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Pure strictly uniform models of non-ergodic measure automorphisms. (English) Zbl 07463733


Summary: The classical theorem of Jewett and Krieger gives a strictly ergodic model for any ergodic measure preserving system. An extension of this result for non-ergodic systems was given many years ago by George Hansel. He constructed, for any measure preserving system, a strictly uniform model, i.e. a compact space which admits an upper semicontinuous decomposition into strictly ergodic models of the ergodic components of the measure. In this note we give a new proof of a stronger result by adding the condition of purity, which controls the set of ergodic measures that appear in the strictly uniform model.

MSC:

37B05 Dynamical systems involving transformations and group actions with special properties (minimality, distality, proximality, expansivity, etc.)

37B20 Notions of recurrence and recurrent behavior in topological dynamical systems

37A25 Ergodicity, mixing, rates of mixing

Keywords:

non-ergodic measure-preserving system; ergodic decomposition; pure topological model; strictly ergodic system; strictly uniform system

Full Text: DOI

References:


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