

Zhiwei Shao

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EDUCATION	<i>Bachelor of Science</i> , School of Astronomy and Space Science Nanjing University, Nanjing, Jiangsu Province, China, expected June 2020 Overall GPA: 4.44/5.0, Major GPA: 4.50/5.0
SKILLS	Proficient with Python and Linux Working knowledge of C++, MATLAB and Mathematica
EXPERIENCE	<div><div>Course Project - Plasma Code</div><div>Sep 2017 - Jan 2018</div><div>Advisor: Li Ji, Purple Mountain Observatory</div><ul style="list-style-type: none">• Read background articles, offer theoretical support to the use of PyAtomDB and check the reliability of the database via comparing with other data.• Use AtomDB and PyAtomDB to do line diagnostics of SNR N132D and successfully identify the presence of Fe, S and Si lines.</div> <div><div>Early Research Project - Kilonova</div><div>Sep 2017 - Present</div><div>Advisor: Zi-Gao Dai, Nanjing University</div><ul style="list-style-type: none">• Based on the multi band data collected by Villar, consider the extinction of ISM to make the observables directly comparable with our simulation results.• Based on a structure model proposed by Prof. Dai, use MCMC and analytical model to determine the best fit kilonova ejecta distribution in GW170817 event (on going).</div> <div><div>Internship - Numerical Cosmology</div><div>Jan 2019</div><div>Advisor: Liang Gao, National Astronomical Observatories of China</div><ul style="list-style-type: none">• Illustrate satellites number density profiles in C-EAGLE results with different stellar mass limits and demonstrate their connections with the mass distribution of the cluster.• Compare number density profiles in C-EAGLE results with observation data to examine its accordance with real universe.</div> <div><div>Internship - Numerical Cosmology</div><div>July 2019 - Aug 2019</div><div>Advisor: Arif Babul, University of Victoria</div><ul style="list-style-type: none">• Develop a Python package to systematically analyze the X-ray properties of IGrM in the cosmological simulations, including luminosity, spectroscopic temperature, entropy, etc. (Project website: https://xigrm.readthedocs.io/)• Apply the analyzing codes to a series of simulations with different numerics and wind description to investigate the differences across simulations.</div>
HONORS & AWARDS	<div><div>Member of Elite project</div><div>2016 - Present</div></div> <div><div>Excellent student</div><div>2017</div></div> <div><div>Elite project scholarship</div><div>2017</div></div> <div><div>People's scholarship</div><div>2017 - 2018</div></div> <div><div>Annual scholarship of NAOC, CAS</div><div>2018</div></div>