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

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, Accepted, New maser species tracing spiral-arm accretion flows in a high-mass young stellar object

17. Sanz-Novo, M.; Belloche, A.; Alonso, J. L.; Kolesniková, L.; Garrod, R. T.; Mata, S.; Müller, H. S. P.; Menten, K. M., **Gong, Y.**; 2020, A&A, Accepted, 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, Accepted, 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 $^{12}C/^{13}C$ 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-LeÃşn, 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° < l <36° and |b| < 1°*

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.°8–49.°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° ≤ l ≤218.75° and 0.75° ≤ b ≤1.25°"*

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

- 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° $\leq l \leq$218.75° and 0.75° $\leq b \leq$1.25°"

- 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, LaTeX, KARMA, MONTAGE, HTML, vi, Emacs, NOD3

- Operating systems: Linux, Mac OS, Windows

- Observing experience: IRAM-30 m (>250 hours,on site+remote); PMO-13.7 m (>100 hours, on site); Effelsberg-100 m (>400 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

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