

# LISTE DE PUBLICATIONS

## PRINCIPAUX ARTICLES

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1. Squicciarini, V. ; **Mazoyer, J.** ; Wilkinson, C. et al. (2025), *GPI+SPHERE detection of a 6.1  $M_{Jup}$  circumbinary planet around HD 143811*, Astronomy and Astrophysics, 702, L10, [DOI link](#), [arXiv link](#)
2. Stasevic, S. ; Milli, J. ; **Mazoyer, J.** et al. (2025), *Optimising reference library selection for reference-star differential imaging of discs with SPHERE/IRDIS*, Astronomy and Astrophysics, 701, A93, [DOI link](#), [arXiv link](#)
3. Lajinja, 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](#), 2 citations
4. 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 re-analysis of 400 stars from the GPIES survey*, Astronomy and Astrophysics, 693, A54, [DOI link](#), [arXiv link](#), 7 citations
5. 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](#)
6. 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](#), 4 citations
7. Galicher, R. & **Mazoyer, J.** (2024), *Imaging exoplanets with coronagraphic instruments*, Comptes Rendus Physique, 24, 133, [DOI link](#), [arXiv link](#), 19 citations
8. 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
9. Potier, A. ; **Mazoyer, J.** ; Wahhaj, Z. et al. (2022), *Increasing the raw contrast of VLT/SPHERE with the dark hole technique. II. On-sky wavefront correction and coherent differential imaging*, Astronomy and Astrophysics, 665, A136, [DOI link](#), [arXiv link](#), 23 citations
10. 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](#), 38 citations
11. **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](#), 23 citations
12. **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
13. 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
14. **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
15. **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
16. **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
17. **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
18. **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](#), 41 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 citations
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](#), 13 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](#), 1 citation
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](#), 6 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  $\mu\text{m}$* , The Astrophysical Journal, 983, L25, [DOI link](#), [arXiv link](#), 7 citations
6. Luginja, 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](#)
7. Wilkinson, C. ; Charnay, B. ; Mazevet, S. et al. (2024), *Breaking degeneracies in exoplanetary parameters through self-consistent atmosphere-interior modelling*, Astronomy and Astrophysics, 692, A113, [DOI link](#), [arXiv link](#), 6 citations
8. Lewis, B. L. ; Fitzgerald, M. P. ; Esposito, T. M. et al. (2024), *Gemini Planet Imager Observations of a Resolved Low-inclination Debris Disk around HD 156623*, The Astronomical Journal, 168, 142, [DOI link](#), [arXiv link](#), 2 citations
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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11. Hom, J. ; Patience, J. ; Chen, C. H. et al. (2024), *A uniform analysis of debris discs with the Gemini Planet Imager II: constraints on dust density distribution using empirically informed scattering phase functions*, Monthly Notices of the Royal Astronomical Society, 528, 6959, [DOI link](#), [arXiv link](#), 6 citations
12. Sallum, S. ; Ray, S. ; Kammerer, J. et al. (2024), *The JWST Early Release Science Program for Direct Observations of Exoplanetary Systems. IV. NIRISS Aperture Masking Interferometry Performance and Lessons Learned*, The Astrophysical Journal, 963, L2, [DOI link](#), [arXiv link](#), 10 citations
13. Worthen, K. ; Chen, C. H. ; Brittain, S. D. et al. (2024), *Vertical Structure of Gas and Dust in Four Debris Disks*, The Astrophysical Journal, 962, 166, [DOI link](#), [arXiv link](#), 2 citations
14. Crotts, K. A. ; Matthews, B. C. ; Duchêne, G. et al. (2024), *A Uniform Analysis of Debris Disks with the Gemini Planet Imager. I. An Empirical Search for Perturbations from Planetary Companions in Polarized Light Images*, The Astrophysical Journal, 961, 245, [DOI link](#), [arXiv link](#), 13 citations
15. Vaughan, S. R. ; Gebhard, T. D. ; Bott, K. et al. (2023), *Chasing rainbows and ocean glints: Inner working angle constraints for the Habitable Worlds Observatory*, Monthly Notices of the Royal Astronomical Society, 524, 5477, [DOI link](#), [arXiv link](#), 34 citations
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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](#), 18 citations
21. Singh, G. ; Bhowmik, T. ; Boccaletti, A. et al. (2021), *Revealing asymmetrical dust distribution in the inner regions of HD 141569*, Astronomy and Astrophysics, 653, A79, [DOI link](#), [arXiv link](#), 12 citations
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27. Bruzzone, J. S. ; Metchev, S. ; Duchêne, G. et al. (2020), *Imaging the 44 au Kuiper Belt Analog Debris Ring around HD 141569A with GPI Polarimetry*, The Astronomical Journal, 159, 53, [DOI link](#), [arXiv link](#), 11 citations
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29. Bhowmik, T. ; Boccaletti, A. ; Thébault, P. et al. (2019), *Spatially resolved spectroscopy of the debris disk HD 32297. Further evidence of small dust grains*, Astronomy and Astrophysics, 630, A85, [DOI link](#), [arXiv link](#), 31 citations
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33. Esposito, T. M. ; Duchêne, G. ; Kalas, P. et al. (2018), *Direct Imaging of the HD 35841 Debris Disk: A Polarized Dust Ring from Gemini Planet Imager and an Outer Halo from HST/STIS*, The Astronomical Journal, 156, 47, [DOI link](#), [arXiv link](#), 34 citations
34. Leboulleux, L. ; Sauvage, J. -F. ; Pueyo, L. A. et al. (2018), *Pair-based Analytical model for Segmented Telescopes Imaging from Space for sensitivity analysis*, Journal of Astronomical Telescopes, Instruments, and Systems, 4, 035002, [DOI link](#), [arXiv link](#), 20 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](#), 33 citations
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38. Delorme, J. R. ; Galicher, R. ; Baudoz, P. et al. (2016), *Focal plane wavefront sensor achromatization: The multireference self-coherent camera*, Astronomy and Astrophysics, 588, A136, [DOI link](#), [arXiv link](#), 19 citations
39. Choquet, É. ; Perrin, M. D. ; Chen, C. H. et al. (2016), *First Images of Debris Disks around TWA 7, TWA 25, HD 35650, and HD 377*, The Astrophysical Journal, 817, L2, [DOI link](#), [arXiv link](#), 81 citations

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, 171 citations
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## PRINCIPAUX ACTES DE CONFERENCES

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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, 1 citation
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
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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, 16 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
10. Fogarty, K. ; Pueyo, L. ; Mazoyer, J. et al. (2017), *Tip/tilt optimizations for polynomial apodized vortex coronagraphs on obscured telescope pupils*, Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series, 10400, 104000T, DOI link, 2 citations
11. Mazoyer, J. ; Pueyo, L. ; N'Diaye, M. et al. (2016), *Correcting for the effects of pupil discontinuities with the ACAD method*, Space Telescopes and Instrumentation 2016: Optical, Infrared, and Millimeter Wave, 9904, 99044T, DOI link, arXiv link, 2 citations
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## AUTRES ACTES DE CONFERENCES

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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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