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Coincidence of the homological dimensions of the Fréchet algebra of smooth functions on a manifold with the dimension of the manifold. (English. Russian original) Zbl 0626.46057

Funct. Anal. Appl. 20, 248-250 (1986); translation from Funkts. Anal. Prilozh. 20, No. 3, 92-93 (1986).

The principal result of this paper is the following: $ds C^\infty(M) = dgC^\infty(M) = dbC^\infty(M) = m$; here M is a smooth real m -dimensional manifold, $C^\infty(M)$ is the topological algebra of C^∞ functions on M and $ds A$, $dg A$, $db A$ denote the cohomological dimensions of a topological algebra A in the sense of A. Ya. Khelemskij [Homology in Banach and topological algebras (in Russian) (1986; Zbl 0608.46046)].

Reviewer: L.Maxim Răileanu

MSC:

- [46M20](#) Methods of algebraic topology in functional analysis (cohomology, sheaf and bundle theory, etc.) Cited in 4 Documents
- [46H05](#) General theory of topological algebras
- [46J05](#) General theory of commutative topological algebras

Keywords:

[cohomological dimensions](#)

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References:

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