

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

FELLOWSHIPS, HONORS AND AWARDS

PRL Editor's Recommendation Paper 2015

NSF Graduate Fellowship 2012 – present

Columbia Dean's Fellowship 2012 – present

Morehead-Cain Scholarship 2008 – 2012

Full scholarship to UNC-Chapel Hill

REFEREED PUBLICATIONS

6 journal articles, 2 first author

6. 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, Accepted to MNRAS Letters. [arXiv:1606.06689](https://arxiv.org/abs/1606.06689).
5. 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](https://arxiv.org/abs/1512.03775).
4. **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 Editor's Recommendation. [arXiv:1508.07705](https://arxiv.org/abs/1508.07705).
3. 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](https://arxiv.org/abs/1501.01130)
2. **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](https://arxiv.org/abs/1312.1338)

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*. 2010, AJ, 141, 57 [arXiv:1011.0011](https://arxiv.org/abs/1011.0011)

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
Student Instructor, UNC-Chapel Hill, Physics Help Center	2011 – 2012
Teaching Assistant, UNC-Chapel Hill, Calculus-Based Newtonian Mechanics	2011

STUDENTS ADVISED

Lowell Schudel, Columbia University, undergraduate research	2014 – 2015
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SCIENTIFIC TALKS

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, Hawai'i	Aug. 2015
14. Poster, IAU Symposium, From Interstellar Clouds to Star-Forming Galaxies: Universal Processes?, Honolulu, Hawai'i	Aug. 2015
13. Talk, Pontificia 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

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| 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 |

SELECTED OUTREACH AND SERVICE

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| Public Lecture, <i>Our Magnetic Universe</i> , Columbia Astronomy Outreach Lecture Series | 2015 |
| Instructor for Rooftop Variables , Curtis High School, Staten Island, New York | 2012 – present |
| Outreach Volunteer, bi-weekly community stargazing, Columbia University | 2012 – present |
| 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