Corrections

1. (Communicated by Kannappan Sampath on February 25, 2020) On p. 33, the first isomorphism in Step 4 should read

\[
H^1(X, \mathcal{O}_X(-\widetilde{D})) \simeq H^1(P(E), \pi_*\mathcal{O}_X(-\widetilde{D}))
\]
\[
\simeq H^1(P(E), \mathcal{O}_{P(E)}(-F - f^*\left(\frac{h(p-h - 3)}{r} \cdot \infty\right))
\]
\[
\oplus \bigoplus_{i=1}^{r-1} \mathcal{O}_{P(E)}(-iM - f^*\left(\frac{h(p-h - 3)}{r} \cdot \infty\right))\bigg).
\]

This correction affects the subsequent calculations as follows. The Leray spectral sequence (2.16) should then read

\[
E_2^{p,q} = H^p\left(C, R^q f_*\left(\mathcal{O}_{P(E)}(-F - f^*\left(\frac{h(p-h - 3)}{r} \cdot \infty\right))\right)\right)
\]
\[
\oplus \bigoplus_{i=1}^{r-1} \mathcal{O}_{P(E)}(-iM - f^*\left(\frac{h(p-h - 3)}{r} \cdot \infty\right))\bigg)\bigg)
\]
\[
\Rightarrow H^{p+q}\left(P(E), \mathcal{O}_{P(E)}(-F - f^*\left(\frac{h(p-h - 3)}{r} \cdot \infty\right))\right)
\]
\[
\oplus \bigoplus_{i=1}^{r-1} \mathcal{O}_{P(E)}(-iM - f^*\left(\frac{h(p-h - 3)}{r} \cdot \infty\right))\bigg)\bigg)
\]
and then (2.17) should read

\[ H^1(X, \mathcal{O}_X(-\tilde{D})) \]
\[ \cong H^0 \left( C, R^1 f_* \left( \mathcal{O}_{\mathbb{P}(E)} \left( -F - f^* \left( \frac{h\nu h - 3}{r} \cdot \infty \right) \right) \right) \right) \]
\[ \oplus \bigoplus_{i=1}^{r-1} \left( -iM - f^* \left( \frac{h\nu h - 3}{r} \cdot \infty \right) \right) \]

Eq. (2.17*)

Now to get non-vanishing of the right-hand side of (2.17*), one twists the injection at the bottom of p. 34 by \(-\frac{h\nu h - 3}{r} \cdot \infty\), in which case the injection at the top of p. 35 now reads

\[ H^0 \left( C, \mathcal{O}_C \left( \frac{(2r - i - 1)h\nu h - 3}{r} \cdot \infty \right) \right) \]
\[ \hookrightarrow H^0 \left( C, R^1 f_* \left( \mathcal{O}_{\mathbb{P}(E)} \left( -iM - f^* \left( \frac{h\nu h - 3}{r} \cdot \infty \right) \right) \right) \right), \]

where we note the denominator on the left-hand side has also been corrected from “2” to “r.” The left-hand side is nonzero as long as \(2r - i - 1 \geq 0\). By the assumption \(r \geq 2\), the left-hand side is nonzero for \(i = 1\), hence (2.17*) implies \(H^1(X, \mathcal{O}_X(-\tilde{D})) \neq 0\).