

**Table 1.** Median values and 68% confidence interval for OGLE-TR-1075.

Parameter	Units	Values
Stellar Parameters:		
$M_*$	Mass ( $M_\odot$ )	$0.788^{+0.045}_{-0.025}$
$R_*$	Radius ( $R_\odot$ )	$1.576^{+0.074}_{-0.057}$
$R_{*,SED}$	Radius <sup>1</sup> ( $R_\odot$ )	$1.698^{+0.099}_{-0.089}$
$L_*$	Luminosity ( $L_\odot$ )	$4.48^{+0.90}_{-0.67}$
$F_{Bol}$	Bolometric Flux (cgs)	$0.000000000284^{+0.0000000000051}_{-0.0000000000038}$
$\rho_*$	Density (cgs)	$0.288^{+0.031}_{-0.037}$
$\log g$	Surface gravity (cgs)	$3.944^{+0.032}_{-0.041}$
$T_{eff}$	Effective Temperature (K)	$6680^{+280}_{-240}$
$T_{eff,SED}$	Effective Temperature <sup>1</sup> (K)	$6450^{+300}_{-250}$
[Fe/H]	Metallicity (dex)	$-4.15^{+0.47}_{-0.11}$
[Fe/H] <sub>0</sub>	Initial Metallicity <sup>2</sup>	$-3.60^{+0.46}_{-0.14}$
Age	Age (Gyr)	$11.9^{+1.4}_{-2.1}$
EEP	Equal Evolutionary Phase <sup>3</sup>	$444.2^{+4.4}_{-3.6}$
$A_V$	V-band extinction (mag)	$1.97^{+0.23}_{-0.29}$
$\sigma_{SED}$	SED photometry error scaling	$10.5^{+1.5}_{-1.2}$
$\varpi$	Parallax (mas)	$0.445 \pm 0.025$
$d$	Distance (pc)	$2250^{+130}_{-120}$
Planetary Parameters:		
		b
$P$	Period (days)	$30.55566^{+0.00015}_{-0.00014}$
$R_p$	Radius ( $R_J$ )	$1.929^{+0.11}_{-0.072}$
$M_p$	Mass <sup>4</sup> ( $M_J$ )	$0.4034^{+0.0079}_{-0.016}$
$T_C$	Time of conjunction <sup>5</sup> (BJD <sub>TDB</sub> )	$2455390.5425^{+0.0078}_{-0.0085}$
$T_T$	Time of minimum projected separation <sup>6</sup> (BJD <sub>TDB</sub> )	$2455390.5425^{+0.0078}_{-0.0085}$
$T_0$	Optimal conjunction Time <sup>7</sup> (BJD <sub>TDB</sub> )	$2456887.7697^{+0.0039}_{-0.0041}$
$a$	Semi-major axis (AU)	$0.1767^{+0.0033}_{-0.0019}$
$i$	Inclination (Degrees)	$89.46^{+0.36}_{-0.41}$
$T_{eq}$	Equilibrium temperature <sup>8</sup> (K)	$962^{+40}_{-36}$
$\tau_{circ}$	Tidal circularization timescale (Gyr)	$106^{+21}_{-25}$
$K$	RV semi-amplitude <sup>4</sup> (m/s)	$30.4^{+1.1}_{-1.5}$
$R_p/R_*$	Radius of planet in stellar radii	$0.1261^{+0.0022}_{-0.0021}$
$a/R_*$	Semi-major axis in stellar radii	$24.22^{+0.85}_{-1.1}$
$\delta$	$(R_p/R_*)^2$	$0.01591^{+0.00055}_{-0.00052}$
$\delta_I$	Transit depth in I (fraction)	$0.01783^{+0.00058}_{-0.00056}$
$\delta_V$	Transit depth in V (fraction)	$0.01879^{+0.00077}_{-0.00074}$
$\tau$	Ingress/egress transit duration (days)	$0.0519^{+0.0061}_{-0.0027}$
$T_{14}$	Total transit duration (days)	$0.441^{+0.010}_{-0.011}$

Table 1 continued on next page

Table 1 (continued)

Parameter	Units	Values	
$T_{FWHM}$ ..	FWHM transit duration (days) .....	0.3882 <sup>+0.0095</sup> <sub>-0.010</sub>	
$b$ .....	Transit Impact parameter .....	0.23 ± 0.15	
$\delta_{S,2.5\mu m}$ ..	Blackbody eclipse depth at 2.5 $\mu m$ (ppm) .....	55.2 <sup>+12</sup> <sub>-9.6</sub>	
$\delta_{S,5.0\mu m}$ ..	Blackbody eclipse depth at 5.0 $\mu m$ (ppm) .....	452 <sup>+48</sup> <sub>-40</sub>	
$\delta_{S,7.5\mu m}$ ..	Blackbody eclipse depth at 7.5 $\mu m$ (ppm) .....	832 <sup>+64</sup> <sub>-52</sub>	
$\rho_P$ .....	Density <sup>4</sup> (cgs) .....	0.0688 <sup>+0.0085</sup> <sub>-0.010</sub>	
$\log g_P$ ..	Surface gravity <sup>4</sup> .....	2.424 <sup>+0.035</sup> <sub>-0.047</sub>	
$\Theta$ .....	Safronov Number .....	0.0918 <sup>+0.0058</sup> <sub>-0.0064</sub>	
$\langle F \rangle$ .....	Incident Flux (10 <sup>9</sup> erg s <sup>-1</sup> cm <sup>-2</sup> ) .....	0.195 <sup>+0.035</sup> <sub>-0.027</sub>	
$T_P$ .....	Time of Periastron (BJD <sub>TDB</sub> ) .....	2455390.5425 <sup>+0.0078</sup> <sub>-0.0085</sub>	
$T_S$ .....	Time of eclipse (BJD <sub>TDB</sub> ) .....	2455405.8203 <sup>+0.0078</sup> <sub>-0.0085</sub>	
$T_A$ .....	Time of Ascending Node (BJD <sub>TDB</sub> ) .....	2455413.4592 <sup>+0.0077</sup> <sub>-0.0084</sub>	
$T_D$ .....	Time of Descending Node (BJD <sub>TDB</sub> ) .....	2455398.1814 <sup>+0.0078</sup> <sub>-0.0085</sub>	
$V_c/V_e$ ..	.....	1.00	
$M_P \sin i$ ..	Minimum mass <sup>4</sup> ( $M_J$ ) .....	0.4033 <sup>+0.0079</sup> <sub>-0.016</sub>	
$M_P/M_*$ ..	Mass ratio <sup>4</sup> .....	0.000483 <sup>+0.000022</sup> <sub>-0.000031</sub>	
$d/R_*$ ..	Separation at mid transit .....	24.22 <sup>+0.85</sup> <sub>-1.1</sub>	
$P_T$ .....	A priori non-grazing transit prob .....	0.0361 <sup>+0.0017</sup> <sub>-0.0013</sub>	
$P_{T,G}$ .....	A priori transit prob .....	0.0465 <sup>+0.0023</sup> <sub>-0.0016</sub>	
Wavelength Parameters:		I	V
$u_1$ .....	linear limb-darkening coeff .....	0.233 ± 0.050	0.331 ± 0.050
$u_2$ .....	quadratic limb-darkening coeff .....	0.315 <sup>+0.049</sup> <sub>-0.050</sub>	0.303 <sup>+0.049</sup> <sub>-0.050</sub>
Transit Parameters:		OGLE UT 2010-07-13 (I)	OGLE UT 2010-07-13 (V)
$\sigma^2$ .....	Added Variance .....	0.00003096 ± 0.00000047	0.0000289 <sup>+0.0000044</sup> <sub>-0.0000039</sub>
$F_0$ .....	Baseline flux .....	1.000252 <sup>+0.000054</sup> <sub>-0.000053</sub>	1.00014 ± 0.00045

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