Table 1. Median values and 68% confidence interval for OGLE-TR-1042.

Parameter	Units	Values
Stellar Parameters:		
M_*	Mass ($M_\odot$)	$0.871^{+0.15}_{-0.092}$
R_*	Radius ($R_\odot$)	$1.546^{+0.086}_{-0.071}$
$R_{*,SED}$ ..	Radius[1] ($R_\odot$)	$1.579^{+0.10}_{-0.091}$
L_*	Luminosity ($L_\odot$)	$2.77^{+0.70}_{-0.64}$
F_{Bol}	Bolometric Flux (cgs)	$0.0000000000472^{+0.0000000000080}_{-0.000000000012}$
ρ_*	Density (cgs)	$0.339^{+0.020}_{-0.024}$
$\log g$	Surface gravity (cgs)	$4.006^{+0.025}_{-0.026}$
$T_{\rm eff}$	Effective Temperature (K)	5980^{+420}_{-460}
$T_{\rm eff,SED}$ ..	Effective Temperature[1] (K)	5940^{+370}_{-450}
[Fe/H]..	Metallicity (dex)	$-0.80^{+0.80}_{-1.9}$
$[{\rm Fe/H}]_0$.	Initial Metallicity[2]	$-0.63^{+0.67}_{-1.5}$
Age	Age (Gyr)	$11.6^{+1.7}_{-2.9}$
EEP	Equal Evolutionary Phase[3]	$454.7^{+3.1}_{-6.8}$
A_V	V-band extinction (mag)	$2.58^{+0.21}_{-0.34}$
σ_{SED}	SED photometry error scaling	$7.44^{+1.3}_{-1.00}$
ϖ	Parallax (mas)	$0.717^{+0.057}_{-0.056}$
d	Distance (pc)	1390^{+120}_{-100}
Planetary Parameters:		b
P	Period (days)	$7.675599^{+0.000016}_{-0.000017}$
R_P	Radius ($R_{\rm J}$)	$1.662^{+0.087}_{-0.073}$
M_P	Mass[4] ($M_{\rm J}$)	$0.397^{+0.013}_{-0.026}$
T_C	Time of conjunction[5] ($\rm BJD_{TDB}$)	2455267.8518 ± 0.0037
T_T	Time of minimum projected separation[6] ($\rm BJD_{TDB}$)	2455267.8518 ± 0.0037
T_0	Optimal conjunction Time[7] ($\rm BJD_{TDB}$)	2456849.0252 ± 0.0016
a	Semi-major axis (AU)	$0.0727^{+0.0039}_{-0.0027}$
i	Inclination (Degrees)	$89.33^{+0.47}_{-0.73}$
T_{eq}	Equilibrium temperature[8] (K)	1327^{+94}_{-100}
$\tau_{\rm circ}$	Tidal circularization timescale (Gyr)	$0.589^{+0.11}_{-0.097}$
K	RV semi-amplitude[4] (m/s)	$43.8^{+4.5}_{-4.4}$
R_P/R_* ..	Radius of planet in stellar radii	0.1105 ± 0.0017
a/R_* ...	Semi-major axis in stellar radii	$10.18^{+0.19}_{-0.25}$
δ	$\left(R_P/R_*\right)^2$	0.01221 ± 0.00038
$\delta_{\rm I}$	Transit depth in I (fraction)	$0.01399^{+0.00053}_{-0.00047}$
$\delta_{\rm V}$	Transit depth in V (fraction)	$0.01512^{+0.0010}_{-0.00074}$
τ	Ingress/egress transit duration (days)	$0.02682^{+0.0013}_{-0.00065}$
T_{14}	Total transit duration (days)	$0.2646^{+0.0043}_{-0.0039}$

Table 1 continued on next page

Table 1 *(continued)*

Parameter	Units	Values
T_{FWHM} ..	FWHM transit duration (days)	$0.2375^{+0.0039}_{-0.0036}$
b	Transit Impact parameter	$0.120^{+0.12}_{-0.084}$
$\delta_{S,2.5\mu m}$ ..	Blackbody eclipse depth at 2.5μm (ppm)	261^{+56}_{-57}
$\delta_{S,5.0\mu m}$ ..	Blackbody eclipse depth at 5.0μm (ppm)	973^{+91}_{-100}
$\delta_{S,7.5\mu m}$ ..	Blackbody eclipse depth at 7.5μm (ppm)	1420^{+92}_{-100}
ρ_P	Density[4] (cgs)	$0.105^{+0.017}_{-0.015}$
$logg_P$ ...	Surface gravity[4]	$2.543^{+0.045}_{-0.046}$
Θ	Safronov Number	$0.0390^{+0.0054}_{-0.0053}$
$\langle F \rangle$	Incident Flux (10^9 erg s^{-1} cm^{-2})	$0.70^{+0.22}_{-0.19}$
T_P	Time of Periastron (BJD$_{\rm TDB}$)	2455267.8518 ± 0.0037
T_S	Time of eclipse (BJD$_{\rm TDB}$)	2455271.6896 ± 0.0037
T_A	Time of Ascending Node (BJD$_{\rm TDB}$)	2455273.6085 ± 0.0037
T_D	Time of Descending Node (BJD$_{\rm TDB}$)	2455269.7707 ± 0.0037
V_c/V_e ...	.....	1.00
$M_P \sin i$.	Minimum mass[4] ($M_{\rm J}$)	$0.397^{+0.013}_{-0.026}$
M_P/M_* .	Mass ratio[4]	0.000425 ± 0.000060
d/R_* ...	Separation at mid transit	$10.18^{+0.19}_{-0.25}$
P_T	A priori non-grazing transit prob	$0.0874^{+0.0022}_{-0.0017}$
$P_{T,G}$	A priori transit prob	$0.1091^{+0.0027}_{-0.0020}$

Wavelength Parameters:		I	V
u_1	linear limb-darkening coeff	$0.259^{+0.078}_{-0.061}$	$0.388^{+0.12}_{-0.072}$
u_2	quadratic limb-darkening coeff	$0.286^{+0.052}_{-0.053}$	$0.282^{+0.058}_{-0.068}$

Transit Parameters:		OGLE UT 2010-03-12 (I)	OGLE UT 2010-03-12 (V)
σ^2	Added Variance	$0.00003310^{+0.00000054}_{-0.00000053}$	$0.0000521^{+0.0000082}_{-0.0000071}$
F_0	Baseline flux	1.000410 ± 0.000056	0.99968 ± 0.00060

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

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

[2] The metallicity of the star at birth

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

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

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

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

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

[8] Assumes no albedo and perfect redistribution