

WENJIN YANG

Address: School of Astronomy & Space Science, Nanjing University, 163 Xianlin Avenue, Nanjing 210023, People's Republic of China

E-mail: wjyang@nju.edu.cn, wjyang@mpifr-bonn.mpg.de, wjyangwhu@gmail.com

Homepage: <https://wjyang7.github.io>

ORCID: <https://orcid.org/0000-0002-3599-6608>

I am now a postdoc in the Nanjing University. I mainly work on astronomical masers (CH_3OH , SiO , HCN , H_2O) in star formation regions, evolved stars and supernova remnants, as well as methanol absorption features in star formation regions.

Updated on July 29, 2024

RESEARCH INTERESTS

- Astronomical masers
- Circumstellar envelopes of evolved stars
- Supernova remnants
- Star formation
- Kinematics and dynamics of interstellar medium

EDUCATION

- **Purple Mountain Observatory & University of science and technology of China** 2014.09–2020.07
Ph.D in Astrophysics
Thesis: *Observational studies of class I methanol masers*
Advisors: Prof. Dr. Ye Xu, Prof. Dr. Xi Chen
- **Wuhan University** 2010.09–2014.06
Bachelor of Engineering in Geographical Information System (GIS)

EMPLOYMENT

- **Nanjing University** 2023.09–present
Postdoc Researcher
- **Max-Planck-Institut für Radioastronomie** 2020.11–2023.06
Postdoc Researcher
Scientific employee of SOFIA/GREAT, 2023.03–2023.06
(Guest of Menten's group, 2023.07–2025.10)

PRESENTATIONS

- 2024.02 [[contributed talk](#)] [The second Cross-Strait Workshop on Radio Astronomy](#), Shanghai, China, "Methanol masers and absorption features in massive star formation regions"
- 2023.10 [[talk](#)] Group meeting of Millimeter and Submillimeter Astronomy in MPIfR, Bonn, Germany, "Maser Investigation toward Off-Plane Stars: detection of SiO masers in the Galactic thick disk and halo"
- 2023.06 [[talk](#)] Nanjing University, Nanjing, China, "Masers in star formation regions and evolved stars"
- 2023.03 [[poster+flash talk](#)] [IAU 380 Cosmic Masers](#), Kagoshima, Japan, "ATLASGAL: Methanol masers at 3 mm"
- 2022.06 [[poster](#)] [The MPIfR's Scientific Advisory Committee \(Fachbeirat\)](#), Bonn, Germany, "Probing infall in high-mass star-forming regions from red-shifted absorption of CH_3OH and HNCO "
- 2022.03 [[talk](#)] Group meeting of Millimeter and Submillimeter Astronomy in MPIfR, Bonn, Germany, "Methanol masers and absorption features at 3 mm toward ATLASGAL sources"
- 2021.11 [[invited-talk \(on-line\)](#)] Guangzhou University, China, "How to use RADEX code"
- 2019.07 [[contributed talk](#)] Symposium on molecular clouds and star formation 2019, Altay, China, "44 GHz Methanol Masers: Observations toward 95 GHz Methanol Masers"
- 2017.10 [[contributed talk](#)] Symposium on molecular clouds and star formation 2017, Yichang, China, "The new catalog of 95 GHz methanol maser"

- 2016.11 [[contributed talk](#)] The Chinese Annual Astronomy/Astrophysics Meeting, Wuhan, China, “The Current Status of 95 GHz methanol masers observations”

ACCEPTED PROPOSALS

PI Proposals

- [The Karl G. Jansky Very Large Array \(JVLA\)](#)
(24A-198: 9 h; 24B-109: 3.5 h)
- [The Australia Telescope Compact Array \(ATCA\)](#)
(C3471: 9.5 h)
- [The Atacama Pathfinder EXperiment \(APEX\)](#)
(M9509B_111: 20 h)
- [The IRAM-30m telescope \(IRAM-30m\)](#)
(141-22: 29 h, 112-23)
- [The Effelsberg-100 m](#)
(17-21: 22 h, 65-17: 29 h)
- [The Very Long Baseline Array \(VLBA\)](#)
(17A-112: 24 h)
- [The PMO-13.7 m](#)
(20A-007: 147 h, 18A-001: 57 h, 17A-007: 130 h)

Co-I. Proposals (> 500 hours)

[ALMA](#) (2023.1.01576.S), [VLA](#) (23A-136), [VLBA](#) (20B-107), [ATCA](#) (C3457), [EAVN](#) (EAVN 2024A 378)
[APEX-12 m](#) (M9519A_109, M9505B_113, M9509C_113), [Effelsberg-100 m](#) (92-20, 13-21, 92-21, 95-21, 100-21, 34-22, 75-22, 12-23, 14-23), [IRAM-30 m](#) (O28-21), [KVN](#) (KVN-16B-SD-O3), [Yebes-40 m](#) (23A009)

OUTREACH

2024.03 – 2024.07 Coordinator and host of the (weekly) MARTES Talk in School of Astronomy and Space Science @NJU

FUNDING

2024.10 – 2026.10 China Postdoctoral Science Foundation (2024M751376; ¥ 80,000)
2023.09 – 2025.09 Jiangsu Funding Programme for Excellent Postdoctoral Talent (2024ZB347; ¥ 300,000)

HONOR AND AWARDS

- 2020 Outstanding graduate, University of science and technology of China
- 2017 National scholarship for master student, University of science and technology of China
- 2014-2015 Merit student, University of Chinese Academy of Sciences

SKILLS OF NOTE

Software/Language GILDAS, python, CASA, MIRIAD (basic), html/css (basic), markdown
Radiative transfer code RADEX/myRadex, molpop-cep, Cassis (basic)
Observing experience Effelsberg-100m (remote), IRAM-30m (remote), APEX-12m (remote), ATCA (remote), PMO-13.7m (on site)

REFERENCES

Dr. Ping Zhou (Nanjing University)

E-mail: pingzhou@nju.edu.cn

Prof. Dr. Karl M. Menten (Max-Planck-Institut für Radioastronomie)

E-mail: kmenten@mpifr-bonn.mpg.de

Prof. Dr. Ye Xu (Purple Mountain Observatory, Chinese Academy of Science)

E-mail: xuye@pmo.ac.cn

REFEREED PUBLICATIONS

A full list via ADS

First authored Publications:

5. [Maser Investigation toward Off-Plane Stars \(MIOPS\): detection of SiO masers in the Galactic thick disk and halo](#)

Wenjin Yang, Yuanwei Wu, Yan Gong, Nicolas Mauron, Bo Zhang, Karl M. Menten, Xiaofeng Mai, Dejian Liu, Juan Li, and Jingjing Li, 2024, *ApJ*, 961, 190

4. [ATLASGAL: 3-mm class I methanol masers in high-mass star formation regions](#)

W. Yang, Y. Gong, K. M. Menten, J. S. Urquhart, C. Henkel, F. Wyrowski, T. Csengeri, S. P. Ellingsen, A. R. Bemis, J. Jang, 2023, *A&A*, 675, A112

3. [Redshifted methanol absorption tracing infall motions of high-mass star formation regions](#)

W. J. Yang, K. M. Menten, A. Y. Yang, F. Wyrowski, Y. Gong, S. P. Ellingsen, C. Henkel, X. Chen, Y. Xu, 2022, *A&A*, 658, A192

2. [44GHz Methanol Masers: Observations toward 95GHz Methanol Masers](#)

Wenjin Yang, Ye Xu, Yoon Kyung Choi, Simon P. Ellingsen, Andrej M. Sobolev, Xi Chen, Jingjing Li, Dengrong Lu, 2020, *ApJS*, 248, 18

1. [A New 95 GHz Methanol Maser Catalog. I. Data](#)

Wenjin Yang, Ye Xu, Xi Chen, Simon P. Ellingsen, Dengrong Lu, Binggang Ju, Yingjie Li, 2017, *ApJS*, 231, 20

Co-authored Publications:

13. [Hyperfine structure of methanol molecule as traced by Class I methanol masers](#)

I. I. Agafonova, O. S. Bayandina, Y. Gong, C. Henkel, Kee-Tae Kim, M. G. Kozlov, B. Lankhaar, S. A. Levshakov, K. M. Menten, W. Ubachs, I. E. Val'tts, W. Yang, 2024, *MNRAS*, accepted

12. [First detection of the \$J_{-1}-\(J-1\)_0 - E\$ methanol maser transitions at \$J = 7\$ and \$10\$](#)

Pedro K. Humire, Gisela Ortiz-León, Antonio Hernández-Gómez, Wenjin Yang, Christian Henkel, Sergio Martín, 2024, *A&A Letter*, accepted

11. [Discovery of widespread non-metastable ammonia masers in the Milky Way](#)

Y. T. Yan, C. Henkel, K. M. Menten, T. L. Wilson, A. Wootten, Y. Gong, F. Wyrowski, W. Yang, A. Brunthaler, A. Kraus, B. Winkel, 2024, *A&A*, 686, A205

10. [Molecular Bubble and Outflow in S Mon Revealed by Multi-band Datasets](#)

Dejian Liu, Ye Xu, Yingjie Li, Zehao Lin, Chaojie Hao, Wenjin Yang, Jingjing Li, Xinrong Liu, Yiwei Dong, Shuaibo Bian, Deyun Kong, 2024, *ApJ*, 964, 93

9. [Sulfur Isotope Ratios in the Large Magellanic Cloud](#)

Y. Gong, C. Henkel, K. M. Menten, C.-H. R. Chen, Z. Y. Zhang, Y. T. Yan, A. Weiss, N. Langer, J. Z. Wang, R. Q. Mao, X. D. Tang, W. Yang, Y. P. Ao, M. Wang, 2023, *A&A*, 679, L6

8. [Protonated hydrogen cyanide as a tracer of pristine molecular gas](#)

Y. Gong, F. J. Du, C. Henkel, A. M. Jacob, A. Belloche, J. Z. Wang, K. M. Menten, W. Yang, D. H. Quan, C. T. Bop, G. N. Ortiz-León, X. D. Tang, M. R. Rugel, S. Liu, 2023, *A&A*, 679, A39

7. [The Effelsberg survey of FU Orionis and EX Lupi objects II. H₂O maser observations](#)

Zs. M. Szabó, Y. Gong, W. Yang, K. M. Menten, O. S. Bayandina, C. J. Cyganowski, Á. Kóspál, P. Ábrahám, A. Belloche, F. Wyrowski, 2023, *A&A*, 674, A202

6. [The Effelsberg survey of FU Orionis and EX Lupi objects. I. Host environments of FUors and EXors traced by NH₃](#)

Zs. M. Szabó, Y. Gong, K. M. Menten, W. Yang, C. J. Cyganowski, Á. Kóspál, P. Ábrahám, A. Belloche, F. Wyrowski, 2023, *A&A*, 672, A158

5. [Widespread subsonic turbulence in Ophiuchus North 1](#)

Yan Gong, Shu Liu, Junzhi Wang, Weishan Zhu, Guang-Xing Li, **Wenjin Yang**, Jixian Sun, 2022, *A&A*, 663, A82

4. [Light Deflection under the Gravitational Field of Jupiter-Testing General Relativity](#)

Yingjie Li, Ye Xu, JingJing Li, Yuanwei Wu, Shaibo Bian, ZeHao Lin, **Wenjin Yang**, Chaojie Hao, DeJian Liu, 2022, *ApJ*, 925, 47

3. [Probing the electron-to-proton mass ratio gradient in the Milky Way with Class I methanol masers](#)

S. A. Levshakov, I. I. Agafonova, C. Henkel, Kee-Tae Kim, M. G. Kozlov, B. Lankhaar, **W. Yang**, 2022, *MNRAS*, 511, 413

2. [Searching for further evidence for cloud-cloud collisions in L1188](#)

Y. Gong, X. D. Tang, C. Henkel, K. M. Menten, R. Q. Mao, Y. Wang, M.-Y. Lee, W. S. Zhu, Y. Lin, S. B. Zhang, X. P. Chen, **W. J. Yang**, 2019, *A&A*, 632, A115

1. [Molecular Gas toward the Gemini OB1 Molecular Cloud Complex. II. CO Outflow Candidates with Possible WISE Associations](#)

Yingjie Li, Fa-Cheng Li, Ye Xu, Chen Wang, Xin-Yu Du, **Wenjin Yang**, Ji Yang, 2018, *ApJS*, 235, 15

PROCEEDINGS

3. [ATLASGAL: methanol masers at 3 mm](#)

W. Yang, Y. Gong, K. M. Menten, F. Wyrowski, J. S. Urquhart, C. Henkel, T. Csengeri, S. P. Ellingsen, A. R. Bemis, J. Jang, 2024, *IAU*, 380, 266

2. [H₂O masers and host environments of FU Orionis and EX Lupi type low-mass eruptive YSOs](#)

Zsófia Marianna Szabó, Yan Gong, **Wenjin Yang**, Karl M. Menten, Olga S. Bayandina, Claudia J. Cyganowski, Ágnes Kóspál, Péter Ábrahám, Arnaud Belloche, Friedrich Wyrowski, 2024, *IAU*, 380, 246

1. [Searching masers from the Sagittarius stellar stream](#)

Yuanwei Wu, Bo Zhang, Yan Gong, **Wenjin Yang**, Nicolas Mauron, 2024, *IAU*, 380, 128