

Nikole M. Nielsen

Curriculum vitae

Astronomy Department
New Mexico State University
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EDUCATION

New Mexico State University, Las Cruces, NM

Ph.D., Astronomy May 2015
– Dissertation: *Tracing Galaxy Evolution Through Spatial and Kinematic Probes of the Mg II Circumgalactic Medium*
– Advisor: Christopher W. Churchill

M.S., Astronomy December 2013

Michigan State University, East Lansing, MI

B.S., Astrophysics May 2009
– Advisor: Timothy C. Beers

PROFESSIONAL DEVELOPMENT

Graduate Research Assistant July 2009 – May 2015
Astronomy Department, New Mexico State University
Supervisor: Christopher W. Churchill

Graduate Teaching Assistant August 2009 – January 2012
Astronomy Department, New Mexico State University
– Lab instructor for an introductory-level undergraduate astronomy course
– Grader for 3 upper-level undergraduate astronomy courses

Undergraduate Research Assistant January 2008 – May 2009
Physics and Astronomy Department, Michigan State University
Supervisor: Timothy C. Beers

Undergraduate Teaching Assistant August 2007 – May 2009
Physics and Astronomy Department, Michigan State University
– Lab instructor for an intro-level undergraduate physics lab
– Grader for intro- and upper-level undergraduate astronomy courses

REFERENCES

Assoc. Prof. Christopher Churchill (NMSU); cwc@nmsu.edu
Prof. Michael Murphy (Swinburne); mmurphy@swin.edu.au
Prof. Rene Walterbos (NMSU); rwalterb@nmsu.edu

GRANTS & AWARDS

NMSU Alumni Association Outstanding Graduate Award for the Graduate School, Ph.D.	2015
NMSU Graduate Research Enhancement Grant	2012 – 2015
– 3-year \$45k grant, Office of the Vice President for Research	
NMSU College of Arts and Sciences Graduate Travel Award	2014
NMSU Astronomy Zia Award for Outstanding Research	2013
NSF East Asia and Pacific Summer Institutes	2012
– \$12k fellowship to conduct thesis-related research at Swinburne University of Technology in Melbourne, Australia for June–August 2012	
New Mexico Space Grant Graduate Research Fellowship, 1-year \$10k	2012
New Mexico Space Grant Graduate Research Fellowship, 1-year \$10k	2010

CONFERENCES & COLLOQUIA

International Conferences

Intergalactic Matters, Heidelberg, Germany (Talk)	June 2014
The Physical Link Between Galaxies and their Halos, Garching, Germany (Poster)	June 2013
Leiden Summer CGM-Galaxy Interface Workshop, Leiden, Netherlands (Talk)	June 2013

Domestic Conferences

225 th American Astronomical Society Meeting, Seattle, WA (Dissertation Talk)	January 2015
Santa Cruz Galaxy Workshop, Santa Cruz, CA (Talk)	August 2014
The Near-Field Deep-Field Connection, Irvine, CA (Poster)	February 2014
STScI May Symposium: Gas Flows in Galaxies, Baltimore, MD (Poster)	May 2012
219 th American Astronomical Society Meeting, Austin, TX (Poster)	January 2012

Local Colloquia

NMSU Astronomy Dept Pizza Lunch	September 2014
NMSU Graduate Research & Arts Symposium	March 2014
NMSU Astronomy Dept Colloquium	May 2013
The 28 th New Mexico Symposium in Socorro, NM	November 2012
NMSU Astronomy Dept Pizza Lunch	October 2012
NMSU Graduate Research & Arts Symposium	March 2012

PROFESSIONAL ORGANIZATIONS

Scientific referee for the Astrophysical Journal	2014 – Present
American Astronomical Society	2012 – Present
NMSU Astronomy Dept Graduate Awards Committee	2014 – 2015
– Graduate Student Representative	
NMSU Astronomy Graduate Student Organization	
– President: Faculty-Student Liaison	2011 – 2012
– Vice President: Astronomy Dept Outreach Coordinator	2010 – 2011

Publications

11 refereed publications, 3 first author, 116 citations, h-index: 6, [ADS Query](#)

First Author Refereed (3)

- “MAGIIICAT V. Orientations of Outflows and Accretion Determine the Kinematics and Column Densities of the Circumgalactic Medium”
Nielsen, N. M., Churchill, C. W., Kacprzak, G. G., Murphy, M. T., & Evans, J. L. 2015, ApJ, submitted, arXiv:1505.07167
- “MAGIIICAT II. General Characteristics of the Mg II Absorbing Circumgalactic Medium”
Nielsen, N. M., Churchill, C. W., & Kacprzak, G. G. 2013, ApJ, 776, 115
- “MAGIIICAT I. The Mg II Absorber-Galaxy Catalog”
Nielsen, N. M., Churchill, C. W., Kacprzak, G. G., & Murphy, M. T. 2013, ApJ, 776, 114

Co-Author Refereed (8)

- “An Extreme Metallicity, Large-Scale Outflow from a Star-Forming Galaxy at $z \sim 0.4$ ”
Muzahid, S., Kacprzak, G. G., Churchill, C. W., Charlton, J. C., **Nielsen, N. M.**, Mathes, N. L., & Trujillo-Gomez, S. 2015, ApJ, submitted
- “Halo Mass Dependence of HI and OVI Absorption: Evidence for Differential Kinematics”
Mathes, N. L., Churchill, C. W., Kacprzak, G. G., **Nielsen, N. M.**, Trujillo-Gomez, S., Charlton, J., & Muzahid, S. 2014, ApJ, 792, 128
- “MAGIIICAT III. Interpreting Self-Similarity of the Circumgalactic Medium with Virial Mass using Mg II Absorption”
Churchill, C. W., Trujillo-Gomez, S., **Nielsen, N. M.**, & Kacprzak, G. G. 2013, ApJ, 779, 87
- “The Smooth Mg II Gas Distribution Through the Interstellar/Extra-planar/Halo Interface”
Kacprzak, G. G., Cooke, J., Churchill, C. W., Ryan-Weber, E. V., & **Nielsen, N. M.** 2013, ApJ, 777, L11
- “The Redshift Distribution of Intervening Weak Mg II Quasar Absorbers and a Curious Dependence on Quasar Luminosity”
Evans, J. L., Churchill, C. W., Murphy, M. T., **Nielsen, N. M.**, & Klimek, E. S. 2013, ApJ, 768, 3
- “The Self-Similarity of the Circumgalactic Medium with Galaxy Virial Mass: Implications for Cold-Mode Accretion”
Churchill, C. W., **Nielsen, N. M.**, Kacprzak, G. G., & Trujillo-Gomez, S. 2013, ApJ, 763, L42
- “Tracing Outflows and Accretion: A Bimodal Azimuthal Dependence of Mg II Absorption”
Kacprzak, G. G., Churchill, C. W., & **Nielsen, N. M.** 2012, ApJ, 760, L7
- “Quenched Accretion of a Large Scale Metal-Poor Filament due to Virial Shocking in the Halo of a Massive $z = 0.7$ Galaxy”
Churchill, C. W., Kacprzak, G. G., Steidel, C. C., Spitler, L. R., Holtzman, J. A., **Nielsen, N. M.**, & Trujillo-Gomez, S. 2012, ApJ, 760, 68