

VII International Conference “Models in Quantum Field Theory”
(MQFT-2022)



Contribution ID: 159

Type: **not specified**

Dissipation in the formalism of time-dependent Green's functions at finite temperature

Tuesday, 11 October 2022 18:00 (25 minutes)

We discuss the microscopical justification of dissipation in model nonrelativistic Fermi and Bose systems with weak local interaction above phase transitions. Dynamics of equilibrium fluctuations are considered in Keldysh –Schwinger framework. We show that dissipation is related to pinch singularities of diagram technique. Using Dyson –Schwinger equation and two loop approximation we define and calculate attenuation parameter which is related to exponentiality of Green's functions decay. We show that the attenuation parameter is the microscopic analogous of the Onsager kinetic coefficient and it is related to attenuation in excitation spectrum.

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Session Classification: Section B