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Scott Schneider* (scottsch@math.rutgers.edu), Department of Mathematics, Rutgers University, 110 Frelinghuysen Road, Piscataway, NJ 08854-8019. *Bernoulli Actions of Property (τ) Groups*. Preliminary report.

We will discuss the use of entropy in the study of factors of Bernoulli systems and present some applications to the theory of countable Borel equivalence relations. In particular, we will show that if $p \neq q$, then the orbit equivalence relations arising from Bernoulli actions of $SL_2(\mathbb{Z}[\sqrt{p}])$ and $SL_2(\mathbb{Z}[\sqrt{q}])$ are incomparable with respect to Borel reducibility. (Received September 13, 2008)