flat manifold is necessarily flat. This answers a conjecture of Auslander and Wolf posed in [5].

(F) The notion of totally convex sets can be used to study isometries of complete manifolds of nonnegative curvature.

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ON MIXING IN INFINITE MEASURE SPACES

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1. E. Hopf [6, p. 66] suggested that strong mixing in infinite measure spaces should be defined by a limit statement on certain ratios; Krickeberg [9] made this precise in the context of topological measure spaces. In this paper we shall consider a different concept of strong mixing, meaningful also without existence of a topological structure. Our notion coincides with the usual concept of strong mixing in the case of finite measure spaces and seems to be the proper generalization to the infinite measure case in that it is exactly the concept needed to carry over certain theorems on mixing which hold in finite measure spaces.

Given a sequence (A_n) of measurable sets on a measure space $(\Omega, \mathcal{A}, \mu)$, the intersection $\mathcal{R}(A_n)$ of the σ-algebras $\mathcal{B}_k(A_n)$ generated by $A_k, A_{k+1}, \cdots$ will be called the *remote σ-algebra* of (A_n). A sequence (A_n) is called *remotely trivial*, iff $\mathcal{R}(A_n)$ is *trivial*, i.e., contains only

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