORRELATION FUNCTIONS FOR MULTICOMPONENT LIQUIDS WITH REGARD FOR THE ANOMALOUS DIMENSION INDEX

A.N. Vasilev, A.V. Chalyi[1]

Taras Shevchenko Kyiv National University,
Faculty of Physics
(*6, Academician Glushkov Ave., Kyiv 03022, Ukraine;*
e-mail: vasilev@univ.kiev.ua),
[1]O.O. Bogomolets Medical National University
(*13, Shevchenko Blvd., Kyiv 01601, Ukraine;*
e-mail: avchal@iatp.org.ua)

S u m m a r y

We have considered a multicomponent liquid system, for which the pair correlation functions of density fluctuations are calculated. These functions are calculated in the approximation of anomalous dimension, which allows us to obtain the expressions for correlation functions of the scaling type, i.e., such that correspond to the positions of the theory of scaling invariance. The expressions obtained become simpler in the case where a system is at a close vicinity of the critical state. It is shown that then all correlation functions are described by a single general expression, whose structure is similar to that of the pair correlation function of a one-component system.