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Wigner transform and quasicrystals

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Joint work with P. Boggiatto, C. Fernández, A. Oliaro.

A Fourier quasicrystal is a discrete measure whose Fourier transform is also a discrete measure. We prove that a tempered distribution whose Wigner transform is supported on a product of two uniformly discrete sets is a quasicrystal. This suggests that techniques from time-frequency analysis could possibly be useful tools in the study of such structures.

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