

CONTACT INFORMATION	MIT Kavli Institute for Astrophysics and Space Research Massachusetts Institute of Technology 77 Massachusetts Avenue, 37-626B Cambridge, MA 02139, USA	E-mail: eilers@mit.edu Web: www.mit.edu/~eilers
POSITIONS	Assistant Professor of Physics since 2023 Massachusetts Institute of Technology, Cambridge, USA Pappalardo Fellow 2019–2023 Massachusetts Institute of Technology, Cambridge, USA NASA Hubble Fellow 2019–2022 Massachusetts Institute of Technology, Cambridge, USA	
EDUCATION	PhD in Astrophysics (summa cum laude) 2015–2019 Max-Planck Institute for Astronomy, Heidelberg, Germany <i>Advisors:</i> Prof. Joseph F. Hennawi, Prof. Hans-Walter Rix Master of Science in Physics 2012–2015 University of Heidelberg, Germany <i>Advisors:</i> Prof. Joseph F. Hennawi Bachelor of Science in Physics (Maximum Distinction) 2008–2011 University of Göttingen, Germany <i>Advisors:</i> Dr. Demian Battaglia, Prof. Theo Geisel	
HONOURS & AWARDS	Victor F. Weisskopf Career Development Professor, MIT 2026–2029 Alfred P. Sloan Research Fellow, Alfred P. Sloan Foundation 2026 Committed to Caring Award, MIT Office of Graduate Education 2026 Ludwig Biermann Award, German Astronomical Society 2025 Otto Haxel Award for Physics, German Physical Society 2023 Otto Hahn Medal, Max Planck Society 2020 IAU PhD Prize, International Astronomical Union 2020 Doctoral Thesis Award, German Astronomical Society 2020 KlarText Prize, Klaus Tschira Foundation, Prize for Science Communication 2020 Wilhelm and Else Heraeus PhD Prize, University of Heidelberg 2020 NASA Hubble Fellowship, NASA 2019–2022 Pappalardo Fellowship, Massachusetts Institute of Technology 2019–2023 PhD Graduation with <i>summa cum laude</i> , University of Heidelberg 2019 PhD Fellowship, German National Academic Foundation 2016–2018 Ernst Patzer Award, Patzer Foundation, Heidelberg 2017 Max Planck Fellow for the 66th Lindau Nobel Laureate Meeting 2016 Undergraduate Scholarship, German National Academic Foundation 2012–2015 Bachelor of Science with Distinction, University of Göttingen 2011	

SELECTED PUBLICATIONS

1. **Eilers**, Hogg, Rix & Ness 2019: *“The Circular Velocity Curve of the Milky Way from 5 to 25 kpc”*, The Astrophysical Journal, 871, 120
2. **Eilers**, Davies, Hennawi, Prochaska, Lukić & Mazzucchelli 2017: *“Implications of $z \sim 6$ Quasar Proximity Zones for the Epoch of Reionization and Quasar Lifetimes”*, The Astrophysical Journal, 840, 24
3. **Eilers**, Davies & Hennawi 2018: *“The Opacity of the Intergalactic Medium Measured along Quasar Sightlines at $z \sim 6$ ”*, The Astrophysical Journal, 864, 53
4. **Eilers**, Mackenzie, Pizzati, Matthee, Hennawi, Zhang, Bordoloi, Kashino, Lilly, Naidu, Simcoe, Yue, Frenk, Helly, Schaller & Schaye 2024: *“EIGER. VI. The Correlation Function, Host Halo Mass, and Duty Cycle of Luminous Quasars at $z \gtrsim 6$ ”*, The Astrophysical Journal, 974, 275
5. **Eilers**, Yue, Matthee, Hennawi, Davies, Simcoe, Teague, Bordoloi, Brammer, Kang, Kashino, Mackenzie, Naidu & Navarrete 2025: *The Light Echo of a High-redshift Quasar Mapped with Ly α Tomography*, The Astrophysical Journal Letters, 991, 40

A full list of **~140 refereed publications** with a total of **~9000 citations** and an **h-index of 52** is available on [NASA/ADS](#).

ACADEMIC SERVICES	Alternate Representative for AURA Astronomy, MIT	since 2026
	Astronomy Colloquium Organizer, MIT	2025–2026
	Reviewer for <i>Nature</i> , <i>Nature Astronomy</i> , <i>AAS Journals</i> , <i>MNRAS</i> , and <i>JCAP</i>	since 2019
	MIT School of Science Postdoctoral Fellowship, Steering Committee Member	2024
	JWST Time Allocation Cycle 3, Committee Member	2024
	First Stars VII Conference, SOC Member	2024
	“First Light” Conference, Chair of the SOC	2023
	MIT Kavli Institute Journal Club, Co-Organizer	2020–2023
	IAU Symposium: Dynamical Masses of Local Group Galaxies, SOC Member	2023
	Fraunhofer-Schwarzschild Postdoctoral Fellowship, Committee Member	2023
	MIT Magellan Time Allocation, Committee Member	2020–2021
	NASA FINESST, External Reviewer	2020
	Student Representative of the International Max Planck Research School	2015–2019

TEACHING	Classical Mechanics (8.01), MIT	Fall 2026
	Electricity and Magnetism (8.02), MIT	Spring 2024, 2025, 2026

MENTORING	Graduate Students:	
	• Teodora Bulichi	since 2023
	• Dominika Ďurovčíková	2022–2026
	Postdocs:	
	• Benedetta Spina	since 2026
	• Alberto Traina	since 2026
	• John Weaver, Brinson Prize Postdoctoral Fellow	since 2025

- Gene Leung since 2024
- Yuzo Ishikawa since 2024
- Minghao Yue 2022–2025

Undergraduate Students:

- Adiba Amira Siddiq, MIT Summer Research Program (MSRP) 2026
- Padmalakshmi Ramesh, UROP since 2026
- April Ren, UROP since 2026
- Mariona Giner Mascarell, MIT Summer Research Program (MSRP) 2025
- Katherine Panebianco, UROP 2025–2026
- Matthew Nuñez, UROP 2025
- Anna Hung, UROP 2025–2026
- Abby Tejera, MIT Summer Research Program (MSRP) 2024
- Emily Albornoz, UROP 2023–2024
- Ellery Stahler, UROP 2023–2024
- Kristin He, UROP 2023–2024
- Sam Christian, UROP 2023–2024
- Leah Bigwood (Durham University) 2021–2022
- Karna Morey, UROP 2020–2021

SCIENCE COMMUNICATION	MIT CAST Visiting Artist Grant (\$40k), collaboration with composer Anna Clyne and sound designer Jody Elff	2026
	<i>Beyond the Telescope</i> , Planetarium Show, Museum of Science Boston	2026
	MKI Artist-in-Residence, selection committee member	2025
	Cambridge Science Festival, public lecture at the MIT Museum	2024
	<i>Faszination Astronomie</i> , public talk on distant quasars	2021
	KlarText Prize, Prize for Science Communication in Physics	2020
	Public Outreach Fellow, Center for Astronomy Education and Outreach	2015–2019

INVITED COLLOQUIA & SEMINARS	Astronomy Seminar, New York University	Apr 2026
	CIERA Astronomy Colloquium, Northwestern University	Feb 2026
	Joint Astronomy Colloquium, Munich	Jan 2026
	Joint Astronomy Colloquium, Heidelberg	Jan 2026
	Plenary Talk, Annual Meeting of the German Astronomical Society	Sept 2025
	Astronomy Colloquium, UCLA	Apr 2025
	ITC Colloquium, Institute for Theory and Computation, Harvard University	Sept 2024
	Astronomy Colloquium, Max Planck Institute for Astronomy, Heidelberg	June 2024
	Astronomy Colloquium, University of Maryland, Baltimore	May 2024
	Astronomy Colloquium, Columbia University, New York	Apr 2024
	Physics Colloquium, Argonne National Laboratory	Mar 2024
	ITC Luncheon, Harvard University	Apr 2023
	Astronomy Colloquium, University of Texas, Austin	Feb 2023
	Astrophysics Colloquium, MIT	Feb 2023
	Astronomy Colloquium, Ohio State University	Dec 2022

Astronomy Colloquium, KIPAC, Stanford	Oct 2022
Astronomy Seminar, Cosmic DAWN Center, Copenhagen	May 2022
Astrophysics Colloquium, Australian National University, Canberra	May 2022
Astronomy Colloquium, University of Bonn	Apr 2022
Astronomy Colloquium, Ludwig Maximilian University, Munich	Dec 2021
Astrophysics Colloquium, University of Chicago	Dec 2021
Joint ESO/ALMA Colloquium, European Southern Observatory	Dec 2021
Astronomy Colloquium, University of Michigan	Nov 2021
BHI Colloquium, Black Hole Initiative, Harvard University	Oct 2021
NASA Hubble Fellow Symposium	Oct 2021
PhD Prize Colloquium, Annual Meeting of the German Astronomical Society	Sept 2021
Astronomy Seminar, University of Cambridge	May 2021
Astronomy Seminar, Kavli IPMU Tokyo	May 2021
Annual Pappalardo Fellowship Symposium, MIT	Apr 2021
Astronomy Colloquium, École Polytechnique Fédéral de Lausanne (EPFL)	Mar 2021
KICP Seminar, Kavli Institute for Cosmological Physics, Chicago	Feb 2021
Astrophysics Seminar, University of California San Diego	Jan 2021
Astronomy Colloquium, Cornell University	Oct 2020
Strong Gravity Seminar, Perimeter Institute	Sept 2020
NASA Hubble Fellow Symposium	Sept 2020
Faculty Lunch Talk, MIT	July 2020
Aspen Center for Physics Summer Colloquium	June 2020
NASA Hubble Fellow Symposium, Washington DC	Oct 2019
Königstuhl Colloquium, Max Planck Institute for Astronomy	July 2019
Brown Bag Lunch Series, MIT	Oct 2018
High Energy Astrophysics Seminar, University of Michigan	Oct 2018
ITC Luncheon, Harvard-Smithsonian Center for Astrophysics	Oct 2018
Astro Lunch, University of Washington, Seattle	May 2018
Cosmology Seminar, Berkeley Center for Cosmological Physics, UC Berkeley	Feb 2018
Cosmology Seminar, KIPAC Stanford	Feb 2018
Patzer Colloquium, Max Planck Institute for Astronomy, Heidelberg	Nov 2017

CONFERENCE TALKS	Unsolved Problems in Astrophysics (<i>invited talk</i>), Vienna, Austria	July 2026
	Cosmic Peaks: Exploring the Formation of Black Holes (<i>invited talk</i>), Sesto, Italy	Mar 2026
	Highly accreting supermassive black holes across all cosmic times (<i>invited talk</i>), Santiago, Chile	Dec 2025
	Massive Black Holes across Cosmic Time, Cambridge, UK	Sept 2025
	Cosmic Dawn Revealed by JWST (<i>invited talk</i>), KITP, Santa Barbara	Aug 2024
	First Stars VII, Flatiron Institute, New York	May 2024

XXXI st General Assembly of the International Astronomical Union (<i>invited talk</i>), Division J Meeting, Busan, South Korea	Aug 2022
Reionization and Cosmic Dawn, UC Berkeley, California	Mar 2022
Quasars at the Reionization Epoch (<i>invited talk</i>), EAS Symposium	June 2021
Machine Learning in Astronomy: Methods, Applications & Challenges (<i>invited talk</i>), 238th Meeting of the American Astronomical Society	June 2021
Frontiers in Science Symposium (<i>invited talk</i>), Max Planck Society	Feb 2021
Supermassive Black Holes Conference, Pucón, Chile	Dec 2020
YAGN 2020: Young Astronomers on Galactic Nuclei	Oct 2020
Accreting Supermassive Black Holes Through Cosmic Time, Annual Meeting of the German Astronomical Society	Sept 2020
Summer All Zoom Epoch of Reionization Astronomy Conference	July 2020
Black holes and galaxies at the edge of the Universe (<i>invited review</i>)	Mar 2020
IGM 2018: Revealing Cosmology and Reionization History with the IGM, (<i>invited talk</i>), Kavli IPMU, Tokyo, Japan	Sept 2018
Massive Black Holes in Evolving Galaxies: from Quasars to Quiescence, Paris	July 2018
Arthur Wolfe Symposium on the Inter- and Circumgalactic Medium, California	Mar 2018
The Circle of Life – Connecting the IGM, CGM, and ISM, South Africa	Aug 2017
Unveiling the Physics Behind Extreme AGN Variability, US Virgin Islands	July 2017
High Redshift Quasars in the JWST Era, Carnegie Observatories	Feb 2017
IGM 2016: From Wall to Web, Berlin, Germany	July 2016
Signals from the Deep Past – Unveiling Early Cosmic Structures, Valletta, Malta	July 2016
Illuminating the Dark Ages: Quasars and Galaxies in the Reionization Epoch, Heidelberg, Germany	June 2016

AWARDED TELESCOPE TIME (AS PI)	Magellan/FIRE (3 nights)	2025, 2026
	<i>The First Reverberation Mapping of a Quasar in the Early Universe</i>	
	Magellan/FIRE (4 nights)	2025, 2026
	<i>FIRE × Euclid: Discovering and Characterizing Quasars at Cosmic Dawn</i>	
	JWST/NIRSpec MSA Cycle 5 (19.7 hours)	2026
	<i>Lyman-alpha tomography of a proto-cluster with a luminous quasar in the early universe, ID: 9886</i>	
	Chandra LP, Cycle 27 (750 ks)	2025
	<i>Searching for dust-obscured black hole growth in a spectacular proto-cluster in the early universe, ID: 27700099</i>	
	JWST/NIRCam, MIRI Cycle 4 (110.9 hours)	2025
	<i>From Dawn till Noon: Chronicling the Cosmic History of Black Hole Growth, ID: 6827</i>	
	Magellan/LLAMAS (6 nights)	2024, 2025
	<i>ALPAQA: A Llamas Program of Ancient Quasars</i>	
	HST/ACS Cycle 32 (30 orbits)	2024
	<i>MASQUERADE: Mapping A Super-luminous Quasar's Extended Radiative Emission, ID: 17725</i>	
	JWST/NIRSpec MSA Cycle 3 (20.9 hours)	2024
	<i>MASQUERADE: Mapping a Super-luminous Quasar's Extended Radiative Emission, ID: 4713</i>	
	VLT/MUSE (30 hours)	2024
	<i>MASQUERADE: Mapping A Super-luminous Quasar's Extended Radiative Emission, ID: 113.268B</i>	

JWST/NIRSpec MSA Cycle 2 (20.9 hours) <i>Mapping Quasar Light Echoes with Lyα Forest Tomography during the Epoch of Reionization</i>	2023
Magellan/FIRE, LLAMAS (5 nights) <i>Searching for Lyman-α Nebulae around High-Redshift Quasars</i>	2023, 2024
JWST/NIRSpec IFU Cycle 2 (19.6 hours) <i>BEES: Black hole Extended Emission Search, ID: 3079</i>	2023
Magellan/FIRE, IMACS (2 nights) <i>Exploring high-redshift quasars revealed by Gaia DR3</i>	2022
HST/ACS Cycle 29 (11 orbits) <i>Quasars with small proximity zones: gravitationally lensed or exceptionally young?, ID: 16756</i>	2021
ALMA Cycle 8 (7 hours) <i>Triggering Mechanisms of Quasars and Black Hole Fueling in the Early Universe, 2021.1.00349.S</i>	2021
VLT/MUSE (23 hours) <i>Searching for Lyman-alpha Nebulae around Young Quasars, 106.215A, 108.222J</i>	2020, 2021
Magellan/FIRE (19 nights) <i>The Formation and Growth of Supermassive Black Holes in the Early Universe</i>	2019–2021
IRAM/NOEMA (20 hours) <i>The Formation and Growth of Supermassive Black Holes in the Early Universe, W19DU</i>	2019
IRAM/NOEMA (20 hours) <i>Young Quasars in the Early Universe, W17EQ, W18EF</i>	2017, 2018
IRAM/NOEMA (15 hours) <i>Is the radio-brightest quasar at $z \sim 6$ one of the youngest ($<10,000$ years)?, W18EG</i>	2018
ALMA Cycle 5 (4.6 hours), <i>Young Quasars in the Early Universe, 2017.1.00332.S</i>	2017
VLT/X-Shooter (2 nights), <i>Young Quasars in the Early Universe, 101.B-02720</i>	2017