

## Erratum: Lepton-mediated electroweak baryogenesis, gravitational waves and the $4\tau$ final state at the collider

---

**Ke-Pan Xie**

*Center for Theoretical Physics, Department of Physics and Astronomy, Seoul National University,  
Seoul 08826, Korea*

*E-mail:* [kpxie@snu.ac.kr](mailto:kpxie@snu.ac.kr)

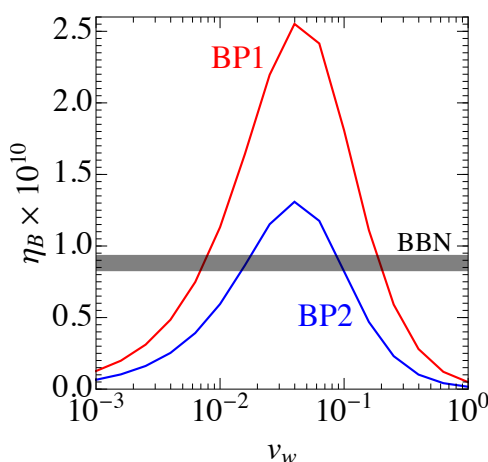
ERRATUM TO: [JHEP02\(2021\)090](#)

ARXIV EPRINT: [2011.04821](#)

Eq. (B.4) should be [1]

$$\Gamma_Y = \frac{3y_\tau^2}{4\pi^3 T_n^2} (m_h^2 - m_\ell^2 - m_\tau^2) \int_{m_\tau}^\infty d\omega_R h_F(\omega_R) \ln \left( \frac{e^{\omega_R/T_n} + e^{\omega_-/T_n} e^{\omega_+/T_n} - 1}{e^{\omega_R/T_n} + e^{\omega_+/T_n} e^{\omega_-/T_n} - 1} \right) + \frac{3\zeta_3}{32\pi^3} g^2 y_\tau^2 T_n \left[ \left( 1 + \frac{1}{6} \tan^2 \theta_W \right) \ln \frac{8T_n^2}{m_\ell^2} + \frac{2}{3} \tan^2 \theta_W \ln \frac{8T_n^2}{m_\tau^2} \right],$$

while in its original version the second line was mistaken to be  $\propto g_s^2$ . After correcting this, the washout effect from Yukawa interaction is weakened and hence the generated  $\eta_B$  in the right panel of figure 2 increases by 1%  $\sim$  20%, depending on  $v_w$ . The improved figure 2 (right panel) is as follows.



I thank Benoit Laurent for pointing out this to me, and Yehonatan Viernik for the useful discussions.

**Open Access.** This article is distributed under the terms of the Creative Commons Attribution License ([CC-BY 4.0](https://creativecommons.org/licenses/by/4.0/)), which permits any use, distribution and reproduction in any medium, provided the original author(s) and source are credited.

## References

- [1] M. Joyce, T. Prokopec and N. Turok, *Nonlocal electroweak baryogenesis. Part I. Thin wall regime*, *Phys. Rev. D* **53** (1996) 2930 [[hep-ph/9410281](https://arxiv.org/abs/hep-ph/9410281)] [[INSPIRE](https://inspirehep.net/literature/124000)].