LENNART VAN SLUIJS

Postdoctoral researcher at the University of Michigan (Oct 2023 - now),
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EDUCATION

DPhil in Astrophysics	Oct 2019 - Sep 2019
University of Oxford, *thesis working title: "Characterisation of exoplanet atmospheres using high dispersion spectroscopy."*	
MSc and BSc in Astronomy	Sep 2013 - Feb 2019
Leiden University	

RESEARCH INTERESTS

High-resolution infrared spectroscopy − Characterisation of exoplanet atmospheres − Detection of transiting exoplanets − Fundamental properties of hot Jupiters − Exoplanet population studies − Planet formation

RESEARCH EXPERIENCE

Postdoc (research group: Emily Rauscher)	Oct 2023 - now
University of Michigan, *"Linking high-resolution observations to complex 3D exoplanet atmospheric models."*	
DPhil (advisor: Jayne Birkby)	Oct 2019 - Oct 2023
University of Oxford with time spent at the University of Amsterdam, *"Characterisation of exoplanet atmospheres using high dispersion spectroscopy."*	
Second master research project (advisor: Prof Matthew Kenworthy)	Sep 2018 – Feb 2019
Leiden University, *"Spectroscopic transit search: a self-calibrating method for detecting planets around bright stars" (published in A&A)*	
First master research project (advisor: Dr Vincent Van Eylen, in the group of Prof Ignas Snellen)	Sep 2016 - Aug 2017
Leiden University, *"The occurrence of substellar bodies around white dwarfs using K2" (published in MNRAS)*	
Bachelor research project (advisor: Prof Benne Holwerda, co-advised by Prof Matthew Kenworthy)	Feb 2016 - May 2017
Leiden University, *"Feasibility of the debris ring transit method for the solar-like star HD 107146 by an occulted galaxy" (published in MNRAS)*	

RESEARCH SKILLS

- **Coding**: development of an end-to-end data reduction pipeline from raw detector images to detections of species in the exoplanet atmosphere using mainly Bash and Python. Designed my own webpage using HTML, CSS and JavaScript. Processing data on a remote cluster. Adapting GPU-accelerated parallelised Python code. A lot of my codes are publicly available on my Github webpage.
- **Academic writing**: written and published multiple peer-reviewed and first-authored papers in academic journals.
- **Presenting**: got accepted, presented posters and contributed talks at scientific conferences. Volunteered to present my research within the department at various talks. Regular attendance of journal clubs and presented scientific papers from others.
- **Project management**: successful fulfilment of European Research Grant objectives within the set timeline.

- **Data analysis and reduction**: experience analysing high-resolution spectra. Processing of raw data.
- **Observing and proposals**: On-site observing experience with the Isaac Newton Telescope (3 nights, 2014) and WINERED/Magellan (3 nights, 2023). Co-Investigator on several proposals for observing time: submitted ESO Phase 1 Proposal 108.22EF, submitted ESO Phase 1 Proposal 108.22PW, accepted ESO P109 Proposal 109.23G2 and submitted SO Proposal (ID: 5103.C-0829).

TEACHING EXPERIENCE

- Examination paper checking assistant at the University of Oxford, Oxford, United Kingdom (2021)
- Teaching assistant in the Astronomical Interferometry course at the University of Amsterdam, Amsterdam, The Netherlands (2020)
- Teaching assistant at Leiden University, Leiden, The Netherlands (2016-2019)
- Exam crash-course tutor at "Stichting Studiebegeleiding Leiden", Leiden, The Netherlands (2013-2019)

OUTREACH EXPERIENCE

- Volunteer at open day and outreach events, Oxford, United Kingdom (2021-2022)
- Tour guide at the Old Observatory, Leiden, The Netherlands (2016-2019)
- Board member of astronomy student association L.A.D. 'F. Kaiser', Leiden, The Netherlands (2016-2017)
- Manager of public planetarium and observatory, Königsleiten, Austria (2016)
- Volunteer at public observatory, Middelburg, The Netherlands (2010-2012)

ACADEMIC SERVICE

- Co-founder and chair of the Oxford-Warwick High-Resolution Discussion group, Oxford, United Kingdom (2020-now)
- Student member of the educational committee, Leiden, The Netherlands (2014-2016)

CONTRIBUTED TALKS AND POSTERS

- AAS 241 Meeting, Seattle, United Stated, contributed thesis talk (Jan 2023)
- UKExom, Edinburgh, United Kingdom, contributed talk (Sep 2022)
- Potsdam Thinkshop, Potsdam, Germany, contributed talk (Sep 2022)
- Early Career Showcase, Oxford, United Kingdom, contributed talk (Jun 2022)
- Exoplanets IV, 2022, Las Vegas, United States, contributed talk (May 2022)
- EAS Annual Meeting, 2021, online, poster (July 2021)
- STSci Spring Symposium, online, poster (Apr 2021)
- UKExom, poster, online, (Apr 2021)
- Exoplanets III, online, poster (Jul 2020)
- Accepted into 3-day Summer School program for Planetary Science and Exploration in East Asia, Tokyo, Japan (May 2018)

FIRST-AUTHORED PUBLICATIONS

Lennart van Sluijs; Jayne L. Birkby; Joshua Lothringer; Elspeth K. H. Lee; Ian J. M. Crossfield; Vivien Parmentier; Matteo Brogi; Craig Kulesa; Don McCarthy; David Charbonneau   2023
"Carbon monoxide emission lines reveal an inverted atmosphere in the ultra hot Jupiter WASP-33 b and indicate an eastward hot spot"
accepted by MNRAS, 10.1093/mnras/stad1103

Lennart van Sluijs, Ernst de Mooij; Matthew Kenworthy; Maggie Celeste; Matthew J. Hooton; Eric E. Mamajek; Brigitta Sipöcz; Ignas. A. G. Snellen; Andrew R. Ridden-Harper and Paul A. Wilson   2019
"Spectroscopic transit search: a self-calibrating method for detecting planets around bright stars"
published in A&A, 626, A97, https://doi.org/10.1051/0004-6361/201935066

L. van Sluijs; D. A. J. H. Vaendel; B. W. Holwerda; M. A. Kenworthy; G. Schneider   2018
"Feasibility of the debris ring transit method for the solar-like star HD 107146 by an occulted galaxy"
Monthly Notices of the Royal Astronomical Society, Volume 480, Issue 1, October 2018, Pages 914–926, https://doi.org/10.1093/mnras/sty1829

L van Sluijs; V Van Eylen   2018
"The occurrence of planets and other substellar bodies around white dwarfs using K2"
Monthly Notices of the Royal Astronomical Society, Volume 474, Issue 4, March 2018, Pages 4603–4611, https://doi.org/10.1093/mnras/stx306868