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Erratum: *Chandra* grating spectroscopy of embedded wind shock X-ray emission from O stars shows low plasma temperatures and significant wind absorption

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This is an erratum to the paper '*Chandra* grating spectroscopy of embedded wind shock X-ray emission from O stars shows low plasma temperatures and significant wind absorption' (2021, MNRAS, 503, 715). We present here a modest correction to the overall scaling of the differential emission measures (DEMs) of six O stars originally presented in Cohen et al. (2021). While working on a follow-up paper, we realized that we had incorrectly converted the *bvapec* spectral emission model's normalization parameters (proportional to the emission measure per temperature bin size) to the emission measure per decade Kelvin shown in figs 4 and 7 of Cohen et al. (2021). The normalization, or emission measure, bins functionally have a uniform logarithmic width of $\Delta\log_{10}T = 0.23$ (each temperature is 1.7 times higher than the previous one) based on our choice of the six fixed temperatures of the spectral emission model. We had, however, incorrectly stated the bin width as $\Delta\log_{10}T = 0.7$, or 0.7 dex, in the first paragraph of section 3 and the penultimate paragraph of section 5 of the original paper (Cohen et al. 2021). Both instances should be changed to 0.23 dex.

When converting the model normalizations to differential emission measure values [with units cm^{-3} (dex K)$^{-1}$] for the purpose of making the plots shown in figs 4 and 7, we had incorrectly multiplied the distance-corrected emission measures by $10/10^{0.7}$. Dividing the published results by this factor and then dividing by the correct factor of 0.23 re-scales the curves in these two figures, making them all higher by a factor of 2.18. We present corrected figures, with the original and still accurate captions, here as Figs 1 and 2. We also note that the factor for converting the *bvapec* model normalizations to emission measure units in table 3 should be $10^{10} \cdot 4\pi d^2$ cm^{-3}, rather than the stated $10^{18} \cdot 4\pi d^2$ cm^{-3}.

No other corrections to the text, tables (including table 3 of Cohen et al. (2021) which listed the individual model component normalizations that came directly from the model fitting), or figures in the original paper, are required. The scientific conclusions and specific quantitative results of the paper, including the shapes of the DEMs shown in the figures, the X-ray luminosities, and the amount of wind absorption, remain unchanged. The quantification of the temperature-integrated DEMs (total emission measures) of the stars were stated as ranging approximately from 10^{54} to 10^{56} cm^{-3} near the end of the first paragraph of section 4. These quantities also should be scaled up by a factor of 2.18 but because they were quoted to only one significant figure, that text does not need to be changed.

Authors Winter Parts and Graham Doskoch have changed their affiliations, to Penn State and University of West Virginia, respectively, since the publication of the original article and we use these new affiliations here.

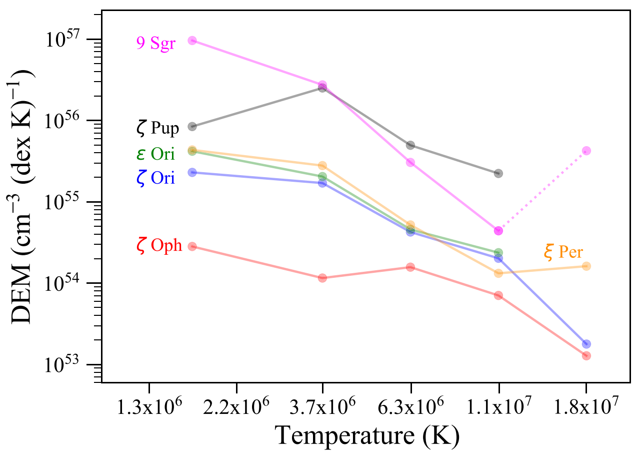

Figure 1. Emission measure distributions of the six programme stars are displayed as dots representing each *bvapec* normalization, with line segments connecting them. For ζ Pup and ϵ Ori, the emission measure in the hottest component is negligible. For 9 Sgr, the hottest component has a significant contribution from CWS X-rays. For all stars, we averaged and combined the two lowest temperature components into a single bin.

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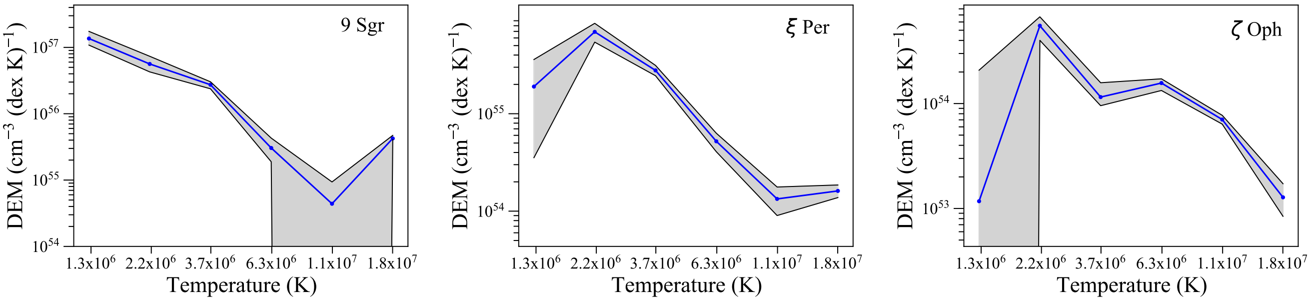

Figure 2. The 68 per cent confidence limits on the DEM are shown as grey bands surrounding the best-fitting DEMs (blue points and lines) for the three programme stars that have statistically good fits according to the unweighted χ^2 values of the best-fitting models. Note that unlike in Fig. 1, we do not add together the two lowest-temperature bins but rather show them separately.

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REFERENCE

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