

BIBIANA PRINOTH

PhD student in Astronomy & Astrophysics
at Lund Observatory



bibi@astro.lu.se



bprinoth.github.io



@bibianaprinoth

EDUCATION



2020 - present
PhD student in
Astronomy & Astrophysics
Lund University, Sweden

2018 - 2020
Master of Science in Physics
ETH Zürich, Switzerland

2015 - 2018
Bachelor of Science in Physics
ETH Zürich, Switzerland

AWARDS & GRANTS



2022
Seminar Grant (SEK 50,000)
The Royal Physiographic Society of Lund,
Gunnar and Gunnell Källén's Memorial Fund

2021
Research Grant (SEK 100,000)
The Royal Physiographic Society of Lund,
The Fund of the Walter Gyllenberg
Foundation

2020
Research Grant (SEK 105,000)
The Royal Physiographic Society of Lund,
The Fund of the Walter Gyllenberg
Foundation

2020
VMP Assistentenaward: Award for
excellent teaching
Association of mathematics and physics
students at ETH Zurich

RESEARCH INTERESTS

I study the atmospheres of ultra-hot exoplanets using ground-based and hopefully soon also space-based observatories.

PUBLICATIONS

- **Titanium Oxide, Metals and Chemical Inhomogeneity in the Atmosphere of the Exoplanet WASP-189 b**
Bibiana Prinoth, H. Jens Hoeijmakers, Daniel Kitzmann et al.
Nature Astronomy, 6, 449–457 (2022)
<https://doi.org/10.1038/s41550-021-01581-z>
- **3D Radiative Transfer for Exoplanet Atmospheres. gCMCRT: A GPU-accelerated MCRT Code**
Elspeth K. H. Lee, Joost P. Wardenier, **Bibiana Prinoth** et al.
ApJ, 929, 180 (2022)
<https://iopscience.iop.org/article/10.3847/1538-4357/ac61d6/meta>
- **The Mantis Network II: Examining the 3D high-resolution observable properties of the UHJs WASP-121b and WASP-189b through GCM modelling**
Elspeth K. H. Lee, **Bibiana Prinoth**, Daniel Kitzmann et al.
MNRAS, 517, 1 (2022),
<https://doi.org/10.1093/mnras/stac2246>
- **The Mantis Network I: A standard grid of templates and masks for cross-correlation analyses of ultra-hot Jupiter transmission spectra**
Daniel Kitzmann, Jens H. Hoeijmakers, Simon L. Grimm, Nicholas W. Borsato, Anna Lueber, **Bibiana Prinoth**
accepted for publication in A&A
<https://arxiv.org/abs/2112.11380>

SEMINARS, TALKS & PRESENTATIONS

- **What else is there to see? Revisiting the transmission spectrum of WASP-189 b**
Astronomdagarna, Oct 4-6, 2022 (contributed talk)
<https://www.chalmers.se/en/conference/astronomdagarna2022/Pages/default.aspx>
- **Titanium oxide and chemical inhomogeneity in the atmosphere of WASP-189 b**
EAS 2022, Jun 27 - Jul 2, 2022 (poster presentation)
- **Titanium oxide and chemical inhomogeneity in the atmosphere of WASP-189 b**
Exoplanets IV, May 1-6, 2022 (poster presentation)
- **Revealing dynamics, atmospheric stratification and chemical inhomogeneities in the atmosphere of WASP-189 b**
UU Astronomy/Space physics seminar (invited seminar)
- **Revealing Dynamics, Three-Dimensional Stratification, and Chemical Inhomogeneities in the Atmosphere of an Ultra-Hot Jupiter**
Astronomdagarna, Oct 22-23, 2021 (contributed talk)
<https://indico.cern.ch/event/1016890/contributions/4498334/>
- **Interpreting Detections of Metals in the Transmission Spectra of Ultra-hot Jupiters**
ESO Atmospheres Conference & Workshop, Aug 23-27, 2021 (contributed talk)
<https://eso.org/sci/meetings/2021/Atmo2021/program/Prinoth.html>

BIBIANA PRINOTH

PhD student in Astronomy & Astrophysics
at Lund Observatory



bibi@astro.lu.se



bprinoth.github.io



@bibianaprinoth

OBSERVATIONS ————— EXPERIENCE / PROPOSALS

ESPRESSO @ the Very Large Telescope (VLT)

Transit observation in designated Visitor Mode (dVM) during SC107, PI: Prinoth, PID: 107.22QF

FIES @ the Nordic Optical Telescope (NOT)

Two transit observation in Visitor Mode (VM) during semester 21B, PI: Johansen

FIES @ the Nordic Optical Telescope (NOT)

Two transit observation in designated Visitor Mode (dVM) during semester 22B, PI: Johansen, PID:

HRS @ the Southern African Large Telescope (SALT)

Transit in Service Mode (SM) during semester 22B, PI: Prinoth

OUTREACH & SCIENCE COMMUNICATION —————

Skype A Scientist

Talks to several school classes

<https://www.skypeascientist.com/>

The Interplanetary Podcast

Guest on a podcast, talking about Ultra-hot Jupiters

<https://www.interplanetary.org.uk/>

The Meridian

Field reporter on the podcast of Lund Observatory during season 2

<https://www.astro.lu.se/TheMeridian>

Outreach Talk @ Polhemskola, Lund

Invited talk at a high school in Lund

NMT Days @ Lund University

Lecture during the NMT (naturvetenskap, medicin, teknik) days at Lund University

<https://www.nmt.lu.se/app/?nav>

WORK EXPERIENCE

- **Social Media Internship at the Europlanet Science Congress** (Sep 18-23, 2022)
Europlanet Science Congress in Granada, Spain
- **Teaching assistant in ASTB01 - Introduction to Astrophysics**
(Sep 2022 - Jan 2023)
Department for Astronomy and Theoretical Physics, Lund University
- **Teaching assistant in FYSB21 - Mathematical Methods for Waves, Vibrations and Diffusion** (Apr 2021 - Jul 2021, Nov 2021 - Jan 2022, Apr 2022 - Jul 2022, upcoming: Nov 2022 - Jan 2023)
Department for Astronomy and Theoretical Physics, Lund University
- **Teaching assistant in ASTC01 - Astrobiology** (Nov 2020 - Jan 2021, Nov 2021 - Jan 2022, upcoming: Nov 2022 - Jan 2023)
Department for Astronomy and Theoretical Physics, Lund University
- **Teaching assistant in Physics II** (Feb 2020 - Aug 2020)
Department for Particle Physics and Astrophysics, ETH Zürich
- **Teaching assistant in Physics I & II** (Sep 2018 - Jan 2020)
Department for Particle Physics and Astrophysics, ETH Zürich
- **Substitute Teacher in Mathematics** (02/15/16 - 02/19/16, 09/21/15 - 09/25/15)
Kantonsschule Sargans (Gymnasium), Switzerland

VOLUNTARY WORK & STUDENT REPRESENTATION

- **Founding Member of SENECA — The Swedish Network for Early Career Astronomers** (Sep 2022 - present)
<https://bprinoth.github.io/seneca/>
- **NDR Working Committee Member** (Jul 2022 - present)
Naturvetenskapliga Doktorandrådet (NDR)
- **NDR Chair** (Jul 2021 - Jun 2022)
Naturvetenskapliga Doktorandrådet (NDR)
- **PhD representative @ Nämnden för utbildning på forskarnivå (Research Education Board)** (Jan 2021 - present)
Naturvetenskapliga Doktorandrådet (NDR)
- **Co-Secretary General of IDEALiStiC** (Feb 2018 - Oct 2020)
IDEA League Students in Conference
- **President of the Council for Student Associations** (Sep 2018 - Feb 2019)
Verband der Studierenden an der ETH Zürich
- **Board member for communication at VSETH** (Sep 2017 - Mar 2018)
Verband der Studierenden an der ETH Zürich
- **President of VMP** (Oct 2016 - Oct 2017)
Verein der Mathematik- und Physikstudierenden an der ETH Zürich