

Yaoting Yan (闫耀庭)

Max-Planck-Institut für Radioastronomie, Auf dem Hügel 69, 53121 Bonn, Germany

Homepage	https://yaotingyan.github.io/
Telephone	+86 13824465597; +49 015256043266
Email	yyan@mpifr-bonn.mpg.de, s6yayann@uni-bonn.de, astrotingyan@gmail.com
Date of Birth	26 DECEMBER 1993
Gender	MALE
Education	<p>Ph.D. in Astronomy & Astrophysics, Max-Planck-Institut für Radioastronomie (MPIfR), Bonn, Germany, 2019 - expected 2023 Supervisors: Dr. Christian Henkel, Prof. Dr. Karl M. Menten Thesis: "Systematic observational study of Galactic interstellar carbon and sulfur isotope ratios"</p> <p>M.S. in Astronomy, Center for Astronomy, Guangzhou University, China, 2016 - 2019 Supervisor: Prof. Dr. Jiangshui Zhang Thesis: "A Systematic TMRT Observational Study of Galactic $^{12}\text{C}/^{13}\text{C}$ Ratios from Formaldehyde"</p> <p>B.S. in Optical Information Science and Technology, School of Physics and Electronic Engineering, Guangzhou University, China, 2012-2016</p>
Academic Honors	<p>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 2018 Annual College scholarship 2017 Annual College scholarship 2016 Annual Graduate student Entrance scholarship 2015 The 13th Challenge Cup of Guangdong Undergrade Students Extracurricular Academic Science and Technology Competition Second Prize 2014 The 14th Guangzhou University Challenge Cup Competition First Prize 2014 Annual College scholarship 2014 Outstanding Student Leader 2013 Annual College scholarship 2013 Outstanding Student Leader</p>

PUBLICATIONS

2022

11. 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.; 2022, A&A, under review

10. [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

9. **Cyanopolyne 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

8. **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

2021

7. **Interstellar Nitrogen Isotope Ratios: New NH₃ 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

6. **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

5. **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

2020

4. **Galactic Interstellar Sulfur Isotopes: A Radial ³²S/³⁴S 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

3. **A Systematic Observational Study on Galactic Interstellar Ratio ¹⁸O/¹⁷O. I. C¹⁸O and C¹⁷O 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

2. **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

2019

1. **A Systematic TMRT Observational Study of Galactic ¹²C/¹³C 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,

Accepted
Observation
Proposals as PI

(1690.0 hours)

The 100-m Effelsberg Radio Telescope

1. *Probing Kinetic Temperatures towards a sample of Nearby IRDCs*
10.3 Hours (ID: 68-22) 2022
2. *Monitoring ammonia maser emissions in the Milky Way*
35.0 Hours (ID: 30-22) 2022
3. *A global survey on K-band in high-mass star-forming regions*
70.0 Hours (ID: 34-22) 2022
4. *Silicon isotope ratios in the Milky Way*
38.0 Hours (ID: 91-20) 2020
5. *Confirmation of new ammonia masers in three star-forming regions*
5.0 Hours (ID: 13-20) 2020

The Karl G. Jansky Very Large Array

1. *Widespread Ammonia Masers in Sgr B2*
1.5 Hours (ID: VLA/22A-106) 2022
2. *Imaging the Newly Discovered Ammonia (9,6) Masers*
1.0 Hours (ID: VLA/21A-157) 2020

The IRAM 30m Telescope

1. *Mapping Gas Assembly in Nearby IRDCs*
8.2 Hours (ID: 063-22) 2022
2. *Silicon isotope ratios in the Milky Way*
56.0 Hours (ID: 031-21) 2021
3. *Sulfur chemistry and isotopic ratios in the Milky Way*
48.0 Hours (ID: 033-21) 2021
4. *Measurements of the gradients of isotope ratios $^{12}\text{C}/^{13}\text{C}$ and $^{14}\text{N}/^{15}\text{N}$ in our Galaxy from CN*
74.0 Hours (ID: 004-20, 125-20) 2020
5. *3mm spectroscopic mapping toward W49A*
66.0 Hours (ID: 117-20, 047-21) 2020, 2021

NASA/JPL Deep Space Network DSS-43 70-m Telescope

1. *A global survey on K-band in high-mass star-forming regions*
45.0 Hours 2022

The ARO 12 Meter Telescope

1. *Isotope ratio $^{12}\text{C}/^{13}\text{C}$ in Galactic molecular clouds*
298.0 Hours 2018B, 2019A
2. *Isotope ratio $^{18}\text{O}/^{17}\text{O}$ in Galactic molecular clouds*
172.0 Hours 2016B, 2017B

The James Clerk Maxwell Telescope

1. *Isotope ratio $^{18}\text{O}/^{17}\text{O}$ in Galactic molecular clouds*
165.0 Hours (ID: M16BP037, M16XP019, M19AP021) 2016B, 2016X, 2019A

The Shanghai Tianma 65m Radio Telescope

1. *Isotope ratio $^{12}\text{C}/^{13}\text{C}$ in Galactic molecular clouds*
400 Hours. 2016-2019
Yan et al. *ApJ*, 2019, 877(2): 154.

The Sub-Millimeter Radio Telescope

1. *Oxygen isotope ratio of $^{18}\text{O}/^{17}\text{O}$ in molecular clouds with different Galactocentric distance*
197.0 Hours 2016A, 2017B

Presentations

- 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 $^{12}\text{C}/^{13}\text{C}$ Ratios from Formaldehyde.*
-2019 Symposium on Molecular Cloud and Star Formation, Xinjiang, China July 2019

Formaldehyde observations with TMRT.

-11th Jing-Guang-Xia Astrophysics Meeting, Guangzhou, China

November 2017

Experience

Observation experience > 2000.0 hours (on-site + remote)

**with the Effelsberg 100-m, IRAM-30m, TMRT-65m, Arecibo-305m,
ARO-12m, and SMT-10m.**

2016 - 2021

Teaching data reduction in Radio Astronomy Summer School

at Shanghai Astronomical Observatory

July 9-July 14, 2017

10th IRAM 30-meter School on Millimeter Astronomy

–

November 15-19, 22 and 23 2021

Two weeks IRAM EMIR Pool observations (**volunteer**)

–

April 06 - April 13, May 25 - June 01 2021

The scientific writing workshop (online), Bonn, Germany

June 8-June 11, 2020

2018 FAST Radio Astronomy Summer School

July 8-July 13, 2018

2016 Annual Meeting of the Chinese Astronomical Society

Nov. 1-Nov. 3 2016

James Clerk Maxwell Telescope (JCMT) Data Reductions and Analysis Workshop

at Shanghai Astronomical Observatory

Oct. 16, 2016

2015 Radio Astronomy Summer School at Shanghai Astronomical

Observatory

July 19-July 25, 2015

Professional References

Dr. Christian Henkel

Staff of Department Millimeter and
Submillimeter Astronomy
Max-Planck-Institut für Radioastronomie
D-53121 Bonn, Germany
Phone:(0049)228 525 305
chenkel@mpifr-bonn.mpg.de

Dr. Thomas L. Wilson

Staff of Department Millimeter and
Submillimeter Astronomy
Max-Planck-Institut für Radioastronomie
D-53121 Bonn, Germany
Phone:(0049)228 525 303
thomaswilson1b@gmail.com

Dr. Al Wootten

ALMA-NRAO Deputy Project Scientist
National Radio Astronomy Observatory
Charlottesville VA 22903, USA
Phone:(001)434 296 0329
awootten@nrao.edu