

Measuring the magnetic field of a trans-equatorial loop system using coronal seismology (Corrigendum)

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It has been brought to our attention (B. Roberts, 2017, priv. comm.) that the formula used in Eq. (2) of our paper (Long et al. 2017) was incorrect. This equation should instead have read

$$B = \frac{L}{P} \sqrt{2\pi\rho_{\text{in}} \left(1 + \frac{\rho_{\text{ex}}}{\rho_{\text{in}}}\right)} \quad (1)$$

where B is the magnetic field strength, L is the loop length, P is the period of the oscillation, ρ_{in} is the internal density of the loop system and ρ_{ex} is the external density of the surrounding corona (cf. Roberts et al. 1984; Nakariakov & Ofman 2001; Van Doorselaere et al. 2008a; Aschwanden & Schrijver 2011). As a result of the incorrect equation used, the value of the magnetic field strength estimated using the oscillation of the trans-equatorial loop system quoted in Sect. 5.1 of Long et al. (2017) is also incorrect. It should instead be $B \approx 2.4 \pm 0.6$ G.

Although this value is lower than the original (incorrect) value quoted in Long et al. (2017), it does not affect the

qualitative results or conclusions of the paper. The magnetic field strength estimated using the oscillation of the transequatorial loop system is still comparable to the values estimated using both the independent magnetoseismology approach of Morton et al. (2015, 2016) and the extrapolated magnetic field obtained from both the HMI and GONG magnetograms. This indicates that the approach is still sound, albeit with a lower estimated value.

References

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