

WENJIN YANG

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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 and evolved stars, as well as methanol absorption features in star formation regions.

Updated on November 2, 2023

RESEARCH INTERESTS

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

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–now
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

- 2023.10 [group talk] Group meeting of Millimeter and Submillimeter Astronomy in MPIfR, Bonn, Germany, "Maser Investigation toward Off-Plane Stars (MIOPS): detection of SiO masers in the Galactic thick disk and halo"
- 2023.06 [talk] Nanjing University, 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] Meeting of 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 [group 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 [talk] Symposium on molecular clouds and star formation 2019, Altay, China, "44 GHz Methanol Masers: Observations toward 95 GHz Methanol Masers"
- 2017.10 [talk] Symposium on molecular clouds and star formation 2017, Yichang, China, "The new catalog of 95 GHz methanol maser"
- 2016.11 [talk] The Chinese Annual Astronomy/Astrophysics Meeting, Wuhan, China, "The Current Status of 95 GHz methanol masers observations"

ACCEPTED PROPOSALS

- ATCA (C3471), 9.5 h (PI): Studying rare class II CH₃OH masers at 3 & 7 mm
- APEX (M9509B_111), 8.2 h (PI): An unbiased survey of new class II methanol masers in G345.01+1.79
- IRAM-30 m (141-22), 29 h (PI): Searching for class I methanol masers at 132.9 and 146.6 GHz
- Effelsberg-100 m (17-21), 22 h (PI): Methanol: Do class I maser lines originate in Class II line absorbing clouds?
- Effelsberg-100 m (65-17), 29 h (PI): Ammonia observations toward 95 GHz methanol masers
- VLBA (17A-112), 24 h (PI): Locating the very distant Outer Scutum Centaurus spiral arm of the Milky Way
- PMO-13.7 m (20A-007), 147 h (PI): Studying the shock environments of 84 GHz class I methanol masers
- PMO-13.7 m (18A-001), 57 h (PI): Mapping HCO⁺ to study kinetic environment and physical environment of 95 GHz masers
- PMO-13.7 m (17A-007), 130 h (PI): Searching for 95 GHz class I methanol masers toward Red MSX Sources
- Co-I. Projects
ALMA (2023.1.01576.S), VLA (23A-136), VLBA (20B-107), ATCA (C3457), Effelsberg-100 m (92-20, 13-21, 92-21, 95-21, 100-21, 34-22, 75-22, 12-23, 14-23), APEX (9519A_109), KVN (KVN-16B-SD-03), Yebes-40m (23A009)

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	GILDAS, python, CASA, MIRIAD (basic), html/css (basic)
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)

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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

Prof. Dr. Xi Chen (Guangzhou University)

E-mail: chenxi@gzhu.edu.cn

PUBLICATIONS

A full list via ADS (14)

First authored Publications:

5. **Wenjin Yang**, Yuanwei Wu, Yan Gong, Nicolas Maun, Bo Zhang, Karl Menten, Xiaofeng Mai, Dejian Liu, Juan Li, and Jingjing Li, [Maser Investigation toward Off-Plane Stars \(MIOPS\): detection of SiO masers in the Galactic thick disk and halo](#), 2023 ApJ accepted
4. **W. Yang**, Y. Gong, K. M. Menten, J. S. Urquhart, C. Henkel, F. Wyrowski, T. Csengeri, S. P. Ellingsen, A. R. Bemis, J. Jang, [ATLASGAL: 3-mm class I methanol masers in high-mass star formation regions](#), 2023, A&A, 675, A112
3. **W. J. Yang**, K. M. Menten, A. Y. Yang, F. Wyrowski, Y. Gong, S. P. Ellingsen, C. Henkel, X. Chen, Y. Xu, [Redshifted methanol absorption tracing infall motions of high-mass star formation regions](#), 2022, A&A, 658, A192
2. **Wenjin Yang**, Ye Xu, Yoon Kyung Choi, Simon P. Ellingsen, Andrej M. Sobolev, Xi Chen, Jingjing Li, Dengrong Lu, [44GHz Methanol Masers: Observations toward 95GHz Methanol Masers](#), 2020, ApJS, 248, 18

1. **Wenjin Yang**, Ye Xu, Xi Chen, Simon P. Ellingsen, Dengrong Lu, Binggang Ju, Yingjie Li, [A New 95 GHz Methanol Maser Catalog. I. Data](#), 2017, ApJS, 231, 20

Co-authored Publications:

9. 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, [Sulfur Isotope Ratios in the Large Magellanic Cloud](#), 2023, A&A Letter accepted

8. 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, [Protonated hydrogen cyanide as a tracer of pristine molecular gas](#), 2023, A&A accepted

7. Zs. M. Szabó, Y. Gong, **W. Yang**, K. M. Menten, O. S. Bayandina, C. J. Cyganowski, Á. Kóspál, P. Ábrahám, A. Belloche, F. Wyrowski, [The Effelsberg survey of FU Orionis and EX Lupi objects II. H₂O maser observations](#), 2023, A&A, 674, A202

6. Zs. M. Szabó, Y. Gong, K. M. Menten, **W. Yang**, C. J. Cyganowski, Á. Kóspál, P. Ábrahám, A. Belloche, F. Wyrowski, [The Effelsberg survey of FU Orionis and EX Lupi objects. I. Host environments of FUors and EXors traced by NH₃](#), 2022, A&A, 672, A158

5. Yan Gong, Shu Liu, Junzhi Wang, Weishan Zhu, Guang-Xing Li, **Wenjin Yang**, Jixian Sun, [Widespread subsonic turbulence in Ophiuchus North 1](#), 2022, A&A, 663, A82

4. Yingjie Li, Ye Xu, JingJing Li, Yuanwei Wu, Shaibo Bian, ZeHao Lin, **Wenjin Yang**, Chaojie Hao, DeJian Liu, [Light Deflection under the Gravitational Field of Jupiter-Testing General Relativity](#), 2022, ApJ, 925, 47

3. S. A. Levshakov, I. I. Agafonova, C. Henkel, Kee-Tae Kim, M. G. Kozlov, B. Lankhaar, **W. Yang**, [Probing the electron-to-proton mass ratio gradient in the Milky Way with Class I methanol masers](#), 2022, MNRAS, 511, 413

2. 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**, [Searching for further evidence for cloud-cloud collisions in L1188](#), 2019, A&A, 632, A115

1. Yingjie Li, Fa-Cheng Li, Ye Xu, Chen Wang, Xin-Yu Du; **Wenjin Yang**, Ji Yang, [Molecular Gas toward the Gemini OB1 Molecular Cloud Complex. II. CO Outflow Candidates with Possible WISE Associations](#), 2018, ApJS, 235, 15