Zhiwei Shao

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EDUCATION

Bachelor of Science, 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 Linux and Python (e.g., `emcee`, `pyraf`, `astropy`, etc)
Working knowledge of C++, MATLAB and Mathematica

EXPERIENCE

Course Project - Plasma Code   Sep 2017 - Jan 2018
Advisor: Li Ji, Purple Mountain Observatory

- 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.

Early Research Project - Kilonova   Sep 2017 - Present
Advisor: Zi-Gao Dai, Nanjing University

- Based on the multi band data collected in `Open Kilonova Catalog`, 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).

Internship - Numerical Cosmology   Jan 2019
Advisor: Liang Gao, National Astronomical Observatories of China

- 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 with observational data to examine its accordance with real universe.

Internship - Numerical Cosmology   July 2019 - Aug 2019
Advisor: Arif Babul, University of Victoria

- 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.

HONORS & AWARDS

Member of Elite project	2016 - Present
Excellent student	2017
Elite project scholarship	2017
People's scholarship	2017 - 2018
Annual scholarship of NAOC, CAS	2018