

# Yaoting Yan

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

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**Date of Birth** 14 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

**Telescope  
Proposals  
(accepted)**

## PI

1. *Silicon isotope ratios in the Milky Way*  
The 100-m Effelsberg Radio Telescope, 38.0 Hours,(ID: 91-20). 2020
2. *Imaging the Newly Discovered Ammonia (9,6) Masers*  
The Karl G. Jansky Very Large Array, 1.0 Hours,(ID: VLA/21A-157). 2020
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 (continuation)*  
The IRAM 30m Telescope, 35.5 Hours,(ID: 125-20). 2020
4. *3mm spectroscopic mapping toward W49A*  
The IRAM 30m Telescope, 33.0 Hours,(ID: 117-20). 2020
5. *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*  
The IRAM 30m Telescope, 38.5 Hours,(ID: 004-20). 2020
6. *Confirmation of new ammonia masers in three star-forming regions*  
The 100-m Effelsberg Radio Telescope, 5.0 Hours,(ID: 13-20). 2020

7. *Isotope ratio  $^{12}\text{C}/^{13}\text{C}$  in Galactic molecular clouds*  
The ARO 12 Meter Telescope, 142 Hours. 2019A
8. *Isotope ratio  $^{18}\text{O}/^{17}\text{O}$  in Galactic molecular clouds*  
James Clerk Maxwell Telescope, 100 Hours,(ID: M19AP021). 2019A
9. *Isotope ratio  $^{12}\text{C}/^{13}\text{C}$  in Galactic molecular clouds*  
The ARO 12 Meter Telescope, 156 Hours. 2018B
10. *Isotope ratio  $^{12}\text{C}/^{13}\text{C}$  in Galactic molecular clouds*  
The Shanghai Tianma 65m Radio Telescope, 98 Hours. 2018
11. *Oxygen isotope ratio of  $^{18}\text{O}/^{17}\text{O}$  in the outer galactic disk*  
Sub-Millimeter Radio Telescope, 107 Hours. 2017B
12. *Oxygen isotope ratio of  $^{18}\text{O}/^{17}\text{O}$  in the outer galactic disk*  
The ARO 12 Meter Telescope, 78 Hours. 2017B
13. *Oxygen isotope ratio  $^{18}\text{O}/^{17}\text{O}$  in Galactic molecular clouds*  
James Clerk Maxwell Telescope, 55 Hours,(ID: M16XP019). 2016X
14. *Isotope ratio  $^{18}\text{O}/^{17}\text{O}$  in Galactic molecular clouds : A Galactic radial gradient?*  
The ARO 12 Meter Telescope, 94 Hours. 2016B
15. *Oxygen isotope ratio  $^{18}\text{O}/^{17}\text{O}$  in Galactic molecular clouds*  
James Clerk Maxwell Telescope, 10 Hours,(ID: M16BP037). 2016B
16. *Oxygen isotope ratio of  $^{18}\text{O}/^{17}\text{O}$  in molecular clouds with different Galactocentric distance*  
Sub-Millimeter Radio Telescope, 90 Hours. 2016A

## Co-I

1. *Searching for  $\text{H}_2\text{O}$  megamasers in PG quasars*  
The 100-m Effelsberg Radio Telescope, 32.0 Hours,(ID: 99-20). 2020
2. *Deuterated enhancement distribution of ammonia in massive star forming regions*  
The 100-m Effelsberg Radio Telescope, 16.0 Hours,(ID: 89-20). 2020
3. *The interaction between H II regions and their neighbour massive clumps*  
The IRAM 30m Telescope, 33.0 Hours,(ID: 128-20). 2020
4. *Measuring the Galactic sulfur isotope ratios toward massive star forming regions: a radial  $^{32}\text{S}/^{34}\text{S}$  gradient?*  
The IRAM 30m Telescope, 50.5 Hours,(ID: 022-20). 2020
5. *A Dark Cloud at Redshift  $z = 0.89$  ?*  
The 100-m Effelsberg Radio Telescope, 8.0 Hours,(ID: 14-20). 2020
6. *Systematic observations on  $\text{NH}_3$  and  $^{15}\text{NH}_3$  toward a large sample of star forming regions*  
The 100-m Effelsberg Radio Telescope, 55.0 Hours,(ID: 93-19). 2019
7.  *$\text{NH}_3$  mapping towards Massive Starless Clump Candidates*  
The 100-m Effelsberg Radio Telescope, 46.8 Hours,(ID: 86-19). 2019
8. *Oxygen-Burning, Neon-Burning and s-Process Nucleosynthesis: Interstellar Sulfur Isotopes*  
The IRAM 30m Telescope, 54.5 Hours,(ID: 045-19). 2019
9. *Oxygen isotope ratio of  $^{18}\text{O}/^{17}\text{O}$  in the outer galactic disk*  
The ARO 12 Meter Telescope, 175 Hours. 2018B

10. *Measuring isotropic ratios in Galactic massive star formation regions with sulfur isotopes*  
The ARO 12 Meter Telescope, 126 Hours. 2018B
11. *A systematic cyanopolyynes line survey toward massive star formation regions*  
The Shanghai Tianma 65m Radio Telescope, 100 Hours. 2018
12. *A survey for H<sub>2</sub>O megamasers in Seyfert 2 with Radio-bright nuclei*  
The 100-m Effelsberg Radio Telescope, 130 Hours,(ID: 64-17). 2017
13. *Galactic Isotopic Ratio of <sup>18</sup>O/<sup>17</sup>O*  
The IRAM 30m Telescope, 41.7 Hours,(ID: 088-16). 2016
14. *Galactic Isotopic Ratio of <sup>18</sup>O/<sup>17</sup>O*  
The IRAM 30m Telescope, 25.5 Hours,(ID: 013-16). 2016

## Experience

- Remote observations with the IRAM 30m Telescope at Max Planck Institute for Radioastronomy, Bonn, Germany Sep. 01-Sep. 05, 2020
- Remote observations with the IRAM 30m Telescope at Max Planck Institute for Radioastronomy, Bonn, Germany Aug. 18-Aug. 25, 2020
- Oral presentation: *Carbon and Sulfur isotope ratios in our Galaxy and NGC 253*. -Group meeting. Bonn July 07, 2020
- Remote observations with the IRAM 30m Telescope at Max Planck Institute for Radioastronomy, Bonn, Germany June 24-June 30, 2020
- The scientific writing workshop (online), Bonn, Germany June 8-June 11, 2020
- Remote observations with the IRAM 30m Telescope at Max Planck Institute for Radioastronomy, Bonn, Germany April 29-May 04, 2020
- Remote observations with the Effelsberg 100-m telescope at Max Planck Institute for Radioastronomy, Bonn, Germany Mar. 24-Mar. 27, 2020
- Remote observations with the Effelsberg 100-m telescope at Max Planck Institute for Radioastronomy, Bonn, Germany Feb. 05-Feb. 08, 2020
- Remote observations with the Effelsberg 100-m telescope at Max Planck Institute for Radioastronomy, Bonn, Germany Jan. 03-Jan. 04, 2020
- Observations at the Effelsberg 100-m telescope, Max Planck Institute for Radioastronomy, Bonn, Germany Dec. 27-Dec. 30, 2019
- Oral presentation: *A Systematic TMRT Observational Study of Galactic <sup>12</sup>C/<sup>13</sup>C Ratios from Formaldehyde*. -2019 Symposium on Molecular Cloud and Star Formation. Xinjiang July 10-July 15, 2019
- Observations at the Tianma Radio Telescope (TMRT) 65-m telescope, Shanghai Astronomical Observatory, Chinese Academy of Science Nov. 11-Nov. 16, 2018
- Observations at the Tianma Radio Telescope (TMRT) 65-m telescope, Shanghai Astronomical Observatory, Chinese Academy of Science Oct. 23-Sep. 3, 2018
- 2018 FAST Radio Astronomy Summer School July 8-July 13, 2018

Observations at the Tianma Radio Telescope (TMRT) 65-m telescope, Shanghai  
Astronomical Observatory, Chinese Academy of Science June 24-July 6, 2018

Observations at the Effelsberg 100-m telescope, Max Planck Institute for  
Radioastronomy, Bonn, Germany Jan. 23-Feb. 3, 2018

Observations at the Tianma Radio Telescope (TMRT) 65-m telescope, Shanghai  
Astronomical Observatory, Chinese Academy of Science Dec. 22-Dec. 26, 2017

11th, Jing-Guang-Xia Astrophysics Meeting (speaker) Nov. 24-Nov. 27, 2017

Observations at the Tianma Radio Telescope (TMRT) 65-m telescope, Shanghai  
Astronomical Observatory, Chinese Academy of Science Oct. 26-Nov. 4, 2017

2017 Radio Astronomy Summer School at Shanghai Astronomical  
Observatory July 9-July 14, 2017

Remote observations with the Arecibo 305-meter Radio telescope of Arecibo  
Observatory Nov. 19-Nov. 20, Nov. 25, 2016

Remote observations with the 12 Meter Radio telescope of Arizona Radio  
Observatory Nov. 9-Nov. 20, 2016

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

Remote observations with the Submillimeter Telescope (SMT) of Arizona Radio  
Observatory May 27-May 29, June 3-June 7, 2016

Remote observations with the Submillimeter Telescope (SMT) of Arizona Radio  
Observatory Dec. 30, 2015-Jan. 1, 2016

2015 Radio Astronomy Summer School at Shanghai Astronomical  
Observatory July 19-July 25, 2015

## 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

## PUBLICATIONS 1st author

(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.

not 1st author

(2).Yu H Z, Zhang J S, Henkel C, **Yan Y T**, et al. Galactic Interstellar Sulfur Isotopes: A Radial  $^{32}\text{S}/^{34}\text{S}$  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.  $\text{C}^{18}\text{O}$  and  $\text{C}^{17}\text{O}$  J = 1-0 Data Analysis[J]. The Astrophysical Journal Supplement Series, 2020, 249(1): 6.

(4).Zhang J S, **Yan Y T**, Liu W, et al. Systematic observations on Galactic Interstellar isotope ratios[J]. Proceedings of the International Astronomical Union, 2018, 14(A30): 278-279.