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Inventiones mathematicae

Erratum

Principal bundles admitting a rational section

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In the paper referred to in the title, the argument given in 4.10 (p 421) in erroneous. It is asserted that the inclusion of $k[Z,\underline{X}]$ in R maps k diagonally in R. What one is interested in is the inclusion of $K[Z]$ in R (the natural map of $k[Z,\underline{X}]$ in R is not an injection). But there is a more serious error here: the inclusion of $K[Z]$ in R does not (in the case we are interested in) map k diagonally into Λ as claimed. Consequently one cannot apply Corollary 1.6 as is done immediately after this. However a modified (and stronger) version of Corollary 1.6 is true and may be applied to rectify the proof. We want to assert that Corollary 1.6 holds even if one equips each $R_i[[\underline{Z}]]$ with a k-algebra structure such that the composite inclusion $k \hookrightarrow R_i[[\underline{Z}]] \to R_i, R_i[[\underline{Z}]] \to R_i$ being the standard surjection, is the inclusion of k in R_i that gives the given k-algebra structure on R_i. In fact in the entire section §1, all the results hold when we equip $R[[Z]]$ with any k-algebra structure such that the composite map $k \hookrightarrow R[[Z]] \to R$, $R[[Z]] \to R$ being the standard projection, is a k-algebra morphism . We have not anywhere in our proofs utilised the assumption that the k-algebra structure on $R[[Z]]$ is obtained from the k-algebra structure on R through the standard inclusion of R in $R[[Z]]$. Correspondingly, the corollary also holds if the $R_i[[\underline{Z}]], 1 \leqq i \leqq t$, are equipped with k-algebra structures such that the composite maps $k \hookrightarrow R_i[[\underline{Z}]] \to R_i$ is the inclusion of k in R_i giving the k-algebra structure on R_i. One needs only the fact that the valuation takes the value 0 for all $x \in k, x \neq 0$, which holds even under the weaker condition above.

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