# Yaoting Yan

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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 Aster-

oids 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** 

1st author

(1).Yan Y T, Zhang J S, Henkel C, et al. A Systematic TMRT Observational Study of Galactic <sup>12</sup>C/<sup>13</sup>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 <sup>32</sup>S/<sup>34</sup>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  $^{18}$ O/ $^{17}$ O. I. C $^{18}$ O and C $^{17}$ O J = 1-0 Data Analysis[J]. The Astrophys-

ical 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.

Academ	ic
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 (1383.0 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. Measurements of the gradients of isotope ratios  $^{12}$  C/ $^{13}$  C and  $^{14}$ N/ $^{15}$ N in our Galaxy from CN

 $74.0 \ Hours \ (ID: 004\text{-}20, \ 125\text{-}20)$ 

2020

2. 3mm spectroscopic mapping toward W49A 33.0 Hours (ID: 117-20)

2020

# The ARO 12 Meter Telescope

1. Isotope ratio  $^{12}\,C/^{13}\,C$  in Galactic molecular clouds 298.0 Hours

2018B, 2019A

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

## The Shanghai Tianma 65m Radio Telescope

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

2016-2019

The Sub-Millimeter Radio Telescope

1. Oxygen isotope ratio of <sup>18</sup>O/<sup>17</sup>O in molecular clouds with different Galactocentric distance197.0 Hours 2016A, 2017B

Co-I

#### The 100-m Effelsberg Radio Telescope

1. Searching for H<sub>2</sub>O megamasers in PG quasars 32.0 Hours (ID: 99-20)

2020

- 2. Deuterated enhancement distribution of ammonia in massive star forming regions 16.0 Hours (ID: 89-20) 2020
- 3. A Dark Cloud at Redshift z = 0.89 ? 8.0 Hours (ID: 14-20)

2020

4. Systematic observations on NH<sub>3</sub> and <sup>15</sup>NH<sub>3</sub> toward a large sample of star forming regions

55.0 Hours (ID: 93-19)

2019

5. NH<sub>3</sub> mapping towards Massive Starless Clump Candidates 46.8 Hours (ID: 86-19)

2019

6. A survey for H<sub>2</sub>O megamasers in Seyfert 2 with Radio-bright nuclei 130 Hours (ID: 64-17)

2017

2020

#### The IRAM 30m Telescope

1. The interaction between H II regions and their neighbour massive clumps 33.0 Hours (ID: 128-20)

2. Measuring the Galactic sulfur isotope ratios toward massive star forming regions: a radial <sup>32</sup>S/<sup>34</sup>S gradient? 50.5 Hours (ID: 022-20) 2020

3. Oxygen-Burning, Neon-Burning and s-Process Nucleosynthesis: Interstellar Sulfur Isotopes

54.5 Hours (ID: 045-19)

2019

4. Galactic Isotopic Ratio of <sup>18</sup>O/<sup>17</sup>O 67.2 Hours (ID: 013-16, 088-16)

2016

Zhang et al. ApJS, 2020, 249(1): 6.

### The ARO 12 Meter Telescope

1. Oxygen isotope ratio of  $^{18}O/^{17}O$  in the outer galactic disk 175 Hours

2018B

2. Measuring isotropic ratios in Galactic massive star formation regions with sulfur isotopes

126 Hours 2018B

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

#### The Shanghai Tianma 65m Radio Telescope

1. A systematic cyanopolyynes line survey toward massive star formation regions 100 Hours 2018

## 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  $^{12}$  C/ $^{13}$  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

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