ERRATUM

In Section 7.1 of the paper, I write that we may choose the CM type Φ to be primitive. This is not true, but fortunately also not needed. Let us explain this.

It is not true that any CM field admits a primitive CM type. Example: let $E = kE_0$ be the compositum of a real quadratic field E_0 and an imaginary quadratic field k. Then besides E_0 and k, there is a third quadratic subfield $k' \subset E$, which is again imaginary quadratic. Let σ, $\bar{\sigma}$, τ and $\bar{\tau}$ be the complex embeddings of E, chosen such that σ and τ are the same on k. Up to a renaming of these elements, the only possibly CM types are $\{\sigma, \tau\}$, which is induced from k, and $\{\sigma, \bar{\tau}\}$, which is induced from k'.

Choosing Φ to be primitive would have as consequence that $\mathrm{End}^0(A) = E$. This, however, does not play a role in the rest of the argument. All that matters is that E is its own commutant in $\mathrm{End}^0(A)$, which implies that $\underline{\mathrm{End}}_E\big(\mathbb{H}^1(A_S)\big) = E$ (used in (7.1.1)) and $\underline{\mathrm{End}}_E\big(\boldsymbol{H}^1(A)\big) = E$ (in Section 7.7). This is true regardless of how we choose Φ.