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DOI

[10.1051/0004-6361/201014037e](https://doi.org/10.1051/0004-6361/201014037e)

Publication date

2011

Document Version

Final published version

Published in

Astronomy & Astrophysics

[Link to publication](#)

Citation for published version (APA):

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Amplitudes and lifetimes of solar-like oscillations observed by CoRoT

Red-giant versus main-sequence stars (Corrigendum)

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A&A, 529, A84 (2011), DOI: 10.1051/0004-6361/201014037

Key words. stars: oscillations – methods: data analysis – asteroseismology – errata, addenda

In Sects. 4.3 and 4.4, uncertainties were not properly taken into account in the computation of the scaling relation between mode widths (Sect. 4.3) and effective temperature for main-sequence stars (MS), and of the scaling relation between mode amplitude and effective temperature, again for main-sequence stars (other scaling relations are correct). The correct results are

$$\Gamma \propto T_{\text{eff}}^s \quad \text{with} \quad \begin{cases} s \approx -0.3 \pm 0.9 & \text{for RG (unchanged)} \\ s \approx 16 \pm 2 & \text{for MS (corrected)} \end{cases}$$

and:

$$A_{\text{max}}^I \propto \left(\frac{L}{M}\right)^s \quad \text{with} \quad \begin{cases} s = 0.92 \pm 0.14 & \text{for RG (unchanged)} \\ s = 0.42 \pm 0.14 & \text{for MS (corrected)}. \end{cases}$$

The corrected values are only slightly changed and well inside former uncertainties. Moreover, the corrected uncertainties are smaller than the former ones. Figure 7 is also slightly changed (see Fig. 1). The conclusions remain unchanged with these more precise results.

Acknowledgements. This wrong computation was pointed out by T. Appourchaux who performed a thorough check of the former published results.

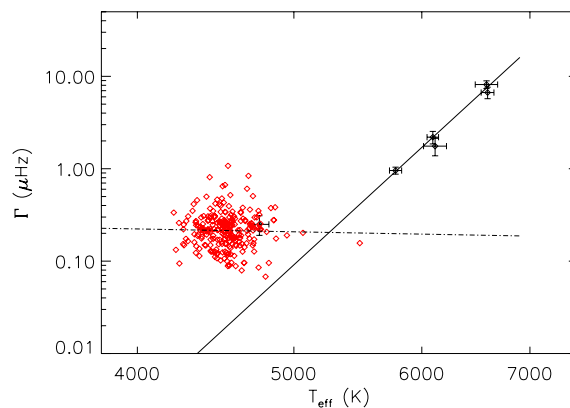


Fig. 1. Measured mode linewidths versus T_{eff} for the red giants ($T_{\text{eff}} < 5000$ K) and for the main-sequence stars ($T_{\text{eff}} > 5000$ K). The dot-dash line indicates the fit to the red-giant width and the triple-dot-dash line the fit to main-sequence stars.