

**Brown, J. R.**

**Properties of a hypothetical exotic complex structure on  $\mathbb{C}P^3$ .** (English) Zbl 1174.53345  
*Math. Bohem.* 132, No. 1, 59-74 (2007).

Summary: We consider almost-complex structures on  $\mathbb{C}P^3$  whose total Chern classes differ from that of the standard (integrable) almost-complex structure. *E. Thomas* established the existence of many such structures. We show that if there exists an “exotic” integrable almost-complex structures, then the resulting complex manifold would have specific Hodge numbers which do not vanish. We also give a necessary condition for the nondegeneration of the Frölicher spectral sequence at the second level.

**MSC:**

**53C56** Other complex differential geometry

**53C15** General geometric structures on manifolds (almost complex, almost product structures, etc.)

**58J20** Index theory and related fixed-point theorems on manifolds

**55T99** Spectral sequences in algebraic topology

Cited in 1 Document

**Keywords:**

projective space; Frölicher spectral sequence; Hodge numbers

**Full Text:** [EMIS](#) [EuDML](#)