Frączek, Krzysztof; Lemańczyk, Mariusz
Ratner’s property and mild mixing for special flows over two-dimensional rotations. (English summary)
J. Mod. Dyn. 4 (2010), no. 4, 609–635.

Summary: “We consider special flows over two-dimensional rotations by \((\alpha, \beta)\) on \(\mathbb{T}^2\) and under piecewise \(C^2\) roof functions \(f\) satisfying von Neumann’s condition \(\int_{\mathbb{T}^2} f_x(x,y) \, dx \, dy \neq 0\) or \(\int_{\mathbb{T}^2} f_y(x,y) \, dx \, dy \neq 0\). Such flows are shown to be always weakly mixing and never partially rigid. It is proved that while specifying to a subclass of roof functions and to ergodic rotations for which \(\alpha\) and \(\beta\) are of bounded partial quotients the corresponding special flows enjoy the so-called weak Ratner property. As a consequence, such flows turn out to be mildly mixing.”

References

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Note: This list reflects references listed in the original paper as accurately as possible with no attempt to correct errors.

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