

INTERFACIAL ENTROPY PROFILE
IN THE ONE-LOOP APPROXIMATION

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S u m m a r y

The near-critical interfacial entropy profile is calculated in the one-loop approximation of renormalized field theory. The shape of the profile is broadened by fluctuations and goes beyond the mean-field coupling between the entropy and the order parameter. The excess interfacial entropy and heat capacity are calculated by using the entropy profile. The interface creates corrections to the heat capacity and entropy of order ξ/L , where ξ is the correlation length, and L is a characteristic length of the system. These results are discussed in relation to finite-size scaling, surface critical phenomena, and the results of experiments and simulations.