

Large time and long distance asymptotics of the thermal correlators of the impenetrable anyonic lattice gas

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We study thermal correlation functions of the one-dimensional impenetrable lattice anyons. These correlation functions can be presented as a difference of two Fredholm determinants. To describe large time and long distance behavior of these objects we use effective form factor approach. The asymptotic behavior is different in the space-like and time-like regions. In particular, in the time-like region we observe the additional power factor on top of the exponential decay. We argue that this result is universal as it is related to the discontinuous behavior of the phase shift function of the effective fermions. At particular values of the anyonic parameter we recover asymptotics of spin-spin correlation functions in XXO quantum chain.

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