

Constraining planetary mass-loss rates by simulating Parker wind profiles with Cloudy (Corrigendum)

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In Sect. 4.3, we assumed a normally distributed prior and likelihood but erroneously used p -values derived from the survival function instead of from the probability density function of the normal distribution. We gave the example of a temperature difference of $T_{\text{He}} - T_0 = 2\sigma_T$, which we considered a 2σ discrepancy and thus translated to a prior p -value of ~ 0.05 (rounded from 0.0455, equal to two times the survival function evaluated at 2σ). Instead, we should have used a p -value of 0.0540, equal to the probability density function evaluated at 2σ . This error has only a minimal effect on the posteriors we derived. Figures 1, 2, and 3 show corrected versions of Figs. 4, 5, and A.1 from the paper, respectively. Table 1 gives the corrected values for the constrained temperatures and mass-loss rates of Table 1 from the paper. All main findings and conclusions remain unaffected.

Table 1. Corrected values for the constrained temperatures and mass-loss rates for the investigated exoplanets.

Planet	T (K)	$\log_{10}(\dot{M})$ ($\log_{10}(\text{g s}^{-1})$)
HD 209458 b	8200^{+1300}_{-1200}	$9.84^{+0.27}_{-0.30}$
WASP-69 b	$5300^{+1400}_{-300 (u)}$	$9.91^{+0.19}_{-0.13 (u)}$
WASP-52 b	9000^{+1900}_{-1600}	$11.06^{+0.28}_{-0.29}$
HAT-P-11 b	4500^{+1300}_{-1200}	$9.70^{+0.30}_{-0.17}$
HAT-P-18 b	5400^{+1400}_{-1300}	$10.33^{+0.30}_{-0.27}$
WASP-107 b	$3400^{+1500}_{-400 (u)}$	$9.96^{+0.24}_{-0.23 (u)}$

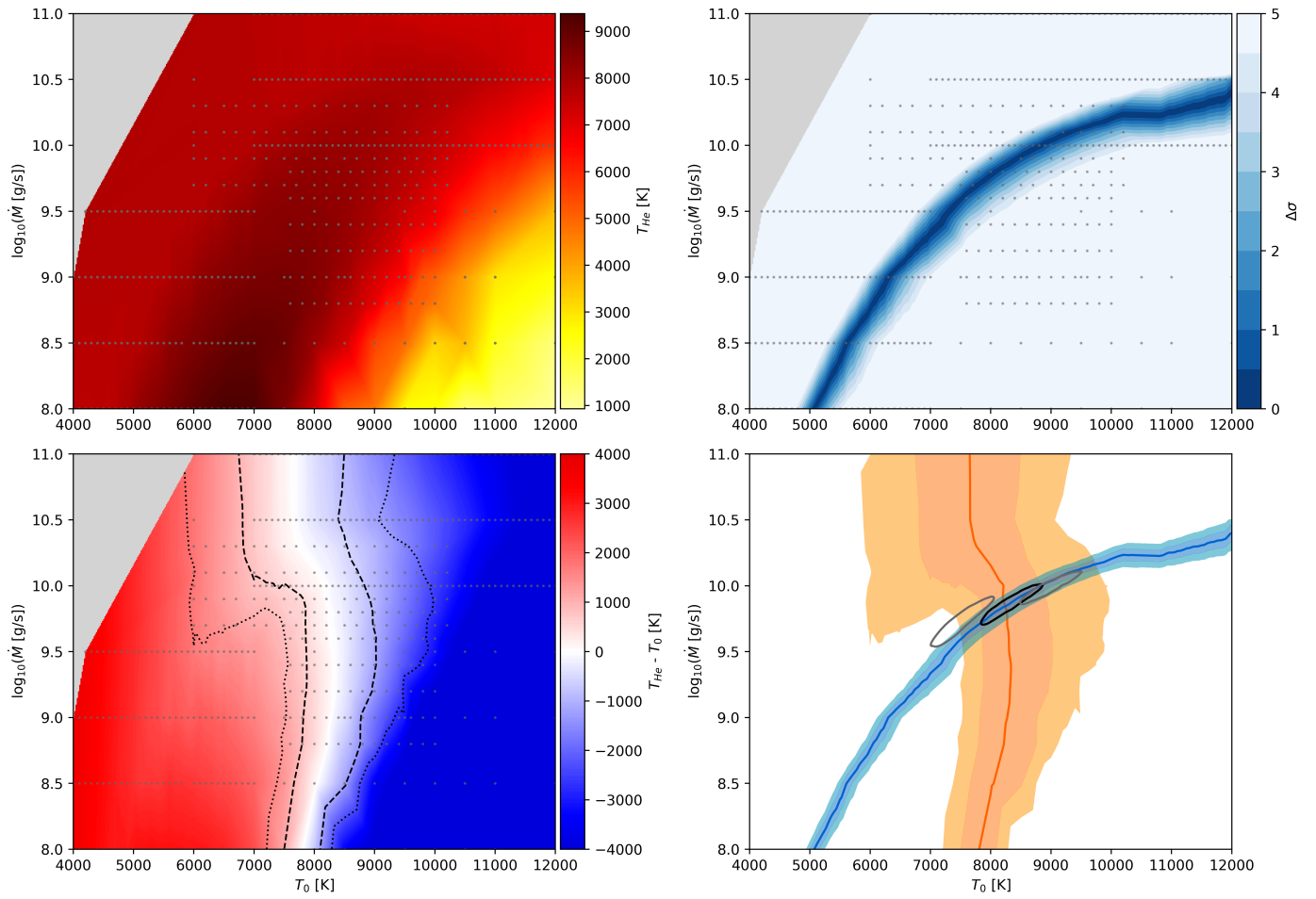


Fig. 1. Corrected Fig. 4. Only the posteriors in the bottom-right panel have changed, and only slightly.

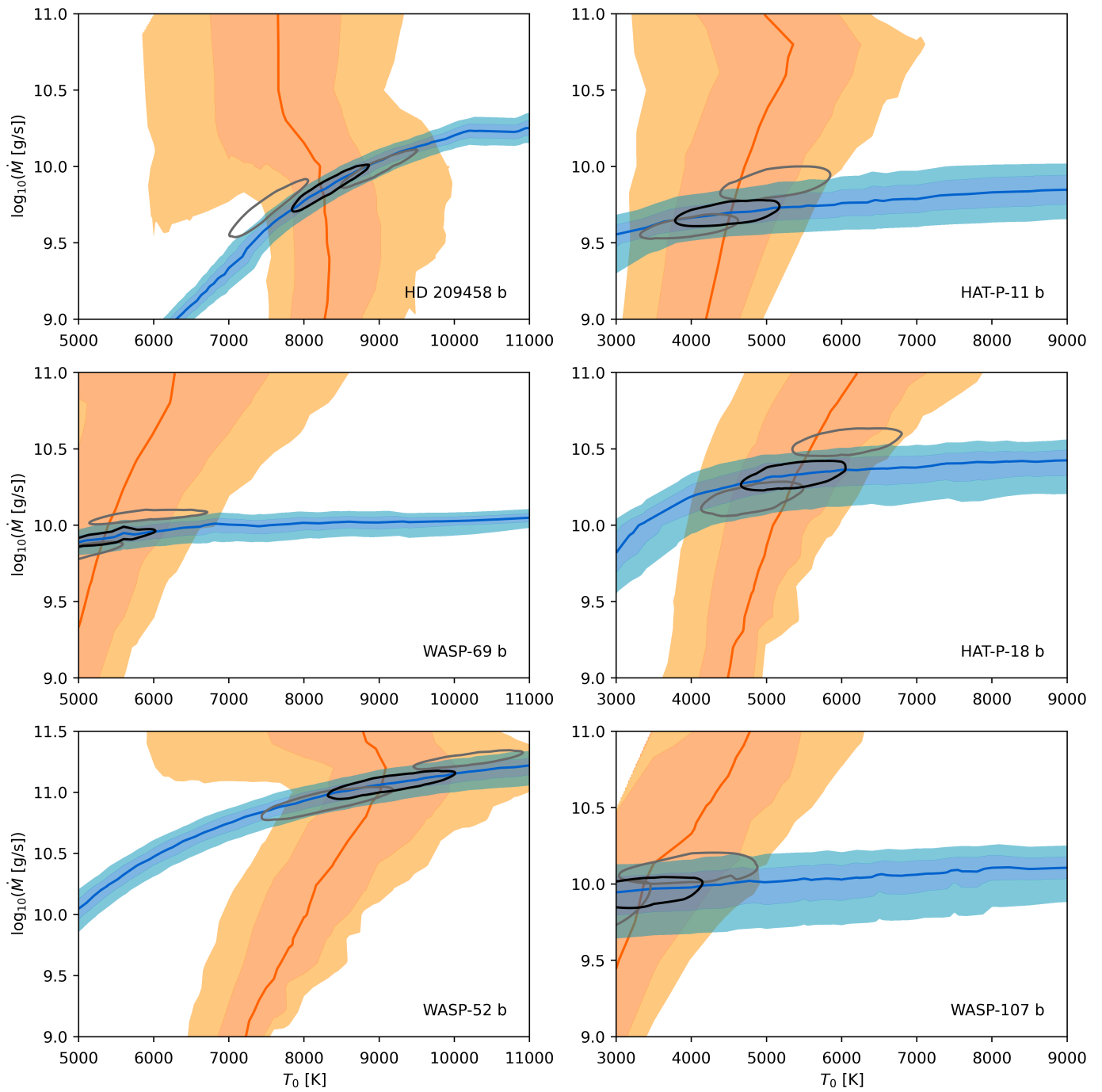


Fig. 2. Corrected Fig. 5. The only difference is a slight change in the posteriors.

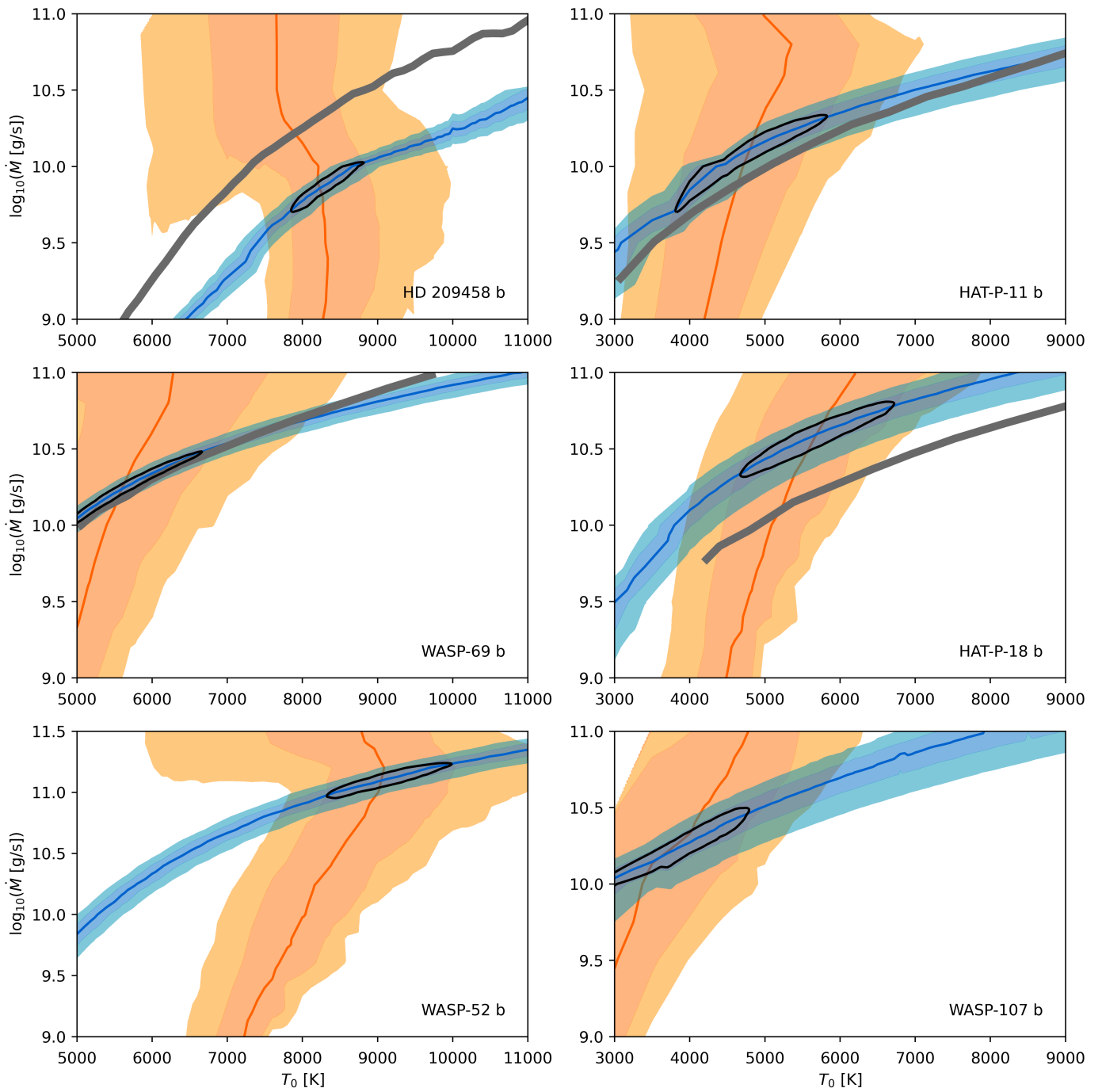


Fig. 3. Corrected Fig. A.1. The only difference is a slight change in the posteriors.