

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

PI, VLA Observing Proposal 16A-133, 8 hours 2016

PRL Editor’s Recommendation Paper 2015

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)

SCIENTIFIC TALKS

23 presentations, 7 invited talks/colloquia

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| 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, 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

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|---|-------------|
| 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 |

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| 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

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| Lowell Schudel, Columbia University, undergraduate research | 2014 – 2015 |
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SELECTED OUTREACH AND SERVICE

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| 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, <i>Our Magnetic Universe</i> , 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