

Table 1. Median values and 68% confidence interval for OGLE-TR-1092.

Parameter	Units	Values
Stellar Parameters:		
M_*	Mass (M_\odot)	$1.16^{+0.14}_{-0.16}$
R_*	Radius (R_\odot)	$2.59^{+0.17}_{-0.30}$
$R_{*,SED}$	Radius ¹ (R_\odot)	$2.73^{+0.12}_{-0.44}$
L_*	Luminosity (L_\odot)	$3.38^{+0.17}_{-0.29}$
F_{Bol}	Bolometric Flux (cgs)	$0.000000000198^{+0.0000000000018}_{-0.0000000000049}$
ρ_*	Density (cgs)	$0.106^{+0.030}_{-0.037}$
$\log g$	Surface gravity (cgs)	$3.707^{+0.086}_{-0.14}$
T_{eff}	Effective Temperature (K)	4804^{+250}_{-83}
$T_{eff,SED}$	Effective Temperature ¹ (K)	4711^{+360}_{-87}
[Fe/H]	Metallicity (dex)	$0.20^{+0.20}_{-0.26}$
[Fe/H] ₀	Initial Metallicity ²	$0.14^{+0.21}_{-0.25}$
Age	Age (Gyr)	$6.6^{+4.8}_{-1.6}$
EEP	Equal Evolutionary Phase ³	$476.8^{+5.6}_{-6.6}$
A_V	V-band extinction (mag)	$1.197^{+0.17}_{-0.083}$
σ_{SED}	SED photometry error scaling	$2.6^{+2.1}_{-1.7}$
ϖ	Parallax (mas)	$0.4362^{+0.0029}_{-0.078}$
d	Distance (pc)	2292^{+500}_{-15}
Planetary Parameters:		
		b
P	Period (days)	$3.660176^{+0.000069}_{-0.000075}$
R_P	Radius (R_J)	$1.043^{+0.17}_{-0.046}$
M_P	Mass ⁴ (M_J)	42^{+36}_{-39}
T_C	Time of conjunction ⁵ (BJD _{TDB})	$2455380.164^{+0.030}_{-0.017}$
T_T	Time of minimum projected separation ⁶ (BJD _{TDB})	$2455380.164^{+0.030}_{-0.017}$
T_0	Optimal conjunction Time ⁷ (BJD _{TDB})	$2456635.6046^{+0.012}_{-0.0072}$
a	Semi-major axis (AU)	$0.0493^{+0.0024}_{-0.0028}$
i	Inclination (Degrees)	$78.8^{+2.3}_{-1.0}$
T_{eq}	Equilibrium temperature ⁸ (K)	1690^{+78}_{-51}
τ_{circ}	Tidal circularization timescale (Gyr)	40 ± 39
K	RV semi-amplitude ⁴ (m/s)	4900^{+3300}_{-4500}
R_P/R_*	Radius of planet in stellar radii	$0.0433^{+0.0040}_{-0.0024}$
a/R_*	Semi-major axis in stellar radii	$4.26^{+0.39}_{-0.61}$
δ	$(R_P/R_*)^2$	$0.00188^{+0.00036}_{-0.00020}$
δ_I	Transit depth in I (fraction)	$0.00190^{+0.00037}_{-0.00038}$
δ_V	Transit depth in V (fraction)	$0.00192^{+0.00044}_{-0.00049}$
τ	Ingress/egress transit duration (days)	$0.0209^{+0.0035}_{-0.0044}$
T_{14}	Total transit duration (days)	$0.212^{+0.025}_{-0.045}$

Table 1 continued on next page

Table 1 (continued)

Parameter	Units	Values	
T_{FWHM} ..	FWHM transit duration (days)	0.196 ^{+0.019} _{-0.045}	
b	Transit Impact parameter	0.763 ^{+0.074} _{-0.077}	
$\delta_{S,2.5\mu m}$..	Blackbody eclipse depth at 2.5 μm (ppm)	157 ⁺³⁸ ₋₃₅	
$\delta_{S,5.0\mu m}$..	Blackbody eclipse depth at 5.0 μm (ppm)	345 ⁺⁶³ ₋₅₃	
$\delta_{S,7.5\mu m}$..	Blackbody eclipse depth at 7.5 μm (ppm)	438 ⁺⁷² ₋₆₅	
ρ_P	Density ⁴ (cgs)	50 ⁺³⁸ ₋₄₈	
$\log g_P$	Surface gravity ⁴	5.01 ^{+0.25} _{-1.2}	
Θ	Safronov Number	3.7 ^{+2.3} _{-3.4}	
$\langle F \rangle$	Incident Flux (10 ⁹ erg s ⁻¹ cm ⁻²)	1.85 ^{+0.37} _{-0.22}	
T_P	Time of Periastron (BJD _{TDB})	2455380.164 ^{+0.030} _{-0.017}	
T_S	Time of eclipse (BJD _{TDB})	2455381.994 ^{+0.030} _{-0.017}	
T_A	Time of Ascending Node (BJD _{TDB})	2455382.909 ^{+0.030} _{-0.017}	
T_D	Time of Descending Node (BJD _{TDB})	2455381.079 ^{+0.030} _{-0.017}	
V_c/V_e	1.00	
$M_P \sin i$..	Minimum mass ⁴ (M_J)	41 ⁺³⁵ ₋₃₈	
M_P/M_*	Mass ratio ⁴	0.035 ^{+0.023} _{-0.031}	
d/R_*	Separation at mid transit	4.26 ^{+0.39} _{-0.61}	
P_T	A priori non-grazing transit prob	0.225 ^{+0.037} _{-0.019}	
$P_{T,G}$	A priori transit prob	0.245 ^{+0.041} _{-0.020}	
Wavelength Parameters:		I	V
u_1	linear limb-darkening coeff	0.464 ^{+0.017} _{-0.063}	0.678 ^{+0.078} _{-0.090}
u_2	quadratic limb-darkening coeff	0.221 \pm 0.039	0.065 ^{+0.067} _{-0.029}
Transit Parameters:		OGLE UT 2010-07-02 (I)	OGLE UT 2010-07-02 (V)
σ^2	Added Variance	0.00004011 ^{+0.0000013} _{-0.0000071}	0.0000216 ^{+0.0000043} _{-0.0000033}
F_0	Baseline flux	1.000265 ^{+0.000050} _{-0.000041}	1.00013 ^{+0.00025} _{-0.00023}

See Table 3 in Eastman, J. et al., 2019, arXiv:1907.09480 for a detailed description of all parameters

¹This value ignores the systematic error and is for reference only

²The metallicity of the star at birth

³Corresponds to static points in a star's evolutionary history. See §2 in Dotter, A., 2016, ApJS, 222, 8

⁴Uses measured radius and estimated mass from Chen, J., & Kipping, D. 2017, ApJ, 834, 17

⁵Time of conjunction is commonly reported as the "transit time"

⁶Time of minimum projected separation is a more correct "transit time"

⁷Optimal time of conjunction minimizes the covariance between T_C and Period

⁸Assumes no albedo and perfect redistribution