
Publication List

Peer-Reviewed

Feb 2022 Angerhausen, D.; Ottiger, M.; Dannert, F.; Miguel, Y.; Sousa-Silva, C.; Kammerer, J.; Menti, F.; **Alei, E.**; Konrad, B. S.; Wang, H. S.; Quanz, S. P. + The LIFE Collaboration (2023) *Large Interferometer For Exoplanets (LIFE): VIII. Where is the phosphine? Observing exoplanetary PH₃ with a space based MIR nulling interferometer*; *Astrobiology*; 23; 2; pp. 183–194; doi.org/10.1089/ast.2022.0010.

CReditT role: writing - review & editing, visualization.

Sep 2022 **Alei, E.**; Konrad, B. S.; Angerhausen, D.; Grenfell, J. L.; Mollière, P.; Rugheimer, S.; Wunderlich, F.; Quanz, S. P. + the LIFE Collaboration (2022) *Large Interferometer For Exoplanets (LIFE): V. Diagnostic potential of the mid-infrared space interferometer LIFE for studying Earth analogs*; *A&A*, 665, A106; doi.org/10.1051/0004-6361/202243760.

CReditT role: conceptualization, data curation, formal analysis, investigation, methodology, software, validation, visualization, writing.

Aug 2022 Konrad, B. S.; **Alei, E.**; Angerhausen, D.; Carrión-González, Ó.; Fortney, J. J.; Grenfell, J. L.; Kitzmann, D.; Mollière, P.; Rugheimer, S.; Wunderlich, F.; Quanz, S. P. + the LIFE Collaboration (2022) *Large Interferometer For Exoplanets (LIFE): III. Spectral resolution, wavelength range and sensitivity requirements based on atmospheric retrieval analyses of an exo-Earth*; *A&A* 664, A23; doi.org/10.1051/0004-6361/202141964.

CReditT role: conceptualization, methodology, software, supervision, writing.

Aug 2022 Quanz, S. P.; Ottiger, M.; Fontanet, E.; Kammerer, J.; Menti, F.; Dannert, F.; Gheorghe, A.; Absil, O.; Airapetian, V. S.; **Alei, E.**; Allart, R.; Angerhausen, D.; Blumenthal, S.; Buchhave, L. A.; Cabrera, J.; Carrión-González, Ó.; Chauvin, G.; Danchi, W. C.; Dandumont, C.; Defrère, D.; Dorn, C.; Ehrenreich, D.; Ertel, S.; Fridlund, M.; García Muñoz, A.; Gascón, C.; Girard, J. H.; Glauser, A.; Grenfell, J. L.; Guidi, G.; Hagelberg, J.; Helled, R.; Ireland, M. J.; Kopparapu, R. K.; Korth, J.; Kozakis, T.; Kraus, S.; Léger, A.; Leedjäv, L.; Lichtenberg, T.; Lillo-Box, J.; Linz, H.; Liseau, R.; Loicq, J.; Mahendra, V.; Malbet, F.; Mathew, J.; Mennesson, B.; Meyer, M. R.; Mishra, L.; Molaverdikhani, K.; Noack, L.; Oza, A. V.; Pallé, E.; Parviainen, H.; Quirrenbach, A.; Rauer, H.; Ribas, I.; Rice, M.; Romagnolo, A.; Rugheimer, S.; Schwieterman, E. W.; Serabyn, E.; Sharma, S.; Stassun, K. G.; Szulágyi, J.; Wang, H. S.; Wunderlich, F.; Wyatt, M. C. + the LIFE collaboration (2022) *Large Interferometer For Exoplanets (LIFE): I. Improved exoplanet detection yield estimates for a large mid-infrared space-interferometer mission*; *A&A* 664, A21; doi.org/10.1051/0004-6361/202140366.

CReditT role: writing, visualization.

- Sep 2021** Montalto, M.; Piotto, G.; Marrese, P. M.; Nascimbeni, V.; Prisinzano, L.; Granata, V.; Marinoni, S.; Desidera, S.; Ortolani, S.; Aerts, C.; **Alei, E.**; Altavilla, G.; Benatti, S.; Börner, A.; Cabrera, J.; Claudi, R.; Deleuil, M.; Fabrizio, M.; Gizon, L.; Goupil, M. J.; Heras, A. M.; Magrin, D.; Malavolta, L.; Mas-Hesse, J. M.; Pagano, I.; Paproth, C.; Pertenais, M.; Pollacco, D.; Ragazzoni, R.; Ramsay, G.; Rauer, H.; Udry, S. (2021) *The all-sky PLATO input catalogue*; A&A, 653, A98; doi.org/10.1051/0004-6361/202140717.
- CRedit role:** software, writing, visualization.
- Dec 2020** Claudi, R.; **Alei, E.**; Battistuzzi, M.; Cocola, L.; Erculiani, M. S.; Pozzer, A. C.; Salasnich, B.; Simionato, D.; Squicciarini, V.; Poletto, L.; La Rocca, N. (2020) *Super-Earths, M Dwarfs, and Photosynthetic Organisms: Habitability in the Lab*; *Life*, 11(1), 10; [doi:10.3390/life11010010](https://doi.org/10.3390/life11010010).
- CRedit role:** software, writing, investigation, resources, visualization.
- Nov 2020** Carleo, I.; Desidera, S.; Nardiello, D.; Malavolta, L.; Lanza, A. F.; Livingston, J.; Locci, D.; Marzari, F.; Messina, S.; Turrini, D.; Baratella, M.; Borsa, F.; D'Orazi, V.; Nascimbeni, V.; Pinamonti, M.; Rainer, M.; **Alei, E.**; Bignamini, A.; Gratton, R.; Micela, G.; Montalto, M.; Sozzetti, A.; Squicciarini, V.; Affer, L.; Benatti, S.; Biazzo, K.; Bonomo, A. S.; Claudi, R.; Cosentino, R.; Covino, E.; Damasso, M.; Esposito, M.; Fiorenzano, A.; Frustagli, G.; Giacobbe, P.; Harutyunyan, A.; Leto, G.; Magazzù, A.; Maggio, A.; Mainella, G.; Maldonado, J.; Mallonn, M.; Mancini, L.; Molinari, E.; Molinaro, M.; Pagano, I.; Pedani, M.; Piotto, G.; Poretti, E.; Redfield, S.; Scandariato, G. + GAPS Team. (2020) *The GAPS Programme at TNG XXVIII: A pair of hot-Neptunes orbiting the young star TOI-942*; A&A, 645, A71; doi.org/10.1051/0004-6361/202039042.
- CRedit role:** software, visualization, writing.
- Aug 2020** Petralia, A.; **Alei, E.**; Aresu, G.; Locci, D.; Cecchi-Pestellini, C.; Micela, G.; Claudi, R.; Ciaravella, A. (2020) *A systematic study of CO₂ planetary atmospheres and their link to the stellar environment*; *MNRAS*, 496, 5350; [doi:10.1093/mnras/staa1929](https://doi.org/10.1093/mnras/staa1929).
- CRedit role:** data curation, methodology, investigation, formal analysis, validation, visualization, writing.
- May 2020** Carleo, I.; Malavolta, L.; Lanza, A.F.; Damasso, M.; Desidera, S.; Borsa, F.; Mallonn, M.; Pinamonti, M.; Gratton, R.; **Alei, E.**; Benatti, S.; Mancini, L.; Maldonado, J.; Biazzo, K.; Esposito, M.; Frustagli, G.; González-Álvarez, E.; Micela, G.; Scandariato, G.; Sozzetti, A.; Affer, L.; Bignamini, A.; Bonomo, A. S.; Claudi, R.; Cosentino, R.; Covino, E.; Fiorenzano, A. F. M.; Giacobbe, P.; Harutyunyan, A.; Leto, G.; Maggio, A.; Molinari, E.; Nascimbeni, V.; Pagano, I.; Pedani, M.; Piotto, G.; Poretti, E.; Rainer, M.; Redfield, S.; Baffa, C.; Baruffolo, A.; Buchschacher, N.; Billotti, V.; Cecconi, M.; Falcini, G.; Fantinel, D.; Fini, L.; Galli, A.; Ghedina, A.; Ghinassi, F.; Giani, E.; Gonzalez, C.; Gonzalez, M.; Guerra, J.; Hernandez Diaz, M.; Hernandez, N.; Iuzzolino, M.; Lodi, M.; Oliva, E.; Origlia, L.; Perez Ventura, H.; Puglisi, A.; Riverol, C.; Riverol, L.; San Juan, J.; Sanna, N.; Scuderi, S.; Seemann, U.; Sozzi, M.; Tozzi, A. + GAPS Team. (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 Leo b*; A&A, 638, A5; [doi:10.1051/0004-6361/201937369](https://doi.org/10.1051/0004-6361/201937369).

CRedit role: software, visualization, writing.

Feb 2020 Battistuzzi, M.; Cocola, L.; Salasnich, B.; Erculiani, M. S.; **Alei, E.**; Morosinotto T.; Claudi, R.; Poletto, L.; La Rocca, N. (2020) *A New Remote Sensing-Based System for the Monitoring and Analysis of Growth and Gas Exchange Rates of Photosynthetic Microorganisms Under Simulated Non-Terrestrial Conditions*; *Front. Plant Sci.* 11:182, doi:10.3389/fpls.2020.00182.

CRedit role: software, resources, investigation, writing.

Feb 2020 **Alei, E.**; Claudi, R.; Bignamini, A.; Molinaro, M. (2020) *Exo-MerCat: a merged exoplanet catalog with Virtual Observatory connection*; *Astronomy and Computing*, Volume 31, 100370, ISSN 2213-1337; doi:10.1016/j.ascom.2020.100370.

CRedit role: conceptualization, data curation, methodology, software, validation, visualization, writing.

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

CRedit role: visualization, writing.

Non-Peer-Reviewed

Aug 2022 **Alei, E.**; Konrad, B.; Mollière, P.; Quanz, S.; Angerhausen, D.; Ranganathan, M. + the LIFE Collaboration (2022) *Atmospheric retrievals for LIFE and other future space missions: the importance of mitigating systematic effects*; SPIE Proceedings Volume 12180, Space Telescopes and Instrumentation 2022: Optical, Infrared, and Millimeter Wave; 121803L; doi.org/10.1117/12.2631692.

CRedit role: conceptualization, data curation, formal analysis, investigation, methodology, software, validation, visualization, writing.

Sep 2021 **Alei, E.**; Konrad, B.; Mollière, P.; Quanz, S.; Angerhausen, D. + the LIFE Collaboration (2021) *Diagnostic potential of the mid-infrared space interferometer LIFE for studying Earth analogues*; 15th Europlanet Science Congress 2021, held virtually, 13 - 24 September 2021 Online at www.epsc2021.eu, id. EPSC2021-340.

CRedit role: conceptualization, data curation, formal analysis, investigation, methodology, software, validation, visualization, writing.

Sep 2021 Konrad, B.; **Alei, E.**; Angerhausen, D.; Quanz, S. + the LIFE Collaboration (2021) *Atmospheric Retrieval of Cloudy Venus-Twin Exoplanets in the Context of the LIFE Mission*; 15th Europlanet Science Congress 2021, held virtually, 13 - 24 September 2021 Online at www.epsc2021.eu, id. EPSC2021-578.

CRedit role: conceptualization, methodology, software, supervision, writing.

Jun 2021 Zinzi, A.; Turrini, D.; **Alei, E.**; Verrecchia, F. (2021); *Exoplan3T, the Novel Tool for Exosystems Studies*; 5th Planetary Data Workshop & Planetary Science Informatics & Analytics, held virtually June 28-July 2, 2021. LPI Contribution No. 2549, id.7019; www.hou.usra.edu/meetings/planetdata2021/pdf/7019.pdf.

CRedit role: resources, visualization, writing.

Dec 2020 **Alei, E.** (2020) *Stability studies of super Earths atmospheres*, *Mem. S.A.It.* Vol. 91, 267; [MSAIt9103-0420/PDF/2020MmSAI..91..267A.pdf](https://www.msa.it/MSAIt9103-0420/PDF/2020MmSAI..91..267A.pdf).

CRediT role: data curation, formal analysis, investigation, methodology, software, validation, visualization, writing.

Sep 2020 Alei, E.; Claudi, R.; Quanz, S. P. (2020) *Assessing the habitability of observed Super Earths*; 14th Europlanet Science Congress 2020, held virtually, 21 September 2020 - 9 October, 2020. Online at www.epsc2020.eu, id. EPSC2020-355.

CRediT role: conceptualization, data curation, formal analysis, investigation, methodology, software, validation, visualization, writing.

Sep 2020 Konrad, B. S.; Alei, E.; Quanz, S. P. (2020) *Atmospheric Retrieval Sensitivity Analysis for an Earth-Twin in the Future LIFE Mission*; 14th Europlanet Science Congress 2020, held virtually, 21 September 2020 - 9 October, 2020. Online at www.epsc2020.eu, id. EPSC2020-650.

CRediT role: conceptualization, methodology, software, supervision, writing.

Jan 2020 Alei, E.; Claudi, R.; Bignamini, A.; Molinaro, M. (2020) *Exo-MerCat: a Merged Exoplanet Catalog with Virtual Observatory Connection*; *Proceedings of the Astronomical Data Analysis Software and Systems XXIX*; *ASP Conference Series*; Vol. 527; p. 445; articles.adsabs.harvard.edu/pdf/2020ASPC..527..445A.

CRediT role: conceptualization, data curation, methodology, software, validation, visualization, writing.

July 2018 Salasnich, B.; Claudi, R.; Alei, E.; Barbisan, D.; Baruffolo, A.; Cocola, L.; Erculiani, M. S.; La Rocca, N.; Pace, E.; Poletto, L.; Trivellin, N. (2018) *Control software for the Multi-Channel Led starlight simulator*; *SPIE 10707, Software and Cyberinfrastructure for Astronomy V*, 107071I, [10.1117/12.2311436](https://doi.org/10.1117/12.2311436).

CRediT role: software, writing.

Dec 2018 Molinaro, M.; Alei, E.; Benatti, S.; Bignamini, A.; Bonnarel, F.; Damasso, M.; Louys, M.; Maris, M.; Nascimbeni, V. (2018) *Starting up a Data Model for Exoplanetary Data*; *Proceedings of the Astronomical Data Analysis Software and Systems XXVIII*; *ASP Conference Series*; Vol. 523; p. 597; asp-books.org/a/volumes/article_details/?paper_id=39315.

CRediT role: conceptualization, methodology, resources, writing.

Sep 2018 Claudi, R.; La Rocca, N.; Poletto, L.; Alei, E.; Battistuzzi, M.; Cocola, L.; Pace, E. (2018) *M Dwarfs, Super Earths and photosynthetic bacteria: a mix for laboratory studies*; *Proceedings of the European Planetary Science Congress 2018*, Vol. 12, EPSC2018-228 meetingorganizer.copernicus.org/EPSC2018/EPSC2018-228.pdf.

CRediT role: software, writing, investigation, resources, visualization.

Technical Reports

Jul 2022 Mollière, P. ; Nasedkin, E. ; Alei, E. ; Molaverdikhani, K. ; Zilinskas, M. (2022) *petitRADTRANS: Exoplanet spectra calculator*; ascl.net/2207.014.

CRediT role: software, validation.

Jun 2020 Alei, E. (2020) *CINECA INA17_C3B15a: report and preliminary results* accepted by [ICT and Science Data management](https://www.ict.ac.uk/) website.

CRediT role: conceptualization, data curation, formal analysis, investigation, methodology, software, validation, visualization, writing.

Aug 2018 Alei, E. (2018) *CINECA INA17_C2BB0: report and preliminary results* accepted by [ICT and Science Data management](#) website.

CRedit role: conceptualization, data curation, formal analysis, investigation, methodology, software, validation, visualization, writing.