Erratum

Inflation from the superstring vacuum

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The following are corrections to errors in the published paper:

- (1) On page 4021, in line 10, printed as “ $\kappa_0^{-2}[1 + 15\zeta(3)\bar{\chi}/16\lambda B_r^3 + \bar{\chi}/384\pi^2 A_r]$ ” should read “ $\kappa_0^{-2}[1 - 15\zeta(3)\bar{\chi}/16\lambda B_r^3 - \bar{\chi}/384\pi^2 A_r]$ ”
- (2) On page 4021, in line 12, printed as “negative” should read “positive or negative”
- (3) On page 4021, in line 13, printed as “produce” should read “can produce”
- (4) On page 4021, in line 14, printed as “ $B_r^{(c)} = [15\zeta(3)|\bar{\chi}|/16\lambda]^{1/3}$ ” should read “ $B_r^{(c)} = [15\zeta(3)\bar{\chi}/16\lambda]^{1/3}$ ”
- (5) On page 4021, in line 15, printed as “ $\bar{\chi} = -6$ ” should read “ $\bar{\chi} = 6$ ”
- (6) On page 4021, in line 18, printed as “ $V(B_r) = \frac{15}{32}\zeta(3)\bar{\chi}\lambda^{-1}\kappa_0^{-2}RB_r^{-3} - \dots$ ” should read “ $V(B_r) = -\frac{15}{32}\zeta(3)\bar{\chi}\lambda^{-1}\kappa_0^{-2}RB_r^{-3} - \dots$ ”
- (7) On page 4021, in line 24, printed as “ $V(A_r) = \bar{\chi}\kappa_0^{-2}RA_r^{-1}/768\pi^2 - \dots$ ” should read “ $V(A_r) = -\bar{\chi}\kappa_0^{-2}RA_r^{-1}/768\pi^2 - \dots$ ”

*Temporary address.

- (8) On page 4023, Eq. (8) should read

$$\kappa^{-2} = \kappa_0^{-2} \left[1 - \frac{15\zeta(3)\bar{\chi}}{16\lambda B_r^3} - \frac{\bar{\chi}}{384\pi^2 A_r} \right]. \quad (8)$$

- (9) On page 4023, in line 12, printed as “ $\bar{\chi} = -6$ ” should read “ $\bar{\chi} = \pm 6$ ”

- (10) On page 4023, in line 19, Eq. (10), printed as “ $= 1.69 \times \dots$ ” should read “ $= \mp 1.69 \times \dots$ ”

- (11) On page 4023, in line 20, Eq. (10), printed as “ $= 7.92 \times \dots$ ” should read “ $= \mp 7.92 \times \dots$ ”

- (12) On page 4024, in line 11, printed as “Eqs. (10),” should read “Eqs. (10), setting $\bar{\chi} = 6$ and”

- (13) On page 4024, Eq. (15) should read

$$B_r^{(c)} = \left[\frac{15\zeta(3)\bar{\chi}}{16\lambda} \right]^{1/3} = 0.357 \left(\frac{15\pi^2}{\lambda} \right)^{1/3} \left(\frac{\bar{\chi}}{6} \right)^{1/3}. \quad (15)$$

- (14) On page 4024, in line 16, printed as “Minkowski space and anti-” should read “Minkowski space and”

- (15) On page 4024, in line 17, printed as “negative” should read “positive”

- (16) On page 4024, Eq. (16) should read

$$\Lambda_{\mathcal{R}^4} = \left[\frac{18}{337\zeta(3) + 1/2} \right]^{1/3} A_r^{-1} \kappa^{-2/3} \kappa_0^{-4/3}. \quad (16)$$

- (17) On page 4025, Eq. (19) should read

$$K \equiv \left| \frac{\Lambda_{\mathcal{R}^{2(\text{anom})}}}{\Lambda_{\mathcal{R}^4}} \right| = 8640\pi^2 \left[\frac{337\zeta(3) + 1/2}{18} \right]^{1/3} \frac{A_r}{k_2} \left| \frac{\kappa_0}{\kappa} \right|^{4/3}. \quad (19)$$

- (18) On page 4025, in line 10, printed as “ $\Lambda_{\mathcal{R}^4} < 0$ ” should read “ $\Lambda_{\mathcal{R}^4} > 0$ ”

- (19) On page 4025, in line 11, printed as “anti-de Sitter” should read “de Sitter”

- (20) On page 4025, Eq. (23) should read

$$V(B_r) = -\frac{15}{32}\zeta(3)\bar{\chi}\lambda^{-1}\kappa_0^{-2}RB_r^{-3} - A_r\tilde{B}\mathcal{R}^2B_r^{-2}. \quad (23)$$

- (21) On page 4026, in line 3, printed as “Since $\bar{\chi} < 0$,²⁷ note first that” should read “Mirror Calabi–Yau manifolds exist for which $\bar{\chi} > 0$ or $\bar{\chi} < 0$ ²⁷ [see P. Candelas, M. Lynker and R. Schimmrigk, *Nucl. Phys. B* **341**, 383 (1990)]. Note, however, that”

- (22) On page 4026, in line 4, printed as “provided that $R < 0$, and thus only for a de Sitter” should read “when $R < 0$ [$R > 0$], and thus for a de Sitter”

- (23) On page 4026, in line 5, printed as “(rather than anti-de Sitter) maximally symmetric space,” should read “[anti-de Sitter] maximally symmetric space, only if $\bar{\chi} > 0$ [$\bar{\chi} < 0$],”

- (24) On page 4026, line 17 should read

Setting $\bar{\chi} = 6$, the constants V_1 and V_2 are defined as

- (25) On page 4027, in line 6, printed as “ $R < 0$, corresponding to de Sitter space,” should read “ $R > 0$, corresponding to anti-de Sitter space,”

- (26) On page 4027, Eq. (36) should read

$$R = -4\Lambda_{\mathcal{R}^4} = 4 \left[\frac{18}{337\zeta(3) + 1/2} \right]^{1/3} A_{\text{r}}^{-1} \kappa_0^{-2} (\beta^{-3} - 1)^{1/3}, \quad (36)$$

- (27) On page 4027, line 11 should read

where $V'_1 = -2 \{18/[337\zeta(3) + 1/2]\}^{1/3} A_{\text{r}}^{-1} \kappa_0^{-4}$ and $V'_2 = 12 \{18/[337\zeta(3) + 1/2]\}^{2/3} A_{\text{r}}^{-1} \tilde{B} B_{\text{r}}^{(c)-2} \kappa_0^{-4}$.

- (28) On page 4027, line 12 should read

The extrema of expression (37) are given by

- (29) On page 4027, lines 15-18 should read

which, however, yields no solution when $(\beta^{-3} - 1)^{1/3} > 0$.

- (30) On page 4028, Eq. (42) should read

$$V(A_{\text{r}}) = -\frac{1}{768\pi^2} \bar{\chi} \kappa_0^{-2} R A_{\text{r}}^{-1} - \left(\frac{1}{4} \mathcal{R}_{\text{E}}^2 + \tilde{B} B_{\text{r}}^{-2} \mathcal{R}^2 \right) A_{\text{r}}. \quad (42)$$

- (31) On page 4028, Eq. (46) should read

$$V(A_{\text{r}}) \approx \frac{1}{768\pi^2} \bar{\chi} \kappa_0^{-2} |R| A_{\text{r}}^{-1}, \quad (46)$$

- (32) On page 4029, Eq. (55) should read

$$L_{\zeta(3)}^{(4)} \Big|_{\text{tree-level}} = \left[\frac{337\zeta(3) + 1/2}{288} \right] \alpha'^2 \Lambda_{\mathcal{R}^4}^4 A_{\text{r}}^{(c)3} \alpha_{\text{r}}^3, \quad (55)$$

- (33) On page 4029, Eq. (56) should read

$$\Lambda_{\mathcal{R}^4} = \left[\frac{18}{337\zeta(3) + 1/2} \right]^{1/3} A_{\text{r}}^{-1} \kappa_0^{-2} (1 - \alpha_{\text{r}}^{-1})^{1/3}, \quad (56)$$

- (34) On page 4030, Eq. (61) should read

$$V_1'' = -64\pi^2 \left[\frac{18}{337\zeta(3) + 1/2} \right]^{1/3} \kappa_0^{-4}. \quad (61)$$

- (35) On page 4030, in line 15, printed as “ $\partial^2 V / \partial \alpha_{\text{r}}^2 < 0$ ” should read “ $\partial^2 V / \partial \alpha_{\text{r}}^2 > 0$ ”

- (36) On page 4030, in line 16, printed as “ $V(A_{\text{r}} \rightarrow 0_+) \rightarrow \infty$ ” should read “ $V(A_{\text{r}} \rightarrow 0_+) \rightarrow -\infty$ ”

- (37) On page 4030, in line 16, printed as “minima” should read “maxima”

- (38) On page 4030, in line 17, printed as “maximum” should read “minimum”

- (39) On page 4030, in Eq. (65), printed as “ $V(\alpha_r^{(+)}) = \dots > 0$ ” should read
“ $V(\alpha_r^{(+)}) = \dots < 0$ ”
- (40) On page 4034, in line 2, printed as “anti-de Sitter” should read “de Sitter”
- (41) On page 4036, Refs. 10-14, 25 and 28 should read
10. M. D. Pollock, *Phys. Lett. B* **411**, 68 (1997); *B* **743**, 542(C) (2015).
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 28. M. D. Pollock, *Int. J. Mod. Phys. D* **13**, 923 (2004); *D* **25**, 1692001(E) (2016).
- (42) On page 4037, Ref. 33 should read
33. M. D. Pollock, *Int. J. Mod. Phys. D* **15**, 845 (2006); *D* **22**, 1392001(E) (2013).