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The Levi problem and the structure theorem for non-negatively curved complete Kähler manifolds. (English) [Zbl 0911.32022](#)

J. Reine Angew. Math. 504, 139-157 (1998).

The subject of this paper is the Levi problem on complex manifolds.

The main result is: A complex manifold with a negative canonical bundle is holomorphically convex if and only if it is pseudoconvex.

The method of the proof is based on an analytic version of the so-called concentration method on the study of adjoint bundles in algebraic geometry.

As an application, one has the following Kähler version of the Cheeger-Gromoll Riemannian structure theorem: Every complete Kähler manifold with nonnegative sectional curvature and positive Ricci curvature, has a structure of holomorphic fibre bundle over a Stein manifold whose typical fibre is biholomorphic to some compact Hermitian symmetric manifold.

Reviewer: [S. Takayama \(Osaka\)](#)

MSC:

[32E05](#) Holomorphically convex complex spaces, reduction theory

[32T99](#) Pseudoconvex domains

Cited in **1** Review
Cited in **3** Documents

Keywords:

non-negatively curved complete Kähler manifolds; Levi problem; complex manifolds

Full Text: [DOI](#)