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The curvature of direct images of holomorphic vector bundles

We consider holomorphic fiber bundles, i.e., holomorphic submersions p between complex manifolds Y and S . Given a hermitian holomorphic vector bundle over Y , its direct image under p is sometimes itself a hermitian holomorphic vector bundle, but often it is a more general object. In the talk we will discuss the notion of curvature of such direct images, and the relationship between the curvature of the original bundle and that of its direct image. We will also discuss applications.