Hanyue Guo

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EDUCATION

Beijing Institute of Technology Beijing, China

Master of Physics 2020 - 2023
Thesis: *Classification of fast radio bursts and their cosmological applications*
Advisor: *Prof. Hao Wei*

Nanjing University of Information Science and Technology Nanjing, China
Bachelor of Physics 2014 - 2018
Thesis: *Error estimation of the higher order moments of the net proton number in RHIC*

PUBLICATIONS

Han-Yue Guo and Hao Wei, A possible subclassification of fast radio bursts, **JCAP 07 (2022) 010**, arXiv:2203.12551, DOI: https://doi.org/10.1088/1475-7516/2022/07/010
Abstract: We compared the FRB observations with FRB simulations generated following the Star Formation History (SFH), and used this as a basis to classify the FRBs and analyze possible progenitor models for each class.

Han-Yue Guo and Hao Wei, Could Fast Radio Bursts Be Standard Candles? arXiv:2301.08194.
Abstract: We constrained cosmological models using MCMC methods based on an empirical relation for fast radio bursts.

CONFERENCE PRESENTATIONS

"Make sense" postgraduate academic forum, *"A possible subclassification of fast radio bursts."* October 2022, Beijing, China.

GRANTS

National Scholarship (the highest scholarship awarded to the top 1% of students from the Chinese Ministry of Education) 2022

First-class academic scholarship 2022

First-class academic scholarship 2020

RESEARCH INTERESTS

Cosmology, High-energy Astrophysics, Gravitational Waves, Deep Learning

RESEARCH EXPERIENCE

Cosmology Research Group Beijing Institute of Technology

Master Student *Advisor: Prof. Hao Wei* 2020-2023

Using numerical analysis to study the population and properties of fast radio bursts, and applying fast radio bursts to cosmological research through MCMC methods.

TEACHING ASSISTANT

Beijing Institute of Technology
Physics Department Beijing

University Physics Spring, 2022

SUMMER SCHOOL AND TRAINING SCHOOL

Chinese Survey Space Telescope(CSST) Summer School 2022, Peking University

Astronomical data and Python Training School 2020, The National Astronomical Observatories of the Chinese Academy of Sciences(NAOC)

CONFERENCE

Fast Radio Bursts Conference May 2023, Hefei, China

Annual Conference of Division of Gravitational and Relativistic Astrophysics, Chinese Physical Society April 2023, Chongqing, China

Gravitational Lensing Symposium 2023 March 2023, Beijing, China

Annual Conference of Division of Gravitational and Relativistic Astrophysics, Chinese Physical Society April 2021, Shenyang, China

TECHNICAL

Programming
Python, Linux, LaTeX

Analysis Tools
MCMC packages: emcee, CosmoMC and Cobaya
Deep Learning packages: Pytorch

Languages
Chinese: native
English: good

Database Management
MS Excel, SQL