

LeaMarcotulli

astrophysicist

interests

jets, AGNs, supermassive black holes, high-redshift universe, population studies, SED modeling, high-energy astrophysics, multi-wavelength, time-domain & multimessenger, X-ray & MeV missions, outreach, DEI

about



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citizenship

italian/french

languages

italian/french (native)
english (fluent)
spanish (intermediate)

facilities

Fermi-LAT
NuSTAR, XMM
Swift-XRT, Chandra
Keck-LRIS
Keck-OSIRIS
NASA-IRTF
Palomar

astro-software

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

appointments

2024-pres. **Postdoctoral Fellow**

Yale University

2021-2024 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

honors and awards

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

NASA

2020 Outstanding Graduate in Engagement Award, \$1k

CoS, Clemson University

outreach

2024 Astronomy Club

Greenville, SC

2023 Astro on Tap

New Haven, CT

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, SC

2019 Science Fair Volunteer Judge

Clemson Elementary School, SC

2018 College of Science Donors' dinner

Clemson University, SC

Clemson Science Day for Elementary Schools

Clemson University, SC

2017 Eclipse over Clemson

Clemson Child Development Center, SC

2016-2017 Planetarium Shows

Clemson University, SC

publications

Total: first author: 8 ; co-author: 27; h-index:16; ADS

First author:

2024 *NuSTAR observations of a varying-flux quasar in the Epoch of Reionization*

ApJL, submitted

2024 *The High Energy X-ray Probe (HEX-P): the most powerful jets through the lens of a superb X-ray eye*

FrASS, Vol. 11, id. 1290057

2022 *Shock waves spark blazing light from black holes*




Nature, Vol. 611, Issue 7937

2022 *BASS. XXXIII. Swift-BAT Blazars and Their Jets through Cosmic Time*

ApJ, Vol. 940, Id. 77

2022 *Bridging the gap - Fermi-LAT sources at 20-200 MeV*

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: \$ 481k

2024	<i>Swift (joint NuSTAR) proposal 2023233</i>	\$40k
2023	<i>NuSTAR proposal 9259</i>	\$72k
2022	<i>NuSTAR proposal 8196</i>	\$123k
2021	<i>Fermi-LAT proposal 141104</i>	\$75k
2020	<i>NuSTAR proposal 6248</i>	\$74k
2019	<i>NuSTAR proposal 5193</i>	\$70k
	<i>XMM-Newton proposal 86233</i>	\$15k
	<i>Graduate Student Travel Award</i>	\$750
2018	<i>NuSTAR proposal 4301</i>	\$10k
	<i>Graduate Student Travel Award</i>	\$750





awarded observing time

Total as PI: X-ray - 1001 ks; optical - 3 nights; infrared - 8.5 nights

2024	<i>Swift (joint NuSTAR) proposal 2023233</i>	117 ks
2023	<i>NuSTAR proposal 9259</i>	80 ks
	<i>XMM DDT</i>	5 ks
	<i>Swift ToOs 18444, 18503, 19224</i>	20 ks
2022	<i>NuSTAR, proposal 8196</i>	400 ks
	<i>Swift ToOs 17331, 17458, 17649, 17893, 17895, 18114</i>	43 ks
2021	<i>Swift ToOs 15279</i>	4 ks
	<i>Keck-LRIS, 2022A semester</i>	1 night
	<i>Keck-LRIS, 2021B semester</i>	1 night
	<i>Palomar, 2022A semester</i>	3 nights
2020	<i>NuSTAR proposal 6248</i>	50 ks
	<i>Swift ToOs 14716</i>	4 ks
	<i>Keck-LRIS, 2021A semester</i>	1 night
	<i>Keck-OSIRIS, 2020B semester</i>	1 night
	<i>NASA IRFT proposals: 2020A093,2020B113</i>	4.5 nights
2019	<i>NuSTAR proposal 5193</i>	61 ks
	<i>XMM-Newton proposal 86233</i>	116 ks
	<i>Swift ToOs 12513, 13013</i>	8 ks
2018	<i>NuSTAR proposal 4301</i>	63 ks
	<i>Swift ToOs 10914, 11154</i>	8 ks

mentoring


Graduate Students:

2024-pres.	Co-advisor of Iver Warburton	Yale University
2023-pres.	Co-advisor of Garima Rajguru	Clemson University
2022-pres.	Co-advisor of Scott Joffre	Clemson University
2018-2022	Co-advisor of Meenakshi Rajagopal	 ApJ, 889, 102,  ApJ, 165, 42
2019-2020	Mentor of Ross Silver	 ApJ, 902, 23
2016-2017	Mentor of Xiurui Zhao	 ApJ, 870, 60




Undergraduate Students:

2024	Advisor of Aadi Krishna	Yale University
2023	Co-advisor of Sean Lewis	Yale University




2022 Co-advisor of Kiera Spall, Carissma McGee
 2020-2021 Co-advisor of Adam Venderasco
 2016 Mentor of Luke Tremblay

Yale University
 Clemson University
 ApJ, 848, 53

DEI efforts

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

meeting organized

2023	Accretion History of AGN (AHA)	Miami, FL
	Yale astrophysics colloquia	New Haven, CT
	NHFP symposium	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: 29





Upcoming

2024	Swift Time Domain Workshop	Clemson, SC
	COSI Collaboration Meeting	Berkeley, CA







Most recent contributions





2024	EAS 2024	Padova, Italy
2024	APS April Meeting 2024	Sacramento, CA
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	DESY Berlin, Germany

leadership

2022-pres **HEX-P Blazar science group coordinator** 
 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 

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 γ -rays 	Media INAF
	How quickly is the Universe expanding 	Clemson Newsstand
2017	Five early universe γ -ray blazars 	Greenville Journal
	The most power-packed galaxies 	Clemson Newsstand

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

visiting scientist positions

2024-pres.	Caltech High Energy Astrophysics Group 	Pasadena, CA
2023	Washington University	St. Louis, MO
2019	NASA Goddard Science Space Center	Washington, DC
2017	Stanford University	Stanford, CA

service to the astrophysics community

Committees:

NuSTAR User Committee [2024-pres.] – Swift Senior Review AGN topical coordinators [2024-pres.]

Referee Contribution:

Nature Astronomy [2] – Nature [1] – Publication of the Astronomical Society of Japan (PASJ) [1] – Monthly Notices of the Royal Astronomical Society (MNRAS) [1] – Astrophysical Journal (ApJ) [3] – Journal of High Energy Astrophysics (JHEA) [1] – Internal referee for the *Fermi*-LAT Collaboration [1]

Panel Reviews:

[1] HST – [1] Yale internal TAC

conferences

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

Most recent contributions:

2024	AAS 243	USA
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

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