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1 Editorial

Dear readers,

Welcome to the March edition of the ExoPlanet News!

In this issue you will find abstracts of scientific papers, job advertisements, announcements (conferences, book), the latest exoplanet talks, updates from the Exoplanet archive, and an overview of exoplanet-related articles on astro-ph.

We remind you of some **guidelines for using our templates**. If you follow these guidelines, you will make our job easier:

- Please rename the *.tex* file you send from *abstract_template* to something with your last name, like *jobs_smith* or *announcement_miller*
- Avoid using hyperlinks, the newsletter template cannot yet handle the package *hyperref*.
- Do not use any defined command or additional packages
- Abstract: should occupy maximum one page of the pdf without figure. If the list of authors is too large for this, please cut the list of authors, add “et al.” followed by “(a complete list of authors can be found on the publication)”.
- Figure: attach it to the e-mail without large white margins. It should be one single pdf file per abstract.
- Prior to submission, please remember to comment the three lines which start the tex document and the last line which ends the document.
- Please remember to fill the brackets `{ }` after the title with author names.

For the next month we look forward to your paper abstracts, job ads or meeting announcements. Also special announcements are welcome. As always, we would also be happy to receive feedback concerning the newsletter. The Latex template for submitting contributions, as well as all previous editions of ExoPlanet News, can be found on the ExoPlanet News webpage (<http://nccr-planets.ch/exoplanetnews/>).

The next issue will appear on April 12, 2022.

Julia Venturini
Daniel Angerhausen
Lokesh Mishra
Holly Capelo
Timm-Emanuel Riesens

2 Abstracts of refereed papers

Orbital alignment of HD 332231 b

E. Knudstrup^{1,2}, *S. H. Albrecht*¹

¹ Stellar Astrophysics Centre, Department of Physics and Astronomy, Aarhus University, Ny Munkegade 120, DK-8000 Aarhus C, Denmark

² Nordic Optical Telescope, Rambla José Ana Fernández Pérez 7, E-38711 Breña Baja, Spain

Astronomy & Astrophysics, accepted (arXiv:2111.14968)

Contrary to the orthodox picture of planet formation resulting in a neatly ordered Solar System, exoplanet systems exhibit highly diverse orbits: short and long periods, circular and eccentric, well- and misaligned, and even retrograde orbits. In order to understand this diversity it is essential to probe key orbital parameters. Spin-orbit alignment is such a parameter and can provide information about the formation and migration history of the system. However, tidal circularisation and alignment might hamper interpretations of orbital eccentricity and obliquities in the context of planet formation and evolution for planets on orbits shorter than about 10 days. Here we aim to measure the projected stellar obliquity in the HD 332231 system in which a warm (period ≈ 18.7 days) giant planet orbits a bright F star on a circular orbit. We observed the system during a transit with the HARPS-N spectrograph and obtained data on the Rossiter-McLaughlin effect. We analysed the spectroscopic transit data together with new TESS photometry employing three different analysis methods. The results from the different approaches are fully consistent. We find a projected obliquity of $-2 \pm 6^\circ$, indicating the stellar spin axis to be well-aligned with the orbit of the planet. We furthermore find evidence for transit timing variations suggesting the presence of an additional third body in the system. Together with the low orbital eccentricity, the good alignment suggests that this warm giant planet has not undergone high-eccentricity migration.

Download/Website: <https://arxiv.org/abs/2111.14968>

Contact: emil@phys.au.dk

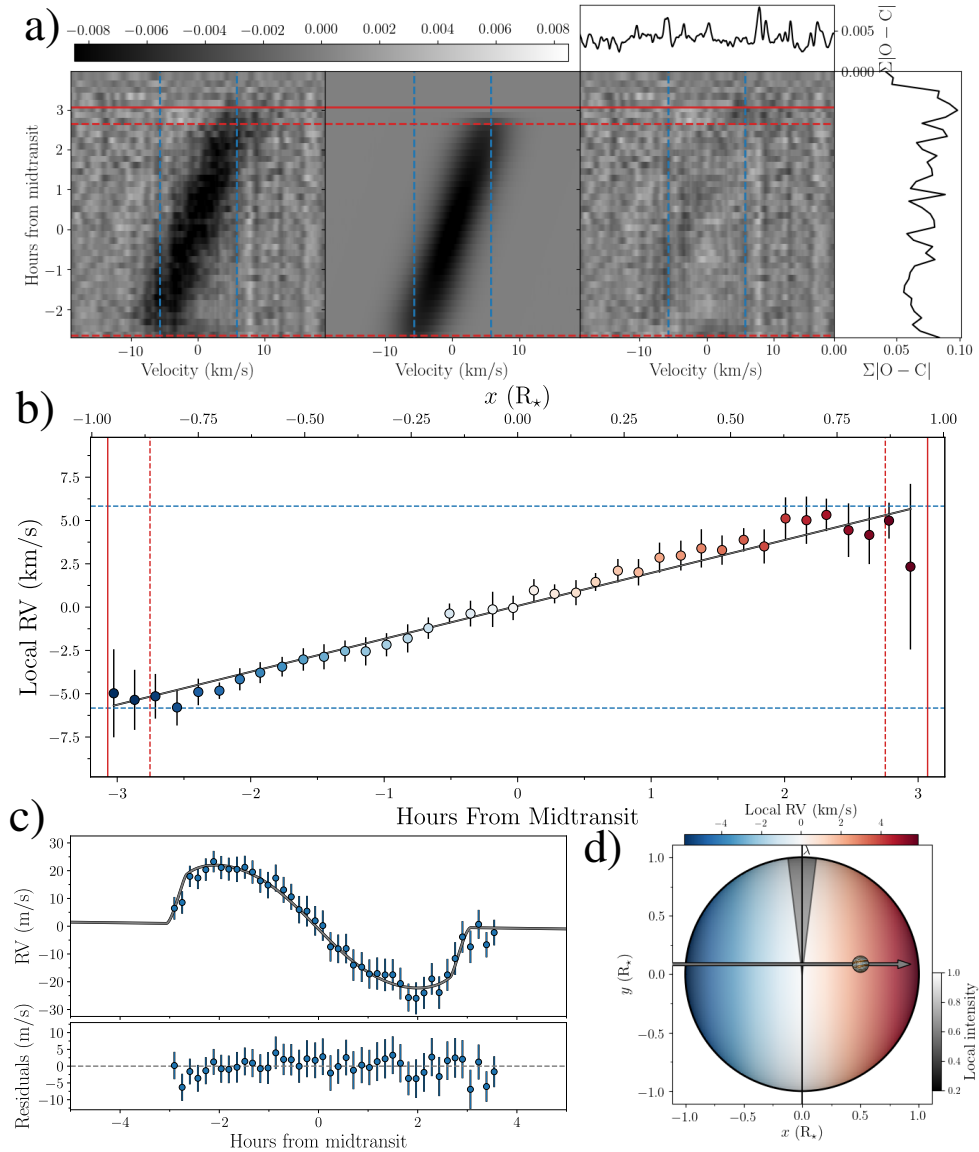


Figure 1: **a) Left:** The distortion of the stellar absorption lines as observed with HARPS-N during the transit night. The vertical lines denote $\pm v \sin i$. The horizontal dashed lines are the second and third contact, i.e., the times in between is when the planet is completely within the stellar disk, and the solid line is the fourth contact, i.e., the point where the stellar and planetary disks no longer overlap. **Middle:** The best-fitting model of the distortion of the absorption lines. **Right:** The residuals from subtracting the best-fitting model from the data with the summed values displayed on top and to the right. In all panels data and model have been shifted into the stellar restframe, a minor effect. The horizontal colour bar on top denotes the strength of the signal. **b)** The subplanetary, or local, RVs created by subtracting the out of transit CCF from the in-transit ones and measuring the position of the excess bump caused by the planet. The error bars are colour-coded according to the $v \sin i$ value they should have given their x -position in **d)**, which shows the orientation of the orbit and the projected stellar rotation going from blue ($-v \sin i$) to red ($v \sin i$). As in **a)** the dashed blue line denotes the value for $v \sin i$, while the solid and dashed red lines mark the contact points. **c) Top:** Shown with blue error bars are the radial velocities from HARPS-N used in the fit. The grey line is the best-fitting model of the Rossiter-McLaughlin effect. **Bottom:** The residuals from subtracting the best-fitting model from the data. **d)** The geometry of the system with the planet transiting the rotating and limb-darkened star, which is tilted by λ with respect to the orbit of the planet marked with the grey arrow. The horizontal colour bar shows the rotation speed at a given longitude, and the grey colour bar shows the relative intensity given going from 1.0 in the center to around 0.16 at the limb. Here the intensity overlay has been made transparent to make the rotation colour-coding visible.

A Scaling for Atmospheric Heat Redistribution on Tidally-Locked Rocky Planets

Daniel D.B. Koll¹

¹ Peking University, Beijing, China

The Astrophysical Journal, published (2022ApJ...924..134K)

Atmospheric heat redistribution shapes the remote appearance of rocky exoplanets but there is currently no easy way to predict a planet's heat redistribution from its physical properties. This paper proposes an analytical scaling theory for the heat redistribution on tidally-locked rocky exoplanets. The main parameters of the scaling are a planet's equilibrium temperature, surface pressure, and broadband longwave optical thickness. The scaling compares favorably against idealized general circulation model simulations of TRAPPIST-1b, GJ1132b, and LHS 3844b. For these planets heat redistribution generally becomes efficient, and a planet's observable thermal phase curve and secondary eclipse start to deviate significantly from that of a bare rock, once surface pressure exceeds $\mathcal{O}(1)$ bar. The scaling additionally points to planetary scenarios for which heat transport can be notably more or less efficient, such as H_2 and CO atmospheres or hot lava ocean worlds. The results thus bridge the gap between theory and imminent observations with the *James Webb Space Telescope*. They can also be used to parameterize the effect of 3D atmospheric dynamics in 1D models, thereby improving the self-consistency of such models.

Download/Website: <https://iopscience.iop.org/article/10.3847/1538-4357/ac3b48>

Contact: dkoll@pku.edu.cn

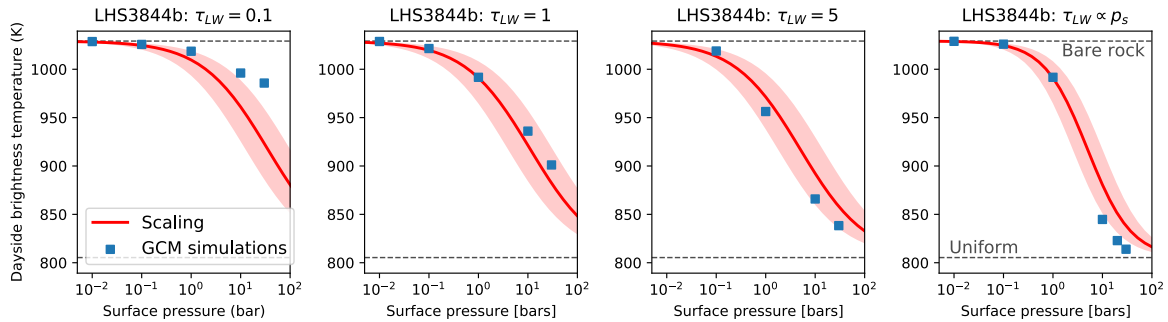


Figure 2: The analytical scaling proposed in this paper (red), compared to 3D GCM simulations of LHS 3844b (blue). Shown is the planet's broadband dayside brightness temperature, which decreases with increasing surface pressure, for different assumptions about an atmosphere's optical thickness τ_{LW} . The light red envelope indicates a representative factor-of-two uncertainty in the heat engine efficiency parameter that enters the scaling. Horizontal dashed lines show the limiting cases of a bare rock planet (zero heat redistribution) and uniform redistribution. This figure is a smaller version of Fig. 2 in the published article.

3 Jobs and Positions

Tenure-Track Professorship for the field of Exoplanetary Atmospheres

Department of Astrophysics, University of Vienna, deadline 1 April 2022

At the Faculty of Earth Sciences, Geography and Astronomy, Department of Astrophysics, of the University of Vienna the position of a

Tenure-Track Professorship for the field of Exoplanetary Atmospheres

(full-time position) is to be filled.

We are seeking an outstanding early career scientist who will establish an internationally competitive and innovative research program in the field of Exoplanetary Atmospheres. Possible research topics include, among others, the formation, evolution, and dispersal of planetary atmospheres, chemical processing, or atmospheric dynamics; the focus of the position will be on atmospheres of rocky planets, and bridging to research on habitable planetary environments will be very welcome. The successful candidate will develop her/his research either based on observational methods, or on numerical modeling/theoretical approaches, or both. Experience in interdisciplinary and international research cooperation is highly desired.

For all details related to candidate qualifications, necessary application materials, how to apply, application deadline, and the offers by the University, please consider the full announcement text given at the URL of the University of Vienna Job Center – link see below.

Included Benefits: See full announcement text

Application Deadline: Friday, April 1, 2022

URL: Job no. 12846 in University of Vienna Job Center: <https://personalwesen.univie.ac.at/en/jobs-recruiting/job-center/>

Download/Website: https://univis.univie.ac.at/ausschreibungstellensuche/flow/bew_ausschreibung_flow?_flowExecutionKey=_c6D94D4BC-741C-1C97-F405-CBC32AE7961A_k18EFAF47-6FCB-7A67-60A6-C97FFD479BCF&tid=89881.28

Contact: dekanat.fgga@univie.ac.at

Tenure Track Assistant Professor Astronomy and Astrophysics

Kapteyn Astronomical Institute, University of Groningen, The Netherlands

deadline, 9am CET, March 31, 2022

The Kapteyn Astronomical Institute of the University of Groningen invites applications for a tenure track Assistant Professor position in the field of Exoplanets. We are particularly interested in a candidate with a strong background in Planetary Sciences who can connect to the key themes of the Dutch Origins Centre and engage in collaborations with other institutes at the Faculty of Science and Engineering and with SRON and universities across the Netherlands.

The mission of the Kapteyn Astronomical Institute is to perform front-line research in astronomy, astrophysics and related fields, aided by the proximity of NWO-institutes ASTRON and SRON and the NOVA labs, and to provide an excellent educational environment for both graduate and undergraduate studies. The University of Groningen is currently in or near the top 100 on several influential international ranking lists.

As Assistant Professor you will develop your own research line/group, supervise PhD students, acquire external funding, teach and contribute to the organization of the faculty.

We encourage you to apply if you have a PhD degree in Astronomy or closely aligned field (such as Physics, Planetary Sciences or Geosciences) and at least two years of postdoctoral experience, a developed international network, excellent research qualities and a good track record in teaching (appropriate for your career stage).

We offer a full-time position as Assistant Professor in our faculty's tenure track system Career Paths in Science with a salary, depending on qualifications and work experience, from 3.821 Euro up to a maximum of 5.943 Euro gross per month (according to the CAO Dutch Universities). The position includes a pension scheme, paid maternity and parental leave and the possibility to work part-time (0,9 fte or 0,8 fte).

A complete application consists of a single pdf file including a cover letter in which you describe your motivation and qualifications for the position, a CV, including a list of your publications and a list with names of at least three references, a list of five self-selected 'best papers', a list of five 'key research outputs', a statement of your teaching goals and experience and a description of your scientific interest and plans. Please also arrange for three letters of reference to be sent directly to recruitment@rug.nl. The deadline for applications for this position is 9am CET on March 31st, 2022.

More details concerning the description of the position, working conditions, pre-requisites and how to apply can be found here (<https://www.rug.nl/about-ug/work-with-us/job-opportunities/?details=00347-02S0008Z0P&cat=wp>).

Download/Website: <https://www.rug.nl/research/kapteyn/vacatures/scientific-staff>

Contact: For inquiries about the position, please contact Prof. dr. I. Kamp, Prof. dr. F. van der Tak, or Prof. dr. L.V.E. Koopmans via VacancyKapteyn@astro.rug.nl

Postdoctoral Teaching Fellow in Planetary Sciences at Wesleyan University

Seth Redfield

¹ Planetary Science Group, Wesleyan University, Middletown, CT USA

Wesleyan University, September 2022

Applications are invited for a Postdoctoral Teaching Fellow in the Planetary Sciences, an interdisciplinary group comprised of the Astronomy and Earth & Environmental Science Departments at Wesleyan University. The Teaching Fellow position is structured with time devoted to research and teaching, with a teaching load of one course per semester plus organizing the planetary science seminar. Our expectation is that the successful candidate will excel at teaching and mentoring students who are broadly diverse with regard to race, ethnicity, socioeconomic status, gender, nationality, sexual orientation, and religion. The precise research direction will be driven by the candidate. The Postdoctoral Fellow will be encouraged to interact with other faculty, postdocs and students in Planetary Science and to carry out independent research with full access to observational, laboratory and field facilities available. Expertise in Planetary Science includes the geology of solar system bodies including Venus, Mars, and the Moon, cosmochemistry, planet formation, and exoplanet discovery and characterization. Applicants must have a Ph.D. in planetary science, astronomy, or geology at the start of the appointment.

Wesleyan University, located between New York City and Boston, has a small and active planetary science program which emphasizes involvement of undergraduate and M.A. students in research and includes some grant-funded postdoctoral researchers. The Postdoctoral Fellow is expected to engage with our research community, including mentoring students in research. The position has been approved for 3 years, structured with an initial 1-year appointment with the additional 2 years contingent upon performance. Anticipated start date is September 1, 2022.

The following documents are required (submitted electronically): (1) Cover letter, (2) Current curriculum vitae with publication list, (3) Statement of research experience and interests, (4) Statement of teaching, and (5) email addresses of three referees from whom we will obtain confidential letters of recommendation. These materials should demonstrate the candidate's ability to help us cultivate a diverse and inclusive community. Applications will be considered on a rolling basis. Applications received by 10 March 2022 will be given full consideration. Please contact Stefanie Dinneen at sdinneen@wesleyan.edu if you have questions about the application process.

Compensation includes health and retirement benefits as well as a travel allowance. Please see the Wesleyan Benefits website for more information: <https://www.wesleyan.edu/hr>.

Wesleyan University, located in Middletown, Connecticut, does not discriminate on the basis of race, color, religious practice or creed, age, gender, gender identity or expression, national origin, marital status, ancestry, present or past history of mental disorder, learning disability or physical disability, political belief, veteran status, sexual orientation, genetic information or non-position-related criminal record. We welcome applications from women and historically underrepresented minority groups. Inquiries regarding Title IX, Section 504, or any other non-discrimination policies should be directed to: Vice President for Equity & Inclusion / Title IX Officer, 318 North College, 860.685.4771.

Apply through the Wesleyan Online Career Opportunities site.

Download/Website: <https://careers.wesleyan.edu/postings/8533>

Contact: sredfield@wesleyan.edu

4 Conferences

“Planetary formation and evolution” (PFE) and “Exoplanet diversity” (SPP 1992) joint meeting

Heike Rauer on behalf of the SOC

Freie Universität Berlin, Germany, September 12-14, 2022

The biennial workshop series “Planet formation and evolution” (PFE) and the DFG funded priority program “Exploring the diversity of extrasolar planets” (SPP 1992) are planning a joint meeting. In order to foster collaborations across fields, this PFE-SPP1992 joint meeting aims at being a platform for researchers from the scientific fields of exoplanets, planet formation, protoplanetary and debris disks, astrobiology, cosmochemistry, and planetary research in general. The organizers also want to encourage contributions from all disciplines, i.e. theory, observations as well as numerical and laboratory studies. The overarching goal of this meeting is to stimulate and intensify the dialogue between researchers from these different fields.

The 2.5 day meeting is scheduled September 12-14, 2022 as a hybrid meeting. The venue will be the Freie Universität (FU) Berlin. Abstract submission and registration will be open mid-March 2022. The meeting website will also be online mid-March 2022.

Download/Website: coming mid-March 2022

Contact: spp1992@astro.physik.tu-berlin.de

IAU Symposium 370: Winds of stars and exoplanets

Aline Vidotto

Leiden Observatory, Leiden University, the Netherlands

Busan, Republic of Korea, 8 - 11 August 2022

We are pleased to announce the IAU Symposium 370 “Winds of stars and exoplanets”, which will take place during the IAU General Assembly in Busan, Republic of Korea, 8-11 August 2022.

This symposium is dedicated to “winds” — in particular, we would like to bring together researchers working on winds of close-in exoplanets (atmospheric escape), winds of low- and high-mass stars and the solar wind, to gain insight in the physics and the modelling tools used by different communities. Our goal is to foster communication between these different communities and drive advances in the field. The key topics of discussion will be:

- Physical ingredients of winds
- Observational evidence of winds
- Relevance of winds on stellar/planetary evolution
- Flow-flow interactions

More information on the symposium can be found at the conference website.

Important upcoming dates

Early-bird registration deadline: 28 March 2022

Abstract submission deadline: 31 March 2022

IAU travel grant application: 31 March 2022

Please, register and submit your abstract through the IAU GA website: <https://www.iauga2022.org> .

We are looking forward to your participation, either in person or virtually, at the IAUS370!

Confirmed invited speakers: Leonardo dos Santos; Daria Kubyshkina; Jonathan Mackey; Andrea Mehner; Darius Modirrousta-Galian; Rachel Osten; Stan Owocki (Plenary speaker); Susana Parenti; Andreas Sanders; Ildar Shaikhislamov; Munehito Shoda; Sung-Chul Yoon

SOC: Aline Vidotto (chair), Luca Fossati (co-chair), Jorick Vink (co-chair), Steve Cranmer, Richard Ignace, Moira Jardine, Kristina Kislyakova, Tommi Koskinen, Shazrene Mohamed, Takeru Suzuki

Download/Website: <https://local.strw.leidenuniv.nl/iaus370>

Contact: vidotto@strw.leidenuniv.nl

Manifestations of star-planet interactions (Splinter session at Cool Stars 21)

A. Strugarek¹, A. Vidotto², and R. Fares³

¹ DAp-AIM, CEA Paris-Saclay, France

² Leiden Observatory, Netherlands

³ United Arab Emirates University, UAE

Toulouse, France / Hybrid Format, 5 July 2022

The interactions of cool stars with their surrounding exoplanets can have various origins: gravitation (tides), magnetism (stellar hot spots), wind-magnetosphere coupling (magnetic reconnection), and irradiation (atmospheric escape). They are expected to leave visible traces in a large part of the electromagnetic spectrum, in X-rays (e.g., stellar hot spots), infrared (evaporation of hot atmospheres), radio (planetary aurorae), among others. Their manifestation generally adds up to the stellar spectrum with a non-trivial temporal modulation. In this splinter session, we aim to bring together observers/theoreticians whose diverse research interests are linked to star-planet interactions. We will address the following questions:

- What can we learn from observed star-planet interactions?
- How can the detailed knowledge acquired by the solar system community be applied in the case of hot exosystems?
- How to better disentangle star-planet interactions signals from stellar activity in the stellar spectra?

The invited speakers are Wilson Cauley, Moira Jardine, and Melodie Kao.

We welcome abstracts, to be sent to cs21spi@gmail.com before 15 April 2022.

Download/Website: https://avidotto.github.io/cs21/SPI_splinter.html

Contact: cs21spi@gmail.com

5 Announcements

ESA Archival Research Visitor Programme

Guido De Marchi

ESAC (Spain) and ESTEC (Netherlands), Autumn 2022 and Winter 2023

To increase the scientific return from its space science missions, the European Space Agency (ESA) welcomes applications from scientists interested in pursuing research projects based on data publicly available in the ESA Space Science Archives.

The ESA Archival Research Visitor Programme is open to scientists, at all career levels, affiliated with institutes in ESA Member States and Collaborating States. Early-career scientists (within 10 years of the PhD) are particularly encouraged to apply. Applications by PhD students are also welcome.

During their stay, visiting scientists will have access to archives and mission specialists for help with the retrieval, calibration, and analysis of archival data. In principle, all areas of space research covered by ESA science missions can be supported.

Residence lasts typically between one and three months, also distributed over multiple visits. Research projects can be carried out at ESAC (Madrid, Spain) and at ESTEC (Noordwijk, Netherlands). To offset the expenses incurred by visitors, ESA covers travel costs from and to the home institution and provides support for lodging expenses and meals.

Applications received before 1 May 2022 will be considered for visits in autumn and winter (2022/2023).

For further details, including areas of research and contact information, please refer to the website and email address indicated below.

Download/Website: <https://www.cosmos.esa.int/web/esdc/visitor-programme>

Contact: arvp@cosmos.esa.int

CHEOPS AO-3

Kate Isaak

ESA CHEOPS Project Scientist, European Space Agency/ESTEC, the Netherlands

”AO-3 for the CHEOPS Guest Observers Programme closes 15 March 2022 12:00 GMT/13:00 CET”

Dear Colleagues,

The third Annual Announcement of Opportunity (AO-3) for participation in the CHEOPS Guest Observers Programme will close on 15 March 2022 at 12:00 GMT/13:00 CET.

AO-3 will be the final call in the nominal mission, and will cover the period from the very end of June 2022 to 24 September 2023

Documents, tools and webpages to help you with your proposal preparation are available from the following webpage:

<https://www.cosmos.esa.int/web/cheops-guest-observers-programme/ao-3>

The Discretionary Programme remains open, with further details available at:

<https://www.cosmos.esa.int/web/cheops-guest-observers-programme/discretionary-programme>

Do not hesitate to get in touch with me (at the email address below) directly in case of any questions, small or big.

Best,

Kate Isaak
(kate.isaak@esa.int)

Contact: `kate.isaak@esa.int`

6 Exoplanet Archives

February 2022 Updates at the NASA Exoplanet Archive

The NASA Exoplanet Archive team

Caltech/IPAC-NASA Exoplanet Science Institute, MC 100-22 Pasadena CA 91125

Pasadena CA USA, March 8, 2022

Note: Unless otherwise noted, all planetary and stellar data mentioned in the news are in the Planetary Systems Table (<http://bit.ly/2Pt0tM1>), which provides a single location for all self-consistent planetary solutions, and its companion table the Planetary Systems Composite Parameters (<https://bit.ly/2Fer9NU>), which offers a more complete table of parameters combined from multiple references and calculations. Data can also be found in the Microlensing Planets Table (<https://bit.ly/3urUyZU>) or Direct Imaging Planets Table (<http://bit.ly/3ayD185>).

February 25, 2022

Two More Planets and New Parameters

This week's new planets are GJ 3929 b and TOI-1759 b, both discovered using the transit method. There are also new parameter sets for WASP-28 b and WASP-151 b. Today's update brings the archive's total confirmed planet count to **4,935**.

February 17, 2022

19 New Planets

All but two of this week's new planets are TESS discoveries, and 13 of them are potentially terrestrial. The TOI-1860 system appears to have the youngest solar twin with a known planet. Learn more in Giacalone et al. 2022 (<https://bit.ly/3MdUJkV>).

The new planets are Kepler-1972 b & c, TOI-1268 b, TOI-2337 b, TOI-4329 b, TOI-2669 b, TOI-206 b, TOI-500 b, TOI-544 b, TOI-833 b, TOI-1075 b, TOI-1411 b, TOI-1442 b, TOI-1693 b, TOI-1860 b, TOI-2260 b, TOI-2411 b, TOI-2427 b, and TOI-2445 b.

Final UKIRT Microlensing Survey Data Release

The 2019 data for the UKIRT Microlensing Survey are now public!

After a pandemic-induced delay, all data for the multi-year UKIRT Microlensing Survey toward the Galactic bulge can be accessed from the Exoplanet Archive:

- Documentation for DR 2019 (and all earlier releases) is on the UKIRT Mission page (<http://bit.ly/2Hsv4aE>).
- To download UKIRT data by wget script, go to the Bulk Download page (<http://bit.ly/2CLiYE3>).

- To search for and download a subset of the data, use the UKIRT Time Series Search interface (<http://bit.ly/2HDG710>). (Consult the Data Column Definitions document for the full list of available parameters (<https://bit.ly/3sAATIw>).
- UKIRT data are also now supported through the archive's Table Access Protocol (TAP) service (<https://bit.ly/2Tajkgk>).

If you use archive data or services for your research, please include the following Digital Object Identifier (DOI) as part of your acknowledgment: DOI 10.26133/NEA7. Additional acknowledgements are listed in UKIRT Acknowledgments (<https://bit.ly/3K86kQs>).

February 10, 2022

Big News: The archive's social media presence has merged with NExSci!

If you follow the Exoplanet Archive on Twitter or Facebook, you may have noticed the accounts now say NASA Exoplanet Science Institute, or NExSci. Don't worry, we are still here! This important update enables us to better serve the scientific community and inform them of not only Exoplanet Archive items, but also NExSci activities.

Why the change?

The NASA Exoplanet Science Institute (NExSci) provides science operations and services for NASA Exoplanet Exploration Program projects, which includes the NASA Exoplanet Archive. By merging the archive's established social media presence with NExSci, we hope to introduce NExSci and its offerings to a wider audience.

For example, did you know NExSci administers and schedules NASA's portion of time on the Keck telescopes? And that NExSci assists with the NASA Hubble Fellowship Program and runs the annual Sagan Summer Workshop? And that NExSci operates the NEID Archive—NASA's newest Extreme Precision Radial Velocity spectrometer—as part of the NN-Explore Program? NExSci has also developed and maintains several public astronomy data archives and software tools, including the Keck Observatory Archive (KOA).

These are the kinds of things we hope to feature on Twitter and Facebook. (You can also learn more on the NExSci website: <https://nexsci.caltech.edu/>.)

What has changed

The archive's Twitter handle and Facebook page name have been changed from @NASAExoArchive to @NExSciIPAC and @NExSci, respectively. If you were already following these accounts, you will just see the name change and more NExSci-inclusive content.

What isn't changing

The new NExSci Facebook and Twitter accounts will continue publishing archive news—including the weekly new planet count. If you were already following the Exoplanet Archive, there is no need for you to do anything.

If you're not following the accounts, please take a minute to do so now:

- Like NExSci on Facebook: <https://www.facebook.com/NExSci>

- Follow @NExScI_IPAC on Twitter https://twitter.com/NExScI_IPAC

And if you're not on social media, you can always subscribe to our exoplanet-announce mailing list for a text version of our news updates (<https://bit.ly/35DWR4t>).

February 3, 2022

We've added six planets this week, bringing the total number of planets in the archive to **4,914**. Only 86 discoveries to go before we reach the next milestone of 5,000 planets!

The new planets are TOI-1064 b & c, TOI-2184 b, HD 22532 b, HD 64121 b, and HD 69123 b.

Download/Website: <https://exoplanetarchive.ipac.caltech.edu>

Contact: mharbut@caltech.edu

7 As seen on Exoplanet-talks.org

Download/Website: <http://exoplanet-talks.org>

Contact: info@exoplanet-talks.org

Instruction video: <http://exoplanet-talks.org/talk/164>

Statistical Inference on the Distribution of Exoplanetary Systems: Correlations in Planetary System Architectures (PhD defense talk) by Matthias He - talk/402

8 As seen on astro-ph

The following list contains exoplanet related entries appearing on astro-ph in February 2022.

February 2022

- astro-ph/2202.00027: **Exoplanet Characterization using Conditional Invertible Neural Networks** by *Jonas Haldemann et al.*
- astro-ph/2202.00031: **YOUNG Star detrending for Transiting Exoplanet Recovery (YOUNGSTER) II: Using Self-Organising Maps to explore young star variability in Sectors 1-13 of TESS data** by *Matthew P. Battley, David J. Armstrong, Don Pollacco*
- astro-ph/2202.00042: **A Possible Alignment Between the Orbits of Planetary Systems and their Visual Binary Companions** by *Sam Christian et al.*
- astro-ph/2202.00376: **ALMA High-resolution Multiband Analysis for the Protoplanetary Disk around TW Hya** by *Takashi Tsukagoshi et al.*
- astro-ph/2202.00472: **Dealing with density discontinuities in planetary SPH simulations** by *Sergio Ruiz-Bonilla et al.*
- astro-ph/2202.00524: **Chemical Feedbacks of Pebble Growth: Impacts on CO depletion and C/O ratios** by *Eric Van Clepper et al.*
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