Table 1. Median values and 68% confidence interval for OGLE-TR-1040.

Parameter	Units	Values
Stellar Parameters:		
M_*	Mass ($M_\odot$)	$1.00^{+0.25}_{-0.16}$
R_*	Radius ($R_\odot$)	$0.993^{+0.079}_{-0.068}$
$R_{*,SED}$ ..	Radius[1] ($R_\odot$)	$0.998^{+0.097}_{-0.083}$
L_*	Luminosity ($L_\odot$)	$2.7^{+3.5}_{-1.1}$
F_{Bol}	Bolometric Flux (cgs)	$0.0000000000217^{+0.000000000026}_{-0.0000000000097}$
ρ_*	Density (cgs)	$1.48^{+0.47}_{-0.38}$
$\log g$	Surface gravity (cgs)	$4.450^{+0.10}_{-0.098}$
$T_{\rm eff}$	Effective Temperature (K)	7370^{+1700}_{-810}
$T_{\rm eff,SED}$ ..	Effective Temperature[1] (K)	7360^{+1700}_{-840}
[Fe/H]..	Metallicity (dex)	$-2.8^{+1.6}_{-1.2}$
$[{\rm Fe/H}]_0$.	Initial Metallicity[2]	$-2.2^{+1.3}_{-1.1}$
Age	Age (Gyr)	$2.8^{+5.1}_{-2.2}$
EEP	Equal Evolutionary Phase[3]	360^{+45}_{-36}
A_V	V-band extinction (mag)	$1.43^{+0.73}_{-0.84}$
σ_{SED}	SED photometry error scaling	41^{+30}_{-19}
ϖ	Parallax (mas)	$0.497^{+0.078}_{-0.074}$
d	Distance (pc)	2010^{+350}_{-270}
Planetary Parameters:		b
P	Period (days)	$19.496967^{+0.000087}_{-0.000079}$
R_P	Radius ($R_{\rm J}$)	$1.058^{+0.093}_{-0.078}$
M_P	Mass[4] ($M_{\rm J}$)	40^{+32}_{-28}
T_C	Time of conjunction[5] ($\rm BJD_{TDB}$)	$2455277.9227^{+0.0068}_{-0.0079}$
T_T	Time of minimum projected separation[6] ($\rm BJD_{TDB}$)	$2455277.9227^{+0.0068}_{-0.0079}$
T_0	Optimal conjunction Time[7] ($\rm BJD_{TDB}$)	2456818.1829 ± 0.0033
a	Semi-major axis (AU)	$0.1438^{+0.011}_{-0.0081}$
i	Inclination (Degrees)	$89.08^{+0.40}_{-0.33}$
T_{eq}	Equilibrium temperature[8] (K)	940^{+180}_{-110}
$\tau_{\rm circ}$	Tidal circularization timescale (Gyr)	40000^{+48000}_{-31000}
K	RV semi-amplitude[4] (m/s)	2900^{+2200}_{-2000}
R_P/R_* ..	Radius of planet in stellar radii	$0.1097^{+0.0038}_{-0.0037}$
a/R_* ...	Semi-major axis in stellar radii	31.4 ± 3.0
δ	$\left(R_P/R_*\right)^2$	$0.01203^{+0.00086}_{-0.00079}$
$\delta_{\rm I}$	Transit depth in I (fraction)	$0.01288^{+0.00085}_{-0.00081}$
$\delta_{\rm V}$	Transit depth in V (fraction)	$0.01346^{+0.00095}_{-0.00089}$
τ	Ingress/egress transit duration (days)	$0.0252^{+0.0060}_{-0.0045}$
T_{14}	Total transit duration (days)	$0.1955^{+0.0092}_{-0.0088}$

Table 1 continued on next page

Table 1 *(continued)*

Parameter	Units	Values	
T_{FWHM} ..	FWHM transit duration (days)	$0.1698^{+0.0084}_{-0.0086}$	
b	Transit Impact parameter	$0.51^{+0.12}_{-0.20}$	
$\delta_{S,2.5\mu m}$ ..	Blackbody eclipse depth at 2.5μm (ppm)	32^{+32}_{-15}	
$\delta_{S,5.0\mu m}$ ..	Blackbody eclipse depth at 5.0μm (ppm)	287^{+96}_{-72}	
$\delta_{S,7.5\mu m}$ ..	Blackbody eclipse depth at 7.5μm (ppm)	540^{+100}_{-93}	
ρ_P	Density[4] (cgs)	43^{+37}_{-32}	
$logg_P$ ...	Surface gravity[4]	$4.96^{+0.26}_{-0.57}$	
Θ	Safronov Number	$10.9^{+9.4}_{-7.8}$	
$\langle F \rangle$	Incident Flux (10^9 erg s^{-1} cm^{-2})	$0.180^{+0.18}_{-0.068}$	
T_P	Time of Periastron (BJD$_{\rm TDB}$)	$2455277.9227^{+0.0068}_{-0.0079}$	
T_S	Time of eclipse (BJD$_{\rm TDB}$)	$2455287.6712^{+0.0068}_{-0.0079}$	
T_A	Time of Ascending Node (BJD$_{\rm TDB}$)	$2455292.5455^{+0.0067}_{-0.0078}$	
T_D	Time of Descending Node (BJD$_{\rm TDB}$)	$2455282.7970^{+0.0067}_{-0.0079}$	
V_c/V_e ...	.....	1.00	
$M_P \sin i$.	Minimum mass[4] ($M_{\rm J}$)	40^{+32}_{-28}	
M_P/M_* .	Mass ratio[4]	$0.037^{+0.032}_{-0.026}$	
d/R_* ...	Separation at mid transit	31.4 ± 3.0	
P_T	A priori non-grazing transit prob	$0.0284^{+0.0029}_{-0.0025}$	
$P_{T,G}$	A priori transit prob	$0.0353^{+0.0037}_{-0.0031}$	
Wavelength Parameters:		I	V
u_1	linear limb-darkening coeff	$0.190^{+0.061}_{-0.056}$	$0.309^{+0.065}_{-0.070}$
u_2	quadratic limb-darkening coeff	$0.272^{+0.058}_{-0.063}$	$0.310^{+0.053}_{-0.055}$
Transit Parameters:		OGLE UT 2010-03-22 (I)	OGLE UT 2010-03-22 (V)
σ^2	Added Variance	$0.00005638 \pm 0.00000080$	$0.0000256^{+0.0000045}_{-0.0000040}$
F_0	Baseline flux	$0.999851^{+0.000068}_{-0.000066}$	1.00022 ± 0.00045

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