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On ergodicity of multidimensional dispersing billiards

Ergodic theory of dispersing billiards was developed in 1970s–1980s. An important part of the theory is the analysis of the structure of the sets where the billiard map is discontinuous. They were assumed to be smooth manifolds till recently, when a new pathological type of behaviour of these sets was found. Thus a reconsideration of earlier arguments was needed. I'll show that at least in a generic situation the earlier proofs of ergodicity of dispersing billiards can be recovered.