

# Sebastian Zieba

## Curriculum Vitae

✉ [zieba@mpia.de](mailto:zieba@mpia.de)  
id 0000-0003-0562-6750  
🌐 [sebastian-zieba](https://sebastian-zieba.mpia.de/)  
Website: [mpia.de/zieba](https://mpia.de/zieba)



## Education

- 2013 – 2017 **Bachelor Physics**, *Leopold Franzens University*, Innsbruck, Austria.  
Thesis: *The Titius Bode law - applied on exoplanetary systems*  
Supervisor: Univ.-Prof. Dr. Norbert Przybilla
- 2017 – 2020 **Master Physics**, *Leopold Franzens University*, Innsbruck, Austria.  
Thesis: *Time delay analysis of the  $\delta$  Scuti pulsations in the exoplanet host star  $\beta$  Pictoris based on space and ground-based photometry*  
Supervisor: Univ.-Prof. Mag. Dr. Konstanze Zwintz  
Co-Supervisor: Associate Professor Dr. M.A. Matthew Kenworthy
- 2020 – now **PhD**, *Max-Planck Institute for Astronomy*, Heidelberg, Germany.  
APEX Department  
Supervisor: Dr. Laura Kreidberg

## First-author Publications

- **Zieba, S.** and Kreidberg, L., et al., "PACMAN: A pipeline to reduce and analyze Hubble Wide Field Camera 3 IF Grism data", submitted to JOSS (2022)
- **Zieba, S.**, Zilinskas, M., Kreidberg, L., et al., "K2 and Spitzer phase curves of the rocky ultra-short-period planet K2-141 b hint at a tenuous rock vapor atmosphere", *A&A* 664, A79 (2022)
- **Zieba, S.**, Zwintz, K., Kenworthy, M. A., Kennedy, G. M., "Transiting exocomets detected in broadband light by TESS in the  $\beta$  Pictoris system", *A&A*, 625, L13 (2019)

## Co-author Publications (selection)

- Bell, T. J., Brande, J., Ahrer, E., et. al. [including **Zieba, S.**] "Eureka!: An End-to-End Pipeline for JWST Time-Series Observations", submitted to JOSS (2022)
- Zilinskas M., van Buchem C., Miguel Y., et al. [including **Zieba, S.**] "Observability of evaporating lava worlds", *A&A* 661, A126 (2022)
- Strøm, P., Bodewits, D., Knight, M., et. al. [including **Zieba, S.**] "Exocomets from a Solar System Perspective", *PASP*, 132, 101001 (2020)

- Rodriguez, J. E.; Vanderburg, A.; **Zieba, S.**, et al. "The First Habitable Zone Earth-Sized Planet From TESS II: *Spitzer* Confirms TOI-700 d", AJ, 160, 117 (2020)
- Iglesias, D. P., Olofsson, J., Bayo, A., et al. [including **Zieba, S.**] "An unusually large gaseous transit in a debris disc", MNRAS 490, 5218 (2019)
- Zwintz, K., Reese, D. R., Neiner, C. et al. [including **Zieba, S.**] "Revisiting the pulsational characteristics of the exoplanet host star  $\beta$  Pictoris", A&A 627, A28 (2019)

## Awards

- 2019 Summer School Alpbach 2019 Award for *Best Crisis Management*
- 2019 *Student Poster Competition Winner* at TESS Science Conference I
- 2019 Studienförderungspreis 2019 des Deutschen Freundeskreises der Universitäten in Innsbruck e.V.

## Accepted observing proposals (as Co-I)

- 2019 CHEOPS AO-1 PROGRAM: *Hunting for exocomets transiting the young naked-eye star 5 Vulpeculae*.

## Attendance at Conferences, Workshops and Summer Schools (selection)

- Aug 2018 Conference: *XXX IAU General Assembly*, Vienna, Austria
- May 2019 Workshop: *ExoComets: Understanding the Composition of Planetary Building Blocks*, Leiden, Netherlands
- July 2019 Summer school: *Summer School Alpbach 2019, Geophysics from Space using Micro-or Nano-Satellite Constellations*, Alpbach, Austria
- July - Aug 2019 Conference: *TESS Science Conference I*, Boston, USA (Contribution: Poster)
- Aug 2019 Conference: *Stars and their variability, observed from space: Celebrating the 5th anniversary of BRITE-Constellation*, Vienna, Austria (Contribution: Poster)
- Sep 2019 Workshop: *PLATO ESP workshop*, Warwick, UK (Contribution: Poster)
- Jan 2020 Conference: *ARIEL: Science, Mission & Community 2020 Conference*, ESA/ESTEC, Noordwijk, Netherlands
- March 2021 Workshop: *Exoplanet atmosphere characterization: from HST and Spitzer to JWST*, online (Contribution: Talk)
- June 2021 Workshop: *JWST ERS Pre-launch Data Hackathon*, online
- Sept 2021 Conference: *Europlanet Science Congress (EPSC)*, online (Contribution: Talk)
- March 2022 Workshop: *JWST ERS Spring 2022 Data Challenge*, Heidelberg, Germany
- May 2022 Conference: *Exoplanets IV*, Las Vegas, USA (Contribution: Poster)
- July 2022 Conference: *Rocky Worlds 2*, Oxford, UK (Contribution: Talk)

---

## Given Talks

- 2019 TESS Science Conference I  
**Student Poster Competition Winner Talk: Transiting exocomets detected in broadband light by TESS in the  $\beta$  Pictoris system**  
Video Link: <https://youtu.be/KTRbjX1jTuI>
- 2021 Exoplanet atmosphere characterization: from HST and Spitzer to JWST  
**Optical and Infrared Phase Curves of the Lava Planet K2-141 b**
- 2021 Europlanet Science Congress (EPSC)  
Video Link: <https://vimeo.com/523742466/4644d3e974>  
**Optical and Infrared Phase Curves of the Lava Planet K2-141 b**  
Video Link: <https://vimeo.com/596172827>
- 2022 Rocky Worlds 2  
**Student Poster Competition Winner Talk: Transiting exocomets detected in broadband light by TESS in the  $\beta$  Pictoris system**

---

## Teaching Experience

- May 2018 Substitute Lecturer for Univ.-Prof. Mag. Dr. Paul Scheier  
Topic: Introduction to exoplanets
- Jan 2019 Substitute Lecturer for Univ.-Prof. Mag. Dr. Konstanze Zwintz  
Topic: Introduction to exoplanets
- May 2019 Substitute Lecturer for Univ.-Prof. Mag. Dr. Konstanze Zwintz  
Topic: Telescopes in Space: Kepler and TESS

---

## Given Talks and Public Outreach

- 2011 Science Day at the *Salzburg University of Education Stefan Zweig*  
**Talk: Planetology of the Moon and Mars as seen with *Google Maps***
- 2012 Science Day at the *Salzburg University of Education Stefan Zweig*  
**Talk: How do you find an exoplanet?**
- 2013 Science Day at the *Salzburg University of Education Stefan Zweig*  
**Talk: Exoplanets - The search for the second Earth**
- 2013 Astronomical Society of Salzburg  
**Talk: Exoplanets - Homeworld of Aliens?**