Susan E. Clark

Curriculum Vitae

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EDUCATION

Columbia University
Ph.D. Candidate, Astrophysics — 2017 (expected)
Thesis Project: *Magnetic Fields in the Interstellar Medium*
Thesis Advisors: Mary E. Putman, Joshua E.G. Peek
M.A., M.Phil, Astrophysics — 2014

The University of North Carolina at Chapel Hill
B.S., Physics — 2012

Thomas Jefferson High School for Science & Technology — 2008

HONORS, AWARDS AND GRANTS

NSF Graduate Research Fellowship — 2012 – present
Columbia Dean's Fellowship — 2012 – present
ASNY Graduate Student Paper Prize — 2016
CCAPP Price Prize in Cosmology and AstroParticle Physics — 2016
PI, VLA Observing Proposal 16A-133, 8 hours — 2016
PRL Editors' Recommendation Paper — 2015
Morehead-Cain Scholarship — 2008 – 2012
Full scholarship to UNC-Chapel Hill

PUBLICATIONS

First-author journal articles

4. **S.E. Clark** & J.S. Oishi. *The weakly nonlinear magnetorotational instability in a global, cylindrical Taylor-Couette flow.* 2016, submitted to ApJ. arXiv:1610.01603

3. **S.E. Clark** & J.S. Oishi. *The weakly nonlinear magnetorotational instability in a thin-gap Taylor-Couette flow.* 2016, submitted to ApJ. arXiv:1610.01616

2. **S.E. Clark**, J. Colin Hill, J.E.G. Peek, M.E. Putman, B.L. Babler. *Neutral hydrogen structures trace dust polarization angle: Implications for cosmic microwave background foregrounds.* 2015, PRL 115, 241302. Selected as PRL Editors' Recommendation. arXiv:1508.07705.

1. **S.E. Clark**, J.E.G. Peek, M.E. Putman. *Magnetically aligned* HI *fibers and the Rolling Hough Transform.* 2014, ApJ 789, 82. arXiv:1312.1338

Other journal articles

4. F. Heitsch, B. Bartell, **S.E. Clark**, J.E.G. Peek, D. Cheng, M.E. Putman. *Three-dimensional orientation of compact high velocity clouds.* 2016, MNRAS Letters 462, L46. arXiv:1606.06689.

3. J. Malinen, L. Montier, J. Montillaud, M. Juvela, I. Ristorcelli, **S.E. Clark**, O. Berné, J.-Ph. Bernard, V.-M. Pelkonen, D.C. Collins. *Matching dust emission structures and magnetic field in high-latitude cloud L1642: comparing Herschel and Planck maps.* 2016, MNRAS 460, 1934. arXiv:1512.03775.

2. N.M. McClure-Griffiths, S. Stanimirović, [5 authors], **S.E. Clark**, [3 authors]. *Galactic and Magellanic evolution with the SKA.* 2015, from "Advancing Astrophysics with the Square Kilometre Array", PoS. arXiv:1501.01130

1. W.-H. Hsu, M.E. Putman, F. Heitsch, S. Stanimirović, J.E.G. Peek, **S.E. Clark**. *Physical properties of Complex C halo clouds.* 2011, AJ 141, 57 arXiv:1011.0011

Conference proceedings

1. **S.E. Clark**, J.E.G. Peek, J. Colin Hill, M.E. Putman. *Quantifying the magnetic alignment of* HI *and dust in the diffuse ISM.* 2016, In P. Jablonka, Ph. André, F. van der Tak (Eds.) *From Interstellar Clouds to Star-forming Galaxies: Universal Processes?* Proceedings of the International Astronomical Union Symposia and Colloquia, IAU 315, Honolulu, Hawaii

SCIENTIFIC TALKS

31 presentations, 15 invited talks/colloquia

31.	Invited Talk, Cosmic Rays, Astrophysical Turbulence and Magnetic Reconnection, Natal, Brazil	Dec. 2016
30.	Invited Talk, NRAO/UVA Seminar, Charlottesville, Virginia	Nov. 2016
29.	Invited Talk, ASNY Prize Talk, Siena College, Albany, New York	Nov. 2016
28.	Invited Talk, Star Formation/ISM Rendezvous Seminar, Princeton, New Jersey	Nov. 2016
27.	Invited Talk, Simons Observatory Meeting, Princeton, New Jersey	Nov. 2016
26.	Invited Talk, OSU CCAPP Price Prize Seminar, Columbus, Ohio	Sept. 2016
25.	Invited Talk, Harvard-Smithsonian CfA Galaxies & Cosmology Seminar, Cambridge, Massachussetts	Sept. 2016
24.	Invited Talk, CITA Seminar, Toronto, Canada	Aug. 2016
23.	Talk, Star Formation, Magnetic Fields, and Diffuse Matter in the Galaxy, Madison, Wisconsin	May 2016
22.	Invited Talk, JILA Seminar, Colorado University Boulder, Boulder, Colorado	Feb. 2016
21.	Invited Talk, AMNH Colloquium, New York, New York	Jan. 2016
20.	Invited Talk, Brown Astrophysics Seminar, Providence, Rhode Island	Nov. 2015
19.	Invited Talk, IRAP ISM Seminar, Toulouse, France	Oct. 2015
18.	Talk, Magnetic Fields in the Universe V, Corsica, France	Oct. 2015
17.	Invited Talk, IAS, ENS, and CEA/Saclay Joint ISM Seminar, IAS, Orsay, France	Oct. 2015
16.	Talk, Experimental CMB Journal Club, Columbia University, New York, NY	Sept. 2015
15.	Talk, IAU Focus Meeting 5, The Legacy of Planck, Honolulu, Hawaii	Aug. 2015
14.	Poster, IAU Symposium, From Interstellar Clouds to Star-Forming Galaxies: Universal Processes?, Honolulu, Hawaii	Aug. 2015
13.	Talk, Pontifica Universidad Católica, Santiago, Chile	May 2015
12.	Talk, Midwest Magnetic Fields Workshop, Madison, Wisconsin	May 2015
11.	Invited Talk, PPPL Theory Seminar, Princeton, New Jersey	Dec. 2014
10.	Poster, NSF Directorate for Mathematical & Physical Sciences, New York, New York	Oct. 2014
9.	Poster, Filamentary Structure in Molecular Clouds, NRAO, Charlottesville, Virginia	Oct. 2014
8.	Invited Talk, Non-Ideal MHD, Stability, and Dissipation in PPDs, Copenhagen, Denmark	Aug. 2014

7. Poster, Galactic Science with the SKA and its Pathfinders, Leiden, Netherlands — May 2014
6. Talk, Midwest Magnetic Fields Workshop, Madison, Wisconsin — April 2014
5. Talk, Phases of the ISM Conference, Heidelberg, Germany — July 2013
4. Talk, Senior Research Symposium, Chapel Hill, North Carolina — April 2012
3. Poster, AAS Winter Meeting, Austin, Texas — Jan. 2012
2. Talk, GALFA-HI Collaboration Meeting, Madison, Wisconsin — Aug. 2011
1. Talk, REU Symposium, Arecibo Observatory, Puerto Rico — Aug. 2011

TEACHING EXPERIENCE

Head Teaching Assistant, Columbia Department of Astronomy — 2015 – 2016
Guest Lecturer, Hunter College Unsolved Problems in Astrophysics course — 2016
Grader, Columbia University, Life in the Universe — 2014
Instructor, Columbia University, Observational Astronomy Lab — 2014
Instructor, Columbia University, Earth, Moon, & Planets Lab — 2013
Grader, Columbia University, Life in the Universe — 2013
Teaching Assistant, Columbia University, Galaxies & Cosmology — 2013
Teaching Assistant, Columbia University, Stars & Atoms — 2012
Instructor, UNC-Chapel Hill, Physics Help Center — 2011 – 2012
Teaching Assistant, UNC-Chapel Hill, Calculus-Based Newtonian Mechanics — 2011

STUDENTS ADVISED

Larry Li, Columbia University, undergraduate research — 2016 – present
Garrison Grogan, Columbia University, undergraduate research — 2016 – present
Lowell Schudel, Columbia University, undergraduate research — 2014 – 2015

SELECTED OUTREACH AND SERVICE

Referee, *Astronomy & Astrophysics* — 2016 – present
Organizer, Weekly Astro-ph Discussion — 2016 – present
Instructor for Rooftop Variables, Curtis High School, Staten Island, New York — 2012 – present
Outreach Volunteer, bi-weekly community stargazing, Columbia University — 2012 – present
Public Lecture, *Our Magnetic Universe*, Columbia Astronomy Outreach Lecture Series — 2015
Founder, President, UNC-Chapel Hill Women in Physics — 2010 – 2012
Member, Social Chair, UNC-Chapel Hill Society of Physics Students — 2010 – 2012
Chapter Director, Mentor, UNC-Chapel Hill Strive For College — 2009 – 2012

OTHER PUBLICATIONS

Closing My Eyes, **S. E. Clark**, personal essay, The Washington Post Magazine, May 2009