



## Correction to: Regularization and error characterization of GRACE mascons

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**Correction to:**  
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In the originally published version of the article, Eq. (15) is shown incorrectly. The corrected equation is:

$$\begin{aligned} \mathbf{C}_s &= \mathbf{C}_{(\hat{\mathbf{x}}-\mathbf{x})_s} = \mathbf{C}_{(\hat{\mathbf{n}})_s} \\ &= \mathbb{E} \left[ \left( \hat{\mathbf{n}}^T - \mathbb{E}[\hat{\mathbf{n}}^T] \right) \left( \hat{\mathbf{n}}^T - \mathbb{E}[\hat{\mathbf{n}}^T] \right)^T \right] \\ &= \frac{1}{M-1} \hat{\mathbf{n}}^T \hat{\mathbf{n}} \end{aligned}$$

$$\begin{aligned} \mathbf{C}_t &= \mathbf{C}_{(\hat{\mathbf{x}}-\mathbf{x})_t} = \mathbf{C}_{(\hat{\mathbf{n}})_t} \\ &= \mathbb{E} \left[ \left( \hat{\mathbf{n}} - \mathbb{E}[\hat{\mathbf{n}}] \right) \left( \hat{\mathbf{n}} - \mathbb{E}[\hat{\mathbf{n}}] \right)^T \right] \\ &= \frac{1}{N-1} \hat{\mathbf{n}} \hat{\mathbf{n}}^T \end{aligned}$$

The correct equation was implemented in the analysis, and so this correction does not affect any of the results or other expressions in the paper. We are grateful to Dr. Michael Croteau for pointing out the error.

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The original article can be found online at <https://doi.org/10.1007/s00190-019-01252-y>.

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