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We announce here a proof that ergodic automorphisms of compact abelian groups, and skew products of Bernoulli shifts with such automorphisms, are isomorphic to Bernoulli shifts. The proof for group automorphisms begins by using the structure theorem for modules over a principal ideal domain together with an idea of Benjamin Weiss to reduce the general case to that of the group whose dual is the n-dimensional rationals. An ergodic automorphism of such a group is then algebraically split into a skew product of automorphisms with irreducible minimal polynomial. These are handled separately using a variant of the Ornstein-Weiss geometric technique together with the identification of expanding and contracting "directions" in a totally disconnected fiber found using Gauss's lemma. Finally, the whole skew product is shown to be Bernoullian by proving that each extension is very weak Bernoulli relative to the preceeding ones in the sense of Thouvenot. A theorem of Thouvenot then shows the automorphism is Bernoullian.

This easily extends to the following result about skew products. If T is a Bernoulli shift on X, A is an ergodic automorphism of the compact abelian group G, and $f : X \to G$ is measurable, then the skew product transformation $(x,g) \to (Tx, Ag+f(x))$ on $X \times G$ is Bernoullian.

Proofs of these results will appear in the Israel Journ.of Math.

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