List of Publications

Sebastian Zieba

November 7, 2025

5	Refereed first author publications
27	Refereed publications
295	Citations for refereed first author publications
1649	Citations for 57 bibliographic references in the Astrophysics Data System
18	h-index (i.e., 18 publications with $\geq$ 18 citations)

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Refereed First Author Publications

[A1] **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]

[A2] **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: 163]

[A3] **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: 4]

[A4] **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: 61]

[A5] **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: 65]

Other Publications

[B1] 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: 16]

[B2] 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: 2]

[B3] 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: 7]

[B4] 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: 43]

[B5] 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: 60]

[B6] 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: 5]

[B7] 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: 48]

[B8] 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: 122]

[B9] 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: 25]

[B10] 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: 5]

[B11] 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]

[B12] 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: 254]

[B13] 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: 194]

[B14] 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: 155]

[B15] 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: 115]

[B16] 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: 20]

[B17] M. Zilinskas, C. P. A. van Buchem, Y. Miguel, et al., *Observability of evaporating lava worlds*, Astronomy and Astrophysics, 661, A126, May 2022. [Citations: 47]

[B18] 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: 32]

[B19] 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: 113]

[B20] 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: 48]

[B21] 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: 6]

[B22] 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: 29]

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: 3]

[C2] T. Bell, E. Ahrer, 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: 1]

[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] M. Gillon, E. Ducrot, E. Agol, et al., *TRAPPIST-1 Planets: Atmospheres Or Not?*, JWST Proposal. Cycle 2, 3077, May 2023. [Citations: 0]

[C15] **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]

[C16] **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]

[C17] 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]

[C18] M. Mansfield, E. Ahrer, K. Stevenson, et al., *JWST Transiting Exoplanet Early Release Science: A Transmission Spectrum of WASP-39b with NIRCam/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] 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]

[C27] **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]

[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]