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The secondary eclipse of the transiting exoplanet CoRoT-2b⋆ *(Corrigendum)*

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As noticed by Snellen et al. (2009), there was an error in the calculation of the brightness temperature from the observed eclipse depths. We have corrected this mistake. The relevant parts of the paper that are affected should read as follows:

- Section 4, 4th sentence: we used a value of $T_{\rm eff}$ = 5625 ± 120 K for the star (Alonso et al. 2008a), and the model spectrum of a G5V star from Pickles (1998), obtaining $T_{\rm p,CoRoT} = 2120^{+95}_{-110}$ K.
- Section 4, 12th sentence: if we further assume that $F_{\rm p,internal} = 0$ and that the planet is in thermal equilibrium[1], this temperature favors unrealistic high values of the redistribution factor $f > 0.70$.
- Section 4, 2nd paragraph: assuming blackbody radiation and negligible $F_{\rm p,internal}$, Fig. 6 shows that likely values of the albedo (corresponding to f between 0.25 and 0.5) are $A_{\rm g}$ = 0.085 ± 0.045.

The rest of the discussion remains unaffected.

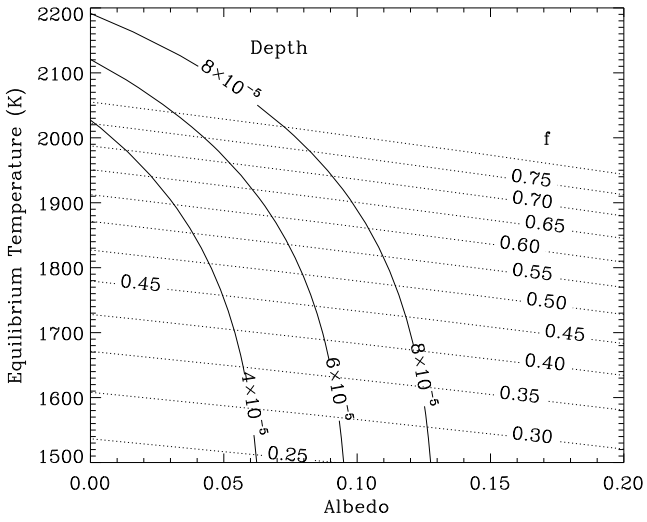

Fig. 6. The equilibrium temperature of CoRoT-2b as a function of the albedo matching the observed secondary eclipse depth. The zero-albedo equilibrium temperature is about 2120 K. In dotted lines, we plot the redistribution factors f. Realistic re-distribution factors require the contribution of some reflected light (non zero albedo) or the presence of an additional source of energy in the planet (assumed zero in this plot).

References

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Pickles, A. J. 1998, PASP, 110, 863
Snellen, I. A. G., de Mooij, E. J. W., & Burrows, A. 2010, A&A, in press [arXiv:0909.4080]

⋆ Based on observations obtained with CoRoT, a space project operated by the French Space Agency, CNES, with participation of the Science Programme of ESA, ESTEC/RSSD, Austria, Belgium, Brazil, Germany and Spain.

[1] $T_{\rm eq} = T_\star (R_\star/a)^{1/2} [f(1-A)]^{1/4}$.