

Correction

# Correction: Cooray *et al.* The Deep Physics Hidden within the Field Expressions of the Radiation Fields of Lightning Return Strokes. *Atmosphere*, 2016, 7, 21.

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The authors would like to correct the published article [1] as follows. Equations (14)–(17) are valid when  $\cos\theta = 0$ . For the general case, the Equations should read:

$$E_{rad} = \frac{\sin\theta}{4\pi\epsilon_0 cr} \frac{I_0}{[1 - \cos\theta]} \left( \sin\frac{\pi c}{l}(t - r/c) \right) \mathbf{a}_\theta \text{ with } \delta' = l(1 - \cos\theta)/c \text{ for } r/c < t < r/c + \delta' \quad (14)$$

$$E_{rad} = \frac{\sin\theta}{4\pi\epsilon_0 cr} \frac{I_0}{[1 - \cos\theta]} \left( \sin\frac{\pi c}{l}(t - r/c) - \sin\frac{\pi c}{l}(t - r/c - \delta') \right) \mathbf{a}_\theta \text{ for } t > r/c + \delta' \quad (15)$$

$$\mathbf{S}(\theta, t) = \frac{i(t - r/c)^2 u^2 \sin^2\theta}{(4\pi)^2 \epsilon_0 c^3 r^2} \frac{1}{\left[1 - \frac{u}{c} \cos\theta\right]^2} \mathbf{a}_r \text{ with } \delta'' = l/u - l\cos\theta/c \text{ for } r/c < t < r/c + \delta'' \quad (16)$$

$$\mathbf{S}(\theta, t) = \frac{u^2 \sin^2\theta}{(4\pi)^2 \epsilon_0 c^3 r^2} \frac{[i(t - r/c) - i(t - r/c - \delta'')]^2}{\left[1 - \frac{u}{c} \cos\theta\right]^2} \mathbf{a}_r \text{ for } t > r/c + \delta'' \quad (17)$$

Note that with respect to the geometry given in Figure 3 of the paper, the time is shifted by an amount equal to  $l\cos\theta/2c$ . The authors would like to apologize for any inconvenience this may have caused to the readers.

## Reference

1. Cooray, V.; Cooray, G. The deep physics hidden within the field expressions of the radiation fields of lightning return strokes. *Atmosphere* **2016**, *7*. [[CrossRef](#)]



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