

# LeaMarcotulli

astrophysicist

## interests

blazars, AGNs, supermassive black holes, population studies,  $\gamma$ -NLSys, high-energy astrophysics, SED modeling, jets, MeV & X-ray missions, outreach, DEI efforts

## about

Yale University  
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## appointments

2021-pres **NASA Hubble Fellowship (NHFP) Einstein Fellow**

Yale University

## education

2017-2021 **Ph.D.** in Physics

Clemson University

*Chasing supermassive black holes at the dawn of the Universe*

Advisor: professor M. Ajello

2015-2017 **M.Sc.** in Physics

Clemson University

*High-redshift blazars through NuSTAR eyes*

Advisor: professor M. Ajello

2012-2015 **B.Sc.** in Astrophysics (110/110)

Università di Astronomia, Bologna

*Teorema del Viriale (The virial theorem)*

## citizenship

italian/french

## languages

italian/french/english  
spanish notions

## honors and awards

2021 **NASA Hubble Fellowship**, \$404k

NASA

2020 Outstanding Graduate in Engagement Award, \$1k

CoS, Clemson University

## outreach

2023 Astro on Tap

New Haven

2022- pres. **Skype a Scientist**

Virtual

2022 **GAINS** - *Girls Advancing in STEM conference 2022*

Virtual

2021- pres. **YouTube Channel** - *(On) Planet Nine*

2020 **TEDx-Greenville** - *The biggest baddest black holes*

Virtual

3 Minute Thesis Competition

Clemson Graduate School

Science Fair Volunteer Judge

Clemson Elementary School

2018 College of Science Donors' dinner

Clemson University

Clemson Science Day for Elementary Schools

Clemson University

2017 Eclipse over Clemson

Clemson Child Development Center

2016-2017 Planetarium Shows

Clemson University

## astro-software

HEASOFT, XSPEC  
DS9, TopCAT  
fermipy, CIAO  
SpeXtools, IRAF  
Pypelt

## publications

**Total: first author: 7 ; co-author: 26; h-index:14; ADS**

First author:

2023	<i>The High Energy X-ray Probe (HEX-P): the most powerful jets through the lens of a superb X-ray eye</i>	arXiv:2311.04782 Frontiers, under review
2022	<i>Shock waves spark blazing light from black holes</i>	Nature, Vol. 611, Issue 7937
2022	<i>BASS. XXXIII. Swift-BAT Blazars and Their Jets through Cosmic Time</i>	ApJ, Vol. 940, Id. 77
2022	<i>Bridging the gap - Fermi-LAT sources at 20-200 MeV</i>	37th ICRC Proc.
2020	<i>Source-count Distribution of Gamma-Ray Blazars</i>	ApJ, Vol. 896, Id. 6
2020	<i>NuSTAR Perspective on High-redshift MeV Blazars</i>	ApJ, Vol. 889, Id. 164
2017	<i>High-redshift blazars through NuSTAR eyes</i>	ApJ, Vol. 839, Id. 96

## awarded research fundings

**Total as PI: \$ 441k**

2023	<i>NuSTAR</i> proposal 9259	\$72k
2022	<i>NuSTAR</i> proposal 8196	\$123k
2021	<i>Fermi-LAT</i> proposal 141104	\$75k
2020	<i>NuSTAR</i> proposal 6248	\$74k
2019	<i>NuSTAR</i> proposal 5193	\$70k
	<i>XMM-Newton</i> proposal 86233	\$15k
	Graduate Student Travel Award	\$750
2018	<i>NuSTAR</i> proposal 4301	\$10k
	Graduate Student Travel Award	\$750

## awarded observing time

**Total as PI: X-ray - 884 ks; optical - 3 nights; infrared - 8.5 nights**

2023	<i>NuSTAR</i> proposal 9259	80 ks
	<i>XMM DDT</i>	5 ks
	<i>Swift</i> ToOs 18444, 18503, 19224	20 ks
2022	<i>NuSTAR</i> , proposal 8196	400 ks
	<i>Swift</i> ToOs 17331, 17458, 17649, 17893, 17895, 18114	43 ks
2021	<i>Swift</i> ToOs 15279	4 ks
	Keck-LRIS, 2022A semester	1 night
	Keck-LRIS, 2021B semester	1 night
	Palomar, 2022A semester	3 nights
2020	<i>NuSTAR</i> proposal 6248	50 ks
	<i>Swift</i> ToOs 14716	4 ks
	Keck-LRIS, 2021A semester	1 night
	Keck-OSIRIS, 2020B semester	1 night
	NASA IRFT proposals: 2020A093, 2020B113	4.5 nights
2019	<i>NuSTAR</i> proposal 5193	61 ks
	<i>XMM-Newton</i> proposal 86233	116 ks
	<i>Swift</i> ToOs 12513, 13013	8 ks
2018	<i>NuSTAR</i> proposal 4301	63 ks
	<i>Swift</i> ToOs 10914, 11154	8 ks

## mentoring

### Graduate Students:

2023-pres.	Mentor of graduate student Iver Warburton	Yale University
2023-pres.	Co-advisor of graduate student Garima Rajguru	Clemson University
2022-pres.	Co-advisor of graduate student Scott Joffre	Clemson University
2018-2022	Co-advisor of graduate student Meenakshi Rajagopal	ApJ, 889, 102, ApJ, 165, 42
2019-2020	Mentor of graduate student Ross Silver	ApJ, 902, 23
2016-2017	Mentor of graduate student Xiurui Zhao	ApJ, 870, 60

### Undergraduate Students:

2023	Co-advisor of Sean Lewis	Yale University
2022	Co-advisor of Kiera Spall, Carissma McGee	Yale University
2020-2021	Co-advisor of Adam Vendrasco	Clemson University
2016	Mentor of Luke Tremblay	ApJ, 848, 53

## DEI efforts

2023-pres	<b>COSI DEI working group</b>	Co-organizer
2022-pres	<b>NHFP DEI committee</b>	Co-organizer
2021-pres	Astro-sibs mentoring program at Yale	Member
2023-pres	Astronomers for Planet Earth	Member
2023-pres	IDEEA	Member

## press releases

2022	(On) Planet Nine	Clemson Newsstand
2021	2021 NASA Hubble Fellowship	NASA
	Clemson student receive prestigious NHFP	Clemson Newsstand
	Women in STEM	Clemson Newsstand
2020	2020:Brain Candy-Virtual TEDx	Clemson Newsstand
	2020:Brain Candy	TEDx-Greenville
2019	Hubble constant in $\gamma$ -rays	Media INAF
	How quickly is the Universe expanding	Clemson Newsstand
2017	Five early universe $\gamma$ -ray blazars	Greenville Journal
	The most power-packed galaxies	Clemson Newsstand

## meeting organized

2023	<b>Accretion History of AGN (AHA)</b>	Miami, FL
	<b>Yale astrophysics colloquia</b>	New Haven, CT
	<b>NHFP symposium</b>	Boston, MA
2022	NHFP symposium	Baltimore, MD
2021-2022	BLAST Workshop I & II	Virtual
2020-2021	MOSCA Meeting	Virtual
2019	Meeting of Astronomers in South Carolina (MASC)	Clemson University
2018	Time Domain Astrophysics with Swift	Clemson University
	Astrophysics seminar: Local Group (LG) meeting	Clemson University
	SIRPA	Clemson University

## invited talks

**Total: 25**

Most recent contributions

2023	Scientific Colloquium	NASA Goddard, DC
	YAGN22 Observational Summary Talk	Palermo, Italy
	Theory Seminar	Carnegie Observatories, CA
	Astrophysics Seminar	Caltech, CA
	KIPAC Tea Talk	Stanford, CA
	Astrophysics Seminar	Berkeley, CA
	Astrophysics Seminar	University of Würzburg
	Astrophysics Seminar	DESY Berlin, Germany
	Astrophysics Seminar	IA-Forth, Crete
	High Energy Astrophysics Seminar	APC, Paris
	Quasar Tea Talk	CfA, Harvard & Smithsonian

## leadership

2022-pres	<b>HEX-P Blazar science group coordinator</b>
2021	Co-founder of (On) Planet 9
2017-2018	President of Physics & Astronomy Graduate Student Organization
2016-2017	Vicepresident of Physics & Astronomy Graduate Student Organization

## collaboration membership

2022-pres. HEX-P Collaboration  
2022-pres. COSI Collaboration  
2020-pres. AMEGO & AMEGO-X Collaborations  
2019-pres. BASS Collaboration  
2016-pres. *Fermi*-LAT Collaboration

## referee contribution

2 Nature Astronomy  
1 Nature  
1 Publication of the Astronomical Society of Japan (PASJ)  
1 Monthly Notices of the Royal Astronomical Society (MNRAS)  
2 Astrophysical Journal (ApJ)  
1 Internal referee for the *Fermi*-LAT Collaboration

## panel reviews

1 HST  
1 Yale internal TAC

## visiting scientist positions

2023	Washington University	St. Louis, MO
2019	NASA Goddard Science Space Center	Washington, D.C.
2017	Stanford University	Stanford, CA

## conferences

**Contributed talks: 25; Contributed Poster: 5; Session Chair:2**

Most recent contributions:

2023	YAGN22	Italy
	NHFP Symposium	USA
	The X-ray Universe	Greece
	12th HEAD Meeting (Poster)	USA
2022	375 IAU: The Multimessenger Chakra of Blazar Jets	Nepal
	10th International Fermi Symposium	South Africa
	Gamma 2022	Spain
	NuSTAR 2022	Italy
	AAS 240	USA
	NERQUAM (Poster)	USA
	10th HEAD Meeting (Poster)	USA

## teaching

2023	Guest Lecturer - PHYS 040/ASTR 040; ASTR 255/PHYS 295	Yale University
2023-pres	Certificate of College Teaching Preparation	Yale University
2016-2019	Guest Lecturer - ASTR3030; ASTR3020; ASTR1010	Clemson University
2016-2017	Teaching assistant - Astro. Lab. ASTR1030; ASTR1040	Clemson University
2015-2016	Teaching assistant - Physics Lab. PHYS2100; PHYS2090	Clemson University