

Errata to thesis “Rational points on K3 surfaces.”
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Chapters 3, 4, and 5 have also been made into papers, see [VL1], [VL2], and [VL3] in the references of the thesis.

Note that these errata are listed by page number, while (ln) means line n from the top of the page and $(l-n)$ means line n from below. Display math formulas are counted as (possibly multiple) lines, but figures and tables (including captions) are not counted.

I thank Brendan Hassett and Bas Edixhoven for pointing out some of these mistakes.

[abstract-1] (1–6) see erratum [89] (15).

[50] (1–8) “ $E \times_{k(t)} F$ is a cubic,” this could use a little more explanation. Outside the fibers that contain singular points of the surface, every fiber is a cubic curve in \mathbb{P}^2 as the missing points M_i are filled in by exactly one point of the \widetilde{M}_i according to Lemma 2.5.6. Likewise, the generic fiber is a plane cubic curve.

[51] (16) “ $p > 0$,” should be “ $p > 3$.”

[53] (1–11) “**From Lemma 2.3.8**,” that lemma can not be used, as we do not yet know that S' is integral. Instead, use [EGA IV(2)], Thm 2.4.6 and Prop. 4.5.7.

[68] (15) “**singular surface**,” should be “singular K3 surface”.

[74] (1–12) “ $s \in \mathbb{Z}_{>0}$,” as s is a variable or parameter, it is not an element in $\mathbb{Z}_{>0}$, but elements in $\mathbb{Z}_{>1}$ can be substituted for s .

[74] (1–11, 1–10) the letters s and s' should be replaced by σ and σ' .

[75] (1–6) “**the K3 surface Y** ,” this surface was never introduced. It is a well chosen base extension of \widetilde{X} .

[85] (110) “**defined over the $k = \mathbb{F}_p$** ,” should be “defined over $k = \mathbb{F}_p$.”

[89] (15) “**in both the Zariski topology and the real analytic topology**,” should be “in the Zariski topology.” In the real analytic topology there are in fact nonempty open subsets of the moduli space in which every surface does not contain any real points. (see erratum [96])

[96] (16) “**it suffices to show that φ is dominant**,” this is not sufficient for the real analytic topology. (see erratum [89])

[102] (19) “**IV**,” should be “**II**.”