

Research Data Developer  
 Princeton Plasma Physics Laboratory  
 100 Stellarator Rd  
 Princeton, NJ 08540

Email: [cly@pppl.gov](mailto:cly@pppl.gov)  
 WWW: <https://astrochun.github.io>  
 GitHub: [astrochun](#)  
 ORCID: [0000-0002-4245-2318](#)

## RESEARCH INTERESTS

- (1) Galaxy evolution and formation, star formation, chemical enrichment, diagnostic spectroscopy
- (2) Extragalactic radio jets on sub-parsec scales, high-resolution very long baseline interferometry

## EDUCATION

*University of California, Los Angeles, **Ph.D.**, Astronomy* 2010  
 Advisor: Matthew A. Malkan  
 Thesis: “*The Universe as Viewed from Star-forming Galaxies over the Past 10 Billion Years*”

*University of California, Los Angeles, **M.Sc.**, Astronomy, Summa Cum Laude* 2006  
 Advisor: Matthew A. Malkan  
 Thesis: “*The Luminosity Function and Star Formation Rate between Redshifts of 0.07 and 1.47 for Narrowband Emitters in the Subaru Deep Field*”

*University of Arizona, Tucson, **B.Sc.**, Astronomy and Physics, Magna Cum Laude* 2004

## APPOINTMENTS

*Research Data Developer, Princeton Plasma Physics Laboratory* 08/2021 –  
*Affiliate Assistant Astronomer, University of Arizona (Steward Observatory)* 06/2016 –  
*Research Data Systems Integration Specialist, University of Arizona (Libraries)* 09/2019 – 07/2021  
*Queue/Professional Observer, MMT Observatory* 09/2016 – 09/2019  
*NASA Postdoctoral Fellow, NASA GSFC (Advisor: Jane Rigby)* 10/2013 – 09/2016  
*Visiting Fellow, STScI* 10/2013  
*Giacconi Postdoctoral Fellow, STScI (Advisor: Ron Allen)* 09/2010 – 10/2013  
*NASA Graduate Student Research Program (GSRP) Fellow, UCLA/JPL* 09/2008 – 08/2010  
 (Advisors: Daniel Stern and Leonidas Moustakas)  
*Summer Graduate Student Researcher, Carnegie Observatories* 06/2008 – 09/2008  
*Graduate Student Researcher, UCLA* 03/2005 – 06/2008  
*Graduate Summer Researcher, NRAO–Socorro* 06/2004 – 09/2004  
*NASA Arizona Space Grant Researcher, NOAO–Tucson* 08/2003 – 05/2004  
*NSF REU Summer Researcher, NRAO–Socorro* 06/2003 – 08/2003

## HONORS AND AWARDS

2013 – *NASA Postdoctoral Fellowship, NASA GSFC*  
 2010 – *Giacconi Postdoctoral Fellowship, STScI*  
 2009 – *Chambliss Astronomy Achievement Student Award, American Astronomical Society*  
 2008 – *Graduate Student Research Fellowship, NASA*  
 2008 – *Incentive Award for Extramural Funding, UCLA's Astronomy Department*  
 2006 – *Graduate Research Mentorship Award, UCLA*

2005 – *Departmental Outstanding Teaching Award*, UCLA  
 2004 – *Eugene V. Cota-Robles Fellowship*, UCLA  
 2003 – *Galileo Circle Scholarship*, U. Arizona  
 2002 – *Fred and Ida McCormick Scholarship*, U. Arizona  
 2002 – *San Diego Astronomy Association's Lucas Scholarship*, U. Arizona  
 2001 – *Phi Eta Sigma National Honor Society*, U. Arizona

#### SERVICE

Referee for *Astrophysical Journal*, *Astrophysical Journal Letters*  
 Referee for *Astronomy & Astrophysics*  
 Referee for *Research in Astronomy & Astrophysics*  
 Referee for *Monthly Notices of the Royal Astronomical Society*  
 NASA Astrophysics Data Analysis Program (ADAP), Peer Reviewer 2015  
 Hubble Space Telescope Time Allocation Committee, Peer Reviewer 2014 (Cycle 22)  
 CFHT (Taiwan) Time Allocation, External Referee 2012–2014  
 China Telescope Access Program, External Referee 2013, 2015  
 Hubble Space Telescope Time Allocation Committee, Support Staff 2011, 2012  
 Postdoctoral Researcher Mentoring Committee for STScI 2011 – 2012  
 JHU-STScI CoolSci/HotSci Colloquium, Organizer for STScI 2011  
 JHU-STScI Wine and Cheese Talk Series, Organizer for STScI 2011  
 STScI/JHU Very Wide Field Surveys Conference, Local organizer 2011

#### ADVISORSHIP AND EDUCATIONAL PUBLIC OUTREACH

Summary: I have mentored or am mentoring 11 undergraduate students and one data analyst with in-person interactions on a regular basis

Caroline McCormick, undergraduate at the University of Arizona 2018 –  
 Mentoring on the evolution of the mass–metallicity relation

Scott McKinley, University of Arizona, NASA Space Grant Undergraduate Researcher 2017–2018  
 Mentored on metallicity diagnostics and recalibrating such diagnostics for the high- $z$  universe

Rafia Bushra, undergraduate at the University of Arizona 2017  
 Mentored on the evolution of the mass–metallicity relation

Reagen Leimbach, University of Arizona, NASA Space Grant Undergraduate Researcher 2017 –  
 Mentoring on metallicity diagnostics and recalibrating such diagnostics for the high- $z$  universe

Drew Weldon, University of Arizona, NASA Space Grant Undergraduate Researcher 2016 – 2020  
 Mentoring on stellar population in dwarf galaxies. Project has culminated into a first-author *MNRAS* publication for Drew

Kaitlyn Shin, Stanford University, NASA Summer Student 2015 –  
 Mentored for 10 weeks on studying the environment effects on star-forming galaxies.  
 Project has culminated into a first-author paper submitted to *MNRAS*.

NASA's Hubble 25<sup>th</sup> Anniversary Family Day Event 2015  
 Answered questions from the general public at Smithsonian's National Air and Space Museum (Steven F. Udvar-Hazy Center)

Mithi de los Reyes, North Carolina State University, STSci Summer Student Mentored for over a year on analyzing spectra. Project has culminated into a first-author peer-review paper in the <i>Astronomical Journal</i> for Mithi.	2013 – 2015
Bryan Hilbert, Senior Research Instrument Analyst at STSci Advised for several months on reduction of ground-based near-infrared imaging data.	2013
<u>Project ASTRO</u> I visited a public school and spoke with over 100 4 <sup>th</sup> and 5 <sup>th</sup> graders about astronomy throughout the academic year.	2011 – 2013
Jesse Feddersen, Indiana University, STSci Summer Student Mentored for 10 weeks on analyzing spectra. Attending Yale for Astronomy Ph.D.	2012
Mary Christian, undergraduate student at UCLA Mentored for 10 weeks on analyzing spectra.	2009
Celestine Grady, undergraduate student at UCLA Mentored for a year on data reduction. Her work has contributed toward at least two co-authored papers. She received a M.Sc. from U. California–Davis.	2007 – 2008
Christopher Rodriguez, undergraduate student at UCLA Mentored for two years on space-based data reduction and analysis.	2005 – 2007

TEACHING EXPERIENCE

<i>Research Bazaar Arizona Instructor</i>	May 2020
<i>Software/Data Carpentry Instructor, the Carpentries</i>	July 2018 –
<i>Guest Lecturer, “The Gaseous Interstellar Medium” (UCLA)</i> Graduate-level course. Discussed nebular emission from ionized gas.	Spring 2009
<i>Teaching Assistant, “Astrophysics II: Stellar Evolution and Galaxies” (UCLA)</i> A required course offered for astronomy and physics majors. Led weekly discussions and created in-course laboratory assignments for a classroom of ~30 students. Received an Outstanding Teaching Award in 2005.	Spring 2005
<i>Teaching Assistant, “Astrophysics I: Stars and Nebulae” (UCLA)</i> A required course offered for astronomy and physics majors. Led weekly discussions and created in-course laboratory assignments for a classroom of ~30 students	Winter 2005
<i>Teaching Assistant, “Nature of the Universe” (UCLA)</i> An introductory astronomy course for non-science majors. Led weekly discussions and laboratory exercises for a classroom of ~30 students.	Fall 2004

PROFESSIONAL AFFILIATIONS

Member, International Astronomical Union	2018 –
Member, NewH $\alpha$ Survey Science Collaboration	2008 –
Member, Subaru Deep Field Science Collaboration	2005 –
Member, American Astronomical Society	2004 – 2017

GRANTS AND OBSERVING PROPOSALS

Summary: Over 36 telescope nights approved as PI or Science PI, and nearly the equivalent of ~156 nights in total. Approximately \$300,000 in grants have been awarded as PI or Science PI.

Role	Source	Name	Year	Amount
PI	NASA	Keck PI grant	2017	\$12,500
PI	NASA	<i>Spitzer</i> GO program	2015	\$10,000
Co-I	NASA	<i>Hubble</i> GO program	2015	N/A
Science PI	NASA	Astrophysics Data Analysis Program	2015	\$104,400
PI	NASA	Keck PI grant	2015	\$16,000
PI	NASA	Keck PI grant	2015	\$13,000
PI	NASA	Postdoctoral Fellowship Travel Grant	2015	\$8,000
PI	NASA	Keck PI grant	2014	\$12,750
PI	NASA	Postdoctoral Fellowship Travel Grant	2014	\$8,000
PI	NASA	Postdoctoral Fellowship Travel Grant	2013	\$8,000
PI	NASA	Giacconi Fellowship Start-up Grant	2010	\$48,000
Science PI	NASA	Graduate Student Researcher Fellowship	2009	\$30,000
Science PI	NASA	Graduate Student Researcher Fellowship	2008	\$30,000

  

Observatory	Instrument	Nights/Hours as PI or Science PI	Total Nights or Hours	Number of Proposals
<i>Hubble</i>	WFC3	–	20 orbits	1
<i>Spitzer</i>	IRAC	16.5 hr	16.5 hr	1
10-m Keck I	MOSFIRE	2	5.5	4
10-m Keck II	DEIMOS	4	10	6
10-m Keck II	NIRSPEC	1	1	1
8.2-m Subaru	FMOS	7	13	6
8.2-m Subaru	Suprime-Cam	–	9.5	4
8.2-m Subaru	MOIRCS	–	4	2
8.2-m Subaru	FOCAS	–	2	1
8.2-m Subaru	IRCS+A0188	–	0.5	1
8.1-m Gemini-North	GNIRS	36.1 hr	36.1 hr	3
6.5-m Magellan	FourStar	–	4	1
6.5-m MMT	Hectospec	3.5	3.5	3
6.5-m MMT	MMIRS	2.5	2.5	2.5
4-m Kitt Peak–Mayall	NEWFIRM	8	21	6
4-m Kitt Peak–Mayall	MOSAIC	2	2	1

4-m Cerro Tololo–Blanco	NEWFIRM	5	14	2
4-m UKIRT	WFCAM	–	4	2
ALMA	450,880,1100 $\mu$ m	–	1.1 hr	1
CARMA	1.3mm imaging	–	10 hr	1
SMA	1100 $\mu$ m imaging	–	1	1
NRAO VLBA	7mm imaging	9 hr	561 hr	13
NRAO VLA	21-cm imaging	–	28 hr	1

### PUBLICATIONS (As of September 2, 2021)

43 peer-review papers, 13 are first-authored

2767 citations to peer-review papers, 702 citations to first-authored papers

Hirsch  $h$ -index: 29 papers with  $\geq 29$  citations

6 DOI-minted data publications

A complete list of publications can be found here: <https://astrochun.github.io/publication/>

### TALKS

Invited Talks or Colloquia:

Event	Date
Invited: <a href="#">Figshare webinar</a>	06/2021
Invited: NOAO Science Talk (Tucson, AZ)	04/2019
Invited: Special talk, Internal Council of UNAM-Institute of Astronomy (Mexico City, Mexico)	11/2015
Invited: NASA Sciences and Exploration Directorate Seminar (Greenbelt, MD)	06/2014
Shanghai Astronomical Observatory Colloquium (Shanghai, China)	03/2014
Invited: NAOJ Subaru Seminar (Hilo, HI)	03/2014
JHU-STScI HotSci Colloquium (Baltimore, MD)	07/2013
Invited: Hubble Fellows Symposium (Baltimore, MD)	03/2013
Invited: Dark Cosmology Centre (Copenhagen, Denmark)	01/2013
Invited: NAOJ Subaru Seminar (Hilo, HI)	04/2012
Invited: ASU Cosmology Seminar (Tempe, AZ)	03/2012
JHU-STScI HotSci Colloquium (Baltimore, MD)	08/2011
CTIO Science Colloquium (La Serena, Chile)	03/2011
Invited: JPL Astrophysics Lunch Talk Series (Pasadena, CA)	06/2008
Invited: NOAO Scientific Lunch Talk Series (Tucson, AZ)	04/2007

## Conference Talks:

Event	Date
MMT 40 <sup>th</sup> Symposium (Tucson, AZ)	05/2019
<i>Galaxy of Many Colours Conference</i> (Marstrand, Sweden)	06/2015
<i>AAS 225<sup>th</sup> Meeting</i> (Seattle, WA)	01/2015
<i>Keck Science Meeting</i> (Pasadena, CA)	10/2014
<i>European Week of Astronomy and Space Sciences</i> (Geneva, Switzerland)	07/2014
<i>AAS 223<sup>rd</sup> Meeting</i> (Washington, DC)	01/2014
<i>AAS 221<sup>st</sup> Meeting</i> (Long Beach, CA)	01/2013
<i>AAS 215<sup>th</sup> Meeting Dissertation Talk</i> (Washington, DC)	01/2010
<i>Harvesting the Redshift Desert Conference</i> (Marseille, France)	07/2009

## Seminars and Other Talks (Since 2010):

Event	Date
<i>STScI Galaxy Journal Club</i> (Baltimore, MD)	03/2016
<i>East Asian Observatory Seminar</i> (Hilo, HI)	03/2015
<i>University of Maryland CARMA Seminar</i> (College Park, MD)	11/2014
<i>STScI Galaxy Journal Club</i> (Baltimore, MD)	11/2014
<i>JHU CAS Wine and Cheese Seminar</i> (Baltimore, MD)	11/2014
<i>NASA Goddard Stellar and Extragalactic Astronomy Lunch</i> (Greenbelt, MD)	12/2012
<i>NOAO Scientific Lunch Talk</i> (Tucson, AZ)	03/2012