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ABOUT THE EXISTENCE OF THE THERMODYNAMIC LIMIT FOR SOME DETERMINISTIC SEQUENCES OF THE UNIT CIRCLE

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Abstract. We show that in the set $\Omega = \mathbb{R}_+ \times (1, +\infty) \subset \mathbb{R}^2_+$, endowed with the usual Lebesgue measure, for almost all $(h, \lambda) \in \Omega$ the limit $\lim_{n\to+\infty} \frac{1}{n} \ln \left| h\big(\lambda^n - \lambda^{-n}\big) \bmod [-1/2, 1/2) \right|$ exists and is equal to zero. The result is related to a characterization of relaxation to equilibrium in mixing automorphisms of the two-torus. It is nothing but a curiosity, but maybe you will find it nice.

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