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Corrigendum to "Global sensitivity analysis of the climate–vegetation system to astronomical forcing: an emulator-based approach" published in Earth Syst. Dynam., 6, 205–224, 2015

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Dario Domingo (University of Leeds) kindly alerted us to a number of typographical inaccuracies in the equations of the manuscript. We list them below.

On p. 208, second column, line 10, one should read $\mathbb{V}\mathrm{ar}(\boldsymbol{f}(\boldsymbol{x})|\boldsymbol{x}_{-i})$ instead of $\mathbb{V}\mathrm{ar}(\boldsymbol{f}(\boldsymbol{x})|\boldsymbol{x}_{i})$.

On p. 209, Eq. (8) should read

$$\rho_i(\boldsymbol{x}_i) = \int_{\mathcal{X}_{-i}} \rho(\boldsymbol{x}_i, \boldsymbol{x}_{-i})\,\mathrm{d}\boldsymbol{x}_{-i}. \tag{8}$$

Equation (10) should read:

$$\mathbf{C} = \boldsymbol{M}_{\mathrm{tot}}\boldsymbol{M}'_{\mathrm{tot}} + \iint_{\mathcal{X}\times\mathcal{X}} \boldsymbol{\Sigma}(\boldsymbol{x},\boldsymbol{x}')\rho(\boldsymbol{x})\rho(\boldsymbol{x}')\mathrm{d}\boldsymbol{x}\mathrm{d}\boldsymbol{x}', \tag{10}$$

and Eq. (11) should be

$$\mathbb{E}_f(\mathbf{V}) = \int_{\mathcal{X}} \boldsymbol{m}(\boldsymbol{x})\boldsymbol{m}(\boldsymbol{x})'\rho(\boldsymbol{x})\mathrm{d}\boldsymbol{x} + \mathbf{S}_{\mathrm{tot}} - \mathbf{C},$$

$$\text{with} \quad \mathbf{S}_{\mathrm{tot}} = \int_{\mathcal{X}} \boldsymbol{\Sigma}(\boldsymbol{x},\boldsymbol{x})\rho(\boldsymbol{x})\,\mathrm{d}\boldsymbol{x}. \tag{11}$$

The synergy term is $\mathbf{V} - \mathbf{T}_{\{e\varpi\}} - \mathbf{T}_{\varepsilon} = \mathbf{V}_{\varepsilon} - \mathbf{T}_{\varepsilon}$.

On p. 209, column 2, one should read 1_n instead of 1_p.

The correlation function (Eq. 14) used by Andrianakis and Challenor (2012) is

$$c_k(\boldsymbol{x}_i,\boldsymbol{x}_j) = \exp\left[-(\boldsymbol{x}_i-\boldsymbol{x}_j)'\boldsymbol{\Lambda}_k^{-2}(\boldsymbol{x}_i-\boldsymbol{x}_j)\right] + \nu_k \mathbb{I}_{i=j}. \tag{14}$$

On p. 210, left column, end of first paragraph of Sect. 2.4.3, one should have had

$$\boldsymbol{h}(\boldsymbol{x})'\boldsymbol{\beta}_k = \beta_{k,0} + \beta_{k,1}x_1 + \beta_{k,2}x_2 + \beta_{k,3}x_3$$

instead of

$$1 + \beta_{k,1}x_1 + \ldots.$$

Still on p. 210, bottom of the left column, $\hat{\sigma}_k^2$ should be

$$\hat{\sigma_k^2} = \frac{1}{n-q-2}(\boldsymbol{e}'_k\mathbf{A}_k\boldsymbol{e}_k).$$

Finally, p. 210, Eq. (15) should read

$$\log L_k(\nu_k, \boldsymbol{\Lambda}_k) = -\frac{1}{2}\left(\log\left(\left|\mathbf{A}_k\right|\left|\mathbf{H}'\mathbf{A}_k^{-1}\mathbf{H}\right|\right) + (n-q)\log\hat{\sigma_k^2}\right) + K \tag{15}$$

(missing closing parenthesis and added K, which is an unspecified constant).

Fortunately, these are all typos and the above equations are consistent with the code used to do the numerical computations.