

Meeting: 1003, Atlanta, Georgia, AMS CP 1, AMS Contributed Paper Session

1003-37-1558 **S. Butler** and **W. Kosek*** (wkosek@coloradocollege.edu), 14 East Cache La Poudre St., Tutt Science Center, Room 204, Colorado Springs, CO 80903, and **J. Rosenblatt**. *Existence of a sigma-finite invariant measure.*

Consider a nonsingular transformation T of a measure space (X, m) . There are many conditions equivalent to the existence of a finite invariant measure equivalent to the given measure m . There are, however, relatively few known conditions for the same, if we allow the invariant measure to be (infinite) sigma-finite. A necessary and sufficient condition will be presented. What makes our condition interesting is that it is stated only in terms of the given measure. This condition has a stronger sufficient form, which is more convenient to work with. An example will be presented, which indicates that the stronger version is probably not a necessary condition. (Received October 05, 2004)