### PUBLICATION LIST

#### MAJOR REFEREED PUBLICATIONS

- 1. Stasevic, S.; Milli, J.; Mazoyer, J. (2025), Optimising reference library selection for reference-star differential imaging of disks with SPHERE/IRDIS, accepted for publication in Astronomy and Astrophysics.
- 2. Laginja, I.; Baudoz, P.; Mazoyer, J. et al. (2025), Extended linearity in the high-order wavefront sensor for the Roman Coronagraph, Astronomy and Astrophysics, 698, A130, DOI link, arXiv link
- 3. Squicciarini, V.; Mazoyer, J.; Lagrange, A.-M. et al. (2025), The COBREX archival survey: Improved constraints on the occurrence rate of wide-orbit substellar companions: I. A uniform reanalysis of 400 stars from the GPIES survey, Astronomy and Astrophysics, 693, A54, DOI link, arXiv link, 2 citations
- 4. Gutierrez, Y.; Mazoyer, J.; Mugnier, L. M. et al. (2024), Image-based wavefront correction using model-free reinforcement learning, Optics Express, 32, 31247, DOI link, arXiv link
- 5. Galicher, R.; Potier, A.; Mazoyer, J. et al. (2024), Increasing the raw contrast of VLT/SPHERE with the dark hole technique. III. Broadband reference differential imaging of HR4796 using a four-quadrant phase mask, Astronomy and Astrophysics, 686, A54, DOI link, arXiv link, 2 citations
- 6. Galicher, R. & Mazoyer, J. (2024), Imaging exoplanets with coronagraphic instruments, Comptes Rendus Physique, 24, 133, DOI link, arXiv link, 16 citations
- 7. Stasevic, S.; Milli, J.; Mazoyer, J. et al. (2023), An inner warp discovered in the disk around HD 110058 using VLT/SPHERE and HST/STIS, Astronomy and Astrophysics, 678, A8, DOI link, arXiv link, 7 citations
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- 9. Chen, C.; Mazoyer, J.; Poteet, C. A. et al. (2020), Multiband GPI Imaging of the HR 4796A Debris Disk, The Astrophysical Journal, 898, 55, DOI link, arXiv link, 36 citations
- 10. Mazoyer, J.; Pueyo, L.; N'Diaye, M. et al. (2018), Active Correction of Aperture Discontinuities-Optimized Stroke Minimization. II. Optimization for Future Missions, The Astronomical Journal, 155, 8, DOI link, arXiv link, 22 citations
- 11. Mazoyer, J.; Pueyo, L.; N'Diaye, M. et al. (2018), Active Correction of Aperture Discontinuities-Optimized Stroke Minimization. I. A New Adaptive Interaction Matrix Algorithm, The Astronomical Journal, 155, 7, DOI link, arXiv link, 18 citations
- 12. Fogarty, K.; Pueyo, L.; **Mazoyer, J.** et al. (2017), Polynomial Apodizers for Centrally Obscured Vortex Coronagraphs, The Astronomical Journal, 154, 240, DOI link, arXiv link, 10 citations
- 13. Mazoyer, J.; Pueyo, L.; Norman, C. et al. (2016), Active compensation of aperture discontinuities for WFIRST-AFTA: analytical and numerical comparison of propagation methods and preliminary results with a WFIRST-AFTA-like pupil, Journal of Astronomical Telescopes, Instruments, and Systems, 2, 011008, DOI link, arXiv link, 9 citations
- 14. Mazoyer, J.; Boccaletti, A.; Choquet, É. et al. (2016), A Symmetric Inner Cavity in the HD 141569A Circumstellar Disk, The Astrophysical Journal, 818, 150, DOI link, arXiv link, 13 citations
- 15. Mazoyer, J.; Boccaletti, A.; Augereau, J.-C. et al. (2014), Is the HD 15115 inner disk really asymmetrical?, Astronomy and Astrophysics, 569, A29, DOI link, arXiv link, 35 citations
- 16. Mazoyer, J.; Baudoz, P.; Galicher, R. et al. (2014), High-contrast imaging in polychromatic light with the self-coherent camera, Astronomy and Astrophysics, 564, L1, DOI link, arXiv link, 36 citations
- 17. Mazoyer, J.; Baudoz, P.; Galicher, R. et al. (2013), Estimation and correction of wavefront aberrations using the self-coherent camera: laboratory results, Astronomy and Astrophysics, 557, A9, DOI link, arXiv link, 39 citations

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- 1. Hom, J.; Esposito, T. M.; Crotts, K. A. et al. (2025), The Disks In Scorpius-Centaurus Survey (DISCS). I. Four Newly Resolved Debris Disks in Polarized Intensity Light, The Astronomical Journal, 170, 46, DOI link, arXiv link
- 2. Lagrange, A. -M.; Wilkinson, C.; Mâlin, M. et al. (2025), Evidence for a sub-Jovian planet in the young TWA 7 disk, Nature, 642, 905, DOI link, arXiv link, 4 citations
- 3. Desgrange, C.; Milli, J.; Chauvin, G. et al. (2025), Dust populations from 30 to 1000 au in the debris disk of HD 120326: Panchromatic view with VLT/SPHERE, ALMA, and HST/STIS, Astronomy and Astrophysics, 698, A183, DOI link, arXiv link
- 4. Chomez, A.; Delorme, P.; Lagrange, A.-M. et al. (2025), The SPHERE infrared survey for exoplanets (SHINE): IV. Complete observations, data reduction and analysis, detection performances, and final results, Astronomy and Astrophysics, 697, A99, DOI link, arXiv link, 3 citations
- 5. Ray, S.; Sallum, S.; Hinkley, S. et al. (2025), The JWST Early Release Science Program for Direct Observations of Exoplanetary Systems. III. Aperture Masking Interferometric Observations of the Star HIP 65426 at 3.8 μm, The Astrophysical Journal, 983, L25, DOI link, arXiv link, 4 citations
- 6. Laginja, I.; Carrión-González, Ó.; Laugier, R. et al. (2025), Advancing European high-contrast imaging R&D towards the Habitable Worlds Observatory, Astrophysics and Space Science, 370, 29, DOI link, arXiv link
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- 9. Goulas, C.; Galicher, R.; Vidal, F. et al. (2024), Numerical simulations for the SAXO+ upgrade: Performance analysis of the adaptive optics system, Astronomy and Astrophysics, 689, A199, DOI link, arXiv link, 2 citations
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- 17. Miles, B. E.; Biller, B. A.; Patapis, P. et al. (2023), The JWST Early-release Science Program for Direct Observations of Exoplanetary Systems II: A 1 to 20 μm Spectrum of the Planetary-mass Companion VHS 1256-1257 b, The Astrophysical Journal, 946, L6, DOI link, arXiv link, 124 citations
- 18. Hinkley, S.; Carter, A. L.; Ray, S. et al. (2022), The JWST Early Release Science Program for the Direct Imaging and Spectroscopy of Exoplanetary Systems, Publications of the Astronomical Society of the Pacific, 134, 095003, DOI link, arXiv link, 47 citations
- 19. Crotts, K. A.; Draper, Z. H.; Matthews, B. C. et al. (2022), A Multiwavelength Study of the Highly Asymmetrical Debris Disk around HD 111520, The Astrophysical Journal, 932, 23, DOI link, arXiv link, 8 citations
- 20. Betti, S. K.; Follette, K.; Jorquera, S. et al. (2022), Detection of Near-infrared Water Ice at the Surface of the (Pre)Transitional Disk of AB Aur: Informing Icy Grain Abundance, Composition, and Size, The Astronomical Journal, 163, 145, DOI link, arXiv link, 16 citations
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- 25. Duchêne, G.; Rice, M.; Hom, J. et al. (2020), The Gemini Planet Imager View of the HD 32297 Debris Disk, The Astronomical Journal, 159, 251, DOI link, arXiv link, 23 citations
- 26. Ertel, S.; Defrère, D.; Hinz, P. et al. (2020), The HOSTS Survey for Exozodiacal Dust: Observational Results from the Complete Survey, The Astronomical Journal, 159, 177, DOI link, arXiv link, 108 citations
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- 31. Stark, C. C.; Belikov, R.; Bolcar, M. R. et al. (2019), ExoEarth yield landscape for future direct imaging space telescopes, Journal of Astronomical Telescopes, Instruments, and Systems, 5, 024009, DOI link, arXiv link, 67 citations
- 32. Engler, N.; Boccaletti, A.; Schmid, H. M. et al. (2019), Investigating the presence of two belts in the HD 15115 system, Astronomy and Astrophysics, 622, A192, DOI link, arXiv link, 31 citations
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- 36. Jensen-Clem, R.; Mawet, D.; Gomez Gonzalez, C. A. et al. (2018), A New Standard for Assessing the Performance of High Contrast Imaging Systems, The Astronomical Journal, 155, 19, DOI link, arXiv link, 34 citations
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- 40. Debes, J. H.; Ygouf, M.; Choquet, E. et al. (2016), Wide-Field Infrared Survey Telescope-Astrophysics Focused Telescope Assets coronagraphic operations: lessons learned from the Hubble Space Telescope and the James Webb Space Telescope, Journal of Astronomical Telescopes, Instruments, and Systems, 2, 011010, DOI link, arXiv link, 11 citations
- 41. Wiens, R. C.; Maurice, S.; Lasue, J. et al. (2013), Pre-flight calibration and initial data processing for the ChemCam laser-induced breakdown spectroscopy instrument on the Mars Science Laboratory rover, Spectrochimica Acta Part B: Atomic Spectroscopy, 82, 1, DOI link, 161 citations
- 42. Cousin, A.; Forni, O.; Maurice, S. et al. (2011), Laser induced breakdown spectroscopy library for the Martian environment, Spectrochimica Acta Part B: Atomic Spectroscopy, 66, 805, DOI link, 54 citations

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- 1. Gutierrez, Y.; Mazoyer, J.; Herscovici-Schiller, O. et al. (2024), A deep reinforcement learning approach to wavefront control for exoplanet imaging, Space Telescopes and Instrumentation 2024: Optical, Infrared, and Millimeter Wave, 13092, 130926H, DOI link, arXiv link
- 2. Mazoyer, J.; Goulas, C.; Vidal, F. et al. (2024), Upgrading SPHERE with the second stage AO system SAXO+: non-common path aberrations estimation and correction, Ground-based and Airborne Instrumentation for Astronomy X, 13096, 130969D, DOI link
- 3. Fogarty, K.; Mawet, D.; Mazoyer, J. et al. (2020), Towards high throughput and low-order aberration robustness for vortex coronagraphs with central obstructions, Space Telescopes and Instrumentation 2020: Optical, Infrared, and Millimeter Wave, 11443, 114433Y, DOI link, 1 citation
- 4. Mazoyer, J.; Arriaga, P.; Hom, J. et al. (2020), DiskFM: A forward modeling tool for disk analysis with coronagraphic instruments, Ground-based and Airborne Instrumentation for Astronomy VIII, 11447, 1144759, DOI link, arXiv link, 9 citations
- 5. Fogarty, K.; Mazoyer, J.; St. Laurent, K. et al. (2018), Optimal deformable mirror and pupil apodization combinations for apodized pupil Lyot coronagraphs with obstructed pupils, Space Telescopes and Instrumentation 2018: Optical, Infrared, and Millimeter Wave, 10698, 106981J, DOI link, 2 citations
- 6. Ruane, G.; Riggs, A.; Mazoyer, J. et al. (2018), Review of high-contrast imaging systems for current and future ground- and space-based telescopes I: coronagraph design methods and optical performance metrics, Space Telescopes and Instrumentation 2018: Optical, Infrared, and Millimeter Wave, 10698, 106982S, DOI link, arXiv link, 15 citations
- 7. Mazoyer, J.; Pueyo, L.; N'Diaye, M. et al. (2017), Capabilities of ACAD-OSM, an active method for the correction of aperture discontinuities, Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series, 10400, 104000G, DOI link, arXiv link, 2 citations

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- 9. Leboulleux, L.; N'Diaye, M.; **Mazoyer, J.** et al. (2017), Comparison of wavefront control algorithms and first results on the high-contrast imager for complex aperture telescopes (hicat) testbed, Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series, 10562, 105622Z, DOI link
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- 14. N'Diaye, M.; Mazoyer, J.; Choquet, É. et al. (2015), High-contrast imager for complex aperture telescopes (HiCAT): 3. first lab results with wavefront control, Techniques and Instrumentation for Detection of Exoplanets VII, 9605, 96050I, DOI link, arXiv link, 21 citations
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- 16. Mazoyer, J.; Baudoz, P.; Galicher, R. et al. (2013), Direct detection of exoplanets in polychromatic light with a Self-coherent camera, Proceedings of the Third AO4ELT Conference, 97, DOI link
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#### OTHER CONFERENCE PROCEEDINGS

- 1. Stadler, E.; Schreiber, L.; Cortecchia, F. et al. (2024), Upgrading SPHERE with the second-stage adaptive optics system SAXO+: conceptual design of the opto-mechanical module, Adaptive Optics Systems IX, 13097, 130976S, DOI link
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- 3. Cantalloube, F.; Christiaens, V.; Cantero, C. et al. (2024), Exoplanet imaging data challenge, phase II: comparison of algorithms in terms of characterization capabilities, Adaptive Optics Systems IX, 13097, 1309713, DOI link, arXiv link
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