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Erratum: “An 11 Earth-mass, Long-period Sub-Neptune Orbiting a Sun-like Star” (2019, AJ, 158, 165)

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The semimajor axis and planet insolation flux of Kepler-538b were incorrectly calculated in the published article. This error did not impact any other parameters or any other results in the paper. Table 2 has been included in full here with the corrected semimajor axis and planet insolation flux values.

We thank Arbab I. Arbab and Charles D. Fortenbach for bringing this to our attention.

Table 2
Transit and RV Parameters of Kepler-538b

Parameter	Unit	This Paper	Priors
<i>Transit Parameters</i>			
Period P	day	81.73778 ± 0.00013	Unif(81.73666, 81.73896)
Time of first transit	BJD-2454833	$211.6789^{+0.0010}_{-0.0011}$	Unif(211.6671, 211.6901)
Orbital eccentricity e	...	$0.041^{+0.034}_{-0.029} (<0.11)^a$	Beta(0.867, 3.03) ^{b,c}
Longitude of periastron ω	deg	140^{+140}_{-90}	Unif(0, 360)
Impact parameter b	...	$0.41^{+0.10}_{-0.21}$	Unif(0, 1)
Transit duration t_{14}	hr	$6.62^{+0.21}_{-0.13}$	Unif(0, 24)
Radius ratio R_p/R_*	...	$0.02329^{+0.00039}_{-0.00033}$	Jeffreys(0.001, 1)
Quadratic limb-darkening parameter q_1	...	$0.164^{+0.067}_{-0.042}$	Unif(0, 1)
Quadratic limb-darkening parameter q_2	...	$0.74^{+0.16}_{-0.22}$	Unif(0, 1)
Normalized baseline offset	ppm	$-2.1^{+2.7}_{-2.8}$	Unif(−100, 100)
Photometric white noise amplitude	ppm	$112.2^{+2.5}_{-2.4}$	ModJeffreys(1, 1000, 234)
<i>RV Parameters</i>			
Semi-amplitude K	m s^{-1}	$1.69^{+0.39}_{-0.38}$	ModJeffreys(0.01, 10, 2.1)
HIRES RV white noise amplitude	m s^{-1}	$3.25^{+0.56}_{-0.48}$	ModJeffreys(0, 10, 2.1)
HARPS-N RV white noise amplitude	m s^{-1}	$2.24^{+0.29}_{-0.27}$	ModJeffreys(0, 10, 2.1)

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Table 2
(Continued)

Parameter	Unit	This Paper	Priors
HARPS-N FWHM white noise amplitude	m s^{-1}	$6.71^{+0.52}_{-0.46}$	Jeffreys(0.01, 10)
HIRES RV offset amplitude	m s^{-1}	$-0.50^{+0.78}_{-0.87}$	Unif(−5, 5)
HARPS-N RV offset amplitude	m s^{-1}	$-37322.07^{+0.58}_{-0.73}$	Unif(−37330, −37315)
HARPS-N FWHM offset amplitude	m s^{-1}	$6655.4^{+7.5}_{-8.6}$	Unif(6600, 6700)
GP RV convective blueshift amplitude V_c	m s^{-1}	$0.86^{+0.75}_{-0.54}$	ModJeffreys(0, 15, 2.1)
GP RV rotation modulation amplitude V_r	m s^{-1}	$4.0^{+5.7}_{-3.0}$	ModJeffreys(0, 15, 2.1)
GP FWHM amplitude F_c	m s^{-1}	$13.3^{+5.9}_{-4.9}$	Jeffreys(0.01, 25)
GP stellar rotation period P_*	day	$25.2^{+6.5d}_{-1.2}$	Unif(20, 40)
GP inverse harmonic complexity λ_p	...	$5.2^{+2.8}_{-2.5}$	Unif(0.25, 10)
GP evolution timescale λ_e	day	370^{+200}_{-140}	Jeffreys(1, 1000)
<i>Derived Parameters</i>			
Planet radius R_p	$R_\oplus$	$2.215^{+0.040}_{-0.034}$	...
System scale a/R_*	...	$87.5^{+1.5}_{-1.6}$	...
Planet semimajor axis a	au	$0.3548^{+0.0066}_{-0.0068}$	...
Orbital inclination i	degree	$89.73^{+0.14}_{-0.06}$	...
Planet mass M_p	$M_\oplus$	$10.6^{+2.5}_{-2.4}$	...
Planet mean density ρ_p	$\rho_\oplus$	0.98 ± 0.23	...
Planet mean density ρ_p	g cm^{-3}	5.4 ± 1.3	...
Planet insolation flux S_p	$S_\oplus$	$5.19^{+0.31}_{-0.28}$	...
Planet equilibrium temperature T_{eq} (albedo = 0.3)	K	380	...
Planet equilibrium temperature T_{eq} (albedo = 0.5)	K	350	...

Notes.^a 95% confidence limit.^b Beta distribution parameter values from Kipping (2013).^c Prior also truncated to exclude $e > 0.95$.^d Rotation period uncertainties are highly asymmetric because the posterior includes a large peak at 25 days and a smaller peak at 31 days.**ORCID iDs**

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