

Yaoting Yan

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Date of Birth	26 DECEMBER 1993
Gender	MALE
Supervisor 1	Dr. Christian Henkel
Research	Molecular Spectroscopy, Star Formation, Active Galactic Nuclei, Physical Constants.
Supervisor 2	Prof. Dr. Karl M. Menten
Research	Millimeter & Submillimeter Astronomy, (Sub)Millimeter Wavelength Studies of Asteroids and Comets, Molecular Clouds and Star Formation, Late Stages of Stellar Evolution, Astro-Chemistry, the Galactic Center and its Neighborhood, Dust and Molecules in External Galaxies, the Distant Universe and Cosmology, (Sub)Millimeter Wavelength Instrumentation.
Education	Ph.D. in Astronomy & Astrophysics, Max-Planck-Institut für Radioastronomie , Bonn, Germany, 2019 - now M.S. in Astronomy, Center for Astronomy, Guangzhou University , China, 2016 - 2019 B.S. in Optical Information Science and Technology, School of Physics and Electronic Engineering, Guangzhou University , China, 2012-2016

PUBLICATIONS

- (7). Chen J L, Zhang J S, Henkel C, **Yan Y T**, et al. [Interstellar Nitrogen Isotope Ratios: New NH₃ Data from the Galactic Center out to the Perseus Arm \[J\]](#). The Astrophysical Journal Supplement Series, 2021, 257: 39.
- (6). Xie J J, Wu J W, Fuller G A, Peretto N, Ren Z Y, Chen L F, **Yan Y T**, et al. [Studying infall in infrared dark clouds with multiple HCO⁺ transitions \[J\]](#). Research in Astronomy and Astrophysics, 2021, 21: 8.
- (5). S. Martín, J. G. Mangum, N. Harada, F. Costagliola, K. Sakamoto, S. Muller, R. Aladro, K. Tanaka, Y. Yoshimura, K. Nakanishi, R. Herrero-Illana, S. Mühle, S. Aalto, E. Behrens, L. Colzi, K. L. Emig, G. A. Fuller, S. García-Burillo, T. R. Greve, C. Henkel, J. Holdship, P. Humire, L. Hunt, T. Izumi, K. Kohno, S. König, D. S. Meier, T. Nakajima, Y. Nishimura, M. Padovani, V. M. Rivilla, S. Takano, P. P. van der Werf, S. Viti, **Yan Y T** [ALCHEMI: an ALMA Comprehensive High-resolution Extragalactic Molecular Inventory. Survey presentation and first results from the ACA array \[J\]](#). Astronomy & Astrophysics, 2021
- (4). Yu H Z, Zhang J S, Henkel C, **Yan Y T**, et al. [Galactic Interstellar Sulfur Isotopes: A Radial ³²S/³⁴S Gradient? \[J\]](#). The Astrophysical Journal, 2020, 899(2): 145.
- (3). Zhang J S, Liu W, **Yan Y T**, et al. [A Systematic Observational Study on Galactic](#)

Interstellar Ratio $^{18}\text{O}/^{17}\text{O}$. I. C^{18}O and C^{17}O $J = 1-0$ Data Analysis [J]. The Astrophysical Journal Supplement Series, 2020, 249(1): 6.

(2). Zhang J S, **Yan Y T**, Liu W, et al. **Systematic observations on Galactic Interstellar isotope ratios** [J]. Proceedings of the International Astronomical Union, 2020, pp. 278-279.

(1). **Yan Y T**, Zhang J S, Henkel C, et al. **A Systematic TMRT Observational Study of Galactic $^{12}\text{C}/^{13}\text{C}$ Ratios from Formaldehyde** [J]. The Astrophysical Journal, 2019, 877(2): 154.

Academic Honors

2019-2022 A 3 years scholarship for Ph.D. studies from 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

Telescope Proposals (accepted)

PI (1520.0 hours)

The 100-m Effelsberg Radio Telescope

1. *Silicon isotope ratios in the Milky Way*
38.0 Hours (ID: 91-20) 2020
2. *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. *Imaging the Newly Discovered Ammonia (9,6) Masers*
1.0 Hours (ID: VLA/21A-157) 2020

The IRAM 30m Telescope

1. *Silicon isotope ratios in the Milky Way*
56.0 Hours (ID: 031-21) 2021
2. *Sulfur chemistry and isotopic ratios in the Milky Way*
48.0 Hours (ID: 033-21) 2021
3. *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
4. *3mm spectroscopic mapping toward W49A*
66.0 Hours (ID: 117-20, 047-21) 2020, 2021

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
Zhang et al. ApJS, 2020, 249(1): 6.
Yu et al. ApJ, 2020, 899(2): 145.

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

- 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 Nov., 2017

Experience

- Observation experience > 2000.0 hours (on-site + remote)** 2016 - 2021
- 10th IRAM 30-meter School on Millimeter Astronomy
– November 15-19, 22 and 23 2021
- Two weeks IRAM EMIR Pool observations
– 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
2017 Radio Astronomy Summer School at Shanghai Astronomical Observatory	July 9-July 14, 2017
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