

## Yan Gong

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### RESEARCH INTERESTS

- Large-scale structure and kinematics of molecular clouds
- Star formation in molecular clouds
- Astrochemistry
- Astronomical masers
- Circumstellar envelopes of late-type stars

### EDUCATION

- 09/2009–07/2016 Ph.D. in Astrophysics, [Purple Mountain Observatory](#)  
Thesis: *"A search for triggered star formation and a 1.3 cm spectral line survey"*  
Advisors: Prof. Dr. Rui-qing Mao & Dr. Christian Henkel
- 09/2005–07/2009 B.Sc. in physics, [Central China Normal University](#)

### PROFESSIONAL APPOINTMENTS

- 07/2016–08/2017 Research assistant, [Purple Mountain Observatory](#)  
09/2017– Postdoc, [Max-Planck Institut für Radioastronomie](#)

### REFEREED PUBLICATIONS

20. Gong, Y.; Belloche, A.; Du, F. J.; Menten, K. M.; Henkel, C.; Li, G. X.; Wyrowski, F.; Mao, R. Q.; 2020, A&A, accepted, [Physical and chemical structure of the Serpens filament: fast formation and gravity-driven accretion](#)
19. Li, Dalei; Tang, Xindi; Henkel, Christian; Menten, Karl M.; Wyrowski, Friedrich; [Gong, Yan](#); Wu, Gang; He, Yuxin; Esimbek, Jarken; Zhou, Jianjun, 2020, ApJ, 901, 62, [Evidence for dense gas heated by the explosion in Orion KL](#)
18. Chen, Xi; Sobolev, Andrej M.; Ren, Zhi-Yuan; Parfenov, Sergey; Breen, Shari L.; Ellingsen, Simon P.; Shen, Zhi-Qiang; Li, Bin; MacLeod, Gordon C.; Baan, Willem; Brogan, Crystal; Hirota, Tomoya; Hunter, Todd R.; Linz, Hendrik; Menten, Karl; Sugiyama, Koichiro; Stecklum, Bringfried; [Gong, Yan](#); Zheng, Xingwu; 2020, NatAs, 4, 1170, [New maser species tracing spiral-arm accretion flows in a high-mass young stellar object](#)

17. Sanz-Novo, M.; Belloche, A.; Alonso, J. L.; Kolesníková, L.; Garrod, R. T.; Mata, S.; Müller, H. S. P.; Menten, K. M., **Gong, Y.**; 2020, A&A, 639, A135, *Interstellar glycolamide: A comprehensive rotational study and an astronomical search in Sgr B2(N)*
16. Su, Y.; Yang, J.; Yan, Q. Z., **Gong, Y.**; Chen, Z. W.; Zhang, S. B.; Sun, Y.; Zhang, M. M.; Chen, X. P.; Zhou, X.; Wang, M.; Wang, H. C.; Xu, Y.; Jiang, Z. B., 2020, ApJ, 893, 91, *Local molecular gas toward the Aquila Rift region*
15. Humire, P.; Henkel, C.; **Gong, Y.**; Leurini, S.; Mauersberger, R.; Levshakov, S. A.; Winkel, B.; Tarchi, A.; Castangia, P.; Malawi, A.; Asiri, H.; Ellingsen, S. P.; McCarthy, T. P.; Chen, X.; Tang, X., 2020, A&A, 633, A106, *36 GHz methanol lines from nearby galaxies: maser or quasi-thermal emission?*
14. **Gong, Y.**; Tang, X.D.; Henkel, C.; Menten, K.M.; Mao, R.Q.; Wang, Y.; Lee, M.-Y.; Zhu, W.S.; Lin, Y.; Zhang, S.B.; Chen, X.P.; Yang, W.J., 2019, A&A, 632, A115, *Search for further evidence for cloud-cloud collisions in L1188*
13. Tang, X. D.; Henkel, C.; Menten, K. M.; **Gong, Y.**; Martin, S.; Muhle, S.; Aalto, S.; Muller, S.; Garcia-Burillo, S.; Levshakov, S.; Aladro, R.; Spaans, M.; Viti, S.; Asiri, H. M.; Ao, Y. P.; Zhang, J. S.; Zheng, X. W.; Esimbek, J.; Zhou, J. J., A&A, 629, A6, *ALMA view of the  $^{12}\text{C}/^{13}\text{C}$  isotopic ratio in starburst galaxies*
12. Medina, S. N. X.; Urquhart, J. S.; Dzib, S. A.; Brunthaler, A.; Cotton, B.; Menten, K. M.; Wyrowski, F.; Beuther, H.; Billington, S. J.; Carrasco-Gonzalez, C.; Csengeri, T.; **Gong, Y.**; Hofner, P.; Nguyen, H.; Ortiz-LeAñ, G. N.; Ott, J.; Pandian, J. D.; Roy, N.; Sarkar, E.; Wang, Y. Winkel, B., A&A, 627, A175, *GLOSTAR – Radio Source Catalog I:  $28^\circ < l < 36^\circ$  and  $|b| < 1^\circ$*
11. Su, Yang; Yang, Ji; Zhang, Shaobo; **Gong, Yan**; Wang, Hongchi; Zhou, Xin; Wang, Min; Chen, Zhiwei; Sun, Yan; Chen, Xuepeng; Xu, Ye; Jiang, Zhibo, 2019, ApJS, 240, 9, *The Milky Way Imaging Scroll Painting (MWISP): Project Details and Initial Results from the Galactic Longitudes of  $25^\circ 8' - 49^\circ 7'$*
10. **Gong, Y.**; Li, G. X.; Mao, R. Q.; Henkel, C.; Menten, K. M.; Fang, M.; Wang, M.; Sun, J. X., 2018, A&A, 620, A62, *The Serpens filament at the onset of slightly supercritical collapse*
9. Henkel, C.; Mühle S.; Bendo, G.; Józsa, G. I. G.; **Gong, Y.**; Viti, S.; Aalto, S.; Combes, F.; García-Burillo, S.; Hunt, L. K.; Mangum, J.; Martín, S.; Muller, S.; Ott, J.; van der Werf, P.; Malawi, A. A.; Ismail, H.; Alkhuja, E.; Asiri, H. M.; Aladro, R.; Alves, F.; Ao, Y.; Baan, W. A.; Costagliola, F.; Fuller, G.; Greene, J.; Impellizzeri, C. M. V.; Kamali, F.; Klessen, R. S.; Mauersberger, R.; Tang, X. D.; Tristram, K.; Wang, M.; Zhang, J. S. 2018, A&A, 615, A155, *Molecular line emission in NGC 4945, imaged with ALMA*
8. Tang, X. D.; Henkel, C.; Menten, K. M.; Wyrowski, F.; Brinkmann, N.; Zheng, X. W.; **Gong, Y.**; Lin, Y. X.; Esimbek, J.; Zhou, J. J.; Yuan, Y.; Li, D. L.; He, Y. X., 2018, A&A, 609, A16, *Kinetic temperature of massive star-forming molecular clumps measured with formaldehyde. III. The Orion molecular cloud 1*
7. Su, Yang; Zhou, Xin; Yang, Ji; Chen, Yang; Chen, Xuepeng; **Gong, Yan**; Zhang, Shaobo, 2017, ApJ, 845, 48, *“Is HESS J1912+101 associated with an old Supernova Remnant?”*
6. **Gong, Y.**; Henkel, C.; J. Ott; K. M. Menten; M. R. Morris; D. Keller; M. J. Claussen; M. Grasshoff; R. Q. Mao, 2017, ApJ, 843, 54, *“SiS in the circumstellar envelope of IRC +10216: maser and quasi-thermal emission”*

5. **Gong**, Yan; Fang, Min; Mao, Ruiqing; Zhang, Shaobo; Wang, Yuan; Su, Yang; Chen, Xuepeng; Yang, Ji; Wang, Hongchi; Lu, Dengrong, 2017, ApJL, 835, L14, *"L1188: a promising candidate of cloud-cloud collision triggering the formation of the low- and intermediate-mass stars"*
4. **Gong**, Y.; Mao, R. Q.; Fang, M.; Zhang, S. B.; Su, Y.; Yang, J.; Jiang, Z. B.; Xu, Y.; Wang, M.; Wang, Y.; Lu, D. R.; Sun, J. X., 2016, A&A, 588, A104, *"Molecular clouds and star formation toward the Galactic plane within  $216.25^\circ \leq l \leq 218.75^\circ$  and  $0.75^\circ \leq b \leq 1.25^\circ$ "*
3. Zhang, C. P.; Li, G. X.; Wyrowski, F.; Wang, J. J.; Yuan, J. H.; Xu, J. L.; **Gong**, Y.; Yeh, Cosmos C.; Menten, K. M., 2016, A&A, 585, A117, *"N131: A dust bubble born from the disruption of a gas filament"*
2. **Gong**, Y.; Henkel, C.; Thorwirth, S.; Spezzano, S.; Menten, K. M.; Walmsley, C. M.; Wyrowski, F.; Mao, R. Q.; Klein, B., 2015, A&A, 581, A48, *"A 1.3 cm line survey toward Orion KL"*
1. **Gong**, Y.; Henkel, C.; Spezzano, S.; Thorwirth, S.; Menten, K. M.; Wyrowski, F.; Mao, R. Q.; Klein, B., 2015, A&A, 574, A56, *"A 1.3 cm line survey toward IRC +10216"*

## PROCEEDINGS

2. **Gong, Y.**, Mao, R. Q.; Henkel, C.; Urquhart, J.; Wang, Y.; Zhang, Z. Y.; Wyrowski, F., 2013b, in Protostars and Planets VI Posters, 11, *"Triggered Star Formation at the End of the Galactic Bar?"*
1. **Gong, Y.**, Mao, R., Fang, M., Sun, J., & Lu, D. 2013a, in IAU Symposium, Vol. 292, IAU Symposium, ed. T. Wong & J. Ott, 43–43, *"Molecular gas around infrared dust bubbles"*

## HONORS AND AWARDS

- |           |   |
|-----------|---|
| 2011-2012 | Merit Student, University of Chinese Academy of Sciences                    |
| 2012-2015 | MPG-CAS Joint Doctoral Promotion Program                                    |
| 2016      | The Zhu-Li Yuehua outstanding doctoral award of Chinese Academy of Sciences |
| 2017      | Excellent Doctoral Dissertation of Chinese Academy of Sciences              |

## REFEREEING DUTIES

- since 2019, Publications of the Astronomical Society of Japan

## PRESENTATIONS

- 11/2020: Online talk, Guangzhou University, (invited talk)  
*"The Serpens filament as a key to the initial conditions of filament evolution"*
- 02/2020: **APEX2020**, Schloss Ringberg, (talk)  
*"The Serpens filament as a key to the initial conditions of filament evolution"*
- 06/2019: **the CASSACA & Calan star formation joint meeting**, CASSACA, Santiago, (talk)  
*"L1188: a tangoing molecule cloud complex"*
- 06/2018: **Star and Planet Formation Seminar**, Garching, ESO, (talk)  
*"The Serpens filament: at the onset of slightly supercritical collapse"*
- 11/2016: **The Chinese Annual Astronomy / Astrophysics Meeting**, Wuhan, China, (talk)  
*"Star formation triggered by a collision of molecular clouds in L1188"*
- 04/2016: **JCMT PI Science**, Mitaka, Japan, (talk)  
*"Studying the thermal state of dense gas with JCMT"*
- 08/2015: **Zhangheng academic seminar**, Delingha, (talk)  
*"Molecular clouds and star formation toward the Galactic plane within  $216.25^\circ \leq l \leq 218.75^\circ$  and  $0.75^\circ \leq b \leq 1.25^\circ$ "*
- 08/2015: **Scientific talk at XAO**, Urumqi, (talk)  
*"A 1.3 cm line survey toward Orion KL"*
- 08/2014: MPIFR group meeting, Bonn, (talk)  
*"A 1.3 cm line survey toward IRC +10216"*
- 07/2013: **Protostars & Planets VI**, Heidelberg, (poster)  
*"Triggered Star Formation at the End of the Galactic Bar?"*

- 08/2012: **The 28th IAU**, Beijing, (poster)  
*“Molecular gas around infrared dust bubbles”*

## SKILLS OF NOTE

- Advanced: GILDAS, IDL, PYTHON
- Experienced: CASA, DS9, L<sup>A</sup>T<sub>E</sub>X, KARMA, MONTAGE, HTML, vi, Emacs, NOD3
- Operating systems: Linux, Mac OS, Windows
- Observing experience: IRAM-30 m (>300 hours, on site+remote); PMO-13.7 m (>100 hours, on site); Effelsberg-100 m (>1000 hours, on site+remote); APEX (>200 hours, four weeks, on site); Onsala-20 m (a week, onsite); SMT-10 m (a week, remote)
- Speaking languages: Chinese (mother tongue), English (fluent), and German (A1)

PROFESSIONAL REFERENCES

**Prof. Dr. Karl M. Menten**

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