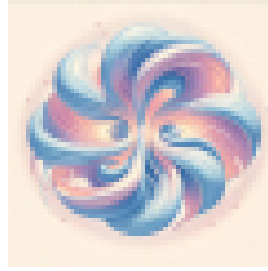


The 8th International Conference on Chirality, Vorticity and Magnetic Field in Quantum Matter



ID de Contribution: 84

Type: **Flash Talk (Plenary) + Poster**

Acceleration as a circular motion along an imaginary circle

lundi 22 juillet 2024 17:50 (5 minutes)

We describe a quantum fluid undergoing constant acceleration in the grand canonical ensemble, in thermal equilibrium at finite inverse temperature β . Writing the action of the density operator ρ as a Poincaré transformation with imaginary parameters, we derive the Kubo-Martin-Schwinger (KMS) relation characterizing the two-point functions. The KMS relation sets boundary conditions for the Euclidean propagator, identifying points in the τ - z plane on a circle separated by an angle equal to the thermal acceleration α . When $\alpha/2\pi = p/q$ is a rational number, we find a fractalization of thermodynamics, similar to the case of states under imaginary rotation.

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