Chen-Wei Wang (王晨巍)

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Education

2021 – now **University of Chinese Academy of Sciences**
The Institute of High Energy Physics
Ph.D candidate of Science

2017 – 2021 **Huazhong University of Science and Technology**
School of Optical and Electronic Information
Bachelor of Engineering

Interests

Instrument
- Design and simulation of next generation X/γ-ray telescopes.
- On-ground/In-orbit test and calibration of X/γ-ray detectors.
- Develop data analysis methods and pipeline.

Astrophysics
- Observation of high-energy transients, including GRBs and Magnetar X-ray bursts.
- Radiation process, dissipative mechanism and central engine of GRBs.

Space physics
- Search and analysis of peculiar Particle Precipitations.
- Space Environment in Low Earth orbit and Lunar orbit.
- High-Energy Atmospheric Phenomena and Terrestrial Electron Beams.

Skills

Languages Strong reading, writing and speaking competencies for English and Chinese.

Coding Python, C/C++, MATLAB, LaTeX, Java, Ruby, …

Web Dev Html, MySQL, Flask Server, Ruby on Rails Server.

Tools GEANT4, HEAsoft, SOLIDWORKS, PSpice, Keil, Altium Designer.

References

Prof. Dr. Shao-Lin Xiong
Institute of High Energy Physics, Chinese Academy of Sciences, China
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References (continued)

Prof. Dr. Rahim Moradi
Institute of High Energy Physics, Chinese Academy of Sciences, China
Email: r.moradi9@gmail.com

Prof. Dr. Shu-Xu Yi
Institute of High Energy Physics, Chinese Academy of Sciences, China
Email: sxyi@ihep.ac.cn

Publications

Journal Articles (major contributions)

1. **C.-W. Wang**, S.-L. Xiong*, H.-B. Xue, *et al.*, "Pitch Angle Measurement Method based on Detector Counts Distribution. -I. Basic conception," *arXiv e-prints*, arXiv:2505.06167, arXiv:2505.06167, May 2025. arXiv: 2505.06167 [astro-ph.IM].
2. **C.-W. Wang**, S.-L. Xiong*, Y. Zhao*, *et al.*, "GECAM Discovery of Peculiar Oscillating Particle Precipitation Events," *arXiv e-prints*, arXiv:2505.06192, arXiv:2505.06192, May 2025. arXiv: 2505.06192 [astro-ph.HE].
3. **C.-W. Wang**, W.-J. Tan, S.-L. Xiong*, *et al.*, "Evolution of the Three Spectral Components in the Prompt Emission of GRB 240825A," *The Astrophysical Journal Letters*, vol. 985, no. 2, L30, p. L30, Jun. 2025. DOI: 10.3847/2041-8213/add522. arXiv: 2503.09562 [astro-ph.HE].
4. **C.-W. Wang**, W.-J. Tan, S.-L. Xiong*, *et al.*, "A Subclass of Gamma-Ray Burst Originating from Compact Binary Merger," *The Astrophysical Journal*, vol. 979, no. 1, 73, p. 73, Jan. 2025. DOI: 10.3847/1538-4357/ad98ec.
5. W.-J. Tan, **C.-W. Wang**, P. Zhang, *et al.*, "Search for Type IL Gamma-ray Bursts: Criterion, Results, Verification and Physical Implication," *arXiv e-prints*, arXiv:2504.06616, arXiv:2504.06616, Apr. 2025. DOI: 10.48550/arXiv.2504.06616. arXiv: 2504.06616 [astro-ph.HE].
6. S.-X. Yi*, **C.-W. Wang***, X.-Y. Shao, *et al.*, "Evidence of Minijet Emission in a Large Emission Zone from a Magnetically Dominated Gamma-Ray Burst Jet," *The Astrophysical Journal*, vol. 985, no. 2, 239, p. 239, Jun. 2025. DOI: 10.3847/1538-4357/adcf98. arXiv: 2310.07205 [astro-ph.HE].
7. R. Moradi*, **C.-W. Wang***, B. Zhang*, *et al.*, "Temporal and Spectral Analysis of the Unique and Second-brightest Gamma-Ray Burst GRB 230307A: Insights from GECAM and Fermi/GBM Observations," *The Astrophysical Journal*, vol. 977, no. 2, 155, p. 155, Dec. 2024. DOI: 10.3847/1538-4357/ad8a64.
8. H. Sun, **C.-W. Wang**, J. Yang, *et al.*, "Magnetar emergence in a peculiar gamma-ray burst from a compact star merger," *National Science Review*, vol. 12, no. 3, nwae401, nwae401, Mar. 2025. DOI: 10.1093/nsr/nwae401.

9 **C.-W. Wang**, J. Zhang*, S.-J. Zheng*, *et al.*, "Simulation of the in-flight background and performance of DRO/GTM," *Experimental Astronomy*, vol. 57, no. 3, 26, p. 26, Jun. 2024. DOI: 10.1007/s10686-024-09946-8.

10 **C.-W. Wang**, Y.-Q. Zhang, S.-L. Xiong*, *et al.*, "Progress of GECAM Observation Research," *Chinese Journal of Space Science*, vol. 44, no. 4, pp. 668–673, Jul. 2024. DOI: 10.11728/cjss2024.04.2024-yg13.

Books and Chapters

1 S.-L. Xiong, Y.-Q. Zhang, and **C.-W. Wang**, *GECAM: A Gamma-Ray Monitor Constellation*, ch. Chapter 18, pp. 355–372. DOI: 10.1142/9789819800643_0018. eprint: https://www.worldscientific.com/doi/pdf/10.1142/9789819800643_0018.

Awards and Achievements

2021 **Outstanding graduates** , Huazhong University of Science and Technology.

Outstanding graduation thesis , Huazhong University of Science and Technology.

2023 **Highlight talks**, Annual Meeting of Beijing Astronomical Society.

2024 **Highlight talks**, Symposium on Particle Astrophysics.

2025 **Merit student**, University of Chinese Academy of Science.

Best student presentation award, 2nd International Symposium on Lightning Physics and Lightning Meteorology.