

Chong-Chong He

University of Maryland, Department of Astronomy
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Education

Ph.D., Astronomy; University of Maryland	2018-2022
Thesis (proposed): <i>Simulating Compact Star Clusters and Growth of the Seed Black Holes in the First Galaxies</i>	(expected)
M.S., Astronomy; University of Maryland	2016-2018
Thesis: <i>Simulating Star Clusters Across Cosmic Time</i>	
Non-degree Visiting Honors Student Program; Georgia Institute of Technology	2015
B.S., Physics, With Highest Honor; Jilin University	2012-2016
Upper Division GPA: 3.92/4 Cumulative GPA 3.91/4	

Research Experience

Department of Astronomy, University of Maryland	2017-Present
Advisor: Massimo Ricotti & Cole Miller (co-advisor)	
<ul style="list-style-type: none">Running simulations of the formation and dynamic evolution of star clusters in the early universe.	
Center for Theoretical Physics, Jilin University	12/2015-03/2016
Advisor: Ping He	
<ul style="list-style-type: none">Ran simulations of CMB anisotropies using <i>CAMB</i>.	
Center for Relativistic Astrophysics, Georgia Institute of Technology	01/2015-08/2015
Advisor: Laurens Keek	
<ul style="list-style-type: none">Created a set of numerical programs to simulate the angular distributions of X-ray radiation from Low-Mass X-ray Binaries.	

Refereed Publications

- He, C.-C., Ricotti, M., & Geen, S., 2020, “**Simulating Star Clusters Across Cosmic Time - II. Fraction of Ionizing Photons Escaping from Molecular Clouds**”, *Monthly Notices of the Royal Astronomical Society*, 492, 4858.
- He, C.-C., Ricotti, M., & Geen, S., 2019, “**Simulating Star Clusters Across Cosmic Time - I. Initial Mass Function, Star Formation Rates, and Efficiencies**”, *Monthly Notices of the Royal Astronomical Society*, 489, 1880-1898.
- He, C.-C. & Keek, L., 2016, “**Anisotropy of X-Ray Bursts from Neutron Stars with Concave Accretion Disks**”, *The Astrophysical Journal*, 819, 47.

Honors & Awards

Dean's Honored Graduates , Jilin University	2016
The highest honor awarded to graduating seniors in the college	
China Youth Science and Technology Innovation Award , P.R. China	2016
Tang-Ao Qing Supreme Award for Excellence in Research & Practice , Jilin University	2016
National Scholarship , P.R. China	2015
Scholarship for Overseas Study , China Scholarship Council	2014

Teaching Experience

Graduate Teaching Assistant ; University of Maryland	2016-2018, 2020-Present
<ul style="list-style-type: none"> Responsibilities include leading classroom discussions, writing homework and exam solutions, grading homework and exams, and holding office hours to provide additional guidance to students. Courses include Introduction to Astronomy, Stars and Stellar Systems, Solar System Astronomy, Origin of the Universe, Life in the Universe, Galaxies, Cosmology. 	

Skills

Programming Languages & Softwares

- **Python, LaTeX**; advanced
- **C/C++, Fortran, Mathematica, MATLAB**; proficient
- **HTML/CSS**; basic

High-Performance Computing

- Experienced in **MPI Parallel Programming**

Data Science

- Basic knowledge of **Machine Learning**, including **Deep Learning** and **Neural Networks** (**course era certification**)

Operating Systems

- MacOS, Unix/Linux; proficient
- Windows; basic

Professional Services

Member of the American Astronomical Society	2018-Present
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Presentations

“Life and Academics in college”, invited presentation in the summer program for elite high school students at Jilin University	06/2016
“Topics on Quantum Mechanics and Quantum Teleportation”, review presentation at the concluding ceremony of Physics Summer School in Peking University, Jul. 2014	07/2014

Outreach

Lecture Assistant, GRAD-MAP Python Bootcamp, University of Maryland	2018, 2020
Maryland Day volunteer	2017