



Correction to: Spherical gravitational curvature boundary-value problem

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The right-hand side of Eq. (35) in the original article equals one. Thus, Eq. (35) is incorrect, and we suggest the following correct form instead:

$$V_{n,m}^k(r) = \frac{1}{4\pi a_k} \int_{\Omega'} \mathbf{V}^{(k)}(r, \Omega') : \mathbf{Z}_{n,m}^k(\Omega') d\Omega',$$

$k = 0, 1, 2, 3.$

The error in Eq. (35) affects also Eq. (40). The correct form of Eq. (40) is:

$$V(r, \Omega) = \frac{GM}{4\pi R a_k} \int_{\Omega'} \left[\mathbf{V}^{(k)}(R, \Omega') : \sum_{n=k}^{\infty} \sum_{m=-n}^{+n} \frac{1}{v_n^k(R)} \left(\frac{R}{r}\right)^{n+1} \times \mathbf{Z}_{n,m}^k(\Omega') \right] \bar{Y}_{n,m}(\Omega) d\Omega', \quad k = 0, 1, 2, 3.$$

The degree-dependent coefficients $v_n^k(R)$ are:

$$v_n^k(R) = \frac{V_{n,m}^k(R)}{\bar{C}_{n,m}},$$

and their explicit forms are obvious from Eqs. (8)–(11).

The other equations in the original article are unaffected by the errors in Eqs. (35) and (40). The authors are thankful to Reiner Rummel for pointing out this issue.

The original article can be found online at <https://doi.org/10.1007/s00190-016-0905-x>.

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