Joseph A. Muñoz

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RESEARCH INTERESTS:	
Cosmology, ISM of high-z galaxies, first galaxies, reionization, relics in the L	ocal Group
CURRENT POSITION:	
Postdoctoral Scholar, UCSB, with Peng Oh	2013–15
EDUCATION:	
	2010
Ph.D , Harvard University , ASTRONOMY Advisor: Abraham Loeb	2010
Thesis title: <i>Galaxies within Hierarchical Structure Formation</i>	
A.M., Harvard University, ASTRONOMY	2007
A.M., Harvard University, ASTRONOMT A.B., Princeton University, ASTROPHYSICAL SCIENCES, magna cum lau	
Advisor: Paul Steinhardt and Neta Bahcall	<i>iue</i> 2005
Advisor. I adi Steninardi and Neta Danean	
HONORS AND AWARDS:	
NSF Graduate Research Fellowship	2005-08
Sigma Xi Book Award, Princeton (one graduating senior in astrophysics)	2005
Sigma Xi Inductee, Princeton Chapter (selected by the faculty)	2005
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PREVIOUS RESEARCH POSITIONS:	
Postdoctoral Scholar, UCLA, with Steven Furlanetto	2010–13
Graduate Student Researcher, Harvard, with Abraham Loeb	2005–10
Senior Independent Work, Princeton, with Paul Steinhardt and Neta Bahcall	
REU Summer Research Intern, Princeton, with Edward Jenkins	2004
Junior Independent Work, Princeton, with J. Richard Gott	2004
Junior Independent Work, Princeton, with David Spergel	2003
REU Summer Research Intern , Princeton, with Jonathan Tan	2003
Research Assistant, Princeton, with Gillian Knapp	2002
REU Summer Research Intern , University of Florida, with Andrey Korytov	
Research Assistant, Princeton, with Lyman Page	2001-02
MENTORING:	
Lauren Holzbauer, graduate student, UCLA, with Steven Furlanetto	2012-
Adam Greenberg, first-year graduate student, UCLA	2013
Fred Davies, graduate student, UCLA, with Steven Furlanetto	2013-
Ethan Nadler, undergraduate student, UCSB	2014-

TEACHING POSITIONS:

Designed and taught weekly one hour section; ran the in-lecture Pearson Response System (PRS); led problem sessions and exam reviews; graded problem set and exams Teaching Assistant , Princeton, AST 203: The Universe (non-majors) 2004, Ran problem set and review sessions and graded problem sets and exams. <u>GRANTS:</u>	TEACHING POSITIONS:	
Teaching Fellow, Harvard, Ay 202a: Galaxies and Dynamics (grad) 2009 Helped organize curriculum; ran sessions for and graded problem sets and exams. Teaching Fellow, Harvard, Science A-47: Cosmic Connections (non-majors) 2006, Designed and taught weekly one hour section; ran the in-lecture Pearson Response System (PRS); led problem sessions and exam reviews; graded problem set and exams Teaching Assistant, Princeton, AST 203: The Universe (non-majors) 2004, Ran problem set and review sessions and graded problem set and exams. GRANTS: PI: UC High Performance AstroComputing Center, small travel grant 2013-4 "The Proximity Effect of Galaxies on the Column Density Distribution of Absorbers During Hydrogen Reionization" 2012 "Unveiling the structure of the farthest galaxy protocluster: WFC3 imaging of a z-8 galaxy overdensity" 2014 WORK IN MANUSCRIPT STAGE: 2014 2. J. A. Muñoz, F. Davies, P. Oh, S. Furlanetto, to be submitted to MNRAS 2014 "The Itaness and Sudden Evolution of the Meta-Galactic Ionizing Background" 2014 "The Itaness and Sudden Evolution of the Meta-Galactic Ionizing Background" 2014 "The Itaness and Sudden Evolution of MNRAS 2014 "The Itaness and Sudden Evolution of the Meta-Galactic Ionizing Background" 2014 "The Flatness and Sudden Evolution of the Meta-Galactic Ionizing Background" 2014 "The Itaness of Empirical	Teaching Fellow, Harvard, Ay 202b: Cosmology (grad)	2010
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The Scatter in Galactic Ages and Stellar Metallicities"11. J. A. Muñoz, S. Furlanetto, $MNRAS$, 438, 24832014"Extreme Galaxies During Reionization: Testing ISM and Disk Models"201310. J. A. Muñoz, S. Furlanetto, $MNRAS$, 435, 26762013"Molecular Cloud Properties and CO Line Emission in $z \ge 6$ Galaxies"20129. J. A. Muñoz, S. Furlanetto, $MNRAS$, 426, 34772012"Faint AGN in $z \ge 6$ Lyman-break Galaxies Powered by Cold Accretion and Rapid Angular Momentum Transport"20128. J. A. Muñoz, $JCAP$, 04, 0152012"The Evolution of the Galaxy Luminosity Function from $z=6-10$ in the Context of Hierarchical Structure Formation"20117. J. A. Muñoz, A. Loeb, ApJ , 729, 992011"Constraining the Minimum Mass of High-Redshift Galaxies2011		2014
 11. J. A. Muñoz, S. Furlanetto, <i>MNRAS</i>, 438, 2483 "Extreme Galaxies During Reionization: Testing ISM and Disk Models" 10. J. A. Muñoz, S. Furlanetto, <i>MNRAS</i>, 435, 2676 "Molecular Cloud Properties and CO Line Emission in z ≥ 6 Galaxies" 9. J. A. Muñoz, S. Furlanetto, <i>MNRAS</i>, 426, 3477 "Faint AGN in z ≥ 6 Lyman-break Galaxies Powered by Cold Accretion and Rapid Angular Momentum Transport" 8. J. A. Muñoz, <i>JCAP</i>, 04, 015 "The Evolution of the Galaxy Luminosity Function from z=6–10 in the Context of Hierarchical Structure Formation" 7. J. A. Muñoz, A. Loeb, <i>ApJ</i>, 729, 99 "Constraining the Minimum Mass of High-Redshift Galaxies 		
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 10. J. A. Muñoz, S. Furlanetto, MNRAS, 435, 2676 2013 "Molecular Cloud Properties and CO Line Emission in z ≥ 6 Galaxies" 9. J. A. Muñoz, S. Furlanetto, MNRAS, 426, 3477 2012 "Faint AGN in z ≥ 6 Lyman-break Galaxies Powered by Cold Accretion and Rapid Angular Momentum Transport" 8. J. A. Muñoz, JCAP, 04, 015 "The Evolution of the Galaxy Luminosity Function from z=6–10 in the Context of Hierarchical Structure Formation" 7. J. A. Muñoz, A. Loeb, ApJ, 729, 99 "Constraining the Minimum Mass of High-Redshift Galaxies 		2014
 "Molecular Cloud Properties and CO Line Emission in z ≥ 6 Galaxies" 9. J. A. Muñoz, S. Furlanetto, MNRAS, 426, 3477 2012 "Faint AGN in z ≥ 6 Lyman-break Galaxies Powered by Cold Accretion and Rapid Angular Momentum Transport" 8. J. A. Muñoz, JCAP, 04, 015 2012 "The Evolution of the Galaxy Luminosity Function from z=6–10 in the Context of Hierarchical Structure Formation" 7. J. A. Muñoz, A. Loeb, ApJ, 729, 99 2011 "Constraining the Minimum Mass of High-Redshift Galaxies 		
 9. J. A. Muñoz, S. Furlanetto, MNRAS, 426, 3477 9. J. A. Muñoz, S. Furlanetto, MNRAS, 426, 3477 2012 "Faint AGN in z ≥ 6 Lyman-break Galaxies Powered by Cold Accretion and Rapid Angular Momentum Transport" 8. J. A. Muñoz, JCAP, 04, 015 The Evolution of the Galaxy Luminosity Function from z=6–10 in the Context of Hierarchical Structure Formation" 7. J. A. Muñoz, A. Loeb, ApJ, 729, 99 "Constraining the Minimum Mass of High-Redshift Galaxies 		2013
 "Faint AGN in z ≥ 6 Lyman-break Galaxies Powered by Cold Accretion and Rapid Angular Momentum Transport" 8. J. A. Muñoz, JCAP, 04, 015 2012 "The Evolution of the Galaxy Luminosity Function from z=6–10 in the Context of Hierarchical Structure Formation" 7. J. A. Muñoz, A. Loeb, ApJ, 729, 99 2011 "Constraining the Minimum Mass of High-Redshift Galaxies 	-	
and Rapid Angular Momentum Transport" 8. J. A. Muñoz, <i>JCAP</i> , 04, 015 2012 "The Evolution of the Galaxy Luminosity Function from z=6–10 in the Context of Hierarchical Structure Formation" 7. J. A. Muñoz, A. Loeb, <i>ApJ</i> , 729, 99 2011 "Constraining the Minimum Mass of High-Redshift Galaxies		2012
 8. J. A. Muñoz, JCAP, 04, 015 "The Evolution of the Galaxy Luminosity Function from z=6–10 in the Context of Hierarchical Structure Formation" 7. J. A. Muñoz, A. Loeb, ApJ, 729, 99 "Constraining the Minimum Mass of High-Redshift Galaxies 		
 "The Evolution of the Galaxy Luminosity Function from z=6–10 in the Context of Hierarchical Structure Formation" 7. J. A. Muñoz, A. Loeb, <i>ApJ</i>, 729, 99 2011 "Constraining the Minimum Mass of High-Redshift Galaxies 		
in the Context of Hierarchical Structure Formation" 7. J. A. Muñoz , A. Loeb, <i>ApJ</i> , 729, 99 "Constraining the Minimum Mass of High-Redshift Galaxies		2012
7. J. A. Muñoz, A. Loeb, ApJ, 729, 992011"Constraining the Minimum Mass of High-Redshift Galaxies		
"Constraining the Minimum Mass of High-Redshift Galaxies		• • • • •
		2011
and Their Contribution to the Ionization State of the IGM"		
	and Their Contribution to the Ionization State of the IGM"	

6. J. A. Muñoz, H. Trac, A. Loeb, MNRAS, 405, 2001	2010
"High-redshift Pencil-beam Statistics"	
5. J. A. Muñoz, P. Madau, A. Loeb, J. Diemand, MNRAS, 400,1593	2009
"Probing the Epoch of Reionization with Milky Way Satellites"	
4. J. A. Muñoz, A. Loeb, MNRAS, 391, 1341	2008
"The Density Contrast of the Shapley Supercluster"	
3. J. A. Muñoz, A. Loeb, <i>MNRAS</i> , 386, 2323	2008
"Light-Cone Distortion of the Clustering and Abundance of	
Massive Galaxies at High-Redshifts"	
2. J. A. Muñoz, A. Loeb, MNRAS, 385, 2175	2008
"Verifying the Identity of High-Redshift Massive Galaxies	
Through the Clustering of Lower Mass Galaxies Around Them"	
1. J. A. Muñoz , J. Tan, <i>ApJ</i> , 625, 256	2005
"The Variability of Gamma-Ray Bursts that Create Afterglows"	
OTHER REFEREED PUBLICATIONS:	
2. K. Finlator, J. A. Muñoz, et al., MNRAS, 438, 2483	2014
"The Host Halos of OI Absorbers in the Reionization Epoch"	
1. M. Trenti et al. (incl. J. A. Muñoz), ApJ, 746, 55	2012
"A Protocluster of Galaxies at Redshift z~8"	
PROFESSIONAL ACTIVITIES, AFFILIATIONS, AND OUTREACH:	
Referee: MNRAS, ApJ, JCAP	
Student Representative for the Harvard Junior Faculty Search	2008
Led student discussions, collated opinions, and reported to faculty	
Project ASTRO Astronomer	2007–09
Taught level-appropriate astronomy to Deyne Meadow's 4th-grade class	
at the Haggerty School, Cambridge, MA	
Member of Sigma Xi, Princeton Chapter	
Member of American Astronomical Society	
SEMINARS & COLLOQUIA:	2012
Caltech, Astronomy Tea Talk	2013
CCAPP/OSU, CCAPP Seminar	2013
UC Riverside, Astronomy Seminar	2012
Georgia Tech, Center for Relativistic Astrophysics Seminar	2012
UC Santa Barbara, Astro Lunch Talk	2011

Carnegie Observatories, Lunch Talk2011UNLV, Astronomy Colloquium2011Harvard University, Institute for Theory and Computation Luncheon2009

CONFERENCE PRESENTATIONS:

10. The Properties of Gas in Galaxies at $z > 6$ (invited talk)
Cosmic Dawn @ Ringberg, June 2013, Ringberg Castle, Germany
9. Modeling X-Ray and CO Line Emission from $z \ge 6$ Galaxies (contr. talk)
221th AAS Meeting, 2013, Long Beach, CA, USA
8. Analytic Modeling of $z \ge 6$ Galaxy Formation (contr. talk)
The Baryon Cycle, 2012, Irvine, CA, USA
7. Analytic Modeling of Galaxies at $z \ge 6$: Star Formation and Black Hole Growth (contr. talk)
First Stars IV: From Hayashi to the Future, 2012, Kyoto, Japan
6. The Galaxy Formation Theory Perspective on the High-z LF for Reionization (contr. talk)
EOR:2012, 2012, Strasbourg, France
5. The Sources that Reionized the Universe and their Relics in the Local Group (contr. talk)
Theoretical Astrophysics in Southern California, 2010, Pasadena, CA
4. Galaxy Clustering within Hierarchical Structure Formation (dissertation talk)
215th AAS Meeting, 2010, Washington, DC, USA
3. Probing Reionization with Milky Way Satellites (contr. talk)
Reionization @ Ringberg, 2009, Ringberg Castle, Germany
2. Abundance and Clustering of the Most Massive Galaxies at $z > 6$ (contr. talk)
Far Away: Light in the Young Universe at Redshift Beyond Three, 2008, Paris, France
1. The Density Contrast of the Shapley Supercluster (poster)
The Warm & Hot Universe, 2008, Columbia University, New York, NY, USA

PROFESSIONAL REFERENCES:

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