

# Jonah Daniël Wagenveld

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🌐 JonahDW 🌐 <https://www3.mpifr-bonn.mpg.de/staff/wagenveld/>

## Education

Nov 2019 - Present	<b>Ph.D. Astronomy</b> <i>Testing large scale cosmology with MeerKAT</i> Supervisors: Prof. Dr. Michael Kramer, Dr. Hans-Rainer Klöckner	MAX-PLANCK INSTITUT FÜR RADIOASTRONOMIE
Sep 2017 - Aug 2019	<b>M.Sc. Astronomy Research</b> First project: <i>Bayesian methods of high redshift quasar selection in the LOFAR HETDEX field</i> Supervisors: Prof. Dr. Huub Röttgering, Dr. Kenneth Duncan  Second project: <i>Weak lensing power spectrum inference using Bayesian Hierarchical modeling with KiDS</i> Supervisor: Prof. Dr. Koen Kuijken  Honours: cum laude	LEIDEN UNIVERSITY
Sep 2014 - Aug 2017	<b>B.Sc. Astronomy</b> <i>Exploratory analysis of the Sz91 transition disk</i> Supervisor: Prof. Dr. Michiel Hogerheijde Thesis work carried out together with fellow student Christiaan van Buchem	LEIDEN UNIVERSITY

## Professional experience

Nov 2019 - Present	<b>Doctoral researcher</b>	MAX-PLANCK INSTITUT FÜR RADIOASTRONOMIE
SS 2020 - WS 2021	<b>Teaching assistant</b> Optical Astronomy Lab course (Master's, English, two semesters)	UNIVERSITY OF BONN
Apr 2018 - Okt 2019	<b>Custodian</b> Overseeing the visitors' centre at the Old Observatory in Leiden greeting guests and giving two short tours per day	OLD OBSERVATORY LEIDEN

## International collaborations

Nov 2019 - Present	<b>Associate member</b> Under student project: <i>Testing large scale cosmology with MeerKAT</i>	MEERKAT ABSORPTION LINE SURVEY (MALS)
Jan 2023 - Present	<b>co-Chair SWG-3</b> co-Chair of Science Working Group (SWG)-3: Radio continuum and polarization science	MEERKAT ABSORPTION LINE SURVEY (MALS)

## Service to the community

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March 2023	<b>Co-organiser Fundi tutorials</b> Co-organised a week of tutorials on various topics for students of the Fundamental Physics in Radio Astronomy group	MAX-PLANCK INSTITUT FÜR RADIOASTRONOMIE
Dec 2021 - Present	<b>PhD-student meetings coordinator</b> Organise a semi-regular meeting between the PhD students and the group director (Prof. Dr. Michael Kramer) of the Fundamental Physics in Radio Astronomy group	MAX-PLANCK INSTITUT FÜR RADIOASTRONOMIE
Apr 2021 - Apr 2022	<b>Student representative</b> MPIfR internal student representative of IMPRS	INTERNATIONAL MAX PLANCK RESEARCH SCHOOL (IMPRS)

## Successful proposals and observing experience

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2020	<b>Co-I</b> Programme: A41TAC_23, 4 hours granted. Title: <i>Follow-up observations on a confirmed <math>z=5.56</math> quasar</i>	TELESCOPIO NAZIONALE GALILEO, LA PALMA
2019	<b>PI</b> Programme: N17, 10 nights (6 dark/4 grey) granted. Title: <i>Spectroscopic confirmation of radio detected high-redshift quasar candidates selected using machine learning techniques</i>	ISAAC NEWTON TELESCOPE, LA PALMA

## Skills

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- Programming languages: **Python**, Bash,  $\text{\LaTeX}$ , SQL
- Software: **CASA**, CARTA, **Topcat**, AstroPy, DS9, Singularity, Docker, IRAF
- Languages: Dutch (native), **English (fluent)**, German (intermediate)

## Conferences and Workshops

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Dec 2023	<b>Contributed talk</b> <i>Uncovering the origin of the cosmic radio dipole with multi-catalogue estimates</i>	SCIENCE AT LOW FREQUENCIES IX, AMSTERDAM, NETHERLANDS
Sep 2023	<b>Invited talk</b> <i>The cosmic radio dipole: Bayesian estimators on new and old radio surveys</i>	BIPAC JOURNAL CLUB, OXFORD UNIVERSITY
Jun 2023	<b>Contributed talk</b> <i>The cosmic radio dipole: Bayesian estimators on new and old radio surveys</i>	KOSMOLOGIETAG, BIELEFELD, GERMANY
Mar 2023	<b>Invited talk</b> <i>Interferometry for dummies</i>	FUNDI TUTORIALS, MAX-PLANCK INSTITUT FÜR RADIOASTRONOMIE
Mar 2023	<b>Contributed talk</b> <i>The cosmic radio dipole: Bayesian estimators on new and old radio surveys</i>	COSMOLOGY ON SAFARI, SOUTH AFRICA
Nov 2022	<b>Contributed talk</b> <i>MALS – Homogeneous continuum catalogues towards a measurement of the cosmic radio dipole</i>	SKA PATHFINDER RADIO CONTINUUM SURVEYS (SPARCS), SOUTH AFRICA
Nov 2021	<b>Contributed talk</b> <i>MALS - The first steps towards a kilo square degrees continuum sky</i>	GERMAN LONG WAVELENGTH CONSORTIUM (GLOW) ASSEMBLY, MUNICH, GERMANY
Mar 2021	<b>Contributed talk</b> <i>MALS - The first steps towards a kilo square degrees deep radio continuum sky</i>	A PRECURSOR VIEW OF THE SKA SKY, ONLINE
Aug 2019	<b>Participant</b>	FIRST LIGHT SUMMER SCHOOL, SAO PAULO, BRAZIL

### As leading author

- 2023 | **J. D. Wagenveld** and H.-R. Klöckner, 2023, *The cosmic radio dipole: Bayesian estimators on new and old radio surveys*, A&A, 673, A113  
**J. D. Wagenveld**, H.-R. Klöckner, N. Gupta, P. Deka, P. Jagannathan, S. Sekhar, S. A. Balashev, E. Boettcher, F. Combes, K. L. Emig, M. Hilton, G. I. G. Józsa, P. Kamphuis, D. Y. Klutse, K. Knowles, J.-K. Krogager, A. Mohapatra, E. Momjian, K. Moodley, S. Muller, P. Petitjean, P. Salas, S. Sikhosana, R. Srianand, 2023, *The MeerKAT Absorption Line Survey: Homogeneous continuum catalogues towards a measurement of the cosmic radio dipole*, A&A, 675, A72
- 2022 | **J. D. Wagenveld**, A. Saxena, K. J. Duncan, H. J. A. Röttgering & M. Zhang, 2022, *Revealing new high-redshift quasar populations through Gaussian mixture model selection*, A&A, 660, A22

### As co-author

- 2023 | Deka et al. (incl. **Wagenveld**), 2023, *MALS discovery of a rare HI 21-cm absorber at  $z \sim 1.35$ : origin of the absorbing gas in powerful AGN*, A&A, submitted  
Deka et al. (incl. **Wagenveld**), 2023, *The MeerKAT Absorption Line Survey (MALS) data release I: Stokes I image catalogs at 1-1.4 GHz*, ApJS, accepted  
Gludemans et al. (incl. **Wagenveld**), 2023, *Plausible association of distant late M dwarfs with low-frequency radio emission*, A&A, 678, A161  
Emig et al. (incl. **Wagenveld**), 2023, *Discovery of Hydrogen Radio Recombination Lines at  $z=0.89$  towards PKS 1830-211*, ApJ, 944, 93
- 2022 | Gupta et al. (incl. **Wagenveld**), 2022, *MALS SALT-NOT survey of MIR-selected powerful radio-bright AGN at  $0 < z < 3.5$* , ApJ, 929, 1  
Maina et al. (incl. **Wagenveld**), 2022, *Mapping HI 21-cm in the Klemola 31 group at  $z = 0.029$ : emission and absorption towards PKS2020-370*, MNRAS, 516, 2  
Gludemans et al. (incl. **Wagenveld**), 2022, *Discovery of 24 radio-bright quasars at  $4.9 \leq z \leq 6.6$  using low-frequency radio observations*, A&A, 668, A27  
Combes et al. (incl. **Wagenveld**), 2022, *PKS1413+135: OH and HI at  $z = 0.247$  with MeerKAT*, A&A, 671, A43
- 2021 | Gupta et al. (incl. **Wagenveld**), 2021, *Blind HI and OH absorption line search: first results with MALS and uGMRT processed using ARTIP*, ApJ, 907, 1  
Kondapally et al. (incl. **Wagenveld**), 2021, *The LOFAR Two Metre Sky Survey: Deep Fields Data Release I – III. Host-galaxy identifications and value added catalogues*, A&A, 648, A3