Title: The asymptotic behavior of geodesic circles in any 2-torus: a sub-mixing property

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We study the behavior of the level sets of Busemann functions in the universal covering plane of a 2-torus in detail. We prove that in any 2-torus $T^2$, for any point $p$ and for any $\varepsilon > 0$, there exists a number $R > 0$ such that the geodesic circles with center $p$ and radii $t$ are $\varepsilon$-dense in $T^2$, for all $t > R$.

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