

Erratum: Rational curves on holomorphic symplectic fourfolds

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In this Erratum we correct two mistakes in our paper:

Rational curves on holomorphic symplectic fourfolds, *Geometric and Functional Analysis* **11** (2001), no. 6, 1201-1228

We are grateful to Antoine Chambert-Loir for pointing out that the first paragraph of Theorem 4.1 should read as follows:

Let F be an irreducible holomorphic symplectic manifold of dimension $2n$ and Y a submanifold of dimension k . Assume either that Y is Lagrangian, or that all of the following hold: $\mathcal{N}_{Y/F} = \Omega_Y^1 \oplus \mathcal{O}_Y^{\oplus 2n-2k}$, the restriction of the symplectic form to Y is zero, and $H^1(\mathcal{O}_Y) = 0$. Then the deformation space of Y in F is smooth, of dimension $2n-2k$ **if the last three conditions above hold.**

We are grateful to Claire Voisin for pointing out that Proposition 7.4 requires an additional hypothesis, and should read as follows:

Let X be a cubic fourfold with Fano variety F . Assume that F contains a smooth rational curve R of degree n , with corresponding scroll $T_{n,\Delta}$. Assume that this corresponding scroll T is not a cone **and has isolated singularities**. Then there exists a rational map

$$\phi : \mathbb{P}^4 \dashrightarrow X$$

with

$$\deg(\phi) = \binom{n-2}{2} - \Delta = \frac{(n-2)^2}{4} + \frac{(R, R)}{2} + 1.$$

Without this hypothesis the double point computation fails, as is shown by the example

$$T = \{x^2z + y^2t = 0\}.$$