

**Table 1.** Median values and 68% confidence interval for OGLE-TR-1061.

Parameter	Units	Values
Stellar Parameters:		
$M_*$ . . . . .	Mass ( $M_\odot$ ) . . . . .	$1.74^{+0.29}_{-0.64}$
$R_*$ . . . . .	Radius ( $R_\odot$ ) . . . . .	$1.793^{+0.095}_{-0.21}$
$R_{*,SED}$ . . . . .	Radius <sup>1</sup> ( $R_\odot$ ) . . . . .	$1.82^{+0.12}_{-0.14}$
$L_*$ . . . . .	Luminosity ( $L_\odot$ ) . . . . .	$14.8^{+7.5}_{-3.6}$
$F_{Bol}$ . . . . .	Bolometric Flux (cgs) . . . . .	$0.00000000109^{+0.0000000000052}_{-0.0000000000020}$
$\rho_*$ . . . . .	Density (cgs) . . . . .	$0.428^{+0.024}_{-0.053}$
$\log g$ . . . . .	Surface gravity (cgs) . . . . .	$4.165^{+0.038}_{-0.080}$
$T_{eff}$ . . . . .	Effective Temperature (K) . . . . .	$8500^{+970}_{-480}$
$T_{eff,SED}$ . . . . .	Effective Temperature <sup>1</sup> (K) . . . . .	$8330^{+970}_{-430}$
[Fe/H] . . . . .	Metallicity (dex) . . . . .	$-0.35^{+0.64}_{-3.2}$
[Fe/H] <sub>0</sub> . . . . .	Initial Metallicity <sup>2</sup> . . . . .	$-0.23^{+0.57}_{-3.0}$
Age . . . . .	Age (Gyr) . . . . .	$0.78^{+3.1}_{-0.53}$
EEP . . . . .	Equal Evolutionary Phase <sup>3</sup> . . . . .	$348^{+100}_{-34}$
$A_V$ . . . . .	V-band extinction (mag) . . . . .	$1.36^{+0.28}_{-0.20}$
$\sigma_{SED}$ . . . . .	SED photometry error scaling . . . . .	$12.4^{+1.8}_{-1.5}$
$\varpi$ . . . . .	Parallax (mas) . . . . .	$0.481^{+0.041}_{-0.032}$
$d$ . . . . .	Distance (pc) . . . . .	$2080^{+150}_{-160}$
Planetary Parameters:		
		b
$P$ . . . . .	Period (days) . . . . .	$2.6528610 \pm 0.0000016$
$R_P$ . . . . .	Radius ( $R_J$ ) . . . . .	$1.667^{+0.090}_{-0.19}$
$M_P$ . . . . .	Mass <sup>4</sup> ( $M_J$ ) . . . . .	$0.401^{+0.052}_{-0.026}$
$T_C$ . . . . .	Time of conjunction <sup>5</sup> (BJD <sub>TDB</sub> ) . . . . .	$2455376.6303 \pm 0.0011$
$T_T$ . . . . .	Time of minimum projected separation <sup>6</sup> (BJD <sub>TDB</sub> ) . . . . .	$2455376.6303 \pm 0.0011$
$T_0$ . . . . .	Optimal conjunction Time <sup>7</sup> (BJD <sub>TDB</sub> ) . . . . .	$2456779.99382 \pm 0.00069$
$a$ . . . . .	Semi-major axis (AU) . . . . .	$0.0451^{+0.0024}_{-0.0064}$
$i$ . . . . .	Inclination (Degrees) . . . . .	$88.2^{+1.2}_{-2.0}$
$T_{eq}$ . . . . .	Equilibrium temperature <sup>8</sup> (K) . . . . .	$2600^{+290}_{-160}$
$\tau_{circ}$ . . . . .	Tidal circularization timescale (Gyr) . . . . .	$0.0092^{+0.0064}_{-0.0017}$
$K$ . . . . .	RV semi-amplitude <sup>4</sup> (m/s) . . . . .	$40.1^{+22}_{-4.3}$
$R_P/R_*$ . . . . .	Radius of planet in stellar radii . . . . .	$0.0957^{+0.0011}_{-0.0010}$
$a/R_*$ . . . . .	Semi-major axis in stellar radii . . . . .	$5.42^{+0.10}_{-0.24}$
$\delta$ . . . . .	$(R_P/R_*)^2$ . . . . .	$0.00915^{+0.00020}_{-0.00019}$
$\delta_I$ . . . . .	Transit depth in I (fraction) . . . . .	$0.00991^{+0.00026}_{-0.00025}$
$\delta_V$ . . . . .	Transit depth in V (fraction) . . . . .	$0.01063^{+0.00039}_{-0.00038}$
$\tau$ . . . . .	Ingress/egress transit duration (days) . . . . .	$0.01534^{+0.0016}_{-0.00046}$
$T_{14}$ . . . . .	Total transit duration (days) . . . . .	$0.1697^{+0.0024}_{-0.0020}$

Table 1 continued on next page

Table 1 (continued)

Parameter	Units	Values	
$T_{FWHM}$ . . .	FWHM transit duration (days) . . . . .	$0.1539^{+0.0017}_{-0.0016}$	
$b$ . . . . .	Transit Impact parameter . . . . .	$0.17^{+0.17}_{-0.12}$	
$\delta_{S,2.5\mu m}$ . . .	Blackbody eclipse depth at $2.5\mu m$ (ppm) . . . . .	$1085^{+160}_{-90}$	
$\delta_{S,5.0\mu m}$ . . .	Blackbody eclipse depth at $5.0\mu m$ (ppm) . . . . .	$1811^{+140}_{-83}$	
$\delta_{S,7.5\mu m}$ . . .	Blackbody eclipse depth at $7.5\mu m$ (ppm) . . . . .	$2110^{+120}_{-77}$	
$\rho_P$ . . . . .	Density <sup>4</sup> (cgs) . . . . .	$0.105^{+0.075}_{-0.016}$	
$\log g_P$ . . . . .	Surface gravity <sup>4</sup> . . . . .	$2.544^{+0.18}_{-0.050}$	
$\Theta$ . . . . .	Safronov Number . . . . .	$0.0123^{+0.0091}_{-0.0018}$	
$\langle F \rangle$ . . . . .	Incident Flux ( $10^9 \text{ erg s}^{-1} \text{ cm}^{-2}$ ) . . . . .	$10.4^{+5.4}_{-2.3}$	
$T_P$ . . . . .	Time of Periastron (BJD <sub>TDB</sub> ) . . . . .	$2455376.6303 \pm 0.0011$	
$T_S$ . . . . .	Time of eclipse (BJD <sub>TDB</sub> ) . . . . .	$2455375.3039 \pm 0.0011$	
$T_A$ . . . . .	Time of Ascending Node (BJD <sub>TDB</sub> ) . . . . .	$2455378.6200 \pm 0.0011$	
$T_D$ . . . . .	Time of Descending Node (BJD <sub>TDB</sub> ) . . . . .	$2455377.2935 \pm 0.0011$	
$V_c/V_e$ . . . . .	. . . . .	1.00	
$M_P \sin i$ . . . . .	Minimum mass <sup>4</sup> ( $M_J$ ) . . . . .	$0.400^{+0.052}_{-0.026}$	
$M_P/M_*$ . . . . .	Mass ratio <sup>4</sup> . . . . .	$0.000217^{+0.00018}_{-0.000032}$	
$d/R_*$ . . . . .	Separation at mid transit . . . . .	$5.42^{+0.10}_{-0.24}$	
$P_T$ . . . . .	A priori non-grazing transit prob . . . . .	$0.1669^{+0.0075}_{-0.0031}$	
$P_{T,G}$ . . . . .	A priori transit prob . . . . .	$0.2020^{+0.0093}_{-0.0036}$	
Wavelength Parameters:		I	V
$u_1$ . . . . .	linear limb-darkening coeff . . . . .	$0.163 \pm 0.049$	$0.296^{+0.060}_{-0.063}$
$u_2$ . . . . .	quadratic limb-darkening coeff . . . . .	$0.246^{+0.062}_{-0.056}$	$0.318^{+0.054}_{-0.053}$
Transit Parameters:		OGLE UT 2010-06-29 (I)	OGLE UT 2010-06-29 (V)
$\sigma^2$ . . . . .	Added Variance . . . . .	$0.00000514^{+0.00000018}_{-0.00000017}$	$0.0000035^{+0.0000012}_{-0.0000010}$
$F_0$ . . . . .	Baseline flux . . . . .	$1.000244^{+0.000036}_{-0.000037}$	$1.00012 \pm 0.00023$

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

<sup>1</sup>This value ignores the systematic error and is for reference only

<sup>2</sup>The metallicity of the star at birth

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

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

<sup>5</sup>Time of conjunction is commonly reported as the "transit time"

<sup>6</sup>Time of minimum projected separation is a more correct "transit time"

<sup>7</sup>Optimal time of conjunction minimizes the covariance between  $T_C$  and Period

<sup>8</sup>Assumes no albedo and perfect redistribution