Curriculum Vitae

Yaoting Yan (闫耀庭)

Ph.D. candidate, Millimeter and Submillimeter Astronomy Department,
Max-Planck-Institut für Radioastronomie

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Date of Birth:	December 26, 1993
Place of Birth:	Yuncheng/Shanxi, China
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Education

2019–expected 2024	Ph.D. in Astronomy & Astrophysics, Max-Planck-Institut für Radioastronomie (MPIfR) Supervisors: Dr. Christian Henkel, Prof. Dr. Karl M. Menten Thesis: "The influence of stellar objects onto the interstellar medium: isotopic compositions and maser lines"
2016–2019	M.S. in Astronomy, Center for Astronomy, Guangzhou University (GZHU) Supervisor: Prof. Dr. Jiangshui Zhang Thesis: "A Systematic TMRT Observational Study of Galactic $^{12}C/^{13}C$ Ratios from Formaldehyde"
2012–2016	B.S. in Optical Information Science and Technology, GZHU

Honors & Awards

2022.09-2023.03	Ph.D. scholarship from the MPIfR
2019.09-2022.09	Ph.D. scholarship from the China Scholarship Council (CSC)
2019	Excellent Graduate Student Award from the GZHU
2018	Annual College scholarship from the GZHU
2017	Annual College scholarship from the GZHU
2016	Annual Graduate Student Entrance scholarship from the GZHU
2015	The 13th Challenge Cup of Guangdong Undergraduate Students Extracurricular Academic Science and Technology Competition Second Prize
2014	The 14th Guangzhou University Challenge Cup Competition First Prize
2014	Annual College scholarship from the GZHU
2014	Outstanding Student Leader Award from the GZHU
2013	Annual College scholarship from the GZHU
2013	Outstanding Student Leader Award from the GZHU

Refereeing Duty

since September 2023	The Astrophysical Journal

Publications

In total: 18 refereed papers and 1 non-refereed paper.
A complete list of publications can be found via ADS
First-author: five refereed papers.
1. *Discovery of widespread non-metastable ammonia masers in the Milky Way*

Yan, Y. T.; Henkel, C.; Menten, K. M.; Wilson, T. L.; Wootten, A.; Gong, Y.; Wyrowski, F.; Yang, W,; Brunthaler, A.; Kraus A.; Winkel, B.; submitted to A&A

2. *Direct measurements of carbon and sulfur isotope ratios in the Milky Way*

Yan, Y. T.; Henkel, C.; Kobayashi, C.; Menten, K. M.; Gong, Y.; Zhang, J. S.; Yu, H. Z.; Yang, K.; Xie, J. J.; Wang, Y. X.; 2023, A&A, 670, A98

3. *Discovery of non-metastable ammonia masers in Sagittarius B2*

Yan, Y. T.; Henkel, C.; Menten, K. M.; Gong, Y.; Nguyen, H.; Ott, J.; Ginsburg A., Wilson, T. L.; Brunthaler, A.; Belloche, A.; Zhang, J. S.; Budaiev, N.; Jeff, D.; 2022, A&A, 666, L15

4. *Discovery of ammonia (9,6) masers in two high-mass star-forming regions*

Yan, Y. T.; Henkel, C.; Menten, K. M.; Gong, Y.; Ott, J.; Wilson, T. L.; Wootten, A.; Brunthaler, A.; Zhang, J. S.; Chen, J. L.; Yang, K.; 2022, A&A, 659, A5

5. *A Systematic TMRT Observational Study of Galactic $^{12}C/^{13}C$ Ratios from Formaldehyde*

Yan, Y. T.; Zhang, J. S.; Henkel, C.; Mufakharov, T.; Jia, L. W.; Tang, X. D.; Wu, Y. J.; Li, J.; Zeng, Z. A.; Wang, Y. X.; Li, Y. Q.; Huang, J.; Jian, J. M.; 2019, ApJ, 877, 154

Co-author: 13 refereed papers and 1 non-refereed paper.

1. Sulfur Isotope Ratios in the Large Magellanic Cloud

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

2. A Systematic Observational Study on Galactic Interstellar Ratio $^{18}O/^{17}O$. II. $C^{18}O$ and $C^{17}O$ J = 2-1 Data Analysis

Zou, Y. P.; Zhang, J. S.; Henkel, C.; Romano, D.; Liu, W.; Zheng, Y. H.; **Yan, Y. T.**; Chen, J. L.; Wang, Y. X.; Zhao, J. Y.; 2023, ApJS, 268, 56

3. Origins of the shocks in high-mass starless clump candidates

Zhu, Feng-Yao; Wang, Junzhi; **Yan, Yaoting**; Zhu, Qing-Feng; Li, Juan; 2023, MNRAS, 523, 2770Z

4. A Multitransition Methanol Survey toward a Large Sample of High-mass Star-forming Regions

Zhao, J. Y.; Zhang, J. S.; Wang, Y. X.; Qiu, J. J.; **Yan, Y. T.**; Yu, H. Z.; Chen, J. L.; Zou, Y. P.; 2023, ApJS, 266, 29

5. Spatial distributions and kinematics of shocked and ionized gas in M17

Zhu, Feng-Yao; Wang, Junzhi; **Yan, Yaoting**; Zhu, Qing-Feng; Li, Juan; 2023, MNRAS, 522, 503Z

6. A Possible Chemical Clock in High-mass Star-forming Regions: $N(HC_3N)/N(N_2H^+)$?

Wang, Y. X.; Zhang, J. S.; Yu, H. Z.; Wang, Y.; **Yan, Y. T.**; Chen, J. L.; Zhao, J. Y.; Zou, Y. P.; 2023, ApJS, 264, 48

7. Molecules in the peculiar age-defying source IRAS 19312+1950

Qiu, Jian-Jie; Zhang, Yong; Nakashima, Jun-ichi; Zhang, Jiang-Shui; Koning, Nico; Tang, Xin-Di; **Yan, Yao-Ting**; Feng, Huan-Xue; 2023, A&A, 669, A121

8. Cyanopolyyne line survey towards high-mass star-forming regions with TMRT

Wang, Y. X.; Zhang, J. S.; **Yan, Y. T.**; Qiu, J. J.; Chen, J. L.; Zhao, J. Y.; Zou, Y. P.; Wu, X. C.; He, X. L.; Gong, Y. B.; Cai, J. H.; 2022, A&A, 663, A177

9. Interstellar Nitrogen Isotope Ratios: New NH_3 Data from the Galactic Center out to the Perseus Arm

Chen, J. L.; Zhang, J. S.; Henkel, C.; **Yan, Y. T.**; Yu, H. Z.; Qiu, J. J.; Tang, X. D.; Wang, J.; Liu, W.; Wang, Y. X.; Zheng, Y. H.; Zhao, J.; 2021, ApJS, 257, 39

10. ALCHEMI: an ALMA Comprehensive High-resolution Extragalactic Molecular Inventory. Survey presentation and first results from the ACA array

Martín, S.; Mangum, J. G.; Harada, N.; Costagliola, F.; Sakamoto, K.; Muller, S.; Aladro, R.; Tanaka, K.; Yoshimura, Y.; Nakanishi, K.; Herrero-Illana, R.; Mühle, S.; Aalto, S.; Behrens, E.; Colzi, L.; Emig, K. L.; Fuller, G. A.; García-Burillo, S.; Greve, T. R.; Henkel, C.; Holdship, J.; Humire, P.; Hunt, L.; Izumi, T.; Kohno, K.; König, S.; Meier, D. S.; Nakajima, T.; Nishimura, Y.; Padovani, M.; Rivilla, V. M.; Takano, S.; van der Werf, P. P.; Viti, S.; **Yan, Y. T.**; 2021, A&A, 656, A46

11. Studying infall in infrared dark clouds with multiple HCO^+ transitions

Xie, Jin-Jin; Wu, Jing-Wen; Fuller, Gary A.; Peretto, Nicolas; Ren, Zhi-Yuan; Chen, Long-Fei; **Yan, Yao-Ting**; Li, Guo-Dong; Duan, Yan; Xia, Ji-Feng; Wang, Yong-Xiong; Li, Di.; 2021, RAA, 21, 208

12. Galactic Interstellar Sulfur Isotopes: A Radial $^{32}S/^{34}S$ Gradient?

Yu, H. Z.; Zhang, J. S.; Henkel, C.; **Yan, Y. T.**; Liu, W.; Tang, X. D.; Langer, N.; Luan, T. C.; Chen, J.

L.; Wang, Y. X.; Deng, G. G.; Zou, Y. P.; 2020, ApJ, 899, 145

13. A Systematic Observational Study on Galactic Interstellar Ratio $^{18}O/^{17}O$. I. $C^{18}O$ and $C^{17}O$ J = 1-0 Data Analysis

Zhang, J. S.; Liu, W.; **Yan, Y. T.**; Yu, H. Z.; Liu, J. T.; Zheng, Y. H.; Romano, D.; Zhang, Z. -Y.; Wang, J. Z.; Chen, J. L.; Wang, Y. X.; Zhang, W. J.; Lu, H. H.; Chen, L. S.; Zou, Y. P.; Yang, H. Q.; Wen, T.; Lu, F. S.; 2020, ApJS, 249, 6

14. Systematic observations on Galactic Interstellar isotope ratios

Zhang, J. S.; **Yan, Y. T.**; Liu, W.; Yu, H. Z.; Chen, J. L.; Henkel, C.; 2020, IAUGA, 30, 278

Accepted Observation Proposals as PI

In total: 1710.5 hours

▶ The 100-m Effelsberg Radio Telescope, **158.3** hours
project IDs: *13-20, 91-20, 30-22, 34-22, 68-22.*
▶ The IRAM 30-m Telescope, **272.7** hours
project IDs: *004-20, 117-20, 125-20, 031-21, 033-21, 047-21, 063-22, 103-23.*
▶ The Karl G. Jansky Very Large Array, **2.5** hours
project IDs: *VLA/21A-157, VLA/22A-106.*
▶ NASA/JPL Deep Space Network DSS-43 70-m Telescope, **45.0** hours
▶ The ARO 12-M Telescope, **470.0** hours
project IDs: *Yan-2016B, 2017B, 2018B, 2019A.*
▶ The James Clerk Maxwell Telescope, **165.0** hours
project IDs: *M16BP037, M16XP019, M19AP021.*
▶ The Shanghai Tianma 65m Radio Telescope, **400.0** hours
▶ The Sub-Millimeter Radio Telescope, **197.0** hours
project IDs: *Yan-2016A, 2017B.*

Presentations

★*The isotopic abundance ratios of carbon and sulfur in the Milky Way and ammonia masers.*
@ Chongqing University, Chongqing, China (**invited**) October 2023
★*Ammonia masers in the Milky Way.*
@ Zhejiag Lab, Hangzhou, China September 2023
★*Carbon and sulfur isotope ratios in the Milky Way.*
@ Astrochemistry conference, XAO, Xinjiang, China August 2023
★*Carbon isotope ratios in the Milky Way.*
@ TMRT 10th anniversary, Shanghai, China (**invited**, online) November 2022
★*Ammonia masers in the Milky Way.*
@ MPIfR group meeting, Bonn, Germany September 2022
★*Discovery of ammonia (9,6) masers in Cep A and G34.26+0.15.*
@ 12th IMPRS conference, Bonn, Germany May 2022
★*Discovery of ammonia (9,6) masers in two high-mass star-forming regions.*
@ PoSTER 2022 (poster) May 2022
★*Direct measurements of carbon and sulfur isotope ratios in the Milky Way.*
@ 50th YERAC (poster) August 2021
★*C, N, O, S isotope ratios in the Milky Way.*
@ 8th IMPRS conference, Bonn, Germany July 2021
★*Carbon and Sulfur isotope ratios in our Galaxy and NGC 253.*
@ MPIfR group meeting, Bonn, Germany July 2020
★*A Systematic TMRT Observational Study of Galactic $^{12}C/^{13}C$ Ratios from Formaldehyde.*
@ 2019 Symposium on Molecular Cloud and Star Formation, Xinjiang, China July 2019

Experience

♡ Observation experience > **2000.0 hours** (on-site + remote) with the Effelsberg 100-m, the IRAM 30-m, the TMRT 65-m, the Arecibo 305-m, the ARO 12-m, and the SMT 10-m. 2016 – 2023
♡ Teaching data reduction during Radio Astronomy Summer School at Shanghai Astronomical Observatory (SHAO) July 9-July 14, 2017
♡ Two weeks IRAM EMIR Pool observations (**volunteer**) April 06–13, May 25–June 01, 2021
♡ 10th IRAM 30-meter School on Millimeter Astronomy November 15–23, 2021
♡ The scientific writing workshop (online), Bonn, Germany June 8–11, 2020
♡ 2018 FAST Radio Astronomy Summer School July 8–13, 2018
♡ 2016 Annual Meeting of the Chinese Astronomical Society November 01–03, 2016
♡ JCMT Data Reductions and Analysis Workshop at SHAO October 16, 2016
♡ 2015 Radio Astronomy Summer School at SHAO July 19–25, 2015

Professional References

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