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Manifolds with finite first homology as codimension 2 fibrators. (English) Zbl 0727.55009
Proc. Am. Math. Soc. 113, No. 2, 471-477 (1991).

Summary: Given a map $f: M \rightarrow B$ defined on an orientable $(n+2)$ -manifold with all point inverses having the homotopy type of a specified closed n -manifold N , we seek to catalog the manifolds N for which f is always an approximate fibration. Assuming $H_1(N)$ finite, we deduce that the cohomology sheaf of f is locally constant provided N admits no self-map of degree $d > 1$ when $H_1(N)$ has a cyclic subgroup of order d . For manifolds N possessing additional features, we achieve the approximate fibration conclusion.

MSC:

[55R65](#) Generalizations of fiber spaces and bundles in algebraic topology

[57N15](#) Topology of the Euclidean n -space, n -manifolds ($4 \leq n \leq \infty$)
(MSC2010)

[57N65](#) Algebraic topology of manifolds

Cited in 4 Documents

Keywords:

orientable manifold; homotopy type; approximate fibration; cohomology sheaf

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