

Ana María Mosquera

Curriculum Vitae

Contact Information

The Ohio State University
Department of Astronomy
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RESEARCH INTERESTS

AGN structure, Evolution of Galaxies, Microlensing, Strong and Weak Gravitational Lensing

EDUCATION

PhD - Astrophysics, 2009

University of Valencia, Spain

Title: *Gravitational Lens Chromaticity*

Advisor: Prof. José A. Muñoz

Bachelor of Science - Physics, 2004

Facultad de Ciencias, Montevideo, Uruguay

RESEARCH EXPERIENCE

The Ohio State University, Dept. of Astronomy (April 2010 - Present)

Postdoctoral Researcher

Fermilab Center for Particle Astrophysics (Jan 2010 - April 2010)

Research Associate

University of Valencia, Spain (Aug 2009 - Jan 2010)

Visiting Scientist

University of Valencia, Spain (Sept 2004 - Jul 2009)

Graduate Research. Advisor: Prof. José A. Muñoz

Instituto de Física, Facultad de Ciencias, Uruguay (2003 - 2004)

Undergraduate Research. Advisor: Prof. Verónica Motta

FELLOWSHIPS AND AWARDS

2010 Generalitat Valenciana, Conselleria de Educació, Postdoctoral Fellowship to join The Ohio State University.

2010 Fulbright-MEC Postdoctoral Fellowship to join the Harvard-Smithsonian Center for Astrophysics (declined).

2004 Marie Curie Research Training Fellowship - ANGLES Network (Astrophysics Network for Galaxy LEnsing Studies), Predoctoral Fellowship to join the University of Valencia.

OBSERVATIONAL EXPERIENCE

1. Long slit spectroscopy, MDM 1.3-m telescope
Kitt Peak National Observatory
14 nights - September and October 2011
Reverberation-mapping campaign.
2. CCD photometry, Nordic Optical Telescope
Roque de los Muchachos, La Palma, Spain
Seven nights - August to November 2006, and October 2007
P.I. of the Proposal: "Chromatic studies in lensing systems".
3. CCD photometry, MERCATOR Telescope
Roque de los Muchachos, La Palma, Spain
Four nights - February to May 2006
Chromatic studies in lensing systems.
4. Bidimensional Spectroscopy with INTEGRAL at the William Herschel Telescope (WHT)
Roque de los Muchachos, La Palma, Spain
One night - February 2006
Spectrophotometric variability of lensed quasars.

SEMINARS

LSST lunch talk at The University of Washington, Seattle, WA, September 2011, *TBD*.

"Probing the Accretion Disk Structure in Two Lensed Quasars: Q2237+0305 and HE 0435–1223",
Quasar tea talk at the Harvard-Smithsonian Center for Astrophysics, Boston, MA (USA), November 2009.

"Chromatic Studies in Two Lensing Systems: SDSS J1650+4251 & Q2237+0305", Jet Propulsion Laboratory, Pasadena, CA (USA), February 2008.

"Chromaticity studies in the gravitational lens systems SDSS J1650+4251 & Q2237+0305", Department of Astronomy and Astrophysics, University of Valencia, September 2006.

CONFERENCES WITH RESEARCH CONTRIBUTION (SELECTED)

1. "Q2237+0305 as a Trigger for Chromatic Microlensing Statistics" (*Talk*).
Conference: The Final Whistle - ANGLES Workshop, MPI für Radioastronomie, Bonn, Germany, March 27 - 28 2008.
2. "Chromaticity Study in Q2237+0305" (*Poster*).
Conference: XXIIIrd IAP Colloquium "From giant arcs to CMB lensing: 20 years of gravitational distortion" in Honor of Bernard Fort, IAP, Paris, France, July 2 - 6 2007.
3. "Chromaticity Study in Q2237+0305" (*Talk*).
Conference: Searching for Strong Lenses in Large Imaging Surveys, Fermilab, Batavia, IL (USA), June 14 - 15 2007.
4. "Chromaticity studies in the gravitational lens system Q2237+0305" (*Talk*).
Conference: 2007 Gravitational Microlensing Workshop, Daejeon, Republic of Korea, January 15 - 17 2007.

5. "Chromaticity studies in the gravitational lens system Q2237+0305" (*Talk*).
Conference: ANGLES Mid-term Review Meeting at Copenhagen, Denmark, November 13 - 15 2006.
6. "Studies of extinction in SDSS J1650+4251 and chromatic microlensing in Q2237+0305: an update" (*Talk*).
Conference: ANGLES ER and ESR meeting at Ylläs, Finland, February 6 - 9 2006.
7. "Chromaticity in Q2237+0305" (*Talk*).
Conference: First Annual ANGLES Workshop, Crete, Greece, April 4 - 7 2005.
8. "Wavelength dependence in the flux ratio of the double quasar SDSS J1650+4251" (*Talk*).
Conference: 25 Years After the Discovery: Some Current Topics on Lensed QSOs, Santander, Spain, December 15 - 17 2004.
9. "Preliminary results on the gravitational lens system HS 0818+1227" (*Poster*).
IAU Symposium 225, Impact of Gravitational Lensing on Cosmology, EPFL, Lausanne, Switzerland, July 19 - 23 2004.

SCIENTIFIC VISITS

CCAPP, The Ohio State University, Columbus (USA), September 14 - Oct 17 2009, with Prof. Chris Kochanek.

University of California, Davis (USA), February 5-17 2008, with Prof. Chris Fassnacht.

Instituto de Astrofísica de Canarias, Canary Islands (Spain), March 6-10 2006, with Prof. Evencio Mediavilla.

PROFESSIONAL SERVICE

Conference Organization

1. Member of Scientific Organizing Committee (SOC) in charge of the "13th Microlensing Workshop", IAP, Paris, France (January 19 - 21, 2009).
2. Member of Local Organizing Committee (LOC) in charge of the "ANGLES School on Gravitational Lens Modeling", Valencia, Spain (March 27 - 30, 2007).

Teaching Assistance - Undergraduate Courses

1. System Mechanics and Wave Phenomena (September 2001 - September 2004)
Instituto de Física, Facultad de Ingeniería, Montevideo, Uruguay.
2. Thermodynamics (September 2001 - September 2004)
Instituto de Física, Facultad de Ingeniería, Montevideo, Uruguay.

OTHER RELEVANT INFORMATION

Languages: Spanish (native), English (fluent), Portuguese (fluent), Greek (fluent), French (Intermediate).

PUBLICATIONS

Refereed Publications

1. Muñoz, J. A., Mediavilla, E., Kochanek, C. S., Falco, E. & **Mosquera, A. M.** 2011, "A Study of Gravitational Lens Chromaticity with the Hubble Space Telescope", Submitted to The Astrophysical Journal, arXiv1107.5932v1 [astro-ph].
2. **Mosquera, A. M.** & Kochanek, C. S. 2011, "The Microlensing Properties of a Sample of 87 Lensed Quasars", The Astrophysical Journal, 738, 96.
3. Mediavilla, E., Muñoz, J. A., Kochanek, C. S., Guerras, E., Acosta-Pulido, J., Falco, E., Motta, V., Arribas, S., Manchado, A. & **Mosquera, A. M.** 2011, "The Structure of the Accretion Disk in the Lensed Quasar SBS 0909+532", The Astrophysical Journal, 730, 16.
4. **Mosquera, A. M.**, Muñoz, J. A., Mediavilla, E., & Kochanek, C. S. 2011, "A Study of Gravitational Lens Chromaticity Using Ground-based Narrowband Photometry", The Astrophysical Journal, 728, 145.
5. **Mosquera, A. M.**, Muñoz, J. A. & Mediavilla, E. 2009, "Detection of chromatic microlensing in Q2237+0305 A", The Astrophysical Journal, 691, 1292.
6. Mediavilla, E., Muñoz, J. A., Falco, E., Motta, V., Guerras, E., Canovas, H., Jean, C., Oscoz, A. & **Mosquera, A.M.** 2009, "Microlensing Based Estimate of the Mass Fraction in Compact Objects in Lens Galaxies", The Astrophysical Journal, 706, 1451.

Proceedings

1. **Mosquera, A. M.**, Muñoz, J. A., Mediavilla, E., & Barrena, R. 2004, "Wavelength dependence in the flux ratio of the double quasar SDSS J1650+4251", Proceedings of the Workshop: "25 Years After the Discovery: Some Current Topics on Lensed QSOs", Santander, Spain. Electronic publication.