Erratum: Fundamental Physics Implications for Higher-Curvature Theories from Binary Black Hole Signals in the LIGO-Virgo Catalog GWTC-1 [Phys. Rev. Lett. 123, 191101 (2019)]

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We found an error in Eq. (3) of [1]. The corrected equation is

$$\beta_{\text{dCS}} = -\frac{5}{8192} \frac{\zeta_{\text{dCS}} (m_1 s_2^{\text{dCS}} - m_2 s_1^{\text{dCS}})^2}{\eta^{14/5} m^2} + \frac{15075}{114688} \frac{\zeta_{\text{dCS}}}{\eta^{14/5}} \frac{1}{m^2} \left(m_2^2 \chi_1^2 - \frac{350}{201} m_1 m_2 \chi_1 \chi_2 + m_1^2 \chi_2^2 \right), \quad (1)$$

which however did not change our conclusion on dynamical Chern-Simons gravity since the modifications to Fig. 1 [1] are minimal. The corrected left panel of Fig. 1 is as follows.

FIG. 1.

We also found a mistake in our calculation for the estimated bound on $\alpha_{\text{dCS}}^{1/2}$. The corrected entries from Table I of [1] are

System	Method	$\alpha_{\text{dCS}}^{1/2}$ [km]
GW151226	Estimate	12.6
GW170608	Estimate	28.1

All other entries reported in Table I are correct.

[1] R. Nair, S. Perkins, H. O. Silva, and N. Yunes, *Phys. Rev. Lett.* **123**, 191101 (2019).