

MARCEL AGÜEROS

Department of Astronomy
 Mail Code 5246
 550 West 120th Street
 New York, NY 10027

phone: (212) 854 6814
 fax: (212) 854 8121
 email: marcel@astro.columbia.edu
 web: <http://www.astro.columbia.edu/~marcel/>

employment & education	COLUMBIA UNIVERSITY, NEW YORK, NY Assistant Professor of Astronomy	2010–present
	COLUMBIA UNIVERSITY, NEW YORK, NY NSF Astronomy & Astrophysics Post-doctoral Fellow <i>Advisor: David Helfand</i>	2006–2010
	UNIVERSITY OF WASHINGTON, SEATTLE, WA Ph.D., Astronomy <i>Advisor: Scott Anderson</i>	2000–2006
	EMMANUEL COLLEGE, UNIVERSITY OF CAMBRIDGE, U.K. M.Phil., Physics <i>Advisor: Dave Green</i>	1996–1998
	COLUMBIA COLLEGE, COLUMBIA UNIVERSITY B.A., Astronomy, <i>magna cum laude</i>	1992–1996
honors	Selected participant, Summer Leadership Institute, Society for the Advancement of Chicanos and Native Americans in Science	2011
	Certificate of Excellence in Recognition of Distinguished Personal Initiative on Diversity in Astronomy, National Society of Black Physicists	2008
	Trailblazer Award, Latino Alumni Association of Columbia U.	2006
	NASA Harriett G. Jenkins Pre-doctoral Fellow, U. of Washington	2003–2006
	NSF Graduate Teaching in K-12 Education (GK-12) Fellow, U. of Washington	2002–2003
	NSF East Asian & Pacific Summer Institute participant, National Astronomical Observatory of Japan	2002
	Columbia College Euretta J. Kellett Fellow, U. of Cambridge	1996–1998
	Elected to Phi Beta Kappa, Columbia U.	1996
	Hispanic Scholarship Fund recipient, Columbia U.	1994–1996
research interests	Current projects include: <ul style="list-style-type: none"> • Studies of the age/activity/rotation relation for main sequence stars in open clusters <i>facilities/data sets used: Chandra & archival X-ray data, MDM 2.4-m & WIYN 3.5-m telescopes, Palomar Transient Factory (PTF)</i> • Searches for companions to low-mass white dwarfs (WDs) and for wide WD pairs <i>Chandra, Gemini 8.0-m telescopes, Green Bank Telescope, Sloan Digital Sky Survey (SDSS), & XMM-Newton</i> Past projects include: <ul style="list-style-type: none"> • Characterization of large samples of X-ray emitting stars <i>Apache Point Observatory 3.5-m telescope, Chandra, ROSAT All-Sky Survey (RASS), SDSS, & Two Micron All Sky Survey (2MASS)</i> • Multiwavelength searches for isolated neutron stars <i>Chandra, Gemini, RASS, SDSS, & XMM-Newton</i> • Properties of morphologically diverse nearby galaxies with nuclear star clusters <i>Magellan/Clay 6.5-m telescope.</i> • Radio and X-ray observations of supernova remnants <i>Chandra, Very Large Array (VLA), & XMM-Newton</i> 	
affiliations	African Astronomical Society American Astronomical Society National Society of Hispanic Physicists Society for the Advancement of Chicanos and Native Americans in Science	

courses taught	ASTRONOMY G9002: HIGH-IMPACT PAPERS IN ASTRONOMY & ASTROPHYSICS <i>Co-taught with Zoltan Haiman</i> Graduate seminar centered on discussing high-impact papers across a range of sub-fields. Enrollment: 15.	Spring 2012
	ASTRONOMY G9003: GRADUATE SEMINAR Seminar examining the Astro2010 Decadal Survey. Enrollment: 13.	Fall 2011
	ASTRONOMY G9004: RESEARCH SEMINAR Graduate seminar focusing on how to talk about, write about, and present research. Enrollment: 9.	Spring 2011
	ASTRONOMY C1403: EARTH, MOON, AND PLANETS Introductory-level course on the Solar System. Enrollment: 56.	Fall 2010
students supervised	EMILY BOWSHER, POST-BACCALAUREATE Examining rotational properties of stars in the old open cluster NGC 752.	2011–present
	ADRIAN PRICE-WHELAN, GRADUATE STUDENT Using the PTF archive to develop search tools for microlensing events.	2011–present
	JEFF ANDREWS, THESIS STUDENT Investigating the properties of tight and wide WD/WD binaries from a theoretical and observational perspective.	2010–present
	DAVID FIERROZ, UNDERGRADUATE STUDENT Investigated relation between rotation and chromospheric activity in the middle-aged open cluster Praesepe.	2010–2011
	JENNA LEMONIAS, GRADUATE STUDENT Co-advised with Kevin Covey (Lowell). USED PTF data to characterized stellar rotations in Praesepe.	2009–2010
	DESTROY SAUL, GRADUATE STUDENT Co-advised with David Helfand (Columbia). Worked on analysis of archival VLA observations of the curious composite supernova remnant G16.7+0.1.	2008–2009
	EMILY NEWSOM, POST-BACCALAUREATE Analyzed <i>Chandra</i> and <i>XMM-Newton</i> observations of cool WDs and of candidate isolated neutron stars.	2008–2009
	DUANE LEE, GRADUATE STUDENT Co-advised with Anil Seth (Utah). Analyzed optical spectra of nuclear star clusters taken with Magellan 6.5 m to detect presence of black holes.	2007–2008
DANIEL ESTRADA, NICHOLAS MAKAROV, & RAFAEL MOTA Trained three rising high school seniors in research methods and oversaw project to re-analyze catalog of nearby X-ray emitting stars.	summer 2007	
selected research grants	DEEP IMAGING OF M37, A BETTER HYADES <i>Chandra</i> Cycle 13 Science Program Award: \$126,217.	2011
	SEARCHING FOR MILLISECOND PULSARS IN EXTREMELY LOW-MASS WHITE DWARF BINARIES <i>Chandra</i> Cycle 12 Science Program Award: \$23,182.	2010

research grants <i>continued</i>	THE COOLEST X-RAY EMITTING WHITE DWARFS? <i>XMM-Newton</i> AO8 Science Program Award: \$56,900. <i>Chandra</i> Cycle 9 Science Program Award: \$26,584.	2008, 2009
	XMM-NEWTON SPECTRAL ENERGY DISTRIBUTION OF A NEW CANDIDATE ISOLATED NEUTRON STAR <i>XMM-Newton</i> AO6 Science Program Award: \$27,016.	2007
	LIFTING THE VEIL: A MULTIWAVELENGTH PICTURE OF THE GALACTIC PLANE AND OF ITS STELLAR REMNANTS NSF Astronomy & Astrophysics Postdoctoral Fellowship (AAPF) Award: \$206,000.	2006
	FINDING ISOLATED NEUTRON STARS IN THE ROSAT AND SDSS SURVEYS NASA Harriett G. Jenkins Pre-doctoral Fellowship Award: \$106,449.	2003
other grants	A RESEARCH-INTENSIVE PREPARATION FOR THE TRANSITION TO GRADUATE SCHOOL: COLUMBIA U.'S BRIDGE TO THE PH.D. IN THE NATURAL SCIENCES PROGRAM NSF (unsolicited proposal) Award: \$692,321.	2010–2013
	COLUMBIA'S PARTICIPATION IN THE CORNELL SPACE GRANT CONSORTIUM Award: \$40,000.	2010–2012
	ROOFTOP VARIABLES <i>Chandra</i> Cycles 9 & 11 Education/Public Outreach Program; Space Grant Total award: \$66,792.	2008, 2010, 2011
	A PROPOSAL TO INCREASE UNDERREPRESENTED STUDENT PARTICIPATION IN ASTRONOMY: THE PRE-MAJOR IN ASTRONOMY PROGRAM (PRE-MAP) President's Diversity Appraisal Implementation Fund, U. of Washington. Award: \$21,700.	2005
selected mentoring & outreach experiences	DIRECTOR, BRIDGE TO THE PH.D. PROGRAM IN THE NATURAL SCIENCES, COLUMBIA U.	2010–present
	ASSOCIATE DIRECTOR Manage NSF-supported program to prepare post-baccalaureates for transition into Ph.D. programs. See http://www.columbia.edu/cu/vpdi/bridge_faculty.html	2008–2010
	PI, ROOFTOP VARIABLES Leading program to train public school teachers to use telescopes/CCDs for variable star observing campaigns. See http://rv.astro.columbia.edu/	2008–present
	RESEARCH MENTOR, LEADERSHIP ALLIANCE SUMMER RESEARCH PROGRAM Oversaw undergraduate summer research work at Columbia across natural sciences disciplines. Responsibilities include editing research reports, assisting in presentation preparations, and organizing professional development dinners.	2008, 2009
	NSF GK-12 FELLOW, THURGOOD MARSHALL ELEMENTARY, SEATTLE Assisted teachers in implementing inquiry-based mathematics curriculum in 4 th /5 th grade Bilingual Orientation Center (for non-native English speakers) and mainstream 4 th grade classroom.	Part time, 2003–2005 Full time, 2002–2003

- diversity
& service** CO-ORGANIZER, ASTRONOMY SESSIONS, NSBP ANNUAL MEETING Feb. 2008, 2009
Organized and chaired three astronomy sessions.
- INVITED PARTICIPANT, NSF DIVISION OF MATHEMATICAL SCIENCES WORKSHOP Apr. 2008
Helped produce recommendations for a new NSF program, PRISM, designed to increase mathematics-based research opportunities for undergraduate students.
- A PROPOSAL TO INCREASE UNDERREPRESENTED STUDENT PARTICIPATION 2005
IN ASTRONOMY: THE PRE-MAJOR IN ASTRONOMY PROGRAM (PRE-MAP)
Co-wrote proposal funded by the President's Diversity Appraisal Implementation Fund, U. of Washington. See <http://www.astro.washington.edu/premap/>
- SCIENTIFIC REFEREE for *Publications of the Astronomical Society of the Pacific* and for *Astronomy & Astrophysics*.
- first author
publications** THE FACTORY AND THE BEEHIVE I. ROTATION PERIODS FOR LOW-MASS STARS IN PRAESEPE
Agüeros, M., Covey, K., Lemonias, J., et al. 2011, *ApJ*, 740, 110
- NO CONFIRMED NEW ISOLATED NEUTRON STARS IN THE SDSS DATA RELEASE 4
Agüeros, M., Posselt, B., Anderson, S., et al. 2011, *AJ*, 141, 176
- NO NEUTRON STAR COMPANION TO THE LOWEST MASS SDSS WHITE DWARF
Agüeros, M., Heinke, C., Camilo, F., et al. 2009, *ApJL*, 700, L123
- A RADIO SEARCH FOR PULSAR COMPANIONS TO SDSS LOW-MASS WHITE DWARFS
Agüeros, M., Camilo, F., Silvestri, N., et al. 2009, *ApJ*, 697, 283
- X-RAY EMITTING STARS IDENTIFIED FROM THE ROSAT ALL-SKY SURVEY AND THE SLOAN DIGITAL SKY SURVEY
Agüeros, M., Anderson, S., Covey, K., et al. 2009, *ApJS*, 181, 444
- THE CHAMP EXTENDED STELLAR SURVEY (CHESS): PHOTOMETRIC AND SPECTROSCOPIC PROPERTIES OF SERENDIPITOUSLY DETECTED STELLAR X-RAY SOURCES
Covey, K., Agüeros, M., Green, P., et al. 2008, *ApJS*, 178, 339
The first two authors contributed equally to this study.
- CANDIDATE ISOLATED NEUTRON STARS AND OTHER OPTICALLY BLANK X-RAY FIELDS IDENTIFIED FROM THE ROSAT ALL-SKY AND SLOAN DIGITAL SKY SURVEYS
Agüeros, M., Anderson, S., Margon, B., et al. 2006, *AJ*, 131, 1740
- THE ULTRAVIOLET, OPTICAL, AND INFRARED PROPERTIES OF SLOAN DIGITAL SKY SURVEY SOURCES DETECTED BY GALEX
Agüeros, M., Ivezić, Ž., Covey, K., et al. 2005, *AJ*, 130, 1022
- THE BULK EXPANSION OF SNR CASSIOPEIA A AT 151 MHZ
Agüeros, M. & Green, D. 1999, *MNRAS*, 305, 957
- selected
talks** POCS: THE PTF OPEN CLUSTER SURVEY
Astronomy Colloquium, University of Toronto, Mar. 23, 2012
Astronomy Colloquium, Yale University, Apr. 5, 2012
- THE FACTORY & THE BEEHIVE: STELLAR ROTATIONS AT 600 MYR
Physics Colloquium, University of Wisconsin-Milwaukee, Apr. 1, 2011
Astronomy Seminar, Center for Interdisciplinary Exploration and Research in Astronomy, Northwestern University, Apr. 5, 2011

talks

continued

Cape Town Astronomy & Cosmology Colloquium, South African Astronomical
Observatory, Apr. 19, 2011

Astrophysics Seminar, Rutgers University, Apr. 22, 2011

Steward Observatory/NOAO Joint Colloquium, Apr. 28, 2011

Astronomy Colloquium, Pennsylvania State University, Sep. 28, 2011

THE PALOMAR TRANSIENT FACTORY: HOW LOOKING FOR DISTANT EXPLOSIONS TELLS US
ABOUT NEARBY STARS

Invited talk, Society for the Advancement of Chicanos and Native Americans in Science,
San José, CA, Oct. 28, 2011

COLUMBIA'S BRIDGE TO THE PHD PROGRAM: WHO WHAT WHERE WHEN WHY HOW

Invited talk, Joint Annual Conference, National Society of Black Physicists,
National Society of Hispanic Physicists, Austin, TX, Sep. 24, 2011