ERRATA TO STABLY ERGODIC SKEW PRODUCTS

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The statement of the lemma should be ammended to

Lemma. *Let f be a measure preserving, Anosov diffeomorphism of $\mathbb{T}^n$ and $f_\sharp$ be the induced map on the fundamental group of $\mathbb{T}^n$. Let φ be in $H\ddot{o}l(\mathbb{T}^n, \mathbb{S}^1)$. If f_φ is not ergodic then $\varphi^{\det(I-f_\sharp)}$ is cohomologous to a constant function, $exp(2\pi i \frac{k}{r})$, for some $k, r \in \mathbb{Z}$.*

Proof. The proof is the same down to following the line. We take the maps φ and h_r induce on the fundamental groups and get the equation

$$r\varphi_\sharp = (h_r)_\sharp - (h_r)_\sharp f_\sharp = (h_r)_\sharp(I - f_\sharp).$$

Since f is Anosov $(I - f_\sharp)$ is invertible over $\mathbb{Q}$ and $det(I - f_\sharp)(I - f_\sharp)^{-1}$ is an integer matrix. It follows that there is a map $g_\sharp$ on the fundamental group with

$$rg_\sharp = \det(I - f_\sharp)(h_r)_\sharp.$$

By standard covering space arguments we can conclude there is a g in $\mathrm{H\ddot{o}l}(\mathbb{T}^n, \mathbb{S}^1)$ with $(g)^r = (h_r)^{\det(I-f_\sharp)}$.

The rest of the proof follows as before. □

The proof of the theorem also follows as before.

Thanks to Amy Wilkinson for pointing out the mistake.

We take this opportunity to add a reference to a paper which should have been included in our original paper.

REFERENCES

[B] Brin M.I., *Topological Transitivity of One Class of Dynamic Systems and Flows of Frames on Manifolds of Negative Curvature*, Funktsional'nyi Analiz i Ego Prilozheniya **9** (1975); English transl. in Functional Analysis and It's Applications **9** (1975), 8-16.