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Corrigendum: Detection and identification of faults in clock ensembles with the generalized likelihood ratio test (2022 *Metrologia* 59 045010)

Christian Trainotti[1,*], **Gabriele Giorgi**[1] **and Christoph Günther**[2]

[1] Institute of Communications and Navigation, German Aerospace Center (DLR), 82234 Weßling, Germany
[2] Chair of Communication and Navigation, TUM School of Engineering and Design, Technical University of Munich, 80333 Munich, Germany

E-mail: christian.trainotti@dlr.de

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The authors would like to correct the following equations in their original work. The authors apologize for any inconvenience these errors may have caused and state that the scientific conclusions remain unaffected. The results in the original paper have been derived using the correct equations.

In (59), (60), and (61) in section 4.2, the inversions of the terms in brackets are missing. The equations should read

$$\mathbf{P}_{\mathbf{u}}^{\perp} = \mathbf{I} - \mathbf{u}\left(\mathbf{u}^{\top}\boldsymbol{\Psi}^{-1}\mathbf{u}\right)^{-1}\mathbf{u}^{\top}\boldsymbol{\Psi}^{-1}\,, \tag{59}$$

$$\mathbf{P}_{\mathbf{C}}^{\perp} = \mathbf{I} - \mathbf{C}\left(\mathbf{C}^{\top}\boldsymbol{\Psi}^{-1}\mathbf{C}\right)^{-1}\mathbf{C}^{\top}\boldsymbol{\Psi}^{-1}\,, \tag{60}$$

$$\underline{\mathbf{P}}_{\mathbf{u}}^{\perp} = \mathbf{I} - \mathbf{u}\left(\mathbf{u}^{\top}\boldsymbol{\Psi}^{-1}\mathbf{P}_{\mathbf{C}}^{\perp}\mathbf{u}\right)^{-1}\mathbf{u}^{\top}\boldsymbol{\Psi}^{-1}\mathbf{P}_{\mathbf{C}}^{\perp}\,. \tag{61}$$

The same typos are present in appendix B, showing the derivation of the self-consistency test. While (B.24) correctly shows the inversion, (B.28) and (B.29) must be corrected to

$$\mathbf{P}_{\mathbf{C}}^{\perp} = \mathbf{I} - \mathbf{C}\left(\mathbf{C}^{\top}\boldsymbol{\Psi}^{-1}\mathbf{C}\right)^{-1}\mathbf{C}^{\top}\boldsymbol{\Psi}^{-1}\,, \tag{B.28}$$

$$\underline{\mathbf{P}}_{\mathbf{u}}^{\perp} = \mathbf{I} - \mathbf{u}\left(\mathbf{u}^{\top}\boldsymbol{\Psi}^{-1}\mathbf{P}_{\mathbf{C}}^{\perp}\mathbf{u}\right)^{-1}\mathbf{u}^{\top}\boldsymbol{\Psi}^{-1}\mathbf{P}_{\mathbf{C}}^{\perp}\,. \tag{B.29}$$

Additionally, in (63), (A.6) and (A.9) the inversion operator was not correctly indicated. The equations should be, respectively,

$$\lambda = \boldsymbol{\nabla}^{\top}\mathbf{R}^{-1}_{\widehat{\boldsymbol{\nabla}}\widehat{\boldsymbol{\nabla}}}\boldsymbol{\nabla}v^{-2}\,, \tag{63}$$

$$\exp\left(\frac{1}{2}\widehat{\boldsymbol{\nabla}}^{\top}\mathbf{Q}^{-1}_{\widehat{\boldsymbol{\nabla}}\widehat{\boldsymbol{\nabla}}}\widehat{\boldsymbol{\nabla}} - \boldsymbol{\rho}^{\top}\boldsymbol{\Omega}^{-1}\mathbf{C}\widehat{\boldsymbol{\nabla}}\right)\,, \tag{A.6}$$

$$\text{Reject } \mathcal{H}_0 \text{ if } \exp\left(-\frac{1}{2}\widehat{\boldsymbol{\nabla}}^{\top}\mathbf{Q}^{-1}_{\widehat{\boldsymbol{\nabla}}\widehat{\boldsymbol{\nabla}}}\widehat{\boldsymbol{\nabla}}\right) < a\,. \tag{A.9}$$

* Author to whom any correspondence should be addressed.

ORCID iDs

Christian Trainotti https://orcid.org/0000-0001-5176-6100
Gabriele Giorgi https://orcid.org/0000-0003-0552-9790

