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ERRATUM TO "HYPERBOLIC SETS EXHIBITING C^1-PERSISTENT HOMOCLINIC TANGENCY FOR HIGHER DIMENSIONS"

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Though there are several minor differences (we mention later), the author found that the main example in [1] is essentially the same as the example in Simon's paper [2] published in 1972. Simon proved the C^1-persistence of homoclinic tangency in Lemmas 4 and 5 of [2]. As Simon mentioned, his construction can be done for not only the three-dimensional torus but also for any higher-dimensional manifold which is the product of the two-dimensional torus with a manifold. Therefore, Theorem 1.1 of [1] for such manifolds should be credited to Simon.

The difference between the two examples can be summarized as follows:

(1) The author's example is based on a Plykin-type attractor, while Simon's is based on a DA attractor.
(2) The author's example admits a normally repelling invariant manifold which is foliated by the one-dimensional strong stable manifolds, while Simon's example admits the two-dimensional center-unstable foliation on a neighborhood of the hyperbolic basic set.

By (1), the author's example can be embedded into any higher-dimensional manifold, while Simon's exists only on a manifold which is a product with a torus. By (2), the proofs of the persistence of homoclinic tangency are different from each other. However, it may be negligible, since each proof works for another example with a small modification.

References

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[2] C. P. Simon, Instability in $\mathrm{Diff}^r\,(T^3)$ and the nongenericity of rational zeta functions. *Trans. Amer. Math. Soc.* **174** (1972), 217–242. MR0317356 (47:5903)

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