

# NICOLAS KURTOVIC

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PUBLICATIONS (65 ACCEPTED), [ADS LIBRARY](#)

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## Refereed publications as first author: 8 accepted

- 8) **N.T. Kurtovic**, S. Grant, M. Temmink, et al., **2025b**, A&A, accepted, arXiv:2508.02576  
“MINDS. Young binary systems with JWST/MIRI: Variable water-rich primaries and extended emission”
- 7) **N.T. Kurtovic**, M. Gárate, P. Pinilla, et al., **2025a**, ApJ, 989, 6.  
“The ALMA Survey of Gas Evolution of PROtoplanetary Disks (AGE-PRO). VI. Comparison of Dust Evolution Models to AGE-PRO Observations”
- 6) **N.T. Kurtovic**, S. Facchini, M. Benisty, et al., **2024c**, A&A, 692, A155.  
“Binary orbit and disks properties of the RW Aur system using ALMA observations”
- 5) **N.T. Kurtovic**, P. Pinilla, **2024b**, A&A, 687, A188.  
“Recovering the gas properties of protoplanetary disks through parametric visibility modeling: MHO 6”
- 4) **N.T. Kurtovic**, **2024a**, JOSS, 9, 4942.  
“SIMIO-continuum: Connecting simulations to interferometric observations”,
- 3) **N.T. Kurtovic**, P. Pinilla, A. B. T. Penzlin, et al., **2022**, A&A, 645, A139.  
“The morphology of CS Cha circumbinary disk suggesting the existence of a Saturn-mass planet”
- 2) **N.T. Kurtovic**, P. Pinilla, M. Benisty, et al., **2021**, A&A, 645, A139.  
“Size and Structures of Disks around Very Low Mass Stars in the Taurus Star-Forming Region”
- 1) **N.T. Kurtovic**, L.M. Pérez, M. Benisty, et al., **2018**, ApJL, 869, L44.  
“The Disk Substructures at High Angular Resolution Project (DSHARP). IV. Characterizing Substructures and Interactions in Disks around Multiple Star Systems”

**Refereed papers as second, third, fourth author, or with significant contributions:  
22 accepted**

- 22) L. Trapman, M. Vioque, **N.T. Kurtovic**, et al., (2025), ApJ, 989, 10.  
“The ALMA Survey of Gas Evolution of PROtoplanetary Disks (AGE-PRO). XI. Beam-corrected Gas Disk Sizes from Fitting  $^{12}\text{CO}$  Moment Zero Maps”
- 21) M. Vioque, **N.T. Kurtovic**, L. Trapman, et al., (2025), ApJ, 989, 9.  
“The ALMA Survey of Gas Evolution of PROtoplanetary Disks (AGE-PRO). X. Dust Substructures, Disk Geometries, and Dust-disk Radii”
- 20) K. Zhang, L.M. Pérez, I. Pascucci, et al., incl. **N.T. Kurtovic**, (2025), ApJ, 989, 1.  
“The ALMA Survey of Gas Evolution of PROtoplanetary Disks (AGE-PRO). I. Program Overview and Summary of First Results”
- 19) A. Santamaría-Miranda, P. Curone, L.M. Pérez, **N.T. Kurtovic**, et al., (2025), ApJL, 986, L11.  
“Hints of Disk Substructure in the First Brown Dwarf with a Dynamical Mass Constraint”
- 18) G. Perotti, **N.T. Kurtovic**, T. Henning, et al., (2025), arXiv, arXiv:2504.11424.  
“MINDS. Anatomy of a water-rich, inclined, brown dwarf disk: lack of abundant hydrocarbons”
- 17) M. Vlasblom, M. Temmink, S. Grant, **N.T. Kurtovic**, et al., (2025), A&A, 693, A278.  
“MINDS. JWST-MIRI reveals a peculiar  $\text{CO}_2$ -rich chemistry in the drift-dominated disk CX Tau”
- 16) S. Das, **N.T. Kurtovic**, and M. Flock, (2024), A&A, 689, A104.  
“From traffic jams to roadblocks: The outer regions of TW Hya with ALMA Band 8”
- 15) S.L. Grant, **N.T. Kurtovic**, E.F. van Dishoeck, et al., (2024), A&A, 689, A85.  
“MINDS: A multi-instrument investigation into the molecule-rich JWST-MIRI spectrum of the DF Tau binary system”
- 14) A. Derkink, C. Ginski, P. Pinilla, **N.T. Kurtovic**, et al., (2024), A&A, 688, A149.  
“Disk Evolution Study Through Imaging of Nearby Young Stars (DESTINYs): PDS 111, an old T Tauri star with a young-looking disk”
- 13) J. Dietrich, D. Apai, M. Schlecker, K.K. Hardegree-Ullman, B.V. Rackham, **N.T. Kurtovic**, et al., (2023), AJ, 165, 149.  
“EDEN Survey: Small Transiting Planet Detection Limits and Constraints on the Occurrence Rates of Planets around Late-M Dwarfs within 15 pc”
- 12) L. Flores-Rivera, M. Flock, **N.T. Kurtovic**, et al., (2023), A&A, 670, A126.  
“Forbidden emission lines in protostellar outflows and jets with MUSE”
- 11) J. Stadler, M. Benisty, A. Izquierdo, S. Facchini, R. Teague, **N.T. Kurtovic**, et al., (2023), A&A, 670, L1.  
“A kinematically detected planet candidate in a transition disk”

- 10) P. Weber, S. Pérez, G. Guidi, **N.T. Kurtovic**, et al., (2023), MNRAS, 518, 5620.  
“The SPHERE view of three interacting twin disc systems in polarized light”
- 9) P. Pinilla, M. Benisty, **N.T. Kurtovic**, et al., (2022), A&A, 665, A128.  
“Distributions of gas and small and large grains in the LkHa 330 disk trace a young planetary system”
- 8) Bergez-Casalou, C., Bitsch, B., Kurtovic, N. T., and Pinilla, P. (2022), A&A, 659, A6.  
“Constraining giant planet formation with synthetic ALMA images of the Solar System’s natal protoplanetary disk”
- 7) M.A. Pyerin, T.N. Delage, **N.T. Kurtovic**, et al., (2021), A&A, 656, A150.  
“Constraining the properties of the potential embedded planets in the disk around HD 100546”
- 6) S.B. Brown-Sevilla, M. Keppler, M. Barraza-Alfaro, J.D. Melon-Fuksman, **N.T. Kurtovic**, et al., (2021), A&A, 654, A35.  
“A multiwavelength analysis of the spiral arms in the protoplanetary disk around WaOph 6”
- 5) Benisty, Myriam, Bae, Jaehan, Facchini, Stefano, et al., incl. **N.T. Kurtovic**, (2021), ApJL, 916, L2.  
“A Circumplanetary Disk around PDS70c”
- 4) P. Pinilla, **N.T. Kurtovic**, M. Benisty, et al., (2021), A&A, 649, A122.  
“A bright inner disk and structures in the transition disk around the very low-mass star CIDA 1”
- 3) L. Wölfer, S. Facchini, **N.T. Kurtovic**, et al., (2021), A&A, 648, A19.  
“A highly non-Keplerian protoplanetary disc. Spiral structure in the gas disc of CQ Tau”
- 2) L.A. Cieza, C. González-Ruilova, A.S. Hales, et al., incl **N.T. Kurtovic**, (2021), MNRAS, 501, 2934.  
“The Ophiuchus Disc Survey Employing ALMA (ODISEA) - III. The evolution of substructures in massive discs at 3-5 au resolution”
- 1) Jenkins, James S., Díaz, Matías R., **Kurtovic, Nicolás T.**, et al., (2020), NatAs, 4, 1148.  
“An ultrahot Neptune in the Neptune desert”

**Additional refereed papers:** (35 accepted)

35) S. L. Grant, M. Temmink, E. F., van Dishoeck, et al., incl. **N. T. Kurtovic**, (2025), arXiv e-prints, arXiv:2508.04692.

“A transition from H<sub>2</sub>O to C<sub>2</sub>H<sub>2</sub> dominated spectra with decreasing stellar luminosity.”

34) J. M. Miley, L. M. Pérez, C. Agurto-Gangas, A. Sierra, L. Trapman, M. Vioque, **N. T. Kurtovic**, et al., (2025), ApJ, 989, 11.

“The ALMA Survey of Gas Evolution of PROtoplanetary Disks (AGE-PRO). XII. Extreme Millimeter Variability Detected in a Class II Disk”

33) R. Anania, G. Rosotti, M. Gárate, et al., incl. **N. T. Kurtovic**, (2025), ApJ, 989, 8.

“The ALMA Survey of Gas Evolution of PROtoplanetary Disks (AGE-PRO). VIII. The Impact of External Photoevaporation on Disk Masses and Radii in Upper Scorpius”

32) B. Tabone, G. Rosotti, L. Trapman, et al., incl. **N. T. Kurtovic**, (2025), ApJ, 989, 7.

“The ALMA Survey of Gas Evolution of PROtoplanetary Disks (AGE-PRO). VII. Testing Accretion Mechanisms from Disk Population Synthesis”

31) L. Trapman, K. Zhang, G. Rosotti, et al., incl. **N. T. Kurtovic**, (2025), ApJ, 989, 5.

“The ALMA Survey of Gas Evolution of PROtoplanetary Disks (AGE-PRO). V. Protoplanetary Gas Disk Masses”

30) C. Agurto-Gangas, L. M. Pérez, A. Sierra, et al., incl. **N. T. Kurtovic**, (2025), ApJ, 989, 4.

“The ALMA Survey of Gas Evolution of PROtoplanetary Disks (AGE-PRO). IV. Dust and Gas Disk Properties in the Upper Scorpius Star-forming Region”

29) D. Deng, M. Vioque, I. Pascucci, et al., incl. **N. T. Kurtovic**, (2025), ApJ, 989, 3.

“The Astrophysical Journal, 989, 3, The ALMA Survey of Gas Evolution of PROtoplanetary Disks (AGE-PRO). III. Dust and Gas Disk Properties in the Lupus Star-forming Region”

28) D. Ruiz-Rodríguez, C. González-Ruilova, L. Cieza, et al., incl. **N. T. Kurtovic** (2025), ApJ, 989, 2.

“The ALMA Survey of Gas Evolution of PROtoplanetary Disks (AGE-PRO). II. Dust and Gas Disk Properties in the Ophiuchus Star-forming Region ”

27) A. Sierra, M. Benisty, P. Pinilla, et al., incl. **N. T. Kurtovic**, (2025), MNRAS, 541, 3101.

“Leaky dust trap in the PDS 70 disc revealed by ALMA Band 9 observations”

26) D. Fasano, M. Benisty, P. Curone, et al., incl. **N. T. Kurtovic**, (2025), A&A, 699, A373.

“Inner disc and circumplanetary material in the PDS 70 system: Insights from multi-epoch, multi-frequency ALMA observations”

25) M. Temmink, A. Sellek, D., Gasman, et al., incl. **N. T., Kurtovic**, (2025), A&A, 699, A134.

“MINDS: Water reservoirs of compact planet-forming dust discs: A diversity of H<sub>2</sub>O distributions”

- 24) D. Gasman, M. Temmink, E. F. van Dishoeck, **N. T. Kurtovic**, (2025), A&A, 694, A147.  
“MINDS: The influence of outer dust disc structure on the volatile delivery to the inner disc”
- 23) K. R. Schwarz, M. Samland, G. Olofsson, et al., incl. **N. T. Kurtovic**, (2025), ApJ, 980, 148.  
“MINDS. JWST-MIRI Observations of a Spatially Resolved Atomic Jet and Polychromatic Molecular Wind toward SY Cha”
- 22) S. Jorquera, M. Bonnefoy, L. M. Pérez, et al., incl. **N. T. Kurtovic**, (2024), ApJ, 976, 42.  
“VLT/MUSE Detection of Accretion/Ejection Associated with the Close Stellar Companion in the HT Lup System”
- 21) A. Sierra, L. M. Pérez, C. Agurto-Gangas, et al., incl. **N. T. Kurtovic**, (2024), ApJ, 974, 102.  
“Hints of Planet Formation Signatures in a Large-cavity Disk Studied in the AGE-PRO ALMA Large Program”
- 20) M. Temmink, E. F. van Dishoeck, D. Gasman, et al., incl. **N. T. Kurtovic**, (2024), A&A, 689, A330.  
“MINDS: The DR Tau disk: II. Probing the hot and cold H<sub>2</sub>O reservoirs in the JWST-MIRI spectrum”
- 19) J. Kanwar, I. Kamp, H. Jang, et al., incl. **N. T. Kurtovic**, (2024), A&A, 689, A231.  
“MINDS. Hydrocarbons detected by JWST/MIRI in the inner disk of Sz28 consistent with a high C/O gas-phase chemistry”
- 18) A. S. Carvalho, L. M. Pérez, A. Sierra, et al., incl. **N. T. Kurtovic**, (2024), ApJ, 971, 129.  
“A Dust-trapping Ring in the Planet-hosting Disk of Elias 2-24”
- 17) E. Nasedkin, P. Mollière, S. Lacour, et al., incl. **N. T. Kurtovic**, (2024), A&A, 687, A298.  
“Four-of-a-kind? Comprehensive atmospheric characterisation of the HR 8799 planets with VLTI/GRAVITY”
- 16) C. Ginski, A. Garufi, M. Benisty, et al., incl. **N. T. Kurtovic**, (2024), A&A, 685, A52.  
“The SPHERE view of the Chamaeleon I star-forming region. The full census of planet-forming disks with GTO and DESTINYS programs”
- 15) M. Gárate, T. Birnstiel, P. Pinilla, et al., incl. **N. T. Kurtovic** (2023), A&A, 679, A15.  
“Millimeter emission in photoevaporating disks is determined by early substructures”
- 14) Curone, P., Izquierdo, A. F., Testi, L., Lodato, G., Facchini, S., Natta, A., Pinilla, P., **Kurtovic, Nicolás T.**, Toci, C., Benisty, M., Tazzari, M., Borsa, F., Lombardi, M., Manara, C. F., Sanchis, E., and Ricci, L. (2022), A&A, 665, A25.  
“A giant planet shaping the disk around the very low-mass star CIDA 1”
- 13) J. Bae, R. Teague, S. M. Andrews, et al., incl. **N. T. Kurtovic**, (2022), ApJL, 934, L20.  
“Molecules with ALMA at Planet-forming Scales (MAPS): A Circumplanetary Disk Candidate

in Molecular-line Emission in the AS 209 Disk”

12) I. Czekala, R. A. Loomis, R. Teague, et al., incl. **N. T. Kurtovic**, (2021), ApJS, 257, 2.  
“Molecules with ALMA at Planet-forming Scales (MAPS). II. CLEAN Strategies for Synthesizing Images of Molecular Line Emission in Protoplanetary Disks”

11) K. I. Öberg, V. Guzmán, C. Walsh, et al., incl. **N. T. Kurtovic**, (2021), ApJS, 257, 1.  
“Molecules with ALMA at Planet-forming Scales (MAPS). I. Program Overview and Highlights”

10) S. M. Andrews, W. Elder, S. Zhang, J. Huang, M. Benisty, **N. T. Kurtovic**, et al., (2021), ApJ, 916, 51.

“Limits on Millimeter Continuum Emission from Circumplanetary Material in the DSHARP Disks”

9) S. Jorquera, L. M. Pérez, G. Chauvin, et al., incl. **N. T. Kurtovic**, (2021), AJ, 161, 146.  
“A Search for Companions via Direct Imaging in the DSHARP Planet-forming Disks”

8) R. C. Challener, J. Harrington, J. S. Jenkins, **N. T., Kurtovic**, et al., (2021), PSJ, 2, 9.  
“Identification and Mitigation of a Vibrational Telescope Systematic with Application to Spitzer”

7) L. D. Nielsen, D. Gandolfi, D. J. Armstrong, et al., incl. **N. T. Kurtovic**, (2020), MNRAS, 492, 5399.

“Mass determinations of the three mini-Neptunes transiting TOI-125”

6) R. Cloutier, N. Astudillo-Defru, X. Bonfils, et al., incl. **N. T. Kurtovic**, (2019), A&A, 629, A111.

“Characterization of the L 98-59 multi-planetary system with HARPS. Mass characterization of a hot super-Earth, a sub-Neptune, and a mass upper limit on the third planet”

5) J. S., Jenkins, J. Harrington, R. C. Challener, **N. T. Kurtovic**, et al., (2019), MNRAS, 487, 268.

“Proxima Centauri b is not a transiting exoplanet”

4) M. G. Ubeira-Gabellini, A. Miotello, S. Facchini, et al., incl. **N. T. Kurtovic**, (2019), MNRAS, 486, 4638.

“A dust and gas cavity in the disc around CQ Tau revealed by ALMA”

3) L. M. Pérez, M. Benisty, S. M. Andrews, et al., incl. **N. T. Kurtovic**, (2018), ApJL, 869, L50.

“The Disk Substructures at High Angular Resolution Project (DSHARP). X. Multiple Rings, a Misaligned Inner Disk, and a Bright Arc in the Disk around the T Tauri star HD 143006”

2) S. M. Andrews, J. Huang, L. M. Pérez, A. Isella, C. P. Dullemond, **N. T. Kurtovic**, et al., (2018), ApJL, 869, L41.

“The Disk Substructures at High Angular Resolution Project (DSHARP). I. Motivation, Sample, Calibration, and Overview”

1) C. P. Dullemond, T. Birnstiel, J. Huang, **N. T. Kurtovic**, et al., (2018), ApJL, 869, L46.  
“The Disk Substructures at High Angular Resolution Project (DSHARP). VI. Dust Trapping

in Thin-ringed Protoplanetary Disks”