




Erratum: “Stellar Diameters and Temperatures. II. Main-sequence K- and M-stars” (2012, *ApJ*, 757, 112)

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We report that the temperature-radius relations expressed in Equations (8) and (9) are swapped in Boyajian et al. (2012). Here, Equation (8) now correctly reports the temperature–radius relation derived from stars with temperatures between 3200 and 5500 K, and Equation (9) is the relation using the same stars while also requiring the fit to go through the Sun (hence being a reference point for the more massive stars). We print the correct version of the equations below for clarity:

$$R(R_{\odot}) = -8.133(\pm 0.226) + 5.09342(\pm 0.16745) \times 10^{-3} X \\ - 9.86602(\pm 0.40672) \times 10^{-7} X^2 + 6.47963(\pm 0.32429) \times 10^{-11} X^3 \quad (8)$$

$$R(R_{\odot}) = -10.8828(\pm 0.1355) + 7.18727(\pm 0.09468) \times 10^{-3} X \\ - 1.50957(\pm 0.02155) \times 10^{-6} X^2 + 1.07572(\pm 0.01599) \times 10^{-10} X^3, \quad (9)$$

where X is the effective temperature. As seen in Figure 13 of Boyajian et al. (2012), the difference between the two relations is minimal. They deviate from each other only slightly for stars with $T_{\text{eff}} > 4000$ K due to the upward curvature to include the Sun in the fit for Equation (9). The place where the two relations deviate the most from each other, around 4600 K, is also the place where the data are most deviant from both relations. All conclusions in the original publication remain unchanged.

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References

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