COMPARISON BETWEEN ANALYTIC AND ALGEBRAIC CONSTRUCTIONS OF TOROIDAL COMPACTIFICATIONS OF PEL-TYPE SHIMURA VARIETIES — ERRATA

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(1) In Def. 1.1.2, at the end, should write “for example, when $L = \{0\}$”.
(2) In Sec. 2.2, in the fact (b) implied by the fact (4) about G_h, “positive definiteness of $\mathrm{sgn}(h)H$” should be “positive definiteness of $\mathrm{sgn}(h)H_h$”.
(3) In Lem. 3.1.1 and its proof, the references “[4, 1.5]” should be “[4, 3.5]”.
(4) In the last displayed equation preceding Def. 3.1.2, the last “$\mathtt{F}^{(g)}$” should be “$\mathtt{F}^{(g)}_{-i}$”.
(5) In Def. 3.1.2, $\varphi^{(g)}_{-2}$ and $\varphi^{(g)}_{0}$ should be the inverse isomorphisms of what were literally written.
(6) In Lem. 3.1.6, “at any level $\mathcal{H}$, the moduli problem defined by $(\mathrm{Gr}^{\mathtt{F}^{(g)}}_{-1}, \langle\,\cdot\,,\,\cdot\,\rangle^{(g)}, (h_0)_{-1})$ is identical to the moduli problem $\mathsf{M}^{\mathtt{Z}^{(g)}_{\mathcal{H}}}_{\mathcal{H}}$” should better be “at any neat level $\mathcal{H}$, the scheme $\mathsf{M}^{\mathtt{Z}^{(g)}_{\mathcal{H}}}_{\mathcal{H}}$ can be identified with the moduli problem defined by $(\mathrm{Gr}^{\mathtt{F}^{(g)}}_{-1}, \langle\,\cdot\,,\,\cdot\,\rangle^{(g)}, (h_0)_{-1})$ at a suitable level ($\mathcal{H}''_{-1}$, to be introduced in §3.4 below)”.
(7) Rem. 3.3.1, Lem. 3.3.3, and the diagram following them are correct for principal congruence subgroups, but incorrect in general. This does not affect the main comparisons done for the various structures at principal levels, but is still an unfortunate mistake that has to be corrected. At the same time, there are similar mistakes in [1] and in [2], which we have noticed and fixed. Let us explain how to carry out the corrections (compatible with the corrections made to [1] and in [2] in their errata) and the necessary improvements for the exposition:
   (a) In Def. 3.2.1, after defining $\mathrm{P}_{\mathtt{F}^{(g)}}(R)$, add the definition

$$\mathrm{P}'_{\mathtt{F}^{(g)}}(R) := \{(p, r) \in \mathrm{P}^{(g)}(R) : \mathrm{Gr}_{-2}(p) = r\,\mathrm{Id}_{\mathrm{Gr}^{\mathtt{F}^{(g)}}_{-2}} \text{ and } \mathrm{Gr}_0(p) = \mathrm{Id}_{\mathrm{Gr}^{\mathtt{F}^{(g)}}_{0}}\}.$$

   Then add or modify the natural inclusions and exact sequences in Lem. 3.2.2 accordingly.

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(b) In §3.3, add or revise the definitions

$$\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},\prime} := \Gamma_{\mathcal{H}}^{(g)} \cap \mathrm{P}_{\mathsf{F}^{(g)}}(\mathbb{Q}) = (g\mathcal{H}g^{-1}) \cap \mathrm{P}'_{\mathsf{F}^{(g)}}(\mathbb{Q})_0,$$
$$\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h,+} := \text{image of } \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)}} \text{ under the homomorphism } \mathrm{P}_{\mathsf{F}^{(g)}}(\mathbb{Q}) \twoheadrightarrow \mathrm{G}_{h,\mathsf{F}^{(g)}}(\mathbb{Q}),$$
$$\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h} := \text{image of } \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},\prime} \text{ under the homomorphism } \mathrm{P}'_{\mathsf{F}^{(g)}}(\mathbb{Q}) \twoheadrightarrow \mathrm{G}_{h,\mathsf{F}^{(g)}}(\mathbb{Q}),$$
$$\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},l} := \text{image of } \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)}} \text{ under the homomorphism } \mathrm{P}_{\mathsf{F}^{(g)}}(\mathbb{Q}) \twoheadrightarrow \mathrm{G}_{l,\mathsf{F}^{(g)}}(\mathbb{Q}),$$
$$\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},l,-} := \text{image of } \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},\mathrm{Z}} \text{ under the homomorphism } \mathrm{Z}_{\mathsf{F}^{(g)}}(\mathbb{Q}) \twoheadrightarrow \mathrm{G}_{l,\mathsf{F}^{(g)}}(\mathbb{Q}).$$

Then add or modify the natural inclusions and exact sequences in Lem. 3.3.2 accordingly.

(c) Lem. 3.3.3 should be

The splitting $\varepsilon^{(g)} : \mathrm{Gr}^{\mathsf{F}^{(g)}} \xrightarrow{\sim} L^{(g)}$ defines an isomorphism

$$\mathrm{P}_{\mathsf{F}^{(g)}}(\mathbb{Q})/\mathrm{U}_{\mathsf{F}^{(g)}}(\mathbb{Q}) \cong \mathrm{G}_{l,\mathsf{F}^{(g)}}(\mathbb{Q}) \times \mathrm{G}_{h,\mathsf{F}^{(g)}}(\mathbb{Q})$$

mapping $\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)}}/\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},\mathrm{U}}$ isomorphically to a subgroup of $\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},l} \times \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h,+}$ containing $\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},l,-} \times \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h}$. The two projections then induce isomorphisms $\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},l}/\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},l,-} \cong (\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)}}/\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},\mathrm{U}})/(\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},l,-} \times \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h}) \cong \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h,+}/\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h}$. When $\mathcal{H} = \mathcal{U}(n)$, we have $\Gamma_{\mathcal{U}(n)}^{\mathsf{F}^{(g)},l} = \Gamma_{\mathcal{U}(n)}^{\mathsf{F}^{(g)},l,-}$ and $\Gamma_{\mathcal{U}(n)}^{\mathsf{F}^{(g)},h,+} = \Gamma_{\mathcal{U}(n)}^{\mathsf{F}^{(g)},h}$, and hence the above mapping defines an isomorphism $\Gamma_{\mathcal{U}(n)}^{\mathsf{F}^{(g)}}/\Gamma_{\mathcal{U}(n)}^{\mathsf{F}^{(g)},\mathrm{U}} \cong \Gamma_{\mathcal{U}(n)}^{\mathsf{F}^{(g)},l} \times \Gamma_{\mathcal{U}(n)}^{\mathsf{F}^{(g)},h}$.

(d) The next diagram should be replaced with the following diagram:

$$\begin{tikzcd}
\mathsf{X}_2^{\mathsf{F}^{(g)}} \arrow[r, "\pi_2"] \arrow[d, "\text{quot. by } \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},\mathrm{U}_2}"'] & \mathsf{X}_1^{\mathsf{F}^{(g)}} \arrow[r, "\pi_1"] \arrow[d] & \mathsf{X}_0^{\mathsf{F}^{(g)}} \arrow[d] \\
\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},\mathrm{U}_2}\backslash\mathsf{X}_2^{\mathsf{F}^{(g)}} \arrow[r] \arrow[d, "\text{quot. by } \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},\mathrm{U}_1}"'] & \mathsf{X}_1^{\mathsf{F}^{(g)}} \arrow[r] \arrow[d] & \mathsf{X}_0^{\mathsf{F}^{(g)}} \arrow[d] \\
\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},\mathrm{U}}\backslash\mathsf{X}_2^{\mathsf{F}^{(g)}} \arrow[r] \arrow[d, "\text{quot. by } \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h}"'] & \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},\mathrm{U}_1}\backslash\mathsf{X}_1^{\mathsf{F}^{(g)}} \arrow[r] \arrow[d] & \mathsf{X}_0^{\mathsf{F}^{(g)}} \arrow[d] \\
\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h}\backslash(\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},\mathrm{U}}\backslash\mathsf{X}_2^{\mathsf{F}^{(g)}}) \arrow[r] \arrow[d, "\text{quot. by } \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},l}"'] & \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h}\backslash(\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},\mathrm{U}_1}\backslash\mathsf{X}_1^{\mathsf{F}^{(g)}}) \arrow[r] \arrow[d] & \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h}\backslash\mathsf{X}_0^{\mathsf{F}^{(g)}} \arrow[d] \\
\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)}}\backslash\mathsf{X}_2^{\mathsf{F}^{(g)}} \arrow[r] & (\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)}}/\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},\mathrm{U}})\backslash(\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},\mathrm{U}_1}\backslash\mathsf{X}_1^{\mathsf{F}^{(g)}}) \arrow[r] & \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h,+}\backslash\mathsf{X}_0^{\mathsf{F}^{(g)}}
\end{tikzcd}$$

The changes are in the last row (and in the definitions of $\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h}$ and $\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},l}$). (For the bottom-right vertical arrow, we use the isomorphism $\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},l}/\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},l,-} \cong (\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)}}/\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},\mathrm{U}})/(\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},l,-} \times \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h}) \cong \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h,+}/\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h}$ in Lemma 3.3.3.)

(e) The title of §3.4 should be "The morphism $\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h}\backslash\mathsf{X}_0^{\mathsf{F}^{(g)}} \to \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h,+}\backslash\mathsf{X}_0^{\mathsf{F}^{(g)}}$". After $\mathcal{H}_{-1}$ is defined, we should also introduce $\mathcal{H}'_{-1} := \mathrm{Gr}_{-1}((g\mathcal{H}g^{-1})\cap\mathrm{P}'_{\mathsf{F}^{(g)}}(\mathbb{A}^\infty))$ and $\mathcal{H}''_{-1} := \mathrm{Gr}_{-1}((g\mathcal{H}g^{-1})\cap(\mathrm{G}_{l,\mathsf{F}^{(g)}}(\mathbb{Q})\ltimes\mathrm{P}'_{\mathsf{F}^{(g)}}(\mathbb{A}^\infty)))$, satisfying $\mathcal{H}'_{-1}\subset\mathcal{H}''_{-1}\subset\mathcal{H}_{-1}$. Later, all instances of "$\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h}$" should be replaced with "$\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h,+}$", and all instances of $\mathcal{H}_{-1}$ should be replaced with $\mathcal{H}''_{-1}$. Then we insert the following sentences between "the pullback of the universal family." and "Then, by the same argument in ...":

> Similarly, let $\mathsf{M}_{\mathcal{H}}^{\Phi_{\mathcal{H}}^{(g)}}$ be the finite étale covering of $\mathsf{M}_{\mathcal{H}}^{\mathsf{Z}_{\mathcal{H}}^{(g)}}$ classifying the additional structure $(\varphi_{-2,\mathcal{H}}^{(g),\sim},\varphi_{0,\mathcal{H}}^{(g),\sim})$ inducing $(\varphi_{-2,\mathcal{H}}^{(g)},\varphi_{0,\mathcal{H}}^{(g)})$ and $\varphi_{-1,\mathcal{H}}$ (see [1, erratum for Def. 5.4.2.6]), and denote its pullback to $\mathbb{C}$ by $\mathsf{M}_{\mathcal{H},\mathbb{C}}^{\Phi_{\mathcal{H}}^{(g)}}$. Let $\mathsf{M}_{\mathcal{H},\mathbb{C},L\otimes_{\mathbb{Z}}\mathbb{Q}}^{\Phi_{\mathcal{H}}^{(g)}} \to \mathsf{M}_{\mathcal{H},\mathbb{C},L\otimes_{\mathbb{Z}}\mathbb{Q}}^{\mathsf{Z}_{\mathcal{H}}^{(g)}}$ be the pullback of $\mathsf{M}_{\mathcal{H}}^{\Phi_{\mathcal{H}}^{(g)}} \to \mathsf{M}_{\mathcal{H}}^{\mathsf{Z}_{\mathcal{H}}^{(g)}}$. Then there is also a tautological pair $(\varphi_{-2,\mathcal{H},\mathbb{C}}^{(g),\sim},\varphi_{0,\mathcal{H},\mathbb{C}}^{(g),\sim})$ inducing $(\varphi_{-2,\mathcal{H}}^{(g)},\varphi_{0,\mathcal{H}}^{(g)})$ and $\varphi_{-1,\mathcal{H},\mathbb{C}}$ over $\mathsf{M}_{\mathcal{H},\mathbb{C},L\otimes_{\mathbb{Z}}\mathbb{Q}}^{\Phi_{\mathcal{H}}^{(g)}}$.

And we replace the next paragraph with the following:

> Since $\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h} = \mathcal{H}'_{-1}\cap\mathrm{G}_{h,\mathsf{F}^{(g)}}(\mathbb{Q})_0$ and $\Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h,+} = \mathcal{H}''_{-1}\cap\mathrm{G}_{h,\mathsf{F}^{(g)}}(\mathbb{Q})_0$, and since $\Gamma_{\mathcal{U}(n)}^{\mathsf{F}^{(g)},h} = \Gamma_{\mathcal{U}(n)}^{\mathsf{F}^{(g)},h,+} = \Gamma_{\mathcal{U}(n)}^{\mathsf{Z}^{(g)},h}$ for all $n\geq 1$ such that $\mathcal{U}(n)\subset\mathcal{H}$, the construction of $\mathsf{M}_{\mathcal{H}}^{\Phi_{\mathcal{H}}^{(g)}}$ as the quotient of $\coprod \mathsf{M}_n^{\Phi_n^{(g)}}$ (with the disjoint union running over representatives $(\mathsf{Z}_n^{(g)},\Phi_n^{(g)},\delta_n^{(g)})$, with the same $(X^{(g)},Y^{(g)},\phi^{(g)})$, in $(\mathsf{Z}_{\mathcal{H}},\Phi_{\mathcal{H}},\delta_{\mathcal{H}})$) by $\mathcal{H}/\mathcal{U}(n)$, and the construction of $\mathsf{M}_{\mathcal{H}}^{\mathsf{Z}_{\mathcal{H}}^{(g)}}$ as a quotient of $\mathsf{M}_{\mathcal{H}}^{\Phi_{\mathcal{H}}^{(g)}}$ by $\Gamma_{\Phi_{\mathcal{H}}^{(g)}} \cong \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},l}$, show that
>
> $$\mathsf{Sh}_{\mathcal{H},0}^{\Phi^{(g)}} := \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h}\backslash\mathsf{X}_0^{\mathsf{F}^{(g)}} \to \mathsf{Sh}_{\mathcal{H},0}^{\mathsf{F}^{(g)}} := \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h,+}\backslash\mathsf{X}_0^{\mathsf{F}^{(g)}}$$
>
> is the pullback of the analytification $\mathsf{M}_{\mathcal{H},\mathrm{an},L\otimes_{\mathbb{Z}}\mathbb{Q}}^{\Phi_{\mathcal{H}}^{(g)}} \to \mathsf{M}_{\mathcal{H},\mathrm{an},L\otimes_{\mathbb{Z}}\mathbb{Q}}^{\mathsf{Z}_{\mathcal{H}}^{(g)}}$ of $\mathsf{M}_{\mathcal{H},\mathbb{C},L\otimes_{\mathbb{Z}}\mathbb{Q}}^{\Phi_{\mathcal{H}}^{(g)}} \to \mathsf{M}_{\mathcal{H},\mathbb{C},L\otimes_{\mathbb{Z}}\mathbb{Q}}^{\mathsf{Z}_{\mathcal{H}}^{(g)}}$ under $\mathsf{Sh}_{\mathcal{H},0}^{\mathsf{F}^{(g)}} \hookrightarrow \mathsf{Sh}_{\mathcal{H}}^{\mathsf{F}^{(g)}} \cong \mathsf{M}_{\mathcal{H},\mathrm{an},L\otimes_{\mathbb{Z}}\mathbb{Q}}^{\mathsf{Z}_{\mathcal{H}}^{(g)}}$. Let us (abusively) denote the pullback of the holomorphic family over $\mathsf{Sh}_{\mathcal{H}}^{\mathsf{F}^{(g)}}$ by (the same notation)
>
> $$(A_{\mathrm{hol}},\lambda_{A_{\mathrm{hol}}},i_{A_{\mathrm{hol}}},\varphi_{-1,\mathcal{H},\mathrm{hol}}) \to \mathsf{Sh}_{\mathcal{H},0}^{\mathsf{F}^{(g)}} = \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h,+}\backslash\mathsf{X}_0^{\mathsf{F}^{(g)}},$$
>
> and also by
>
> $$(A_{\mathrm{hol}},\lambda_{A_{\mathrm{hol}}},i_{A_{\mathrm{hol}}},\varphi_{-1,\mathcal{H},\mathrm{hol}}) \to \mathsf{X}_0^{\mathsf{F}^{(g)}}$$

the further pullback to $\mathsf{X}_0^{\mathsf{F}^{(g)}}$. Let us denote by

$$(\varphi_{-2,\mathcal{H},\mathrm{hol}}^{(g),\sim},\varphi_{0,\mathcal{H},\mathrm{hol}}^{(g),\sim}) \to \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h}\backslash \mathsf{X}_0^{\mathsf{F}^{(g)}}$$

the pullback of $(\varphi_{-2,\mathcal{H},\mathbb{C}}^{(g),\sim},\varphi_{0,\mathcal{H},\mathbb{C}}^{(g),\sim}) \to \mathsf{M}_{\mathcal{H},\mathbb{C},L\underset{\mathbb{Z}}{\otimes}\mathbb{Q}}^{\Phi_{\mathcal{H}}^{(g)}}$. By construction, over each $h_{-1} \in \mathsf{X}_0^{\mathsf{F}^{(g)}}$, the pullback $(\varphi_{-2,\mathcal{H},h_{-1},g}^{(g),\sim},\varphi_{0,\mathcal{H},h_{-1},g}^{(g),\sim})$ of $(\varphi_{-2,\mathcal{H},\mathrm{hol}}^{(g),\sim},\varphi_{0,\mathcal{H},\mathrm{hol}}^{(g),\sim})$ is (up to isomorphism) the $\mathcal{H}$-orbit of the canonical tuple $((\varphi_{-2}^{(g)},\varphi_0^{(g)}),\varphi_{-1,h_{-1},g})$ above the $\mathcal{H}$-orbit $\varphi_{-1,\mathcal{H},h_{-1},g}$ of $\varphi_{-1,h_{-1},g}$. For later references, let us define $\mathsf{Sh}_{\mathcal{H},0,\mathrm{alg}}^{\Phi^{(g)}}$ (resp. $\mathsf{Sh}_{\mathcal{H},0,\mathrm{alg}}^{\mathsf{F}^{(g)}}$) to be the connected component of $\mathsf{Sh}_{\mathcal{H},\mathrm{alg}}^{\Phi^{(g)}} \cong \mathsf{M}_{\mathcal{H},\mathbb{C},L\underset{\mathbb{Z}}{\otimes}\mathbb{Q}}^{\Phi_{\mathcal{H}}^{(g)}}$ (resp. $\mathsf{Sh}_{\mathcal{H},\mathrm{alg}}^{\mathsf{F}^{(g)}} \cong \mathsf{M}_{\mathcal{H},\mathbb{C},L\underset{\mathbb{Z}}{\otimes}\mathbb{Q}}^{\mathsf{Z}_{\mathcal{H}}^{(g)}}$) whose analytification is $\mathsf{Sh}_{\mathcal{H},0}^{\Phi^{(g)}} = \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h}\backslash \mathsf{X}_0^{\mathsf{F}^{(g)}}$ (resp. $\mathsf{Sh}_{\mathcal{H},0}^{\mathsf{F}^{(g)}} = \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h,+}\backslash \mathsf{X}_0^{\mathsf{F}^{(g)}}$).

In Remark 3.4.2, add the following sentence:

Similarly, the fiber-wise description in the paragraph preceding Lemma 3.4.1 determines $(\varphi_{-2,\mathcal{H},\mathrm{hol}}^{(g),\sim},\varphi_{0,\mathcal{H},\mathrm{hol}}^{(g),\sim}) \to \Gamma_{\mathcal{H}}^{\mathsf{F}^{(g)},h}\backslash \mathsf{X}_0^{\mathsf{F}^{(g)}}$.

(f) In Lem. 3.5.11, "$C_{\Phi_n^{(g)},\delta_n^{(g)},\mathbb{C}} \to \mathsf{Sh}_{\mathcal{H},0,\mathrm{alg}}^{\mathsf{F}^{(g)}}$", should be "$C_{\Phi_n^{(g)},\delta_n^{(g)},\mathbb{C}} \to \mathsf{Sh}_{\mathcal{U}(n),0,\mathrm{alg}}^{\mathsf{F}^{(g)}}$".

(g) In Cor. 3.5.12, "$\mathsf{Sh}_{\mathcal{H},\mathrm{alg}}^{\mathsf{F}^{(g)}}$" should be replaced with "$\mathsf{Sh}_{\mathcal{H},\mathrm{alg}}^{\Phi^{(g)}}$", and "$\mathsf{Sh}_{\mathcal{H},0,\mathrm{alg}}^{\mathsf{F}^{(g)}}$" should be replaced with "$\mathsf{Sh}_{\mathcal{H},0,\mathrm{alg}}^{\Phi^{(g)}}$".

(h) In §4.2, should also mention the pair $(\varphi_{-2,\mathcal{H}}^{(g),\sim},\varphi_{0,\mathcal{H}}^{(g),\sim})$ inducing $(\varphi_{-2,\mathcal{H}}^{(g)},\varphi_{0,\mathcal{H}}^{(g)})$ (not $(\varphi_{-2,\mathcal{H}},\varphi_{0,\mathcal{H}})$).

(8) In the paragraph preceding Def. 5.3.3, "a section of $\mathcal{E}_{\mathrm{M}_0,\mathrm{an}}^{\Phi_{\mathcal{H}}^{(g)},\delta_{\mathcal{H}}^{(g)}}(W)$" should be more precisely "a section of $\mathcal{E}_{\mathrm{M}_0,\mathrm{an}}^{\Phi_{\mathcal{H}}^{(g)},\delta_{\mathcal{H}}^{(g)}}(W)$ over $\mathsf{X}_1^{\mathsf{F}^{(g)}}$", and "a section of the line bundles $\Psi_{\Phi_{\mathcal{H}}^{(g)},\delta_{\mathcal{H}}^{(g)},\mathbb{C}}(\ell) \underset{\mathscr{O}_{C_{\Phi_{\mathcal{H}}^{(g)},\delta_{\mathcal{H}}^{(g)},\mathbb{C}}}}{\otimes} \mathcal{E}_{\mathrm{M}_0,\mathrm{an}}^{\Phi_{\mathcal{H}}^{(g)},\delta_{\mathcal{H}}^{(g)}}(W)$" should be "a section over $\mathsf{X}_2^{\mathsf{F}^{(g)}}$ of the vector bundle $\Psi_{\Phi_{\mathcal{H}}^{(g)},\delta_{\mathcal{H}}^{(g)},\mathbb{C}}(\ell) \underset{\mathscr{O}_{C_{\Phi_{\mathcal{H}}^{(g)},\delta_{\mathcal{H}}^{(g)},\mathbb{C}}}}{\otimes} \mathcal{E}_{\mathrm{M}_0,\mathrm{an}}^{\Phi_{\mathcal{H}}^{(g)},\delta_{\mathcal{H}}^{(g)}}(W)$".

References

[1] K.-W. Lan, *Arithmetic compactification of PEL-type Shimura varieties*, Ph. D. Thesis, Harvard University, Cambridge, Massachusetts (2008). Errata and revision available online at the author's website.

[2] ———, *Arithmetic compactification of PEL-type Shimura varieties*, London Mathematical Society Monographs, vol. 36, Princeton University Press, Princeton, 2013.

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