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**Isaac Loh** and **Cesar E. Silva\*** ([csilva@williams.edu](mailto:csilva@williams.edu)), Department of Mathematics, Williams College, Williamstown, MA 01267. *Strict doubly ergodic infinite transformations.*

We give conditions for rank-one infinite measure preserving transformations to be weakly doubly ergodic and for their  $k$ -fold cartesian product to be conservative. We give examples of rank-one transformations that are weakly doubly ergodic, rigid (so all their cartesian products are conservative), but their 2-fold cartesian product is not ergodic. We also show that a weakly doubly ergodic nonsingular group action is ergodic with isometric coefficients. (Received February 23, 2016)