Julien de Wit

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Disruptive Planets Group
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APPOINTMENTS

Associate Professor in Planetary Sciences	*MIT*	2024 – present
Assistant Professor in Planetary Sciences	*MIT*	2018 – 2024
Associate Member	*Broad Institute*	2018 – 2020
Postdoctoral Associate	*MIT*	2014 – 2018
Founder	*Morpheus, LLC*	2013 – 2023

EDUCATION

Ph.D. Planetary Sciences, *Massachusetts Institute of Technology (MIT)*, 2014
Thesis entitled "*Maps and Masses of Transiting Exoplanets: Towards New Insights into Atmospheric and Interior Properties of Planets*", supervised by Prof. Sara Seager
M.Sc. Aerospace Engineering, Summa Cum Laude, *Université de Liège (ULg)*, 2011
Thesis entitled "*Global Analysis of the Exoplanet HD 189733b Eclipse Photometric Time-Series Obtained with the Instruments IRAC, IRS and MIPS of the Spitzer Space Telescope*", supervised by Dr. Michaël Gillon
SUPAERO Engineer Space Systems and Fluid Dynamics, *Institut Supérieur de l'Aéronautique et de l'Espace (ISAE)*, 2010
M.Res. Astrophysics, Planetology and Space Sciences, *ISAE*, 2010
B.Eng. Physics and Mechanics, *ULg*, 2008

SELECTED HONORS/ AWARDS

Aurelia Fellow	2022
NASA Group Achievement Award – Elected recipient for the TRAPPIST-1 Team	2018
Pioneer of the Year 2017 – Europe (Innovators Under 35)	2017
Honorary Citizenship from the city of Liège	2017
Innovator of the Year 2017 – Belgium (Innovators Under 35)	2017
System and Method for Human Monitoring (US patent # 9538959)	2017
2014 Early Career Award from the Association of the Engineers of Liege	2015
Wallonie-Bruxelles International Fellowship of Excellence	2011 – 2014
Belgian American Educational Foundation fellow	2012 – 2013
2011 Odissea Award of the Belgian Senate	2012

SELECTED GRANTS (*group members)

James Webb Space Telescope—JWST, PIs: Rivkin & de Wit, 2025-2028, "Enabling early decision making for a possible lunar impact in 2032".
JWST, PIs: Burdanov* & de Wit, 2025-2028, "Mining JWST data for hidden asteroid gems".
Euclid General Investigation Program, PIs: Burdanov* & de Wit, 2025-2028, "Exploring uncharted corners of the solar system with Euclid to inform planetary formation models".
Heising-Simons Foundation, co-I (PI: Apai), 2025-2028, "Developing the Science Case for the Nautilus Space Observatory".
NASA Exoplanet Research Program, PIs: Gordon & de Wit, 2025-2028, "DECODE: Developing an Ecosystem to Compute Opacity Data for Exoplanets through quantum calculations of the molecular line shape parameters".
ERC Synergy, co-I (PI: Shapiro), 2024-2030, "Revealing Signatures of Habitable Worlds Hidden by Stellar Activity".
JWST, PIs: Rackham* & Apai & de Wit, 2025-2028, "Eyes on the Stars: A JWST Population Survey of Exoplanet Host Star Heterogeneities and Spectral Contributions to Transits".
Hubble Space Telescope—HST, PIs: Rackham* & Apai & de Wit), 2023-2026, "Unlocking the Stellar Treasure Trove: A Legacy Library of Stellar Hosts' Heterogeneities, Activity, and Spectral Contributions from HST Exoplanet Data".
HST, PIs: Burdanov* & de Wit, 2023-2024, "Deepest high-inclination pencil-beam survey for Trans-Neptunian objects".
Heising-Simons Foundation, PI, "To find planets for imminent habitability assessment".
HST, PI, 2017-2021, "Collecting the Puzzle Pieces: Completing HST's UV+NIR Survey of TRAPPIST-1 ahead of JWST".
HST, PI, 2016-2017, "Exploratory observations of TRAPPIST-1: essential prelude to an immediate JWST follow-up".
HST, PI, 2016-2017, "Two Birds One Stone: Simultaneous Atmospheric Pre-Screening of Two Temperate Earth-Sized Exoplanets During Their Double Transit".

SELECTED SERVICE ACTIVITIES

Co-founder/lead of MIT's Stars & Planets Workshops and of the new Boston Area Planetary Science Meetings.
Panel member and reviewer for NASA XPR (15-19), NASA/STScI Financial Review Committee (20-23).
Reviewer for NASA XPR, NASA NESSF Fellowships, JWST, HST, SST (15-17), Front de Recherche du Québec, FONDECYT-Chile, UKRI (24-25), Swiss NSF (24), Canada Research Chairs (24), Czech NSF (24).
Referee for ApJ, ApJL, AJ, MNRAS.

Supervision:

Research Scientists:

2023-present Artem Burdanov, previously postdoc in the group (2018-2023).
2023-present Benjamin Rackham, previously postdoc in the group (2018-2023).

Postdocs:

2025-present Samantha Hasler, previously graduate student somewhat in the group (see Hasler et al. 2023).
2023-present Prajwal Niraula, previously graduate student in the group (2018-2023).
2023-2025 David Berardo, previously graduate student in the group (2019-2023), now moved to industry.
2021-2025 Khalid Barkaoui, now postdoc to support brown dwarf science with Euclid.
2021-2022 Patricia Chincilla. Now staff at the Institute of Astrophysics of the Canary Islands.
2022 Paul Corlies. Now Senior Scientist at Spectral Sciences Inc.
2020 Clara Sousa-Silva. Now Faculty at Bard College.
+ Artem Burdanov & Benjamin Rackham (see Research Scientist).

Graduate Students:

2025-present Lucas Arthur, PhD supervisor.
2025-present Emily Mailhot, MSc supervisor.
2025-present Anika Nath, MSc supervisor.
2024-present Samson Mercier, PhD supervisor.
2023-present Aaron Householder, initial PhD supervisor, now supervising with Prof. Burdge (MIT Physics).
2022-present Daniel Abdulah, admitted jointly with Prof. Kang.
2021-present Zoe de Beurs, initial PhD supervisor, now supervising with Prof. Vanderburg (Harvard).
2021-2024 Isaac Narrett, 2nd-generals supervisor (paper in review—see Narrett et al. in Publications).
2021-2023 Jared Bryan, 2nd-generals supervisor (paper in review—see Bryan et al). Now with Prof. Frank.
2021-2023 Brindha Kanniah, 2nd-generals supervisor. Now with Prof. Demanet.
2020-2022 Jing Jian, 2nd-generals supervisor. Now in industry (left with a Master Degree).
2020-2021 Mariona Agusti, 2nd-generals supervisor. Now with Prof. Vandenberg.
2019-2021 James Hall, 2nd-generals supervisor (paper in prep). Now postdoc with Prof. Bosak.
+ Prajwal Niraula & David Berardo & Samantha Hasler (see Postdocs).

Undergraduate Students:

2025-present Mariangel Albornoz, MSRP (and continuing) student with de Wit.
2025-present Tristan Cavalier, visiting student with de Wit.
2024-present Lila Schoen, visiting student with de Wit & Burdanov.
2024-present Jan Toomlaid, SuperUROP with Racham & de Wit.
2023-present Paulina Umansky MSRP (and continuing) student with Burdanov & de Wit.
2020-2022 John Dinsmore, SuperUROP (see Dinsmore & de Wit, 2023). Now graduate student at Stanford.
2020-2022 Brianna Ryan, SuperUROP. Now graduate student at MIT with Prof. Formaggio.
2020 Summer (COVID) UROP: Mohit Dighamber, Anika Kamath, Claire McLellam-Cassivi, Lisa Popkov, Alex Quach, Christopher Vargas, Jawad Yousef, Tai Zheng, Lisa Popkov.
2018 Haley Bates, UROP. Now support engineer at NASA/JPL.
2018 Matthew Cotton. Now graduate student at Oxford.
2018 Charlotte Minsky, UROP. Now graduate student at Harvard.
2018 Lana Tilke. Now graduate student at Arizona State.

Past MSc/PhD committees: Abigail Colcasure, Ana Glidden, Brindha Kanniah, Caue Borlina, Clara Maurel, David Berardo, Lionel Garcia, Mariona Badenas-Agusti, Prajwal Niraula, Saleh Al Nassar, Samantha Hasler, Tajana Schneiderman, Zhuchang Zhang.

Other MIT Services:

2023-present Admission Committee
2019-present 51 Peg b Committee Chair
2020 Planetary Search (DEI representative).
2020 EAPS Distinguished Fellowship.
2019 EAPS 2023 TaskForce.
2019 EAPS and College of Computing.

MIT Classes:

2025 (Fall)	12.425/625	Extrasolar Planets
2025 (Spring)	12.003	Introduction to Atmosphere, Ocean, and Climate Dynamics
2024 (Fall)	12.420/601	Physics and Chemistry of the Solar System/Essentials of Planetary Sciences
2024 (Spring)	12.400	Our Space Odyssey
2023 (Fall)	12.422/622	Planetary Atmospheres
2023 (Spring)	12.400	Our Space Odyssey
2022 (Fall)	N/A	Junior Faculty Teaching Leave
2022 (Spring)	12.400	Our Space Odyssey
2021 (Fall)	12.422/622	Planetary Atmospheres
2021 (spring)	12.400	Our Space Odyssey
2020 (fall)	12.420/601	Physics and Chemistry of the Solar System/Essentials of Planetary Sciences
2020 (fall)	12.900	EAPS First Year Graduate Seminar
2020 (spring)	12.400	Our Space Odyssey
2019 (fall)	N/A	Medical/Teaching Leave
2019 (spring)	12.420/601	Physics and Chemistry of the Solar System/Essentials of Planetary Sciences
2018 (fall)	12.S597	Special Seminar in Earth, Atmospheric and Planetary Sciences

+ Contributions to 12.S597, 12.00, 12.177, 12.409, 12.410, 21G.312, and Harvard's ASTRON5.

SELECTED INVITED TALKS

2025 Microsoft, "Searching for Life, Defending Our World: How Exoplanetary Science is Powering Planetary Defense"
2024 Exoplanets in our Backyard 3, "The Impact of Stellar Activity on Transmission Spectra"
2024 U. Brussels, "The intermittently resonant coevolution of migrating planets and their pulsating stars"
2024 AAS Meeting, "Origin and Extent of the Opacity Challenge in Exoplanet Atmospheric Characterization"
2023 Belgian State Visit to Germany (Panelist), "From cross border collaborations to infinity and beyond"
2023 Harvard/CfA, "Robustly Characterizing Exoplanets in a New Era of High-Precision Transit Measurements"
also given at Max Planck Institute for Astronomy, Max Planck Institute for Solar System Research, U. Liège, U. Paris-Saclay, CEA Paris, U. Birmingham, Observatoire de Paris, and U. Geneva.
2019 Belgian State Visit to Luxembourg (Keynote), "Next Step on Our Space Odyssey: Stumbling Upon Life Elsewhere"
2019 MATH+X Symposium, "New Worlds, New Perspectives"
2017 TEDxLiège, "Finding Life Elsewhere: an Imminent Paradigm-shifting Experience"
2017 Broad Institute, MIA Meetings, "A Pseudo-random Walk from New Worlds to Diabetes"
2017 MIT (Keynote), Beyond the Cradle, "*New Worlds, New Perspectives*"

SELECTED PEER-REVIEWED PUBLICATIONS (*group members, + = co-first authors)

+,*Burdanov A.Y., +,*de Wit J., et al. (2025), Nature 638, 74, Cover & Press Release
"JWST sighting of decametre main-belt asteroids and view on meteorite sources"
*Bryan J., de Wit J., et al. (2024), Nature Astronomy, 8, 1387, Cover & Press Release
"The coevolution of migrating planets and their pulsating stars through episodic resonance locking"
+Triaud A.H.M.J., +,*de Wit J. et al. (2024), *Nature Astronomy*, 8, 17. Press Release
"Atmospheric carbon depletion as a tracer of water oceans and biomasses on temperate terrestrial exoplanets"
TRAPPIST-1 JWST Community Initiative, +de Wit J., +Doyon, R., et al. (2024), Nature Astronomy, 8, 810, Press Release
"A roadmap to the characterization of temperate terrestrial planet atmospheres with JWST".
+*Niraula, P., +de Wit, J., et al. (2022), *Nature Astronomy*, 6, 1287. Press Release
"The impeding opacity challenge in exoplanet atmospheric characterization"
+de Wit, J., +Wakeford H., +Lewis N., et al. (2018), *Nature Astronomy*, 2, 214. Press Release
"Atmospheric Reconnaissance of TRAPPIST-1's Habitable-zone Earth-sized Exoplanets"
de Wit, J., Lewis, N., Knutson, H., Fuller, J., Antoci, V., et al. (2017), *ApJL*, 836, L17. Press Release
"Planet-induced Stellar Pulsations in HAT-P-2's Eccentric System"
de Wit, J., Wakeford H., Gillon, M., Lewis N., Valenti, J., et al. (2016), *Nature*, 537, 69, Press Release
"A combined transmission spectrum of the Earth-sized exoplanets TRAPPIST-1 b and c"
Demory, B.-O., Gillon, M., de Wit, J., Madhusudhan, N., et al. (2016), *Nature*, 532, 207. Press Release
"A map of the large day-night temperature gradient of a super-Earth exoplanet"
de Wit, J., Lewis, N., Langton, J., Laughlin, G., Deming, D., et al. (2016), *ApJL*, 820, L33. Press Release
"Direct Measure of Radiative and Dynamical Properties of an Exoplanet Atmosphere"
de Wit, J. & Seager, S., (2013), *Science*, 342, 1473. Press Release
"Constraining Exoplanet Mass from Transmission Spectroscopy"
de Wit, J., Gillon, M., Demory, B.-O., 7 Seager, S. (2012), *A&A*, 548, A128
"Towards consistent mapping of distant worlds: secondary-eclipse scanning of the exoplanet HD18733b"

ALL PUBLICATIONS

Key metrics: 43% (co)led by group, 8,384 citations, h-index 35, i10-index 69 (Google Scholar)

(* = group undergrad. student, ** = group grad. student, *** = group postdoc/scientist, $^{+}$ = co-first authors, ^{T} = enabled by group telescope)

1. **Mercier S.J., de Wit J., ***Rackham B.V. (2025), *in review*, arXiv:2510.00124
"What's in Your Transit? Towards Reliably Getting 5x More Science from Exoplanet Transit Data"

2. ***Niraula P., et al. (2025), *in review*, arXiv:2510.03327
"Comprehensive Ab Initio Calculations of CO_2-H_2 and CO_2-He Collisional Properties"

3. de Wit J., Seager S., ***Niraula P. (2025), *in review*, arXiv:2509.25323
"Combined Exoplanet Mass and Atmospheric Characterization for Accelerated Exoplanetology"

4. de Wit J., **Householder A., ***Niraula P. (2025), *in review*, arXiv:2506.22537
"Are Helium Atmospheres Hiding as Volatile-rich in Current Exoplanet Analysis Frameworks?"

5. ***Niraula P., de Wit J., et al. (2025), *in review*, arXiv:2506.12144
"The Detection-vs-Retrieval Challenge: Titan as an Exoplanet"

6. ***Berardo D., de Wit J., et al. (2025), *in review*, arXiv:2506.12140
"Hubble's Multi-Year Search for Exospheres in the TRAPPIST-1 System Reveals Frequent Microflares"

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7. ^{T}de Wit J. et al. (2025), *Research Notes of the AAS* 9, 270,
"An Ultra-Hot Low-Mass Brown Dwarf Eclipsing the Puffy White Dwarf J0404+1112".

8. Gillon M., Ducrot E., et al. (2025), *Nature Astronomy*, accepted,
"First JWST thermal phase curves of temperate terrestrial exoplanets reveal no thick atmosphere around TRAPPIST-1 b and c"

9. ^{T}Zúñiga-Fernández S. et al. (2025), *Astron. Astrophys*., accepted,
"Two warm Earth-sized exoplanets and an Earth-sized candidate in the M5V-M6V binary system TOI-2267"

10. Vasilyev V. et al. (2025), *Astrophys. J., Letters* 989, L53,
"Flares on TRAPPIST-1 reveal the spectrum of magnetic features on its surface"

11. Jenkins, S.A. et al. (2025), *Astrophys. J., Letters* 989, L20,
"An Eccentric Sub-Neptune Moving Into the Evaporation Desert"

12. Kostogryz N. et al. (2025), *Astrophys. J., Letters* 989, L6,
"The effect of stellar magnetic activity on measurements of morning and evening asymmetry of planetary terminator"

13. Davoudi F., Rackham B.V., de Wit J., et al. (2025), *Astronom. J.* 170, 213
"Gravity-sensitive Spectral Indices in Ultracool Dwarfs: Investigating Correlations with Metallicity and Planet Occurrence Using SpeX and Fire Observations"

14. Kasliwal M.M. et al. (2025), Publications of the Astronomical Society of the Pacific 137, 065001
"Cryoscope: A Cryogenic Infrared Survey Telescope in Antarctica"

15. ^{T}Bryant E.M. et al. (2025), *Nature Astronomy* 9, 1031
"A transiting giant planet in orbit around a 0.2-solar-mass host star"

16. ^{T}Janó Muñoz C. et al. (2025), *Mon. Not. R. Astron. Soc.* 541, 630
"TOI-2407 b: a warm Neptune in the desert"

17. ^{T}Gómez-Limón J.M. et al. (2025), *Astron. Astrophys*. 697, A157,
"Size and shape of the trans-Neptunian object (470316) 2007 OC10: Comparison with thermal data"

18. ^{T,}***Barkaoui K. et al. (2025), *Astron. Astrophys*. 695, A281,
"TOI-2015 b: A sub-Neptune in strong gravitational interaction with an outer non-transiting planet"

19. Fauchez, T. et al. (2025), *Astrophys. J.* 989, 9,
"Stellar Models Also Limit Exoplanet Atmosphere Studies in Emission"

20. Rivkin A.S et al. (2025), *Research Notes of the AAS* 9, 70,
"JWST Observations of Potentially Hazardous Asteroid 2024 YR4".

21. ^{T,}***Barkaoui K. et al. (2025), *Astron. Astrophys.* 696, A44,
"TOI-6508 b: A massive transiting brown dwarf orbiting a low-mass star".

22. ***Wiesenfeld L., ***Niraula P., de Wit J., et al. (2025), *Astrophys. J.* 981, 148,
"Ab Initio Quantum Dynamics as a Scalable Solution to the Exoplanet Opacity Challenge: A Case Study of CO2 in a Hydrogen Atmosphere".

23. ***+Burdanov A.Y., +de Wit J., et al. (2025), *Nature* 638, 74,
"JWST sighting of decametre main-belt asteroids and view on meteorite sources".

24. Jacobs B. et al. (2025), *Astron. J.* 169, 96,
"Spectroscopically Resolved Partial Phase Curve of the Rapid Heating and Cooling of the Highly Eccentric Hot Jupiter HAT-P-2b with WFC3".

25. Rathcke A.D., Bucchave L.A., de Wit J., et al. (2025), *Astrophys. J., Letters* 979, L19,
"Stellar Contamination Correction Using Back-to-back Transits of TRAPPIST-1 b and c".

26. Keers R.E. et al. (2024), *Astrophys. J., Letters* 977, L7,
"Reliable Transmission Spectrum Extraction with a Three-parameter Limb-darkening Law".

27. **Bryan J., de Wit J., et al. (2024), *Nature Astronomy*, 8, 1387,
"The coevolution of migrating planets and their pulsating stars through episodic resonance locking".

28. TZúñiga-Fernández S. et al. (2024), *Ground-based and Airborne Telescopes* 13094, 480,
"SPECULOOS: five years hunting terrestrial planets around ultra-cool dwarfs".

29. de Ugarte Postigo A. et al. (2024), *Ground-based and Airborne Telescopes* 13094, 130942B,
"ASTEP to Cryoscope: expanding Antarctic astronomy at Dome-C with a wide field infrared telescope".

30. ***Rackham B.V. & de Wit J. (2024), *Astron. J.* 168, 82,
"Towards Robust Corrections for Stellar Contamination in JWST Exoplanet Transmission Spectra".

31. Pederson P.P., et al. (2024), *Ground-based and Airborne Instrumentation for Astronomy* 13096, 1146. "Infrared photometry with InGaAs detectors: First light with SPECULOOS".

32. TRAPPIST-1 JWST Community Initiative, +de Wit J., +Doyon, R., et al. (2024), *Nature Astronomy* 8, 810,
"A roadmap to the characterization of temperate terrestrial planet atmospheres with JWST".

33. Davoudi F., et al. (2024), *Astrophys. J., Letters* 970, L4,
"Updated Spectral Characteristics for the Ultracool Dwarf TRAPPIST-1".

34. TGillon M. et al. (2024), *Nature Astronomy* 8, 865,
"Detection of an Earth-sized exoplanet orbiting the nearby ultracool dwarf star SPECULOOS-3".

35. T,***Barkaoui K. et al. (2024), *Nature Astronomy* 8, 909,
"An extended low-density atmosphere around the Jupiter-sized planet WASP-193 b".

36. T,***Barkaoui K. et al. (2024), *Astron. Astrophys.* 687, A264,
"Three short-period Earth-sized planets around M dwarfs discovered by TESS: TOI-5720 b, TOI-6008 b, and TOI-6086 b".

37. TTimmermans M. et al. (2024), *Astron. Astrophys*. 687, A48,
"TOI-4336 A b: A temperate sub-Neptune ripe for atmospheric characterization in a nearby triple M-dwarf system".

38. TMallorquin, M. et al. (2024), *Astron. Astrophys.* 685, A90,
"TOI-1135 b: A young hot Saturn-size planet orbiting a solar-type star".

39. **Narrett I.S., ***Rackham B.V. & de Wit J. (2024), *Astron. J.* 167, 107,
"Axisymmetric High Spot Coverage on Exoplanet Host HD 189733 A".

40. **Berardo D., de Wit J. & ***Rackham B.V. (2024), *Astrophys. J., Letters* 961, L18,
"Empirically Constraining the Spectra of Stellar Surface Features Using Time-resolved Spectroscopy".

41. +Triaud A.H.M.J., +de Wit J. et al. (2024), *Nature Astronomy*, 8, 17
"Atmospheric carbon depletion as a tracer of water oceans and biomasses on temperate terrestrial exoplanets".

42. TGan T., et al. (2023), *Astron. J.* 166, 165,
"A Massive Hot Jupiter Orbiting a Metal-rich Early M Star Discovered in the TESS Full-frame Images".

43. THartman J.D., et al. (2023), *Astron. J.* 166, 163,
"TOI 4201 b and TOI 5344 b: Discovery of Two Transiting Giant Planets around M-dwarf Stars and Revised Parameters for Three Others".

44. [T]Rommel F.L., et al. (2023), *Astron. Astrophys.* 678, A167,
"A large topographic feature on the surface of the trans-Neptunian object (307261) 2002 MS4 measured from stellar occultations".

45. [T]Triaud A.H.M.J., et al. (2023), *Mon. Not. R. Astron. Soc.* 525, L98,
"An M-dwarf accompanied by a close-in giant orbiter".

46. **Hasler S.N., ***Burdanov A.Y, de Wit J. et al. (2023), *Mon. Not. R. Astron. Soc.*526, 3601,
"Small body harvest with the Antarctic Search for Transiting Exoplanets (ASTEP) project".

47. Lim O. et al. (2023), *Astrophys. J., Letters* 955, L22,
"Atmospheric Reconnaissance of TRAPPIST-1 b with JWST/NIRISS: Evidence for Strong Stellar Contamination in the Transmission Spectra".

48. [T]Ghachoui M. et al. (2023), *Astron. J.* 166, 165,
"A Massive Hot Jupiter Orbiting a Metal-rich Early M Star Discovered in the TESS Full-frame Images".

49. **de Beurs Z.L., de Wit J., et al. (2023), *Astron. J.* 166, 136,
"Confirmation of HAT-P-2 c and potential rapid orbital evolution in HAT-P-2 b".

50. [T]Ghachoui M. et al. (2023), *Astron. Astrophys.* 677, A31,
" TESS discovers a super-Earth orbiting the M dwarf star TOI-1680".

51. [T,]***Barkaoui K. et al. (2023), *Astron. Astrophys.* 677, A38,
"TOI-2084b and TOI-4184b: two new sub-Neptunes around nearby M dwarf stars".

52. **Niraula P., de Wit J. et al. (2023), *Astrophys. J., Letters* 950, L17,
"Origin and extent of the opacity challenge for the atmospheric retrievals of WASP-39 b".

53. [T]Brož M., et al. (2023), *Astron. Astrophys.* (accepted),
"2021 occultations and transits of Linus orbiting (22) Kalliope: I. Polygonal and clip tracing algorithm".

54. [T]Dransfield G., et al. (2023), *Mon. Not. R. Astron. Soc.* 527, 34,
"A 1.55 R⊕ habitable-zone planet hosted by TOI-715, an M4 star near the ecliptic South Pole".

55. [T,]***Burdanov A.Y, **Hasler S.N., & de Wit J. (2023), *Mon. Not. R. Astron. Soc.* 521, 4588,
"GPU-based framework for detecting small Solar System bodies in targeted exoplanet surveys".

56. [T]Pozuelos F.J, et al. (2023), *Astron. Astrophys.* 672, A70,
"A super-Earth and a mini-Neptune near the 2: 1 MMR straddling the radius valley around the nearby mid-M dwarf TOI-2096".

57. *Dinsmore J.T. & de Wit J. (2023), *Mon. Not. R. Astron. Soc.* 520, 3459,
"Constraining the interiors of asteroids through close encounters".

58. [T]Morgado BE, et al. (2023), *Nature* 614 (7947), 239-243,
"A dense ring of the trans-Neptunian object Quaoar outside its Roche limit".

59. Pedersen PP, et al. (2023), *Mon. Not. R. Astron. Soc.* 518 (2), 2661,
"Precise near-infrared photometry, accounting for precipitable water vapour at SPECULOOS Southern Observatory".

60. **Berardo D. & de Wit J. (2022), *Astrophys. J.* 941 (2), 155,
"Tidal Distortions as a Bottleneck on Constraining Exoplanet Compositions".

61. de Wit J. & Gordon I. (2022), *Nature Astronomy* 6, 1237,
"Opacity-driven bottlenecks in decoding exoplanetary spectra".

62. Delrez L. et al. (2022), *Astron. Astrophys.* 667, A59,
"Two temperate super-Earths transiting a nearby late-type M dwarf".

63. **,[+]Niraula P., [+]de Wit J. et al. (2022), *Nature Astronomy* 6, 1287,
"The impending opacity challenge in exoplanet atmospheric characterization".

64. [T,]***Burdanov A.Y., de Wit J., et al. (2022), *Public. Astron. Soc. Pac.* 134, 105001,
"SPECULOOS Northern Observatory: searching for red worlds in the northern skies".

65. **Berardo D. & de Wit J (2022), *Astrophys. J.* 935 (2), 178,
"On the Effects of Planetary Oblateness on Exoplanet Studies".

66. [T]Gan T., et al. (2022), *Mon. Not. R. Astron. Soc.* 514, 4120,
"TESS discovery of a sub-Neptune orbiting a mid-M dwarf TOI-2136".

67. Murray C.A. et al. (2022), *Mon. Not. R. Astron. Soc.* 513, 2615,
"A study of flares in the ultra-cool regime from SPECULOOS-South".

68. Garcia L.J. et al. (2022), *Astron. Astrophys.* 665, A19,
"HST/WFC3 transmission spectroscopy of the cold rocky planet TRAPPIST-1h".

69. **Niraula P. et al. (2022), *Astrophys. J.* 163, 172,
"Revisiting Kepler Transiting Systems: Unvetting Planets and Constraining Relationships among Harmonics in Phase Curves".

70. [T]Schanche N., et al. (2022), *Astron. Astrophys.* 657, A45,
"TOI-2257 b: A highly eccentric long-period sub-Neptune transiting a nearby M dwarf".

71. [T]Wells R.D. et al. (2021), *Astron. Astrophys.* 653, A97,
"A large sub-Neptune transiting the thick-disk M4 V TOI-2406".

72. [T]Devogele M. et al. (2021), *Mon. Not. R. Astron. Soc.* 505, 245,
"(6478) Gault: physical characterization of an active main-belt asteroid".

73. [T]Bryant E.M., et al. (2021), *Mon. Not. R. Astron. Soc.* 504, L45,
"A transit timing variation observed for the long-period extremely low-density exoplanet HIP 41378 f".

74. Daylan T. et al. (2021), *Astron. J.* 161, 131,
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