

# Martje M. Slob

Leiden Observatory | [slob@strw.leidenuniv.nl](mailto:slob@strw.leidenuniv.nl) | [home.strw.leidenuniv.nl/slob](http://home.strw.leidenuniv.nl/slob) | [ADS Publication List](#)

## Education

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<b>Leiden Observatory</b> , <i>PhD, Astronomy</i>	Expected Aug. 2027
Supervisor: Prof. <a href="#">Mariska Kriek</a> .	
<b>Leiden University</b> <i>MSc. Astronomy Research, (cum laude)</i>	Aug. 2023
Supervisors: dr. <a href="#">Joseph Callingham</a> & Prof. <a href="#">Huub Röttgering</a> (1st MSc. thesis), Prof. <a href="#">Mariska Kriek</a> (2nd MSc. thesis)	
<b>Leiden University</b> <i>BSc. Astronomy</i>	Aug. 2021
Supervisor: Prof. <a href="#">Ignas Snellen</a>	

## Research interests

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The formation and evolution of massive galaxies, stellar kinematics, dynamical modelling, stellar populations, star formation quenching, the stellar IMF, optical/NIR spectroscopy

## Publications

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10 refereed publications (3(+1 submitted) first-author, 3 second-author), 160 citations (June 2026). [ADS](#)

### First Author:

- Slob., M.**, Kriek, M., Cheng, C.M., et al. “*Jeans Dynamical Constraints on the IMF in Massive Quiescent Galaxies at  $z \sim 0.7$  from JWST/NIRSpec*”. submitted to A&A.
- Slob., M.**, Kriek, M., de Graaff, A., et al. “*Fast Rotators at Cosmic Noon: Stellar Kinematics for 15 Quiescent Galaxies from JWST-SUSPENSE*”. [A&A](#), 702, A110.
- Slob, M.**, Kriek, M., Beverage, A.G., et al. “*The JWST-SUSPENSE Ultradeep Spectroscopic Program: Survey Overview and Star Formation Histories of Quiescent Galaxies at  $1 < z < 3$* ”. 2024, [ApJ](#), 973, 2, 131.
- Slob, M.**, Callingham, J. R., Röttgering, H. J. A., et al. “*Extragalactic peaked-spectrum radio sources at low frequencies are young radio galaxies*”. 2022, [A&A](#), 668, A186.

### Second Author:

- Cheng, C.M., **Slob, M.**, Kriek, M., et al. *Bottom-heavy initial mass functions reveal hidden mass in early galaxies*. 2026, [Nat. Astronomy](#), in press.
- Cheng, C.M., **Slob, M.**, Kriek, M., et al. “*Building up JWST-SUSPENSE: inside-out quenching at cosmic noon from age, Fe-, and Mg-abundance gradients*”. 2025, [A&A](#), 710, A158.
- Beverage, A.G., **Slob, M.**, Kriek, M., et al. “*Carbon and Iron Deficiencies in Quiescent Galaxies at  $z = 1-3$  from JWST-SUSPENSE: Implications for the Formation Histories of Massive Galaxies*”. [ApJ](#), 979, 2.

### Co-author:

- Cheng, C.M., Kriek, M., Beverage, A.G., **Slob, M.**, et al. “*Ages and metallicities of quiescent galaxies: confronting broad-band (UVJ) colours with stellar absorption lines*”. 2025, [MNRAS](#), 540, 2, 1527.
- Ballieux, F. J., Callingham, J. R., Röttgering, H. J. A., **Slob, M. M.**. “*Comparing extragalactic megahertz-peaked spectrum and gigahertz-peaked spectrum sources*”. [A&A](#), 689, A264.
- Cheng, C.M., Kriek, M., Beverage, A.G., ... incl. **Slob, M.**, et al. “*Age and metal gradients in massive quiescent galaxies at  $0.6 < z < 1.0$ : implications for quenching and assembly histories*”. [MNRAS](#) 532, 3, 3604.

4. Arias, M., Botteon, A., Bassa, C. G., ... incl. **Slob, M.**, et al. “Possible discovery of Calvera’s supernova remnant”. *A&A*, 667, A71, 8.

## Grants

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- Reduced conference fee (150EUR), Sexten, IT, Jul/26.
- Leids Kerkhoven-Bosscha Fonds (LKBF) Grant (480EUR), subsidy number 26.1.056, Jun/26.
- Registration fee waiver (400EUR) for BeyondHubble Conference, Cambridge, UK, Apr/26
- Leids Kerkhoven-Bosscha Fonds (LKBF) Grant (300EUR), subsidy number 25.1.101, Jun/25.
- IAU Grant (450EUR) for Symposium 396, Naples, IT, Jun/25.

## Observing Proposals

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- Co-I: JWST Cycle 5 ([GO-11532](#), PI Cheng; 5.3 hr on NIRCam).
- Co-I: JWST Cycle 5 ([GO-10660](#), PI Eftekhari; 37.9 hr on NIRSpec/MSA).
- Co-I: JWST Cycle 4 ([GO-8317](#), PI Kriek; 7.6 hr on NIRSpec/MSA).
- Co-I: JWST Cycle 3 ([GO-5629](#), PI Kriek; 40.24 hr on NIRSpec/MSA).
- Co-I: ALMA Cycle 11 (2025.1.01338.S.; PI Mancera Piña; 37.5 hr with Bands 3 and 4).

## Technical Experience

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- Developed a custom **Python**-based object-oriented forward-modelling framework for stellar dynamics of JWST/NIRSpec/MSA observations.
- Extensive experience with prospector, GALFIT, JAMPy, ppxf, FSPS, MSAFIT
- Data lead for JWST programs 2110, 5629, and 8317, including **planning** and **reducing JWST NIRSpec** data.
- Experienced with **Git**-based version control and computing through bash shell.
- Conducted ~20 nights of observing at the Isaac Newton Telescope (La Palma, ES).

## Teaching

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### Student Supervision (Leiden Observatory, co-supervised with Prof. Mariska Kriek)

- **Yilu Tong**, 2nd-year MSc. Thesis Sep/25 - Jun/26  
Thesis: “SED Shape as a Tracer of Galaxy Evolution”.
- **Lotte Jansen**, 2nd-year MSc. Thesis Sep/24 - Jun/25  
Thesis: “Hidden in the Light: JWST Insights into Nebular and Stellar Dust in Distant Star-Forming Galaxies”.

### Teaching Assistant

- Astronomy Lab & Observing Project, *BSc course Astronomy*, Leiden Observatory 2021 - 2024
- Origin and Evolution of the Universe, *MSc course Astronomy*, Leiden Observatory 2023 - Present

## Service and Outreach

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- Referee for *Astronomy & Astrophysics* Jan/25 - present

### Committees

- Member, Borrel committee, Leiden Observatory Sep/24-Sep/25
- Member, Inspire Society Committee, Leiden Observatory Oct/23 - present
- Member, Monthly Paper Flash Committee, Leiden Observatory Sep/24-Sep/25

## Outreach

- **Klokhuis Question Day**: Volunteer scientist answering children’s astronomy questions Jun/26
- **Alumni Day “De Leidsche Flesch”**: Speaker for public talk Aug/25
- **Interview for Dutch national news *EenVandaag***, Guest expert on solar eclipse Apr/24
- **Inspire Society**: Volunteer for bi-annual 5-week lesson program at primary schools Oct/23 - present
- **Student Ambassador**, Leiden University: Responsible for enthusing and informing prospective Astronomy BSc Students Sep/20 - Aug/23

## Talks

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### Invited

- DAWN Cake Talk. *Copenhagen, DK*. Oct/25
- High- $z$  kinematics workshop. *Lund, SE* Oct/25
- RUBIES and Friends Meeting. *Bergen, NL* May/25
- Lorentz Workshop: Big Galaxies, Big Problems. *Leiden, NL* Apr/25
- ASTRON Lunch talk. *Dwingeloo, NL* Dec/22

### Contributed

- How stars move around & what they tell us about galaxies masses, formation & evolution. From the Milky Way to Giant Elliptical Galaxies *Sexten, IT* Jul/26
- BeyondHubble: Revisiting the Hubble Sequence Across Cosmic Time. *Cambridge, UK* Apr/26
- NOVA NW1 Authumn Meeting. *Leiden, NL* Dec/25
- EAS Annual Meeting. *Cork, IE* Jun/25
- Dancing in the Dark: When Galaxies Shape Galaxies. *Sexten, IT* Jun/25
- Massive Galaxies across the Universe, IAU Symposium 396. *Naples, IT* Jun/25
- Observing and Simulating Galaxy Evolution in the Era of JWST. *Ascona, CH* Aug/24
- Netherlands Astronomy Conference (NAC) 2024. *Egmond, NL* May/24

### Posters

- Extreme galaxies in their extreme environments at extremely early epochs. *Reykjavik, IS* Apr/24