Errata to "Arithmetic properties of a theta lift from $GU(2)$ to $GU(3)$"

p. 7: Of course, in general it is not true that $\mathrm{Cl}_K \simeq \mathrm{Cl}_K^2 \times \mathrm{Cl}_K^{\mathrm{inv}}$, but we have an exact sequence $1 \to \mathrm{Cl}_K^{\mathrm{inv}} \to \mathrm{Cl}_K \to \mathrm{Cl}_K^2 \to 1$.

p. 65, Corollary 4.7: For a better statement, see the author's preprint "Divisibility of anticyclotomic L-functions and theta functions with complex multiplication."

p. 68: The boundary components are in fact defined over $\mathfrak{o}_{H_N}[1/ND]$, where H_N is the ray class field of conductor N of the ground field K. Due to an oversight in Larsen's papers, the description of the compactification is only literally correct for $N \geq 3$, when the moduli problem is rigid, which is the only case that is used later.

p. 69: $\sigma_{m-1,\omega_{K/\mathbb{Q}}}$ instead of $\sigma_{m,\omega_{K/\mathbb{Q}}}$

p. 72: The assertions $H^1(\bar{\mathcal{M}}_N, \mathcal{V}_{0,\mu} \otimes \bar{\mathbb{Z}}_\ell) = 0$ and $H^1(\bar{S}, \tilde{\mathcal{V}}_{0,\mu}) = 0$ are incorrect. The argument can easily be corrected as follows: we have $H^1(\bar{S}, \tilde{\mathcal{V}}_{0,\mu}(-C)) = 0$ from the argument on p. 71, and also (using the notation introduced there) $H^2(\bar{S}, \tilde{\mathcal{V}}_{0,\mu}(-C)) \simeq H^0(\bar{S}, L^{-1}) = 0$ by Serre duality. Therefore, $H^1(\bar{S}, \tilde{\mathcal{V}}_{0,\mu}) \simeq H^1(\bar{S}, \tilde{\mathcal{V}}_{0,\mu;C}) = H^1(\bar{C}, \mathcal{O}_{\bar{C}})$ from the cohomology exact sequence. This implies that this cohomology group has the same dimension as the corresponding group in characteristic zero. A standard base change theorem [Mum2, p. 50/51, Corollary 2] finishes the argument.