

**Grivaux, Julien**

**Variation of the holomorphic determinant bundle.** (English) Zbl 1329.14047

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Let  $f : X \rightarrow Y$  be a proper holomorphic submersion between complex manifolds and let  $(E_t)$  be a holomorphic family of holomorphic vector bundles on  $X$  parametrized by the unit disc. The author gives an explicit description of the variation of the determinant bundle of  $Rf_*E_t$ , first in the rational Deligne cohomology group  $H_D^2(Y, Q(1))$  and then in the Picard group  $\text{Pic}(Y)$ .

Reviewer: [Alexandru Dimca](#) (Nice)

**MSC:**

14F43 Other algebro-geometric (co)homologies

14C40 Riemann-Roch theorems

**Keywords:**

determinant bundle; Chern classes; holomorphic vector bundles

**Full Text:** [DOI](#) [arXiv](#)