

Table 1. Median values and 68% confidence interval for OGLE-TR-1062.

Parameter	Units	Values
Stellar Parameters:		
M_*	Mass (M_\odot)	$1.01^{+0.14}_{-0.16}$
R_*	Radius (R_\odot)	1.70 ± 0.16
$R_{*,SED}$	Radius ¹ (R_\odot)	$1.71^{+0.27}_{-0.15}$
L_*	Luminosity (L_\odot)	$5.6^{+2.7}_{-2.2}$
F_{Bol}	Bolometric Flux (cgs)	$0.00000000052^{+0.000000000015}_{-0.000000000029}$
ρ_*	Density (cgs)	$0.286^{+0.12}_{-0.071}$
$\log g$	Surface gravity (cgs)	$3.981^{+0.11}_{-0.096}$
T_{eff}	Effective Temperature (K)	6870^{+650}_{-900}
$T_{eff,SED}$	Effective Temperature ¹ (K)	6890^{+520}_{-1000}
[Fe/H]	Metallicity (dex)	$-1.6^{+1.5}_{-2.2}$
[Fe/H] ₀	Initial Metallicity ²	$-1.2^{+1.3}_{-2.0}$
Age	Age (Gyr)	$6.9^{+2.1}_{-3.1}$
EEP	Equal Evolutionary Phase ³	$450.2^{+7.2}_{-13}$
A_V	V-band extinction (mag)	$2.19^{+0.34}_{-0.80}$
σ_{SED}	SED photometry error scaling	$12.3^{+42}_{-8.7}$
ϖ	Parallax (mas)	0.51 ± 0.11
d	Distance (pc)	1960^{+550}_{-350}
Planetary Parameters:		
		b
P	Period (days)	$16.52749^{+0.00017}_{-0.00026}$
R_P	Radius (R_J)	$1.102^{+0.061}_{-0.068}$
M_P	Mass ⁴ (M_J)	28^{+29}_{-20}
T_C	Time of conjunction ⁵ (BJD _{TDB})	$2455383.916^{+0.018}_{-0.026}$
T_T	Time of minimum projected separation ⁶ (BJD _{TDB})	$2455383.916^{+0.018}_{-0.026}$
T_0	Optimal conjunction Time ⁷ (BJD _{TDB})	2456788.750 ± 0.012
a	Semi-major axis (AU)	$0.1289^{+0.0052}_{-0.0078}$
i	Inclination (Degrees)	$89.07^{+0.64}_{-0.59}$
T_{eq}	Equilibrium temperature ⁸ (K)	1220^{+140}_{-180}
τ_{circ}	Tidal circularization timescale (Gyr)	10000^{+19000}_{-7600}
K	RV semi-amplitude ⁴ (m/s)	2300^{+2100}_{-1600}
R_P/R_*	Radius of planet in stellar radii	$0.0667^{+0.0043}_{-0.0044}$
a/R_*	Semi-major axis in stellar radii	$16.2^{+2.1}_{-1.6}$
δ	$(R_P/R_*)^2$	$0.00445^{+0.00059}_{-0.00057}$
δ_I	Transit depth in I (fraction)	$0.00490^{+0.00079}_{-0.00066}$
δ_V	Transit depth in V (fraction)	$0.00534^{+0.00088}_{-0.00075}$
τ	Ingress/egress transit duration (days)	$0.0226^{+0.0027}_{-0.0019}$
T_{14}	Total transit duration (days)	$0.327^{+0.037}_{-0.028}$

Table 1 continued on next page

Table 1 (continued)

Parameter	Units	Values	
T_{FWHM} . . .	FWHM transit duration (days)	$0.305^{+0.035}_{-0.028}$	
b	Transit Impact parameter	$0.26^{+0.17}_{-0.18}$	
$\delta_{S,2.5\mu m}$. . .	Blackbody eclipse depth at $2.5\mu m$ (ppm)	50 ± 23	
$\delta_{S,5.0\mu m}$. . .	Blackbody eclipse depth at $5.0\mu m$ (ppm)	236^{+45}_{-59}	
$\delta_{S,7.5\mu m}$. . .	Blackbody eclipse depth at $7.5\mu m$ (ppm)	359^{+61}_{-55}	
ρ_P	Density ⁴ (cgs)	25^{+36}_{-19}	
$\log g_P$	Surface gravity ⁴	$4.76^{+0.36}_{-0.56}$	
Θ	Safronov Number	$6.9^{+7.5}_{-4.8}$	
$\langle F \rangle$	Incident Flux ($10^9 \text{ erg s}^{-1} \text{ cm}^{-2}$)	$0.50^{+0.27}_{-0.24}$	
T_P	Time of Periastron (BJD _{TDB})	$2455383.916^{+0.018}_{-0.026}$	
T_S	Time of eclipse (BJD _{TDB})	$2455375.653^{+0.017}_{-0.025}$	
T_A	Time of Ascending Node (BJD _{TDB})	$2455396.312^{+0.018}_{-0.025}$	
T_D	Time of Descending Node (BJD _{TDB})	$2455388.048^{+0.018}_{-0.025}$	
V_c/V_e	1.00	
$M_P \sin i$	Minimum mass ⁴ (M_J)	28^{+29}_{-20}	
M_P/M_*	Mass ratio ⁴	$0.028^{+0.028}_{-0.018}$	
d/R_*	Separation at mid transit	$16.2^{+2.1}_{-1.6}$	
P_T	A priori non-grazing transit prob	$0.0576^{+0.0062}_{-0.0063}$	
$P_{T,G}$	A priori transit prob	$0.0660^{+0.0066}_{-0.0073}$	
Wavelength Parameters:		I	V
u_1	linear limb-darkening coeff	$0.202^{+0.079}_{-0.050}$	$0.346^{+0.095}_{-0.070}$
u_2	quadratic limb-darkening coeff	$0.254^{+0.074}_{-0.044}$	$0.310^{+0.062}_{-0.055}$
Transit Parameters:		OGLE UT 2010-07-06 (I)	OGLE UT 2010-07-06 (V)
σ^2	Added Variance	$0.00005006^{+0.00000083}_{-0.00000053}$	$0.0000248^{+0.00000034}_{-0.00000027}$
F_0	Baseline flux	1.000140 ± 0.000087	$1.00041^{+0.00038}_{-0.00034}$

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