Erratum: Lepton flavor changing Higgs decays in the littlest Higgs model with T-parity

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1. The sentence in between eqs. (2.16) and (2.17) should read:
 Ψ_R transforms under T-parity:
2. Replace the sentence following eq. (2.23) by:
An explicit realization of this extra scalar factor is obtained identifying χ with $(\Sigma_{33}^\dagger)^{-\frac{1}{4}}$, and $\tilde{\chi}$ with $(\Sigma_{33})^{-\frac{1}{4}}$, which have the correct $Y_{1,2}$ charges, $(Y_1^\chi, Y_2^\chi) = (-\frac{1}{10}, \frac{1}{10})$ and $(Y_1^{\tilde{\chi}}, Y_2^{\tilde{\chi}}) = (\frac{1}{10}, -\frac{1}{10})$, and T-transformation properties [19].
3. Remove the factor $\sqrt{2}$ from eq. (2.37). It should read:
$$\lambda_{ij}v = (V_L^\ell)_{ik} m_{\ell_k} (V_R^{\ell\dagger})_{kj}.$$
4. There is a subindex misprinted in eq. (2.40). It should be:
$$V \equiv V_L^{H\dagger} V_L^\ell, \quad W \equiv \tilde{V}_L^T V_R^H.$$
5. Although the codes, calculations and conclusions of the paper are correct, tables 2, 4, 5 and 7 contain some typos in the published version. The revised tables are collected below.

[SFF]	c_L	c_R
$h \overline{\ell}_i \ell_j$	$-\delta_{ij} \frac{m_{\ell_j}}{v} \left(1 - \frac{v^2}{6f^2}\right)$	$-\delta_{ij} \frac{m_{\ell_j}}{v} \left(1 - \frac{v^2}{6f^2}\right)$
$h \overline{\nu_{Hi}} \nu_{Hj}$	$\frac{m_{\ell_{Hi}}}{v} \delta_{ij} \frac{v^2}{4f^2}$	$\frac{m_{\ell_{Hi}}}{v} \delta_{ij} \frac{v^2}{4f^2}$
$h \overline{\ell_{Hi}} \ell_{Hj}$	0	0
$h \overline{\nu_{Hi}} \tilde{\nu}_j^c$	0	$\frac{m_{\ell_{Hi}}}{v} W_{ij}^\dagger \frac{v^2}{4f^2}$
$\Phi^0 \overline{\ell_{Hi}} \ell_j$	0	$V_{ij} \frac{m_{\ell_j}}{\sqrt{2}f} \left(1 + \frac{v^2}{4f^2}\right)$
$\Phi^P \overline{\ell_{Hi}} \ell_j$	0	$iV_{ij} \frac{m_{\ell_j}}{\sqrt{2}f} \left(1 + \frac{v^2}{4f^2}\right)$
$\Phi^+ \overline{\nu_{Hi}} \ell_j$	$\frac{m_{\ell_{Hi}}}{\sqrt{2}f} V_{ij} \frac{v^2}{8f^2}$	$V_{ij} \frac{m_{\ell_j}}{\sqrt{2}f} \left(1 - \frac{v^2}{8f^2}\right)$
$\Phi^+ \overline{\tilde{\nu}_i^c} \ell_j$	$W_{ik} \frac{m_{\ell_{Hk}}}{\sqrt{2}f} V_{kj}$	0
$\Phi^{++} \overline{\tilde{\ell}_i^c} \ell_j$	$-W_{ik} \frac{m_{\ell_{Hk}}}{f} V_{kj}$	0
$\eta \overline{\ell_{Hi}} \ell_j$	$i \frac{m_{\ell_{Hi}}}{2\sqrt{5}f} V_{ij} \left[1 - \left(\frac{5}{8} + x_H t_W\right) \frac{v^2}{f^2}\right]$	$-iV_{ij} \frac{m_{\ell_j}}{2\sqrt{5}f} \left[1 - \left(\frac{5}{8} + x_H t_W\right) \frac{v^2}{f^2}\right]$
$\omega^0 \overline{\ell_{Hi}} \ell_j$	$i \frac{m_{\ell_{Hi}}}{2f} V_{ij} \left[1 - \left(\frac{1}{8} - \frac{x_H}{t_W}\right) \frac{v^2}{f^2}\right]$	$-iV_{ij} \frac{m_{\ell_j}}{2f} \left[1 - \left(\frac{1}{8} - \frac{x_H}{t_W}\right) \frac{v^2}{f^2}\right]$
$\omega^+ \overline{\nu_{Hi}} \ell_j$	$-i \frac{m_{\ell_{Hi}}}{\sqrt{2}f} V_{ij}$	$iV_{ij} \frac{m_{\ell_j}}{\sqrt{2}f} \left(1 + \frac{v^2}{8f^2}\right)$
$\omega^+ \overline{\tilde{\nu}_i^c} \ell_j$	$iW_{ik} \frac{m_{\ell_{Hk}}}{\sqrt{2}f} V_{kj} \frac{v^2}{8f^2}$	0

Table 2. Scalar-Fermion-Fermion couplings at $\mathcal{O}(\frac{v^2}{f^2})$. We use $t_W = \tan \theta_W = \frac{s_W}{c_W}$. (The coupling $\Phi^{++} \overline{\tilde{\ell}_i^c} \ell_j$ does not enter in the calculation of $h \rightarrow \bar{\ell} \ell'$, but it does in $Z, \gamma \rightarrow \bar{\ell} \ell'$ in order to cancel other contributions.)

[SSFF]	f_L	f_R
$h \Phi^0 \overline{\ell_{Hi}} \ell_j$	0	$V_{ij} \frac{m_{\ell_j}}{\sqrt{2}vf} \left(1 + \frac{5v^2}{12f^2}\right)$
$h \Phi^P \overline{\ell_{Hi}} \ell_j$	0	$iV_{ij} \frac{m_{\ell_j}}{\sqrt{2}vf} \left(1 + \frac{5v^2}{12f^2}\right)$
$h \Phi^+ \overline{\nu_{Hi}} \ell_j$	$-\frac{m_{\ell_{Hi}}}{\sqrt{2}vf} V_{ij} \frac{v^2}{12f^2}$	$V_{ij} \frac{m_{\ell_j}}{\sqrt{2}vf} \left(1 - \frac{7v^2}{24f^2}\right)$
$h \Phi^+ \overline{\tilde{\nu}_i^c} \ell_j$	$-W_{ik} \frac{m_{\ell_{Hk}}}{\sqrt{2}vf} V_{kj} \frac{v^2}{12f^2}$	0
$h \eta \overline{\ell_{Hi}} \ell_j$	0	$-iV_{ij} \frac{m_{\ell_j}}{2\sqrt{5}vf} \left[1 + \left(\frac{7}{8} - x_H \frac{s_W}{c_W}\right) \frac{v^2}{f^2}\right]$
$h \omega^0 \overline{\ell_{Hi}} \ell_j$	0	$-iV_{ij} \frac{m_{\ell_j}}{2vf} \left[1 - \left(\frac{5}{8} - x_H \frac{c_W}{s_W}\right) \frac{v^2}{f^2}\right]$
$h \omega^+ \overline{\nu_{Hi}} \ell_j$	$i \frac{m_{\ell_{Hi}}}{\sqrt{2}vf} V_{ij} \frac{v^2}{12f^2}$	$iV_{ij} \frac{m_{\ell_j}}{\sqrt{2}vf} \left(1 - \frac{v^2}{24f^2}\right)$
$h \omega^+ \overline{\tilde{\nu}_i^c} \ell_j$	$iW_{ik} \frac{m_{\ell_{Hk}}}{\sqrt{2}vf} V_{kj} \frac{v^2}{12f^2}$	0

Table 4. Scalar-Scalar-Fermion-Fermion couplings at $\mathcal{O}(\frac{v^2}{f^2})$. The coupling $h \phi^{++} \overline{\tilde{\ell}_i^c} \ell_j$ does vanish.

$[S(p_1)S(p_2)V_\mu]$	G	$[SS(p_1)S(p_2)]$	J
$h \Phi^+ W_H^-$	$g \frac{v}{4f}$	$h \Phi^0 \Phi^0$	$\frac{v}{6f^2}$
$h \eta A_H^-$	$i\sqrt{5}g' \frac{v}{4f}$	$h \Phi^P \Phi^P$	$\frac{v}{6f^2}$
$h \omega^0 Z_H^-$	$-ig \frac{v}{4f}$	$h \Phi^P \eta$	$-\sqrt{\frac{5}{2}} \frac{v}{6f^2}$
$h \omega^+ W_H^-$	$-ig \frac{v}{4f}$	$h \Phi^P \omega^0$	$\frac{1}{\sqrt{2}} \frac{v}{6f^2}$
		$h \Phi^+ \Phi^-$	$\frac{v}{12f^2}$
		$h \Phi^+ \omega^-$	$i \frac{v}{12f^2}$
		$h \eta \eta$	$\frac{5v}{12f^2}$
		$h \eta \omega^0$	$-\frac{\sqrt{5}v}{12f^2}$
		$h \omega^0 \omega^0$	$\frac{v}{12f^2}$
		$h \omega^+ \omega^-$	$\frac{v}{12f^2}$

Table 5. Scalar-Scalar-Vector and Scalar-Scalar-Scalar couplings at $\mathcal{O}(\frac{v^2}{f^2})$. Other combinations also involving h vanish.

$C_{UV}^{(\frac{v^2}{f^2})}$	I	II	III	IV	V+VI	VII+VIII	IX+X	XI+XII	Sum
W_H, ν_H	0	0	—	—	—	•	—	—	0
W_H, ω, ν_H	—	—	—	—	0	—	—	—	0
ω, ν_H	—	—	$\frac{1}{4}$	$-\frac{1}{8}$	—	—	$-\frac{1}{6}$	$\frac{5}{24}$	$\frac{1}{6}$
Z_H, ℓ_H	•	0	—	—	—	•	—	—	0
Z_H, ω^0, ℓ_H	—	—	—	—	0	—	—	—	0
ω^0, ℓ_H	—	—	•	$-\frac{1}{16}$	—	—	$-\frac{5}{24} + x_H \frac{c_W}{s_W}$	$\frac{3}{8} - x_H \frac{c_W}{s_W}$	$\frac{5}{48}$
$A_H \ell_H$	•	0	—	—	—	•	—	—	0
A_H, η, ℓ_H	—	—	—	—	0	—	—	—	0
η, ℓ_H	—	—	•	$-\frac{1}{16}$	—	—	$-\frac{17}{120} - x_H \frac{s_W}{5c_W}$	$-\frac{1}{40} + x_H \frac{s_W}{5c_W}$	$-\frac{11}{48}$
Z_H, A_H, ℓ_H	—	0	—	—	—	—	—	—	0
ω^0, η, ℓ_H	—	—	—	$\frac{1}{8}$	—	—	—	—	$\frac{1}{8}$
W_H, Φ, ν_H	—	—	—	—	0	—	—	—	0
Φ, ν_H	—	—	•	•	—	—	$-\frac{1}{8}$	$\frac{1}{24}$	$-\frac{1}{12}$
ω, Φ, ν_H	—	—	—	$\frac{1}{6}$	—	—	—	—	$\frac{1}{6}$
ω^0, Φ^P, ℓ_H	—	—	—	$\frac{1}{24}$	—	—	—	—	$\frac{1}{24}$
η, Φ^P, ℓ_H	—	—	—	$-\frac{1}{24}$	—	—	—	—	$-\frac{1}{24}$
$\Phi, \tilde{\nu}^c$	—	—	$-\frac{1}{4}$	$\frac{1}{24}$	—	—	•	$-\frac{1}{24}$	$-\frac{1}{4}$
Total	0	0	0	$\frac{1}{12}$	0	•	$-\frac{47}{120}$	$\frac{37}{120}$	0

Table 7. As in table 6 but to $\mathcal{O}(\frac{v^2}{f^2})$. $x_H = \frac{5t_W}{4(5-t_W^2)}$ is defined in eq. (2.32) with $t_W = \frac{s_W}{c_W}$.

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