

## Correlation functions and amplitude ratio for relaxational dynamics with energy conservation

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The dynamic correlation functions for a dynamical model including the nonconserved order parameter coupled to one conserved density (model C) [1] are studied by field-theoretical renormalization group approach [2]. Scaling functions for the characteristic frequencies as well as for the dynamic shape are calculated in one loop approximation. Using an exponentiation procedure these results are extended in order to consider the changes in these function using the fixed point values and exponents in two loop order. The dynamical amplitude ratio  $R$  [3] of the characteristic frequencies is generalized to the whole region of wave vector and correlation length. Surprisingly the decay of the shape functions at large scaled frequency does not behave as expected from applying usual scaling arguments. However such behavior for the order parameter correlation function is also found [4] in the dynamics of the antiferromagnet (model G).

This work was supported by Fonds zur Förderung der wissenschaftlichen Forschung under Project No. P19583-N20

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