1056-26-104 **Maxim Zinchenko*** (`maxim@caltech.edu`). *On the Hilbert Transform of a Measure.*

We give a criterion for pure absolute continuity of a measure in terms of its Hilbert transform. Explicitly, we prove that $\lim_{t \to \infty} t |E \cap \{x : |H_\mu(x)| > t\}| = 0$ if and only if $\mu_s(E) = 0$, where μ is a finite positive measure on $\mathbb{R}$, μ_s its singular part, H_μ its Hilbert transform, and $E \subset \mathbb{R}$ is a homogeneous set in the sense of Carleson. The result has applications in the spectral theory of Schödinger, Jacobi, and CMV operators.

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