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A half new characterization of I_0 sets

In 1966 Kahane gave a condition that implied a set is I_0 . That condition is also (the new half of the characterization) implied by " I_0 -ness". The proof of the new assertion uses a lemma (which might be of independent interest): there are constants $0 < c_N$ such that the Haar measure of $\bigcap_{n=1}^N \{ \gamma : |\langle \gamma, x_n \rangle - 1| < \varepsilon \}$ is at least $c_N \varepsilon^N$; the c_N are independent of the x_n and the LCA group involved.

This comes from joint work with Kathryn Hare.