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Characteristic classes for algebraic vector bundles with Hermitian metric. II. (English)

Zbl 0715.14006

Ann. Math. (2) 131, No. 2, 205-238 (1990).

[For part I of this paper see *ibid.*, No.1, 163-203 (1990; Zbl 0715.14018).]

This part II has three sections. In section 5, the case $X = \mathbb{P}^n$ (the projective space) is considered; one computes the arithmetic Chern classes of the canonical rank n vector bundle on X , which are given by the L^1 forms introduced by Levine in his paper on Nevanlinna theory for maps into $\mathbb{P}^n(\mathbb{C})$ [*H. I. Levine*, Ann. Math., II. Ser. 71, 529-535 (1960; Zbl 0142.048)]. In section 6, one introduces $\hat{K}_0(X)$ and one describes it by some exact sequences. In the last section, one gives a new description of the Beilinson regulator on $K_1(X)$ by means of Bott-Chern forms, and one shows that ch is an isomorphism of λ -rings.

Reviewer: Vasile Brînzănescu

MSC:

- 14F05 Sheaves, derived categories of sheaves, etc. (MSC2010)
- 32H30 Value distribution theory in higher dimensions
- 57R20 Characteristic classes and numbers in differential topology
- 14C35 Applications of methods of algebraic K -theory in algebraic geometry

Cited in **7** Reviews
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Keywords:

Nevanlinna theory for maps into complex projective n -space; arithmetic Chern classes; Beilinson regulator on K_1

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