

# Darío González Picos

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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/NIRSpec.

As of 2026-03-20<sup>1</sup>, part of 13 refereed papers with 162 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

- 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](https://arxiv.org/abs/2508.18424)) [2 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](https://arxiv.org/abs/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](https://arxiv.org/abs/2501.01789)) [13 citations]
- 2 Zhang, Yapeng; **González Picos, Darío**; de Regt, Sam; Snellen, Ignas A. G.; *et al.*, 2024, *The ESO SupJup Survey. III. Confirmation of <sup>13</sup>CO in YSES 1 b and Atmospheric Detection of YSES 1 c with CRIRES<sup>+</sup>*, *The Astronomical Journal*, **168**, 246 ([arXiv:2409.16660](https://arxiv.org/abs/2409.16660)) [25 citations]
- 1 **González Picos, D.**; Snellen, I. A. G.; de Regt, S.; Landman, R.; *et al.*, 2024, *The ESO SupJup Survey: II. The <sup>12</sup>C/<sup>13</sup>C isotope ratios of three young brown dwarfs with CRIRES<sup>+</sup>*, *Astronomy and Astrophysics*, **689**

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<sup>1</sup>Publication data collected from [NASA Astrophysics Data System](#)

([arXiv:2407.07678](https://arxiv.org/abs/2407.07678)) [17 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  $\beta$  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  $\mu$ m 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/CRILES+.*

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