

GRANT RUSSELL TREMBLAY

ASTROPHYSICIST
CENTER *for* ASTROPHYSICS | HARVARD & SMITHSONIAN
60 Garden St., Cambridge, MA 02138, USA

grant.tremblay@cfa.harvard.edu
+1 617 496 7919
www.granttremblay.com

EXPERIENCE

- 2017 *to present* **Astrophysicist** | Smithsonian Astrophysical Observatory (SAO)
Project Scientist | *Chandra X-ray Observatory* High Resolution Camera (HRC)
Lecturer of Astronomy | Harvard University Department *of* Astronomy
Deputy Lead | *Lynx X-ray Observatory* Concept Study at SAO
Center for Astrophysics | **Harvard & Smithsonian**, Cambridge, MA, USA
- 2014 *to* 2017 **NASA Einstein Fellow** | Yale Center *for* Astronomy & Astrophysics
Yale University, New Haven, CT, USA / Funding via NASA
- 2011 *to* 2014 **ESO Fellow** | Directorate *for* Science
European Southern Observatory (ESO), Garching bei München, Germany
- 2011 *to* 2014 **Fellow Astronomer** | Paranal Observatory Science Operations
ESO Paranal Observatory / Very Large Telescope, Cerro Paranal, Chile
- 2006 *to* 2008 **Graduate Research Assistant** | Science Mission Office
Space Telescope Science Institute (STScI), Baltimore, MD, USA

EDUCATION

- 2008 *to* 2011 **Ph.D. Astrophysics**
Rochester Institute of Technology, New York, USA

Doctoral Thesis advised by Prof. Christopher P. O’Dea and Prof. Stefi A. Baum:
“*Feedback Regulated Star Formation in Cool Core Clusters of Galaxies*”
- 2006 *to* 2008 Visiting Graduate Student (while doing Thesis work at STScI)
Johns Hopkins University, Maryland, USA
- 2002 *to* 2006 **B.S. Physics & Astronomy**
University of Rochester, New York, USA

RESEARCH

- Primary Interests* Star formation amid kinetic and radiative feedback from supermassive black holes
Galaxy clusters and their central galaxies, the intracluster medium
Galaxy formation, evolution, and dynamics
Space Policy and mission development (*Lynx X-ray Observatory*, Europa Lander)
- Techniques* Highly multiwavelength analysis including X-ray, ultraviolet, optical, and infrared
imaging and spectroscopy (*Chandra*, *HST*, *JWST*, *Spitzer*, *Herschel*, VLT, Keck,
Gemini etc.), as well as submillimeter and radio interferometry (ALMA, JVLA)

*Portfolio consists of more than 100 refereed publications (seventeen as first author, including in Nature),
three books for the general public, and over \$2.6M USD in funding (over \$858,000 as P.I.)*

LEADERSHIP EXPERIENCE

<i>AAS Leadership</i>	Senior Vice President (2024-2025) Vice President (2022-2024) Member, Board of Trustees Board Liaison, COMPASSE & HEAD Committees American Astronomical Society (AAS)
<i>NASA Leadership</i>	Vice Chair (2024 to present) Member (2022 to present) NASA Astrophysics Advisory Committee (APAC) <i>A FACA subcommittee of the NASA Advisory Council</i> Chair of the Executive Committee (2022-2024) Vice-Chair of the Executive Committee (2020-2021) X-ray Science Interest Group co-Chair (2020-2023) NASA Physics of the Cosmos Program Analysis Group (PhysPAG)
<i>Large Collaborations</i>	Lynx X-ray Observatory NASA Large Mission Concept Study www.lynxobservatory.org Deputy Lead for <i>Lynx</i> at SAO Head of the <i>Lynx</i> Science Support Office Member of the <i>Lynx</i> Study Office Branding, Graphic Design, and Website Lead The Close AGN Reference Survey (CARS) Founding Member & Former P.I. www.cars-survey.org CARS is now a legacy-class MUSE, ALMA, <i>HST</i> & <i>Chandra</i> dataset that has enabled dozens of papers & five PhD Theses
<i>Research Group Leadership</i>	Leader of an SAO research group that has included three Postdocs (Dr. Rebecca Nevin, Dr. Bryan Terrazas, Dr. Razieh Emami), two Ph.D. students (Osase Omoruyi & Aimee Schechter), and five undergraduates. Center for Astrophysics Harvard & Smithsonian (2019 to present)

GRANTS & AWARDS

<i>Telescope Time as Principal Investigator (selected)</i>	James Webb Space Telescope Cycle 2 (2023): <i>A Galaxy-Scale Fountain of Multiphase Gas Pumped by a Black Hole: The power of JWST combined with ALMA, MUSE, Chandra, and HST</i> GO Program 4094, P.I.: G. Tremblay, allocated 12 hours and \$93,307 Chandra X-ray Observatory Cycle 24 (2022): <i>A Supermassive Black Hole Binary in a Changing-look Quasar</i> GO Program 24700175, P.I.: G. Tremblay, allocated 300 ksec and \$88,110 Hubble Space Telescope Cycle 28 (2020): <i>Temporal & Spatial Resolution of Stellar Ages amid Quasar-Driven gas flows</i> GO Program 16173, P.I.: G. Tremblay, allocated 33 orbits and \$124,575
--	--

Chandra X-ray Observatory Large Program Cycle 18 (2016):
The Hot Phase of a Cold Black Hole Fountain: Unifying Chandra with ALMA
Large Program 18800649, **P.I.: G. Tremblay, allocated 480 ksec and \$160,360**

Atacama Large Millimeter/submillimeter Array (ALMA) Cycle 4 (2016):
Resolving Molecular Outflows in nearby Luminous AGN from the CARS Survey
Project Code 2016.1.00952.S, **P.I.: G. Tremblay, Ranked High Priority**

Chandra X-ray Observatory Cycle 17 Director's Discretionary Time (2014):
Catching a Changing Look Quasar as it returns to the Shadows for the Second Time
DDT Program 17708536, **P.I.: G. Tremblay, allocated 30 ksec**

Chandra X-ray Observatory Cycle 17 (2015):
Expanding Superbubbles in Luminous AGN: Unifying Chandra with MUSE
GO Program 177005179, **P.I.: G. Tremblay, allocated 200 ksec and \$81,272 USD**

Atacama Large Millimeter/submillimeter Array (ALMA) Cycle 3 (2015):
Beaded Strings of Young Stellar Superclusters between Merging Elliptical Galaxies
Project Code 2015.1.01426.S, **P.I.: G. Tremblay, Ranked High Priority**

Atacama Large Millimeter/submillimeter Array (ALMA) Cycle 1 (2013):
The Cold Phase of a Hot Mode: Filaments & Feedback in Abell 2597
Project Code 2012.1.00988.S, **P.I.: G. Tremblay, Ranked Highest Priority**

Chandra X-ray Observatory Cycle 16 (2014):
A "String of Pearls" between two Merging Elliptical Galaxies
GO Program 17218, **Sci. P.I.: G. Tremblay, allocated 130 ksec and \$53,406 USD**

Hubble Space Telescope Cycle 21 (2013):
Ghost Ionization in Cooling Flow Filaments: A Test with Deep FUV Spectroscopy
GO Program 13304, **P.I.: G. Tremblay, allocated 23 Orbits and \$64,917 USD**

Very Large Telescope, Gemini, Keck, Palomar 200", WIYN, Blanco, & SOAR
Fifteen programs as P.I. (Imaging, Spectroscopy, & IFU spectroscopy, incl. Laser AO)

Research Fellowships

Einstein Fellowship

NASA Prize Fellowship | *Now part of the NASA Hubble Fellowship Program*
Hosted at Yale University, 2014 to 2017
Fellowship sponsor/mentor: Prof. C. Megan Urry

European Southern Observatory (ESO) Fellowship

Independent Postdoctoral Fellowship | ESO Garching, 2011 to 2014

Other Funding

Center for Astrophysics | Harvard & Smithsonian Director's Office | **\$100K**
Smithsonian Institution Scholarly Studies Grant (2021) | **\$60K**
CfA IR&D funding for the *Lynx X-ray Observatory* Concept Study | **\$750K**
NRAO ALMA Ambassadors Program (2017) | **\$10K**
New York Space Grant Consortium | **\$10K**

*Selected Programs
as Co-Investigator*

- *JWST* Cycle 3 Projects 5354, 5018
- *JWST* Cycle 2 Projects 4094, 4065, 3149
- Co-I on 25 accepted ALMA programs between Cycles 0 and 9, including:
- ALMA Cycle 4 Projects 2016.1.(01075 / 01058 / 01214).S, Various P.I.s
- ALMA Cycle 3 Projects 2015.1.(01198 / 01107 / 00627 / 00623).S, Various P.I.s
- ALMA Cycle 2 Project 2013.1.00862.S, P.I.: A. Simionescu
- ALMA Cycle 1 Project 2012.1.00837.S, P.I.: B. McNamara
- ALMA Cycle 0 Project 2011.0.00374.S, P.I.: B. McNamara
- *HST* Cycle 24 DDT Program 14486, P.I.: B. Husemann
- *HST* Cycle 22 GO Program 13638, P.I.: M. Bayliss
- *HST* Cycle 21 GO Program 13422, P.I.: R. Canning
- ALMA Cycle 4 Projects 2016.1.(01075 / 01058 / 01214).S, Various P.I.s
- *HST* Cycle 24 DDT Program 14486, P.I.: B. Husemann
- *HST* Cycle 22 GO Program 13638, P.I.: M. Bayliss
- *HST* Cycle 21 GO Program 13422, P.I.: R. Canning
- *HST* Cycle 20 GO Program 13023, P.I.: M. Chiaberge
- *HST* Cycle 18 GO Program 12220, P.I.: R. Mittal
- *Chandra* Cycle 17 GO Program 17700006, P.I.: Massaro, 192 ksec
- *Chandra* Cycle 15 GO Program 15700111, P.I.: Massaro, 276 ksec
- *XMM-Newton* AO-13 Program 074434, P.I.: J. Sanders
- Gemini Program GN-2014A-Q-55, P.I.: O’Dea / Tremblay, 6 hr
- Jansky Very Large Array: 2012B Program 12B-289, P.I.: T. Clarke
- Very Large Telescope Period 86 Program 086.A-0399, P.I.: M. Chiaberge
- *Various (more than 20) other programs on ground- and space-based telescopes*

Awards & Honors

NASA Silver Group Achievement Award

For recovering *Chandra*’s High Resolution Camera from anomalies in 2020 & 2022

NASA Group Achievement Awards

For the *Chandra* 20th Anniversary Communications Team, 2021

For the *Lynx X-ray Observatory* Concept Study, 2019

Smithsonian Institution Special Achievement Awards

Three awards for *Lynx*, *Light from the Void*, and the HRC Anomaly of 2020

Stoddard Prize

Best thesis in Physics & Astronomy, University of Rochester, 2006

Undergraduate Research Prize

Astronomical Society of New York, 2006

Undergraduate Teaching Prize

Outstanding Teaching in Physics & Astronomy, University of Rochester, 2006

Sigma Pi Sigma

Physics Honor Society

Graduation with High Honors

Graduate, Undergraduate, & Secondary Schools, 2002 to 2011

TEACHING

Ph.D. Students (official)

Osase Omoruyi, Harvard University | Ph.D. Astronomy expected May 2025
Awarded NSF Graduate Research Fellowship, 2021
Awarded ALMA SOS Fellowship, 2023

Meredith Powell, Yale University | Ph.D. Astrophysics (completed May 2019)
Thesis Project: *Expanding Superbubbles in Luminous AGN*
co-supervised with Prof. C. Megan Urry
Now a Schwarzschild Fellow at AIP Postdam, formerly a Porat Fellow at Stanford

Invited Visiting Professorship

“You Can’t Grow a Black Hole for Free”
Invited lecture series given as Visiting Professor
Universidad Nacional Autónoma de México (UNAM), Mexico, November 2014

Other Teaching

Harvard University, Lecturer of Astronomy
Lectureship appointment was in order to formally supervise Harvard Ph.D. Students
(2021 *to present*)

Harvard University | Banneker & Aztlán Institute, Advisor
Research Advisor and Instructor for this ten-week summer research experience created to prepare talented undergraduate students of color and other underrepresented groups for studies in top graduate programs in astronomy.

Yale University, Guest Lecturer
Planned and led lectures for 10+ undergraduate astronomy/physics courses.

Teaching Assistant, Dept. of Physics, Rochester Institute of Technology
Physics I (Winter 2008), II (Spring 2009), & III (Fall 2008)
Included planning & leading full lectures

Teaching Intern, Dept. of Physics & Astronomy, University of Rochester
Elementary Astronomy (Fall 2003), Elementary Astrophysics (Spring 2004), Black Holes & Time Warps (Fall 2004 & 2005), Intro. Mechanics (Spring 2005 & 2006)
Awarded U. of Rochester Prize for Outstanding Undergraduate Teaching

Other Students Supervised

Kevin Ortiz Ceballos, Banneker Institute Student (now at Harvard)
Sideena Grace, 2020 Banneker Institute Student (now at MIT)
Keduse Worku & Kevin Ortiz Ceballos, 2019 Banneker Institute Students
Daniel Rodriguez, 2018 Banneker Institute Student
William Cramer, Yale Ph.D. Student
Tonima Tasnim Ananna, Yale Ph.D. Student
Dominic Eggerman & Nathaniel Kerman, Yale Undergraduates
“Fellow Mentor” for two ESO Ph.D. Students
K. Cooke, RIT Ph.D. student, 2014 *to* 2016
K. Christiansen, RIT Undergraduate, 2010 *to* 2011
B. Litts, High School Student, 2011
K. O’Dea, REU Student, 2010 (resulted in publication with undergrad. as first author)
Several Students in the RIT Insight Lab Summer Program, 2008 *to* 2010

TECHNICAL EXPERIENCE

Professional Telescope Experience **Chandra High Resolution Camera | Project Scientist, Instrument P. I. Team**
Official SAO duties. Responsible for operations and science analysis of *Chandra X-ray Observatory's* High Resolution Camera (HRC), as part of the Instrument Principal Investigator team. Operational responsibilities include reviewing *Chandra* command loads to ensure safe operation of the flight instrument, monitoring its health and safety, and analyzing in-flight calibration data. Includes extensive experience in commanding, intervention, and spacecraft recovery procedures. **Experience includes major roles in recovery from critical spacecraft anomalies in 2020 and 2022, an effort which was awarded a NASA Silver Group Achievement Award**

Support Astronomer | Very Large Telescope (Unit Telescope 2 / Kueyen)
Official ESO duties, 40 nights per year. In charge of the science operation of the telescope including the XSHOOTER, UVES, and FLAMES spectrographs, quality assessment of the data, and the support of visiting astronomers.

Space-based Telescopes **James Webb Space Telescope**
Growing experience (successfully proposing, obs. planning, reduction of data)
Hubble Space Telescope
Extensive experience (successfully proposing, obs. planning, reduction of data)
Chandra X-ray Observatory
Extensive experience (successfully proposing, obs. planning, reduction of data)
X-ray Multi-Mirror Mission (XMM-Newton)
Substantial experience (successfully proposing, reduction of data)
Spitzer Space Telescope
Substantial experience (proposing, obs. planning, reduction of data)
Herschel Space Observatory
Limited experience (reduction & analysis of data)

Ground-based Telescopes **Atacama Large Millimeter/submillimeter Array (ALMA)**
Extensive experience (successfully proposing, obs. planning, data reduction)
Very Large Telescope
Extensive / direct experience (operations, observation planning, data reduction)
Very Large Array
Some experience (successfully proposing, limited data reduction)
Other Telescopes
Many nights of observing (on-mountain and remote) with the VLT, Keck, Gemini, SOAR 4.1m, Palomar 200", WIYN 3.5m, UKIRT, NASA IRTF, & TNG

Computing skills **Programming:** Python (fluent), IDL, C/C++, regex, shell scripting, etc.
Codes available at: <https://github.com/granttremblay>
Formal member of the Astropy team | Deputy lead for www.astropy.org
Analysis: Astropy, AstroConda / DrizzlePac, (Py/I)RAF including STSDAS & NOAO packages, etc., CIAO, XSPEC, Sherpa, MOPEX, HIPE, CASA, DS9
Presentation: L^AT_EX, Matplotlib, Adobe products (nearly all), SuperMongo
OS: Linux, macOS, Unix, Solaris, Windows

*Multiwavelength
Analysis Experience*

X-ray: Spectral fitting (*Chandra* and *XMM* data), quantitative imaging analysis, spatially resolved spectroscopy techniques (i.e., X-ray spectral maps, deprojection), X-ray time domain analysis.

Ultraviolet: FUV diagnostic spectroscopy (with *HST/COS*), FUV and NUV imaging (*HST/ACS* SBC and STIS).

Optical: Extensive experience with space- and ground-based imaging data (especially *HST*), photometry, observational techniques, optical spectroscopy (e.g., XSHOOTER, UVES), integral field spectroscopy (e.g., SINFONI, GMOS, OSIRIS).

Mid/Far-infrared *Spitzer* MIPS and IRAC photometry, *Herschel* PACS spatially resolved spectroscopy.

Sub-mm & Radio Quantitative analysis of ALMA data in CASA, analysis of Very Large Array Radio data.

SERVICE & MEMBERSHIPS

*Space Mission
Development*

**Deputy Lead for SAO | Lynx X-ray Observatory NASA Strategic Mission Study
Head of the Lynx Science Support Office**

Core Member of the *Lynx* Study Office

Creator / web designer and curator of www.lynxobservatory.org

Lynx Graphic Design Lead (portfolio at www.behance.net/granttremblay)

Member of the Communication, ‘Feedback’, and ‘Synergy’ Working Groups

Core Science Team | Europa X-ray Instrument for Life Exploration (EXILE)

An X-ray Silicon Drift Detector for the notional Europa Lander Mission

Committee Service

XRSIG co-chair, NASA PhysPAG Executive Committee (2019 to present)

Member, NASA Great Observatories Science Advisory Group (2018 to 2019)

AAS Agent for Yale University (<http://aas.org/agents/>)

Very Large Telescope / Unit Telescope 2 (Kueyen) SciOps Team

Fellow Contact, ESO Directorate for Science (2012 to 2014)

ESO Observing Programmes Committee, Periods 93, 91, 90, 89 (*Scientific Assistant*)

ESO User’s Committee 2013 Meeting (*Fellow Assistant*)

ESO Scientific & Technical Committee 2011 Meeting (*Fellow Assistant*)

International Search Committee, Dean of the College of Science for RIT (2011)

Society of Physics Students Exec. Committee, University of Rochester (2004 to 2006)

*Colloquia Series
Created*

Founder & Organizer, “The AGN Club”

2011 to present, ESO & MPA/MPE

Highly popular regular meeting of the local AGN community, the first of its kind.

Founder & Organizer, “Extragalactic Lunch”

2007 to 2008, Space Telescope Science Institute

Meetings Organized “*The Second Kathmandu Astrophysics School*”, Pokhara, Nepal, June 2018 (SOC)
“*ALMA Community Days 2017*”, New Haven, CT USA, April 2017 (**Co-creator**)
“*SciCoder 2016*”, New Haven, CT USA, August 2016 (LOC)
“*Large Scale Clustering of Active Galactic Nuclei*”, Garching, July 2014 (LOC)
“*AGN 101: A Review of the Field*”, Garching, May 2013 (**Co-creator** / SOC)
“*Shaping E-ELT Science and Instrumentation*, Ismaning, Germany, Feb 2013 (LOC)
“*Islands in the Cosmos*”, Garching, Nov. 2012 (**Co-creator** / SOC)
“*ESO@50: The First Fifty Years of ESO*”, Garching, Sept. 2012 (LOC)
“*Star Formation Across the Universe*”, Garching, Dec. 2011 (**Co-creator** / SOC)

Other Colloquia Organized Yale Center for Astronomy & Astrophysics Seminar, 2015 to 2016
Yale Astronomy Colloquium, 2014 to 2015
The ESO Journal Club, 2011 to 2014
Various ESO Talks, 2011 to 2014
The RIT Astronomy Journal Club, 2008 to 2010
RIT Astronomy Lunch Talks, 2008 to 2010

Referee for *Nature*
The Astrophysical Journal
Monthly Notices of the Royal Astronomical Society
Astronomy & Astrophysics
ESO Director’s Discretionary Time Proposals (*technical assessment*)
NASA Postdoctoral Program (NPP) Proposals
Harvard University Senior Theses

Proposal Review Panel Service NASA 2020 E.7 *Support for Open Source Tools* Review Panel (2021)
James Webb Space Telescope Cycle 1 Time Allocation Committee (2021)
Center for Astrophysics Internal Time Allocation Committee, 2019 to present
Chair, *Chandra* Cool Attitude Targets (CAT) Extragalactic Committee, 2018
Hubble Space Telescope Cycle 25 Time Allocation Committee, 2017
ALMA Strategic Studies Development Program, 2017
ALMA Cycle 4, 5, and 6 Proposal Review Committee, 2016-2019
Chandra Cycle 17 Time Allocation Committee, 2015
NASA Earth & Space Science Fellowship Review Committee, 2015
NASA Astrophysics Data Analysis Program Review Committee, 2015 & 2016
Yale Time Allocation Committee, 2016A, 2016B, & 2017A

Society Memberships **American Astronomical Society** | Vice President (2022-2025), Full Member
Royal Astronomical Society | Fellow
International Astronomical Union | Full Member

PRESS & PUBLIC OUTREACH _____

Press Releases on First-Author Papers November 2018 | “**ALMA and MUSE Detect Galactic Fountain**”
Press releases from **NASA/Chandra, ESO, NRAO/ALMA, Yale** (and others) on Tremblay *et al.* 2018, including an “ESOCast” video. The release was picked up by more than thirty Print and Web news outlets in multiple languages including *CNN, Space.com, SyFy Wire*, etc.

June 2016 | **“Black Hole Deluged by Cold Intergalactic Rain”**

Press releases from **Nature, NRAO/ALMA, ESO, Yale, MIT** (and others) on Tremblay *et al.* 2016, *Nature*. Picked up by over three hundred Print and Web news outlets in over fifteen languages, including *The New York Times*, the *BBC*, *The Washington Post*, *TIME*, *Astronomy*, *Popular Science*, *Wired*, and *Discover* Magazines, as well as many others. The paper has an Altmetric score in the 99th percentile of all tracked papers, and in the 93rd percentile of all similarly aged *Nature* papers.

August 2015 | **“Galaxy Star Birth Regulated by Black Hole Fountain”**

Press releases from **NASA/STScI, ESA, & Yale University** on Tremblay *et al.* 2015. Picked up by over fifty Print and Web news outlets in over ten languages including *IFL Science*, *Astronomy Magazine*, & *Russia Today*.

July 2014 | **“Hubble Sees Bridge of Young Stars Between Two Ancient Galaxies”**

Press releases from **NASA/STScI, ESA, & Hubble Heritage** on Tremblay *et al.* 2014 including a “Hubblecast” video (Hubblecast # 76) and “Hubble Hangout” webcast. Release was picked up by over fifty Print and Web news outlets in over ten languages including *NBC News*, *The Huffington Post*, *Astronomy Picture of the Day*, *Discover & Astronomy* Magazines, *Space.com*, *la Repubblica*, *El Mercurio*, *Kronen Zeitung*, etc.

*External Affairs
& Government
Relations Experience*

2011 to 2014, **representing the European Southern Observatory (ESO)** | Appointed by the ESO Director General to help represent the organization in meetings with and visits by the **President of the European Commission** (J. Barroso, 2014), the **President of Chile** (S. Piñera, 2014), the **European Union’s High Representative Foreign Affairs** (C. Ashton, 2014), the **Prime Minister of Sweden** (C. Bildt, 2014), the **German Science Minister**, and the **Brazilian Ambassador to Germany**. Selected based on ability to engage with stakeholders in an engaging, enthusiastic way while being able to safeguard the organization’s interests, stay on message, and strengthen ESO’s status as an engine of scientific leadership in Europe and Chile.

2017 to present, **representing the CfA and Smithsonian** | Various events formally or informally representing the CfA’s interests, including multi-day 1:1 meetings with the **NASA Administrator** (J. Bridenstine) and **NASA SMD Associate Administrator** (T. Zurbuchen), several Donor events, etc. Chosen by the CfA Director (C. Alcock) to lead the Smithsonian’s *Space On the Hill* series. Working with Undersecretary Ellen Stofan, helped lead the CfA’s government relations efforts for the Event Horizon Telescope Sgr A* event, including recruiting three White House officials to the event. Multiple presentations to the SAO Advisory Board, led *Chandra* OCC tours for VIPs, etc. Selected by the Smithsonian Office of Government Relations to conduct an on-camera interview with Rep. Joe Morelle (D-NY 25).

2022 to present, **representing the American Astronomical Society** | As Vice President, represented the AAS and its membership at the U.S.-Africa Leaders summit (Washington, DC, December 2022), sponsored by the White House and the U.S. Department of State. Led negotiations in what resulted in a formal set of Resolutions between the African Astronomical Society (AfAS), the International Astronomical Union (IAU), and the AAS in the lead up to the 2024 IAU General Assembly.

*Education &
Public Outreach
(Highlights)*

Frequent guest commenting on space-related issues on *NBC Nightly News with Lester Holt*, the *TODAY Show*, *NPR Science Friday*, *NPR All Things Considered*, Boston 25 News, various Podcast episodes including *Planetary Radio*, etc.

Apperances on over 45 episodes of television documentary series, full credits at <https://www.imdb.com/name/nm8955325/>. Highlights include:

Discovery Channel Documentary Series | “*How the Universe Works*”
Prime cast member on seasons 6-11, with more forthcoming

Science Channel Documentary Series | “*Space’s Deepest Secrets*”
Prime cast member for Seasons 3, 4, 5
Season 2, Episode 5 includes segment about results from Tremblay et al. 2016, *Nature*

BBC & PBS NOVA Series | “*Universe*” (2022), “*Great American Eclipse*” (2024)
Prime cast member

Space on the Hill, Lead Organizer (2020 to present)
An outreach program for members of the U.S. Senate and House of Representatives (and their staffers), held every other month in the House Science Committee’s room.
Co-sponsored by the Smithsonian and the American Astronomical Society.

Astronomy On Tap, Lead Organizer (Connecticut chapter)
Highly popular monthly outreach event at a local pub, now in 12 cities worldwide
<http://astronomyontap.org/> | <http://www.facebook.com/AstronomyOnTap/>

Awesome Con 2017 | Official Guest
Moderated a Q&A on Space and Time with David Tennant (Dr. Who) before a live audience of 5,000 people | <http://awesome-con.com/guests/>

Profiled by **BBC Sky at Night Magazine**
November 2015 Issue, <http://www.skyatnightmagazine.com/>

*Education &
Public Outreach
(other / selected)*

- Public talk for 300 middle school students in Belfast, Maine
- Hosted *White House Astronomy Night* Satellite Event, New Haven, 2015
- Several events for Leitner Family Observatory & Planetarium, New Haven
- ESO Outreach Ambassador, 2011 to 2014
- “*Ask an Astronomer*”, ESO Open House Day, Garching, 2013
- ALMA outreach media event at high site (ALMA AOS, 2013)
- Diplomatic outreach with Foreign Dignitaries (ESO 50th Anniversary Gala, 2012)
- “*Letters from the Edge of the Universe*”, ESO Open House Day, Garching, 2011
- Girl Scout Astronomy Nights & Family Science Nights, RIT, 2008 to 2011
- Co-organized multiple “open telescope” nights at RIT Observatory, 2008 to 2011
- Johns Hopkins Dept. of Physics & Astro. Annual Physics Fair, 2007
- “*Big Explosions & Strong Gravity*”, NASA Goddard Space Flight Center, 2008
- “*Ask a Scientist*” at NASA’s *JWST* Exhibit, National Mall, Washington D.C. (2007)
- Mees Observatory Tour Guide, 2005 to 2006
- Chair, American Phys. Society Educational Outreach Committee, Rochester, 2005

*Invited Talks
& Reviews
(selected)*

- *Dozens of Invited Departmental Colloquia:* Dartmouth | CfA | UMass Amherst | U. Michigan | RIT | U. Alabama | Wesleyan | Yale | UMBC | STScI | ASTRON etc.
- *“The Sky & Other Ghosts: Our Fading Age of Discovery”*
14th Annual Biard Endowed Lectureship, Ohio State University, 2024
- Several Invited Virtual talks in the COVID era (2020-2023), including STScI Spring Symposium, Diffuse Gas in Cosmic Ecosystems, Beijing HUBS Symposium, etc.
- *“Cold, Galaxy-scale Fountains with Black Hole Pumps”*
Meeting of the Canadian Astronomical Society (CASCA), Winnipeg, Canada, 2016
- *“A Galaxy-Scale Fountain of Cold Molecular Gas Pumped by a Black Hole”*
Sweeping Galaxies Clean with Molecular Outflows, Sesto, Italy, 2016
- *“The Cold Phase of Mechanical AGN Feedback”*
Snowcluster 2015: The Physics of Galaxy Clusters, Snowbird, Utah, 2015
- *“Galaxy Growth from the Collapse of Hot Atmospheres”*
Islands in the Cosmos: Views of Galaxy Formation, Garching, Germany, 2013
- *“Kinetic and Radiative Feedback from Active Galaxies”*
“AGN 101”: A Review of the Field, Garching, Germany, 2013
- *“Star Formation amid Mechanical AGN Feedback in Brightest Cluster Galaxies”*
Astronomical Society of New York Spring Meeting, Rochester, NY, USA, 2011
- ASNY Research Prize Talk: *“The Warped Nuclear Disk of Radio Galaxy 3C 449”*
Astronomical Society of New York Fall Meeting, Troy, NY, USA, 2006

*Contributed Talks
(selected)*

- *“A Galaxy-Scale Fountain of Cold Molecular Gas Pumped by a Black Hole”*
Extragalactic Relativistic Jets: Cause & Effect, Bangalore, India, 2015
- *“A Galaxy-Scale Fountain of Cold Molecular Gas Pumped by a Black Hole”*
Revolution in Astronomy with ALMA: The Third Year, Tokyo, Japan, 2014
- *“Ballistic Molecular Rain powers Cold Black Hole Feedback”*
IAUS 313, Extragalactic Jets at Every Angle, Puerto Ayora, Galápagos, 2014
- *“ALMA views on Star Formation and AGN Feedback in Radio Loud AGN”*
IAUS 304, Multiwavelength AGN Surveys & Studies, Yerevan, Armenia, 2013
- *“Cool Core Clusters can Actually Cool”*
Tracing Cosmic Evolution with Clusters of Galaxies, Sesto, Italy, 2013
- *“Star Formation, Feedback, and Cold Molecular Gas in BCGs”*
Feeding, Feedback, & Fireworks (Southern Cross), Hamilton Island, Australia, 2013
- *“Morphology of Star Forming Filaments in Elliptical Galaxies”*
ESO Science Day, Garching, Germany, 2013
- *“Unique Multiphase Signatures of AGN Feedback in Abell 2597”*
IAU General Assembly XXVIII, Beijing, China, 2012
- *“Episodic Star Formation coupled to Reignition of Radio Activity in 3C 236”*
Powerful Radio Galaxies: Triggering & Feedback, Leiden, The Netherlands, 2009

Other Presentations

Many formal and informal talks (30+) at various institutes
Various Contributed Posters (four AAS meetings, two AGN feedback meetings, etc.)
Invited talks to data reduction tutorials (X-ray, optical data, etc.)

OTHER INFORMATION

Biographical Information

Citizenship: United States of America
Spoken Languages: English (native), near-fluent Spanish, basic German

References

Prof. C. Megan Urry, meg.urry@yale.edu
Israel Munson Professor of Physics and Astronomy, Yale University
Director, Yale Center for Astronomy and Astrophysics
President, American Astronomical Society

Dr. Alexey Vikhlinin, avikhlinin@cfa.harvard.edu
Senior Astrophysicist, Associate Director, and *Lynx* Community Co-Chair
Smithsonian Astrophysical Observatory

Dr. Ralph Kraft, rkraft@cfa.harvard.edu
Senior Astrophysicist and *Chandra*/HRC Instrument P.I.
Smithsonian Astrophysical Observatory

Prof. Stefi A. Baum, baum@cis.rit.edu
Director, Center for Imaging Science, Rochester Institute of Technology
Dean of Science, University of Manitoba

Prof. Christopher P. O’Dea, odea@cis.rit.edu
Professor, School of Physics & Astronomy, Rochester Institute of Technology

Prof. Dr. Françoise Combes, francoise.combes@obspm.fr
Astronome à l’Observatoire de Paris

Prof. Dr. Eric Emsellem, eemselle@eso.org
Head of the Office for Science, European Southern Observatory

Science Impact Reviewers

The following people submitted letters in support of my recent (2020) promotion at the Smithsonian Astrophysical Observatory: Prof. Feryal Özel, Prof. Megan Donahue, Prof. Mark Voit, Prof. Brian McNamara, and Prof. Andy Fabian.

REFEREED PUBLICATIONS

Over 100 publications, seventeen as first author, including in Nature. Papers in preparation are not listed. Solid and dashed underlines mark graduate and undergraduate authors under my supervision, respectively.

Highlighted papers (*i.e.*, first author papers or works on which I was significantly involved at all stages)

1. Bogdán, Á., Goulding, A. D., Natarajan, P., Kovács, O. E., **Tremblay, G. R.**, Chadayammuri, U., Volonteri, M., Kraft, R. P., Forman, W. R., Jones, C., Churazov, E., & Zhuravleva, I., *Evidence for a heavy-seed origin of early supermassive black holes from a $z \approx 10$ X-ray Quasar*, **Nature Astronomy**, 8, 126 (2024)
2. Omoruyi, O, **Tremblay, G. R.**, Combes, F., Davis, T. A., Gladders, M. D., Vikhlinin, A., Nulsen, P., Zuhone, J. A., Baum, S. A., O’Dea, C. P., Sharon, K., Terrazas, B. A., Nevin, R., Schechter, A., McDonald, M., Dahle, H., Bayliss, M., Connor, T., Florian, M., Rigby, J. R., & Vaddi, S., “*Unraveling the Origin and Multiphase*

- Dynamics of a ‘Beads on a String’ Star Formation Complex in a Cool Core Cluster with Merging Central Galaxies*”, **ApJ**, 963, 1 (2023)
3. Rose, T., McNamara, B. R., Combes, F., Edge, A. C., Fabian, A. C., Gaspari, M., Russell, H. R., Salomé, P., **Tremblay, G. R.**, & Ferland, G., “Does absorption against AGN reveal supermassive black hole accretion?”, **MNRAS**, 518, 878 (2023)
 4. Speranza, G., Balmaverde, B., Capetti, A., Massaro, F., **Tremblay, G. R.**, Marconi, A., Venturi, G., Chiaberge, M., Baldi, R. D., Baum, S., Grandi, P., Meyer, E. T., O’Dea, C., Sparks, W., Terrazas, B. A., Torresi, E., “The MURALES survey. IV. Searching for nuclear outflows in 3C radio galaxies at $z < 0.3$ with MUSE observations”, **A&A**, 653, 150 (2021)
 5. Husemann, B., Singha, M., Scharwächter, J., McElroy, R., Neumann, J., Smirnova-Pinchukova, I., Urrutia, T., Baum, S. A., Bennert, V. N., Combes, F., Croom, S. M., Davis, T. A., Fournier, Y., Galkin, A., Gaspari, M., Enke, H., Krumpe, M., O’Dea, C. P., Pérez-Torres, M., Rose, T., **Tremblay, G. R.**, & Walcher, C. J., “The Close AGN Reference Survey (CARS): IFU Survey data and the BH mass dependence of long-term AGN variability”, **A&A** in press (2021).
 6. Li, Y., Gendron-Marsolais, M., Zhuravleva, I., Xu, S., Simionescu, A., **Tremblay, G. R.**, Lochhaas, C., Bryan, G., Quataert, E., Murray, N., Boselli, A., Hlavacek-Larrondo, J., Zheng, Y., Fossati, M., Miao, L., Emsellem, E., Sarzi, M., & Arzamasckiy, L., “Direct Detection of Black Hole-Driven Turbulence in the Centers of Galaxy Clusters”, **ApJ**, 889, 1 (2020)
 7. Vaddi, S., **Tremblay, G. R.**, O’Dea, C. P., Chakravorty, S., Kharb, P., Baum, S. A., McDonald, M., & Donahue, M., “HST/COS Spectroscopy of Cooling Flow Filaments in Abell 2597 and Zw3146”, submitted to **ApJ** (2020)
 8. Gaskin, J., Swartz, D. A., Vikhlinin, A., Özel, F., Gelmis, K., Arenberg, J. W., Bandler, S. R., Bautz, M. W., Civitani, M. M., Dominguez, A., Eckart, M. E., Falcone, A. D., Figueroa-Feliciano, E., Freeman, M. D., Günther, Hans M., Havey, K. A., Heilmann, R. K., Kilaru, K., Kraft, R. P., McCarley, K. S., McEntaffer, R. L., Paresci, G., Purcell, W., Reid, P. B., Schattenburg, M. L., Schwartz, D. A., Schwartz, E. D., Tananbaum, H. D., **Tremblay, G. R.**, Zhang, W. W., & Zuhone, J. A., “Lynx X-ray Observatory: An Overview”, **JATIS**, 5(2), 021001 (2019)
 9. Husemann, B., Scharwächter, J., Davis, T. A., Smirnova-Pinchukova, I., Pérez-Torres, M., **Tremblay, G. R.**, Krumpe, M., Combes, F., Baum, S. A., Busch, G., Connor, T., Croom, S. M., Gaspari, M., Kraft, R. P., O’Dea, C. P., Powell, M., Singha, M., & Urrutia, T., “The Close AGN Reference Survey (CARS): Jet-driven outflow and stellar feedback in the edge-on galaxy HE 1353-1917”, **A&A**, 627, A53 (2019)
 10. **Tremblay, G. R.**, Combes, F., Oonk, J. B. R., Russell, H. R., McDonald, M. A., Gaspari, M., Husemann, B., Nulsen, P. E. J., McNamara, B. R., Hamer, S. L., O’Dea, C. P., Baum, S. A., Davis, T. A., Donahue, M., Voit, G. M., Edge, A. C., Blanton, E. L., Bremer, M. N., Bulbul, E., Clarke, T. E., David, L. P., Edwards, L. O. V., Eggerman, D., Fabian, A. C., Forman, W. R., Jones, C., Kerman, N., Kraft, R. P., Li, Y., Powell, M., Randall, S., Salomé, P., Simionescu, A., Su, Y., Sun, M., Urry, C. M., Vantyghem, A. N., Wilkes, B. J., & Zuhone, J. A. “A Galaxy-Scale Fountain of Cold Molecular Gas Pumped by a Black Hole”, **ApJ**, 865, 13 (2018)
 11. Powell, M., Husemann, B., **Tremblay, G. R.**, Krumpe, M., Urrutia, T., Combes, F., Croom, S. M., Davis, T. A., O’Dea, C. P., Pérez-Torres, M., Scharwächter, J., Smirnova-Pinchukova, I., & Urry, C. M. “The Close AGN Reference Survey (CARS). No evidence of galaxy-scale hot outflows in two nearby AGN”, **A&A** in press (2018)

12. Chiaberge, M., **Tremblay, G. R.**, Capetti, A., & Norman, C. “*The Recoiling Black Hole Candidate 3C 186: Spatially Resolved Quasar Feedback and Further Evidence of a Blueshifted Broad Line Region*”, **ApJ**, 861, 56 (2018)
13. Simionescu, A., **Tremblay, G. R.**, Werner, N., Canning, R. E. A., Allen, S. W., & Oonk, J. B. R. “*ALMA observation of the disruption of molecular gas in M87*”, **MNRAS**, 475, 30004 (2018)
14. Li, Y., Ruszkowski, M., & **Tremblay, G. R.** “*The effects of Ram Pressure Stripping on Cold Clouds in the Center of Galaxy Clusters*”, **ApJ**, 854, 91 (2018)
15. O’Dea, C. P., Worrall, D. M., **Tremblay, G. R.**, Clarke, T. E., Rotherberg, B., Baum, S. A., Christiansen, K. P., Mullarkey, C. A., Noel-Storr, J., & Mittal, R. “*Testing for Shock-heated X-ray Gas around Compact Steep Spectrum Radio Galaxies*”, **ApJ**, 851, 87 (2017)
16. Krumpke, M., Husemann, B., **Tremblay, G. R.**, Urrutia, T., Powell, M., Davis, T. A., Scharwächter, J., Dexter, J., Busch, G., Combes, F., Croom, S. M., Eckart, A., McElroy, R. E., Perez-Torres, M., & Leung, G. “*The Close AGN Reference Survey (CARS). Mrk 1018 Halts Dimming and Experiences Strong Short-term Variability*”, **A&A Letters**, 607, 9 (2017)
17. Chiaberge, M., Ely, J. C., Meyer, E. T., Georganopoulos, M., Marinucci, A., Bianchi, S., **Tremblay, G. R.**, Hilbert, B., Kotyla, J. P., Capetti, A., Baum, S. A., Macchetto, F. D., Miley, G. K., O’Dea, C. P., Perlman, E. S., Sparks, W. B., & Norman, C. “*The puzzling case of the radio-loud QSO 3C 186: A Gravitational Wave Recoiling Black Hole in a Young Radio Source?*”, **A&A**, 600, 57 (2017)
18. **Tremblay, G. R.**, Oonk, J. B. R., Combes, F., Salomé, P., O’Dea, C. P., Baum, S. A., Voit, G. M., Donahue, M., McNamara, B. R., Davis, T. A., McDonald, M. A., Edge, A. C., Clarke, T. E., Galván-Madrid, R., Bremer, M. N., Edwards, L. O. V., Fabian, A. C., Hamer, S. L., Li, Y., Maury, A., Russell, H. R., Quillen, A. C., Urry, C. M., Sanders, J. S., & Wise, M. “*Cold, Clumpy Accretion onto an Active Supermassive Black Hole*”, **Nature**, 534, 218-221 (2016)
19. Cooke, K. C., O’Dea, C. P., Baum, S. A., **Tremblay, G. R.**, Cox, I. G., & Gladders, M. “*Star Formation in Intermediate Redshift Brightest Cluster Galaxies*”, **ApJ**, 833, 224 (2016)
20. Husemann, B., Urrutia, T., **Tremblay, G. R.**, Krumpke, M., Dexter, J., Busch, G., Combes, F., Croom, S. M., Davis, T. A., Eckhart, A., McElroy, R. E., Perez-Torres, M., Powell, M., & Scharwächter, J. “*The Close AGN Reference Survey (CARS): What is causing Mrk 1018’s Return to the Shadows?*”, **A&A**, 593, L9 (2016)
21. Hilbert, B., Chiaberge, M., Kotyla, J. P., **Tremblay, G. R.**, Stanghellini, C., Sparks, W. B., Baum, S. A., Capetti, A., Macchetto, F. D., Miley, G. K., O’Dea, C. P., Perlman, E. S., & Quillen, A. C. “*Powerful Activity in the Bright Ages. I. A Visible/IR Survey of High Redshift 3C Radio Galaxies and Quasars*”, **ApJS**, 225, 12 (2016)
22. **Tremblay, G. R.**, O’Dea, C. P., Baum, S. A., Mittal, R., McDonald, M., Combes, F., Donahue, M., Voit, M., McNamara, B. R., Russell, H. R., Fabian, A. C., Hamer, S. L., Hogan, M., Oonk, J. B. R., Quillen, A. C., Sanders, J. S., Salomé, P., & Voit, G. M., “*Far Ultraviolet Morphology of Star Forming Filaments in Cool Core Brightest Cluster Galaxies*”, **MNRAS**, 451, 3768 (2015)
23. **Tremblay, G. R.**, Gladders, M. D., Baum, S. A., O’Dea, C. P., Bayliss, M., Cooke, K., Dahle, H., Davis, T. A., Florian, M. D., Rigby, J., Sharon, K., & Soto, E., “*A Thirty Kiloparsec Chain of ‘Beads on a String’ Star Formation between two Merging Early Type Galaxies in the core of a Strong Lensing Galaxy Cluster*”, **ApJL**, 790, 26 (2014)

24. Massaro, F., Harris, D. E., **Tremblay, G. R.**, Liuzzo, E., Bonafede, A., & Paggi, A., “A *Chandra* Snapshot Survey for 3C Radio Galaxies with Redshifts between 0.3 and 0.5”, **ApJS**, 206, 7 (2013)
25. O’Dea, C. P., Baum, S. A., **Tremblay, G. R.**, Kharb, P., Cotton, W., & Perley, R., “*Hubble Space Telescope Observations of Dusty Filaments in Hercules A: Evidence for Entrainment*”, **ApJ**, 771, 38 (2013)
26. Massaro, F., **Tremblay, G. R.**, Harris, D. E., Kharb, P., Axon, D., Balmaverde, B., Baum, S. A., Capetti, A., Chiaberge, M., Gilli, R., Giovannini, G., Grandi, P., Macchetto, F. D., O’Dea, C. P., Risaliti, G., Sparks, W., & Torresi, E., “*Chandra Observations of 3C Radio Sources with $z < 0.3$. II. Completing the Snapshot Survey*”, **ApJS**, 203, 31 (2012)
27. **Tremblay, G. R.**, O’Dea, C. P., Baum, S. A., Clarke, T. E., Sarazin, C. L., Bregman, J. N., Combes, F., Donahue, M., Edge, A. C., Fabian, A. C., Ferland, G. J., McNamara, B. R., Mittal, R., Oonk, J. B. R., Quillen, A. C., Russell, H. R., Sanders, J. S., Salomé, P., Voit, G. M., Wilman, R. J., & Wise, M. W., “*Residual cooling and persistent star formation amid active galactic nucleus feedback in Abell 2597*”, **MNRAS**, 424, 1042 (2012)
28. **Tremblay, G. R.**, O’Dea, C. P., Baum, S. A., Clarke, T. E., Sarazin, C. L., Bregman, J. N., Combes, F., Donahue, M., Edge, A. C., Fabian, A. C., Ferland, G. J., McNamara, B. R., Mittal, R., Oonk, J. B. R., Quillen, A. C., Russell, H. R., Sanders, J. S., Salomé, P., Voit, G. M., Wilman, R. J., & Wise, M. W., “*Multiphase signatures of active galactic nucleus feedback in Abell 2597*”, **MNRAS**, 424, 1026 (2012)
29. **Tremblay, G. R.**, “*Feedback Regulated Star Formation in Cool Core Clusters of Galaxies*”, Ph.D. Thesis, Rochester Institute of Technology (2011), DOI: 10.5281/zenodo.48475
30. O’Dea, K. P., Quillen, A. C., O’Dea, C. P., **Tremblay, G. R.**, Snios, B. T., Baum, S. A., Christiansen, K., Noel-Storr, J., Edge, A. C., Donahue, M., & Voit, G. M. “*Hubble Space Telescope Far-ultraviolet Observations of Brightest Cluster Galaxies: The Role of Star Formation in Cooling Flows and BCG Evolution*”, **ApJ**, 719, 1619 (2010)
31. **Tremblay, G. R.**, O’Dea, C. P., Baum, S. A., Koekemoer, A. M., Sparks, W. B., de Bruyn, G., & Schoenmakers, A. P., “*Episodic Star Formation Coupled to Reignition of Radio Activity in 3C 236*”, **ApJ**, 715, 172 (2010)
32. Massaro, F., Harris, D. E., **Tremblay, G. R.**, Axon, D., Baum, S. A., Capetti, A., Chiaberge, M., Gilli, R., Giovannini, G., Grandi, P., Macchetto, F. D., O’Dea, C. P., Risaliti, G., Sparks, W., & Torresi, E., “*Chandra Observations of 3C Radio Sources with $z < 0.3$: Nuclei, Diffuse Emission, Jets, and Hotspots*”, **ApJ**, 714, 589 (2010)
33. **Tremblay, G. R.**, Chiaberge, M., Sparks, W. B., Baum, S. A., Allen, M. G., Axon, D. J., Capetti, A., Floyd, D. J. E., Macchetto, F. D., Miley, G. K., Noel-Storr, J., O’Dea, C. P., Perlman, E. S., & Quillen, A. C., “*HST/ACS Emission Line Imaging of Low-redshift 3CR Radio Galaxies. I. The Data*”, **ApJS**, 183, 278 (2009)
34. Chiaberge, M., **Tremblay, G.**, Capetti, A., Macchetto, F. D., Tozzi, P., & Sparks, W. B., “*Low-Power Radio Galaxies in the Distant Universe: A Search for FR I at $1 < z < 2$ in the Cosmos Field*”, **ApJ**, 696, 1103 (2009)
35. **Tremblay, G. R.**, Chiaberge, M., Donzelli, C. J., Quillen, A. C., Capetti, A., Sparks, W. B., & Macchetto, F. D., “*Isophotal Structure and Dust Distribution in Radio-loud Elliptical Galaxies*”, **ApJ**, 666, 109 (2007)
36. **Tremblay, G. R.**, Quillen, A. C., Floyd, D. J. E., Noel-Storr, J., Baum, S. A., Axon, D., O’Dea, C. P., Chiaberge, M., Macchetto, F. D., Sparks, W. B., Miley, G. K., Capetti, A., Madrid, J. P., & Perlman, E., “*The Warped Nuclear Disk of Radio Galaxy 3C 449*”, **ApJ**, 643, 101 (2006)

37. **Tremblay, G. R.**, “*Accretion Region Variability Mechanisms in Low Luminosity AGN*”, University of Rochester Journal of Undergraduate Research, 4, 33-37 (2005)

Refereed papers as co-author

38. Ginsburg, A., Bally, J., Barnes, A. T., Battersby, C., Budaiev, N., Butterfield, N., Caselli, P., Colzi, L., Dutkowska, K. M., García, P., Gramze, S., Henshaw, J. D., Hu, Y., Jeff, D., Jiménez-Serra, I, Kauffmann, J., Klessen, Ralf S., Levesque, E. M., Longmore, S. N., Lu, X., Mills, E. A. C., Morris, M. R., Nogueras-Lara, F., Oka, T., Pineda, J. E., Pillai, Thushara G., Rivilla, V. M. ; Sánchez-Monge, Á, Santa-Maria, M. G., Smith, H. A. Sofue, Y., Sormani, M. C., **Tremblay, G. R.**, Vermariën, Gijis, Vikhlinin, A., Viti, S., Walker, D., Wang, Q. D., Xu, F., & Zhang, Q., “*A broad linewidth, compact, millimeter-bright molecular emission line source near the Galactic Center*”, **ApJL** in press, 2024
39. Kovács, O. E., Bogdán, Á, Natarajan, P., Werner, N., Azadi, M., Volonteri, M., **Tremblay, G. R.**, Chadayammuri, U., Forman, W. R., Jones, C., & Kraft, R. P., “*A Candidate Supermassive Black Hole in a Gravitationally Lensed Galaxy at $z \approx 10$* ”, **ApJL**, 965, 21 (2024)
40. Duggal, C., O’Dea, C. P., Baum, S. A., Labiano, A., Tadhunter, C., Worrall, D. M., Morganti, R., Tremblay, G. R., Dicken, D., “*Optical- and UV-continuum Morphologies of Compact Radio Source Hosts*”, **ApJ**, 965, 17 (2024)
41. Rose, T., McNamara, B. R., Combes, F., Edge, A. C., McDonald, M., O’Sullivan, E., Russell, H., Fabian, A. C., Ferland, G., Salomé, P., & **Tremblay, G. R.**, “*Two distinct molecular cloud populations detected in massive galaxies*”, **MNRAS** in press (2024)
42. Breiding, P., Chiaberge, M., Lambrides, E., Meyer, E. T., Willner, S. P., Hilbert, B., Haas, M., Miley, G., Perlman, E. S., Barthel, P., O’Dea, C. P., Capetti, A., Wilkes, B., Baum, S. A., Macchetto, D. F., Sparks, W. B., **Tremblay, G. R.**, Norman, C., “*Powerful Radio-loud Quasars Are Triggered by Galaxy Mergers in the Cosmic Bright Ages*”, **ApJ**, 963, 91 (2024)
43. Rose, T., McNamara, B. R., Combes, F., Edge, A. C., Russell, H., Salomé, P., Tamhane, P., Fabian, A. C., & **Tremblay, G. R.**, “*A massive multiphase plume of gas in Abell 2390’s brightest cluster galaxy*”, **MNRAS**, 528, 3441 (2024)
44. Pozo, A., Emami, R., Mocz, P., Broadhurst, T., Hernquist, L., Vogelsberger, M., Smith, R., **Tremblay, G. R.**, Narayan, R., Steiner, J., Grindlay, J., & Smoot, G. “*Galaxy formation with Wave/Fuzzy Dark Matter: The core-halo structure*”, **ApJ** in press (2024)
45. Waters, T. K., Peterson, C., Emami, R., Shen, X., Hernquist, L., Smith, R., Vogelsberger, M., Alcock, C., **Tremblay, G. R.**, Liska, M., Forbes, J. C., & Moreno, J., “*Gas Morphology of Milky Way-like Galaxies in the TNG50 Simulation: Signals of Twisting and Stretching*”, **ApJ**, 961, 193 (2024)
46. Singha, M., Winkel, N., Vaddi, S., Pérez Torres, M., Gaspari, M., Smirnova-Pinchukova, I., O’Dea, C. P., Combes, F., **Omoruyi, O.**, Rose, T., McElroy, R., Husemann, B., Davis, T. A., Baum, S. A., Lawlor-Forsyth, C., Neumann, J., & **Tremblay, G. R.**, “*The Close AGN Reference Survey (CARS): An Interplay between Radio Jets and AGN Radiation in the Radio-quiet AGN HE0040-1105*”, **ApJ**, 959, 107 (2023)
47. Emami, R., Doeleman, S. S., Wielgus, M., Chang, D., Chatterjee, K., Smith, R., Liska, M., Steiner, J. F., Ricarte, A., Narayan, R., **Tremblay, G. R.**, Finkbeiner, D., Hernquist, L., Chan, C.-K., Blackburn, L., Prather, B. S., Tiede, P., Broderick, A. E., Vogelsberger, M., Alcock, C., & Roelofs, F. “*The EB Correlation in Resolved Polarized Images: Connections to the Astrophysics of Black Holes*, **ApJ**, 955, 6 (2023)

48. van Dokkum, P., Pasha, I., Luisa Buzzo, M., LaMassa, S., Shen, Z., Keim, M., Abraham, R., Conroy, C., Danieli, S., Mitra, K., Nagai, D., Natarajan, P., Romanowky, A., **Tremblay, G. R.**, Urry, C. M., & van den Bosch, F., “*A candidate runaway supermassive black hole identified by shocks and star formation in its wake*”, **ApJL**, 946, 50 (2023)
49. Tian, C., Urry, C. M., Ghosh, A., Ofman, R., Ananna, T., Auge, C., Cappelluti, N., Powell, M., Sanders, D., Schawinski, K., Stark, D., & **Tremblay, G. R.**, “*Using Machine Learning to Determine Morphologies of $z < 1$ AGN Host Galaxies in the Hyper Suprime-Cam Wide Survey*”, **ApJ** 944, 124 (2023)
50. Emami, R., Anantua, R., Ricarte, A., Doeleman, S., Broderick, A., Wong, G., Blackburn, L., Wielgus, M., Narayan, R., **Tremblay, G. R.**, Alcock, C., Hernquist, L., Smith, R., Liska, M., Natarajan, P., Vogelsberger, M., Curd, B., Kramer, J., “*Probing plasma composition with the next generation Event Horizon Telescope (ngEHT)*”, “**Galaxies**”, 11, 11 (2023)
51. Emami, R., Tiede, P., Doeleman, S.S., Roelofs, F., Wielgus, M., Bouman, K.L., Blackburn, L., Liska, M., Chatterjee, C., Fuentes, A., Broderick, A., Hernquist, L., Alcock, C., Weintroub, J., Narayan, R., Smith, R., Tremblay, G., Ricarte, A., Sun, H., Anantua, R., Kovalev, Y.Y., Natarajan, P., & Vogelsberger, M., “*Tracing hot spot motion using the next generation Event Horizon Telescope*”, **Galaxies**, 11, 11 (2023)
52. Emami, R., Ricarte, A., Wong, G., Palumbo, D., Chang, D., Doleman, S., Broderick, A., Narayn, R., Weintroub, J., Maciek, W., Blackburn, L., Prather, B., Chael, A., Anantua, R., Chatterjee, K., Marti-Vidal, I., Gomez, J., Akiyama, K., Liska, M., Hernquist, L., **Tremblay, G. R.**, Vogelsberger, M., Alcock, C., Smith, R., Steiner, J., Tiede, P., & Roelofs, F., “*Unraveling Twisty Linear Polarization Morphologies in Black Hole Images*”, **ApJ**, 950, 38 (2023)
53. Jimenez-Gallardo, A., Sani, E., Ricci, F., Mazzucchelli, C., Balmaverde, B., Massaro, F., Capetti, A., Forman, W. R., Kraft, R. P., Venturi, G., Gendron-Marsolais, M., Prieto, M. A., Marconi, A. ; Peña-Herazo, H. A., Baum, S. A., O’Dea, C. P., Lovisari, L., Gilli, R., Torresi, E., Paggi, A., Missaglia, V., **Tremblay, G. R.**, Wilkes, B. J., “*The cavity of 3CR 196.1: H α emission spatially associated with an X-ray cavity*”, **ApJ**, 941, 114 (2022)
54. Calzadilla, M., McDonald, M., Donahue, M., McNamara, B. R., Fogarty, K., Gaspari, M., Gitti, M., Russell, H. R., **Tremblay, G. R.**, Voit, G. M., & Ubertosi, F., “*Testing the Limits of AGN Feedback in the most Rapidly Star Forming Central Cluster Galaxies*”, **ApJ**, 940, 140 (2022)
55. The Astropy Collaboration, “*The Astropy Project: Sustaining and Growing a Community-oriented Open-source Project and the Latest Major Release (v5.0) of the Core Package*”, **ApJ**, 935, 167 (2022)
56. Winkel, N., Husemann, B., Davis, T.A., Smirnova-Pinchukova, I., Bennert, V., Combes F., Gaspari, M., Jahnke, K., Neumann, J., O’Dea, C. P., Pérez-Torres, M., Singha, M., **Tremblay, G. R.**, & Rix, H. W., “*The Close AGN Reference Survey (CARS): Tracing the circumnuclear star formation in the super-Eddington NLS1 Mrk 1044*”, **A&A**, 663, 104 (2022)
57. Singha, M., Vaddi, S., Perez Torres, M., Winkel, N., Gaspari, M., Davivs, T. A., Huseman, B., O’Dea, C. P., Baum, S. A., Combes, F., Neumann, J., Rose, T., & **Tremblay, G. R.**, “*The Close AGN Reference Survey (CARS): Revealing the jet-driven outflow in the radio quiet AGN HE 0040-1105*”, **ApJ** in press (2022)
58. Duggal, C., O’Dea, C., Baum, S., Labiano, A., Morganti, R., Tadhunter, C., Worrall, D., **Tremblay, G. R.**, Dicken, D., Capetti, A., “*Jet-triggered star formation in young radio galaxies*”, **AN**, 342, 1087 (2021)
59. Castigani, G., Meyer, E., Chiaberge, M., Combes, F., Morishita, T., Decarli, R., Capetti, A., Dotti, M., **Tremblay, G. R.**, Norman, C. A., “*NOEMA Observations support a recoiling black hole in 3C 186*”, **A&A Letters**, 661, 2 (2022)

60. Timmerman, R. , van Weeren, R. J. , Callingham, J. R. , Cotton, W. D. , Perley, R. , Morabito, L. K. , Gizani, N. A. B. , Bridle, A. H. , O’Dea, C. P. , Baum, S. A. , Tremblay, G. R. , Kharb, P. , Kassim, N. E. , Röttgering, H. J. A. , Botteon, A. search by orcid , Sweijen, F. , Tasse, C. , Brüggem, M. , Moldon, J. , Shimwell, T. , Brunetti, G., “*Origin of the ring structures in Hercules A. Sub-arcsecond 144 MHz to 7 GHz observations*”, **A&A**, 658, 5 (2022)
61. Olivares, V. , Salome, P. , Hamer, S. L. , Combes, F. , Gaspari, M. , Kolokythas, K. , O’Sullivan, E. , Beckmann, R. S. , Babul, A. , Polles, F. L. , Lehnert, M. , Loubser, S. I. , Donahue, M. , Gendron-Marsolais, M. -L. , Lagos, P. , Pineau des Forets, G. , Godard, B. , Rose, T. , **Tremblay, G. R.** , Ferland, G. , Guillard, P., “*Gas condensation in Brightest Group Galaxies unveiled with MUSE*”, **A&A**, 666, 94 (2022)
62. Capetti, A., Balmaverde, B., Tadhunter, C., Marconi, A., Venturi, G., Chiaberge, M., Baldi, R. D., Baum, S., Gilli, R., Grandi, P., Meyer, E. T., Miley, G., O’Dea, C., Sparks, W., Torresi, E., **Tremblay, G. R.**, “*The MURALES survey. V. Jet-induced star formation in 3C 277.3 (Coma A)*”, **A&A**, 657, 114 (2022)
63. Smirnova-Pinchukova, I. , Husemann, B. , Davis, T. A. , Smith, C. M. A. , Singha, M. , **Tremblay, G. R.**, Klessen, R. S. , Powell, M. , Connor, T. , Baum, S. A. , Combes, F. , Croom, S. M. , Gaspari, M. search by orcid , Neumann, J. , O’Dea, C. P. , Pérez-Torres, M. , Rosario, D. J. , Rose, T. , Scharwächter, J. , Winkel, N., “*The Close AGN Reference Survey (CARS): No obvious signature of AGN feedback on star formation, but subtle trends*”, **A&A**, 659, 125 (2021)
64. Singha, M. , Husemann, B. , Urrutia, T. , O’Dea, C. P. , Scharwächter, J. , Gaspari, M., Combes, F. , Nevin, R. , Terrazas, B. A. , Pérez-Torres, M. , Rose, T. , Davis, T. A. , **Tremblay, G. R.** , Neumann, J. , Smirnova-Pinchukova, I. , Baum, S. A., “*The Close AGN Reference Survey (CARS): Locating the [O III] wing component in luminous local Type 1 AGN*”, **A&A**, 695, 123 (2022)
65. Gill, A., Boyce, M. M., O’Dea, C. P., Baum, S. A., Kharb, P., Campbell, N., **Tremblay, G. R.**, & Kundu, S., “*Extended X-Ray Emission Associated with the Radio Lobes and the Environments of 60 Radio Galaxies*”, **ApJ**, 912, 88 (2021)
66. Missaglia, V., Massaro, F., Liuzzo, E., Paggi, A., Kraft, R. P., Forman, W. R., Jimenez-Gallardo, A., Madrid, J. P., Ricci, F., Stuardi, C., Wilkes, B. J., Baum, S. A., O’Dea, C. P., Kuraszkiewicz, J., Tremblay, G. R., Maselli, A., Capetti, A., Sani, E., Balmaverde, B., Harris, D. E., “*Hidden treasures in the unknown 3CR extragalactic radio sky: a multi-wavelength approach*”, **ApJS**, 255, 18 (2021)
67. Jimenez-Gallardo, A., Massaro, F., Balmaverde, B., Paggi, A., Capetti, A., Forman, W. R., Kraft, R. P., Baldi, R. D., Mahatma, V. H., Mazzucchelli, C., Missaglia, V., Ricci, F., Venturi, G., Bam, S. A., Liuzzo, E., O’Dea, C. P., Prieto, M. A., Röttgering, H. J. A., Sani, E., Sparks, W. B., **Tremblay, G. R.**, van Weeren, R. J., Wilkes, B. J., Harwood, J. J., Mazzotta, P., & Kuraszkiewicz, J., “*Raining in MKW 3s: a Chandra-MUSE analysis of X-ray cold filaments around 3CR 318.1*”, **ApJ**, 912, 25 (2021)
68. Dunn, W. R., Ness, J. -U., Lamy, L., **Tremblay, G. R.**, Branduardi-Raymont, G., Snios, B., Kraft, R. P., Yao, Z., & Wibisono, A. D., “*A Low Signal Detection of X Rays From Uranus*”, **JGR (Space Physics)**, 126, e28739 (2021)
69. Paggi, A., Massaro, F., Peña-Herazo, H. A., Missaglia, V., Ricci, F., Stuardi, C., Kraft, R. P., **Tremblay, G. R.**, Baum, S. A., & Wilkes, B. J., “*Peering into the extended X-ray emission on megaparsec scale in 3C 187*”, **A&A**, 647, 79 (2021)
70. Stroe, A. , Hussaini, M., Husemann, B., Sobral, D., & **Tremblay, G. R.**, “*The First Integral Field Unit Spectroscopic View of Shocked Cluster Galaxies*”, **ApJ**, 905, 22 (2020)

71. Balmaverde, B., Capetti, A., Marconi, A., Venturi, G., Chiaberge, M., Baldi, R. D., Baum, S. A., Gilli, R., Grandi, P., Meyer, E. T., Miley, G. K., O’Dea, C. P., Sparks, W. B., Torresi, E., & **Tremblay, G. R.**, “*The MURALES survey. III. Completing the MUSE observations of 37 3C low-z radio galaxies*”, **A&A**, 645, 12 (2020)
72. Rose, T., Edge, A. C., Combes, F., Hamer, S., McNamara, B. R., Russell, H., Gaspari, M., Salomé, P., Sarazin, C., **Tremblay, G. R.**, Baum, S. A., Bremer, M. N., Donahue, M., Fabian, A. C., Ferland, G., Nesvadba, N., O’Dea, C. P., Oonk, J. B. R., & Peck, A. B., “*A molecular absorption line survey towards the AGN of Hydra-A*”, **MNRAS**, 496, 364 (2020)
73. Jimenez-Gallardo, A., Massaro, F., Prieto, M. A., Missaglia, V., Stuardi, C., Paggi, A., Ricci, F., Kraft, R. P., Liuzzo, E., **Tremblay, G. R.**, Baum, S. A., O’Dea, C. P., Wilkes, B. J., Kuraszewicz, J., Forman, W. R. & Harris, D. E., “*Completing the 3CR Chandra Snapshot Survey: Extragalactic Radio Sources at High Redshift*”, **ApJS**. 250, 7 (2020)
74. Edwards, L. O.V., Salinas, M., Stanley, S., West, P. E. H., Trierweiler, I., Alpert, H., Coelho, P., Koppaka, S., **Tremblay, G. R.**, Martel, H., & Li, Y., “*Clocking the formation of today’s largest galaxies: Wide field integral spectroscopy of Brightest Cluster Galaxies and their surroundings*”, **MNRAS**, 491, 2617 (2020)
75. Nulsen, S., Kraft, R. P., Germain, G., Dunn, W., **Tremblay, G. R.**, Beegle, L., Branduardi-Raymont, G., Bulbul, E., Elsner, R., Hodyss, R., & Vance, S., “*X-Ray Emission from Jupiter’s Galilean Moons: A Tool for Determining Their Surface Composition and Particle Environment*”, **ApJ**, 895, 79 (2020)
76. Smirnova-Pinchukova, I., Husemann, B., Busch, G., Appleton, P., Bethermin, M., Combes, F., Croom, S., Davis, T. A., Fischer, C., Gaspari, M., Groves, B., Klein, R., O’Dea, C. P., Pérez-Torres, M., Scharwächter, J., Singha, M., Tremblay, G. R., Urrutia, T., “*The Close AGN Reference Survey (CARS). Discovery of a global [C II] 158 μ m line excess in AGN HE 1353-1917*”, **A&A**, 626, 3 (2019)
77. Rose, T., Edge, A. C., Combes, F., Gaspari, M., Hamer, S., Nesvadba, N., Peck, A. B., Sarazin, S., **Tremblay, G. R.**, Baum, S. A., Bremer, M. N., McNamara, B., O’Dea, C. P., Oonk, J. B. R., Russell, H., Salomé, P., Donahue, M., Fabian, A. C., Ferland, G., Mittal, R., & Vantyghem, A., “*Constraining cold accretion on to supermassive black holes: molecular gas in the cores of eight brightest cluster galaxies revealed by joint CO and CN absorption*”, **MNRAS**, 489, 349 (2019)
78. Gaspari, M., Eckert, D., Ettori, S., Tozzi, P., Bassini, L., Rasia, E., Brighenti, F., Sun, M., Borgani, S., Johnson, S. D., Tremblay, G., Stone, J., Temi, P., Yang, H. -Y. K., Tombesi, F., Cappi, M., “*The X-ray Halo Scaling Relations of Supermassive Black Holes*”, **ApJ**, 884, 169 (2019)
79. McDonald, M., McNamara, B. R., Voit, G. M., Bayliss, M., Benson, B. A., Brodwin, M., Canning, R. E. A., Florian, M. K., Garmire, G. P., Gaspari, M., Gladders, M. D., Hlavacek-Larrondo, J., Kara, E., Reichardt, C. L., Russell, H. R., Saro, A., Sharon, K., Somboonpanyakul, T., Tremblay, G. R., van Weeren, R. J., “*Anatomy of a Cooling Flow: The Feedback Response to Pure Cooling in the Core of the Phoenix Cluster*”, **ApJ**, 885, 63 (2019)
80. Balmaverde, B., Capetti, A., Baldi, R., Baum, S., Chiaberge, M., Gilli, R., Grandi, P., Marconi, A., Meyer, E., Miley, G., O’Dea, C., Sparks, W., Torresi, E., Tremblay, G., Venturi, G., “*The MURALES survey. II. Presentation of the observations and first results*”, **A&A**, 632, 124 (2019)
81. Rose, T., Edge, A. C., Combes, F., Gaspari, M., Hamer, S., Nesvadba, N., Russell, H. R., **Tremblay, G. R.**, Baum, S. A., O’Dea, C. P., Peck, A. B., Sarazin, C., Vantyghem, A., Bremer, M., Donahue, M., Fabian, A. C., Ferland, G., McNamara, B. R., Mittal, R., Oonk, J. B. R., Salomé, P., Swinbank, A. M., & Voit, G. M., “*Deep*

- and narrow CO absorption revealing molecular clouds in the Hydra-A Brightest Cluster Galaxy”, *MNRAS*, 485, 229 (2019)
82. Neumann, J., Gadotti, D. A., Wisotzki, L., Husemann, B., Busch, G., Combes, F., Croom, S. M., Davis, T. A., Gaspari, M., Krumpke, M., Pérez-Torres, M., Scharwaechter, J., Smirnova-Pinchukova, I., **Tremblay, G. R.**, & Urrutia, T., ““*The Close AGN Reference Survey (CARS): A comparative analysis of the structural properties of star-forming and non-star-forming galaxy bars*”, *A&A*, 627, 26 (2019)
 83. Olivares, V., Salomé, P., Combes, F., Hamer, S., Guillard, P., Lehnert, M. D., Polles, F., Beckmann, R. S., Dubois, Y., Donahue, M., Edge, A., Fabian, A. C., McNamara, B., Rose, T., Russell, H., **Tremblay, G.**, Vantyghem, A., Canning, R. E. A., Ferland, G., Godard, B. Hogan, M., Peirani, S., Pineau des Forets, G., “*Ubiquitous cold and massive filaments in cool core clusters*”, *A&A* in press (2019)
 84. Calzadilla, M. S., Russell, H. R., McDonald, M., Fabian, A. C., Baum, S. A., Combes, F., Donahue, M., Edge, A. C., McNamara, B. R., Nulsen, P. E. J., O’Dea, C. P., Oonk, J. B., **Tremblay, G. R.**, Vantyghem, A.N., “*Revealing a Highly Dynamic Cluster Core in Abell 1664 with Chandra*”, *ApJ*, 875, 65 (2019)
 85. Allison, J. R., Mahony, E., K., Moss, V. A., Sadler, E. M., Whiting, M. T., Allison, R. F., Bland-Hawthorn, J., Curran, S. J., Emonts, B. H. C., Lagos, C. D. P., Morganti, R., **Tremblay, G. R.**, Zwaan, M., Anderson, C. S., Bunton, J. D., & Voronkov, M. A., “*PKS B1740-517: an ALMA view of the cold gas feeding a distant interacting young radio galaxy*”, *MNRAS*, 482, 2934 (2019)
 86. Ricci, F., Lovisari, L., Kraft, R. P., Massaro, F., Paggi, A., Liuzzo, E., Tremblay, G., Forman, W. R., Baum, S., O’Dea, C., Wilkes, B., “*Stormy Weather in 3C 196.1: Nuclear Outbursts and Merger Events Shape the Environment of the Hybrid Radio Galaxy 3C 196.1*”, *ApJ*, 867, 35, (2018)
 87. Busch, G., Husemann, B., Smirnova-Pinchukova, I., Eckart, A., Baum, S. A., Combes, F., Croom, S. M., Davis, T. A., Fazeli, N., Fischer, C., Gaspari, M., Klein, R., Krumpke, M., McElroy, R., O’Dea, C. P., Perez-Torres, M. A., Powell, M., Sanchez-Monge, A., Scharwaechter, J., **Tremblay, G. R.**, & Urrutia, T., “*The Close AGN Reference Survey (CARS): SOFIA Detects Spatially Resolved [C II] Emission in the Luminous AGN HE 0433-1028*”, *ApJ*, 866, 9 (2018)
 88. Stuardi, C., Missaglia, V., Massaro, F., Ricci, F., Liuzzo, E., Paggi, A., Kraft, R. P., **Tremblay, G. R.**, Baum, S. A., O’Dea, C. P., Wilkes, B. J., Kuraszkiwicz, J., Forman, W. R., & Harris, D. E., “*The 3CR Chandra Snapshot Survey: Extragalactic Radio Sources with Redshifts Between 1 and 1.5*”, *ApJS*, 235, 2 (2018)
 89. Massaro, F., Missaglia, V., Stuardi, C., Harris, D. E., Kraft, R. P., Paggi, A., Liuzzo, E., **Tremblay, G. R.**, Baum, S. A., O’Dea, C. P., Wilkes, B. J., Kuraszkiwicz, J., & Forman, W., “*The 3CR Chandra Snapshot Survey: Extragalactic Radio Sources with $0.5 < z < 1.0$* ”, *ApJS*, 234, 1 (2018)
 90. The Astropy Collaboration (including **Tremblay, G. R.**), “*The Astropy Project: Building an inclusive, open-source project and status of the v2.0 software*”, *AJ*, 156, 123 (2018)
 91. McDonald, M. A., Gaspari, M., McNamara, B. R., & **Tremblay, G. R.**, “*Revisiting the Cooling Flow Problem in Galaxies, Groups, and Clusters of Galaxies*”, *ApJ*, 858, 45 (2018)
 92. Gaspari, M., McDonald, M. A., Hamer, S. L., Brighenti, F., Temi, P., Gendron-Marsolais, M., Hlavacek-Larrondo, J., Edge, A. C., Werner, N., Tozzi, P., Sun, M., Stone, J. M., **Tremblay, G. R.**, Hogan, M. T., Eckert, D., Etori, S., Yu, H., Biffi, V., & Planelles, S., “*Shaken Snow Globes: Kinematic Tracers of the Multiphase Condensation Cascade in Massive Galaxies, Groups, and Clusters*”, *ApJ*, 854, 167 (2018)

93. Russell, H. R., McNamara, B.R., Fabian, A. C., Nulsen, P. E. J., Combes, F., Edge, A. C., Hogan, M. T., McDonald, M. A., Salomé, P., **Tremblay, G. R.**, & Vantyghem, A. N., “Close entrainment of massive molecular gas flows by radio bubbles in the central galaxy of Abell 1795”. **MNRAS**, 472, 4024 (2017)
94. Vantyghem, A. N., McNamara, B. R., Russell, H. R., Hogan, M. T., Edge, A. C., Nulsen, P. E. J., Fabian, A. C., Combes, F., Murray, N. W., Parrish, I. J., Salomé, P., Sanders, J. S., Baum, S. A., Donahue, M., Main, R. A., O’Connell, R. W., O’Dea, C. P., Oonk, J. B. R., **Tremblay, G. R.**, & Voit, G. M. “Molecular Gas along a Bright H α Filament in 2A 0335+096 Revealed by ALMA”, **ApJ**, 832, 148 (2016)
95. McElroy, R. E., Husemann, B., Davis, T. A., Bennert, V. N., Busch, G., Combes, F., Eckart, A., Perez-Torres, M., Powell, M., Scharwächter, J., **Tremblay, G. R.**, & Urrutia, T. “The Close AGN Reference Survey (CARS): Mrk 1018 Returns to the Shadows after 30 years as a Seyfert 1”, **A&A**, 593, L8 (2016)
96. Kotyla, J. P., Chiaberge, M., Baum, S. A., Capetti, A., Hilbert, B., Macchetto, F. D., Miley, G. K., O’Dea, C. P., Perlman, E. S., Sparks, W. B., & **Tremblay, G. R.**, “The Environment of $z > 1$ 3CR Radio Galaxies and QSOs: From Proto-Clusters to Clusters of Galaxies?”, **ApJ**, 826, 46 (2016)
97. Maselli, A., Massaro, F., Cusumano, G., La Parola, V., Harris, D. E., Paggi, A., Liuzzo, E., **Tremblay, G. R.**, Baum, S. A., & O’Dea, C. P., “Swift Observations of unidentified radio sources in the revised Third Cambridge Catalogue”, **MNRAS**, 460, 3829 (2016)
98. Labiano, A., García-Burillo, S., Combes, F., Usero, A., Sorita-Ruiz, R., Piqueras López, J., **Tremblay, G. R.**, Hunt, L., Fuente, A., Neri, R., Oosterloo, T. *AGN Feedback and Star Formation in Young and Old Radio Galaxies*, **AN**, 337, 118 (2016)
99. Russell, H. R., McNamara, B. R., Fabian, A. C., Nulsen, P. J. E., Edge, A. C., Combes, F., N. W. Murray, I. J. Parrish, P. Salomé, Sanders, J. S., Baum, S. A., Donahue, M., Main, R. A., O’Connell, R. W., O’Dea, C. P., Oonk, J. B. R., **Tremblay, G. R.**, Vantyghem, A. N., & Voit, G. M. “ALMA observations of cold molecular gas filaments trailing rising radio bubbles in PKS 0745-191”, **MNRAS**, 458, 3134 (2016)
100. Massaro, F., Harris, D. E., Liuzzo, E., Orienti, M., Paladino, R., Paggi, A., **Tremblay, G. R.**, Wilkes, B. J., Kuraszkiewicz, J., Baum, S. A., & O’Dea, C. P. “The Chandra Survey of Extragalactic Sources in the 3CR Catalog: X-ray Emission from Nuclei, Jets, and Hotspots in the Chandra Archival Observations”, **ApJs**, 220, 5 (2015)
101. Santoro, F., Oonk, J. B. R., Morganti, R., Oosterloo, T. A., & **Tremblay, G. R.**, “The outer filament of Centaurus A as seen by MUSE”, **A&A**, 575L, 4 (2015)
102. Sanders, J. S., Fabian, A. C., Hlavacek-Larrondo, J., Russell, H. R., Taylor, G. B., Hofmann, F., **Tremblay, G. R.**, & Walker, S. A., “Feedback, Scatter and Structure in the Core of the PKS 0745-191 Galaxy Cluster”, **MNRAS**, 444, 1497 (2014)
103. McNamara, B. R., Russell, H. R., Nulsen, P. E. J., Edge, A. C., Murray, N. W., Main, R. A., Vantyghem, A. N., Combes, F., Fabian, A. C., Salome, P., Kirkpatrick, C. C., Baum, S. A., Bregman, J. N., Donahue, M., Egami, E., Hamer, S., O’Dea, C. P., Oonk, J. B. R., **Tremblay, G. R.**, & Voit, G. M., “A Ten Billion Solar Mass Outflow of Molecular Gas Launched by Radio Bubbles in the Abell 1835 Brightest Cluster Galaxy”, **ApJ**, 785, 44 (2014)
104. Russell, H. R., McNamara, B. R., Edge, A. C., Nulsen, P. E. J., Main, R. A., Vantyghem, A. N., Combes, F., Fabian, A. C., Murray, N., Salomé, P., Wilman, R. J., Baum, S. A., Donahue, M., O’Dea, C. P., Oonk, J. B. R., **Tremblay, G. R.**, & Voit, G. M., “Massive molecular gas flows in the Abell 1664 brightest cluster galaxy”, **ApJ**, 784, 78 (2014)

105. Hamer, S. L., Edge, A. C., Swinbank, A. M., Oonk, J. B. R., Mittal, R., McNamara, B. R., Russell, H. R., Bremer, M., Combes, F., Fabian, A. C., Nesvadba, N. P. H., O’Dea, C. P., Baum, S. A., Salomé, P., **Tremblay, G. R.**, Donahue, M., Ferland, G. J., & Sarazin, C. L., “*Cold gas dynamics in Hydra A: evidence for a rotating disk*”, **MNRAS**, 437, 862 (2014)
106. Labiano, A., García-Burillo, S., Combes, F., Usero, A., Soria-Ruiz, R., **Tremblay, G. R.**, Neri, R., Fuente, A., Morganti, R., & Oosterloo, T., “*Fueling the central engine of radio galaxies. II. The footprints of AGN feedback on the ISM of 3C 236*”, **A&A**, 549, A58 (2013)
107. Mittal, R., Oonk, J. B. R., Ferland, G. J., Edge, A. C., O’Dea, C. P., Baum, S. A., Whelan, J. T., Johnstone, R. M., Combes, F., Salomé, P., Fabian, A. C., **Tremblay, G. R.**, Donahue, M., & Russell, H., “*Herschel observations of extended atomic gas in the core of the Perseus cluster*”, **MNRAS**, 426, 2957 (2012)
108. Balmaverde, B., Capetti, A., Grandi, P., Torresi, E., Chiaberge, M., Rodriguez Zaurin, J., Tremblay, G. R., Axon, D. J., Baum, S. A., Giovannini, G., Kharb, P., Macchetto, F. D., O’Dea, C. P., & Sparks, W., “*Extended soft X-ray emission in 3CR radio galaxies at $z < 0.3$: high excitation and broad line galaxies*”, **A&A**, 545, 143 (2012)
109. Mittal, R., O’Dea, C. P., Ferland, G., Oonk, J. B. R., Edge, A. C., Canning, R. E. A., Russell, H., Baum, S. A., Böhringer, H., Combes, F., Donahue, M., Fabian, A. C., Hatch, N. A., Hoffer, A., Johnstone, R., McNamara, B. R., Salomé, P., & **Tremblay, G. R.**, “*Herschel observations of the Centaurus cluster - the dynamics of cold gas in a cool core*”, **MNRAS**, 418, 2386 (2011)
110. Chiaberge, M., Capetti, A., Macchetto, F. D., Rosati, P., Tozzi, P., & **Tremblay, G. R.**, “*Three Candidate Clusters of Galaxies at Redshift ~ 1.8 : The “Missing Link” Between Protoclusters and Local Clusters?*”, **ApJ**, 710, L107 (2010)
111. Floyd, D. J. E., Axon, D., Baum, S., Capetti, A., Chiaberge, M., Macchetto, D., Madrid, J., Miley, G., O’Dea, C. P., Perlman, E., Quillen, A., Sparks, W., & **Tremblay, G. R.**, “*Hubble Space Telescope Near-infrared Snapshot Survey of 3CR Radio Source Counterparts. II. An Atlas and Inventory of the Host Galaxies, Mergers, and Companions*”, **ApJS**, 177, 148 (2008)

SELECTED NON-REFEREED WORKS _____

1. Kraft, R. P., Nulsen, P., Tremblay, G. R., Patnaude, D., Kenter, A., Gauron, T., Austin, G., Bulbul, E., Parker, L., Elsner, R., O’Dell, S., Minow, J., Murray, S., “*Two decades of Chandra High Resolution Camera Operations: Lessons Learned and Future Prospects*”, **SPIE Conference Proceedings**, 10699 (2018)
2. **Tremblay, G. R.**, Kraft, R. P., Nulsen, P. E. J., & Patnaude, D., “*The Chandra High Resolution Camera Anticoincidence shield at times of high solar particle backgrounds*”, **Chandra Flight Memo** (2018)
3. Husemann, B., **Tremblay, G. R.**, Davis, T., Busch, G., McElroy, R., Neumann, J., Urrutia, T., Krumpke, M., Scharwächter, J., Powell, M., Perez-Torres, M., & The CARS Team, “*The Close AGN Reference Survey (CARS)*”, **The ESO Messenger**, 169, 42 (2017)
4. Levesque, E. M., Bezanson, R., & **Tremblay, G. R.**, “*Why Astronomy Programs are moving on from the Physics GRE*”, Editorial in *Physics Today* (2017), DOI:10.1063/PT.5.9090
5. **Tremblay, G. R.**, “*Black Hole Feedback is Elegant, not Violent*”, Einstein Fellows Symposium (2016)
6. Muna, D. and 137 co-signers including **Tremblay, G. R.**, “*The Astropy Problem*”, arXiv:1610.03159 (2016)

7. Rice, E. L. et al. including **Tremblay, G. R.**, “*Expanding the Universe of ‘Astronomy on Tap’ Public Outreach Events*”, American Astronomical Society, AAS Meeting #227 (2016)
8. **Tremblay, G. R.**, “*ALMA Reveals a Galaxy-Scale Fountain of Cold Molecular Gas Pumped by a Black Hole*”, American Astronomical Society, AAS Meeting #227 (2016)
9. Levesque, E. M., Bezanson, R., & **Tremblay, G. R.**, “*Physics GRE Scores of Prize Postdoctoral Fellows in Astronomy*”, arXiv:1512.03709 (2015)
Note: This paper presents results from our survey regarding use of the Physics Graduate Record Examination (GRE) in graduate admissions. The paper was specifically cited as a motivating factor behind a formal recommendation by the AAS council, and was widely shared in many departments, an AAS presidential post, and highlighted in many blogs.
10. **Tremblay, G. R.**, “*A Galaxy-Scale Fountain of Cold Molecular Gas Pumped by a Black Hole*”, Einstein Fellows Symposium (2015)
11. Rothberg, B. et al. including **Tremblay, G. R.**, “*The Close AGN Reference Survey*”, IAU General Assembly, Meeting #29 (2015)
12. **Tremblay, G. R.**, “*Star Formation amid Kinetic Black Hole Feedback*”, Einstein Fellows Symposium (2014)
13. **Tremblay, G. R.** “*Feedback and Star Formation can Coexist*”, IAU Symposium, 304 (2013)
14. Labiano, A., García-Burillo, S., Combes, F., Usero, A., Soria-Ruiz, R., **Tremblay, G. R.**, et al. “*AGN feedback on the ISM of 3C 236*”, IAU Symposium, 292, 374 (2013)
15. **Tremblay, G. R.** “*Fellows at ESO*”, The Messenger, 151, 63 (2013)
16. **Tremblay, G. R.** “*HST Ultraviolet Observations of Star Formation in Seven Brightest Cluster Galaxies in Cooling Flows*”, Galaxy Clusters: Observations, Physics and Cosmology, 41P (2010)
17. **Tremblay, G. R.**, Sparks, W. B., Chiaberge, M., et al. “*HST/ACS Emission Line Snapshots of nearby 3CR Radio Galaxies*”, Bulletin of the American Astronomical Society, 211, 157.03 (2008)
18. **Tremblay, G. R.**, Chiaberge, M., Donzelli, C. J., Sparks, W. B., Quillen, A. C. “*Dust Lanes, Nuclear Dusty Disks, and Isophotal Properties as Observed by HST: What Do They Tell Us about the 3-D Structure of Elliptical Radio Galaxy Hosts?*”, Bulletin of the American Astronomical Society, 38, 987 (2008)
19. **Tremblay, G. R.** & Quillen, A. C. “*The Warped Nuclear Disk of Radio Galaxy 3C 449*”, Bulletin of the American Astronomical Society, 37, 1295 (2005)

MAJOR COMMUNITY REPORTS _____

1. **Lynx X-ray Observatory Concept Study Report**

Available at www.lynxobservatory.org/report, released August 2019

Significant involvement at all levels, including editorial control over the Science Section, writing many pages of text, and creating the large majority of science figures throughout the report

2. **Great Observatories: The Past and Future of Panchromatic Astrophysics**

Available at www.greatobservatories.org, released January 2020

Consensus report of the NASA Great Observatories Science Analysis Group (SAG-10)

Significant involvement across several sections of the report, including on major figures.

1. Tremblay, G. R. et al., “Galaxy Winds in the Age of Hyperdimensional Astrophysics”, **BAAS**, 51, 480 (2019)
2. Civano, F. et al., “Cosmic evolution of supermassive black holes: A view into the next two decades”, **BAAS**, 51, 429 (2019)
3. Voit, M. et al., “Circumgalactic Gas and the Precipitation Limit”, **BAAS**, 51, 405 (2019)
4. Peebles, M. et al., “Understanding the circumgalactic medium is critical for understanding galaxy evolution”, **BAAS**, 51, 386 (2019)
5. Siemiginowska, A. et al., “The Next Decade of Astroinformatics and Astrostatistics”, **BAAS**, 51, 355 (2019)
6. Oppenheimer, B. et al., “Imprint of Drivers of Galaxy Formation in the Circumgalactic Medium”, **BAAS**, 51, 280 (2019)
7. Walker, S. et al., “Unveiling the Galaxy Cluster - Cosmic Web Connection with X-ray observations in the Next Decade”, **BAAS**, 51, 218 (2019)
8. Bulbul, E. et al., “Probing Macro-Scale Gas Motions and Turbulence in Diffuse Cosmic Plasmas”, **BAAS**, 51, 210 (2019)
9. Pacucci, F. et al., “Detecting the Birth of Supermassive Black Holes Formed from Heavy Seeds”, **BAAS**, 51, 117 (2019)

BOOKS FOR THE GENERAL PUBLIC

1. Tremblay, G. R., *The Sky & Other Ghosts: Our Fading Age of Discovery* (working title), a forthcoming 350 page book on the history of NASA’s Great Observatories, coming 2025 from Princeton Press
2. Arcand, K., Tremblay, G. R., Watzke, M., Weisskopf, M., & Wilkes, B., *Light from the Void: Twenty Years of Discovery with NASA’s Chandra X-ray Observatory*, a coffee table book celebrating Chandra’s twentieth launch anniversary from Smithsonian Books (released October 22, 2019)
3. Tremblay, G. R. & Coppens, K., *What do Black Holes Eat for Dinner?*, a children’s book from Tumblehome Learning (released July 9, 2020)

Journal abbreviations used

A&A | *Astronomy & Astrophysics*
AN | *Astronomische Nachrichten*
ApJ | *The Astrophysical Journal*
ApJL | *The Astrophysical Journal Letters*
ApJS | *The Astrophysical Journal Supplement*
BAAS | *Bulletin of the American Astronomical Society*
MNRAS | *Monthly Notices of the Royal Astronomical Society*
JGR | *Journal of Geophysical Research*

This CV was last updated on June 14, 2024.