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Uniqueness of the complex structure on Kähler manifolds of certain homotopy types.

(English) [Zbl 0711.53052](#)

J. Differ. Geom. 32, No. 1, 139-154 (1990).

The main result of this paper is that for $n \leq 6$, a Kähler manifold which is homotopy equivalent to the projective space $\mathbb{C}P_n$ is analytically equivalent to $\mathbb{C}P_n$. An ad hoc proof is given for each of the cases $n = 3, 4, 5, 6$.

Reviewer: [G.Roos](#)

MSC:

[53C55](#) Global differential geometry of Hermitian and Kählerian manifolds

[57R20](#) Characteristic classes and numbers in differential topology

[57R55](#) Differentiable structures in differential topology

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complex projective spaces; homotopy type; Kähler manifold

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