ELEONORA ALEI

NASA Postdoctoral Fellow

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WHO AM I?

I specialize in the characterization of terrestrial, habitable exoplanets and their atmospheric modeling. My research focuses on defining science requirements for future space missions aimed at detecting habitable worlds and potential biosignatures. I model both atmospheres and expected noise to help scientists and technologies make reasonable architecture trades.

KEY ROLES

- LIFE Mission Science Team Lead
- Habitable Worlds Observatory (HWO) Coronagraph ETC Developer Lead
- NASA Postdoctoral Program (NPP) Fellow
- Member of the Astronomy & Computing Early Career Board of Editors

EXPERIENCE

2023 – Now **NASA Postdoctoral Fellow** — NASA Goddard Space Flight Center, Greenbelt, MD, USA
Leading the development of the coronagraph exposure time calculator (ETC) with 2 publications in preparation. Leading the LIFE Science Team with monthly meetings and community papers. Collaborating with international scientists on atmospheric retrievals and radiative transfer intermodel comparisons. Maintaining exoplanet catalog used as source by the PLATO and LIFE teams for their input catalogs.

2020 – 2023 **Postdoctoral Researcher** — ETH,Zürich, Switzerland
Led the atmospheric modeling team for the LIFE mission concept, resulting in 5 high-impact publications by the core team. Developed the official LIFE atmospheric retrieval routine. Supervised 8 students and performed teaching duties for 6 semesters.

2016 – 2019 **Doctoral Researcher** — University of Padua – INAF Astronomical Observatory of Padua, Padua, Italy
Developed software for: handling exoplanet catalog data; modeling radiative-convective transfer and ozone photochemistry for terrestrial planets. The results of the models then recreated by biologists in the laboratory, to study the behavior of photosynthetic bacteria under exotic conditions.

PROJECT MANAGEMENT EXPERIENCE

2020 – Present **Large Interferometer For Exoplanets (LIFE)** — Lead Developer (2020-2023), Science Team Lead (2023 –now)
Coordinated 20+ international scientists. Organized monthly team meetings and led development of community papers. Managed atmospheric modeling team, resulting in 5 high-impact publications. Oversaw development of official LIFE atmospheric retrieval routine.

2023 – Present **Habitable Worlds Observatory (HWO)** — Coronagraph ETC Developer Lead
Led Exposure Time Calculator (ETC) development, coordinating core team efforts (2 publications in preparation). Managed timeline and deliverables. Collaborated with external experts in coronagraphy, science-engineering interface, and software development to optimize ETC functionality and implementation.

2021 – Present **NExSS CUISINES Intermodel Comparison Program** — Co-Lead Developer
Managed collaboration of 15+ international scientists. Coordinated intermodel comparison of radiative transfer models and retrieval frameworks. Established project timelines and ensured timely delivery of results, resulting in 2 publications in preparation.

2019 – Present **Exo-MerCat Project** — Lead Developer
Managed project from conception to implementation for VO-aware Python code for exoplanet data management. Coordinated with PLATO and LIFE teams to integrate catalog into their workflows. Managed open-source release of the code and published 2 refereed papers.

2020 – 2024 **Student Project Supervision and Teaching Assistant Coordinator** — ETH Zürich
Managed and coordinated projects for 1 Ph.D., 4 Master's, and 3 Semester students. Ensured project alignment with broader research goals and timely completion. Projects resulted into 4 refereed publications and conferences contributions. Coordinated 10 teaching assistants for 2 semesters, tracking milestones and deliverables.

DEVELOPER EXPERIENCE

2023 - Now **Habitable Worlds Observatory (HWO) Coronagraph ETC** — Lead Developer
Developing Exposure Time Calculator for HWO coronagraph. Coordinating existing software and standards into a new user-friendly and flexible code. Work will be shared with the HWO team and presented in 2 publications in preparation.

2021 - Now **NExSS CUISINES Intermodel Comparison Program** — Co-Lead Developer
Performing intermodel comparisons with international scientists as point of contact for petitRADTRANS (radiative transfer code) and the LIFE Atmospheric Retrieval (Bayesian retrieval code). Participated in 1 refereed publication and leading 2 publications in preparation.

2020 - Now **LIFE Atmospheric Retrieval Framework** — Lead Developer
Coordinated developer team and overseeing development of official LIFE atmospheric retrieval routine, resulting in 5 high-impact publications. Coordinating open-source release of the code on GitHub.

2019 - Now **Exo-MerCat** — Lead Developer
Developing and maintaining VO-aware Python code for collecting and selecting exoplanet data. Released open-source code and published 2 refereed papers.

2020 - 2023 **petitRADTRANS** — Contributing Developer
Implemented surface scattering feature and enhanced Collision-Induced Absorption treatment. Refactored writing of absorption correlated-k calculation from FORTRAN to Python.

2016 - 2019 **Atmospheric Modeling Software** — Developer
Developed software for modeling radiative-convective transfer and ozone photochemistry for terrestrial planets. Co-authored 1 refereed publication.

EDUCATION

2016 – 2019 **Ph.D. in Astronomy** — University of Padua
Thesis: "Habitability Studies of Super Earths Atmospheres". Grade: Ph.D. degree *cum laude*.

2014 – 2016 **Master's Degree in Astronomy and Astrophysics** — "La Sapienza" University of Rome
Thesis: "Stability Studies of Super Earths Atmospheres". Grade: 110/110 *cum laude*.

2011 – 2014 **Bachelor's Degree in Physics and Astrophysics** — "La Sapienza" University of Rome
Thesis: "Chemical and dynamical processes in Hot Jupiters atmospheres". Grade: 107/110.

GRANTS

Mar 2023 **NASA Postdoctoral Program (NPP) Fellowship**
Role: PI. Secured funding for current position as NPP Fellow at NASA Goddard Space Flight Center. Proposal was funded directly by NASA Headquarters for exceptional relevance to NASA's strategic goals. Funding: USD 256,000 (128,000 yearly for 2 years).

Mar 2021 **European Space Agency (ESA) Open Space Innovation Platform (OSIP)**
Role: Co-I. Secured funding to support a Master's student and a Ph.D. student in developing machine-learning algorithms to improve atmospheric retrievals for the LIFE mission. Funding: EUR 90,000.

SERVICE

2022 - Now **Early Career Research Board of Editors** — Astronomy & Computing
Assisting Editorial Board; contributing ideas; promoting journal, participating in reviewing

2022 - 2023 **Exoplanet Newsletter Editor** — NCCR PlanetS
Collected monthly highlights from subscribers, updates from NASA Exoplanet Archive, and arXiv summaries

STUDENT SUPERVISION

Co-supervised 1 Ph.D., 4 Master's, and 3 Semester projects (2020-2024, ETH Zürich), focusing on exoplanet characterization, atmospheric modeling, and future space mission requirements.

Ph.D. Project (1)

- Characterizing Rocky Exoplanets via their Mid-Infrared Thermal Emission (2020–2024, Björn Konrad, 3 publications)

Master's Projects (4)

- LIFE mission: Earth-like planets around K stars (2023)
- Rocky planet interior composition from spectra (2021)
- Earth-Twin exoplanet atmospheric retrieval (2020, 1 publication)
- Ozone in habitable planets around M stars (2020)

Semester Projects (3)

- LIFE interferometer wavelength coverage (2023)
- Detecting zone in Earth-like planets with LIFE (2022)
- Tidal locking of terrestrial exoplanets (2020)

TEACHING EXPERIENCE

6 semesters of teaching experience at ETH Zürich, covering physics, astronomy, and specialized exoplanet courses. Additional experience includes guest lectures on exoplanet atmospheres and Python programming for astronomical applications.

ETH Zürich (2020-2023)

- Teaching Assistant Coordinator: "Physics I & II"
- Teaching Assistant: "Exoplanets", "Earth - A Unique (?) Habitable Planet","Physics II" (2 semesters), "Astronomy".

Guest Lectures

- Masters Class on Exoplanet Atmospheres (Università degli studi Roma Tre, 2018)
- Python Lectures at Py@stroPD (Astronomical Observatory of Padua, 2018): "Plotting With Pandas", "Pandas: Python Data Analysis Library",

INVITED TALKS AND CONFERENCES

Delivered 13 invited talks at prestigious conferences and workshops, plus 10+ academic seminars at renowned institutions. Actively participated in 30+ international conferences, presenting cutting-edge research in exoplanet characterization, atmospheric modeling, and future space missions.

Invited Talks

Feb 2025 — **Exoplanets in Italy: status and perspectives** — Accademia dei Lincei, Roma, Italy
Topic: "HWO and LIFE: future space telescopes to look for life in the universe"

Nov 2024 — **Habitable Worlds Observatory Exoplanet Spectral Retrieval Workshop** — StScI, Baltimore, MD, USA
Topic: "Tutorial: Earth-like planet with varied H_2O composition using petitRADTRANS."

Sep 2024 — **Dutch LIFE day** — Leiden, The Netherlands
Topic: "HWO and LIFE: future space telescopes to look for life in the universe."

Jun 2023 — **French Society of Astronomy/Astrophysics annual meeting** — Strasbourg, France
Topic: "Atmospheric retrievals for terrestrial planets with future space missions"

Nov 2022 — **KISS Workshop: Exploring Exoplanets with Interferometry** — Caltech, Pasadena, California, USA
Topic: "Atmospheric retrievals with the LIFE space mission"

Sep 2022 — **Europlanet Science Congress 2022** — Granada, Spain
Topic: "Atmospheric retrievals of terrestrial planets with future space missions"

Sep 2022 — **PlanetS WP 1 Kick-off meeting** — Bern, Switzerland
Topic: "Spectroscopic biosignatures in planetary atmospheres: a review"

Mar 2022 — **INAF Laura Bassi Seminar Series** — Virtual seminar
Topic: "Life in the universe, and everything"

Aug 2021 — **ESO Atmo 2021 Workshop** — Virtual meeting
Topic: "petitRADTRANS, Low and high resolution, forward and retrieval models"

Jun 2021 — **NCCR PlanetS Site Visit** — Virtual meeting
Topic: "P4.2: Observational Signatures of Habitability"

Oct 2019 — **Annual Conference on Astronomical Data Analysis and Software Systems** — Groningen, The Netherlands
Topic: "Exo-MerCat: merged exoplanet Catalog with VO connection"

Mar 2018 — **XIV Congresso Nazionale di Scienze Planetarie** — Bormio, Italy
Topic: "Stability Studies of Super Earths Atmospheres"

Nov 2016 — **Astro-pizza Day** — Padua, Italy
Topic: "Stability Studies of Super Earths Atmospheres"

Additional Academic Seminars

- Delivered 10+ academic seminars at various institutions including STScI (US), NASA Goddard Space Flight Center (US), American Museum of Natural History (US), University of Maryland (US), University of Groningen (NL), INAF Trieste (ITA), INAF Padova (ITA), Agenzia Spaziale Italiana (ITA), Ohio State University (US), and ETH Zürich (CH) (2020-2025)

Conference Participation Summary

- Attended 30+ international conferences/workshops (2016-2025)
- Presented contributed talks at major events (2016, 2025): Biennial European Astrobiology Conference (BEACON), Europlanet Science Congress (EPSC), SPIE Astronomical Telescopes + Instrumentation, Rocky Worlds Conference, Astrobiology Science Conference (AbSciCon), NCCR PlanetS General Assembly, Annual Conference on Astronomical Data Analysis and Software Systems (ADASS), International Virtual Observatory Alliance (IVOA) Interoperability Meetings
- Contributed talks/posters on: Exoplanet atmospheric retrievals, LIFE mission concept, HWO and LIFE synergies, super-Earth habitability, exoplanet data management
- Participated in specialized workshops on exoplanet characterization and space mission planning

SCIENCE COMMUNICATION

Participated in 10+ public engagement events across Switzerland, Italy, and the USA, showcasing exoplanet research. Delivered 10+ public talks and activities on exoplanets and space science to audiences including elementary, middle, high-school, and college students, as well as the general public. Produced educational content including interactive laboratories and activities for exoplanet science outreach. Created content and contributed to manage social media presence reaching 130,000+ followers. Led inclusive outreach activities promoting diversity in STEM, highlighting contributions from underrepresented groups in space science.

Public Events and Exhibitions

2024 & 2025 — **Out of this World- Girls In Space** — Robinson Nature Center, MD, USA
Activity for children: "Color your Exoplaneti'

Feb 2024 — **International Day of Women and Girls in Science** — NASA Goddard Space Flight Center, MD, USA
Activity for children: "Color your Exoplaneti'

Oct 2024 — **Astronomy on Tap DC** — Washington DC, USA
Outreach talk. Topic: "LIFE, the universe and everything"

2021 & 2023 — **PlanetS @ Fantasy Basel** — Basel, Switzerland
Interactive booth on exoplanet science for general public; Invited talk. Topic: "LIFE, the universe and everything"

Jun 2022 — **Nacht der Physik** — ETH Zürich, Switzerland
Public engagement event showcasing physics and astronomy research

Sep 2021 — **Scientifica – Zürich Science Days** — ETH Zürich, Switzerland
Presented exoplanet research to diverse public audience

2017 & 2018 — **European Night of Researchers** — Padua, Italy
Conducted "Exoplanet Treasure Hunt" activity for children and families

Educational Outreach

Mar 2025 — **Lectures for 1st-5th Grade Students** — Scuola Amore Misericordioso
Interactive laboratory for 6-11 year-olds, introducing exoplanet concepts

2021 & 2024 — **Seminar for Future Science Educators** — Wheeling University, West Virginia, USA
Topic: "Life in the universe, and everything"

Nov 2021 — **Seminar for 5th Grade Students** — Waggoner Road Middle School, Columbus, OH, USA
Topic: "Finding planets around other stars"

2017 – 2019 — **Exoplanet Treasure Hunt** — Padua, Italy
Role: Developer and presenter. Interactive laboratory for 4-13 year-olds, introducing exoplanet concepts

Digital Science Communication

2018 – present **La Scienza Coatta** Facebook/Instagram Science Page
Content creator and manager for science dissemination page with 130,000 followers.

HARD SKILLS

Programming Languages

Advanced: Python, FORTRAN, HTML, CSS.
Intermediate: SQL/C,C++. **Basic:** IDL, Java

Software & Tools

Advanced: Git, Conda, PyEnv, LaTeX, MS Office Suite.
Intermediate: Adobe Photoshop, Gantt

SOFT SKILLS

Scientific Writing, Project Management, Public Outreach, Data Visualization, High-Performance Computing

LANGUAGES

Italian - Native
English - Fluent (C1)
French - Intermediate (B1)
German - Intermediate (B1)

PUBLICATIONS

Refereed Publications:

1. **Alei, E.**, et al. (2025). Exo-MerCat v2.0.0: Updates and open-source release of the Exoplanet Merged Catalog software. Astronomy and Computing, 51, 100936. https://doi.org/10.1016/j.ascom.2025.100936
2. Cesario, L., et al. (including **Alei, E.**) (2024). Large Interferometer For Exoplanets (LIFE): XIV. Finding terrestrial protoplanets in the galactic neighborhood. Astronomy and Astrophysics, 692, A172. https://doi.org/10.1051/0004-6361/202450764
3. Konrad, B. S., Quanz, S. P., **Alei, E.**, & Wordsworth, R. (2024). Pursuing Truth: Improving Retrievals on Mid-infrared Exo-Earth Spectra with Physically Motivated Water Abundance Profiles and Cloud Models. The Astrophysical Journal, 975(1), 13. https://doi.org/10.3847/1538-4357/ad74f7
4. **Alei, E.**, et al. (2024). Large Interferometer For Exoplanets (LIFE): XIII. The value of combining thermal emission and reflected light for the characterization of Earth twins. Astronomy and Astrophysics, 689, A245. https://doi.org/10.1051/0004-6361/202450320
5. Angerhausen, D., et al. (including **Alei, E.**) (2024). Large Interferometer For Exoplanets (LIFE). XII. The Detectability of Capstone Biosignatures in the Mid-infrared—Sniffing Exoplanetary Laughing Gas and Methylated Halogens. The Astronomical Journal, 167(3), 128. https://doi.org/10.3847/1538-3881/ad1f4b
6. Villanueva, G. L., et al. (including **Alei, E.**) (2024). Modeling Atmospheric Lines by the Exoplanet Community (MALBEC) Version 1.0: A CUISINES Radiative Transfer Intercomparison Project. The Planetary Science Journal, 5(3), 64. https://doi.org/10.3847/PSJ/ad2681
7. Gebhard, T. D., et al. (including **Alei, E.**) (2024). Parameterizing pressure-temperature profiles of exoplanet atmospheres with neural networks. Astronomy and Astrophysics, 681, A3. https://doi.org/10.1051/0004-6361/202346390
8. Hayoz, J., et al. (including **Alei, E.**) (2023). CROCODILE. Incorporating medium-resolution spectroscopy of close-in directly imaged exoplanets into atmospheric retrievals via cross-correlation. Astronomy and Astrophysics, 678, A178. https://doi.org/10.1051/0004-6361/202245752
9. Konrad, B. S., **Alei, E.**, et al. (2023). Large Interferometer For Exoplanets (LIFE). IX. Assessing the impact of clouds on atmospheric retrievals at mid-infrared wavelengths with a Venus-twin exoplanet. Astronomy and Astrophysics, 673, A94. https://doi.org/10.1051/0004-6361/202245655
10. Angerhausen, D., et al. (including **Alei, E.**) (2023). Large Interferometer for Exoplanets: VIII. Where Is the Phosphine? Observing Exoplanetary PH_3 with a Space-Based Mid-Infrared Nulling Interferometer. Astrobiology, 23(2), 183. https://doi.org/10.1089/ast.2022.0010
11. **Alei, E.**, et al. (2022). Large Interferometer For Exoplanets (LIFE). V. Diagnostic potential of a mid-infrared space interferometer for studying Earth analogs. Astronomy and Astrophysics, 665, A106. https://doi.org/10.1051/0004-6361/202243760

12. Konrad, B. S., **Alei, E.**, et al. (2022). Large Interferometer For Exoplanets (LIFE). III. Spectral resolution, wavelength range, and sensitivity requirements based on atmospheric retrieval analyses of an exo-Earth. Astronomy and Astrophysics, 664, A23. https://doi.org/10.1051/0004-6361/202141964

13. Quanz, S. P., et al. (including **Alei, E.**) (2022). Large Interferometer For Exoplanets (LIFE). I. Improved exoplanet detection yield estimates for a large mid-infrared space-interferometer mission. Astronomy and Astrophysics, 664, A21. https://doi.org/10.1051/0004-6361/202140366

14. Montalto, M., et al. (including **Alei, E.**) (2021). The all-sky PLATO input catalogue. Astronomy and Astrophysics, 653, A98. https://doi.org/10.1051/0004-6361/202140717

15. Carleo, I., et al. (including **Alei, E.**) (2021). The GAPS Programme at TNG. XXVIII. A pair of hot-Neptunes orbiting the young star TOI-942. Astronomy and Astrophysics, 645, A71. https://doi.org/10.1051/0004-6361/202039042

16. Claudi, R., **Alei, E.**, et al. (2020). Super-Earths, M Dwarfs, and Photosynthetic Organisms: Habitability in the Lab. Life, 11(1), 10. https://doi.org/10.3390/life11010010

17. Petralia, A., **Alei, E.**, et al. (2020). A systematic study of CO_2 planetary atmospheres and their link to the stellar environment. Monthly Notices of the Royal Astronomical Society, 496(4), 5350. https://doi.org/10.1093/mnras/staa1929

18. Carleo, I., et al. (including **Alei, E.**) (2020). The GAPS Programme at TNG. XXI. A GIARPS case study of known young planetary candidates: confirmation of HD 285507 b and refutation of AD Leonis b. Astronomy and Astrophysics, 638, A5. https://doi.org/10.1051/0004-6361/201937369

19. **Alei, E.**, Claudi, R., Bignamini, A., & Molinaro, M. (2020). Exo-MerCat: A merged exoplanet catalog with Virtual Observatory connection. Astronomy and Computing, 31, 100370. https://doi.org/10.1016/j.ascom.2020.100370

20. Molinaro, M., **Alei, E.**, et al. (2019). Starting Up a Data Model for Exoplanetary Data. Astronomical Data Analysis Software and Systems XXVII, 523, 597.

21. Claudi, R., & **Alei, E.** (2019). Biosignatures Search in Habitable Planets. Galaxies, 7(4), 82. https://doi.org/10.3390/galaxies7040082

Conference Proceedings, Circulars, and Other Publications:

1. Menti, F., et al. (including **Alei, E.**) (2024). Database of Candidate Targets for the LIFE Mission. Research Notes of the American Astronomical Society, 8(10), 267. https://doi.org/10.3847/2515-5172/ad887e

2. Noack, L., Lichtenberg, T., **Alei, E.**, Angerhausen, D., & Quanz, S. (2024). Characterization of Exoplanets with LIFE (Large Interferometer For Exoplanets). European Planetary Science Congress, EPSC2024-711. https://doi.org/10.5194/epsc2024-711

3. Glauser, A. M., et al. (including **Alei, E.**) (2024). The Large Interferometer For Exoplanets (LIFE): a space mission for mid-infrared nulling interferometry. SPIE, 13095, 130951D. https://doi.org/10.1117/12.3019090

4. McElwain, M. W., et al. (including **Alei, E.**) (2024). ExoSpec project: exoplanet spectroscopy technologies for the Habitable Worlds Observatory at NASA's Goddard Space Flight Center. SPIE, 13092, 130925K. https://doi.org/10.1117/12.3020211

5. Rauer, H., et al. (including **Alei, E.**) (2024). The PLATO Mission. arXiv e-prints, arXiv:2406.05447. https://doi.org/10.48550/arXiv.2406.05447

6. Rugheimer, S., **Alei, E.**, et al. (2024). The Goldilocks problem for detecting water worlds to Dune planets: Constraining water abundances in the mid-IR with LIFE. AAS/Division for Extreme Solar Systems Abstracts, 56(4), 628.08.

7. Angerhausen, D., et al. (including **Alei, E.**) (2024). Large Interferometer For Exoplanets (LIFE): XII. The Detectability of Capstone Biosignatures in the Mid-Infrared – Sniffing Exoplanetary Laughing Gas and Methylated Halogens. arXiv e-prints, arXiv:2401.08492. https://doi.org/10.48550/arXiv.2401.08492

8. Angerhausen, D., **Alei, E.**, Quanz, S., & LIFE Initiative (2022). Status and progress of the Large Interferometer For Exoplanets (LIFE) mission. European Planetary Science Congress, EPSC2022-1148. https://doi.org/10.5194/epsc2022-1148

9. **Alei, E.**, Konrad, B. S., Angerhausen, D., & Quanz, S. P. (2022). Atmospheric retrievals of terrestrial planets with future space missions. European Planetary Science Congress, EPSC2022-674. https://doi.org/10.5194/epsc2022-674

10. **Alei, E.**, et al. (2022). Atmospheric retrievals for LIFE and other future space missions: the importance of mitigating systematic effects. SPIE, 12180, 121803L. https://doi.org/10.1117/12.2631692

11. Mollière, P., Nasedkin, E., **Alei, E.**, Molaverdikhani, K., & Zilinskas, M. (2022). petitRADTRANS: Exoplanet spectra calculator. Astrophysics Source Code Library, ascl:2207.014.

12. **Alei, E.**, et al. (2022). Diagnostic potential of the mid-infrared space interferometer LIFE for studying Earth analogs. Bulletin of the American Astronomical Society, 54(5), 102.185.

13. Konrad, B. S., **Alei, E.**, et al. (2022). Atmospheric Retrieval of Terrestrial Solar System Planets for LIFE. Bulletin of the American Astronomical Society, 54(5), 102.81.

14. Gebhard, T., et al. (including **Alei, E.**) (2022). Using machine learning to parameterize pressure-temperature profiles for atmospheric retrievals of exoplanets. The Astrobiology Science Conference (AbSciCon) 2022, 301-02.

15. **Alei, E.**, et al. (2022). Atmospheric Retrievals as a Tool to Define the Requirements of the LIFE Space Mission. The Astrobiology Science Conference (AbSciCon) 2022, 215-05.

16. Angerhausen, D., et al. (including **Alei, E.**) (2022). Detecting phosphine in H2 or CO2 dominated temperate super-Earths around M star hosts with the LIFE (Large Interferometer For Exoplanets) mission. The Astrobiology Science Conference (AbSciCon) 2022, 415-05.

17. Boffin, H. M. J., **Alei, E.**, et al. (2022). Report on the ESO Workshop "Atmospheres, Atmospheres! Do I look like I care about atmospheres?". The Messenger, 186, 32. `https://doi.org/10.18727/0722-6691/5261`

18. Konrad, B. S., **Alei, E.**, Angerhausen, D., & Quanz, S. P. (2021). Atmospheric Retrieval of Cloudy Venus-Twin Exoplanets in the Context of the LIFE Mission. European Planetary Science Congress, EPSC2021-578. `https://doi.org/10.5194/epsc2021-578`

19. **Alei, E.**, et al. (2021). Diagnostic potential of the mid-infrared space interferometer LIFE for studying Earth analogues. European Planetary Science Congress, EPSC2021-340. `https://doi.org/10.5194/epsc2021-340`

20. Zinzi, A., Turrini, D., **Alei, E.**, & Verrecchia, F. (2021). ExoplAn3T, the Novel Tool for Exosystems Studies. 5th Planetary Data Workshop & Planetary Science Informatics & Analytics, 2549, 7019.

21. Montalto, M., et al. (including **Alei, E.**) (2021). VizieR Online Data Catalog: asPIC1.1 catalogue (Montalto+, 2021). VizieR Online Data Catalog, J/A+A/653/A98. `https://doi.org/10.26093/cds/vizier.36530098`

22. Zinzi, A., Turrini, D., **Alei, E.**, & Verrecchia, F. (2021). ExoplAn3T: a new way of exploring large exoplanetary databases and its applications to astrobiology. Memorie della Societa Astronomica Italiana, 92(1), 124.

23. **Alei, E.**, Claudi, R., & Quanz, S. P. (2020). Assessing the habitability of observed Super Earths. European Planetary Science Congress, EPSC2020-355. `https://doi.org/10.5194/epsc2020-355`

24. Konrad, B. S., **Alei, E.**, & Quanz, S. P. (2020). Atmospheric Retrieval Sensitivity Analysis for an Earth-Twin in the Future LIFE Mission. European Planetary Science Congress, EPSC2020-650. `https://doi.org/10.5194/epsc2020-650`

25. Carleo, I., et al. (including **Alei, E.**) (2020). VizieR Online Data Catalog: HD 285507 and AD Leo light and velocity curves (Carleo+, 2020). VizieR Online Data Catalog, J/A+A/638/A5. `https://doi.org/10.26093/cds/vizier.36380005`

26. **Alei, E.**, Bignamini, A., Claudi, R., & Molinaro, M. (2020). Exo-MerCat: a Merged Exoplanet Catalog with Virtual Observatory Connection. Astronomical Data Analysis Software and Systems XXIX, 527, 445.

27. Claudi, R., et al. (including **Alei, E.**) (2018). M Dwarfs, Super Earths and photosynthetic bacteria: a mix for laboratory studies. European Planetary Science Congress, EPSC2018-228.

28. Salasnich, B., et al. (including **Alei, E.**) (2018). Control software for the Multi-Channel Led starlight simulator. SPIE, 10707, 107071I. `https://doi.org/10.1117/12.2311436`

github.com/eleonoraalei Google Scholar ResearchGate NASA ADS