

List of Publications

Sebastian Zieba

May 14, 2026

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| 6 | Refereed first author publications |
| 32 | Refereed publications |
| 360 | Citations for refereed first author publications |
| 2006 | Citations for 62 bibliographic references in the Astrophysics Data System |
| 19 | h-index (i.e., 19 publications with ≥ 19 citations) |

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Refereed First Author Publications

- [A1] **S. Zieba**, L. Kreidberg, B. P. Coy, et al., *The dark and featureless surface of rocky exoplanet LHS 3844 b from JWST mid-infrared spectroscopy*, *Nature Astronomy*, May 2026. [Citations: 0]
- [A2] **S. Zieba**, K. Zwintz, M. Kenworthy, et al., *The β Pictoris b Hill sphere transit campaign. II. Searching for the signatures of the β Pictoris exoplanets through time delay analysis of the δ Scuti pulsations*, *Astronomy and Astrophysics*, 687, A309, July 2024. [Citations: 2]
- [A3] **S. Zieba**, L. Kreidberg, E. Ducrot, et al., *No thick carbon dioxide atmosphere on the rocky exoplanet TRAPPIST-1 c*, *Nature*, 620, 746, August 2023. [Citations: 211]
- [A4] **S. Zieba**, L. Kreidberg, *PACMAN: A pipeline to reduce and analyze Hubble Wide Field Camera 3 IR Grism data*, *The Journal of Open Source Software*, 7, 4838, December 2022. [Citations: 5]
- [A5] **S. Zieba**, M. Zilinskas, L. Kreidberg, et al., *K2 and Spitzer phase curves of the rocky ultra-short-period planet K2-141 b hint at a tenuous rock vapor atmosphere*, *Astronomy and Astrophysics*, 664, A79, August 2022. [Citations: 74]
- [A6] **S. Zieba**, K. Zwintz, M. A. Kenworthy, et al., *Transiting exocomets detected in broadband light by TESS in the β Pictoris system*, *Astronomy and Astrophysics*, 625, L13, May 2019. [Citations: 68]

Other Publications

- [B1] J. Adams Redai, V. Chandra, S. W. Yee, et al., *An Ancient Brown Dwarf Transiting a Metal-poor Thick-disk Star*, *The Astrophysical Journal*, 1002, L41, May 2026. [Citations: 1]
- [B2] M. B. Scheuck, R. van Boekel, T. Henning, et al., *The asymmetric structure of the inner disc around HD 142527 A with VLTI/MATISSE*, *Astronomy and Astrophysics*, 708, A380, April 2026. [Citations: 1]
- [B3] M. Gillon, E. Ducrot, T. J. Bell, et al., *No thick atmosphere around TRAPPIST-1 b and c from JWST thermal phase curves*, *Nature Astronomy*, April 2026. [Citations: 0]
- [B4] C. P. A. van Buchem, R. Buddhacharya, M. Zilinskas, et al., *Sensitivity of Dry Lava Planet Atmospheric Emission Spectra to Changes in Lava Compositions*, *Monthly Notices of the Royal Astronomical Society*, April 2026. [Citations: 1]

- [B5] T. Barclay, K. B. Sheppard, N. Latouf, et al., *The Transmission Spectrum of the Potentially Rocky Planet L 98-59 c*, *The Astronomical Journal*, 169, 241, May 2025. [Citations: 20]
- [B6] M. Zilinskas, C. P. A. van Buchem, **S. Zieba**, et al., *Characterising the atmosphere of 55 Cancri e: 1D forward model grid for current and future JWST observations*, *Astronomy and Astrophysics*, 697, A34, May 2025. [Citations: 9]
- [B7] A. Y. Burdanov, J. de Wit, M. Brož, et al., *JWST sighting of decametre main-belt asteroids and view on meteorite sources*, *Nature*, 638, 74, February 2025. [Citations: 15]
- [B8] A. L. Carter, E. M. May, N. Espinoza, et al., *A benchmark JWST near-infrared spectrum for the exoplanet WASP-39 b*, *Nature Astronomy*, 8, 1008, August 2024. [Citations: 63]
- [B9] T. J. Bell, N. Crouzet, P. E. Cubillos, et al., *Nightside clouds and disequilibrium chemistry on the hot Jupiter WASP-43b*, *Nature Astronomy*, 8, 879, July 2024. [Citations: 74]
- [B10] Z. L. de Beurs, A. Vanderburg, E. Thygesen, et al., *Characterization of K2-167 b and CALM, a new stellar activity mitigation method*, *Monthly Notices of the Royal Astronomical Society*, 529, 1047, April 2024. [Citations: 7]
- [B11] A. P. Lincowski, V. S. Meadows, **S. Zieba**, et al., *Potential Atmospheric Compositions of TRAPPIST-1 c Constrained by JWST/MIRI Observations at 15 μm* , *The Astrophysical Journal*, 955, L7, September 2023. [Citations: 57]
- [B12] E. M. Kempton, M. Zhang, J. L. Bean, et al., *A reflective, metal-rich atmosphere for GJ 1214b from its JWST phase curve*, *Nature*, 620, 67, August 2023. [Citations: 155]
- [B13] M. E. Steinrueck, T. Koskinen, P. Lavvas, et al., *Photochemical Hazes Dramatically Alter Temperature Structure and Atmospheric Circulation in 3D Simulations of Hot Jupiters*, *The Astrophysical Journal*, 951, 117, July 2023. [Citations: 32]
- [B14] I. Rebollido, **S. Zieba**, D. Iglesias, et al., *CHEOPS's hunt for exocomets: photometric observations of 5 Vul*, *Monthly Notices of the Royal Astronomical Society*, 523, 1441, July 2023. [Citations: 6]
- [B15] I. Rebollido, **S. Zieba**, D. Iglesias, et al., *The search for exocomets in photometry using CHEOPS*, *Highlights on Spanish Astrophysics XI*, 467, May 2023. [Citations: 0]
- [B16] Z. Rustamkulov, D. K. Sing, S. Mukherjee, et al., *Early Release Science of the exoplanet WASP-39b with JWST NIRSpec PRISM*, *Nature*, 614, 659, February 2023. [Citations: 301]
- [B17] JWST Transiting Exoplanet Community Early Release Science Team, E. Ahrer, L. Alderson, et al., *Identification of carbon dioxide in an exoplanet atmosphere*, *Nature*, 614, 649, February 2023. [Citations: 222]
- [B18] E. Ahrer, K. B. Stevenson, M. Mansfield, et al., *Early Release Science of the exoplanet WASP-39b with JWST NIRCam*, *Nature*, 614, 653, February 2023. [Citations: 177]
- [B19] T. Bell, E. Ahrer, J. Brande, et al., *Eureka!: An End-to-End Pipeline for JWST Time-Series Observations*, *The Journal of Open Source Software*, 7, 4503, November 2022. [Citations: 142]
- [B20] M. Damiano, R. Hu, T. Barclay, et al., *A Transmission Spectrum of the Sub-Earth Planet L98-59 b in 1.1-1.7 μm* , *The Astronomical Journal*, 164, 225, November 2022. [Citations: 22]
- [B21] M. Zilinskas, C. P. A. van Buchem, Y. Miguel, et al., *Observability of evaporating lava worlds*, *Astronomy and Astrophysics*, 661, A126, May 2022. [Citations: 56]
- [B22] P. A. Strøm, D. Bodewits, M. M. Knight, et al., *Exocomets from a Solar System Perspective*, *Publications of the Astronomical Society of the Pacific*, 132, 101001, October 2020. [Citations: 37]

- [B23] E. A. Gilbert, T. Barclay, J. E. Schlieder, et al., *The First Habitable-zone Earth-sized Planet from TESS. I. Validation of the TOI-700 System*, The Astronomical Journal, 160, 116, September 2020. [Citations: 126]
- [B24] J. E. Rodriguez, A. Vanderburg, **S. Zieba**, et al., *The First Habitable-zone Earth-sized Planet from TESS. II. Spitzer Confirms TOI-700 d*, The Astronomical Journal, 160, 117, September 2020. [Citations: 53]
- [B25] D. P. Iglesias, J. Olofsson, A. Bayo, et al., *An unusually large gaseous transit in a debris disc*, Monthly Notices of the Royal Astronomical Society, 490, 5218, December 2019. [Citations: 7]
- [B26] K. Zwintz, D. R. Reese, C. Neiner, et al., *Revisiting the pulsational characteristics of the exoplanet host star β Pictoris*, Astronomy and Astrophysics, 627, A28, July 2019. [Citations: 32]

Conference Proceedings, Observational Proposals, and similar

- [C1] M. Gillon, E. Ducrot, T. J. Bell, et al., *First JWST thermal phase curves of temperate terrestrial exoplanets reveal no thick atmosphere around TRAPPIST-1 b and c*, arXiv e-prints, arXiv:2509.02128, September 2025. [Citations: 22]
- [C2] T. Bell, E. Ahler, J. Brande, et al., *Eureka!: Data reduction and analysis pipeline for JWST and HST time-series observations*, Astrophysics Source Code Library, ascl:2505.004, May 2025. [Citations: 0]
- [C3] L. Dang, R. Allart, M. Behounkova, et al., *Surveying Hellish Worlds: Lava Planets as Time Capsules of Thermal Evolution*, JWST Proposal. Cycle 4, 8864, March 2025. [Citations: 0]
- [C4] Y. Miguel, B. Edwards, A. J. Louca, et al., *Mapping the Atmosphere and Interior of HAT-P-13b: The Next Benchmark for Exoplanetary Science*, JWST Proposal. Cycle 4, 8233, March 2025. [Citations: 0]
- [C5] K. Paragas, B. L. Ehlmann, R. Hu, et al., *Exo-Geology: Surface Spectral Features from a Rocky Exoplanet*, JWST Proposal. Cycle 4, 7953, March 2025. [Citations: 0]
- [C6] **S. Zieba**, L. Kreidberg, A. Bello-Arufe, et al., *Surface characterization of the rocky exoplanet LHS3844b with MIRI/LRS and NIRSpec/G395H on JWST*, 246th Meeting of the American Astronomical Society, 246, 215.04, June 2025. [Citations: 0]
- [C7] **S. Zieba**, L. Kreidberg, *PACMAN: Data reduction and analysis pipeline for HST/WFC3 data*, Astrophysics Source Code Library, ascl:2502.012, February 2025. [Citations: 0]
- [C8] M. Tenthoff, K. Wohlfarth, C. Wöhler, et al., *Reflectance and Emission Modelling of Airless Exoplanets*, European Planetary Science Congress, EPSC2024-649, September 2024. [Citations: 4]
- [C9] E. Ducrot, P. Lagage, E. Agol, et al., *Bare rocks are not supposed to do that*, JWST Proposal. Cycle 3, 5191, February 2024. [Citations: 0]
- [C10] A. Lincowski, Virtual Planetary Laboratory, V. Meadows, et al., *Potential Atmospheric Compositions of TRAPPIST-1 c constrained by JWST/MIRI Observations*, AASTCS10, Extreme Solar Systems V, 56, 627.10, April 2024. [Citations: 0]
- [C11] **S. Zieba**, L. Kreidberg, E. Ducrot, et al., *Characterization of the atmospheres and surfaces of the rocky exoplanets TRAPPIST-1c and LHS3844b with MIRI on JWST*, AASTCS10, Extreme Solar Systems V, 56, 103.05, April 2024. [Citations: 0]
- [C12] L. Dang, **S. Zieba**, G. Nguyen, et al., *A Hell of a Phase Curve: Mapping the Surface and Atmosphere of a Lava Planet*, AASTCS10, Extreme Solar Systems V, 56, 103.02, April 2024. [Citations: 0]
- [C13] **S. Zieba**, L. Kreidberg, E. Ducrot, et al., *No thick carbon dioxide atmosphere on the rocky exoplanet TRAPPIST-1 c*, European Geosciences Union General Assembly 2024 (EGU24), 18489, April 2024. [Citations: 0]

- [C14] **S. Zieba**, R. Hu, L. Kreidberg, et al., *The search for regolith on the airless exoplanet LHS 3844 b*, JWST Proposal. Cycle 2, 4008, May 2023. [Citations: 1]
- [C15] M. Gillon, E. Ducrot, E. Agol, et al., *TRAPPIST-1 Planets: Atmospheres Or Not?*, JWST Proposal. Cycle 2, 3077, May 2023. [Citations: 0]
- [C16] K. Stevenson, T. J. Bell, E. Ahrer, et al., *Eureka!: An Open-Source Pipeline for JWST Time-Series Observations*, JWST Proposal. Cycle 2, 3273, May 2023. [Citations: 0]
- [C17] **S. Zieba**, L. Kreidberg, Y. Miguel, et al., *Exploring the boundary between rocky and gaseous planets with WASP-47 e*, JWST Proposal. Cycle 2, 3615, May 2023. [Citations: 0]
- [C18] M. Mansfield, E. Ahrer, K. Stevenson, et al., *JWST Transiting Exoplanet Early Release Science: A Transmission Spectrum of WASP-39b with NIRCам/F322W2*, American Astronomical Society Meeting Abstracts #241, 241, 124.03, January 2023. [Citations: 0]
- [C19] **S. Zieba**, M. Zilinskas, L. Kreidberg, et al., *K2 and Spitzer phase curves of the rocky ultra-short-period planet K2-141 b hint at a tenuous rock vapor atmosphere*, Bulletin of the American Astronomical Society, 54, 102.76, June 2022. [Citations: 0]
- [C20] M. Zilinskas, C. van Buchem, Y. Miguel, et al., *Observability of Evaporating Lava Worlds*, Bulletin of the American Astronomical Society, 54, 503.05, June 2022. [Citations: 0]
- [C21] M. Zilinskas, C. van Buchem, Y. Miguel, et al., *Observability of Evaporating Lava Worlds*, EAS2022, European Astronomical Society Annual Meeting, 667, July 2022. [Citations: 0]
- [C22] **S. Zieba**, M. Zilinskas, L. Kreidberg, et al., *Optical and Infrared Phase Curves of the Lava Planet K2-141 b*, European Planetary Science Congress, EPSC2021-476, September 2021. [Citations: 0]
- [C23] L. Dang, N. B. Cowan, M. Hammond, et al., *A Hell of a Phase Curve: Mapping the Surface and Atmosphere of a Lava Planet K2-141b*, JWST Proposal. Cycle 1, 2347, March 2021. [Citations: 0]
- [C24] S. Quinn, **S. Zieba**, N. B. Cowan, et al., *Inside out: detecting a rock vapor atmosphere on the lava world TOI-2431 b*, HST Proposal, 16660, June 2021. [Citations: 2]
- [C25] Z. L. de Beurs, A. Vanderburg, C. J. Shallue, et al., *A Machine Learning Inspired Method Reveals the Mass of K2-167 b*, Posters from the TESS Science Conference II (TSC2), 134, July 2021. [Citations: 0]
- [C26] **S. Zieba**, K. Zwintz, M. A. Kenworthy, et al., *Transiting exocomets detected in broadband light by TESS in the β Pictoris system*, Stars and their Variability Observed from Space, 439, January 2020. [Citations: 0]
- [C27] K. Zwintz, R. Kuschnig, C. Arnold, et al., *Science with BRITE-Constellation at the University of Innsbruck*, Stars and their Variability Observed from Space, 119, January 2020. [Citations: 1]
- [C28] S. N. Quinn, J. E. Rodriguez, A. Vanderburg, et al., *Spitzer Observations of a Habitable-Zone Planet from TESS*, American Astronomical Society Meeting Abstracts #235, 235, 456.03, January 2020. [Citations: 0]
- [C29] K. Zwintz, D. R. Reese, C. Neiner, et al., *VizieR Online Data Catalog: beta Pic BRITE, bRing, SMEI light curves (Zwintz+, 2019)*, VizieR Online Data Catalog, 362, J/A+A/627/A28, June 2019. [Citations: 0]
- [C30] **S. Zieba**, K. Zwintz, M. Kenworthy, et al., *VizieR Online Data Catalog: TESS light curve of beta Pictoris (Zieba+, 2019)*, VizieR Online Data Catalog, 362, J/A+A/625/L13, April 2019. [Citations: 0]