1086-37-2853 **Evangelie Zachos*** (ezachos@princeton.edu), **Tudor Padurariu** (tudor_pad@yahoo.com) and **Cesar Silva** (cesar.e.silva@williams.edu). *Positive Type Infinite Measure Ergodic Transformations.*

In 1964, Hajian and Kakutani defined an infinite measure-preserving transformation T to be of zero type if $\lim n \to \infty \mu(T^{-n}(A) \cap A) = 0$ for all A of finite measure, and they also observed that when T is conservative ergodic, if it is not of zero type then $\limsup_{n\to\infty} \mu(T^{-n}(A) \cap A) > 0$ for all A of finite positive measure. For a vector $v = (v_1, v_2, \ldots, v_d)$ of positive entries we define T if v-positive type if $\limsup_{n\to\infty} \mu(A \cap T^{v_1 n}(A)) \ldots \mu(A \cap T^{v_d n}(A)) > 0$.

We study this property and construct examples of rank-one and Markov shift transformations satisfying it. (Received September 25, 2012)