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Lennard F Bakker* (bakker@mathematics.byu.edu), 366 TMCB, Department of Mathematics, Brigham Young University, Provo, UT 84602, and **Pedro Martins Rodrigues**. *Block conjugacy of irreducible toral automorphisms*.

We show that there exists topologically non-conjugate irreducible Anosov diffeomorphisms f and g on the n -torus, both having the same entropy, with the property that $f \times f$ and $g \times g$ are topologically conjugate on the $2n$ -torus. The proof of this existence is a consequence of an algebraic number theory characterization of when two non-conjugate irreducible toral automorphisms $A, B \in \mathrm{GL}_n(\mathbb{Z})$ with the same characteristic polynomial are block conjugate, meaning there are toral automorphisms $A', B' \in \mathrm{GL}_n(\mathbb{Z})$ such that $A \oplus A'$ is conjugate to $B \oplus B$ and $A \oplus A$ is conjugate to $B \oplus B'$ in $\mathrm{GL}_{2n}(\mathbb{Z})$. (Received February 10, 2016)