

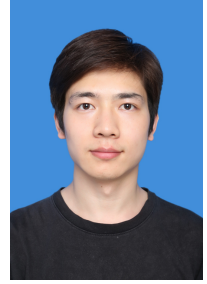
# WANG YOUXIN

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**Birthday** October 28, 1996



## 🎓 EDUCATION AND WORK

- |   |                       |
|---|-----------------------|
| <b>R. A.</b>  | Sep. 2022 – Present   |
| Center for Astrophysic, Guangzhou University, Guangdong, China                    |                       |
| <b>M. S.</b> , in Astrophysics  | Sep. 2019 – Jun. 2022 |
| Center for Astrophysic, Guangzhou University<br>Supervisor: Prof. Zhang Jiangshui |                       |
| <b>B. S.</b> , in Physics   | Sep. 2015 – Jun. 2019 |
| School of Physics and Materials Science, Guangzhou University                     |                       |

## 🔍 RESEARCH INTEREST

Millimeter & Submillimeter Astronomy, Star Formation and evolution, Astrochemistry

## 📖 PUBLICATIONS

### 1st author

- **Wang, Y. X.**, Zhang, J. S., Yu, H. Z., et al. A possible chemical clock in high-mass star-forming regions:  $N(HC_3N)/N(N_2H^+)$ ? 2023, ApJS, 264(2) 48.
- **Wang, Y. X.**, Zhang, J. S., Yan, Y. T., et al. Cyanopolyynes line survey toward high-mass star-forming regions with TMRT. 2022, A&A, 663 A177.
- **Wang, Y. X.**, et al. Carbon-chain chemistry of  $HC_5N$  in high-mass star-forming regions. In preparation.
- **Wang, Y. X.**, et al. A spectral line survey on  $HC_3N$  and its three carbon isotopic molecules. In preparation.

### Co-author

- Liu, J. T., Chen, X., Chen, X. D., Chen, Z. W., Song, S. M., **Wang, Y.X.**, et al. Luminosity Outburst of a High-mass Young Stellar Object Triggered by the Surrounding Radiation Field [J]. 2023, ApJL, 951, L24.
- Zhang, Y. K., Chen, X., Song, S. M., **Wang, Y. X.** Luminosity Outburst Energized by the Collision between the Infalling Streamer and Disk in W51 North [J]. 2023, AJ, 166, 21.
- Zhao, J. Y., Zhang, J. S., **Wang, Y. X.**, et al. A large methanol line survey toward high-mass star-forming regions[J]. 2023, ApJS, 266, 29.
- Song, S. M., Chen, X., Shen, Z. Q., **Wang, Y. X.**, et al. Sample and Statistical Analysis of the Near-Earth Object Wide-field Infrared Survey Explorer Variability of the 6.7 GHz Methanol Maser Sources[J]. 2023, ApJS, 265(1), 16.
- Yan, Y. T., Henkel, C., Kobayashi, C., et al. Direct measurements of carbon and sulfur isotope ratios in the Milky Way[J]. 2023, A&A, 670, A98.
- Chen, J. L., Zhang, J. S., Henkel, C., et al. Interstellar nitrogen isotope ratios: New  $NH_3$  data from the Galactic center out to the Perseus arm[J]. 2021, ApJS, 257(2) 39.
- Yu, H. Z., Zhang, J. S., Henkel, C., et al. Galactic Interstellar Sulfur Isotopes: A Radial  $^{32}S/^{34}S$  Gradient?[J]. 2020, ApJ, 899(2): 145.
- 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]. 2020, ApJS, 249(1): 6.
- Yan, Y. T., Zhang, J. S., Henkel, C., et al. A Systematic TMRT Observational Study of Galactic  $^{12}C/^{13}C$  Ratios from Formaldehyde[J]. 2019, ApJ, 877(2): 154.

## As PI

- Carbon-chain chemistry and isotopic ratio toward ultra-compact HII regions. **IRAM 30m**, 22.5 h.
- A systematic cyanopolyynes line survey toward high-mass star-forming regions. **TMRT 65m**, ~ 200 h.
- Chemical evolution of HC<sub>5</sub>N in high-mass star-forming regions. **TMRT 65m**, 35 h.
- To investigate the evolutionary sequence identified by different tracers. **ARO 12m**, 74 h.
- Direct measurement of the <sup>12</sup>C/<sup>13</sup>C gradient in the Milky Way. **ARO 12m**, 65 h.
- Spectral line survey in the 3-mm band for hyper-compact HII regions. **DLH 13.7m**, ~ 300 h.
- C<sup>18</sup>O and C<sup>17</sup>O J = 1-0 mapping of WB89 191. **DLH 13.7m**, ~ 30 h.

## As Co-PI

- FAST sky OHM survey. FAST 500m.
- Systematic observations on NH<sub>3</sub> and <sup>15</sup>NH<sub>3</sub> toward a large sample of star forming regions. GBT 110m.
- Systematic observations on NH<sub>3</sub> and <sup>15</sup>NH<sub>3</sub> toward a large sample of star forming regions. Effelsberg 100m.
- Measuring the Galactic sulfur isotope ratios toward massive star forming regions: a radial <sup>32</sup>S/<sup>34</sup>S gradient? IRAM 30m.
- Sulfur chemistry and isotopic ratios in the Milky Way. IRAM 30m.
- Measurements of the gradients of isotopic ratios <sup>12</sup>C/<sup>13</sup>C and <sup>14</sup>N/<sup>15</sup>N in our Galaxy from CN. IRAM 30m.
- Isotope ratio <sup>18</sup>O/<sup>17</sup>O toward molecular clouds in the Galactic disk. ARO 12m.
- Isotope ratio <sup>12</sup>C/<sup>13</sup>C in Galactic molecular clouds. ARO 12m.
- Measuring Galactic interstellar sulfur isotope ratios toward massive star forming regions. ARO 12m.
- Isotope ratio <sup>18</sup>O/<sup>17</sup>O toward molecular clouds in the Galactic disk. SMT 10m.
- A Systematic Observational Study on Galactic Interstellar Ratio <sup>18</sup>O/<sup>17</sup>O. II. C<sup>18</sup>O and C<sup>17</sup>O J = 3-2. SMT 10m.
- The observation for sulfur isotope ratio <sup>32</sup>S/<sup>34</sup>S J = 5-4. SMT 10m.

## SCIENTIFIC EXPERIENCES

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### Presentations

A possible chemical clock in high-mass star-forming regions: N(HC<sub>3</sub>N)/N(N<sub>2</sub>H<sup>+</sup>)?

- Seminar on Molecular Clouds and Star Formation

Aug. 2022

### Other experiences

The 14th Zhang Heng Symposium

Apr. 2023

ALMA Scientific Seminar and Data Processing Workshop

Mar. 2023

Astrochemistry Group Meeting

Oct. 2021

The 6th China Square Kilometre Array Radio Telescope (SKA) Summer School

Aug. 2021

FAST 2019 Annual User Training

Nov. 2019

## SKILLS

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- Programming Languages: Python
- Platform: Mac, Linux and Windows
- Software: Gildas, Origin, DS9, Aladin, Latex
- Language: Chinese (native), English (IELES: 6)

## HONORS AND AWARDS

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Annual College scholarship

2021

Annual College scholarship

2020

Annual Graduate student Entrance scholarship

2019

The Third National Students' Astronomy Innovation

2019