Erratum Page

for the book: Elements of String Cosmology,


Last update: February 16, 2011

Chapter 1

• p. 4, Eq. (1.11), first line: $\Gamma_{ij}^0$ should be replaced by $-\Gamma_{ij}^0$.

• p. 12, Eq. (1.46), right-hand side, third line (the case with $\alpha < 0$): the square roots $\alpha^{-1/2}$ and $\sqrt{a}$ should be replaced, respectively, by $|\alpha|^{-1/2}$ and $\sqrt{|a|}$.

Chapter 3

• p. 93, Eq. (3A.12): there is a wrong sign on the right-hand side of the second equation. The corrected equation is:

$$\frac{1}{2} (T_{00} - T_{10}) = \frac{1}{4} \eta_{\mu\nu} \left( \dot{X}^\mu - X'^\mu \right) \left( \dot{X}^\nu - X'^\nu \right) = 0 \quad (1)$$

• p. 101, Eq. (3A.63): in the last term on the first line, and in the first term on the second line, the symbol $a_{\nu}^0$ should be replaced by $\alpha_{\nu}^0$.

• p. 111, second line of Eq. (3B.36): the integral $\int_0^\pi$ should be replaced by $\int_{-\pi}^\pi$.

Chapter 7

• p. 319, Eq. (7.249): $d\nu$ should be replaced by $dt'$.

• p. 320, Eq. (7.254): $\sin(\pi ft)$ should be replaced by $\sin(\pi fT)$.

Chapter 8

• p. 339, five lines before Eq. (8.18): $T_{ij}$ should be replaced by $\delta T_{ij}$.

• p. 342, second line: “traceless” should be replaced by “transverse”.

• p. 344, fourth line: “extrinsic” should be replaced by “intrinsic”.

• p. 344, fifth line: the symbol $R_{ij}$ should be replaced by $R_{ij}^{(3)}$.

• p. 344, four lines above Eq. (8.40): the sentence “both in the longitudinal and uniform-curvature gauge” should be replaced by “in the longitudinal gauge”.

• p. 345, Eq. (8.43): the connection $\Gamma$ should be replaced by the intrinsic connection $\Gamma^{(3)}$.

• p. 345, three lines above Eq. (8.46): the sentence “The same is true in the uniform-curvature gauge” should be replaced by “The same is true for the perturbation of the spatial Ricci tensor in the uniform-curvature gauge”. 

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p. 345, Eq. (8.46): in the first line, $\delta R_{ij}^{(3)}$ should be replaced by $\delta R_{ij}$. In the second line, $\delta R^{(3)} = g^{ij}\delta R_{ij}^{(3)}$ should be replaced by $\delta R = g^{ij}\delta R_{ij}$.

p. 345, first line below Eq. (8.46): $\delta R_{ij}^{(3)}$ should be replaced by $\delta R_{ij}$.

Chapter 10

p. 485, Eq. (10.3), first line: $\sqrt{|f|}$ is to be integrated over the external coordinates $x^\mu$. In particular, $\int d^n y \sqrt{|f|}$ should be replaced by $\int d^n y$, and $e^{-\phi}$ should be replaced by $e^{-(\phi - \log \sqrt{|f|})}$.

p. 485, three lines above Eq. (10.4): $V_n$ should be defined as $V_n = \int d^n y$, without $\sqrt{|f|}$.

p. 485, after Eq. (10.5), a factor $\sqrt{|f|}$ is missing in the definition of $g^2$, which should read: $g^2 = \exp(\phi - \log \sqrt{|f|})$.

p. 488, two lines above Eq. (10.8): “intrinsic curvature” should be replaced by “extrinsic curvature”.

p. 497, Eq. (10.46): the integration variable is missing. $d^{D-1} \sqrt{|h|}$ should be replaced by $d^{D-1} \xi \sqrt{|h|}$.

p. 508, three lines after Eq. (10.110): “for $k^{-1}$” should be replaced by “for $r \lesssim k^{-1}$”.

p. 512, after Eq. (10.124): $\lambda_p^{D-3}$ should be replaced by $\lambda_p^{D-3}$.

p. 513, in Eq. (10.129): “Tev” should be replaced by “TeV”.

p. 521, Eq. (10.166): the last term on the right-hand side should be divided by two, namely $\rho G D^{-3} P$ should be replaced by $\rho G/2\lambda_p^{D-3}$.