







Heyang Long

She/Her/Hers

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 INSPIRE  CosmoSheep  <https://cosmosheep.github.io>

Research Interest

Cosmology	<ul style="list-style-type: none">• Epoch of Reionization, 21 cm Intensity Mapping, Lyman-alpha Forest• Weak Gravitational Lensing• Cosmic Microwave Background, B-modes• Gravitational Wave, Binary Black Hole System
Particle Physics	<ul style="list-style-type: none">• Dark Matter• Neutrino Physics

Education

Aug 2018 –	The Ohio State University , Columbus, OH <i>Ph.D in Physics</i> Advisor: Christopher M. Hirata
Sep 2014 – June 2018	Nanjing University , Nanjing, China <i>B.S in Physics</i> Advisor: Zuowei Liu

Position

Jul 2017 – Oct 2017	University of Pittsburgh, PITT PACC , Pittsburgh, PA <i>Visiting Student</i> Advisor: Tao Han
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Publications

2021	3. Long, Heyang , Jahmour J. Givans, and Christopher M. Hirata. "Streaming Velocity Effects on the Post-reionization 21 cm Baryon Acoustic Oscillation Signal." arXiv preprint arXiv:2107.07615 (2021).
2019	2. Troxel, M. A., H. Long , C. M. Hirata, A. Choi, M. Jarvis, R. Mandelbaum, K. Wang, M. Yamamoto, S. Hemmati, and P. Capak. "A synthetic Roman Space Telescope High-Latitude Imaging Survey: simulation suite and the impact of wavefront errors on weak gravitational lensing." Monthly Notices of the Royal Astronomical Society 501, no. 2 (2021): 2044-2070.
2018	1. Long, Heyang , Luyan Yu, Ruyan Sun, Sihui Wang, and Huijun Zhou. "2015 Problem 5: Two Balloons." International Young Physicists' Tournament: Problems And Solutions 2015 (2018): 31.

Presentations

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| Aug 2021 | | 3. COSMO'21 , online, UIUC, IL
Talk: <i>Streaming Velocity Effects on the Post-reionization 21 cm Baryon Acoustic Oscillation Signal</i> |
| Jul 2021 | | 2. Astro Coffee , online, Department of Astronomy, OSU, OH
Talk: <i>Streaming Velocity Effects on the Post-reionization 21 cm Baryon Acoustic Oscillation Signal</i> |
| Aug 2019 | | 1. The 12th Great Lakes Cosmology Workshop , Rochester, NY
Poster: <i>A synthetic Roman Space Telescope High-Latitude Imaging Survey: simulationsuite and the impact of wavefront errors on weak gravitational lensing</i> |

Teaching Experience

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| 2018-2020 | | Graduate Teaching Assistant <ul style="list-style-type: none">• Physics 1250, <i>Mechanics, Work and Energy, Thermal Physics</i>, OSU, Fall 2018 & Fall 2019• Physics 1251, <i>E&M, Waves, Optics, Modern Physics</i>, OSU, Spring 2019 & Spring 2020 |
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Programming Skills

- **Language:** Python, C, LaTeX
- **Cosmological Simulations:** GalSim, GADGET-2, 21cmFAST, CLASS
- **Script:** Perl, Bash

Reference

- **Prof. Christopher M. Hirata**
Department of Physics and Astronomy, The Ohio State University
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- **Prof. Michael Troxel**
Department of Physics, Duke University
michael.troxel@duke.edu