

Table 1. Median values and 68% confidence interval for OGLE-TR-1093.

Parameter	Units	Values
Stellar Parameters:		
M_*	Mass (M_\odot)	$1.59^{+0.26}_{-0.18}$
R_*	Radius (R_\odot)	$3.61^{+0.32}_{-0.29}$
$R_{*,SED}$	Radius ¹ (R_\odot)	$3.85^{+0.31}_{-0.27}$
L_*	Luminosity (L_\odot)	$8.8^{+3.9}_{-1.6}$
F_{Bol}	Bolometric Flux (cgs)	$0.000000000394^{+0.0000000000038}_{-0.0000000000037}$
ρ_*	Density (cgs)	$0.047^{+0.017}_{-0.011}$
$\log g$	Surface gravity (cgs)	$3.518^{+0.11}_{-0.079}$
T_{eff}	Effective Temperature (K)	5220^{+590}_{-290}
$T_{eff,SED}$	Effective Temperature ¹ (K)	5050^{+550}_{-270}
[Fe/H]	Metallicity (dex)	$0.17^{+0.27}_{-0.45}$
[Fe/H] ₀	Initial Metallicity ²	$0.13^{+0.27}_{-0.43}$
Age	Age (Gyr)	$2.17^{+0.70}_{-0.63}$
EEP	Equal Evolutionary Phase ³	$481.3^{+6.1}_{-25}$
A_V	V-band extinction (mag)	$1.396^{+0.066}_{-0.14}$
σ_{SED}	SED photometry error scaling	$18.4^{+6.2}_{-3.3}$
ϖ	Parallax (mas)	$0.368^{+0.039}_{-0.055}$
d	Distance (pc)	2710^{+480}_{-260}
Planetary Parameters:		
		b
P	Period (days)	$1.4751354^{+0.0000037}_{-0.0000034}$
R_P	Radius (R_J)	$3.82^{+0.92}_{-1.1}$
M_P	Mass ⁴ (M_J)	380^{+110}_{-120}
T_C	Time of conjunction ⁵ (BJD _{TDB})	$2455377.1974^{+0.0036}_{-0.0043}$
T_T	Time of minimum projected separation ⁶ (BJD _{TDB})	$2455377.1974^{+0.0036}_{-0.0043}$
T_0	Optimal conjunction Time ⁷ (BJD _{TDB})	2456666.4656 ± 0.0027
a	Semi-major axis (AU)	$0.0317^{+0.0014}_{-0.0011}$
i	Inclination (Degrees)	$57.4^{+3.4}_{-3.5}$
T_{eq}	Equilibrium temperature ⁸ (K)	2700^{+220}_{-120}
τ_{circ}	Tidal circularization timescale (Gyr)	$0.0164^{+0.037}_{-0.0083}$
K	RV semi-amplitude ⁴ (m/s)	36300^{+7800}_{-9800}
R_P/R_*	Radius of planet in stellar radii	$0.106^{+0.026}_{-0.024}$
a/R_*	Semi-major axis in stellar radii	$1.88^{+0.18}_{-0.13}$
δ	$(R_P/R_*)^2$	$0.0113^{+0.0062}_{-0.0045}$
δ_I	Transit depth in I (fraction)	$0.00293^{+0.00056}_{-0.00050}$
δ_V	Transit depth in V (fraction)	$0.00163^{+0.00093}_{-0.00083}$
τ	Ingress/egress transit duration (days)	$0.0668^{+0.0066}_{-0.0074}$
T_{14}	Total transit duration (days)	$0.134^{+0.013}_{-0.015}$

Table 1 continued on next page

Table 1 (continued)

Parameter	Units	Values	
T_{FWHM} ..	FWHM transit duration (days)	0.0669 ^{+0.0066} _{-0.0073}	
b	Transit Impact parameter	1.015 ^{+0.033} _{-0.037}	
$\delta_{S,2.5\mu m}$..	Blackbody eclipse depth at 2.5 μm (ppm)	3100 ⁺¹⁶⁰⁰ ₋₁₄₀₀	
$\delta_{S,5.0\mu m}$..	Blackbody eclipse depth at 5.0 μm (ppm)	4400 ⁺²³⁰⁰ ₋₁₉₀₀	
$\delta_{S,7.5\mu m}$..	Blackbody eclipse depth at 7.5 μm (ppm)	4900 ⁺²⁶⁰⁰ ₋₂₁₀₀	
ρ_P	Density ⁴ (cgs)	8.5 ^{+7.4} _{-2.8}	
$\log g_P$..	Surface gravity ⁴	4.813 ^{+0.13} _{-0.081}	
Θ	Safronov Number	3.98 ^{+0.38} _{-0.44}	
$\langle F \rangle$	Incident Flux (10 ⁹ erg s ⁻¹ cm ⁻²)	12.1 ^{+4.4} _{-2.1}	
T_P	Time of Periastron (BJD _{TDB})	2455377.1974 ^{+0.0036} _{-0.0043}	
T_S	Time of eclipse (BJD _{TDB})	2455377.9350 ^{+0.0036} _{-0.0043}	
T_A	Time of Ascending Node (BJD _{TDB})	2455378.3038 ^{+0.0036} _{-0.0043}	
T_D	Time of Descending Node (BJD _{TDB})	2455377.5662 ^{+0.0036} _{-0.0043}	
V_c/V_e	1.00	
$M_P \sin i$..	Minimum mass ⁴ (M_J)	319 ⁺⁸² ₋₉₃	
M_P/M_* ..	Mass ratio ⁴	0.226 ^{+0.069} _{-0.074}	
d/R_* ..	Separation at mid transit	1.88 ^{+0.18} _{-0.13}	
P_T	A priori non-grazing transit prob	0.476 ^{+0.038} _{-0.042}	
$P_{T,G}$	A priori transit prob	0.588 ^{+0.052} _{-0.053}	
Wavelength Parameters:		I	V
u_1	linear limb-darkening coeff	0.351 ^{+0.080} _{-0.11}	0.57 ^{+0.11} _{-0.13}
u_2	quadratic limb-darkening coeff	0.252 ^{+0.070} _{-0.067}	0.172 ^{+0.091} _{-0.086}
Transit Parameters:		OGLE UT 2010-06-29 (I)	OGLE UT 2010-06-29 (V)
σ^2	Added Variance	0.00001873 ^{+0.00000029} _{-0.00000031}	0.0000152 ^{+0.00000039} _{-0.00000031}
F_0	Baseline flux	1.000153 ^{+0.000051} _{-0.000042}	1.00003 ^{+0.00040} _{-0.00036}

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