

Darío González Picos

PhD Candidate, Leiden Observatory, Leiden University, The Netherlands

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PhD candidate in exoplanet atmospheres, focusing on high-resolution spectroscopy and atmospheric characterization of exoplanets and host stars.

Experienced in observational astronomy, data reduction, and spectral analysis of medium- to high-resolution spectroscopic data from ground-based telescopes and JWST.

As of 2026-06-11, part of 15 refereed papers with 206 total citations; a complete listing can be found in my [ADS](#) or [ORCID](#).

Experience

Leiden Observatory, Leiden University, The Netherlands

2023 – present PhD Candidate

Researching exoplanet atmospheres using high-resolution spectroscopy, focusing on linking formation pathways and atmospheric composition of Super-Jupiters via the CO isotopologue ratio. Advisor: Prof. Dr. I.A.G Snellen.

Leiden University, The Netherlands

Feb 2022 – present Student Teaching Assistant

Tutored problem sessions of Master's course Star and Planet Formation, Bachelor's course Radiative Processes in Astrophysics.

Isaac Newton Group of Telescopes (ING), La Palma, Spain

Sep 2020 – Sep 2021 Student Support Astronomer

Support Astronomer and Telescope Operator at the 2.5-m INT at Observatorio Roque de Los Muchachos (+40 observing nights).

Education

PhD 2023–2027 (expected), Leiden Observatory, Leiden University, The Netherlands. Advisor: Snellen

MSc 2021–2023, Astronomy, Leiden University, The Netherlands

BSc 2016–2020, Physics, University of Barcelona, Spain

Selected Publications

- 7 **González Picos, D.**; Snellen, I. A. G.; Landman, R.; de Regt, S.; Grasser, N.; et al., 2026, [The carbon isotope ratio of \$\beta\$ Pic b with high-resolution spectroscopy](#), *Astronomy and Astrophysics* (accepted; arXiv:2606.12401)
- 6 **González Picos, D.**; van der Post, T.; de Regt, S.; Ruffio, J.-B.; Grasser, N.; & Snellen, I.A.G., 2026, [JWST high-contrast spectroscopy with speckle modelling: Atmospheric retrievals of the T-dwarf companion HD 19467 B](#), *Astronomy and Astrophysics* (arXiv:2605.02769)
- 5 **González Picos, Darío**; Snellen, Ignas; & de Regt, Sam, 2025, [Chemical evolution imprints in the rare isotopes of nearby M dwarfs](#), *Nature Astronomy*, 9, 1692 (arXiv:2508.18424) [5 citations]
- 4 **González Picos, D.**; de Regt, S.; Gandhi, S.; Grasser, N.; & Snellen, I. A. G., 2025, [Disentangling disc and atmospheric signatures of young brown dwarfs with JWST/NIRSpec](#), *Astronomy and Astrophysics*, 703 (arXiv:2509.11694)
- 3 **González Picos, D.**; Snellen, I. A. G.; de Regt, S.; Landman, R.; et al., 2025, [The ESO SupJup Survey: IV. Unveiling the carbon isotope ratio of GQ Lup B and its host star](#), *Astronomy and Astrophysics*, 693 (arXiv:2501.01789) [16 citations]
- 2 Zhang, Yapeng; **González Picos, Darío**; de Regt, Sam; Snellen, Ignas A. G.; et al., 2024, [The ESO SupJup Survey. III. Confirmation of \$^{13}\text{CO}\$ in YSES 1 b and Atmospheric Detection of YSES 1 c with CRIRES⁺](#), *The Astronomical Journal*, 168, 246 (arXiv:2409.16660) [33 citations]
- 1 **González Picos, D.**; Snellen, I. A. G.; de Regt, S.; Landman, R.; et al., 2024, [The ESO SupJup Survey: II. The \$^{12}\text{C}/^{13}\text{C}\$ isotope ratios of three young brown dwarfs with CRIRES⁺](#), *Astronomy and Astrophysics*, 689 (arXiv:2407.07678) [22 citations]

Talks

Invited talk — CNOPS26, Sexten, Italy: C and O isotopic ratios in planets and host stars. [\[slides\]](#)

Contributed talk — AAS247, Phoenix, USA: Chemical evolution imprints in the rare isotopes of nearby M dwarfs.

[\[abstract\]](#)

Contributed talk — ExoELT2025, Garching ESO, Germany: Storm chasers: Probing β Pic b's weather with high-resolution spectroscopy.

Flash talk — EAS 2025, Cork, Ireland: Rare isotopes in nearby M dwarfs probe galactic chemical evolution.

Contributed talk — ESA Holland-Area Exoplanet Science Meeting, ESA/ESTEC, The Netherlands: JWST/NIRSpec's full 0.97–5.27 μm view of young brown dwarfs.

Contributed talk — STRW Science Day, Leiden Observatory, The Netherlands: Carbon isotope ratios in exoplanet and brown dwarf atmospheres.

Flash talk — Two HorSeS, Berlin, Germany: Atmospheric Characterization and Isotopic Measurements of Directly-Imaged Planets and Brown Dwarfs with VLT/CRIRES⁺.

Flash talk — Thinkshop 2022 HRS for Exoplanet Atmospheres, Potsdam, Germany: Cross-correlation of exoplanet atmospheres at high-resolution.