Youli Tuo | 庹攸隶

Personal Information

Name: Youli TUO
Current status: Postdoctoral Researcher
Gender: Male
Year of birth: 1993
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Language: Chinese (native), English (professional proficiency)

Employment

Postdoc, Institute of High Energy Physics, Beijing, China *2020.11-present*

Education

Institute of High Energy Physics, Chinese Academy of Science 2015.09–2020.09
Ph.D degree in High Energy Astrophysics
Supervisor: Liming Song
Thesis title: Study of the high-energy properties of pulsars observed by Insight-HXMT

Yunnan University, Kunming, China 2011.09–2015.06
Bachelor's degree in Mathematics and Physics

Computer Skills

Operating systems: MacOS, Windows, GNU/Linux.

languages: Python, GNU Bash, C++, LaTeX

Scientific softwares HXMTDAS, heasoft, Xspec, TEMPO2

Refereed Publications
(† : 1st/2nd **author)**
NASA/ADS Library Link

There are 5 papers published as first/second author; 2324 citation in total, including 34 citations of the first/second-author publications.

14.† **A Study on the X-Ray Pulse Profile and Spectrum of the Crab Pulsar Using NICER and Insight-HXMT's Observations**
Lin-Li Yan, You-Li Tuo, Ming-Yu Ge, Fang-Jun Lu, Shi-Jie Zheng, and Ling-Jun Wang, ApJ, 928, 2

13.† **In-orbit timing calibration of the Insight-Hard X-ray Modulation Telescope;**
Tuo Youli, Li Xiaobo, Ge Mingyu, ..., and Li Bing, ApJS, 259(1), 14, 2022;

12. **On-ground and on-orbit time calibrations of GECAM**
Xiao, S. Liu, Y. Q.; Peng, W. X.; An, Z. H.; Xiong, S. L.; Tuo, Y. L.;, ..., and Zhang, S. N. MNRAS 511, 964, 2022

11. **Synchronous X-ray/Optical QPOs from the Black Hole LMXB MAXI J1820+070**
Thomas, Jessymol K.; Buckley, David A. H.; Charles, Philip A., ..., Tuo, Youli, and Zhang, Shuang-Nan, MNRAS: Letters, 2021

10. **Relation of Cyclotron Resonant Energy and Luminosity in a Strongly Magnetized Neutron Star GRO J1008-57 Observed by Insight-HXMT**
Chen, X.; Wang, W.; Tang, Y. M.; Ding, Y. Z.; Tuo, Y. L.;, ..., and J.L. Qu, ApJ, 919, 33, 2021

9. **Estimating the Black Hole Spin for the X-Ray Binary MAXI J1820+070** Zhao, Xueshan ; Gou, Lijun ; Dong, Yanting; Tuo, Youli; Liao, Zhenxuan; Li, Yufeng ; Jia, Nan; Feng, Ye; Steiner, James F., ApJ, 916(2), 14, 2022

8. **Spectral evolution of X-ray pulsar 4U 1901+03 during the 2019 outburst based on Insight-HXMT and NuSTAR observations**
Nabizadeh, Armin; Tsygankov, Sergey S.; Ji, Long; Doroshenko, Victor; Molkov, Sergey V. ;Tuo, Youli; Zhang, Shuang-Nan; Lu, Fan-Jun; Zhang, Shu; Poutanen, Juri, A&A, 652, 12, 2021

7. **HXMT identification of a non-thermal X-ray burst from SGR J1935+2154 and with FRB 200428**
C. Li, L. Lin, S. Xiong, M. Ge, X. Li, T. Li, F. Lu, S-N. Zhang, Y. Tuo, ..., and Insight-HXMT collaboration, Nature Astronomy,5,378,2021

6.† **Insight-HXMT observations of jet-like corona in a black hole X-ray binary MAXI J1820+070**
Bei You, Yuoli. Tuo, Chengzhe Li, Wei Wang, Shuang-Nan Zhang, ..., and Insight-HXMT collaboration, Nature Communication, 12, 1025, 2021

5.† **Insight-HXMT insight into switch of the accretion mode: The case of the X-ray pulsar 4U 1901+03**
Y.L. Tuo, L. Ji, S.S. Tsygankov, T. Mihara, L.M. Song, ⋯, and Insight-HXMT collaboration, Journal of High Energy Astrophysics, 27, 38, 2020

4.† **Insight-HXMT observations of the Crab pulsar**
Y.L. Tuo, M.Y.Ge, L.M. Song, L.L. Yan, Q.C.Bu, and J.L. Qu., Research in Astronomy and Astrophysics, 19, 087, 2019

3. **Time evolution of the X-ray and gamma-ray fluxes of the Crab pulsar**
L.L. Yan, M.Y. Ge, F.J. Lu, S.J. Zheng, Y.L. Tuo, Z.J. Li, J.L. Qu, ApJ,865(1), 21, 2018

2. **Multi-messenger Observations of a Binary Neutron Star Merger**
Abbott, B. P.; Abbott, R.; Abbott, T. D, ..., Tuo, Y. L.; and 3673 more, ApJL, 848, L12, 2017

1. **Phase Evolution of the Crab pulsar between Radio and X-ray**
L.L. Yan, M.Y. Ge, J.P. Yuan, S.J. Zheng, F.J. Lu, Y.L. Tuo, H. Tong, S. N. Zhang, Y. Lu, J.L. Han, and Y.J. Du, ApJ, 845(2), 119, 2017

Submitted Publications

- **Quasi-periodical oscillations of the X-ray burst from the magnetar SGR J1935+2154 and associated with the fast radio burst FRB 200428**
X.B. Li, M.Y. Ge, L. Lin, ..., Y.L. Tuo, ..., and D.K. Zhou, Accepted for publication in ApJ

Presentations

- 3rd China-India Workshop on High Energy Astrophysics August 2020
invited talk: **HXMT data analysis demonstration**
- Beijing Astronomical Annual Meeting, Beijing, China November 2019
contributed talk: **Temporal study on HMXB 4U 1901+03 observed by Insight-HXMT**
- The Second Insight-HXMT Users Conference and X-ray binary workshop, Beijing, China July 2019
contributed talk: **Timing and spectral analysis using Insight-HXMT data** (Lecturing the usage of Insight-HXMT data analysis software)
- Insight-HXMT Users Workshop, Beijing, China December 2018
contributed talk: **Quick tour to Insight-HXMT/HE data processing** (Lecturing the usage of Insight-HXMT data analysis software)
- "New eyes on X-ray astrophysical objects with Japanese and Chinese observatories", the Japan-China X-ray astronomical workshop, Toyoko, Japan November 2018
contributed talk: **Insight-HXMT observations of newly discovered XRB SwiftJ0243.6+6124**
- Annual colloquium of Chinese astronomical society, Kuming, China October, 2018
contributed talk: **Insight-HXMT observations of Crab pulsar**
- The 42ns COSPAR Scientific Assembly, Pasadena, USA July 2018
poster: nsight-HXMT observations of newly discovered XRB SwiftJ0243.6+6124

Software Development

- HXMT pipeline: A pipeline took that makes your life easier when analyzing HXMT data (used in multiple HXMT publications);
- HXMT Docker Container: An integrated environment for Inishgt-HXMT data analysis (total 873 container pulls);
- Pulsar analysis package: The Python package to perform timing analysis on the X-ray pulsars (used in GECAM timing calibration paper, HXMT timing calibration paper, and X-ray Binary paper);
- HXMT Burst Analysis: A supplementary tool for correcting the saturation effect of LE telescope on-board HXMT;
- SVOM/GRM burst analysis tool: Python-based Gamma Burst Analysis Software for SVOM/GRM

Outreach Experience

- One of the co-translators, translating *Physics for Entertainment, Book 1* to Chinese 2021

(last update: September, 2022)