Pauli Operators with Almost Periodic Magnetic Fields

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I will consider the 2D Pauli operator H(b) with almost periodic magnetic field b. First, I will discuss certain ergodic properties of H(b), considerably extending the results of [1]. The main part of the talk will be devoted to the analysis of Ker H(b), in particular in the case of vanishing mean value of b, following our recent work [2].

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References

- [1] G.D.Raikov, Spectral asymptotics for the perturbed 2D Pauli operator with oscillating magnetic fields. I. Non-zero mean value of the magnetic field, Markov Process. Related Fields, 9 (2003) 775–794.
- [2] J.-F. Bony, N. Espinoza, G. Raikov, Zero modes for 2D Pauli operators with almost periodic magnetic fields, in preparation.