The Astrophysical Journal Supplement Series, 283:5 (27pp), 2026 March https://doi.org/10.3847/1538-4365/ae3238

ExoClock Project. IV. A Homogeneous Catalog of 620 Updated Exoplanet Ephemerides

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Received 2025 May 16; revised 2025 November 18; accepted 2025 November 21; published 2026 February 11

Abstract

The ExoClock project is an open platform aiming to monitor exoplanets by integrating observations from space- and ground-based telescopes. This study presents an updated catalog of 620 exoplanet ephemerides, integrating 30,000 measurements from ground-based telescopes (the ExoClock network), literature, and space telescopes (Kepler, K2 and TESS). The updated catalog includes 277 planets from TESS which require special observing strategies due to their shallow transits or bright host stars. This study demonstrates that data from larger telescopes, and the employment of new methodologies such as synchronous observations with small telescopes, are capable of monitoring special cases of planets. The new ephemerides show that 45% of the planets required an update while the results show an improvement of 1 order of magnitude in prediction uncertainty. The collective analysis also enabled the identification of new planets showing transit-timing variations, highlighting the importance of extensive observing coverage. Developed in the context of the ESA's Ariel space mission, with the goal of delivering a catalog with reliable ephemerides to increase the mission efficiency, ExoClock's scope and service have grown well beyond the remit of Ariel. The ExoClock project has been operating in the framework of open science, and all tools and products are accessible to everyone within academia and beyond, to support efficient scheduling of future exoplanet observations, especially from larger telescopes where the pressure for time allocation efficiency is higher (Ariel, JWST, VLT, ELT, Subaru etc.). The inclusion of diverse audiences in the process and the collaborative mode not only foster democratization of science but also enhance the quality of the results.

Unified Astronomy Thesaurus concepts: Exoplanet catalogs (488); Amateur astronomers (34); Open source software (1866); Transit photometry (1709)

Materials only available in the online version of record: machine-readable tables

1. Introduction

So far, more than 5900 exoplanets have been detected, and although discoveries of new exoplanets continue daily thanks to facilities such as TESS (G. R. Ricker et al. 2014), we have now entered the characterization era of exoplanets. A dedicated characterization survey will be conducted by the Ariel mission (G. Tinetti et al. 2018), which aims to study 1000 exoplanet atmospheres. Ariel will observe thousands of transits and eclipses of exoplanets to further investigate their composition and their nature.

The properties of the planets and their host stars need to be precisely determined before Ariel is launched to increase the efficiency of the mission. For example, well-determined stellar ages are important in constraining planetary properties and revealing the composition of giant planets (S. Müller & R. Helled 2023). Other important parameters are stellar masses, radii, temperatures, elemental abundances, and activity indices, for which C. Danielski et al. (2022) and L. Magrini et al. (2022) aim to develop a homogeneous catalog. Similarly, important planetary parameters include the planetary mass, radius, temperature, transit duration, transit depth, and transit timing—i.e., the ephemeris.

Precision in transit timings is crucial to increase the mission efficiency and, therefore, avoid significantly wasting Ariel's observing time. Predictions can be inaccurate for several

[184] A list of associated private observatories that contributed to this work can be found in the Appendix.
[185] GNAT-Global Network of Astronomical Telescopes.

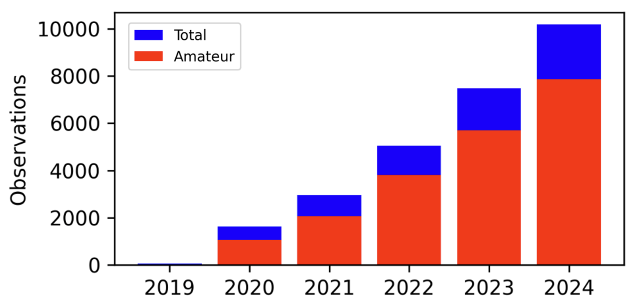

Figure 1. Cumulative distribution of observations published by the ExoClock network.

reasons, including ephemeris uncertainties (M. Mallonn et al. 2019b), and bias in the initial period or midtime. Inaccuracies can also arise due to transit-timing variations (TTVs) that occur as a result of physical processes such as orbital decay, orbital precession, and planet–planet interactions (E. Agol & D. C. Fabrycky 2018).

At the same time, several ground-based telescopes are occupied with following up TESS candidates to confirm them as planets (K. Collins et al. 2018; S. W. Yee et al. 2023; J. Schulte et al. 2024) without further long-term monitoring. As a result, the ephemerides of these planets are not precise after their validation because, as highlighted in N. Narita et al. (2019), the monitoring duration of TESS in each sector is only 27 days, while, for comparison, the monitoring duration for Kepler was over 4 yr.

The effort of maximizing the capabilities of Ariel's observing plan started in 2019 with the launch of the ExoClock project (A. Kokori et al. 2022a), a dedicated, open, and integrated project with the aim of providing a consistent catalog of ephemerides for all the Ariel candidate targets (B. Edwards & G. Tinetti 2022) by 2029. The ExoClock project has been operating for almost 6 yr now, and so far it has been concluded that approximately 40% of the initial ephemerides had to be updated due to significant uncertainties or biases (A. Kokori et al. 2022b, 2023). The number of observations has been increasing since the beginning of the project, surpassing 10,000 in 2024 (Figure 1), while most of the observations are carried out with small- and medium-scale telescopes by amateur observers (73%).

The ExoClock target list includes all the known Ariel candidate targets. This target list is constantly updated with newly confirmed planets, with the large majority of new planets coming from TESS. TESS has been operating since 2019 with more than 500 confirmed exoplanets and thousands of candidates that wait for confirmation (G. R. Ricker et al. 2014; K. Collins et al. 2018; C. Magliano et al. 2023b), and the current ExoClock target list contains 277 planets discovered by TESS (36% of the total current catalog of 775 planets). The addition of the TESS discoveries has altered the characteristics of the target list in two ways: first, these targets have on average lower signal-to-noise ratio (S/N) compared to planets discovered by ground-based instruments, and second, these targets have more planetary companions. More specifically, 61% of the new planets discovered by TESS require telescopes larger than 16 inches for their follow-up observations, while this drops to 21% in the rest of the target list (based on the sensitivity study in A. Kokori et al. 2023). Furthermore, 42% of the new planets discovered by TESS belong to multiplanetary systems, while this drops to 18% in the rest of the target list.

With the constant addition of new planets by the TESS mission and the particularity of these planets, it becomes apparent that the ExoClock project needs to continue monitoring known exoplanets to decrease the uncertainties and the biases on their ephemerides. Moreover, there is now the need to expand the sample of accessible targets by developing new observing techniques, utilizing larger ground-based and space-based telescopes, and integrating more external archives, in order to provide a reliable catalog when Ariel launches in 2029.

While the ExoClock project was developed in the context of the Ariel space mission, its importance and applicability has extended beyond the mission. The products of the project are being used by several research teams already, demonstrating that a homogeneous catalog with reliable exoplanet parameters is important for the entire academic community.

In this study, we have used diverse resources of data, both from ground- and space-based telescopes, as well as midtime points derived from literature studies. In addition, we describe how we have used multiple small telescopes to observe low-S/N transits. In total, approximately 30,000 midtime points have been used to improve the ephemerides of 620 planets by decreasing biases, increasing accuracy, and also detecting long-term phenomena (TTVs).

The open and integrated nature of the ExoClock project enables the efficient monitoring of the Ariel candidate targets, but it is also a successful vehicle for effective public engagement, where members of society (amateur and professional astronomers, as well as university and school students and members of the general public) actively participate in the scientific processes and contribute to a future space mission. In addition, universities and schools employ the ExoClock project for additional research projects, demonstrating that the framework of the ExoClock project provides research and training potential beyond the main scope of monitoring the ephemerides of planets for Ariel.

2. Data

In this work we used light curves from diverse resources including the ExoClock network, the ASTEP observatory, the MuSCAT2 camera on the Telescopio Carlos Sánchez (N. Narita et al. 2019), the Las Cumbres Observatory (LCO; T. M. Brown et al. 2013) telescopes, the Exoplanet Transit Database (ETD; S. Poddaný et al. 2010), the STScI Mikulski Archive for Space Telescopes (MAST) for the Kepler (D. G. Koch et al. 2010a), K2 (S. B. Howell et al. 2014), and TESS (G. R. Ricker et al. 2014) space missions, as well as midtransit times from the literature, to update the ephemerides of 620 exoplanets. All light curves were acquired before the end of 2023, and the literature midtransit times were published by 2023 December.

We performed the analysis of all the light curves using the stellar and planetary parameters included in the Exoplanet Characterization Catalog (see the Appendix), a dedicated catalog within the ExoClock project (A. Kokori et al. 2022a), and the open-source Python package PyLightcurve (A. Tsiaras et al. 2016). In summary, the steps applied for each light curve included:

Table 1
Summary of the Observations Used in This Work

	ExoClock	ETD	Kepler	K2	TESS	Literature	Total
Data points	7316	181	6471	572	12,695	3109	**30,344**
Years	2007–2023	2001–2021	2009–2013	2014–2018	2018–2023	2004–2023	**2001–2023**
Planets	466	40	23	65	573	431	**620**
Median $\sigma_{T_{\rm mid}}$	1.4 minutes	1.7 minutes	0.5 minutes	0.7 minutes	1.2 minutes	0.6 minutes	**1.0 minutes**
Median coverage	27%	14%	24%	10%	22%	13%	**50%**

Note. As coverage we define the percentage of years (since the first observation in the database) for which at least one observation exists. Bold formatting emphasizes the totals.

1. calculation of the limb-darkening coefficients (ExoTETHyS, G. Morello et al. 2020a, 2020b) using the Phoenix stellar models (T. O. Husser et al. 2013);
2. conversion of any time format to Barycentric Julian Date (BJD_{TDB});
3. preliminary fitting using the Nelder–Mead minimization (SciPy, P. Virtanen et al. 2020) of a transit model multiplied by a trend model;
4. removal of 3σ outliers;
5. scaling of the provided uncertainties based on the rms of the normalized residuals;
6. Markov Chain Monte Carlo (MCMC) optimization (emcee, D. Foreman-Mackey et al. 2013) leaving as free parameters only the R_p/R_s, the transit midtime, and the detrending parameters.

The light curves from the ExoClock network were detrended using a linear function of air mass or time and for more difficult cases, a second-order polynomial with time. The light curves from Kepler, K2, and TESS were all detrended using a second-order polynomial with time.

After the fitting, we performed a quality evaluation individually for each light curve. Light curves that did not fulfill one or more of the criteria below (for more details see A. Kokori et al. 2022a) were excluded from further analysis:

1. autocorrelation and Shapiro statistic indicating Gaussian residuals at a 3σ level;
2. the transit signal-to-noise ratio ($\mathrm{Depth}/\sigma_{\mathrm{Depth}}$) is above 3;
3. Rp/Rs differs less than 3σ from the literature value (for the ExoClock and ETD observations), or the weighted average of the mission (for the space observations);
4. $O - C$ value is in a 3σ agreement with other observations at similar time (∼1 month).

The final list of 620 planets includes those planets for which we collected data points at three or more different epochs and for which we could determine an ephemeris of better or similar quality to the initial ephemeris. A summary of all light curves can be found in Table 1.

Figures 2 and 3 demonstrate the distributions of the precision and the coverage of the transit midtimes that were integrated to produce the final ephemerides. We define coverage as the the percentage of years since discovery for which at least one observation exists. We need to note here that 99% of the observations used have transit midtime uncertainties lower than 10 minutes, and that the median coverage of all sources combined together is 50%, while individual sources do not reach more than 29%.

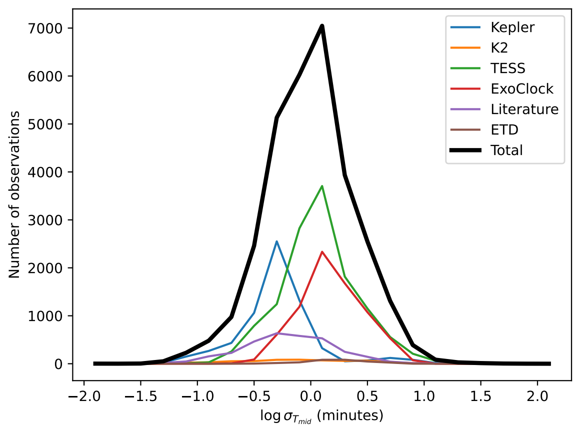

Figure 2. Distribution of transit midtime uncertainties among the different sources.

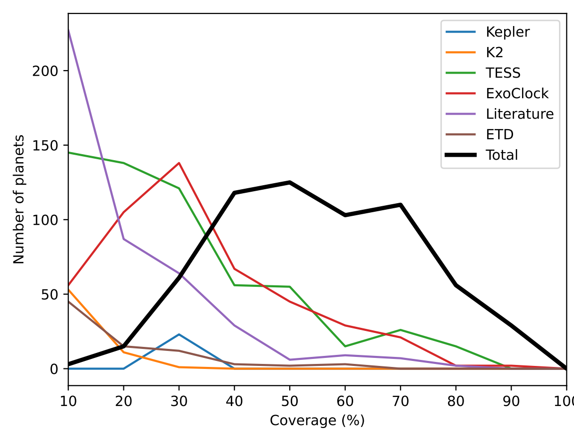

Figure 3. Distribution of coverage among the different sources. As coverage we define the percentage of years (since the first observation in the database) for which at least one observation exists.

2.1. Data from the ExoClock Network

In this work, we used 7588 light curves from the ExoClock network, which currently consists of 1700 participants—80% of whom are amateur astronomers—and 1600 telescopes. The telescope sizes range from 6 to 60 inches (∼15–150 cm) and most of them (∼80%) are smaller than 17 inches, a number that highlights the power of small telescopes. Figure 1 illustrates the distribution of the observations throughout the years since the start of the project.

The organization of the ExoClock network is designed in a way to achieve maximum coverage of the planets and to ensure homogeneity in the results. The strategy behind the organization of the project is described in detail in A. Kokori et al. (2022a).

2.2. Data from the MAST Archive

Following the recipes in A. Kokori et al. (2023), in this work we also integrated light curves from the Kepler (long cadence, STScI 2016a), K2 (STScI 2016b) and TESS (long cadence, TESS Team 2021) missions, acquired before the end of 2023. We included a time span of one transit duration before and after each event, and we only considered those light curves that were at least 80% complete, both in transit and out of transit—i.e., a total exposure time more than 0.8 times the transit duration before, during, and after the transit. Table 7 includes the adjusted a/R_s values, which are marked with an asterisk in the machine-readable version.

2.3. Data from the MuSCAT2 Camera on the Telescopio Carlos Sánchez

The MuSCAT2 instrument is a unique system composed of a four-color simultaneous camera on a 1.52 m telescope at the Teide Observatory in Tenerife. MuSCAT2 can simultaneously observe in four colors: the g (400–550 nm), r (550–700 nm), i (700–820 nm), and zs (820–920 nm) bands (N. Narita et al. 2019). This work includes 97 observations of difficult transits, requiring a larger telescope to be observed (e.g., TOI-2136b, GJ9827d, GJ486b).

2.4. Data from the ASTEP Telescope

In an effort to make the best use of all resources beyond the data already utilized in ExoClock we are open to new collaborations. This work includes 12 light curves from the Antarctic Search for Transiting ExoPlanets (ASTEP) telescope, marking the first steps in a collaboration between the two projects.

ASTEP is a 40 cm telescope installed at the Concordia station, Dome C, Antarctica, that operates during the polar winter from March to September (F. Fressin et al. 2005; J.-B. Daban et al. 2010; D. Mékarnia et al. 2016). The continuous night and excellent atmospheric conditions make it well suited for high precision time-series photometry such as exoplanet transit observations. The telescope was installed in 2010 and upgraded in 2022. The project is a collaboration between Laboratoire Lagrange (CNRS UMR 7293), the University of Birmingham, and the European Space Agency.

2.5. Data from the Europlanet Telescope Network Telescopes

The Europlanet Telescope Network (A. Heward et al. 2020) provides access for professional and trained amateur astronomers involved in planetary science or exoplanet research to small and medium-sized telescopes from professional observatories in the network around the globe. This work includes 24 light curves obtained from three telescopes belonging to this network by amateur astronomers who received funding for several nights of telescope time under the Europlanet 2024 RI NA2 Call: the IAC80 telescope at the Teide Observatory (Tenerife), the 1.23 m telescope at the Calar Alto Observatory (Almería) and the Joan Oró telescope (J. Colomé et al. 2010) at the Montsec Observatory (Lleida). This includes at least 11 transits of challenging targets where the use of larger apertures is necessary (e.g., TOI-4479b, TOI-1272b, TOI-969b, K2-284b, and LHS1478b), highlighting the importance of the collaboration with such facilities.

2.6. Data from the LCO and Telescope Live Telescopes

LCO is an international network of 25 telescopes with diverse sizes (1 m and 40 cm) established in several locations (e.g., Australia, Chile, Texas; T. M. Brown et al. 2013). The scope of the network is to facilitate scientific, outreach and education projects, while Telescope Live is a network of 10 robotic telescopes[186] with a focus on providing data resources for astrophotography. The ExoClock project has been awarded a few tens of observing hours from both networks to follow-up exoplanet transits with the collaboration of citizen scientists. To facilitate this effort, the ExoClock team constructed a dedicated campaign aimed at interested members of the public. The promotion of the campaign was done through ExoClock and Ariel media and social media and received over 100 applications including amateur astronomers, members of the general public, educators, and school and university students. The successful participants had to complete a series of tasks under the guidance of the ExoClock team. In total, four transits were observed by LCO and four by Telescope Live and were analyzed by the participants following the observing and analysis techniques described above, to ensure homogeneity in the results.

2.7. Midtime Points from the Literature

From the available data in the literature, we used only midtime points that refer to individual transits, while excluding reference midtime values that represented ephemerides (for the references see Table 7 in the Appendix). We also excluded midtime points from space observations that were already integrated through the MAST Archive.

2.8. Data from the ETD Archive

In this work we used 181 light curves from the ETD Archive (S. Poddaný et al. 2010) that were already integrated in ExoClock Data Release C (DRC), as part of a collaboration between ExoClock and ETD that started in 2021. We included data following the quality criteria we have set for all light curves, as described above, while we excluded observations that had an uncertainty higher than 10 minutes.

2.9. Synchronous Observations

In A. Kokori et al. (2023), we estimated that an average telescope in the ExoClock network – i.e., a ground-based small- or medium-sized telescope—can achieve an transit S/N of

$$\mathrm{S/N} = \frac{d}{\sigma_d} = \frac{0.85d\sqrt{\pi(D/2)^2 t_e}}{0.135 + 10^{-2.99+0.2R}} \times \sqrt{\frac{T_{\mathrm{oot}} T_{\mathrm{int}}}{(t_e + t_o)(T_{\mathrm{oot}} + T_{\mathrm{int}})}} \tag{1}$$

where d is the transit depth, σ_d is the uncertainty on the transit depth, D is the telescope diameter in inches, t_e is the exposure time in seconds, t_o is the overhead time in seconds, T_{oot} is the observing time out of transit in seconds, T_{int} is the observing time in transit in seconds and R is the magnitude of the star in the R band.

[186] https://telescope.live/home

Table 2
Summary of the Successful Synchronous Observations Presented in this Work

Date	Planet	D_{min} (inches)	E_{min} (hr)	k	D_i (inches)	RI	QI	SE
2022-03-26	TOI-1298b	11.17	2.98	13	8–12	3.89	3.42	87.83%
2022-04-15	TOI-1789b	15.33	2.16	14	7–14	2.96	2.15	72.60%
2022-06-14	HD191939b	25.56	2.54	9	8–14	1.39	1.21	86.91%
2023-04-19	TOI-1789b	15.33	2.16	13	8–16	3.30	2.38	72.35%
2023-12-05	TOI-942b	24.90	2.71	2	17	1.23	0.67	54.79%

In our observing protocol, we suggest to the observers to observe for 1 hr before and 1 hr after the transit, with exposure times at least as long as the overheads (the dead time between exposures), therefore $T_{oot} = 7200$ and $t_e = t_o$. Moreover, we can set $T_{int} = t_{14}$ (transit duration) in seconds, so the equation becomes

$$S/N = \frac{0.85dD}{0.135 + 10^{-2.99+0.2R}}\sqrt{\frac{900\pi t_{14}}{(7200 + t_{14})}}. \quad (2)$$

If we then request the minimum S/N to be 6, we can estimate the minimum telescope diameter D_{min} (in inches) required to observe a transit as

$$D_{min} = \frac{0.135 + 10^{-2.99+0.2R}}{0.14d}\sqrt{\frac{7200 + t_{14}}{900\pi t_{14}}}, \quad (3)$$

which corresponds to Equation (C4) of A. Kokori et al. (2023), with the correction that the factor of 6 appears in the denominator rather than the numerator. In this case, the minimum total exposure time, E_{min}, in seconds, will be

$$E_{min} = \frac{7200 + t_{14}}{2}. \quad (4)$$

In this work, we experimented with combining multiple telescopes observing the same transit simultaneously from different locations. Such an approach, if successfully implemented, can enhance the capabilities of the ExoClock network and give the small telescopes access to more difficult targets. We attempted a number of these simultaneous campaigns with multiple telescopes having $D \leqslant D_{min}$ observed in coordination. We present here those campaigns that we considered successful. For a campaign to be considered successful, it had to have

$$RI = \sqrt{\frac{\sum_{i=0}^{i=k}\left(D_i^2 E_i\right)}{D_{min}^2 E_{min}}} > 1 \quad (5)$$

where D_i is the telescope size used for each individual observation, E_i is the total exposure time of each individual observation, and k is the number of individual observations. We can define the above quantity as the resource index (RI) because it gives a measure of how many times more resources (in telescope size and time) were used in each synchronous observations, compared to the minimum required.

The analysis of a synchronous campaign is performed using different trend parameters for each observation (air mass detrending), different limb-darkening coefficients for each observation (based on the filter used), but forcing the same R_p/R_s and T_{mid} for all the observations. This results in $3 \times k + 2$ parameters for every synchronous campaign.

Table 2 presents the characteristics and the results for the five synchronous observations that we considered successful. To quantify the performance of the final fit we can examine the uncertainty on the final transit depth, σ_d^{OBS}, with respect to $d/6$—i.e., the uncertainty on the final transit depth if the transit S/N was 6. We define this as the quality index (QI):

$$QI = \frac{d}{6\sigma_d^{OBS}}. \quad (6)$$

Finally, we can examine how effectively the resources used were combined to produce the final results by comparing RI and QI. We define this as the synchronous efficiency (SE):

$$SE = 100\frac{QI}{RI}. \quad (7)$$

Although the sample is small and we cannot draw statistical conclusions about the behavior of synchronous observations overall, we can see that this technique can be successful, reaching efficiencies even above 80% when a large number of observations is combined. We would like to focus the attention of the reader on the case of HD 191939b, a planet with a transit depth of 1.3 mmag around a star of $R_{mag} = 8.5$ (Figure 4) that would require a telescope larger than 25 inches to be detectable. The combination of nine observations with telescopes smaller than 14 inches, summing approximately 27 observing hours, resulted in a strong detection with S/N = 6.27 and $\sigma_{T_{mid}} = 3.1$ minutes, comparable to the capabilities of TESS (S/N = 13 and $\sigma_{T_{mid}} = 1.5$ minutes). Such shallow transits around bright stars are difficult to observe even with large telescopes, due to saturation. Therefore, synchronous observations with small telescopes may be our only window to follow-up such targets.

3. Results

3.1. Ephemerides

In this work, we provide a homogenous list with updated ephemerides for 620 of the total 775 planets that are currently in the ExoClock target list.[187] We integrated all data from the resources described above (ground-based telescopes, space observations, and midtime values from the literature). After calculating the updated zero-epoch point to the weighted average of the available epochs, we fitted a line on the epoch versus the transit midtime data. For the fitting, we used the MCMC algorithm in the emcee package (D. Foreman-Mackey et al. 2013). Following an initial fit, we scaled up the uncertainties by multiplying them with the rms of the normalized residuals, to consider excess noise. We performed a new fitting after scaling up and Table 8 shows the new

[187] https://www.exoclock.space/database/planets

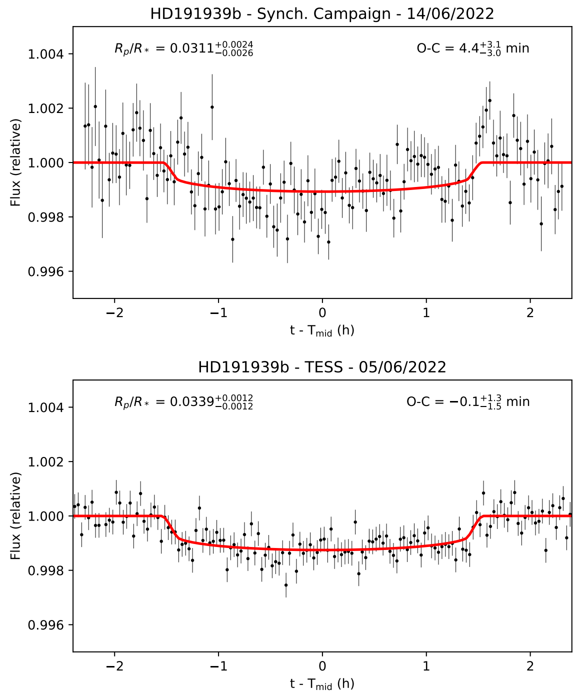

Figure 4. Detrended and binned observations for the 2022 June 14 synchronous campaign on HD 191939b compared to a TESS observation acquired one orbit earlier. Binning has been performed only for visualization purposes. The fitting has been performed on the original data, without binning.

ephemerides for all the planets and the references to the literature midtime values used.

Figure 5 shows the uncertainties in the 2029 predictions before and after the updates presented in this work (σ_p and $\sigma_{p'}$, respectively), where p and p' denote the corresponding predicted midtimes, while Table 3 lists six categories of the ephemerides status. "Significantly improved" refers to the ephemerides that were giving 2029 predictions with uncertainties greater than the target uncertainty of one-twelfth of the transit duration, t_{14}, ($\sigma_p > t_{14}/12$) as described in A. Kokori et al. (2022a). The term "drifting" refers to ephemerides with 2029 predictions that drifted more than the target uncertainty ($|p - p'| > t_{14}/12$). From the remaining ephemerides, the term "Improved" refers to those ephemerides for which the 2029 prediction uncertainties have been improved by more than 1 minute ($\sigma_{p'} < \sigma_p - 1$), "Worse" refers to those ephemerides for which the 2029 prediction uncertainties are now worse by more than 1 minute ($\sigma_{p'} > \sigma_p + 1$), while "No change" refers to those ephemerides for which the 2029 prediction uncertainties have not changed by more than 1 minute ($|\sigma_{p'} - \sigma_p| < 1$). Finally, the "TTVs" flag refers to ephemerides that deviate from linear behavior (see the following section).

Although not expected, we found that a number of ephemerides (37) were significantly improved, or drifting, or worse than the previous ExoClock release. Most of these cases refer to multiplanetary systems so the variability could be related to planet–planet interactions which, however, do not show a statistically significant deviation from a linear ephemeris to be flagged as "TTVs." The rest of the cases (EPIC 211945201b, GJ 1252b, HD 219666b, K2-115b, K2-116b, K2-132b, K2-334b, LHS 3844b, TOI-1201b, TOI-1478b, TOI-169b, TOI-640b, TOI-892b, WASP-169b, WASP-68b) are related to low time coverage in the previous release. As noted in A. Kokori et al. (2023) our previous sample was not completely bias-free and this is the reason we see a small percentage of problematic ephemerides here, which points toward the significance of increasing the time coverage to have a bias-free catalog.

When comparing the results of this work with the initial ephemerides, we can see that on average the ephemerides have improved by approximately 1 order of magnitude (the median improvement in the 2029 prediction uncertainty is 7.9 times). Approximately 45% of the ephemerides (those that are significantly improved, or drifting) were in need of an update to avoid an impact on the final Ariel schedule. If we add to this percentage the planets that are affected by TTVs, then we conclude that 50% of the planets added to our target list at any time need to be followed up. This result is similar to the previous ExoClock release, indicating that the newly discovered TESS planets follow a similar statistical behavior with the planets that were part of our initial target list in terms of uncertainties and bias in their ephemerides.

3.2. Deviations from Linear Ephemerides

For all the 620 planets studied in this work, we studied the possibility of nonlinear ephemerides. Identifying these cases is important for Ariel, in order to implement different ephemerides and produce precise transit and eclipse time predictions. Such deviations occur as a result of physical processes, like stellar activity, orbital decay, orbital precession, and planet–planet interactions in multiplanetary systems (E. Agol & D. C. Fabrycky 2018).

To identify nonlinear behavior in transit timings we used the nonnormalized Lomb–Scargle periodogram on the residuals of the linear ephemeris fit, as implemented in the python package SciPy (N. R. Lomb 1976; J. D. Scargle 1982; P. Virtanen et al. 2020), similarly to A. Kokori et al. (2023).

We first calculated the power of the periodogram of the residuals of the linear ephemeris fit for periods between five epochs and 10 times the full time span of the observations. Then we produced 100,000 periodograms from time series that had the same epochs as the residuals but where the midtime values were drawn from a normal distribution of zero mean and standard deviation (STD) equal to the uncertainty of each observed data point (we name these periodograms Pa). Finally, we produced 100,000 periodograms from time series that were equal to the residuals plus a value drawn from a normal distribution of zero mean and STD equal to the uncertainty of each observed data point (we name these periodograms Pb).

The false-alarm probability (FAP) for each period was then defined as the percentage of Pb periodograms that had greater power than the 99.87% (3σ) upper limit of the Pa periodograms. The "TTVs" flag was then attributed to those planets with periodogram peaks that have FAPs lower than 0.13 (3σ). Detected variations were categorized as short-term or long-term, based on the time span of all available data. Long-term variations are those that are longer than 90% of the total time span of the data used.

We found 42 planets with statistically significant TTVs. Thirty of these planets belong to multiplanetary systems, that can explain those TTVs (namely HD 106315c, HD 108236b, HD 191939c, HD 191939d, HD 28109c, K2-19b, K2-19c, K2-21c, KOI-12b, KOI-94c, Kepler-18d, Kepler-396c, L98-59b, L98-59c, TOI-1130b, TOI-1130c, TOI-1136c, TOI-1136d, TOI-1136e, TOI-1136f, TOI-1246d, TOI-125b, TOI-2076b,

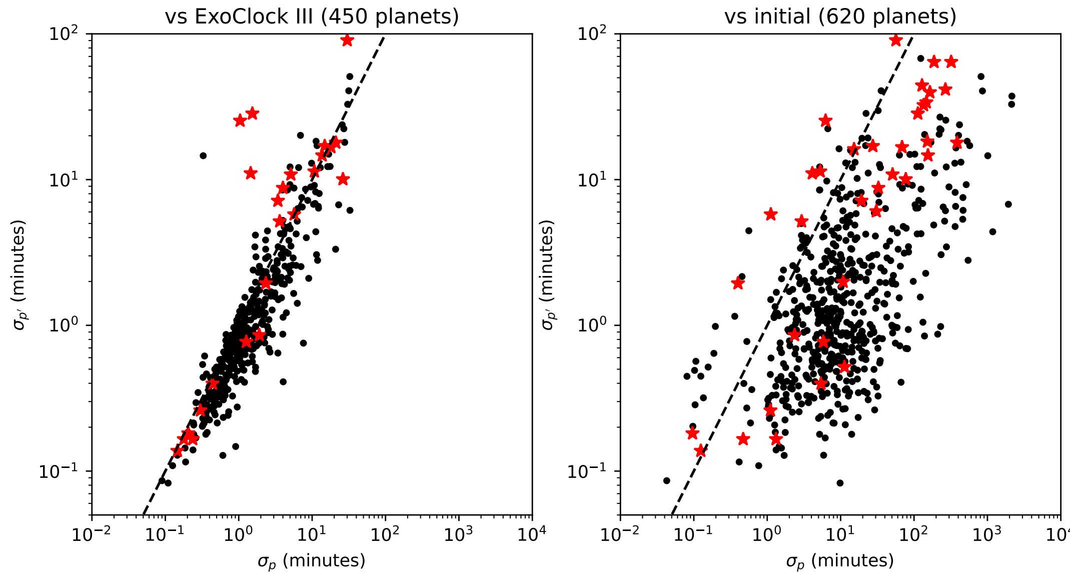

Figure 5. Comparison of the 2029 prediction uncertainties between this work and ExoClock III (left), or between this work and the ephemerides used when the planet was inserted to the ExoClock target list (right). With the red stars we indicate the planets with a "TTVs" flag. In both panels, the dashed lines indicate no change ($\sigma_{p'} = \sigma_p$).

Table 3
Categories of Ephemerides in Comparison with the Previous ExoClock Publication and the Values at the Beginning of the Project

	ExoClock IV versus		
	ExoClock III	ExoClock II	Initial
Planets	450	180	620
Sign. improved	3.1%	0.0%	32.6%
Drifting	1.1%	1.1%	11.9%
Improved	14.7%	40.0%	38.4%
No change	70.9%	55.6%	9.2%
TTVs	6.2%	3.3%	6.8%
Worse	4.0%	0.0%	1.1%

TOI-2076c, TOI-216.01, TOI-216.02, TOI-270c, TOI-270d, TOI-712c, and WASP-148b). For the remaining 12 planets shown in Table 4 and Figure 6 (namely HAT-P-7b, HD 332231b, KELT-9b, TOI-201b, TOI-1333b, TrES-3b, WASP-4b, WASP-12b, WASP-19b, WASP-33b, WASP-135b, and WASP-161b) we performed extra analysis assuming a quadratic ephemeris. In this group, we found that the quadratic terms were statistically significant (3σ) for HAT-P-7b, HD 332231b, TrES-3b, WASP-4b, WASP-12b, WASP-19b, and WASP-161b. A discussion on each planet is included in Section 5.

4. Data Release D

The fourth data release of the ExoClock project (DRD) includes two data products: the catalog of observations (ExoClock, ETD, space observations), and the catalog of ExoClock ephemerides. All data products and their descriptions can be found through doi:10.17605/OSF.IO/WPJTN, hosted by the Open Science Framework.

4.1. Catalog of Observations

The catalog of observations contains all the light curves and literature midtime points summarized in Table 1. In the online repository, each light curve is accompanied by

1. metadata regarding the planet, the source, the observation, the instrument, and the data format;
2. the predetrended light curve, filtered for outliers, converted to BJD_{TDB} and flux formats, with scaled uncertainties;
3. the fitting results, including the detrending method used and its parameters;
4. the detrended light curve, enhanced with the detrending model, the transit model, and the residuals;
5. fitting diagnostics on the residuals.

4.2. Catalog of ExoClock Ephemerides

The new catalog of ExoClock ephemerides contains the updated ephemerides for the 620 planets studied in this work (see also Table 8), accompanied by metadata regarding the planet, and flags concerning the detection of TTVs.

5. Discussion

5.1. Follow-up Efficiency and Comparison with Previous ExoClock Data Releases

To evaluate the efficiency of our follow-up strategy we compared the newly acquired data by TESS (after 2022 January 1) to the predictions of the ephemerides published in ExoClock DRC (A. Kokori et al. 2023) and Data Release B (A. Kokori et al. 2022b). We decided to use TESS data only as a calibrator because, like Ariel, the TESS observations include long baselines before and after the transit, while ground-based observations have limited baselines (usually 1 hr before and after the transit). The results are presented in Table 5, where we can see that the percentage of measurements with $\frac{O-C}{\sigma_{O-C}} < 1$ when compared with the ephemerides published in ExoClock DRC is 62.32%, indicating that the uncertainties in our previously released ephemerides were almost following the normal distribution at the 1σ level. The success rate at the 3σ level—i.e., the percentage of measurements with $\frac{O-C}{\sigma_{O-C}} < 3$—for DRC is now at 98.34%, gradually approaching the normal

Table 4
Planets Not in Multiplanetary Systems Identified with Deviations from a Linear Ephemeris

Planet	Points	Variations after Linear Fit	Q	Variations after Quadratic Fit
HAT-P-7b	688	Short and Long	$74.6^{+4.1}_{-4.2} \times 10^{-11}$	None
HD 332231b	5	Short and Long	$-16.1^{+1.8}_{-1.8} \times 10^{-6}$	None
KELT-9b	78	Short	$-0.4^{+2.1}_{-2.2} \times 10^{-10}$	Short
TOI-201b	14	Short and Long	$3.1^{+1.1}_{-1.1} \times 10^{-5}$	Short and Long
TOI-1333b	12	Short	$2.8^{+4.0}_{-4.1} \times 10^{-8}$	None
TrES-3b	383	Short and Long	$-11.0^{+2.1}_{-2.1} \times 10^{-11}$	Short and Long
WASP-4b	150	Long	$-9.6^{+1.4}_{-1.3} \times 10^{-11}$	None
WASP-12b	411	Short and Long	$-53.7^{+1.2}_{-1.3} \times 10^{-11}$	None
WASP-33b	69	Short	$18.1^{+6.1}_{-6.0} \times 10^{-11}$	None
WASP-19b	218	Short and Long	$-63.6^{+8.7}_{-8.2} \times 10^{-12}$	Short
WASP-135b	111	Short and Long	$4.9^{+2.3}_{-2.3} \times 10^{-10}$	Short and Long
WASP-161b	9	Short and Long	$-578.1^{+6.4}_{-6.4} \times 10^{-9}$	None

Note. Long and Short refer to long- or short-term variations. Q refers to the quadratic term of the ephemeris.

distribution. These results underline the fact that the strategy followed in the ExoClock project is efficient and capable of producing a consistent catalog of reliable ephemerides as the time span of observations is increasing. Moreover, the above indicates that for the full Ariel candidate target list, the percentage of problematic Ariel observations (in terms of timing) will be below 2.0%. As the time span of the follow-up campaigns increases, this percentage is expected to decrease even more.

5.2. New Needs in the Project

TESS targets are quite challenging for several reasons; the particularity of the TESS targets implies special requirements for follow-up observations. For example, large ground-based telescopes cannot easily observe the brightest of these targets due to the scintillation noise and the risk of saturation. On the other hand, some of the TESS transits have shallow depths which means that small-sized telescopes are insufficient for detecting their signal. Many planets are also part of multi-planetary systems, resulting in TTVs and therefore needing special attention for continuous monitoring.

With the increased number of TESS planets in the Ariel target list, it becomes apparent that our current network of telescopes is not enough to efficiently correspond to the new needs of the project. Figure 7 shows the updated capabilities of the telescopes in the ExoClock network. This plot has been produced assuming that the minimum telescope diameter $D_{\min}$ required to observe a transit with depth d and duration t_{14} in seconds around a star of magnitude R in the red filter is (see A. Kokori et al. 2023)

$$D_{\min} = \frac{0.135 + 10^{-2.99+0.2R}}{0.14d}\sqrt{\frac{7200 + t_{14}}{900\pi t_{14}}}. \quad (8)$$

In A. Kokori et al. (2023), the percentage of planets in the ExoClock target list that could be followed up by a 16 inch telescope was 75%, while now this percentage is 67%, with the expectation that it will reduce further as more TESS discoveries are integrated. For this reason, new strategies and methods are required and we have already paved the way for the new era of transit monitoring.

The integration of data from larger facilities and telescopes located in sites beyond the ExoClock network (like MuSCAT2 and ASTEP) enabled the extended coverage of planets for which we did not have available observations. We plan to continue the synergies we initiate with this work to increase the coverage of planets. With the simultaneous observations it is clear that we can achieve a high photometric precision in following up planets with low S/N around bright stars, and we plan to organize more such efforts in the future. Finally, new observations from space telescopes (CHEOPS, JWST, and others) will facilitate these efforts.

We also plan to include planets from the TESS Objects of Interest candidate list as these might be interesting for characterization studies by Ariel. The uncertainties in the ephemerides of these planets are increasing while we are waiting for their confirmation and therefore their timings might be completely lost by the time they get confirmed. (B. J. Hord et al. 2024).

5.3. The Need for Continuous Monitoring

As demonstrated in Table 3, around 45% of the initial planet ephemerides have large uncertainties or drifts (the categories marked as "significantly improved" or "drifting"). This percentage signifies that a considerable number of the planet ephemerides require updates in order to construct an efficient observing plan by the time Ariel flies, and therefore continuous monitoring is essential.

Moreover, we notice that the new ephemerides set is not completely bias-free, despite biases having been reduced (see a comparison with DRD in Table 5). Therefore, it is essential to extend the coverage for all planets in our list by collecting new data from different resources and extending the time span of the follow-up observations.

Finally, continuous monitoring is necessary for the planets flagged as "TTVs" in order to construct a precise ephemeris that includes the dynamics of these systems.

5.4. TTV Signals

5.4.1. Comparison with ExoClock DRC

In agreement with A. Kokori et al. (2023), here we find that HAT-P-7b, TrES-3b, WASP-4b, WASP-12b, and WASP-19b show consistent long-term TTVs. These are indicated by the peaks in the periodograms that have periods similar to the full time span of the data, which, however, disappear after fitting for a quadratic ephemeris (Table 4). Other studies have also

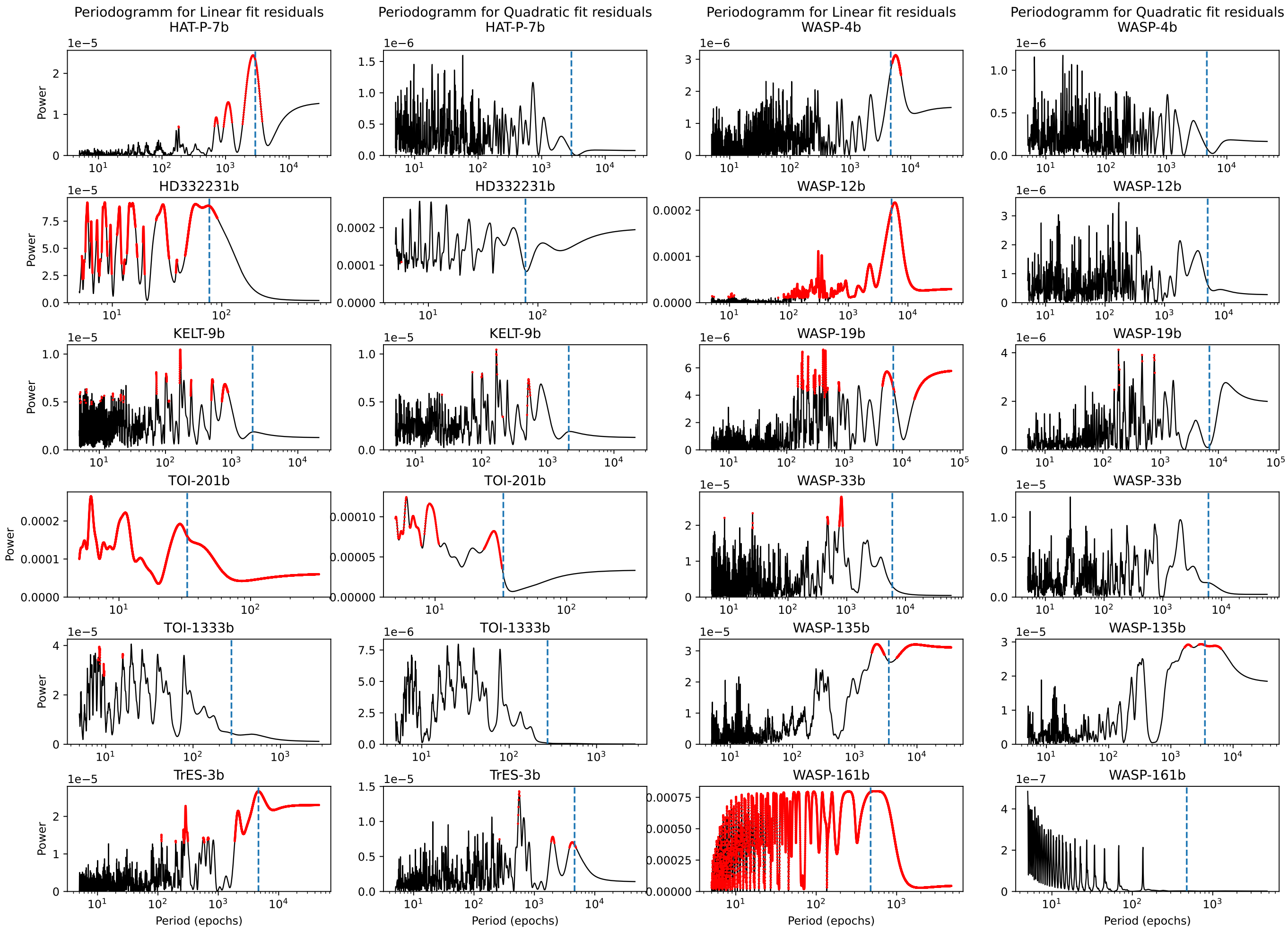

Figure 6. Periodograms for the fitting residuals (linear and quadratic) for the 12 planets with TTVs but without transiting companions. The red parts indicate periods with FAPs lower than 0.13% and the vertical line indicates the total time span of the data used.

Table 5
Success Rate of Each Ephemeris Set on the TESS Data Acquired after 2022 January 1

	DRD	DRC	DRB	Initial
Planets	424	308	130	424
Measurements	4716	3604	1585	4716
$\frac{O-C}{\sigma_{O-C}} < 1$	66.39%	62.32%	48.01%	53.71%
$\frac{O-C}{\sigma_{O-C}} < 2$	93.70%	91.32%	76.53%	82.78%
$\frac{O-C}{\sigma_{O-C}} < 3$	99.28%	98.34%	93.50%	92.88%
$\frac{O-C}{\sigma_{O-C}} < 4$	99.96%	99.61%	98.30%	95.50%

Note. For DRD this calculation is optimistic (the TESS data acquired after 2022 January 1 were included in the production of DRD), but it is shown for completeness.

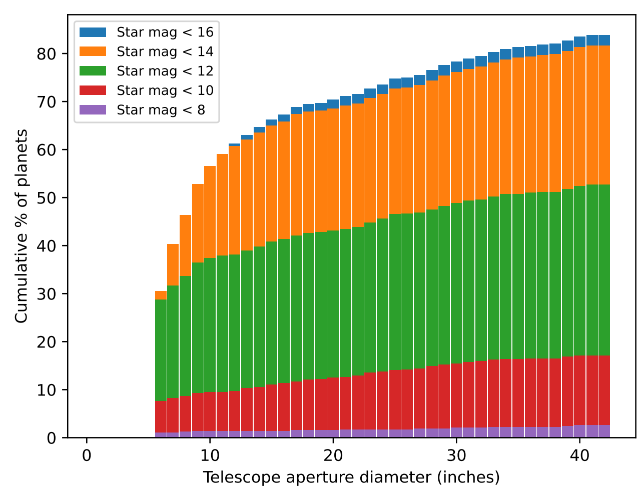

Figure 7. Distribution of available planets per magnitude and telescope aperture diameter.

suggested the presence of quadratic trends in these planets (e.g., N. Narita et al. 2012 for HAT-P-7b, V. K. Mannaday et al. 2020 for TrES-3b, R. V. Baluev et al. 2020 for WASP-4b, S. W. Yee et al. 2020 for WASP-12b, and J. Korth & H. Parviainen 2023 for WASP-19b).

On the contrary, Qatar-1b and WASP-56b no longer show significant deviations from a linear ephemeris. For both planets we acquired a large number of new data, after flagging them as "TTVs" in the previous data release, indicating that the signals found in the previous analysis could be driven by biases in the older observations. Both cases will be closely monitored in the future.

5.4.2. New Planets with a "TTVs" Flag

HD 332231b. So far, it has not been clear whether the system of HD 332231b exhibits TTVs. Spectroscopic observations did not yield enough evidence suggesting a companion planet, and the same conclusion was deduced by radial-velocity measurements (P. A. Dalba et al. 2020). It was speculated though that a slight linear trend in those time series and residuals might indicate the presence of an outer companion (P. A. Dalba et al. 2020) but follow-up observations by E. Sedaghati et al. (2022) did not reveal any statistically significant signal for a detection. Despite the small numbers, the new observations from TESS and one light curve from the ExoClock network show significant variability, and a significant quadratic term in the ephemeris of the planet. To verify the origin of these TTVs, further observations are required.

KELT-9b. An early analysis of KELT-9b's orbit used transit light curves and radial-velocity analyses to constrain the model to either a fiducial one or one with TTVs (B. S. Gaudi et al. 2017). However, it was found that the TTV model and the fiducial model had nearly identical uncertainties associated with them, so the fiducial one was adopted (B. S. Gaudi et al. 2017). A study by E. S. Ivshina & J. N. Winn (2022) found that TTVs were not present within this system. J.-V. Harre et al. (2023) fitted different models to determine the most appropriate explanation for the timing deviations on KELT-9b. Their result suggest that apsidal precession with a nonzero eccentricity can better describe the deviations, however, orbital decay or even a combination of the two models can be a possible solution. Moreover, it is speculated that the eccentricity could derive from the migration history of the planet or from the presence of a third, as-yet unseen body in the system (J.-V. Harre et al. 2023). Our analysis of 78 data points shows short-term variations but further observations are necessary to differentiate the various models and the explanations for the deviations.

TOI-201b. TOI-201b is a warm giant planet orbiting an F-type star that exhibits long-term variability due to stellar activity (M. J. Hobson et al. 2021). The analysis of space data points and two ExoClock observations show both short- and long-term variations. G. Maciejewski & W. Łoboda (2025) performed a TTV analysis in combination with radial-velocity data and a recent transit from TESS to report the detection of TOI-201c, a long-period giant planet. The new planet is the most possible explanation for the short-term variations identified in our analysis, but more data are required to explore the long-term variability.

TOI-1333b. TOI-1333b orbits a subgiant star, while two additional light sources are depicted in image processing (J. E. Rodriguez et al. 2021). It is suggested that the light curves of TOI-1333b are diluted due to the light emitted from these other stars (J. E. Rodriguez et al. 2021). The furthest star was identified as a chance alignment, while the closest one was identified as a companion star (J. E. Rodriguez et al. 2021). In our study we used 12 midtime points and we found short-term variations from the linear ephemeris. Although the companion star could be the source of the TTVs, such an interaction should result in variations at longer timescales and the small number of data points does not allow for their detection.

WASP-33b. WASP-33b orbits around a δ Scuti variable star (A. Collier Cameron et al. 2010), and with a short orbital period (C. von Essen et al. 2020) it is expected to be affected by heating, stellar winds, and tidal forces from its host star. It is clear that WASP-33b interacts intensively with its star, and some of the possible interactions include mass transfer (G. Kovács et al. 2013). Other types of interactions that affect the orbit of the planet have been suggested, but were excluded, such as the existence of additional bodies, low spherical distortions due to the δ Scuti pulsations, and others (G. Kovács et al. 2013). Due to spin–orbit misalignment (A. Collier Cameron et al. 2010), more complex TTV signals could appear over long periods (I. McDonald & E. Kerins 2018). We identified short-term TTVs that can result from the stellar variability that is introducing bias to the timing measurements. In addition, new observations from CHEOPS confirm nodal precession (A. M. S. Smith et al. 2025), which can cause the variations with timescales around 1000 epochs.

WASP-135b. WASP-135b is a hot Jupiter orbiting a Sunlike star discovered in 2016 by J. J. Spake et al. (2016). WASP-135b receives high levels of insolation due to the proximity of the planet to its star, has an inflated radius, and shows evidence of a transfer of angular momentum from the planet to its host star (J. J. Spake et al. 2016). Until now, it has not been evident whether the system displays TTVs. The last photometric analysis of WASP-135b (O. Öztürk & A. Erdem 2021) suggests the possibility of a decrease in its orbital period. However, confirming this hypothesis requires obtaining new midtransit times. In addition, there is an age difference between the isochronal and gyrochronological age of the star that may indicate stellar spin-up (J. J. Spake et al. 2016), although this hypothesis is weak.

WASP-161b. Significant TTVs have previously been detected in WASP-161b using TESS and archival data, with shifts in the transit midpoints observed in 2019 and 2021 January (K. Barkaoui et al. 2019), diverging from previous ephemerides by approximately 67 and 203 minutes. These TTVs align with a quadratic model, indicating a constant period derivative quantified as -1.16×10^{-7} days per day, suggesting possible tidal dissipation and a decaying orbital period (F. Yang & R.-R. Chary 2022; F. Yang et al. 2022). The largest TESS timing offset noted was -203.7 ± 4.1 minutes (S.-S. Shan et al. 2023). Explanations such as period decay and apsidal precession have been proposed, but inconsistencies remain, which need to be supplemented with additional data to find a clearer cause for the origin of TTVs (F. Yang & R.-R. Chary 2022; F. Yang et al. 2022; S.-S. Shan et al. 2023). Our analysis demonstrated short- and long-term variations and we plan to monitor these with further data.

6. Conclusion

The ExoClock project has been continuously operating for the past 6 yr following open-science strategies during all stages: open software, hardware, data, and open to contributions from diverse communities including academics and nonacademics such as citizen scientists and school students. This work presents the updated ephemerides for 620 planets that are current candidates of the Ariel Mission Reference Sample. After comparison of the new catalog with the previous version it is shown that biases are reduced, which underlines that the approach of the ExoClock project is efficient for generating reliable ephemerides. Our study demonstrated that 45% of the planets required an update, a result that highlights the need for continuous monitoring. The new catalog includes the updated ephemerides for a large sample of TESS planets that are challenging for observations due to shallow transits or bright host stars. The new data from larger telescopes and sites beyond the usual ExoClock network enabled the coverage of planets with a lower S/N and planets inaccessible from the usual sites of the ExoClock network. The open-science approach of the project has demonstrated to be the most successful way to provide a validated catalog of planet ephemerides for the Ariel mission. Through the ExoClock project, not only is a reliable scheduler for Ariel established but also further collaborations and research efforts are facilitated. These include testing new methodologies such as the synchronous observations and investigating new research ideas, for example planets with TTVs. We plan to continue fostering synergies with large facilities and space telescopes but also monitor planets with TTVs and conduct further experimental efforts with synchronous observations. This approach facilitates our effort to correspond to the new needs of the project while it accelerates collaborations and progress in the field of exoplanet research.

Software and Data

Software: Django, PyLightcurve (A. Tsiaras et al. 2016), ExoTETHyS (G. Morello et al. 2020a, 2020b), Astropy (Astropy Collaboration et al. 2013), emcee (D. Foreman-Mackey et al. 2013), Matplotlib (J. D. Hunter 2007), Numpy (C. R. Harris et al. 2020), SciPy (P. Virtanen et al. 2020).

All the data products can found through the OSF repository at doi:10.17605/OSF.IO/WPJTN, alongside their descriptions.

Acknowledgments

The ExoClock project has received funding from the STFC grants ST/W006960/, ST/X002616/ and ST/Y001508/1.

We would like to acknowledge the PULSAR nonprofit CLC, Greece, which has been founded by the coordinators of ExoClock with the aim of supporting the organization and the management of the project.

This work has made use of data collected with the TESS mission, obtained from the MAST data archive at the Space Telescope Science Institute (STScI). Funding for the TESS mission is provided by the NASA Explorer Program. STScI is operated by the Association of Universities for Research in Astronomy, Inc., under NASA contract NAS 5–26555.

This work has made use of observations made by the LCOGT network, as part of the LCOGT Global Sky Partners projects “ExoClock” (PI: A. Kokori) and “ORBYTS: Refining Exoplanet Ephemerides” (PI: B. Edwards).

This work makes use of observations from the ASTEP telescope. ASTEP has benefited from the support of the French and Italian polar agencies IPEV and PNRA, and from INSU, the European Space Agency (ESA) through the Science Faculty of the European Space Research and Technology Centre (ESTEC), the University of Birmingham, the European Union’s Horizon 2020 research and innovation program (grants agreements No. 803193/BEBOP), the Science and Technology Facilities Council (STFC; grant No. ST/S00193X/1), the laboratoire Lagrange (CNRS UMR 7293) and the Université Côte d’Azur through Idex UCAJEDI (ANR-15-IDEX-01).

We would like to acknowledge the support provided by the administrators, designers, and developers of the ETD project and of the Czech Astronomical Society both to the ExoClock project but also to the efforts of the whole amateur community through its 10+ years of operation.

Several observations were supported by the Europlanet 2024 RI project that has received funding from the European Union’s Horizon 2020 research and innovation program under grant agreement No. 871149.

This work includes observations made with the MuSCAT2 instrument mounted in the Telescopio Carlos Sánchez at Teide Observatory; the Joan Oró Telescope (TJO) of the Montsec Observatory (OdM), owned by the Catalan Government and operated by the Institute of Space Studies of Catalonia (IEEC); the IAC80 telescope operated on the island of Tenerife by the Instituto Astrofísico de Canarias in the Spanish Observatorio del Teide; the Centro Astronómico Hispano en Andalucía (CAHA) at Calar Alto, operated jointly by the Junta de Andalucía and the Instituto de Astrofísica de Andalucía (CSIC); the Observatorio do Pico dos Dias/LNA (Brazil); the Madrona Peak Observatory, owned by the nonprofit Mark and Candace Williams Family Foundation, dedicated to science education.

This work has made use of observations made by the MicroObservatory which is maintained and operated as an educational service by the Center for Astrophysics, Harvard & Smithsonian as a project of NASA’s Universe of Learning, supported by NASA Award #NNX16AC65A.

A.Bo. acknowledges financial support from the Italian Space Agency (ASI) with Ariel grant No. 2021.5.HH.0.

Members from Silesian University of Technology were responsible for (1) planning observations, (2) automation of observatory work, and (3) processing of data from the SUTO network. P.J.-W. acknowledges support from grant BKM-2025. Other authors from Silesian University of Technology acknowledge grant BK-2025.

R.A.A. would like to thank Mercedes Gómez, Director of the Observatorio Astronómico Córdoba, for supporting the use of the facilities at the Estación Astrofísica Bosque Alegre (EABA), and Luis Tapia Portillo, Telescope operator at EABA, for his collaboration during the observing nights.

V.Be. acknowledges financial support from grant PID2022-137241NB-C41 funded by Agencia Estatal de Investigación of the Ministerio de Ciencia, Innovación y Universidades (MICIU/AEI/10.13039/501100011033) and ERDF/EU.

A.A.B. acknowledges support from M.V. Lomonosov Moscow State University Program of Development.

M.L.C., L.N.C. and R.A.P. acknowledge financial support from the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior–Brasil (CAPES)–Finance Code 001 and the Fundo Paran—Finance Code 31/24 and also would like to thank the Laboratório Nacional de Astrofísica–Brasil for the observing time granted at the Pico dos Dias Observatory.

A.Da. has made use of the OARPAF telescope within the scientific mission of University of Genova and would like to thank Silvano Tosi, Davide Ricci and Lorenzo Cabona for their support.

A.d.M. acknowledges the use of data obtained at the Observatório do Pico dos Dias / LNA (Brazil), Observatório Astronômico—Universidade Estadual de Ponta Grossa (Brazil) and financial support from Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq).

T.E. has received funding from the European Union’s Horizon Europe research and innovation program under grant agreement No. 101079231 (EXOHOST), and from the United Kingdom Research and Innovation (UKRI) Horizon Europe Guarantee Scheme (grant No. 10051045). This work has made use of the ground-based research infrastructure of Tartu Observatory, funded through the projects TT8 (Estonian Research Council) and KosEST (EU Regional Development Fund).

E.E.-B. acknowledges financial support from the European Union and the State Agency of Investigation of the Spanish Ministry of Science and Innovation (MICINN) under the grant PRE2020-093107 of the Pre-Doc Program for the Training of Doctors (FPI-SO) through FSE funds.

A.Fu. is partly supported by JSPS KAKENHI grant Nos. JP24K00689 and JP24H00017.

P.Gaj. is supported by the Slovak Research and Development Agency under contract No. APVV-20-0148, internal grant VVGS-2023-2784 of the Faculty of Science, P. J. Šafárik University in Košice and funded by the EU NextGenerationEU through the Recovery and Resilience Plan for Slovakia under the project No. 09I03-03-V05-00008.

E.G. acknowledges financial support from the Gordon and Betty Moore Foundation for the Global Sky Partners program.

G.F.G. would like to thank Andressa Wille (UTFPR), Elvis Mello-Terencio (UTFPR), Giovanni Tauil (UTFPR), Micheli Moura (UFRGS), Nicholas Souza (UFPR), Richards Albuquerque (UTFPR), Vinicius Fochesatto (UTFPR), and Rubens Machado (UTFPR).

J.K. acknowledges support from the Swiss National Science Foundation under grant No. TMSGI2_211697, and from the Swiss NCCR PlanetS. Their work has been carried out within the framework of the NCCR PlanetS supported by the Swiss National Science Foundation under grants 51NF40182901 and 51NF40205606.

S.-P.L. acknowledges the grants from the National Science and Technology Council of Taiwan under project Nos. 109-2112-M-007-010-MY3, 112-2112-M-007-011, and 113-2112-M-007-004.

Y.H.L. would like to thank K.P. Huang (National Museum of Nature Science) for their technical support.

J.H.L. is partly supported by Astrobiology Center SATELLITE Research project AB022006 and JSPS KAKENHI grant No. JP24H00017.

S.Lo. acknowledges financial support from Orizzonti di Lora Stefano.

G.M. acknowledges financial support from the Severo Ochoa grant CEX2021-001131-S and from the Ramón y Cajal grant RYC2022-037854-I funded by MCIN/AEI/ 10.13039/501100011033 and FSE+.

M. Mori is partly supported by JSPS Grant-in-Aid for JSPS Fellows grant No. JP24KJ0241, JSPS KAKENHI grant No. JP24K17083.

F.Mu. acknowledges the financial support from the Agencia Estatal de Investigación del Ministerio de Ciencia, Innovación y Universidades (MCIU/AEI) through grant PID2023-152906NA-I00.

N.N. is partly supported by JSPS KAKENHI grant No. JPJP24H00017 and JSPS Bilateral Program No. JPJSBP120249910.

E.Pal. acknowledges financial support from the Agencia Estatal de Investigación of the Ministerio de Ciencia e Innovación MCIN/AEI/10.13039/501100011033 and the ERDF "A way of making Europe" through-project PID2021-125627OB-C32, and from the Centre of Excellence "Severo Ochoa" award to the Instituto de Astrofisica de Canarias.

E.Pak. acknowledges the Europlanet Telescope Network funded by the European Union's Horizon 2020 Research and Innovation Programme (grant agreement No. 871149).

P.P. was partially supported by the project Partnership for Excellence in Superprecise Optics, reg. No. CZ.02.1.01/0.0/0.0/16_026/0008390.

D.F.R. is thankful for the support of the CAPES and FAPERJ/DSC-10 (SEI-260003/001630/2023).

F.S. would like to thank Danilo Zardin for his support in the data reduction and Marco Fiaschi for technical support with the instrumentation.

M.Sz. and M.Z. were partially supported by a program of the Polish Ministry of Science under the title "Regional Excellence Initiative," project No. RID/SP/0050/2024/1.

M.F.T. would like to thank Sharjah Astronomical Observatory (SAO-M47) for its full support in using its telescope under the Exoplanet Observation Project.

A.N.T. acknowledges the support of the Foundation for the Development of Theoretical Physics and Mathematics BASIS (project 24-2-1-6-1). Their observations were performed at telescope Astrosib RC-500-Kislovodsk of the shared research facility "Terskol observatory" of the Institute of Astronomy of the Russian Academy of Sciences.

A.H.T. acknowledges financial support from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation program (grant agreement No. 803193/BEBOP), from the UKRI Frontiers research grant (EP/Z000327/1/CandY), and from the Science and Technology Facilities Council (STFC; grant Nos. ST/S00193X/1, ST/W002582/1 and ST/Y001710/1).

K.V. would like to thank the University College London Observatory (UCLO) team for their constant guidance and help for their contributions to ExoClock.

B.G. would like to thank Lauren Sgro and Thomas M. Esposito for the assistance in leading the Unistellar Network collaboration. This work has made use of observations conducted by the Unistellar Citizen Science Network, which is maintained and operated by the SETI Institute and Unistellar with generous support from the Gordon and Betty Moore Foundation and a NASA Exoplanet Research Program grant (No. 80NSSC24K0165).

Appendix
Supplementary Information

Here we include extra information regarding the data sources and results. More specifically, Table 6 includes a list of the amateur private observatories contributing to this work, and is followed by a description of the ASTEP telescope. Table 7 includes a list with the parameters used in the analysis of individual light curves and the respective references, where the asterisk indicates orbital parameters (a/R_s or i) that were adjusted based on TESS data to match the observed durations. Table 8 includes the updated ephemerides presented in this work.

Table 6
Amateur Private Observatories Contributing to This Work

Observer(s)	Observatory
Adrian Jones	I64 Maidenhead, UK
Mercedes Correa	Sirius B, Spain
Paolo Arcangelo Matassa	P.M.P.H.R. Deep Sky (MPC K81), Atina (FR), Italy
Jean-Pascal Vignes	Deep Sky Chile, Chile
Andre Oliveira Kovacs	Paulista, São Paulo, SP, Brazil
Manfred Raetz	Privat Observatory Herges-Hallenberg, Germany
Bryan Eric Martin	Tiger Butte Remote Observatory, USA
Nikolaos I. Paschalis	Nunki Observatory, Skiathos, Greece
Richard Abraham	The Green Observatory, UK
Vikrant Kumar Agnihotri	Cepheid Observatory, Rawatbhata, India
Miguel Ángel Álava-Amat	Observatorio Sarriguren, Spain
Raniero Albanesi	157 Frasso Sabino, Italy
Tom Alderweireldt	MPC 145, ’s-Gravenwezel, Belgium
Enrique Arce-Mansego	Vallbona Observatory Valencia, Spain
Matthieu Bachschmidt	Gonachon Observatory, France
Marco Bastoni	Private Observatory "Bellatrix", Italy
Anis Ben Lassoued	Sousse Observatory, Tunisia
David Bennett	Rickford Observatory, UK
Guillaume Odil Bernard	Eyzahut Observatory, France
Guillaume Biesse	Tossius Hill Observatory, Toussieu, France
Mario Billiani	Starbase, Austria
Patrick Jean-Marie Brandebourg	Observatoire du Guernet, Bretagne, France
Stephen M. Brincat	Flarestar Observatory (MPC:171), San Gwann, Malta
Xavier Bros	Anysllum Observatory, Áger, Spain
Antonino Brosio	ABObservatory (L90), Rosarno, Italy
Sebastien Brouillard	Observatoire de Saint-Véran, Paul Felenbok, France
Giovanni Calapai	Calapai Astronomical Observatory (Massa S. Giorgio, Messina), Italy
Mauro Cal-	Cavallino Observatory, Tuscany, Italy
Fran Campos	Puig d’Agulles Observatory (Vallirana), Spain
Jean-François Coliac	OABAC—Observatoire pour l’Astronomie des Binaires et l’Astronomie Collaborative
Martin Valentine Crow	Burnham Observatory, Burnham on Crouch, UK
Dominique Daniel	LMJ-OBS, Carpentras, France
Simon Dawes	William James II Observatory, Bexleyheath, UK
Paul De Backer	Sorbus (Hove), Belgium
Marc Deldem	Les Barres Observatory, Lamanon, France
Dimitrios Deligeorgopoulos	Artemis Observatory, Evrytania, Greece
Filipe Dias	JGRO, Portugal
Tommaso Dittadi	TD-TRO (TD-Tuscany Remote Observatory) at Astronomical Centre Lajatico, Italy
Rafael González Farfán	Uraniborg Observatory, (Écija, Sevilla), Spain
Antonio Ferretti	Osservatorio Anxanum, Italy
Efrem Frigeni	Resegone Observatory
Trevor Gainey	Kismet Observatory, Berkshire, UK
Pierre Gamache	Observatoire de la Licorne, Canada
Esteban García Navarro	Obs. Paraje Corral de Ricardo
Alberto García-Sánchez	Observatorio Rio Cofio—Robledo de Chavela, Spain
Jordi González-Edo	Observatorio Landete-Kea, Landete, Spain
Guillaume Gruntz	Alentejo Remote Observatory, Portugal
Bruno Guillet	Folie Couvrechef Observatory, Caen, France
Hubert Hautecler	Roosbeek Lake Observatory, Belgium
Marco Iozzi	H.O.B. Astronomical Observatory L63, Italy
Kevin Johnson	(M64) Holbrook Observatory, East Sussex, UK
Aziz Ettahar Kaeouach	Atlas Sky Observatory, Oukaimeden Observatory, Morocco
Üllar Kivila	Looga Observatory, Estonia
Daniel Kustrin	Ickenham Observatory, UK
Didier Lefoulon	Huismes (37420), France
Claudio Lopresti	GAD Observatory, Italy
Esteban Reina Lorenz	Masquefa Observatory,Spain
Darryl Madison	Ajijic Observatory, Ajijic, Mexico
Massimiliano Mannucci	Osservatorio Astronomico Margherita Hack, Firenze, Italy
Antonio Marino	Telescopio Remoto Colacevich c/o Osservatorio Astronomico di Capodimonte di Napoli, Italy
Jean-Claude Mario	Stelle Di Corsica, France
Jean-Baptiste Marquette	AstroKoT, D99, Port-Ste-Marie, France
Andrew E. McGregor	Farr Observatory, UK
Mike Miller	Georgetown Observatory, Georgetown, TX, USA
Salvador Miquel Romero	Vedat Observatory, Valencia, Spain
David Molina	Anunaki Observatory Z51, Spain
Mario Morales-Aimar	Observatorio de Sencelles MPC K14, Spain
Livia Moretti	Leavitt Observatory, Italy
Fabio Mortari	Hypatia Observatory, Italy
Raphael Nicollerat	Observatoire des Valentines K17
Yenal Ogmen	Green Island Observatory IAU B34, Cyprus
Zlatko Orbanic	Explorer Orbanic Observatory, Croatia
Christian Pantacchini	Observatoire de BENAYES, France
Emanuele Pavoni	Leavitt Observatory, Italy
Val-re Perroud	Observatoire de Duines, France
Steven Wade Peterson	Vail View Observatory H18 Vail, Arizona, USA
Jerry Philpot	Wayne Observatory, W15, USA
Davide Pica	D40 Observatory
Jean-Bernard Pioppa	La Cabergue, France
François Régembal	HRT Observatory, DeepSkyChile, Chile
Lluis Ribe	Les Pedritxes, Spain
Lionel Rousselot	Vierzon Observatory, France
Xesco Rubia	Stupa Observatory, Centelles, Catalonia, Spain
Nello Ruocco	Osservatorio Astronomico Nastro Verde, Sorrento, Italy
Mark Salisbury	POST, UK
John Edward-Graham Savage	Z42, Rushay Farm Observatory, Dorset, UK
Marc Serrau	Observatoire de Dauban, 04150 Banon, France
Ian David Sharp	Ham Observatory, UK
Dave Shave-Wall	IMT3b
Alvaro Fornas Silva	Centro Astronómico Alto Turia (CAAT)
Vojtech -koln-k	Broumov NM Observatory, Czech Republic
Thomas H Sprecher	Shed Observatory, USA
Marco Stefanini	Osservatorio Aldebaran (Corniglio-Parma), Italy
Dimitris Stouraitis	Galileo Observatory, Greece
Gerard Tartalo-Montardit	Dark Energy Observatory, Spain
Andrea Tomacelli	Telescopio Remoto Colacevich UAN c/o Osservatorio Astronomico di Capodimonte di Napoli, Italy
Mark Arthur van der Grijp	Eye in the Sky Observatory, Spain
Joost Verheyden	Drogenberg Observatory, Belgium
Pieter Vuylsteke	TheGardenToTheSkyFacility Hoegaarden, Belgium
David E. Wright	Goveryk Observatory, Cornwall, UK
Massimiliano Zulian	Parco Astronomico La Torre Del Sole (Bergamo), Italy

Table 7

Parameters Used in the Analysis of Individual Light Curves and the Respective References, where the Asterisk Indicates Parameters ($R_{\rm p}/R_{\rm s}$, $a/R_{\rm s}$ or i) that Were Adjusted Based on TESS Data to Match the Observed Durations

Planet	Ephemeris (before This Update)	Stellar Parameters	Transit Parameters		
	T_0 (BJD$_{\rm TDB}$)	$T_{\rm eff}$ (K)	R_p/R_s	$a/R_{\rm s}$	i (deg)
	P (days)	log(g) (cgs)	e	ω (deg)	
55Cnce	$2459370.807543^{+9.3e-05}_{-9.3e-05}$	$5234.0^{+30.0}_{-30.0}$	$0.0187^{+0.0004}_{-0.0004}$	$3.47^{+0.07}_{-0.07}$	$83.6^{+0.6}_{-0.6}$
	$0.73654625^{+1.5e-07}_{-1.5e-07}$	$4.45^{+0.08}_{-0.08}$	…	…	
	A. Kokori et al. (2023)	B.-O. Demory et al. (2011)	S. Sulis et al. (2019)		
CoRoT-11b	$2456019.9622^{+0.00037}_{-0.00037}$	$6440.0^{+120.0}_{-120.0}$	$0.107^{+0.0005}_{-0.0005}$	$6.89^{+0.08}_{-0.08}$	$83.17^{+0.15}_{-0.15}$
	$2.99427803^{+4.9e-07}_{-4.9e-07}$	$4.22^{+0.23}_{-0.23}$	…	…	
	A. Kokori et al. (2023)	D. Gandolfi et al. (2010)	D. Gandolfi et al. (2010)		
CoRoT-19b	$2455701.7154^{+0.00048}_{-0.00048}$	$6090.0^{+70.0}_{-70.0}$	$0.0786^{+0.0004}_{-0.0004}$	$6.7^{+0.1}_{-0.1}$	$88.0^{+0.7}_{-0.7}$
	$3.8971379^{+1.6e-06}_{-1.6e-06}$	$4.07^{+0.03}_{-0.03}$	…	…	
	A. Kokori et al. (2023)	E. W. Guenther et al. (2012)	E. W. Guenther et al. (2012)		
CoRoT-1b	$2456268.99119^{+0.00012}_{-0.00012}$	$5950.0^{+150.0}_{-150.0}$	$0.1388^{+0.0021}_{-0.0021}$	$4.92^{+0.08}_{-0.08}$	$85.1^{+0.5}_{-0.5}$
	$1.50896877^{+8e-08}_{-8e-08}$	$4.25^{+0.3}_{-0.3}$	…	…	
	E. S. Ivshina & J. N. Winn (2022)	P. Barge et al. (2008)	P. Barge et al. (2008)		
CoRoT-2b	$2457683.44158^{+0.00016}_{-0.00016}$	$5696.0^{+70.0}_{-70.0}$	$0.1667^{+0.0006}_{-0.0006}$	$6.7^{+0.03}_{-0.03}$	$87.84^{+0.1}_{-0.1}$
	$1.74299705^{+1.5e-07}_{-1.5e-07}$	$4.42^{+0.12}_{-0.12}$	…	…	
	A. Kokori et al. (2023)	C. Chavero et al. (2010)	R. Alonso et al. (2008a)		

References. P. Barge et al. (2008); R. Alonso et al. (2008a); M. Deleuil et al. (2008); R. W. Noyes et al. (2008); D. M. Wilson et al. (2008); C. M. Johns-Krull et al. (2008); G. Torres et al. (2008); A. Pál et al. (2008); C. J. Burke et al. (2008); D. Pollacco et al. (2008); D. R. Anderson et al. (2008); P. R. McCullough et al. (2008); M. Gillon et al. (2009a); I. Skillen et al. (2009); R. G. West et al. (2009b); M. Barbieri et al. (2009); H. Rauer et al. (2009); A. H. M. J. Triaud et al. (2009); R. G. West et al. (2009a); A. Shporer et al. (2009a); C. Hellier et al. (2009b); J. A. Johnson et al. (2009b); L. Hebb et al. (2009); J. A. Carter et al. (2009); T. A. Lister et al. (2009); D. W. Latham et al. (2009); J. D. Hartman et al. (2009); G. Á. Bakos et al. (2009); Y. C. Joshi et al. (2009); D. J. Christian et al. (2009); C. Hellier et al. (2009a); D. Charbonneau et al. (2009); C. Chavero et al. (2010); D. Queloz et al. (2010); F. Bouchy et al. (2010); B. Smalley et al. (2010); D. Gandolfi et al. (2010); P. F. L. Maxted et al. (2010a); L. Hebb et al. (2010); D. R. Anderson et al. (2010); G. Á. Bakos et al. (2010); D. G. Koch et al. (2010b); E. W. Dunham et al. (2010); D. W. Latham et al. (2010); G. Torres et al. (2010); R. A. Street et al. (2010); L. A. Buchhave et al. (2010); C. Hellier et al. (2010); G. Kovács et al. (2010); D. M. Kipping et al. (2010); A. Pál et al. (2010); A. Collier Cameron et al. (2010); J. Southworth et al. (2010); N. Narita et al. (2010); P. F. L. Maxted et al. (2010b); S. C. C. Barros et al. (2011); B. Smalley et al. (2011); J. Southworth et al. (2011); A. H. M. J. Triaud et al. (2011); F. Faedi et al. (2011); D. R. Anderson et al. (2011b); M. Gillon et al. (2011); B.-O. Demory et al. (2011); C. Hellier et al. (2011); A. Santerne et al. (2011); E. K. Simpson et al. (2011); T. Chan et al. (2011); B. Enoch et al. (2011a); D. M. Kipping et al. (2011); P. Nutzman et al. (2011); J. D. Hartman et al. (2011b); J. L. Christiansen et al. (2011); J. D. Hartman et al. (2011a); A. W. Howard et al. (2011); L. A. Buchhave et al. (2011); B. Béky et al. (2011); J. A. Johnson et al. (2011); H. A. Knutson et al. (2011); W. J. Borucki et al. (2011); G. Mandushev et al. (2011); J. D. Hartman et al. (2011c); G. Á. Bakos et al. (2011); W. D. Cochran et al. (2011); J. J. Fortney et al. (2011); J.-M. Désert et al. (2011); B. Enoch et al. (2011b); K. A. Alsubai et al. (2011); A. Fukui et al. (2011); P. F. L. Maxted et al. (2011); E. W. Guenther et al. (2012); M. Lendl et al. (2012); X. Bonfils et al. (2012); B. Smalley et al. (2012); A. M. S. Smith et al. (2012); G. Á. Bakos et al. (2012); J. D. Hartman et al. (2012); S. N. Quinn et al. (2012); Z. K. Berta et al. (2012); A. W. Howard et al. (2012); M. L. Bryan et al. (2012); T. G. Beatty et al. (2012); R. J. Siverd et al. (2012); D. R. Anderson et al. (2012); C. Hellier et al. (2012); B. Sato et al. (2012); G. Hébrard et al. (2013); L. Mancini et al. (2013c); F. Faedi et al. (2013); A. H. M. J. Triaud et al. (2013); M. Gillon et al. (2013); A. M. S. Smith et al. (2013); M. Mohler-Fischer et al. (2013); I. Boisse et al. (2013); Y. Gómez Maqueo Chew et al. (2013); K. Penev et al. (2013); D. Bayliss et al. (2013); L. M. Weiss et al. (2013); S. Faigler et al. (2013); J. Pepper et al. (2013); R. Sanchis-Ojeda et al. (2013); K. Masuda et al. (2013); N. P. Gibson et al. (2013a); J. Southworth et al. (2013); P. F. L. Maxted et al. (2013a); M. Gillon et al. (2014); L. Delrez et al. (2014); M. Lendl et al. (2014); A. M. S. Smith et al. (2014); M. Neveu-VanMalle et al. (2014); K. A. Collins et al. (2014); A. Bieryla et al. (2014); X.-b. Wang et al. (2014); J. D. Hartman et al. (2014); G. Zhou et al. (2014); A. Jordán et al. (2014); G. Maciejewski et al. (2014); J. Wang et al. (2014); G. Morello et al. (2014); I. Wong et al. (2014); H. A. Knutson et al. (2014b); M. Endl et al. (2014); N. Nikolov et al. (2014); C. Hellier et al. (2014); L. I. Biddle et al. (2014); J. Southworth et al. (2014); D. R. Anderson et al. (2014b, 2014a); D. J. A. Brown et al. (2014); D. R. Anderson et al. (2015a); J. M. Almenara et al. (2015); M. Damasso et al. (2015); A. Sozzetti et al. (2015); S. Ciceri et al. (2015); J. Lillo-Box et al. (2015); V. Bourrier et al. (2015); L. Mancini et al. (2015b); F. Motalebi et al. (2015); G. Á. Bakos et al. (2015a); J. D. Hartman et al. (2015b); A. Bieryla et al. (2015); C. Hellier et al. (2015); R. Brahm et al. (2015); C. X. Huang et al. (2015); J. D. Hartman et al. (2015c, 2015a); A. M. S. Smith (2015); A. Vanderburg et al. (2015); I. J. M. Crossfield et al. (2015); L. J. Esteves et al. (2015); B. T. Montet et al. (2015); B. J. Fulton et al. (2015); E. A. Petigura et al. (2015); I. Wong et al. (2015); G. Á. Bakos et al. (2015b); A. H. M. J. Triaud et al. (2015); J. Southworth et al. (2015b); Z. K. Berta-Thompson et al. (2015); D. Juncher et al. (2015); R. G. West et al. (2016); P. F. L. Maxted et al. (2016); S. C. C. Barros et al. (2016); E. Sedaghati et al. (2016); J. D. Eastman et al. (2016); R. Brahm et al. (2016); S. Hoyer et al. (2016); J. E. Rodriguez et al. (2016); M. C. Johnson et al. (2016); M. Rabus et al. (2016); N. Espinoza et al. (2016); K. Penev et al. (2016); S. Grziwa et al. (2016); G. Zhou et al. (2016); M. de Val-Borro et al. (2016); J. D. Hartman et al. (2016); G. Maciejewski et al. (2016b); A. W. Mann et al. (2016); A. Fukui et al. (2016); T. D. Morton et al. (2016); B. C. Addison et al. (2016); F. Dai et al. (2016); I. Wong et al. (2016); A. Santerne et al. (2016); T. Hirano et al. (2016); E. Sinukoff et al. (2016); A. Vanderburg et al. (2016); D. F. Evans et al. (2016); I. J. M. Crossfield et al. (2016); S. Ciceri et al. (2016); J. Southworth et al. (2016); L. Delrez et al. (2016); L. Mancini et al. (2016b); R. B. Kuhn et al. (2016); L. Mancini et al. (2016a); J. Southworth & D. F. Evans (2016); K. L. Hay et al. (2016); J. J. Spake et al. (2016); O. D. Turner et al. (2016); T. Močnik et al. (2016); K. W. F. Lam et al. (2017); A. Wyttenbach et al. (2017); A. S. Bonomo et al. (2017); E. Palle et al. (2017); D. R. Anderson et al. (2017); G. J. J. Talens et al. (2017); K. A. Collins et al. (2017); N. Crouzet et al. (2017); T. E. Oberst et al. (2017); P. Eigmüller et al. (2017); D. J. Stevens et al. (2017); K. Alsubai et al. (2017); G. Zhou et al. (2017); J. Pepper et al. (2017); I. J. M. Crossfield et al. (2017); K. K. McLeod et al. (2017); T. G. Beatty et al. (2017b); A. Shporer et al. (2017); M. B. Lund et al. (2017); C. D. Dressing et al. (2017); A. Vanderburg et al. (2017); S. K. Grunblatt et al. (2017); P. Niraula et al. (2017); B. Benneke et al. (2017); C. Hellier et al. (2017); A. H. M. J. Triaud et al. (2017); J. Bento et al. (2017); J. Kirk et al. (2017); T. Močnik et al. (2017a, 2017b); L. Y. Temple et al. (2017); N. Espinoza et al. (2017);

M. Gillon et al. (2017); J. A. Dittmann et al. (2017); B. S. Gaudi et al. (2017); O. D. S. Demangeon et al. (2018); M. I. Jones et al. (2018); D. Gandolfi et al. (2018); D. R. Ciardi et al. (2018); R. J. Siverd et al. (2018); K. Alsubai et al. (2018); J. E. Rodriguez et al. (2018b); T. Henning et al. (2018); M. C. Johnson et al. (2018b); R. Brahm et al. (2018b); D. Bayliss et al. (2018a); T. Hirano et al. (2018); A. W. Mayo et al. (2018); T. J. David et al. (2018a); A. Chakraborty et al. (2018); L. Yu et al. (2018a); S. Wang et al. (2018); J. E. Rodriguez et al. (2018a); L. Yu et al. (2018b); T. J. David et al. (2018b); H. A. C. Giles et al. (2018); D. Bayliss et al. (2018b); R. Brahm et al. (2018a); J. Bento et al. (2018); V. Van Eylen et al. (2018); M. G. Soto et al. (2018); L. Y. Temple et al. (2018); M. C. Johnson et al. (2018a); L. Raynard et al. (2018); X.-Y. Wang et al. (2018); A. Burdanov et al. (2018); M. Esposito et al. (2019); M. Damasso et al. (2019); M. I. Jones et al. (2019); P. Eigmüller et al. (2019); R. Luque et al. (2019); S. Sulis et al. (2019); G. Zhou et al. (2019a); K. Ment et al. (2019); K. Barkaoui et al. (2019); S. Wang et al. (2019); J. D. Hartman et al. (2019); K. Alsubai et al. (2019a); Y.-H. Wang et al. (2019); A. Jordán et al. (2019); J. H. Livingston et al. (2019); L. Y. Temple et al. (2019a); A. Shporer et al. (2019); J. E. Rodriguez et al. (2019b); L. G. Bouma et al. (2019); K. Alsubai et al. (2019b); V. B. Kostov et al. (2019); N. Espinoza et al. (2019a); D. Johns et al. (2019); G. Zhou et al. (2019b); J. G. Winters et al. (2019); T. G. Beatty et al. (2019); S. N. Quinn et al. (2019); J. E. Rodriguez et al. (2019a); A. M. S. Smith et al. (2019); R. Vanderspek et al. (2019); C. I. Cañas et al. (2019); C. Hedges et al. (2019); A. Vanderburg et al. (2019); I. J. M. Crossfield et al. (2019); E. Kruse et al. (2019); M. Lendl et al. (2019); C. Hellier et al. (2019b); J. Korth et al. (2019); S. Raetz et al. (2019); K. Rice et al. (2019); O. D. Turner et al. (2019); D. Kipping et al. (2019); C. Hellier et al. (2019c); L. D. Nielsen et al. (2019); J. I. Vines et al. (2019); D. Kossakowski et al. (2019); C. Hellier et al. (2019a); L. Y. Temple et al. (2019b); M. N. Günther et al. (2019); P. Gajdoš et al. (2019); P. Dorval et al. (2020); L. D. Nielsen et al. (2020a); G. Hébrard et al. (2020); B.-O. Demory et al. (2020); M. Lendl et al. (2020); S. Dreizler et al. (2020); E. A. Petigura et al. (2020); N. Crouzet et al. (2020); G. Stefansson et al. (2020); A. Jordán et al. (2020b); J. D. Hartman et al. (2020); P. A. Dalba et al. (2020); B. F. Cooke et al. (2020); R. Cloutier et al. (2020); J. Teske et al. (2020); M. Badenas-Agusti et al. (2020); I. Carleo et al. (2020); E. A. Gilbert et al. (2020); J. E. Rodriguez et al. (2020); S. R. Kane et al. (2020); C. I. Cañas et al. (2020); J. A. Burt et al. (2020); A. W. Mann et al. (2020); A. Jordán et al. (2020a); A. B. Davis et al. (2020); R. Brahm et al. (2020); L. G. Bouma et al. (2020); M. Schlecker et al. (2020); G. Maciejewski (2020); A. Shporer et al. (2020); C. X. Huang et al. (2020); S. Kanodia et al. (2020); J. C. Costes et al. (2020); L. D. Nielsen et al. (2020b); J. McCormac et al. (2020); N. Schanche et al. (2020); E. M. Bryant et al. (2020); J. S. Jenkins et al. (2020); R. Luque et al. (2021); I. Carleo et al. (2021); N. Grieves et al. (2021); A. Sozzetti et al. (2021); A. Leleu et al. (2021); M. G. Soto et al. (2021); M. Cointepas et al. (2021); O. D. S. Demangeon et al. (2021); F. Murgas et al. (2021); C. Moutou et al. (2021); D. Kossakowski et al. (2021); G. Zhou et al. (2021); W. C. Waalkes et al. (2021); B. M. Lindor et al. (2021); E. R. Newton et al. (2021); L. Sha et al. (2021); T. Daylan et al. (2021); B. M. Tofflemire et al. (2021); J. E. Rodriguez et al. (2021); M. J. Hobson et al. (2021); G. Á. Bakos et al. (2021); C. Hedges et al. (2021); J. A. Burt et al. (2021); N. Nikolov et al. (2021); S. Kanodia et al. (2021); N. Scarsdale et al. (2021); S. H. C. Cabot et al. (2021); I. Wong et al. (2021); B. C. Addison et al. (2021a); S. Palatnick et al. (2021); C. P. Wirth et al. (2021); J. Dong et al. (2021); G. Lacedelli et al. (2021); B. C. Addison et al. (2021b); H. P. Osborn et al. (2021); N. L. Eisner et al. (2021); P. Benni et al. (2021); T. Gan et al. (2021); A. Osborn et al. (2021); D. V. Martin et al. (2021); J. P. de Leon et al. (2021); L. Delrez et al. (2021); T. Trifonov et al. (2021); A. Panahi et al. (2022); A. Psaridi et al. (2022); H. P. Osborn et al. (2022); R. Luque et al. (2022); J. M. Almenara et al. (2022b); S. C. C. Barros et al. (2022b); E. Esparza-Borges et al. (2022); P. Chaturvedi et al. (2022); P.-C. König et al. (2022); L. M. Serrano et al. (2022); L. Naponiello et al. (2022); E. Knudstrup et al. (2022); J. M. Almenara et al. (2022a); V. Bourrier et al. (2022); M. Ikwut-Ukwa et al. (2022); R. A. Wittenmyer et al. (2022); J. G. Winters et al. (2022); Q. H. Tran et al. (2022); J. A. Patel & N. Espinoza (2022); J. L. Christiansen et al. (2022); C. Beard et al. (2022); G. Zhou et al. (2022); E. V. Turtelboom et al. (2022); C. I. Cañas et al. (2022); S. W. Yee et al. (2022); S. Vach et al. (2022); M. G. MacDougall et al. (2022); H. Diamond-Lowe et al. (2022); J. Dong et al. (2022); E. S. Ivshina & J. N. Winn (2022); M. Montalto et al. (2022); A. Khandelwal et al. (2022); T. Gan et al. (2022a); T. G. Wilson et al. (2022); P. Kabáth et al. (2022); O. Barragán et al. (2022); T. Gan et al. (2022b); G. Dransfield et al. (2022); A. Khandelwal et al. (2023); S. C. C. Barros et al. (2023); A. Psaridi et al. (2023); A. S. Bonomo et al. (2023); J. Orell-Miquel et al. (2023); F. Dai et al. (2023a); J. Van Zandt et al. (2023); D. Oddo et al. (2023); J. T. Clark et al. (2023); R. Brahm et al. (2023); M. Kunimoto et al. (2023); P. Mistry et al. (2023b); L. C. Powers et al. (2023); F. Dai et al. (2023b); S. W. Yee et al. (2023); A. Kokori et al. (2023); D. G. Jackson et al. (2023); K. W. F. Lam et al. (2023); C. Magliano et al. (2023a); E. Knudstrup et al. (2023); F. Hawthorn et al. (2023); P. Mistry et al. (2023a); J. E. Rodriguez et al. (2023); L. Sha et al. (2023).

(This table is available in its entirety in machine-readable form in the online article.)

Table 8
Updated Ephemerides and Data Sources

Planet	T_0 (BJD_{TDB}) P (days)	Transit Duration (hr)	References for Literature Data Used
55Cnce	2459554.20747 ± 0.0001 0.73654635 ± 1.4e-07	1.55757 ± 0.00072	J. N. Winn et al. (2011b)
CoRoT-11b	2456067.8706 ± 0.00034 2.99427799 ± 4.5e-07	2.4938 ± 0.0026	D. Gandolfi et al. (2010)
CoRoT-19b	2456551.29156 ± 0.00045 3.89713846 ± 8.8e-07	4.7012 ± 0.0018	E. W. Guenther et al. (2012)
CoRoT-1b	2455111.612574 ± 6.7e-05 1.508968475 ± 5.8e-08	2.5088 ± 0.0051	M. Gillon et al. (2009b), J. L. Bean (2009), J. D. Turner et al. (2016), C. von Essen et al. (2019a)
CoRoT-2b	2458363.21037 ± 0.00012 1.742997 ± 1.1e-07	2.2764 ± 0.0013	R. Alonso et al. (2008a), O. Öztürk & A. Erdem (2019)

Notes. Note that since we keep the orbital parameters fixed in our analysis, the duration uncertainties are only due to the uncertainties on the R_p/R_s parameter.

References: R. Alonso et al. (2004); D. Charbonneau et al. (2006); P. R. McCullough et al. (2006); F. T. O'Donovan et al. (2006); M. J. Holman et al. (2006); M. Gillon et al. (2007a, 2007b); J. N. Winn et al. (2007a, a); D. Charbonneau et al. (2007); F. T. O'Donovan et al. (2007); M. J. Holman et al. (2007); G. Torres et al. (2007); G. Mandushev et al. (2007); G. Á. Bakos et al. (2007a); G. Kovács et al. (2007); C. J. Burke et al. (2007); G. Á. Bakos et al. (2007b); A. Collier Cameron et al. (2007); A. Shporer et al. (2007); N. Narita et al. (2007); R. Alonso et al. (2008a); M. Gillon et al. (2008); R. Alonso et al. (2008b); J. L. Bean & A. Seifahrt (2008); G. Hébrard et al. (2008); M. Deleuil et al. (2008); N. P. Gibson et al. (2008); R. W. Noyes et al. (2008); J. N. Winn et al. (2008a); D. M. Wilson et al. (2008); I. Ribas et al. (2008); A. Pál et al. (2008); J. Irwin et al. (2008); E. Miller-Ricci et al. (2008); J. N. Winn et al. (2008b); J. A. Johnson et al. (2008); C. J. Burke et al. (2008); D. Pollacco et al. (2008); D. R. Anderson et al. (2008); N. Narita et al. (2008); P. R. McCullough et al. (2008); M. Gillon et al. (2009c,a); I. Skillen et al. (2009); R. G. West et al. (2009b); M. Barbieri et al. (2009); M. Gillon et al. (2009b); J. L. Bean (2009); C. Cáceres et al. (2009); M. Rabus et al. (2009); R. G. West et al. (2009a); S. Raetz et al. (2009a, 2009b); A. Shporer et al. (2009a); C. Hellier et al. (2009b); A. Sozzetti et al. (2009); P. Nutzman et al. (2009); J. N. Winn et al. (2009a); L. Hebb et al. (2009); A. Shporer et al. (2009b); J. A. Carter et al. (2009); J. N. Winn et al. (2009b); A. Pál et al. (2009); N. P. Gibson et al. (2009); T. A. Lister et al. (2009); H. A. Knutson et al. (2009); D. W. Latham et al. (2009); J. D. Hartman et al. (2009); G. Á. Bakos et al. (2009); Y. C. Joshi et al. (2009); D. J. Christian et al. (2009); J. Southworth et al. (2009); C. Hellier et al. (2009a); J. A. Johnson et al. (2009a); D. Mislis et al. (2010); D. Queloz et al. (2010); F. Bouchy et al. (2010); B. Smalley et al. (2010); D. Gandolfi et al. (2010); L. Hebb et al. (2010); D. R. Anderson et al. (2010); J. L. Christiansen et al. (2010); G. Á. Bakos et al. (2010); A. Tripathi et al. (2010); G. Torres et al. (2010); J. A. Dittmann et al. (2010); C. J. Burke et al. (2010); R. A. Street et al. (2010); L. A. Buchhave et al. (2010); E. Agol et al. (2010); G. Kovács et al. (2010); D. M. Kipping et al. (2010); N. P. Gibson et al. (2010); M. Hrudková et al. (2010); G. Maciejewski et al. (2010); K. D. Colón et al. (2010); J. Southworth et al. (2010); N. Narita et al. (2010); P. F. L. Maxted et al. (2010b); S. C. C. Barros et al. (2011); B. Smalley et al. (2011); E. Herrero et al. (2011); V. Nascimbeni et al. (2011b); G. Maciejewski et al. (2011b); A. H. M. J. Triaud et al. (2011); F. Faedi et al. (2011); D. R. Anderson et al. (2011b); V. Nascimbeni et al. (2011a); M. Gillon et al. (2011); G. Maciejewski et al. (2011c); C. Hellier et al. (2011); E. K. Simpson et al. (2011); J. N. Winn et al. (2011a); T. Chan et al. (2011); B. J. Fulton et al. (2011); B. Enoch et al. (2011a); D. M. Kipping et al. (2011); D. Dragomir et al. (2011); P. Nutzman et al. (2011); J. D. Hartman et al. (2011b); J. L. Christiansen et al. (2011); J. D. Hartman et al. (2011a); J.-P. Beaulieu et al. (2011); L. A. Buchhave et al. (2011); R. Sanchis-Ojeda et al. (2011); B. Béky et al. (2011); J. A. Johnson et al. (2011); Z. K. Berta et al. (2011); J. N. Winn et al. (2011b); G. Mandushev et al. (2011); J. D. Hartman et al. (2011c); G. Á. Bakos et al. (2011); B. Enoch et al. (2011b); G. Maciejewski et al. (2011a); A. Pál et al. (2011); A. M. S. Smith et al. (2011); K. A. Alsubai et al. (2011); A. Fukui et al. (2011); P. F. L. Maxted et al. (2011); D. R. Anderson et al. (2011a); E. W. Guenther et al. (2012); N. Nikolov et al. (2012); M. Gillon et al. (2012); M. Lendl et al. (2012); B. Smalley et al. (2012); A. M. S. Smith et al. (2012); J. W. Lee et al. (2012); G. Á. Bakos et al. (2012); J. D. Hartman et al. (2012); S. N. Quinn et al. (2012); K. O. Todorov et al. (2012); S. Hoyer et al. (2012); A. W. Howard et al. (2012); H. A. Knutson et al. (2012); K. B. Stevenson et al. (2012); T. G. Beatty et al. (2012); C. A. Haswell et al. (2012); R. J. Siverd et al. (2012); S. C. C. Barros et al. (2012); J. Southworth et al. (2012a); D. R. Anderson et al. (2012); J. Southworth et al. (2012c); M. T. Eibe et al. (2012); C. Hellier et al. (2012); J. Southworth et al. (2012b); M. Montalto et al. (2012); J. A. Dittmann et al. (2012); B. Sato et al. (2012); P. V. Sada et al. (2012); K. B. W. Harpsøe et al. (2013); V. Nascimbeni et al. (2013); G. Hébrard et al. (2013); L. Mancini et al. (2013c); F. Faedi et al. (2013); A. H. M. J. Triaud et al. (2013); G. Maciejewski et al. (2013a); M. Lendl et al. (2013); M. Gillon et al. (2013); A. M. S. Smith et al. (2013); N. Nikolov et al. (2013); E. Covino et al. (2013); C. von Essen et al. (2013); S. Ciceri et al. (2013); M. Mohler-Fischer et al. (2013); I. Boisse et al. (2013); Y. Gómez Maqueo Chew et al. (2013); K. Penev et al. (2013); G. Maciejewski et al. (2013b); P. Kundurthy et al. (2013); A. C. Becker et al. (2013); J. D. Fraine et al. (2013); N. K. Lewis et al. (2013); A. Fukui et al. (2013); J. L. Bean et al. (2013); D. Dragomir et al. (2013); J. Pepper et al. (2013); D. Deming et al. (2013); M. R. Line et al. (2013); J. Blecic et al. (2013); J. D. Turner et al. (2013); P. F. L. Maxted et al. (2013b); J. Tregloan-Reed et al. (2013); N. P. Gibson et al. (2013a); L. Mancini et al. (2013b); S. C. C. Barros et al. (2013); S. Hoyer et al. (2013); J. Southworth et al. (2013); C. M. Huitson et al. (2013); L. Mancini et al. (2013a); D. K. Sing et al. (2013); N. P. Gibson et al. (2013b); P. F. L. Maxted et al. (2013a); X.-B. Wang et al. (2013); L. Mancini et al. (2014a); M. Gillon et al. (2014); G. Chen et al. (2014); F. Murgas et al. (2014); L. Delrez et al. (2014); C. Cáceres et al. (2014); M. Lendl et al. (2014); L. Mancini et al. (2014b); A. M. S. Smith et al. (2014); M. Neveu-VanMalle et al. (2014); K. A. Collins et al. (2014); A. Bieryla et al. (2014); X.-b. Wang et al. (2014); J. D. Hartman et al. (2014); G. Zhou et al. (2014); K. B. Stevenson et al. (2014); A. Jordán et al. (2014); V. Granata et al. (2014); G. Maciejewski et al. (2014); T. G. Beatty et al. (2014); V. Van Grootel et al. (2014); A. Fukui et al. (2014); B. C. Addison et al. (2014); M. Zhao et al. (2014); C. Hellier et al. (2014); M. Seeliger et al. (2014); L. Mancini et al. (2014c); J. Southworth et al. (2014); D. R. Anderson et al. (2014b); H. A. Knutson et al. (2014a); K. A. Pearson et al. (2014); D. R. Anderson et al. (2014a); D. J. A. Brown et al. (2014); D. R. Anderson et al. (2015a); G. Maciejewski et al. (2015); L. Mancini et al. (2015a); M. Mallonn et al. (2015b); L. Mancini et al. (2015b); M. Mallonn et al. (2015a); C. von Essen et al. (2015); G. Á. Bakos et al. (2015a); J. D. Hartman et al. (2015b); A. Bieryla et al. (2015); C. Hellier et al. (2015); R. Brahm et al. (2015); J. D. Hartman et al. (2015c,2007c); Ö. Baştürk et al. (2015); A. M. S. Smith (2015); D. R. Anderson et al. (2015b); B. J. Fulton et al. (2015); J. A. Kammer et al. (2015); I. Wong et al. (2015); G. Á. Bakos et al. (2015b); L. Kreidberg et al. (2015); D. Dragomir et al. (2015); N. Narita et al. (2015); X. Huang et al. (2015); T. C. Hinse et al. (2015); R. Petrucci et al. (2015); D. K. Sing et al. (2015); N. Nikolov et al. (2015); J. Southworth et al. (2015a); D. Mislis et al. (2015); J. Tregloan-Reed et al. (2015); M. Seeliger et al. (2015); S. Raetz et al. (2015); J. Southworth et al. (2015b); Z. K. Berta-Thompson et al. (2015); D. Juncher et al. (2015); L.-L. Sun et al. (2015); H. Parviainen et al. (2016); R. G. West et al. (2016); M. Neveu--VanMalle et al. (2016); M. Lendl et al. (2016); G. Maciejewski et al. (2016a); M. Mallonn & K. G. Strassmeier (2016); P. F. L. Maxted et al. (2016); S. C. C. Barros et al. (2016); E. Sedaghati et al. (2016); I.-G. Jiang et al. (2016); J. D. Eastman et al. (2016); R. Brahm et al. (2016); S. Hoyer et al. (2016); J. E. Rodriguez et al.

(2016); M. Rabus et al. (2016); N. Espinoza et al. (2016); K. Penev et al. (2016); S. Grziwa et al. (2016); G. Zhou et al. (2016); M. de Val-Borro et al. (2016); J. D. Hartman et al. (2016); G. Maciejewski et al. (2016b); K. B. Stevenson et al. (2016); S. Villanueva et al. (2016); I. Wong et al. (2016); D. Kjurkchieva et al. (2016); J. Southworth et al. (2016); L. Delrez et al. (2016); J. D. Turner et al. (2016); L. Mancini et al. (2016b); R. B. Kuhn et al. (2016); L. Mancini et al. (2016a); J. Kirk et al. (2016); K. L. Hay et al. (2016); J. J. Spake et al. (2016); P. V. Sada & F. G. Ramón-Fox (2016); O. D. Turner et al. (2016); K. W. F. Lam et al. (2017); G. Chen et al. (2017); M. Esposito et al. (2017); E. Palle et al. (2017); M. Lendl et al. (2017b); D. R. Anderson et al. (2017); F. Murgas et al. (2017); M. Lendl et al. (2017a); L. Sun et al. (2017); K. A. Collins et al. (2017); N. Crouzet et al. (2017); T. E. Oberst et al. (2017); D. J. Stevens et al. (2017); K. Alsubai et al. (2017); G. Zhou et al. (2017); J. Pepper et al. (2017); K. K. McLeod et al. (2017); K. C. Patra et al. (2017); T. G. Beatty et al. (2017b); Y.-H. Wang et al. (2017); C. M. Huitson et al. (2017); M. B. Lund et al. (2017); S. K. Nugroho et al. (2017); T. G. Beatty et al. (2017a); J. K. Barstow et al. (2017); B. Benneke et al. (2017); A. N. Wilkins et al. (2017); G. Stefansson et al. (2017); D. J. A. Brown et al. (2017); L. Mancini et al. (2017); C. Hellier et al. (2017); A. H. M. J. Triaud et al. (2017); J. Bento et al. (2017); J. Kirk et al. (2017); T. Louden et al. (2017); M. Moyano et al. (2017); L. Y. Temple et al. (2017); J. D. Turner et al. (2017); M. Gillon et al. (2017); J. A. Dittmann et al. (2017); B. S. Gaudi et al. (2017); E. Sedaghati et al. (2017); Ç. Püsküllü et al. (2017); S. K. Kozłowski et al. (2017); H. R. Wakeford et al. (2017); O. D. S. Demangeon et al. (2018); L. Mancini et al. (2018); G. Chen et al. (2018); X. Alexoudi et al. (2018); R. J. Siverd et al. (2018); K. Alsubai et al. (2018); G. Bruno et al. (2018a); T. Henning et al. (2018); M. Zhang et al. (2018); M. C. Johnson et al. (2018b); R. Brahm et al. (2018b); A. Tsiaras et al. (2018); G. Bruno et al. (2018b); S. Wang et al. (2018); T. M. Evans et al. (2018); G. Maciejewski et al. (2018); Z. Sun et al. (2018); R. Petrucci et al. (2018); J. Kirk et al. (2018); L. Delrez et al. (2018); J. Tregloan-Reed et al. (2018); D. Bayliss et al. (2018b); J. Bento et al. (2018); E. N. Sokov et al. (2018); L. Y. Temple et al. (2018); M. C. Johnson et al. (2018a); J. Southworth et al. (2018); L. Raynard et al. (2018); N. Nikolov et al. (2018); X.-Y. Wang et al. (2018); A. Burdanov et al. (2018); M. Mallonn et al. (2019b); F. Murgas et al. (2019); P. Eigmüller et al. (2019); N. Casasayas-Barris et al. (2019); C. von Essen et al. (2019a, 2019b); K. O. Todorov et al. (2019); G. Zhou et al. (2019a); K. Ment et al. (2019); K. Barkaoui et al. (2019); J. D. Hartman et al. (2019); K. Alsubai et al. (2019a); Y.-H. Wang et al. (2019); M. R. Kosiarek et al. (2019); L. Y. Temple et al. (2019a); J. E. Rodriguez et al. (2019b); K. Alsubai et al. (2019b); N. Espinoza et al. (2019a); D. K. Sing et al. (2019); G. Zhou et al. (2019b); J. Kirk et al. (2019); J. E. Rodriguez et al. (2019a); M. Mallonn (2019); C. I. Cañas et al. (2019); I. J. M. Crossfield et al. (2019); M. Lendl et al. (2019); C. Hellier et al. (2019b); N. Espinoza et al. (2019b); S. Raetz et al. (2019); L. Mancini et al. (2019); O. D. Turner et al. (2019); O. Öztürk & A. Erdem (2019); C. Hellier et al. (2019c); L. D. Nielsen et al. (2019); J. I. Vines et al. (2019); C. Hellier et al. (2019a); L. Y. Temple et al. (2019b); J. Southworth et al. (2019); A. Tsiaras et al. (2019); B. Addison et al. (2019); M. Mallonn et al. (2019a); L. Mancini et al. (2020); P. Dorval et al. (2020); P. Cortés-Zuleta et al. (2020); C. von Essen et al. (2020); G. Hébrard et al. (2020); F. Murgas et al. (2020); B.-O. Demory et al. (2020); G. Chen et al. (2020); F. Yan et al. (2020); M. Lendl et al. (2020); E. A. Petigura et al. (2020); I. C. Weaver et al. (2020); N. Crouzet et al. (2020); I. J. Kain et al. (2020); G. Stefansson et al. (2020); E. Garhart et al. (2020); K. C. Patra et al. (2020); J. D. Hartman et al. (2020); H. R. Wakeford et al. (2020); X. Guo et al. (2020); B. F. Cooke et al. (2020); V. K. Mannaday et al. (2020); N. Skaf et al. (2020); W. Pluriel et al. (2020); H. Diamond-Lowe et al. (2020); Y. Chachan et al. (2020); T. G. Beatty et al. (2020); A. Jordán et al. (2020a); L. O. Anisman et al. (2020); R. Brahm et al. (2020); Q. Changeat et al. (2020); G. Maciejewski (2020); S. W. Yee et al. (2020); M. Mansfield et al. (2020); C. X. Huang et al. (2020); J. C. Costes et al. (2020); J. McCormac et al. (2020); Ö. Baştürk et al. (2020); L. Alderson et al. (2020); N. Schanche et al. (2020); E. M. Bryant et al. (2020); D. Ehrenreich et al. (2020); R. T. Zellem et al. (2020); A. Bonfanti et al. (2021); N. Grieves et al. (2021); G. Maciejewski et al. (2021); G. Zhou et al. (2021); K. H. Yip et al. (2021); W. C. Waalkes et al. (2021); T. Mikal-Evans et al. (2021); G. Guilluy et al. (2021); B. Edwards et al. (2021a); B. M. Lindor et al. (2021); L.-H. Su et al. (2021); P. W. Cauley et al. (2021); R. I. Dawson et al. (2021); J. E. Rodriguez et al. (2021); L. V. Mugnai et al. (2021); G. Á. Bakos et al. (2021); S. Saha et al. (2021); J. Kirk et al. (2021); J. A. Burt et al. (2021); A. Duck et al. (2021); N. Scarsdale et al. (2021); S. H. C. Cabot et al. (2021); I. Wong et al. (2021); B. Edwards et al. (2021c); G. Chen et al. (2021); J. Dong et al. (2021); X.-Y. Wang et al. (2021); M. J. F. Fowler et al. (2021); H. P. Osborn et al. (2021); T. J. Bell et al. (2021); B. Edwards et al. (2021b); P. Benni et al. (2021); P. Spyratos et al. (2021); L. Delrez et al. (2021); M. A. Salisbury et al. (2021); D. P. Sariya et al. (2021); Y. Aladağ et al. (2021); S. C. C. Barros et al. (2022a); A. Deline et al. (2022); A. Panahi et al. (2022); H. P. Osborn et al. (2022); K. Biazzo et al. (2022); L. Mancini et al. (2022a); Y. Zhang et al. (2022); K. Jones et al. (2022); L. M. Serrano et al. (2022); G. Maciejewski et al. (2022); H. Parviainen et al. (2022); S. Hoyer et al. (2022); M. Ikwut-Ukwa et al. (2022); N. A-thano et al. (2022); A. Pai Asnodkar et al. (2022); L. Bai et al. (2022); E. M. May et al. (2022); J. D. Turner et al. (2022); C. I. Cañas et al. (2022); S. W. Yee et al. (2022); L. Kreidberg et al. (2022); C. D. McGruder et al. (2022); N. H. Allen et al. (2022); G. Chen et al. (2022); J. Brande et al. (2022); M. Damiano et al. (2022); S. Vissapragada et al. (2022); G. Maciejewski (2022); L. Mancini et al. (2022b); M. Montalto et al. (2022); A. Khandelwal et al. (2022); E. Sonbas et al. (2022); V. Panwar et al. (2022a); E. Ahrer et al. (2022); L. Kaye et al. (2022); Ö. Baştürk et al. (2022); L. Alderson et al. (2022); N. Watanabe et al. (2022); Z. Garai et al. (2022); P. Kabáth et al. (2022); P. F. L. Maxted et al. (2022); O. Barragán et al. (2022); G. Dransfield et al. (2022); J. Southworth et al. (2022); V. Panwar et al. (2022b); M. I. Saeed et al. (2022); J.-V. Harre et al. (2023); M. Steiner et al. (2023); S. C. C. Barros et al. (2023); V. Nascimbeni et al. (2023); M. M. Murphy et al. (2023); D. Oddo et al. (2023); R. Brahm et al. (2023); M. Kunimoto et al. (2023); L. C. Powers et al. (2023); C. D. McGruder et al. (2023); N. A-thano et al. (2023); G. Maciejewski et al. (2023); R. C. Frazier et al. (2023); J. Lubin et al. (2023); S. W. Yee et al. (2023); D. G. Jackson et al. (2023); L. Sun et al. (2023); M. El Moutamid et al. (2023); Ö. Baştürk et al. (2023); J. E. Rodriguez et al. (2023); E. Ahrer et al. (2023); Q. Ouyang et al. (2023); M. Radica et al. (2023); E.-M. Ahrer et al. (2023); A. D. Feinstein et al. (2023); J. Korth & H. Parviainen (2023).

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References

Addison, B., Wright, D. J., Wittenmyer, R. A., et al. 2019, PASP, 131, 115003
Addison, B. C., Knudstrup, E., Wong, I., et al. 2021a, AJ, 162, 292
Addison, B. C., Tinney, C. G., Wright, D. J., & Bayliss, D. 2014, ApJ, 792, 112
Addison, B. C., Tinney, C. G., Wright, D. J., & Bayliss, D. 2016, ApJ, 823, 29
Addison, B. C., Wright, D. J., Nicholson, B. A., et al. 2021b, MNRAS, 502, 3704
Agol, E., Cowan, N. B., Knutson, H. A., et al. 2010, ApJ, 721, 1861
Agol, E., & Fabrycky, D. C. 2018, in Handbook of Exoplanets, ed. H. J. Deeg & J. A. Belmonte (Springer), 7
Ahrer, E., Wheatley, P. J., Gandhi, S., et al. 2023, MNRAS, 521, 5636
Ahrer, E., Wheatley, P. J., Kirk, J., et al. 2022, MNRAS, 510, 4857
Ahrer, E.-M., Stevenson, K. B., Mansfield, M., et al. 2023, Natur, 614, 653
Aladağ, Y., Akyüz, A., Baştürk, Ö., et al. 2021, TJAA, 2, 28
Alderson, L., Kirk, J., López-Morales, M., et al. 2020, MNRAS, 497, 5182
Alderson, L., Wakeford, H. R., MacDonald, R. J., et al. 2022, MNRAS, 512, 4185
Alexoudi, X., Mallonn, M., von Essen, C., et al. 2018, A&A, 620, A142
Allen, N. H., Espinoza, N., Jordán, A., et al. 2022, AJ, 164, 153
Almenara, J. M., Bonfils, X., Forveille, T., et al. 2022a, A&A, 667, L11
Almenara, J. M., Bonfils, X., Otegi, J. F., et al. 2022b, A&A, 665, A91
Almenara, J. M., Damiani, C., Bouchy, F., et al. 2015, A&A, 575, A71
Alonso, R., Auvergne, M., Baglin, A., et al. 2008a, A&A, 482, L21
Alonso, R., Barbieri, M., Rabus, M., et al. 2008b, A&A, 487, L5
Alonso, R., Brown, T. M., Torres, G., et al. 2004, ApJL, 613, L153
Alsubai, K., Mislis, D., Tsvetanov, Z. I., et al. 2017, AJ, 153, 200
Alsubai, K., Tsvetanov, Z. I., Latham, D. W., et al. 2018, AJ, 155, 52
Alsubai, K., Tsvetanov, Z. I., Latham, D. W., et al. 2019a, AJ, 157, 74
Alsubai, K., Tsvetanov, Z. I., Pyrzas, S., et al. 2019b, AJ, 157, 224
Alsubai, K. A., Parley, N. R., Bramich, D. M., et al. 2011, MNRAS, 417, 709
Anderson, D. R., Barros, S. C. C., Boisse, I., et al. 2011a, PASP, 123, 555
Anderson, D. R., Brown, D. J. A., Collier Cameron, A., et al. 2014a, arXiv:1410.3449
Anderson, D. R., Collier Cameron, A., Delrez, L., et al. 2014b, MNRAS, 445, 1114

Anderson, D. R., Collier Cameron, A., Delrez, L., et al. 2017, A&A, 604, A110
Anderson, D. R., Collier Cameron, A., Gillon, M., et al. 2012, MNRAS, 422, 1988
Anderson, D. R., Collier Cameron, A., Hellier, C., et al. 2011b, A&A, 531, A60
Anderson, D. R., Collier Cameron, A., Hellier, C., et al. 2015a, A&A, 575, A61
Anderson, D. R., Gillon, M., Hellier, C., et al. 2008, MNRAS, 387, L4
Anderson, D. R., Hellier, C., Gillon, M., et al. 2010, ApJ, 709, 159
Anderson, D. R., Triaud, A. H. M. J., Turner, O. D., et al. 2015b, ApJL, 800, L9
Anisman, L. O., Edwards, B., Changeat, Q., et al. 2020, AJ, 160, 233
Astropy Collaboration, Robitaille, T. P., Tollerud, E. J., et al. 2013, A&A, 558, A33
A-thano, N., Awiphan, S., Jiang, I.-G., et al. 2023, AJ, 166, 223
A-thano, N., Jiang, I.-G., Awiphan, S., et al. 2022, AJ, 163, 77
Badenas-Agusti, M., Günther, M. N., Daylan, T., et al. 2020, AJ, 160, 113
Bai, L., Gu, S., Wang, X., et al. 2022, AJ, 163, 208
Bakos, G. Á., Howard, A. W., Noyes, R. W., et al. 2009, ApJ, 707, 446
Bakos, G. Á., Hartman, J., Torres, G., et al. 2011, ApJ, 742, 116
Bakos, G. Á., Hartman, J. D., Bhatti, W., et al. 2015a, AJ, 149, 149
Bakos, G. Á., Hartman, J. D., Bhatti, W., et al. 2021, AJ, 162, 7
Bakos, G. Á., Hartman, J. D., Torres, G., et al. 2012, AJ, 144, 19
Bakos, G. Á., Kovács, G., Torres, G., et al. 2007a, ApJ, 670, 826
Bakos, G. Á., Penev, K., Bayliss, D., et al. 2015b, ApJ, 813, 111
Bakos, G. Á., Shporer, A., Pál, A., et al. 2007b, ApJL, 671, L173
Bakos, G. Á., Torres, G., Pál, A., et al. 2010, ApJ, 710, 1724
Baluev, R. V., Sokov, E. N., Hoyer, S., et al. 2020, MNRAS, 496, L11
Barbieri, M., Alonso, R., Desidera, S., et al. 2009, A&A, 503, 601
Barge, P., Baglin, A., Auvergne, M., et al. 2008, A&A, 482, L17
Barkaoui, K., Burdanov, A., Hellier, C., et al. 2019, AJ, 157, 43
Barragán, O., Armstrong, D. J., Gandolfi, D., et al. 2022, MNRAS, 514, 1606
Barros, S. C. C., Akinsanmi, B., Boué, G., et al. 2022a, A&A, 657, A52
Barros, S. C. C., Boué, G., Gibson, N. P., et al. 2013, MNRAS, 430, 3032
Barros, S. C. C., Brown, D. J. A., Hébrard, G., et al. 2016, A&A, 593, A113
Barros, S. C. C., Demangeon, O. D. S., Alibert, Y., et al. 2022b, A&A, 665, A154
Barros, S. C. C., Demangeon, O. D. S., Armstrong, D. J., et al. 2023, A&A, 673, A4
Barros, S. C. C., Faedi, F., Collier Cameron, A., et al. 2011, A&A, 525, A54
Barros, S. C. C., Pollacco, D. L., Gibson, N. P., et al. 2012, MNRAS, 419, 1248
Barstow, J. K., Aigrain, S., Irwin, P. G. J., & Sing, D. K. 2017, ApJ, 834, 50
Baştürk, Ö., Esmer, E. M., Yalçınkaya, S., et al. 2022, MNRAS, 512, 2062
Baştürk, Ö., Hinse, T. C., Özavcı, İ., Yörükoğlu, O., & Selam, S. O. 2015, ASPC, 496, 370
Baştürk, Ö., Southworth, J., Yalçınkaya, S., et al. 2023, MNRAS, 521, 1200
Baştürk, Ö., Yalçınkaya, S., Esmer, E. M., et al. 2020, MNRAS, 496, 4174
Bayliss, D., Gillen, E., Eigmüller, P., et al. 2018b, MNRAS, 475, 4467
Bayliss, D., Hartman, J. D., Zhou, G., et al. 2018a, AJ, 155, 119
Bayliss, D., Zhou, G., Penev, K., et al. 2013, AJ, 146, 113
Bean, J. L. 2009, A&A, 506, 369
Bean, J. L., Désert, J.-M., Seifahrt, A., et al. 2013, ApJ, 771, 108
Bean, J. L., & Seifahrt, A. 2008, A&A, 487, L25
Beard, C., Robertson, P., Kanodia, S., et al. 2022, AJ, 163, 286
Beatty, T. G., Collins, K. A., Fortney, J., et al. 2014, ApJ, 783, 112
Beatty, T. G., Madhusudhan, N., Pogge, R., et al. 2017a, AJ, 154, 242
Beatty, T. G., Marley, M. S., Gaudi, B. S., et al. 2019, AJ, 158, 166
Beatty, T. G., Pepper, J., Siverd, R. J., et al. 2012, ApJL, 756, L39
Beatty, T. G., Stevens, D. J., Collins, K. A., et al. 2017b, AJ, 154, 25
Beatty, T. G., Wong, I., Fetherolf, T., et al. 2020, AJ, 160, 211
Beaulieu, J.-P., Tinetti, G., Kipping, D. M., et al. 2011, ApJ, 731, 16
Becker, A. C., Kundurthy, P., Agol, E., et al. 2013, ApJL, 764, L17
Béky, B., Bakos, G. Á., Hartman, J., et al. 2011, ApJ, 734, 109
Bell, T. J., Dang, L., Cowan, N. B., et al. 2021, MNRAS, 504, 3316
Benneke, B., Werner, M., Petigura, E., et al. 2017, ApJ, 834, 187
Benni, P., Burdanov, A. Y., Krushinsky, V. V., et al. 2021, MNRAS, 505, 4956
Bento, J., Hartman, J. D., Bakos, G. Á., et al. 2018, MNRAS, 477, 3406
Bento, J., Schmidt, B., Hartman, J. D., et al. 2017, MNRAS, 468, 835
Berta, Z. K., Charbonneau, D., Bean, J., et al. 2011, ApJ, 736, 12
Berta, Z. K., Charbonneau, D., Désert, J.-M., et al. 2012, ApJ, 747, 35
Berta-Thompson, Z. K., Irwin, J., Charbonneau, D., et al. 2015, Natur, 527, 204
Biazzo, K., D'Orazi, V., Desidera, S., et al. 2022, A&A, 664, A161
Biddle, L. I., Pearson, K. A., Crossfield, I. J. M., et al. 2014, MNRAS, 443, 1810
Bieryla, A., Collins, K., Beatty, T. G., et al. 2015, AJ, 150, 12
Bieryla, A., Hartman, J. D., Bakos, G. Á., et al. 2014, AJ, 147, 84
Blecic, J., Harrington, J., Madhusudhan, N., et al. 2013, ApJ, 779, 5
Boisse, I., Hartman, J. D., Bakos, G. Á., et al. 2013, A&A, 558, A86
Bonfanti, A., Delrez, L., Hooton, M. J., et al. 2021, A&A, 646, A157
Bonfils, X., Gillon, M., Udry, S., et al. 2012, A&A, 546, A27
Bonomo, A. S., Desidera, S., Benatti, S., et al. 2017, A&A, 602, A107
Bonomo, A. S., Dumusque, X., Massa, A., et al. 2023, A&A, 677, A33
Borucki, W. J., Koch, D. G., Basri, G., et al. 2011, ApJ, 736, 19
Bouchy, F., Hebb, L., Skillen, I., et al. 2010, A&A, 519, A98
Bouma, L. G., Hartman, J. D., Brahm, R., et al. 2020, AJ, 160, 239
Bouma, L. G., Winn, J. N., Baxter, C., et al. 2019, AJ, 157, 217
Bourrier, V., Deline, A., Krenn, A., et al. 2022, A&A, 668, A31
Bourrier, V., Lecavelier des Etangs, A., Hébrard, G., et al. 2015, A&A, 579, A55
Brahm, R., Espinoza, N., Jordán, A., et al. 2018a, MNRAS, 477, 2572
Brahm, R., Hartman, J. D., Jordán, A., et al. 2018b, AJ, 155, 112
Brahm, R., Jordán, A., Bakos, G. Á., et al. 2016, AJ, 151, 89
Brahm, R., Jordán, A., Hartman, J. D., et al. 2015, AJ, 150, 33
Brahm, R., Nielsen, L. D., Wittenmyer, R. A., et al. 2020, AJ, 160, 235
Brahm, R., Ulmer-Moll, S., Hobson, M. J., et al. 2023, AJ, 165, 227
Brande, J., Crossfield, I. J. M., Kreidberg, L., et al. 2022, AJ, 164, 197
Brown, D. J. A., Anderson, D. R., Doyle, A. P., et al. 2014, arXiv:1412.7761
Brown, D. J. A., Triaud, A. H. M. J., Doyle, A. P., et al. 2017, MNRAS, 464, 810
Brown, T. M., Baliber, N., Bianco, F. B., et al. 2013, PASP, 125, 1031
Bruno, G., Lewis, N. K., Stevenson, K. B., et al. 2018a, AJ, 155, 55
Bruno, G., Lewis, N. K., Stevenson, K. B., et al. 2018b, AJ, 156, 124
Bryan, M. L., Alsubai, K. A., Latham, D. W., et al. 2012, ApJ, 750, 84
Bryant, E. M., Bayliss, D., Nielsen, L. D., et al. 2020, MNRAS, 499, 3139
Buchhave, L. A., Bakos, G. Á., Hartman, J. D., et al. 2010, ApJ, 720, 1118
Buchhave, L. A., Bakos, G. Á., Hartman, J. D., et al. 2011, ApJ, 733, 116
Burdanov, A., Benni, P., Sokov, E., et al. 2018, PASP, 130, 074401
Burke, C. J., McCullough, P. R., Bergeron, L. E., et al. 2010, ApJ, 719, 1796
Burke, C. J., McCullough, P. R., Valenti, J. A., et al. 2007, ApJ, 671, 2115
Burke, C. J., McCullough, P. R., Valenti, J. A., et al. 2008, ApJ, 686, 1331
Burt, J. A., Dragomir, D., Mollière, P., et al. 2021, AJ, 162, 87
Burt, J. A., Nielsen, L. D., Quinn, S. N., et al. 2020, AJ, 160, 153
Cabot, S. H. C., Bello-Arufe, A., Mendonça, J. M., et al. 2021, AJ, 162, 218
Cáceres, C., Ivanov, V. D., Minniti, D., et al. 2009, A&A, 507, 481
Cáceres, C., Kabath, P., Hoyer, S., et al. 2014, A&A, 565, A7
Cañas, C. I., Kanodia, S., Bender, C. F., et al. 2022, AJ, 164, 50
Cañas, C. I., Stefansson, G., Kanodia, S., et al. 2020, AJ, 160, 147
Cañas, C. I., Stefansson, G., Monson, A. J., et al. 2019, ApJL, 877, L29
Carleo, I., Desidera, S., Nardiello, D., et al. 2021, A&A, 645, A71
Carleo, I., Gandolfi, D., Barragán, O., et al. 2020, AJ, 160, 114
Carter, J. A., Winn, J. N., Gilliland, R., & Holman, M. J. 2009, ApJ, 696, 241
Casasayas-Barris, N., Pallé, E., Yan, F., et al. 2019, A&A, 628, A9
Cauley, P. W., Wang, J., Shkolnik, E. L., et al. 2021, AJ, 161, 152
Chachan, Y., Jontof-Hutter, D., Knutson, H. A., et al. 2020, AJ, 160, 201
Chakraborty, A., Roy, A., Sharma, R., et al. 2018, AJ, 156, 3
Chan, T., Ingemyr, M., Winn, J. N., et al. 2011, AJ, 141, 179
Changeat, Q., Edwards, B., Al-Refaie, A. F., et al. 2020, AJ, 160, 260
Charbonneau, D., Berta, Z. K., Irwin, J., et al. 2009, Natur, 462, 891
Charbonneau, D., Winn, J. N., Everett, M. E., et al. 2007, ApJ, 658, 1322
Charbonneau, D., Winn, J. N., Latham, D. W., et al. 2006, ApJ, 636, 445
Chaturvedi, P., Bluhm, P., Nagel, E., et al. 2022, A&A, 666, A155
Chavero, C., de La Reza, R., Domingos, R. C., et al. 2010, A&A, 517, A40
Chen, G., Casasayas-Barris, N., Pallé, E., et al. 2020, A&A, 642, A54
Chen, G., Pallé, E., Nortmann, L., et al. 2017, A&A, 600, L11
Chen, G., Pallé, E., Parviainen, H., Murgas, F., & Yan, F. 2021, ApJL, 913, L16
Chen, G., Pallé, E., Welbanks, L., et al. 2018, A&A, 616, A145
Chen, G., van Boekel, R., Wang, H., et al. 2014, A&A, 563, A40
Chen, G., Wang, H., van Boekel, R., & Pallé, E. 2022, AJ, 164, 173
Christian, D. J., Gibson, N. P., Simpson, E. K., et al. 2009, MNRAS, 392, 1585
Christiansen, J. L., Ballard, S., Charbonneau, D., et al. 2010, ApJ, 710, 97
Christiansen, J. L., Ballard, S., Charbonneau, D., et al. 2011, ApJ, 726, 94
Christiansen, J. L., Bhure, S., Zink, J. K., et al. 2022, AJ, 163, 244
Ciardi, D. R., Crossfield, I. J. M., Feinstein, A. D., et al. 2018, AJ, 155, 10
Ciceri, S., Mancini, L., Southworth, J., et al. 2013, A&A, 557, A30
Ciceri, S., Mancini, L., Southworth, J., et al. 2015, A&A, 577, A54
Ciceri, S., Mancini, L., Southworth, J., et al. 2016, MNRAS, 456, 990

Clark, J. T., Addison, B. C., Okumura, J., et al. 2023, AJ, 165, 207
Cloutier, R., Eastman, J. D., Rodriguez, J. E., et al. 2020, AJ, 160, 3
Cochran, W. D., Fabrycky, D. C., Torres, G., et al. 2011, ApJS, 197, 7
Cointepas, M., Almenara, J. M., Bonfils, X., et al. 2021, A&A, 650, A145
Collier Cameron, A., Bouchy, F., Hébrard, G., et al. 2007, MNRAS, 375, 951
Collier Cameron, A., Guenther, E., Smalley, B., et al. 2010, MNRAS, 407, 507
Collins, K., Quinn, S. N., Latham, D. W., et al. 2018, AAS Meeting, 231, 439.08
Collins, K. A., Eastman, J. D., Beatty, T. G., et al. 2014, AJ, 147, 39
Collins, K. A., Kielkopf, J. F., & Stassun, K. G. 2017, AJ, 153, 78
Colomé, J., Francisco, X., Ribas, I., Casteels, K., & Martín, J. 2010, SPIE, 7740, 774009
Colón, K. D., Ford, E. B., Lee, B., Mahadevan, S., & Blake, C. H. 2010, MNRAS, 408, 1494
Cooke, B. F., Pollacco, D., Almleaky, Y., et al. 2020, AJ, 159, 255
Cortés-Zuleta, P., Rojo, P., Wang, S., et al. 2020, A&A, 636, A98
Costes, J. C., Watson, C. A., Belardi, C., et al. 2020, MNRAS, 491, 2834
Covino, E., Esposito, M., Barbieri, M., et al. 2013, A&A, 554, A28
Crossfield, I. J. M., Ciardi, D. R., Isaacson, H., et al. 2017, AJ, 153, 255
Crossfield, I. J. M., Ciardi, D. R., Petigura, E. A., et al. 2016, ApJS, 226, 7
Crossfield, I. J. M., Petigura, E., Schlieder, J. E., et al. 2015, ApJ, 804, 10
Crossfield, I. J. M., Waalkes, W., Newton, E. R., et al. 2019, ApJL, 883, L16
Crouzet, N., Healy, B. F., Hébrard, G., et al. 2020, AJ, 159, 44
Crouzet, N., McCullough, P. R., Long, D., et al. 2017, AJ, 153, 94
Daban, J.-B., Gouvret, C., Guillot, T., et al. 2010, SPIE, 7733, 77334T
Dai, F., Masuda, K., Beard, C., et al. 2023a, AJ, 165, 33
Dai, F., Schlaufman, K. C., Reggiani, H., et al. 2023b, AJ, 166, 49
Dai, F., Winn, J. N., Albrecht, S., et al. 2016, ApJ, 823, 115
Dalba, P. A., Gupta, A. F., Rodriguez, J. E., et al. 2020, AJ, 159, 241
Damasso, M., Biazzo, K., Bonomo, A. S., et al. 2015, A&A, 575, A111
Damasso, M., Zeng, L., Malavolta, L., et al. 2019, A&A, 624, A38
Damiano, M., Hu, R., Barclay, T., et al. 2022, AJ, 164, 225
Danielski, C., Brucalassi, A., Benatti, S., et al. 2022, ExA, 53, 473
David, T. J., Crossfield, I. J. M., Benneke, B., et al. 2018a, AJ, 155, 222
David, T. J., Mamajek, E. E., Vanderburg, A., et al. 2018b, AJ, 156, 302
Davis, A. B., Wang, S., Jones, M., et al. 2020, AJ, 160, 229
Dawson, R. I., Huang, C. X., Brahm, R., et al. 2021, AJ, 161, 161
Daylan, T., Pinglé, K., Wright, J., et al. 2021, AJ, 161, 85
de Leon, J. P., Livingston, J., Endl, M., et al. 2021, MNRAS, 508, 195
Deleuil, M., Deeg, H. J., Alonso, R., et al. 2008, A&A, 491, 889
Deline, A., Hooton, M. J., Lendl, M., et al. 2022, A&A, 659, A74
Delrez, L., Ehrenreich, D., Alibert, Y., et al. 2021, NatAs, 5, 775
Delrez, L., Madhusudhan, N., Lendl, M., et al. 2018, MNRAS, 474, 2334
Delrez, L., Santerne, A., Almenara, J.-M., et al. 2016, MNRAS, 458, 4025
Delrez, L., Van Grootel, V., Anderson, D. R., et al. 2014, A&A, 563, A143
Demangeon, O. D. S., Faedi, F., Hébrard, G., et al. 2018, A&A, 610, A63
Demangeon, O. D. S., Zapatero Osorio, M. R., Alibert, Y., et al. 2021, A&A, 653, A41
Deming, D., Wilkins, A., McCullough, P., et al. 2013, ApJ, 774, 95
Demory, B.-O., Gillon, M., Deming, D., et al. 2011, A&A, 533, A114
Demory, B.-O., Pozuelos, F. J., Gómez Maqueo Chew, Y., et al. 2020, A&A, 642, A49
Désert, J.-M., Charbonneau, D., Demory, B.-O., et al. 2011, ApJS, 197, 14
de Val-Borro, M., Bakos, G. Á., Brahm, R., et al. 2016, AJ, 152, 161
Diamond-Lowe, H., Charbonneau, D., Malik, M., Kempton, E. M.-R., & Beletsky, Y. 2020, AJ, 160, 188
Diamond-Lowe, H., Kreidberg, L., Harman, C. E., et al. 2022, AJ, 164, 172
Dittmann, J. A., Close, L. M., Scuderi, L. J., & Morris, M. D. 2010, ApJ, 717, 235
Dittmann, J. A., Close, L. M., Scuderi, L. J., Turner, J., & Stephenson, P. C. 2012, NewA, 17, 438
Dittmann, J. A., Irwin, J. M., Charbonneau, D., et al. 2017, Natur, 544, 333
Dong, J., Huang, C. X., Zhou, G., et al. 2021, ApJL, 920, L16
Dong, J., Huang, C. X., Zhou, G., et al. 2022, ApJL, 926, L7
Dorval, P., Talens, G. J. J., Otten, G. P. P. L., et al. 2020, A&A, 635, A60
Dragomir, D., Benneke, B., Pearson, K. A., et al. 2015, ApJ, 814, 102
Dragomir, D., Kane, S. R., Pilyavsky, G., et al. 2011, AJ, 142, 115
Dragomir, D., Matthews, J. M., Eastman, J. D., et al. 2013, ApJL, 772, L2
Dransfield, G., Triaud, A. H. M. J., Guillot, T., et al. 2022, MNRAS, 515, 1328
Dreizler, S., Crossfield, I. J. M., Kossakowski, D., et al. 2020, A&A, 644, A127
Dressing, C. D., Vanderburg, A., Schlieder, J. E., et al. 2017, AJ, 154, 207
Duck, A., Harada, C. K., Harrell, J., et al. 2021, AJ, 162, 136
Dunham, E. W., Borucki, W. J., Koch, D. G., et al. 2010, ApJL, 713, L136
Eastman, J. D., Beatty, T. G., Siverd, R. J., et al. 2016, AJ, 151, 45
Edwards, B., Changeat, Q., Mori, M., et al. 2021a, AJ, 161, 44
Edwards, B., Changeat, Q., Yip, K. H., et al. 2021b, MNRAS, 504, 5671
Edwards, B., Ho, C., Osborne, H., et al. 2021c, ATOM, 2, 25
Edwards, B., & Tinetti, G. 2022, AJ, 164, 15
Ehrenreich, D., Lovis, C., Allart, R., et al. 2020, Natur, 580, 597
Eibe, M. T., Cuesta, L., Ullán, A., Pérez-Verde, A., & Navas, J. 2012, MNRAS, 423, 1381
Eigmüller, P., Chaushev, A., Gillen, E., et al. 2019, A&A, 625, A142
Eigmüller, P., Gandolfi, D., Persson, C. M., et al. 2017, AJ, 153, 130
Eisner, N. L., Nicholson, B. A., Barragán, O., et al. 2021, MNRAS, 505, 1827
El Moutamid, M., Stevenson, K. B., Quarles, B., et al. 2023, MNRAS, 520, 4226
Endl, M., Caldwell, D. A., Barclay, T., et al. 2014, ApJ, 795, 151
Enoch, B., Anderson, D. R., Barros, S. C. C., et al. 2011a, AJ, 142, 86
Enoch, B., Cameron, A. C., Anderson, D. R., et al. 2011b, MNRAS, 410, 1631
Esparza-Borges, E., Parviainen, H., Murgas, F., et al. 2022, A&A, 666, A10
Espinoza, N., Bayliss, D., Hartman, J. D., et al. 2016, AJ, 152, 108
Espinoza, N., Hartman, J. D., Bakos, G. Á., et al. 2019a, AJ, 158, 63
Espinoza, N., Rabus, M., Brahm, R., et al. 2017, MNRAS, 471, 4374
Espinoza, N., Rackham, B. V., Jordán, A., et al. 2019b, MNRAS, 482, 2065
Esposito, M., Armstrong, D. J., Gandolfi, D., et al. 2019, A&A, 623, A165
Esposito, M., Covino, E., Desidera, S., et al. 2017, A&A, 601, A53
Esteves, L. J., De Mooij, E. J. W., & Jayawardhana, R. 2015, ApJ, 804, 150
Evans, D. F., Southworth, J., & Smalley, B. 2016, ApJL, 833, L19
Evans, T. M., Sing, D. K., Goyal, J. M., et al. 2018, AJ, 156, 283
Faedi, F., Barros, S. C. C., Anderson, D. R., et al. 2011, A&A, 531, A40
Faedi, F., Pollacco, D., Barros, S. C. C., et al. 2013, A&A, 551, A73
Faigler, S., Tal-Or, L., Mazeh, T., Latham, D. W., & Buchhave, L. A. 2013, ApJ, 771, 26
Feinstein, A. D., Radica, M., Welbanks, L., et al. 2023, Natur, 614, 670
Foreman-Mackey, D., Hogg, D. W., Lang, D., & Goodman, J. 2013, PASP, 125, 306
Fortney, J. J., Demory, B.-O., Désert, J.-M., et al. 2011, ApJS, 197, 9
Fowler, M. J. F., Sienkiewicz, F. F., Zellem, R. T., & Dussault, M. E. 2021, JBAA, 131, 359
Fraine, J. D., Deming, D., Gillon, M., et al. 2013, ApJ, 765, 127
Frazier, R. C., Stefánsson, G., Mahadevan, S., et al. 2023, ApJL, 944, L41
Fressin, F., Guillot, T., Bouchy, F., et al. 2005, EAS, 14, 309
Fukui, A., Kawashima, Y., Ikoma, M., et al. 2014, ApJ, 790, 108
Fukui, A., Narita, N., Kurosaki, K., et al. 2013, ApJ, 770, 95
Fukui, A., Narita, N., Tristram, P. J., et al. 2011, PASJ, 63, 287
Fukui, A., Narita, N., Kawashima, Y., et al. 2016, ApJ, 819, 27
Fulton, B. J., Collins, K. A., Gaudi, B. S., et al. 2015, ApJ, 810, 30
Fulton, B. J., Shporer, A., Winn, J. N., et al. 2011, AJ, 142, 84
Gajdoš, P., Vaňko, M., & Parimucha, Š. 2019, RAA, 19, 041
Gan, T., Bedell, M., Wang, S. X., et al. 2021, MNRAS, 507, 2220
Gan, T., Lin, Z., Wang, S. X., et al. 2022a, MNRAS, 511, 83
Gan, T., Soubkiou, A., Wang, S. X., et al. 2022b, MNRAS, 514, 4120
Gandolfi, D., Barragán, O., Livingston, J. H., et al. 2018, A&A, 619, L10
Gandolfi, D., Hébrard, G., Alonso, R., et al. 2010, A&A, 524, A55
Garai, Z., Pribulla, T., Kovács, J., et al. 2022, MNRAS, 513, 2822
Garhart, E., Deming, D., Mandell, A., et al. 2020, AJ, 159, 137
Gaudi, B. S., Stassun, K. G., Collins, K. A., et al. 2017, Natur, 546, 514
Gibson, N. P., Aigrain, S., Barstow, J. K., et al. 2013a, MNRAS, 428, 3680
Gibson, N. P., Aigrain, S., Barstow, J. K., et al. 2013b, MNRAS, 436, 2974
Gibson, N. P., Pollacco, D., Simpson, E. K., et al. 2008, A&A, 492, 603
Gibson, N. P., Pollacco, D., Simpson, E. K., et al. 2009, ApJ, 700, 1078
Gibson, N. P., Pollacco, D. L., Barros, S., et al. 2010, MNRAS, 401, 1917
Gilbert, E. A., Barclay, T., Schlieder, J. E., et al. 2020, AJ, 160, 116
Giles, H. A. C., Bayliss, D., Espinoza, N., et al. 2018, MNRAS, 475, 1809
Gillon, M., Anderson, D. R., Collier-Cameron, A., et al. 2013, A&A, 552, A82
Gillon, M., Anderson, D. R., Collier-Cameron, A., et al. 2014, A&A, 562, L3
Gillon, M., Anderson, D. R., Triaud, A. H. M. J., et al. 2009a, A&A, 501, 785
Gillon, M., Demory, B.-O., Barman, T., et al. 2007a, A&A, 471, L51
Gillon, M., Demory, B.-O., Triaud, A. H. M. J., et al. 2009b, A&A, 506, 359
Gillon, M., Demory, B.-O., Van Grootel, V., et al. 2017, NatAs, 1, 0056
Gillon, M., Doyle, A. P., Lendl, M., et al. 2011, A&A, 533, A88
Gillon, M., Pont, F., Demory, B.-O., et al. 2007b, A&A, 472, L13
Gillon, M., Smalley, B., Hebb, L., et al. 2009c, A&A, 496, 259
Gillon, M., Triaud, A. H. M. J., Fortney, J. J., et al. 2012, A&A, 542, A4
Gillon, M., Triaud, A. H. M. J., Mayor, M., et al. 2008, A&A, 485, 871
Gómez Maqueo Chew, Y., Faedi, F., Pollacco, D., et al. 2013, A&A, 559, A36
Granata, V., Nascimbeni, V., Piotto, G., et al. 2014, AN, 335, 797
Grieves, N., Nielsen, L. D., Vines, J. I., et al. 2021, A&A, 647, A180
Grunblatt, S. K., Huber, D., Gaidos, E., et al. 2017, AJ, 154, 254
Grziwa, S., Gandolfi, D., Csizmadia, S., et al. 2016, AJ, 152, 132
Guenther, E. W., Díaz, R. F., Gazzano, J.-C., et al. 2012, A&A, 537, A136

Guilluy, G., Gressier, A., Wright, S., et al. 2021, AJ, 161, 19
Günther, M. N., Pozuelos, F. J., Dittmann, J. A., et al. 2019, NatAs, 3, 1099
Guo, X., Crossfield, I. J. M., Dragomir, D., et al. 2020, AJ, 159, 239
Harpsøe, K. B. W., Hardis, S., Hinse, T. C., et al. 2013, A&A, 549, A10
Harre, J.-V., Smith, A. M. S., Barros, S. C. C., et al. 2023, A&A, 669, A124
Harris, C. R., Millman, K. J., van der Walt, S. J., et al. 2020, Natur, 585, 357
Hartman, J. D., Bakos, G. Á., Béky, B., et al. 2012, AJ, 144, 139
Hartman, J. D., Bakos, G. Á., Buchhave, L. A., et al. 2015a, AJ, 150, 197
Hartman, J. D., Bayliss, D., Brahm, R., et al. 2015b, AJ, 149, 166
Hartman, J. D., Bakos, G. Á., Kipping, D. M., et al. 2011a, ApJ, 728, 138
Hartman, J. D., Bakos, G. Á., Sato, B., et al. 2011b, ApJ, 726, 52
Hartman, J. D., Bakos, G. Á., Torres, G., et al. 2009, ApJ, 706, 785
Hartman, J. D., Bakos, G. Á., Torres, G., et al. 2011c, ApJ, 742, 59
Hartman, J. D., Bakos, G. Á., Torres, G., et al. 2014, AJ, 147, 128
Hartman, J. D., Bakos, G. Á., Bhatti, W., et al. 2016, AJ, 152, 182
Hartman, J. D., Bakos, G. Á., Bayliss, D., et al. 2019, AJ, 157, 55
Hartman, J. D., Bhatti, W., Bakos, G. Á., et al. 2015c, AJ, 150, 168
Hartman, J. D., Jordán, A., Bayliss, D., et al. 2020, AJ, 159, 173
Haswell, C. A., Fossati, L., Ayres, T., et al. 2012, ApJ, 760, 79
Hawthorn, F., Bayliss, D., Wilson, T. G., et al. 2023, MNRAS, 520, 3649
Hay, K. L., Collier-Cameron, A., Doyle, A. P., et al. 2016, MNRAS, 463, 3276
Hebb, L., Collier-Cameron, A., Loeillet, B., et al. 2009, ApJ, 693, 1920
Hebb, L., Collier-Cameron, A., Triaud, A. H. M. J., et al. 2010, ApJ, 708, 224
Hébrard, G., Bouchy, F., Pont, F., et al. 2008, A&A, 488, 763
Hébrard, G., Collier Cameron, A., Brown, D. J. A., et al. 2013, A&A, 549, A134
Hébrard, G., Díaz, R. F., Correia, A. C. M., et al. 2020, A&A, 640, A32
Hedges, C., Hughes, A., Zhou, G., et al. 2021, AJ, 162, 54
Hedges, C., Saunders, N., Barentsen, G., et al. 2019, ApJL, 880, L5
Hellier, C., Anderson, D. R., Barkaoui, K., et al. 2019a, MNRAS, 490, 1479
Hellier, C., Anderson, D. R., Bouchy, F., et al. 2019b, MNRAS, 482, 1379
Hellier, C., Anderson, D. R., Collier Cameron, A., et al. 2009a, Natur, 460, 1098
Hellier, C., Anderson, D. R., Collier Cameron, A., et al. 2010, ApJL, 723, L60
Hellier, C., Anderson, D. R., Collier Cameron, A., et al. 2011, A&A, 535, L7
Hellier, C., Anderson, D. R., Collier Cameron, A., et al. 2012, MNRAS, 426, 739
Hellier, C., Anderson, D. R., Collier Cameron, A., et al. 2014, MNRAS, 440, 1982
Hellier, C., Anderson, D. R., Collier Cameron, A., et al. 2015, AJ, 150, 18
Hellier, C., Anderson, D. R., Collier Cameron, A., et al. 2017, MNRAS, 465, 3693
Hellier, C., Anderson, D. R., Gillon, M., et al. 2009b, ApJL, 690, L89
Hellier, C., Anderson, D. R., Triaud, A. H. M. J., et al. 2019c, MNRAS, 488, 3067
Henning, T., Mancini, L., Sarkis, P., et al. 2018, AJ, 155, 79
Herrero, E., Morales, J. C., Ribas, I., & Naves, R. 2011, A&A, 526, L10
Heward, A., Scherf, M., Tautvaišienė, G., & Hueso, R. 2020, A&G, 61, 4.39
Hinse, T. C., Han, W., Yoon, J.-N., et al. 2015, JASS, 32, 21
Hirano, T., Dai, F., Livingston, J. H., et al. 2018, AJ, 155, 124
Hirano, T., Nowak, G., Kuzuhara, M., et al. 2016, ApJ, 825, 53
Hobson, M. J., Brahm, R., Jordán, A., et al. 2021, AJ, 161, 235
Holman, M. J., Winn, J. N., Latham, D. W., et al. 2006, ApJ, 652, 1715
Holman, M. J., Winn, J. N., Latham, D. W., et al. 2007, ApJ, 664, 1185
Hord, B. J., Kempton, E. M. R., Evans-Soma, T. M., et al. 2024, AJ, 167, 233
Howard, A. W., Bakos, G. Á., Hartman, J., et al. 2012, ApJ, 749, 134
Howard, A. W., Johnson, J. A., Marcy, G. W., et al. 2011, ApJ, 730, 10
Howell, S. B., Sobeck, C., Haas, M., et al. 2014, PASP, 126, 398
Hoyer, S., Bonfanti, A., Leleu, A., et al. 2022, A&A, 668, A117
Hoyer, S., López-Morales, M., Rojo, P., et al. 2013, MNRAS, 434, 46
Hoyer, S., Pallé, E., Dragomir, D., & Murgas, F. 2016, AJ, 151, 137
Hoyer, S., Rojo, P., & López-Morales, M. 2012, ApJ, 748, 22
Hrudková, M., Skillen, I., Benn, C. R., et al. 2010, MNRAS, 403, 2111
Huang, C. X., Hartman, J. D., Bakos, G. Á., et al. 2015, AJ, 150, 85
Huang, C. X., Quinn, S. N., Vanderburg, A., et al. 2020, ApJL, 892, L7
Huang, X., Bakos, G., & Hartman, J. 2015, IAUGA, 29, 2159630
Huitson, C. M., Désert, J.-M., Bean, J. L., et al. 2017, AJ, 154, 95
Huitson, C. M., Sing, D. K., Pont, F., et al. 2013, MNRAS, 434, 3252
Hunter, J. D. 2007, CSE, 9, 90
Husser, T. O., Wende-von Berg, S., Dreizler, S., et al. 2013, A&A, 553, A6
Ikwut-Ukwa, M., Rodriguez, J. E., Quinn, S. N., et al. 2022, AJ, 163, 9
Irwin, J., Charbonneau, D., Nutzman, P., et al. 2008, ApJ, 681, 636
Ivshina, E. S., & Winn, J. N. 2022, ApJS, 259, 62
Jackson, D. G., Watson, C. A., de Mooij, E. J. W., et al. 2023, MNRAS, 518, 4845
Jenkins, J. S., Díaz, M. R., Kurtovic, N. T., et al. 2020, NatAs, 4, 1148
Jiang, I.-G., Lai, C.-Y., Savushkin, A., et al. 2016, AJ, 151, 17
Johns, D., Reed, P. A., Rodriguez, J. E., et al. 2019, AJ, 158, 78
Johns-Krull, C. M., McCullough, P. R., Burke, C. J., et al. 2008, ApJ, 677, 657
Johnson, J. A., Winn, J. N., Albrecht, S., et al. 2009a, PASP, 121, 1104
Johnson, J. A., Winn, J. N., Bakos, G. Á., et al. 2011, ApJ, 735, 24
Johnson, J. A., Winn, J. N., Cabrera, N. E., & Carter, J. A. 2009b, ApJL, 692, L100
Johnson, J. A., Winn, J. N., Narita, N., et al. 2008, ApJ, 686, 649
Johnson, M. C., Dai, F., Justesen, A. B., et al. 2018a, MNRAS, 481, 596
Johnson, M. C., Gandolfi, D., Fridlund, M., et al. 2016, AJ, 151, 171
Johnson, M. C., Rodriguez, J. E., Zhou, G., et al. 2018b, AJ, 155, 100
Jones, K., Morris, B. M., Demory, B.-O., et al. 2022, A&A, 666, A118
Jones, M. I., Brahm, R., Espinoza, N., et al. 2018, A&A, 613, A76
Jones, M. I., Brahm, R., Espinoza, N., et al. 2019, A&A, 625, A16
Jordán, A., Bakos, G. Á., Bayliss, D., et al. 2020a, AJ, 160, 222
Jordán, A., Brahm, R., Bakos, G. Á., et al. 2014, AJ, 148, 29
Jordán, A., Brahm, R., Espinoza, N., et al. 2019, AJ, 157, 100
Jordán, A., Brahm, R., Espinoza, N., et al. 2020b, AJ, 159, 145
Joshi, Y. C., Pollacco, D., Collier Cameron, A., et al. 2009, MNRAS, 392, 1532
Juncher, D., Buchhave, L. A., Hartman, J. D., et al. 2015, PASP, 127, 851
Kabáth, P., Chaturvedi, P., MacQueen, P. J., et al. 2022, MNRAS, 513, 5955
Kain, I. J., Newton, E. R., Dittmann, J. A., et al. 2020, AJ, 159, 83
Kammer, J. A., Knutson, H. A., Line, M. R., et al. 2015, ApJ, 810, 118
Kane, S. R., Yalçınkaya, S., Osborn, H. P., et al. 2020, AJ, 160, 129
Kanodia, S., Cañas, C. I., Stefansson, G., et al. 2020, ApJ, 899, 29
Kanodia, S., Stefansson, G., Cañas, C. I., et al. 2021, AJ, 162, 135
Kaye, L., Vissapragada, S., Günther, M. N., et al. 2022, MNRAS, 510, 5464
Khandelwal, A., Chaturvedi, P., Chakraborty, A., et al. 2022, MNRAS, 509, 3339
Khandelwal, A., Sharma, R., Chakraborty, A., et al. 2023, A&A, 672, L7
Kipping, D. M., Bakos, G. Á., Hartman, J., et al. 2010, ApJ, 725, 2017
Kipping, D. M., Hartman, J., Bakos, G. Á., et al. 2011, AJ, 142, 95
Kipping, D., Nesvorný, D., Hartman, J., et al. 2019, MNRAS, 486, 4980
Kirk, J., López-Morales, M., Wheatley, P. J., et al. 2019, AJ, 158, 144
Kirk, J., Rackham, B. V., MacDonald, R. J., et al. 2021, AJ, 162, 34
Kirk, J., Wheatley, P. J., Louden, T., et al. 2016, MNRAS, 463, 2922
Kirk, J., Wheatley, P. J., Louden, T., et al. 2017, MNRAS, 468, 3907
Kirk, J., Wheatley, P. J., Louden, T., et al. 2018, MNRAS, 474, 876
Kjurkchieva, D., Dimitrov, D., & Ibryamov, S. 2016, BlgAJ, 24, 101
Knudstrup, E., Gandolfi, D., Nowak, G., et al. 2023, MNRAS, 519, 5637
Knudstrup, E., Serrano, L. M., Gandolfi, D., et al. 2022, A&A, 667, A22
Knutson, H. A., Benneke, B., Deming, D., & Homeier, D. 2014a, Natur, 505, 66
Knutson, H. A., Charbonneau, D., Cowan, N. B., et al. 2009, ApJ, 703, 769
Knutson, H. A., Dragomir, D., Kreidberg, L., et al. 2014b, ApJ, 794, 155
Knutson, H. A., Lewis, N., Fortney, J. J., et al. 2012, ApJ, 754, 22
Knutson, H. A., Madhusudhan, N., Cowan, N. B., et al. 2011, ApJ, 735, 27
Koch, D. G., Borucki, W. J., Basri, G., et al. 2010a, ApJL, 713, L79
Koch, D. G., Borucki, W. J., Rowe, J. F., et al. 2010b, ApJL, 713, L131
Kokori, A., Tsiaras, A., Edwards, B., et al. 2022a, ExA, 53, 547
Kokori, A., Tsiaras, A., Edwards, B., et al. 2022b, ApJS, 258, 40
Kokori, A., Tsiaras, A., Edwards, B., et al. 2023, ApJS, 265, 4
König, P.-C., Damasso, M., Hébrard, G., et al. 2022, A&A, 666, A183
Korth, J., Csizmadia, S., Gandolfi, D., et al. 2019, MNRAS, 482, 1807
Korth, J., & Parviainen, H. 2023, Univ, 10, 12
Kosiarek, M. R., Crossfield, I. J. M., Hardegree-Ullman, K. K., et al. 2019, AJ, 157, 97
Kossakowski, D., Espinoza, N., Brahm, R., et al. 2019, MNRAS, 490, 1094
Kossakowski, D., Kemmer, J., Bluhm, P., et al. 2021, A&A, 656, A124
Kostov, V. B., Schlieder, J. E., Barclay, T., et al. 2019, AJ, 158, 32
Kovács, G., Bakos, G. Á., Hartman, J. D., et al. 2010, ApJ, 724, 866
Kovács, G., Bakos, G. Á., Torres, G., et al. 2007, ApJL, 670, L41
Kovács, G., Kovács, T., Hartman, J. D., et al. 2013, A&A, 553, A44
Kozłowski, S. K., Sybilski, P. W., Konacki, M., et al. 2017, PASP, 129, 105001
Kreidberg, L., Line, M. R., Bean, J. L., et al. 2015, ApJ, 814, 66
Kreidberg, L., Mollière, P., Crossfield, I. J. M., et al. 2022, AJ, 164, 124
Kruse, E., Agol, E., Luger, R., & Foreman-Mackey, D. 2019, ApJS, 244, 11
Kuhn, R. B., Rodriguez, J. E., Collins, K. A., et al. 2016, MNRAS, 459, 4281
Kundurthy, P., Becker, A. C., Agol, E., Barnes, R., & Williams, B. 2013, ApJ, 764, 8
Kunimoto, M., Vanderburg, A., Huang, C. X., et al. 2023, AJ, 166, 7
Lacedelli, G., Malavolta, L., Borsato, L., et al. 2021, MNRAS, 501, 4148
Lam, K. W. F., Cabrera, J., Hooton, M. J., et al. 2023, MNRAS, 519, 1437

Lam, K. W. F., Faedi, F., Brown, D. J. A., et al. 2017, A&A, 599, A3
Latham, D. W., Bakos, G. Á., Torres, G., et al. 2009, ApJ, 704, 1107
Latham, D. W., Borucki, W. J., Koch, D. G., et al. 2010, ApJL, 713, L140
Lee, J. W., Youn, J.-H., Kim, S.-L., Lee, C.-U., & Hinse, T. C. 2012, AJ, 143, 95
Leleu, A., Alibert, Y., Hara, N. C., et al. 2021, A&A, 649, A26
Lendl, M., Anderson, D. R., Bonfanti, A., et al. 2019, MNRAS, 482, 301
Lendl, M., Anderson, D. R., Collier-Cameron, A., et al. 2012, A&A, 544, A72
Lendl, M., Csizmadia, S., Deline, A., et al. 2020, A&A, 643, A94
Lendl, M., Cubillos, P. E., Hagelberg, J., et al. 2017a, A&A, 606, A18
Lendl, M., Delrez, L., Gillon, M., et al. 2016, A&A, 587, A67
Lendl, M., Ehrenreich, D., Turner, O. D., et al. 2017b, A&A, 603, L5
Lendl, M., Gillon, M., Queloz, D., et al. 2013, A&A, 552, A2
Lendl, M., Triaud, A. H. M. J., Anderson, D. R., et al. 2014, A&A, 568, A81
Lewis, N. K., Knutson, H. A., Showman, A. P., et al. 2013, ApJ, 766, 95
Lillo-Box, J., Barrado, D., Santos, N. C., et al. 2015, A&A, 577, A105
Lindor, B. M., Hartman, J. D., Bakos, G. Á., et al. 2021, AJ, 161, 64
Line, M. R., Knutson, H., Deming, D., Wilkins, A., & Desert, J.-M. 2013, ApJ, 778, 183
Lister, T. A., Anderson, D. R., Gillon, M., et al. 2009, ApJ, 703, 752
Livingston, J. H., Crossfield, I. J. M., Werner, M. W., et al. 2019, AJ, 157, 102
Lomb, N. R. 1976, Ap&SS, 39, 447
Louden, T., Wheatley, P. J., Irwin, P. G. J., Kirk, J., & Skillen, I. 2017, MNRAS, 470, 742
Lubin, J., Wang, X.-Y., Rice, M., et al. 2023, ApJL, 959, L5
Lund, M. B., Rodriguez, J. E., Zhou, G., et al. 2017, AJ, 154, 194
Luque, R., Fulton, B. J., Kunimoto, M., et al. 2022, A&A, 664, A199
Luque, R., Pallé, E., Kossakowski, D., et al. 2019, A&A, 628, A39
Luque, R., Serrano, L. M., Molaverdikhani, K., et al. 2021, A&A, 645, A41
MacDougall, M. G., Petigura, E. A., Fetherolf, T., et al. 2022, AJ, 164, 97
Maciejewski, G. 2020, AcA, 70, 181
Maciejewski, G. 2022, AcA, 72, 1
Maciejewski, G., Dimitrov, D., Fernández, M., et al. 2016a, A&A, 588, L6
Maciejewski, G., Dimitrov, D., Mancini, L., et al. 2016b, AcA, 66, 55
Maciejewski, G., Dimitrov, D., Neuhäuser, R., et al. 2010, MNRAS, 407, 2625
Maciejewski, G., Dimitrov, D., Neuhäuser, R., et al. 2011a, MNRAS, 411, 1204
Maciejewski, G., Dimitrov, D., Seeliger, M., et al. 2013a, A&A, 551, A108
Maciejewski, G., Errmann, R., Raetz, S., et al. 2011b, A&A, 528, A65
Maciejewski, G., Fernández, M., Aceituno, F. J., et al. 2015, A&A, 577, A109
Maciejewski, G., Fernández, M., Aceituno, F., et al. 2018, AcA, 68, 371
Maciejewski, G., Fernández, M., Aceituno, F., et al. 2021, A&A, 656, A88
Maciejewski, G., Fernández, M., Sota, A., et al. 2022, A&A, 667, A127
Maciejewski, G., Fernández, M., Sota, A., et al. 2023, AcA, 73, 57
Maciejewski, G., & Łoboda, W. 2025, ApJL, 988, L63
Maciejewski, G., Niedzielski, A., Wolszczan, A., et al. 2013b, AJ, 146, 147
Maciejewski, G., Ohlert, J., Dimitrov, D., et al. 2014, AcA, 64, 27
Maciejewski, G., Raetz, S., Nettelmann, N., et al. 2011c, A&A, 535, A7
Magliano, C., Covone, G., Dobal, R., et al. 2023a, MNRAS, 519, 1562
Magliano, C., Kostov, V., Cacciapuoti, L., et al. 2023b, MNRAS, 521, 3749
Magrini, L., Danielski, C., Bossini, D., et al. 2022, A&A, 663, A161
Mallonn, M. 2019, AN, 340, 780
Mallonn, M., Juvan-Beaulieu, I., Sedaghati, E., et al. 2019a, RNAAS, 3, 123
Mallonn, M., Nascimbeni, V., Weingrill, J., et al. 2015a, A&A, 583, A138
Mallonn, M., & Strassmeier, K. G. 2016, A&A, 590, A100
Mallonn, M., von Essen, C., Herrero, E., et al. 2019b, A&A, 622, A81
Mallonn, M., von Essen, C., Weingrill, J., et al. 2015b, A&A, 580, A60
Mancini, L., Ciceri, S., Chen, G., et al. 2013a, MNRAS, 436, 2
Mancini, L., Esposito, M., Covino, E., et al. 2015a, A&A, 579, A136
Mancini, L., Esposito, M., Covino, E., et al. 2018, A&A, 613, A41
Mancini, L., Esposito, M., Covino, E., et al. 2022a, A&A, 664, A162
Mancini, L., Giordano, M., Mollière, P., et al. 2016a, MNRAS, 461, 1053
Mancini, L., Hartman, J. D., Penev, K., et al. 2015b, A&A, 580, A63
Mancini, L., Kemmer, J., Southworth, J., et al. 2016b, MNRAS, 459, 1393
Mancini, L., Nikolov, N., Southworth, J., et al. 2013b, MNRAS, 430, 2932
Mancini, L., Sarkis, P., Henning, T., et al. 2020, A&A, 633, A30
Mancini, L., Southworth, J., Ciceri, S., et al. 2013c, A&A, 551, A11
Mancini, L., Southworth, J., Ciceri, S., et al. 2014a, A&A, 562, A126
Mancini, L., Southworth, J., Ciceri, S., et al. 2014b, A&A, 568, A127
Mancini, L., Southworth, J., Ciceri, S., et al. 2014c, MNRAS, 443, 2391
Mancini, L., Southworth, J., Mollière, P., et al. 2019, MNRAS, 485, 5168
Mancini, L., Southworth, J., Naponiello, L., et al. 2022b, MNRAS, 509, 1447
Mancini, L., Southworth, J., Raia, G., et al. 2017, MNRAS, 465, 843
Mandushev, G., O'Donovan, F. T., Charbonneau, D., et al. 2007, ApJL, 667, L195
Mandushev, G., Quinn, S. N., Buchhave, L. A., et al. 2011, ApJ, 741, 114
Mann, A. W., Gaidos, E., Mace, G. N., et al. 2016, ApJ, 818, 46
Mann, A. W., Johnson, M. C., Vanderburg, A., et al. 2020, AJ, 160, 179
Mannaday, V. K., Thakur, P., Jiang, I.-G., et al. 2020, AJ, 160, 47
Mansfield, M., Bean, J. L., Stevenson, K. B., et al. 2020, ApJL, 888, L15
Martin, D. V., El-Badry, K., Hodžić, V. K., et al. 2021, MNRAS, 507, 4132
Masuda, K., Hirano, T., Taruya, A., Nagasawa, M., & Suto, Y. 2013, ApJ, 778, 185
Maxted, P. F. L., Anderson, D. R., Gillon, M., et al. 2010a, AJ, 140, 2007
Maxted, P. F. L., Anderson, D. R., Collier Cameron, A., et al. 2010b, PASP, 122, 1465
Maxted, P. F. L., Anderson, D. R., Collier Cameron, A., et al. 2011, PASP, 123, 547
Maxted, P. F. L., Anderson, D. R., Collier Cameron, A., et al. 2013a, PASP, 125, 48
Maxted, P. F. L., Anderson, D. R., Collier Cameron, A., et al. 2016, A&A, 591, A55
Maxted, P. F. L., Anderson, D. R., Doyle, A. P., et al. 2013b, MNRAS, 428, 2645
Maxted, P. F. L., Ehrenreich, D., Wilson, T. G., et al. 2022, MNRAS, 514, 77
May, E. M., Stevenson, K. B., Bean, J. L., et al. 2022, AJ, 163, 256
Mayo, A. W., Vanderburg, A., Latham, D. W., et al. 2018, AJ, 155, 136
McCormac, J., Gillen, E., Jackman, J. A. G., et al. 2020, MNRAS, 493, 126
McCullough, P. R., Burke, C. J., Valenti, J. A., et al. 2008, arXiv:0805.2921
McCullough, P. R., Stys, J. E., Valenti, J. A., et al. 2006, ApJ, 648, 1228
McDonald, I., & Kerins, E. 2018, MNRAS, 477, L21
McGruder, C. D., López-Morales, M., Kirk, J., et al. 2022, AJ, 164, 134
McGruder, C. D., López-Morales, M., Kirk, J., et al. 2023, AJ, 166, 120
McLeod, K. K., Rodriguez, J. E., Oelkers, R. J., et al. 2017, AJ, 153, 263
Mékarnia, D., Guillot, T., Rivet, J.-P., et al. 2016, MNRAS, 463, 45
Ment, K., Dittmann, J. A., Astudillo-Defru, N., et al. 2019, AJ, 157, 32
Mikal-Evans, T., Crossfield, I. J. M., Benneke, B., et al. 2021, AJ, 161, 18
Miller-Ricci, E., Rowe, J. F., Sasselov, D., et al. 2008, ApJ, 682, 586
Mislis, D., Mancini, L., Tregloan-Reed, J., et al. 2015, MNRAS, 448, 2617
Mislis, D., Schröter, S., Schmitt, J. H. M. M., Cordes, O., & Reif, K. 2010, A&A, 510, A107
Mistry, P., Pathak, K., Lekkas, G., et al. 2023a, MNRAS, 521, 1066
Mistry, P., Pathak, K., Prasad, A., et al. 2023b, AJ, 166, 9
Močnik, T., Anderson, D. R., Brown, D. J. A., et al. 2016, PASP, 128, 124403
Močnik, T., Hellier, C., Anderson, D. R., Clark, B. J. M., & Southworth, J. 2017a, MNRAS, 469, 1622
Močnik, T., Southworth, J., & Hellier, C. 2017b, MNRAS, 471, 394
Mohler-Fischer, M., Mancini, L., Hartman, J. D., et al. 2013, A&A, 558, A55
Montalto, M., Gregorio, J., Boué, G., et al. 2012, MNRAS, 427, 2757
Montalto, M., Malavolta, L., Gregorio, J., et al. 2022, MNRAS, 509, 2908
Montet, B. T., Morton, T. D., Foreman-Mackey, D., et al. 2015, ApJ, 809, 25
Morello, G., Claret, A., Martin-Lagarde, M., et al. 2020a, JOSS, 5, 1834
Morello, G., Claret, A., Martin-Lagarde, M., et al. 2020b, AJ, 159, 75
Morello, G., Waldmann, I. P., Tinetti, G., et al. 2014, ApJ, 786, 22
Morton, T. D., Bryson, S. T., Coughlin, J. L., et al. 2016, ApJ, 822, 86
Motalebi, F., Udry, S., Gillon, M., et al. 2015, A&A, 584, A72
Moutou, C., Almenara, J. M., Hébrard, G., et al. 2021, A&A, 653, A147
Moyano, M., Almeida, L. A., von Essen, C., Jablonski, F., & Pereira, M. G. 2017, MNRAS, 471, 650
Mugnai, L. V., Modirrousta-Galian, D., Edwards, B., et al. 2021, AJ, 161, 284
Müller, S., & Helled, R. 2023, A&A, 669, A24
Murgas, F., Astudillo-Defru, N., Bonfils, X., et al. 2021, A&A, 653, A60
Murgas, F., Chen, G., Nortmann, L., Palle, E., & Nowak, G. 2020, A&A, 641, A158
Murgas, F., Chen, G., Pallé, E., Nortmann, L., & Nowak, G. 2019, A&A, 622, A172
Murgas, F., Pallé, E., Parviainen, H., et al. 2017, A&A, 605, A114
Murgas, F., Pallé, E., Zapatero Osorio, M. R., et al. 2014, A&A, 563, A41
Murphy, M. M., Beatty, T. G., Roman, M. T., et al. 2023, AJ, 165, 107
Naponiello, L., Mancini, L., Damasso, M., et al. 2022, A&A, 667, A8
Narita, N., Enya, K., Sato, B., et al. 2007, PASJ, 59, 763
Narita, N., Fukui, A., Kusakabe, N., et al. 2019, JATIS, 5, 01 5001
Narita, N., Hirano, T., Fukui, A., et al. 2015, ApJ, 815, 47
Narita, N., Hirano, T., Sanchis-Ojeda, R., et al. 2010, PASJ, 62, L61
Narita, N., Sato, B., Ohshima, O., & Winn, J. N. 2008, PASJ, 60, L1
Narita, N., Takahashi, Y. H., Kuzuhara, M., et al. 2012, PASJ, 64, L7
Nascimbeni, V., Borsato, L., Zingales, T., et al. 2023, A&A, 673, A42
Nascimbeni, V., Cunial, A., Murabito, S., et al. 2013, A&A, 549, A30
Nascimbeni, V., Piotto, G., Bedin, L. R., et al. 2011a, A&A, 532, A24
Nascimbeni, V., Piotto, G., Bedin, L. R., & Damasso, M. 2011b, A&A, 527, A85

Neveu-VanMalle, M., Queloz, D., Anderson, D. R., et al. 2014, A&A, 572, A49
Neveu-VanMalle, M., Queloz, D., Anderson, D. R., et al. 2016, A&A, 586, A93
Newton, E. R., Mann, A. W., Kraus, A. L., et al. 2021, AJ, 161, 65
Nielsen, L. D., Bouchy, F., Turner, O. D., et al. 2019, MNRAS, 489, 2478
Nielsen, L. D., Brahm, R., Bouchy, F., et al. 2020a, A&A, 639, A76
Nielsen, L. D., Gandolfi, D., Armstrong, D. J., et al. 2020b, MNRAS, 492, 5399
Nikolov, N., Chen, G., Fortney, J. J., et al. 2013, A&A, 553, A26
Nikolov, N., Henning, T., Koppenhoefer, J., et al. 2012, A&A, 539, A159
Nikolov, N., Maciejewski, G., Constantinou, S., et al. 2021, AJ, 162, 88
Nikolov, N., Sing, D. K., Burrows, A. S., et al. 2015, MNRAS, 447, 463
Nikolov, N., Sing, D. K., Fortney, J. J., et al. 2018, Natur, 557, 526
Nikolov, N., Sing, D. K., Pont, F., et al. 2014, MNRAS, 437, 46
Niraula, P., Redfield, S., Dai, F., et al. 2017, AJ, 154, 266
Noyes, R. W., Bakos, G. Á., Torres, G., et al. 2008, ApJL, 673, L79
Nugroho, S. K., Kawahara, H., Masuda, K., et al. 2017, AJ, 154, 221
Nutzman, P., Charbonneau, D., Winn, J. N., et al. 2009, ApJ, 692, 229
Nutzman, P., Gilliland, R. L., McCullough, P. R., et al. 2011, ApJ, 726, 3
O'Donovan, F. T., Charbonneau, D., Bakos, G. Á., et al. 2007, ApJL, 663, L37
O'Donovan, F. T., Charbonneau, D., Mandushev, G., et al. 2006, ApJL, 651, L61
Oberst, T. E., Rodriguez, J. E., Colón, K. D., et al. 2017, AJ, 153, 97
Oddo, D., Dragomir, D., Brandeker, A., et al. 2023, AJ, 165, 134
Orell-Miquel, J., Lampón, M., López-Puertas, M., et al. 2023, A&A, 677, A56
Osborn, A., Armstrong, D. J., Cale, B., et al. 2021, MNRAS, 507, 2782
Osborn, H. P., Armstrong, D. J., Adibekyan, V., et al. 2021, MNRAS, 502, 4842
Osborn, H. P., Bonfanti, A., Gandolfi, D., et al. 2022, A&A, 664, A156
Ouyang, Q., Wang, W., Zhai, M., et al. 2023, MNRAS, 521, 5860
Öztürk, O., & Erdem, A. 2019, MNRAS, 486, 2290
Öztürk, O., & Erdem, A. 2021, NewA, 82, 101454
Pai Asnodkar, A., Wang, J., Eastman, J. D., et al. 2022, AJ, 163, 155
Pál, A., Bakos, G. Á., Fernandez, J., et al. 2009, ApJ, 700, 783
Pál, A., Bakos, G. Á., Torres, G., et al. 2008, ApJ, 680, 1450
Pál, A., Bakos, G. Á., Torres, G., et al. 2010, MNRAS, 401, 2665
Pál, A., Sárneczky, K., Szabó, G. M., et al. 2011, MNRAS, 413, L43
Palatnick, S., Kipping, D., & Yahalomi, D. 2021, ApJL, 909, L6
Palle, E., Chen, G., Prieto-Arranz, J., et al. 2017, A&A, 602, L15
Panahi, A., Zucker, S., Clementini, G., et al. 2022, A&A, 663, A101
Panwar, V., Désert, J.-M., Todorov, K. O., et al. 2022a, MNRAS, 510, 3236
Panwar, V., Désert, J.-M., Todorov, K. O., et al. 2022b, MNRAS, 515, 5018
Parviainen, H., Pallé, E., Nortmann, L., et al. 2016, A&A, 585, A114
Parviainen, H., Wilson, T. G., Lendl, M., et al. 2022, A&A, 668, A93
Patel, J. A., & Espinoza, N. 2022, AJ, 163, 228
Patra, K. C., Winn, J. N., Holman, M. J., et al. 2017, AJ, 154, 4
Patra, K. C., Winn, J. N., Holman, M. J., et al. 2020, AJ, 159, 150
Pearson, K. A., Turner, J. D., & Sagan, T. G. 2014, NewA, 27, 102
Penev, K., Bakos, G. Á., Bayliss, D., et al. 2013, AJ, 145, 5
Penev, K., Hartman, J. D., Bakos, G. Á., et al. 2016, AJ, 152, 127
Pepper, J., Rodriguez, J. E., Collins, K. A., et al. 2017, AJ, 153, 215
Pepper, J., Siverd, R. J., Beatty, T. G., et al. 2013, ApJ, 773, 64
Petigura, E. A., Livingston, J., Batygin, K., et al. 2020, AJ, 159, 2
Petigura, E. A., Schlieder, J. E., Crossfield, I. J. M., et al. 2015, ApJ, 811, 102
Petrucci, R., Jofré, E., Ferrero, L. V., et al. 2018, MNRAS, 473, 5126
Petrucci, R., Jofré, E., Melita, M., Gómez, M., & Mauas, P. 2015, MNRAS, 446, 1389
Pluriel, W., Whiteford, N., Edwards, B., et al. 2020, AJ, 160, 112
Poddaný, S., Brát, L., & Pejcha, O. 2010, NewA, 15, 297
Pollacco, D., Skillen, I., Collier Cameron, A., et al. 2008, MNRAS, 385, 1576
Powers, L. C., Libby-Roberts, J., Lin, A. S. J., et al. 2023, AJ, 166, 44
Psaridi, A., Bouchy, F., Lendl, M., et al. 2022, A&A, 664, A94
Psaridi, A., Bouchy, F., Lendl, M., et al. 2023, A&A, 675, A39
Püsküllü, Ç., Soydugan, F., Erdem, A., & Budding, E. 2017, NewA, 55, 39
Queloz, D., Anderson, D. R., Collier Cameron, A., et al. 2010, A&A, 517, L1
Quinn, S. N., Bakos, G. Á., Hartman, J., et al. 2012, ApJ, 745, 80
Quinn, S. N., Becker, J. C., Rodriguez, J. E., et al. 2019, AJ, 158, 177
Rabus, M., Deeg, H. J., Alonso, R., Belmonte, J. A., & Almenara, J. M. 2009, A&A, 508, 1011
Rabus, M., Jordán, A., Hartman, J. D., et al. 2016, AJ, 152, 88
Radica, M., Welbanks, L., Espinoza, N., et al. 2023, MNRAS, 524, 835
Raetz, S., Heras, A. M., Fernández, M., Casanova, V., & Marka, C. 2019, MNRAS, 483, 824
Raetz, S., Maciejewski, G., Seeliger, M., et al. 2015, MNRAS, 451, 4139
Raetz, S., Mugrauer, M., Schmidt, T. O. B., et al. 2009a, AN, 330, 459
Raetz, S., Mugrauer, M., Schmidt, T. O. B., et al. 2009b, AN, 330, 475
Rauer, H., Queloz, D., Csizmadia, S., et al. 2009, A&A, 506, 281
Raynard, L., Goad, M. R., Gillen, E., et al. 2018, MNRAS, 481, 4960
Ribas, I., Font-Ribera, A., & Beaulieu, J.-P. 2008, ApJL, 677, L59
Rice, K., Malavolta, L., Mayo, A., et al. 2019, MNRAS, 484, 3731
Ricker, G. R., Winn, J. N., Vanderspek, R., et al. 2014, SPIE, 9143, 914320
Rodriguez, J. E., Becker, J. C., Eastman, J. D., et al. 2018a, AJ, 156, 245
Rodriguez, J. E., Colón, K. D., Stassun, K. G., et al. 2016, AJ, 151, 138
Rodriguez, J. E., Eastman, J. D., Zhou, G., et al. 2019a, AJ, 158, 197
Rodriguez, J. E., Quinn, S. N., Huang, C. X., et al. 2019b, AJ, 157, 191
Rodriguez, J. E., Quinn, S. N., Vanderburg, A., et al. 2023, MNRAS, 521, 2765
Rodriguez, J. E., Quinn, S. N., Zhou, G., et al. 2021, AJ, 161, 194
Rodriguez, J. E., Vanderburg, A., Eastman, J. D., et al. 2018b, AJ, 155, 72
Rodriguez, J. E., Vanderburg, A., Zieba, S., et al. 2020, AJ, 160, 117
Sada, P. V., Deming, D., Jennings, D. E., et al. 2012, PASP, 124, 212
Sada, P. V., & Ramón-Fox, F. G. 2016, PASP, 128, 024402
Saeed, M. I., Goderya, S. N., & Chishtie, F. A. 2022, NewA, 91, 101680
Saha, S., Chakrabarty, A., & Sengupta, S. 2021, AJ, 162, 18
Salisbury, M. A., Kolb, U. C., Norton, A. J., & Haswell, C. A. 2021, NewA, 83, 101477
Sanchis-Ojeda, R., Winn, J. N., Holman, M. J., et al. 2011, ApJ, 733, 127
Sanchis-Ojeda, R., Winn, J. N., Marcy, G. W., et al. 2013, ApJ, 775, 54
Santerne, A., Bonomo, A. S., Hébrard, G., et al. 2011, A&A, 536, A70
Santerne, A., Hébrard, G., Lillo-Box, J., et al. 2016, ApJ, 824, 55
Sariya, D. P., Jiang, I.-G., Su, L.-H., et al. 2021, RAA, 21, 097
Sato, B., Hartman, J. D., Bakos, G. Á., et al. 2012, PASJ, 64, 97
Scargle, J. D. 1982, ApJ, 263, 835
Schanche, N., Hébrard, G., Collier Cameron, A., et al. 2020, MNRAS, 499, 428
Scarsdale, N., Murphy, J. M. A., Batalha, N. M., et al. 2021, AJ, 162, 215
Schlecker, M., Kossakowski, D., Brahm, R., et al. 2020, AJ, 160, 275
Schulte, J., Rodriguez, J. E., Bieryla, A., et al. 2024, AJ, 168, 32
Sedaghati, E., Boffin, H. M. J., Jeřabková, T., et al. 2016, A&A, 596, A47
Sedaghati, E., Boffin, H. M. J., MacDonald, R. J., et al. 2017, Natur, 549, 238
Sedaghati, E., Sánchez-López, A., Czesla, S., et al. 2022, A&A, 659, A44
Seeliger, M., Dimitrov, D., Kjurkchieva, D., et al. 2014, MNRAS, 441, 304
Seeliger, M., Kitze, M., Errmann, R., et al. 2015, MNRAS, 451, 4060
Serrano, L. M., Gandolfi, D., Hoyer, S., et al. 2022, A&A, 667, A1
Sha, L., Huang, C. X., Shporer, A., et al. 2021, AJ, 161, 82
Sha, L., Vanderburg, A. M., Huang, C. X., et al. 2023, MNRAS, 524, 1113
Shan, S.-S., Yang, F., Lu, Y.-J., et al. 2023, ApJS, 264, 37
Shporer, A., Bakos, G. Á., Bouchy, F., et al. 2009a, ApJ, 690, 1393
Shporer, A., Collins, K. A., Astudillo-Defru, N., et al. 2020, ApJL, 890, L7
Shporer, A., Mazeh, T., Pont, F., et al. 2009b, ApJ, 694, 1559
Shporer, A., Tamuz, O., Zucker, S., & Mazeh, T. 2007, MNRAS, 376, 1296
Shporer, A., Wong, I., Huang, C. X., et al. 2019, AJ, 157, 178
Shporer, A., Zhou, G., Fulton, B. J., et al. 2017, AJ, 154, 188
Simpson, E. K., Faedi, F., Barros, S. C. C., et al. 2011, AJ, 141, 8
Sing, D. K., Lavvas, P., Ballester, G. E., et al. 2019, AJ, 158, 91
Sing, D. K., Lecavelier des Etangs, A., Fortney, J. J., et al. 2013, MNRAS, 436, 2956
Sing, D. K., Wakeford, H. R., Showman, A. P., et al. 2015, MNRAS, 446, 2428
Sinukoff, E., Howard, A. W., Petigura, E. A., et al. 2016, ApJ, 827, 78
Siverd, R. J., Beatty, T. G., Pepper, J., et al. 2012, ApJ, 761, 123
Siverd, R. J., Collins, K. A., Zhou, G., et al. 2018, AJ, 155, 35
Skaf, N., Bieger, M. F., Edwards, B., et al. 2020, AJ, 160, 109
Skillen, I., Pollacco, D., Collier Cameron, A., et al. 2009, A&A, 502, 391
Smalley, B., Anderson, D. R., Collier Cameron, A., et al. 2010, A&A, 520, A56
Smalley, B., Anderson, D. R., Collier Cameron, A., et al. 2011, A&A, 526, A130
Smalley, B., Anderson, D. R., Collier-Cameron, A., et al. 2012, A&A, 547, A61
Smith, A. M. S. 2015, AcA, 65, 117
Smith, A. M. S., Anderson, D. R., Armstrong, D. J., et al. 2014, A&A, 570, A64
Smith, A. M. S., Anderson, D. R., Bouchy, F., et al. 2013, A&A, 552, A120
Smith, A. M. S., Anderson, D. R., Collier Cameron, A., et al. 2012, AJ, 143, 81
Smith, A. M. S., Anderson, D. R., Skillen, I., Collier Cameron, A., & Smalley, B. 2011, MNRAS, 416, 2096
Smith, A. M. S., Csizmadia, S., Gandolfi, D., et al. 2019, AcA, 69, 135
Smith, A. M. S., Csizmadia, S., Van Grootel, V., et al. 2025, A&A, 693, A128
Sokov, E. N., Sokova, I. A., Dyachenko, V. V., et al. 2018, MNRAS, 480, 291

Sonbas, E., Karaman, N., Özdönmez, A., et al. 2022, MNRAS, 509, 5102
Soto, M. G., Anglada-Escudé, G., Dreizler, S., et al. 2021, A&A, 649, A144
Soto, M. G., Díaz, M. R., Jenkins, J. S., et al. 2018, MNRAS, 478, 5356
Southworth, J., Barker, A. J., Hinse, T. C., et al. 2022, MNRAS, 515, 3212
Southworth, J., Bruni, I., Mancini, L., & Gregorio, J. 2012a, MNRAS, 420, 2580
Southworth, J., Dominik, M., Jørgensen, U. G., et al. 2019, MNRAS, 490, 4230
Southworth, J., Dominik, M., Jørgensen, U. G., et al. 2011, A&A, 527, A8
Southworth, J., & Evans, D. F. 2016, MNRAS, 463, 37
Southworth, J., Hinse, T. C., Burgdorf, M., et al. 2014, MNRAS, 444, 776
Southworth, J., Hinse, T. C., Dominik, M., et al. 2012b, MNRAS, 426, 1338
Southworth, J., Hinse, T. C., Burgdorf, M. J., et al. 2009, MNRAS, 399, 287
Southworth, J., Mancini, L., Browne, P., et al. 2013, MNRAS, 434, 1300
Southworth, J., Mancini, L., Ciceri, S., et al. 2015a, MNRAS, 447, 711
Southworth, J., Mancini, L., Maxted, P. F. L., et al. 2012c, MNRAS, 422, 3099
Southworth, J., Mancini, L., Novati, S. C., et al. 2010, MNRAS, 408, 1680
Southworth, J., Mancini, L., Tregloan-Reed, J., et al. 2015b, MNRAS, 454, 3094
Southworth, J., Tregloan-Reed, J., Andersen, M. I., et al. 2016, MNRAS, 457, 4205
Southworth, J., Tregloan-Reed, J., Pinhas, A., et al. 2018, MNRAS, 481, 4261
Sozzetti, A., Bonomo, A. S., Biazzo, K., et al. 2015, A&A, 575, L15
Sozzetti, A., Damasso, M., Bonomo, A. S., et al. 2021, A&A, 648, A75
Sozzetti, A., Torres, G., Charbonneau, D., et al. 2009, ApJ, 691, 1145
Spake, J. J., Brown, D. J. A., Doyle, A. P., et al. 2016, PASP, 128, 024401
Spyratos, P., Nikolov, N., Southworth, J., et al. 2021, MNRAS, 506, 2853
Stefansson, G., Cañas, C., Wisniewski, J., et al. 2020, AJ, 159, 100
Stefansson, G., Mahadevan, S., Hebb, L., et al. 2017, ApJ, 848, 9
Steiner, M., Attia, M., Ehrenreich, D., et al. 2023, A&A, 672, A134
Stevens, D. J., Collins, K. A., Gaudi, B. S., et al. 2017, AJ, 153, 178
Stevenson, K. B., Bean, J. L., Seifahrt, A., et al. 2014, AJ, 147, 161
Stevenson, K. B., Bean, J. L., Seifahrt, A., et al. 2016, ApJ, 817, 141
Stevenson, K. B., Harrington, J., Fortney, J. J., et al. 2012, ApJ, 754, 136
Street, R. A., Simpson, E., Barros, S. C. C., et al. 2010, ApJ, 720, 337
STScI 2016a, Kepler LC+SC, Q0-Q17, MAST, doi:10.17909/T98304
STScI 2016b, K2 Light Curves (all), MAST, doi:10.17909/T9WS3R
Su, L.-H., Jiang, I.-G., Sariya, D. P., et al. 2021, AJ, 161, 108
Sulis, S., Dragomir, D., Lendl, M., et al. 2019, A&A, 631, A129
Sun, L., Gu, S., Wang, X., et al. 2017, AJ, 153, 28
Sun, L., Gu, S., Wang, X., et al. 2023, MNRAS, 520, 1642
Sun, L.-L., Gu, S.-H., Wang, X.-B., et al. 2015, RAA, 15, 117
Sun, Z., Ji, J.-h., & Dong, Y. 2018, ChA&A, 42, 101
Talens, G. J. J., Albrecht, S., Spronck, J. F. P., et al. 2017, A&A, 606, A73
Temple, L. Y., Hellier, C., Albrow, M. D., et al. 2017, MNRAS, 471, 2743
Temple, L. Y., Hellier, C., Almleaky, Y., et al. 2018, MNRAS, 480, 5307
Temple, L. Y., Hellier, C., Almleaky, Y., et al. 2019a, AJ, 157, 141
Temple, L. Y., Hellier, C., Anderson, D. R., et al. 2019b, MNRAS, 490, 2467
Teske, J., Díaz, M. R., Luque, R., et al. 2020, AJ, 160, 96
TESS Team 2021, TESS Light Curves - All Sectors, MAST, doi:10.17909/T9-NMC8-F686
Tinetti, G., Drossart, P., Eccleston, P., et al. 2018, ExA, 46, 135
Todorov, K. O., Deming, D., Knutson, H. A., et al. 2012, ApJ, 746, 111
Todorov, K. O., Désert, J.-M., Huitson, C. M., et al. 2019, A&A, 631, A169
Tofflemire, B. M., Rizzuto, A. C., Newton, E. R., et al. 2021, AJ, 161, 171
Torres, G., Bakos, G. Á., Hartman, J., et al. 2010, ApJ, 715, 458
Torres, G., Bakos, G. Á., Kovács, G., et al. 2007, ApJL, 666, L121
Torres, G., Winn, J. N., & Holman, M. J. 2008, ApJ, 677, 1324
Tran, Q. H., Bowler, B. P., Endl, M., et al. 2022, AJ, 163, 225
Tregloan-Reed, J., Southworth, J., Burgdorf, M., et al. 2015, MNRAS, 450, 1760
Tregloan-Reed, J., Southworth, J., Mancini, L., et al. 2018, MNRAS, 474, 5485
Tregloan-Reed, J., Southworth, J., & Tappert, C. 2013, MNRAS, 428, 3671
Triaud, A. H. M. J., Anderson, D. R., Collier Cameron, A., et al. 2013, A&A, 551, A80
Triaud, A. H. M. J., Gillon, M., Ehrenreich, D., et al. 2015, MNRAS, 450, 2279
Triaud, A. H. M. J., Neveu-VanMalle, M., Lendl, M., et al. 2017, MNRAS, 467, 1714
Triaud, A. H. M. J., Queloz, D., Bouchy, F., et al. 2009, A&A, 506, 377
Triaud, A. H. M. J., Queloz, D., Hellier, C., et al. 2011, A&A, 531, A24
Trifonov, T., Caballero, J. A., Morales, J. C., et al. 2021, Sci, 371, 1038
Tripathi, A., Winn, J. N., Johnson, J. A., et al. 2010, ApJ, 715, 421
Tsiaras, A., Rocchetto, M., Waldmann, I. P., et al. 2016, ApJ, 820, 99
Tsiaras, A., Waldmann, I. P., Tinetti, G., Tennyson, J., & Yurchenko, S. N. 2019, NatAs, 3, 1086
Tsiaras, A., Waldmann, I. P., Zingales, T., et al. 2018, AJ, 155, 156
Turner, J. D., Leiter, R. M., Biddle, L. I., et al. 2017, MNRAS, 472, 3871
Turner, J. D., Pearson, K. A., Biddle, L. I., et al. 2016, MNRAS, 459, 789
Turner, J. D., Smart, B. M., Hardegree-Ullman, K. K., et al. 2013, MNRAS, 428, 678
Turner, O. D., Anderson, D. R., Barkaoui, K., et al. 2019, MNRAS, 485, 5790
Turner, O. D., Anderson, D. R., Collier Cameron, A., et al. 2016, PASP, 128, 064401
Turner, J. D., Flagg, L., Ridden-Harper, A., & Jayawardhana, R. 2022, AJ, 163, 281
Turtelboom, E. V., Weiss, L. M., Dressing, C. D., et al. 2022, AJ, 163, 293
Vach, S., Quinn, S. N., Vanderburg, A., et al. 2022, AJ, 164, 71
Vanderburg, A., Becker, J. C., Buchhave, L. A., et al. 2017, AJ, 154, 237
Vanderburg, A., Bieryla, A., Duev, D. A., et al. 2016, ApJL, 829, L9
Vanderburg, A., Montet, B. T., Johnson, J. A., et al. 2015, ApJ, 800, 59
Van Eylen, V., Dai, F., Mathur, S., et al. 2018, MNRAS, 478, 4866
Van Grootel, V., Gillon, M., Valencia, D., et al. 2014, ApJ, 786, 2
Van Zandt, J., Petigura, E. A., MacDougall, M., et al. 2023, AJ, 165, 60
Vanderburg, A., Huang, C. X., Rodriguez, J. E., et al. 2019, ApJL, 881, L19
Vanderspek, R., Huang, C. X., Vanderburg, A., et al. 2019, ApJL, 871, L24
Villanueva, S., Jr, Eastman, J. D., & Gaudi, B. S. 2016, ApJ, 820, 87
von Essen, C., Mallonn, M., Albrecht, S., et al. 2015, A&A, 584, A75
von Essen, C., Mallonn, M., Borre, C. C., et al. 2020, A&A, 639, A34
von Essen, C., Schröter, S., Agol, E., & Schmitt, J. H. M. M. 2013, A&A, 555, A92
von Essen, C., Stefansson, G., Mallonn, M., et al. 2019a, A&A, 628, A115
von Essen, C., Wedemeyer, S., Sosa, M. S., et al. 2019b, A&A, 628, A116
Vines, J. I., Jenkins, J. S., Acton, J. S., et al. 2019, MNRAS, 489, 4125
Virtanen, P., Gommers, R., Oliphant, T. E., et al. 2020, NatMe, 17, 261
Vissapragada, S., Knutson, H. A., Greklek-McKeon, M., et al. 2022, AJ, 164, 234
Waalkes, W. C., Berta-Thompson, Z. K., Collins, K. A., et al. 2021, AJ, 161, 13
Wakeford, H. R., Sing, D. K., Kataria, T., et al. 2017, Sci, 356, 628
Wakeford, H. R., Sing, D. K., Stevenson, K. B., et al. 2020, AJ, 159, 204
Wang, J., Xie, J.-W., Barclay, T., & Fischer, D. A. 2014, ApJ, 783, 4
Wang, S., Jones, M., Shporer, A., et al. 2019, AJ, 157, 51
Wang, S., Wang, X.-Y., Wang, Y.-H., et al. 2018, AJ, 156, 181
Wang, X.-B., Gu, S.-H., Collier Cameron, A., et al. 2013, RAA, 13, 593
Wang, X.-b., Gu, S.-h., Collier Cameron, A., et al. 2014, AJ, 147, 92
Wang, X.-Y., Wang, S., Hinse, T. C., et al. 2018, PASP, 130, 064401
Wang, X.-Y., Wang, Y.-H., Wang, S., et al. 2021, ApJS, 255, 15
Wang, Y.-H., Wang, S., Hinse, T. C., et al. 2019, AJ, 157, 82
Wang, Y.-H., Wang, S., Liu, H.-G., et al. 2017, AJ, 154, 49
Watanabe, N., Narita, N., Palle, E., et al. 2022, MNRAS, 512, 4404
Weaver, I. C., López-Morales, M., Espinoza, N., et al. 2020, AJ, 159, 13
Weiss, L. M., Marcy, G. W., Rowe, J. F., et al. 2013, ApJ, 768, 14
West, R. G., Anderson, D. R., Gillon, M., et al. 2009a, AJ, 137, 4834
West, R. G., Collier Cameron, A., Hebb, L., et al. 2009b, A&A, 502, 395
West, R. G., Hellier, C., Almenara, J.-M., et al. 2016, A&A, 585, A126
Wilkins, A. N., Delrez, L., Barker, A. J., et al. 2017, ApJL, 836, L24
Wilson, D. M., Gillon, M., Hellier, C., et al. 2008, ApJL, 675, L113
Wilson, T. G., Goffo, E., Alibert, Y., et al. 2022, MNRAS, 511, 1043
Winn, J. N., Henry, G. W., Torres, G., & Holman, M. J. 2008a, ApJ, 675, 1531
Winn, J. N., Holman, M. J., Bakos, G. Á., et al. 2007a, AJ, 134, 1707
Winn, J. N., Holman, M. J., Henry, G. W., et al. 2009a, ApJ, 693, 794
Winn, J. N., Holman, M. J., & Roussanova, A. 2007b, ApJ, 657, 1098
Winn, J. N., Holman, M. J., Torres, G., et al. 2008b, ApJ, 683, 1076
Winn, J. N., Howard, A. W., Johnson, J. A., et al. 2011a, AJ, 141, 63
Winn, J. N., Johnson, J. A., Fabrycky, D., et al. 2009b, ApJ, 700, 302
Winn, J. N., Matthews, J. M., Dawson, R. I., et al. 2011b, ApJL, 737, L18
Winters, J. G., Cloutier, R., Medina, A. A., et al. 2022, AJ, 163, 168
Winters, J. G., Medina, A. A., Irwin, J. M., et al. 2019, AJ, 158, 152
Wirth, C. P., Zhou, G., Quinn, S. N., et al. 2021, ApJL, 917, L34
Wittenmyer, R. A., Clark, J. T., Trifonov, T., et al. 2022, AJ, 163, 82
Wong, I., Knutson, H. A., Cowan, N. B., et al. 2014, ApJ, 794, 134
Wong, I., Knutson, H. A., Kataria, T., et al. 2016, ApJ, 823, 122
Wong, I., Knutson, H. A., Lewis, N. K., et al. 2015, ApJ, 811, 122
Wong, I., Shporer, A., Zhou, G., et al. 2021, AJ, 162, 256
Wyttenbach, A., Lovis, C., Ehrenreich, D., et al. 2017, A&A, 602, A36
Yan, F., Espinoza, N., Molaverdikhani, K., et al. 2020, A&A, 642, A98
Yang, F., & Chary, R.-R. 2022, AJ, 164, 259
Yang, F., Wang, W., Wei, X., et al. 2022, RAA, 22, 055005
Yee, S. W., Winn, J. N., Hartman, J. D., et al. 2022, AJ, 164, 70

Yee, S. W., Winn, J. N., Hartman, J. D., et al. 2023, ApJS, 265, 1
Yee, S. W., Winn, J. N., Knutson, H. A., et al. 2020, ApJL, 888, L5
Yip, K. H., Changeat, Q., Edwards, B., et al. 2021, AJ, 161, 4
Yu, L., Crossfield, I. J. M., Schlieder, J. E., et al. 2018a, AJ, 156, 22
Yu, L., Zhou, G., Rodriguez, J. E., et al. 2018b, AJ, 156, 250
Zellem, R. T., Pearson, K. A., Blaser, E., et al. 2020, PASP, 132, 054401
Zhang, M., Knutson, H. A., Kataria, T., et al. 2018, AJ, 155, 83
Zhang, Y., Snellen, I. A. G., Wyttenbach, A., et al. 2022, A&A, 666, A47
Zhao, M., O'Rourke, J. G., Wright, J. T., et al. 2014, ApJ, 796, 115
Zhou, G., Bakos, G. Á., Bayliss, D., et al. 2019a, AJ, 157, 31
Zhou, G., Bakos, G. Á., Hartman, J. D., et al. 2017, AJ, 153, 211
Zhou, G., Bayliss, D., Penev, K., et al. 2014, AJ, 147, 144
Zhou, G., Huang, C. X., Bakos, G. Á., et al. 2019b, AJ, 158, 141
Zhou, G., Quinn, S. N., Irwin, J., et al. 2021, AJ, 161, 2
Zhou, G., Rodriguez, J. E., Collins, K. A., et al. 2016, AJ, 152, 136
Zhou, G., Wirth, C. P., Huang, C. X., et al. 2022, AJ, 163, 289