Lía Racquel Corrales

Assistant Professor of Astronomy

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EDUCATION

2007 - 2014 Ph.D. in Astronomy, Columbia University, Thesis: "High Energy Studies of Astrophysical Dust"
Thesis advisor: Frits Paerels.

2006 B.Sc. in Physics, Harvey Mudd College,
Thesis advisor: Ann Esin.

PROFESSIONAL EXPERIENCE

2020 - present Assistant Professor of Astronomy, University of Michigan.

2018 - 2020 LSA Collegiate Fellow, University of Michigan.

2016 - 2018 Einstein Fellow, University of Wisconsin-Madison
Science Sponsor: Sebastian Heinz.

2014 - 2016 Postdoctoral Associate, MIT Kavli Institute, Chandra HETG group
Advisors: F. Baganoff, D. Huenemoerder.

AFFILIATIONS

2022 - present MI-Planets
2022 - present Michigan Space Institute
2021 - present Michigan Institute for Data Science (MIDAS)
2019 - present Michigan Institute for Plasma Science and Engineering (MIPSE)

GRANTS

Over $1M raised in grant funding

- XMM-Newton Proposal
  The XUV irradiation of the youngest TESS planet, 53 ks (PI Corrales: Science-PI King)
- XMM-Newton Proposal
  Characterizing Hot Jupiter Atmospheres with XMM-Newton, 76 ks (PI Corrales)
- XMM-Newton Proposal
  Investigating the evolution of planets straddling the radius valley 23 ks Priority B (guaranteed), 129 ks Priority C (not guaranteed) (PI Corrales, Science-PI King)
- Chandra Cycle 24 Guest Observer Program ($43,280)
  Using Chandra's superior imaging resolution to get the most out of XRISM scattering halo science
- Chandra Cycle 24 Guest Observer Program ($66,560)
  Mineralogy of interstellar dust towards GX339-4 (ToO, Science PI: Psaradaki)
- Chandra Cycle 23 Archive Grant ($45k)
  A holistic study of Sgr A* Accretion
- Chandra Cycle 23 Guest Observer Program ($54,080)
  An X-ray study of the youngest TESS planet around a Solar-type star (Science PI: King)
- NASA support for XMM-Newton observations ($68,529)
  Investigating the irradiation and evolution of TESS planets either side of the radius gap (Science PI: King)

- NASA Astrophysics Data Analysis Program ($400k) 2020,
  A New Perspective on Dust Depletion with X-ray and UV spectroscopy
- XRISM Participating Scientist ($250k) 2018 - 2024,
  Interstellar dust grain mineralogy with high resolution spectra of dust scattering halos
- Einstein Fellowship ($300k) 2016-2019 period,
  Bringing the Galactic Center into focus with dust scattering
- Chandra Cycle 17 Theory Grant ($45k),
  Modeling the unique dust distribution of the Cyg X-3 and Cyg OB2 sight line
- Chandra Cycle 17 Archive Grant ($45k),
  A survey of ISM absorption and scattering for better models of X-ray binaries
- NASA Earth and Space Science Fellowship 2011- 2014

Over $150k raised as supporting scientist

- Chandra Cycle 24 Guest Observer Program ($14,505)
  Properties of dust along the line of sight of Cygnus X-1 (PI: Zeegers)
- Chandra Cycle 24 Guest Observer Program ($33,760)
  Constraining the time-dependent accretion rate of a novel class of X-ray source (PI: Cunningham)
- NSF Astronomy and Astrophysics Research Grant ($36,095)
  Collaborative Research: Dust Echo Tomography: New Diagnostics for Galactic Dust and Magnetic Field
  (PI: Heinz)
- Chandra ToO Program 24910103
  Light Echoes from X-ray Transients as Probes of Interstellar Dust and Galactic Structure, unfunded collaboration (ToO, PI: Heinz)
- Hubble Space Telescope Cycle 29 ($48,780)
  An HST exclusive look at two rising stars: high-energy spectra of the two closest M dwarfs to host transiting terrestrial exoplanets (PI: Diamond-Lowe)
- Astropy Project sub-award, Moore Foundation, "Learn Astropy Maintenance Funding" ($6,111)
- XMM Newton Cycle 20 Guest Observer Program, ($13,974),
  Testing the steep decline in chromospheric emission of very late M dwarfs (PI: Wheatley)
- Chandra Cycle 21 Guest Observer Program ($17,500),
  Distinguishing between Circumbinary and Interstellar Medium Dust Signatures in GX 5-1 (PI: Nowak)

AWARDS

- AAS Chambliss Award (2011) 217th AAS Meeting
- ARCS Scholarship 2003 - 2006

PROFESSIONAL SOCIETY MEMBERSHIP

- American Astronomical Society (AAS)
  - High Energy Astrophysics Division (HEAD)
  - Laboratory Astrophysics Division (LAD)
- SACNAS (Society for the Advancement Chicanos/Hispanics and Native Americans in Science)
- American Physical Society (APS)

TEACHING EXPERIENCE

University of Michigan
F21, W22, F22 Astro 101: The Solar System and the Search for a new Earth
F19, W21 Astro 102: Stars, Galaxies, and the Universe

Columbia University
2010 - 2011 Astronomy Department Graduate Student Head TA
2008 - 2011 Astronomy Lab Instructor

Pre-Graduate Teaching Experience
2006 Guided Discoveries Astrocamp Instructor
2004 - 2006 Harvey Mudd College, Academic Excellence Physics Tutor

ADVISING

Postdoctoral Researchers:
- George King, Sept 2020 – present
- Ioanna Psaradaki, Feb 2021 – present

Graduate student researchers:
- Mayura Balakrishnan, Sept 2022 – present

Post-Baccalaureate Students Supervised
- Sasikrishna Ravi, December 2018 – June 2020
- Doreen Beeler, June 2018 – June 2019

Undergraduate Students supervised
- Aleck Hernandez, Summer 2021 – present
- Erik Lytle, Fall 2022 – present
- Raven Cilley, Fall 2022 – present
- Zihao Harris Chen, Summer 2022 (Learn Astropy Project) – present
- Saima Siddiqui, Summer 2022 (Learn Astropy Project) – present
- Lúthien Liu, Summer 2022 (Learn Astropy Project)
- Sanjana Kerkar, Summer 2021 – Fall 2022
- Javier Guerrero Segarra, Fall 2020 – Spring 2021 (UROP)
- Samantha Kasbohm, Fall 2020 – Spring 2021 (UROP)
- Dante Vozza, Fall 2020 – Spring 2021
- Ziying Chen, Fall 2020 – Spring 2021 (Honors Physics Thesis)
- Doreen Beeler, Spring 2017 – December 2018 (Astronomy Thesis)
- Ziyuan Zhang, Spring 2017

Summer Students Supervised
- Devisree Tallapaneni, Maria Mitchell Observatory, Summer 2022
- Emily Temple, University of Michigan Physics REU student, Summer 2022
- Haochuan Li, Nanjing University summer student at UW-Madison, Summer 2017
- Brianna Mills, co-advised with Prof Heinz, UW-Madison summer REU student, Summer 2017
- Michelle Xu, MIT Research Science Institute student, Summer 2015
- Emily Zhang, high school intern, Summer 2015
- Pratishta Yerakala, Biotechnology High School intern, Summer 2013

PhD Thesis Committee
- Qiana Hunt, 2020 - current

OBSERVING TIME ALLOCATIONS

Over 300 ks of Swift time, 30 hours of NOEMA/IRAM time

Chandra
- PI: **L. Corrales**, Cycle 24 GO, “Using Chandra’s superior imaging resolution to get the most out of XRISM scattering halo science”
- PI Psaradaki, (Co-I **L. Corrales**), Chandra Cycle 24 TOO, “Mineralogy of interstellar dust towards GX339-4”

- PI: Heinz, (Co-I **L. Corrales**), Chandra Cycle 24 “Light Echoes from X-ray Transients as Probes of Interstellar Dust and Galactic Structure”
- PI: **L. Corrales**, Chandra Cycle 23 "A holistic view of Sgr A* accretion"
- PI: G. King (Co-I **L. Corrales**), Chandra Cycle 23 "An X-ray study of the youngest TESS planet around a Solar-type star"
- PI: C. Russell (Co-I **L. Corrales**), Chandra Cycle 23 "Dynamic modeling of ~100 stellar winds in the Galactic center's inner parsec"
- PI: Yang (Co-I **L. Corrales**), Chandra Cycle 23 "The X-Ray Gas-to-Dust Abundance Ratio of Silicon towards the Galactic Bulge"
- PI: S. Heinz (Co-I: **L. Corrales)** Chandra Cycle 20-23 GO ToO, Putting a Ring on it: Light Echoes from X-ray Transients as Probes of Interstellar Dust and Galactic Structure
- PI: M. Nowak (Co-I: **L. Corrales**, $17.5k) Chandra Cycle 21 GO, Distinguishing between Circumbinary and Interstellar Medium Dust Signatures in GX 5-1

Swift Observatory

- PI: **L. Corrales** (25 ks) Spring 202, Ensemble study of hot Jupiter UV transits: KELT-7b)
- PI: **L. Corrales** (66 ks) Spring 2021, Third wave XUV followup of TESS discovered exoplanet host stars
- Co-I: **L. Corrales** (58 ks) Spring 2021, The UV transit of the prototypical hot Jupiter HD 20945, PI King,
- PI: **L. Corrales** (39 ks) Fall 2019, Continued X/UV Followup of TESS Exoplanet Host Stars
- PI: **L. Corrales** (34 ks) Fall 2019, Characterizing the high energy variability of exoplanet system KELT-3
- PI: **L. Corrales** (102 ks) Spring 2019, Probing aerosols in hot Jupiter atmospheres with UV transits
- PI: **L. Corrales** (81 ks) Spring 2019, Extreme properties of planet hosting systems
- PI: **L. Corrales** (48 ks) Spring 2019, X/UV Follow up of TESS Exoplanet Host Stars

IRAM Observatory

- PI: **L. Corrales** 30-m (14.5 hours) Summer 2019, Probing Complex Chemistry under High Energy Irradiation in Cygnus X-3's Little Friend

NOEMA Observatory

- PI: **L. Corrales** (16 hours) Fall 2018, Dust at the edges of an extreme environment: The case of Cygnus X-3's Little Friend"

COLLABORATIONS

2022 - present	Lead for the AXIS Stars and Exoplanets Science Working Group
2021 - present	Astropy Project Voting Member
2020 - present	HEACIT (High Energy Astrophysics Codes, Interfaces, and Tools) working group, Chair since 2021
2019 - 2022	TESS Atmospheric Characterization Working Group
2018 - present	XRISM Science Team, NASA Participating Scientist, Vice-chair of Galactic Diffuse science category team
2018 - present	AXIS Science Team
2018 - 2020	Hyperion Science Team
2016 - present	Learn Astropy Team Coordinator
2016 - 2020	Lynx Stellar Lifecycles working group
2016 - 2022	Athena Science Working Group 3.4: SNR & ISM
2014 - 2020	Chandra Galactic Center X-ray Visionary Project

SERVICE

Professional Service

2022	New Athena Science Redefinition Team, Deputy NASA representative
2022 - present	Chandra Workshop 2023 Science Organizing Committee
2022 - present	NASA Deputy Representative to NewAthena Science Redefinition Team
2022	HEAD 19 meeting: Invited speaker for the Decadal Review Panel session
2021	Invited Panelist for AGU Fall Meeting 2021 Special Session: Open Science in Action

2021	Invited review for the Swift Senior Review Strategy Session, November 2021
2021	Astropy AAS 238 Exhibit Hall Organizer, Astropy Workshop Facilitator
2020	NumFOCUS AAS 235 Exhibit Hall Organizer, Astropy Workshop Facilitator
2020	External science reviewer for STAR-X collaboration
2020	Astropy Governance Working Group
2020	Astropy Support Operations Specialist Hiring Committee
2020	Advanced Spectroscopy School, AtomDB workshop
2020 - present	SOC: Latin American Conference in Astrophysics & Relativity
2019	Astropy Workshop Facilitator
2018 - 2019	NASA Cosmic Origins Program Analysis Group, SAG-10: Great Observatories Co-leader of Working Group 3
2017	SOC & LOC: Astropy Tutorial Code Sprinting Workshop
2015 - 2016	MKI Code Coffee lead organizer
2015	Interactive Spectral Interpretation System software workshop organizer
2010 - 2012	Columbia University Astronomy Graduate Student Representative

Diversity, Equity & Inclusion

2022	Led Astronomy and Physics PhDs to submit Amicus Curiae Brief to the Supreme Court
2022	WoCCode 2.0: Expanded mentoring program, Awarded MIRA-funding ($12,700)
2021	Organizer and Speaker MIDAS Symposium: Diversity and Equity in Data Science
2021	Interview for "Women in MIPSE" podcast, hosted by UM graduate students
2021	"Diversity, Equity & Inclusion in Education and Public Outreach" panelist for NSF AAPF symposium
2020	WoCCode - Astropy funded peer mentoring program on code and related topics
2020	Organized SACNAS 2020 special session: "Earth Sky Connection: Recalling Indigenous Traditional Knowledge and Building Our Future"
2020	Lamat Meetings of the Minds Talk
2015 - 2020	American Astronomical Society (AAS) Committee for the Status of Minorities in Astronomy (CSMA)
2018 - 2020	CSMA Co-Chair
2019	"In preparation for AAS 235: Reflections from CSMA Co-Chair", CSMA blog post by L. Corrales
2019	SACNAS Conference, "Maunakea Culture, Community & Astronomy : Towards Collaborating with Integrity", science session organizer
2019	Panelist AAS 233 CSMA sponsored special session: "Know Your Power"
2018	SACNAS Conference
2017	SOC: Women in Astronomy IV conference
2016	"On the US Presidential Election", CSMA blog post by L. Corrales et al.
2016	"Turning Point: Diversity ruling", interview for Nature Jobs by V. Gewin, 2016
2015	"An open letter to SCOTUS from professional physicists", organized by L. Corrales et al.
2015	"Highlights from Inclusive Astronomy", blog post by L. Corrales
2015	Inclusive Astronomy, "Double-Blind Peer Review in Astronomical Journals"
2009	NSBP/NSHP Conference, "Response of a Gas Disk to Black Hole Recoil and Mass Loss"
2004 - 2006	Founding member of Students for the Advancement for Latino Scientific Achievement (SALSA), Harvey Mudd College chapter of NSHPE
2005 - 2006	Organized SALSA mentoring program with MESA high school students

University Service

2023	Prelim Committee
2022/23	Heising-Simons representative for UM-Astro, chairing UM internal review for 51 Peg b Fellowship
2020, 21, 22	UM Astro representative and recruitment lead for SACNAS
2022	MIDAS Seminar Organization Committee
2021/22	Assistant organizer for Extreme Astrophysics Group seminar
2021/22	Graduate Admissions Committee
2020/21	Graduate Admissions Committee

2019/20 Astronomy Department Colloquium Organizer
2018 STEM Panelist for UM Posse Scholars Q&A

Article Reviews
AAS Journals (2)
Publications of the Astronomical Society of Japan (1)
Advances in Space Research (1)

Review Panels
One STScI time allocation committee
Two NASA time allocation committees
Two NSF grant review panels
Two NASA grant review panels

PUBLIC SOFTWARE

- eblur/dust github.com/eblur/newdust
  Calculates the intensity of dust scattering halos in the X-ray and dust extinction properties from the X-ray to IR.

- pyXsis github.com/eblur/pyxsis
  A starter, stand-alone package for examining high resolution X-ray spectra in Python.

- XSTARDB space.mit.edu/cxc/analysis/xstardb
  In collaboration with: D. Huenemoerder (PI), T. Kallman, J. Houck, J. Davis. A suite of ISIS (Interactive Spectral Interpretation System) scripts for navigating atomic databases from XSTAR models of photoionized astrophysical plasmas.

ASTRONOMY OUTREACH

2022 - present	Michigan Dark Skies (MIDS) activism group
2020	"Why Are Black Holes So Bright? And why is the black hole at the center of our own galaxy so dim?" quoted by Kruesi, L., QuantaMagazine
2020	Astronomy on Tap - Ann Arbor, MI
2018	Wayne State Planetarium - Detroit, MI
2019	Interview for Shady Ladies Literary Society
2017	Space Place - Madison, WI
2012	"Micrometeorites: The Extraterrestrials in Your Backyard", IAU 365 Days of Astronomy Podcast
2012	"Black Hole Street Smarts", IAU 365 Days of Astronomy Podcast
2008 - 2014	CU Rooftop Variables Organizer and Instructor
2007 - 2014	CU Public Observing Nights Telescope Volunteer and Lecturer
2008 - 2010	CU Family Astro Organizer

PROFESSIONAL PRESENTATIONS

Invited Conference Talks:

"Illuminating the Dusty Universe: A Tribute to the Work of Bruce Draine"
July 2020 (Postponed due to covid)

"Viewing the interstellar medium through X-ray dust scattering halos"
European Astronomical Society 2020 Meeting, July 2020

"Astromineralogy and Dust Grain Growth with X-ray Imaging and Spectroscopy"
AAS Lab Astrophysics Division meeting, June 2020

"Dust scattering echoes through cosmic time”
Invited online talk series, "Chandra Frontiers in Time-Domain Science" October 2020

“Interpreting Low-Luminosity Accretion Flow from the Extended Quiescent Emission of Sgr A*”
Galactic Center Workshop - Yokohama, Japan August 2019

“Interstellar dust mineralogy with high resolution X-ray spectroscopy”
Cosmic Dust XII meeting - Chiba, Japan August 2019

“New perspectives on the interstellar medium enabled by Chandra”
AAS High Energy Astrophysics Division 17th meeting - Monterey, CA March 2019

“Disentangling the Quiescent High Resolution Spectrum of Sgr A* and the Diffuse Emission at the Galactic Center with 3 Ms of Chandra HETG”
29th International Texas Symposium on Relativistic Astrophysics Cape Town, South Africa December 2017

“High Resolution Imaging and Gratings in Concert”
From Chandra to Lynx workshop - Cambridge, MA August 2017

“Interstellar dust grain composition from high resolution absorption edge structure”
APS DAMOP meeting - Sacramento, CA June 2017
228th AAS Meeting Lab Astrophysics Division, San Diego, CA June 2016

“Navigating atomic databases with ISIS”
High Resolution Spectroscopic Software and Tools - Madrid, Spain May 2016

Colloquium and Invited Seminar Talks:

Maria Mitchell Observatory, Visiting Astronomer Talk, July 2022
Michigan Institute for Data Science (MIDAS), January 2022
Princeton / IAS, January 2022
Bard College, December 2021
High Energy Astrophysics seminar at the Center for Astrophysics, May 2021
Northwestern CIERA Center for Interdisciplinary Exploration and Research in Astrophysics, April 2021
University of California Berkeley, October 2020
Carnegie Observatories, September 2020
Wayne State PAN Seminar, September 2020
AtomDB Advanced Spectroscopy School, August 2020
Michigan State University, September 2019
NASA Goddard, December 2018
University of Maryland, September 2018
University of Washington, April 2018
University of Wisconsin-Milwaukee CGCA Seminar, April 2018
Caltech, November 2017
University of Amsterdam, May 2017
ESA ESTEC, May 2017
UC Santa Cruz, April 2017
University of Illinois, March 2017
University of Michigan, February 2017
Pomona college, February 2017
University of Wisconsin-Madison, January 2017
The Ohio State, January 2017
UC San Diego, November 2016
Cal Poly Pomona, April 2016
Pomona College, April 2016

Boston University, October 2015
American Museum of Natural History, April 2013
Stony Brook University Astronomy, March 2012

Talks and Posters

Splinter Session on High Energy Astrophysics Codes, Interfaces, and Tools (HEACIT) working group
HEAD 19, March 2022

AXIS Splinter Session: “AXIS Contributions to Stars and Exoplanets Science”
HEAD 19, March 2022

“PyXsis: A light-weight Python package for loading and viewing X-ray spectra"
Chandra Data Science Workshop, August 2021
"Capturing Exoplanet Transits with Swift-UVOT"
Stars and Planets in the UV, May 2021

“The low-luminosity accretion ow of Sgr A* as seen by Chandra HETG”
AAS Meeting 235 - Honolulu, HI January 2020
20 Years of Chandra - Boston, MA December 2019

“What high resolution spectroscopic imaging with XRISM reveals about the cycle of interstellar dust”
AAS High Energy Astrophysics Division 17th meeting - Monterey, CA March 2019

“Astromineralogy and dust grain growth with X-ray imaging and spectroscopy”
Cosmic Dust V - Copenhagen, Denmark August 2018

“Modern Problems in High Resolution X-ray Absorption from the Cold Interstellar Medium”
AAS Meeting 231 - National Harbor, MD January 2018
High Energy Astrophysics in the 2020's and Beyond - Rosemont, IL March 2018

“Perils at the heart of the Milky Way: Systematic effects for studying low-luminosity accretion onto Sgr A*”
AAS High Energy Astrophysics Division 16th meeting - Sun Valley, ID August 2017

“An X-ray View of the Dusty Universe”
UMass Amherst - Amherst, MA January 2017

“Preliminary discovery of a dust scattering halo from a Galactic Center X-ray transient”
Einstein Symposium - Boston, MA October 2016
Chandra Workshop 2016 (poster) - Boston, MA August 2016

“Interstellar dust grain composition from high resolution absorption edge structure”
Latin American Regional IAU Meeting - Cartagena, Colombia October 2016

“The effects of dust scattering on high resolution absorption edge structure”
XMM-Newton Science Workshop (poster) - Madrid, Spain
May 2016 15th HEAD Meeting (poster) - Naples, FL April 2016

“eblur/dust -A modular Python approach to extinction and scattering”
Python in Astronomy 2016 - Seattle, WA March 2016

“Studying interstellar dust grain composition with high resolution spectroscopic imaging”
X-ray Vision Workshop - Washington, D.C. October 2015

“X-ray Extinction from Dust Scattering”
The Universe in High Resolution X-ray Spectra - Cambridge, MA August 2015

“Atomic Data Unleashed: Scriptable Interfaces to Atomic Databases”
15 Years of Chandra symposium (poster) - Boston, MA November 2014

"X-ray Studies of Interstellar and Intergalactic Dust Grains"
TUNA Talk - NRAO October 2013
FLASH Talk - University of Arizona September 2013

"High Energy Studies of Interstellar Dust Grains"
Phases of the ISM - MPIA Heidelberg July 2013
Dust Growth 2013 (poster) - MPIA Heidelberg July 2013
221st AAS Meeting (poster) - January 2013

"X-ray Scattering from Intergalactic Dust"
217th AAS Meeting (poster) January 2011

"Response of a Gas Disk to Black Hole Recoil and Mass Loss"
Amaldi 8 (poster) - Columbia University June 2009
NSBP/NSHP Conference - Nashville, TN February 2010

Schools and Workshops Attended

November 2021	Great Lakes Exoplanet Area Meeting (GLEAM) at University of Michigan
November 2020	NSF MPS Workshop for New Investigators
September 2018	Cloud Academy, Les Houches School of Physics
September 2015	Astro Hack Week NYC, New York University
June 2015	Inclusive Astronomy, Vanderbilt University
Summer 2014	AtomDB Workshop, Tokyo Metropolitan University
Summer 2013	Mathematical Biostatistics Boot Camp 1, Johns Hopkins University through Coursera.org
Summer 2011	X-ray Astronomy School, Harvard/CfA
Summer 2010	SciCoder, New York University

PUBLICATIONS

Note: **Bold & underline** indicates a student/postdoc under Corrales's supervision.
Refereed Articles:

(29) Photochemical hazes can trace the C/O ratio in exoplanet atmospheres
Corrales, L., Gavilan, L., Teal, D. J., Kempton, E., accepted to ApJL

(28) The Si K Edge Gas and Dust Optical Depths Towards the Galactic Bulge
Yang, J., Schulz, N., Rogantini, D., Canizares, C., **Corrales, L., Psaradaki, I.** 2022, AJ, 164, 182

(27) Oxygen and iron in interstellar dust: an X-ray investigation
Psaradaki et al. (including **L. Corrales**), 2022, Accepted A&A, arxiv.org/abs/2210.05778

(26) The Astropy Project: Sustaining and Growing a Community-oriented Open-source Project and the Latest Major Release (v5.0) of the Core Package
The Astropy Collaboration (including **Corrales, L.**), 2022, ApJ, 935, 167

(25.) The strongly irradiated planets in Praesepe
King, G., Wheatley, P., Fawcett, V., Miller, N., **Corrales, L.**, Agüeros, M. 2022, MNRAS accepted

(24.) Five new hot-Jupiter transits investigated with Swift-UVOT
Corrales, L., **Ravi, S**., **King, G.**, May, E., Rauscher, E., Reynolds, M. 2021, ApJ, 162, 287

(23.) The near-UV transit of HD 189733b with the XMM-Newton Optical Monitor
King, G., **Corrales, L,** et al., 2021, MNRAS, 506, 2453

(22.) High-energy spectrum of the nearby planet-hosting mid-M dwarf LHS 3844 with HST/COS

Diamond-Lowe et al. (including **King, G.**, and **Corrales, L**.) 2021, AJ, 162, 10

(21.) The Chandra High-resolution X-Ray Spectrum of Quiescent Emission from Sgr A*
Corrales, L., Baganof, F. K., Wang, Q. D., Nowak, M., Neilsen, J., Marko, S., Haggard, D., Davis, J., Houck, J., Principe, D. 2020, ApJ, 891, 71

(20.) Dust and gas absorption in the High Mass X-ray Binary IGR J16318−4848,
Ballhausen et al. (including **Corrales, L.**) 2020, A&A, 641, A65

(19.) Silicon X-ray absorption in the ISM: the gaseous component,
Gatuzz et al. (including **Corrales, L**.), 2020, MNRAS, 498, L20

(18.) The X-ray variable sky as seen by MAXI: the future of dust echo tomography with bright Galactic X-ray bursts
Corrales, L., Mills, B. S., Heinz, S., Williger, G. M., 2019, ApJ, 874, 155

(17.) Study of the Chandra ACIS Readout Streak for Measuring X-Ray Spectra
Ravi, S. & **Corrales, L**., 2019, RNAAS, 3, 98

(16.) Understanding the atmospheric properties and chemical composition of the ultra-hot Jupiter HAT-P-7b: I. Cloud and chemistry mapping
Helling, Ch., Iro, N., **Corrales, L.**, et al., 2019, A&A, 631, A79

(15.) Chandra Spectral and Timing Analysis of Sgr A*'s Brightest X-Ray Flares
Haggard, D., et al. (including **Corrales, L**.) 2019, ApJ, 886, 96

(14.) Photoionization Emission Models for the Cyg X-3 X-Ray Spectrum
Kallman, T., et al. (including **Corrales, L.**) 2019, ApJ, 874, 51

(13.) The Astropy Project: Building an Open-science Project and Status of the v2.0 Core Package
Price-Whelan., et al. (including **Corrales, L.**) 2018, AJ, 156, 123

(12.) The Chandra Dust-scattering Halo of Galactic Center Transient Swift J174540.7-290015
Corrales, L., Mon, B., Haggard, D., et al. 2017, ApJ, 839, 76

(11.) The dust-scattering component of X-ray extinction: effects on continuum tting and high-resolution absorption edge structure
Corrales, L., García, J., Wilms, J., Bagano, F., 2016, MNRAS, 458, 1345

(10.) Cygnus X-3: Its Little Friend's Counterpart, the Distance to Cygnus X-3, and Out-flows?
McCollough, M. L., **Corrales, L.**, & Dunham, M. M. 2016, ApJL, 830, L36

(9.) Si K Edge Structure and Variability in Galactic X-ray Binaries
Schulz, N. S., **Corrales, L.**, Canizares, C., 2016, ApJ, 827, 49

(8.) A Joint Chandra and Swift View of the 2015 X-ray Dust-scattering Echo of V404 Cygni
Heinz, S., **Corrales, L.**, Smith, R.K., et al., 2016, ApJ, 825, 15

(7.) The Impact of Accurate Extinction Measurements for X-ray Spectral Models
Smith, R. K., Valencic, L., & **Corrales, L.**, 2016, ApJ, 818, 143

(6.) The Dust Scattering Halo of Cygnus X-3
Corrales, L. & Paerels, F., 2015, MNRAS, 453, 1121

(5.) X-ray Scattering Echoes and Ghost Halos from the Intergalactic Medium: Relation to the nature of AGN variability
Corrales, L., 2015, ApJ, 805, 23

(4.) Dust in the Circumgalactic Medium of Low-Redshift Galaxies

Peek, J. E. G., Menard, B., & **Corrales, L.**, 2015, ApJ, 813, 7

(3.) Cosmological X-ray Scattering from Intergalactic Dust
Corrales, L. & Paerels, F., 2012, ApJ, 751, 93

(2.) Hydrodynamical Response of a Circumbinary Gas Disk to Black Hole Recoil and Mass Loss
Corrales, L., Haiman, Z., & MacFadyen, A., 2010, MNRAS, 404, 947

(1.) Modeling the Rotational Evolution of Young T Tauri Stars
Baxter, E., **Corrales, L.**, Yamada, R., & Esin, A. A., 2008, ApJ, 689, 308

Books

Handbook of X-ray and Gamma-ray Astrophysics (Springer)
Chapter: Interstellar Absorption and Dust Scattering,
Costantini, E. & **Corrales, L.** 2022, arxiv.org/abs/2209.05261

ATELs

Evidence of a Dust Scattering Halo/Ring in Swift Images of GRS 1915+105
Corrales, L., Balakrishnan, M., Reynolds, M., Miller, J. M., ATEL 12770

Continued Swift XRT Monitoring of GRS 1915+105
Balakrishnan, M., Tetarenko, B., **Corrales, L.**, Reynolds, M., Miller, J. M., ATEL 12848

A Search for a Radio Counterpart to Swift J174540.7-290015
Bower, G. C., Demorest, P., Bagano, F., et al. 2016, ATEL, 8793

Chandra Position of Galactic Center X-ray Transient Swift J174540.7-290015
Bagano, F. K., **Corrales, L.**, Neilsen, J., et al. 2016, ATEL, 8746

A Faint X-ray Dust Scattering Echo from V404 Cyg in Response to Recent Flares
Heinz, S., Beardmore, A., Jonker, P., et al. 2016, ATEL, 8507

Rapid Bright X-ray Flares from V404 Cyg During December-2015 Outburst
Heinz, S., Jonker, P., **Corrales, L.**, & Brandt, N. 2015, ATEL, 8489

Non-Refereed Articles

New Horizons in Galactic Center Astronomy and Beyond, 2021 ASP Conference Series (ASPCS), Volume 528
"Interpreting Low-Luminosity Accretion From the Extended Quiescent Emission of Sgr A*" by **Corrales L.**

Great Observatories: The past and future of panchromatic astrophysics, NASA Cosmic Origins Program Analysis Group, SAG-10 final report
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