

**Gambaryan, M. P.**

**Regularity conditions of complex tapes.** (Russian) [Zbl 0576.32016](#)

*Usp. Mat. Nauk* 40, No. 3(243), 203-204 (1985).

Let  $M$  be an oriented  $C^1$  real compact submanifold of  $\mathbb{C}^n$  of real dimension  $2p-1$  ( $p > 1$ ). Suppose  $M$  is a scarred  $2p-1$  cycle of class  $C^1$ . If  $M$  is maximally complex, then by the Harvey-Lowson theorem there exists a unique subvariety  $V \subset \mathbb{C}^n \setminus M$  so that  $\partial V = M$ . (Then  $V$  will be called complex tape.)

The problem of regularity of the set  $V$  was previously solved by *S. S. Yau* [*Ann. Math. II. Ser.* 113, 67-110 (1981; [Zbl 0464.32012](#))] by using the cohomologies of Kohn-Rossi. In this paper the author gives two theorems on regularity by using another approach.

Reviewer: M.Marinov

**MSC:**

[32C25](#) Analytic subsets and submanifolds

[32V40](#) Real submanifolds in complex manifolds

Cited in **1** Review  
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**Keywords:**

regularity of complex tapes; regular submanifold