

Yan Gong

Max-Planck Institut für Radioastronomie
Auf dem Hügel 69
Bonn 53121, Germany
Homepage: <http://gongyan2444.github.io/>

Mobile: (0049) 157 7154 4476
Fax : (0049) 228 525 435
Skype : gongyan2444
Email : ygong@mpifr-bonn.mpg.de
gongyan2444@gmail.com
May 2, 2022

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](#)
- 09/2017–09/2020 Postdoc, [Max-Planck Institut für Radioastronomie](#)
- 09/2020– Scientific Staff, [Max-Planck Institut für Radioastronomie](#)

REFEREED PUBLICATIONS

33. [Gong, Y.](#); Liu, S.; Wang, J. Z.; Zhu, W. S.; Li, G. X.; Yang, W. J.; Sun, J. X.; A&A, accepted, [Widespread subsonic turbulence in Ophiuchus North 1](#)
32. Yang, W. J. ; Menten, K. M. ; Yang, A. Y.; Wyrowski, F. ; [Gong, Y.](#) ; Ellingsen, S. P. ; Henkel, C. ; Chen, X. ; Xu, Y.; A&A, 658, A192, [Redshifted methanol absorption tracing infall motions of high-mass star formation regions](#)
31. Yan, Y. T. ; Henkel, C. ; Menten, K. M. ; [Gong, Y.](#) ; Ott, J. ; Wilson, T. L. ; Wootten, A. ; Brunthaler, A. ; Zhang, J. S. ; Chen, J. L. ; Yang, K.; A&A, 659, A5, [Discovery of ammonia \(9,6\) masers in two high-mass star-forming regions](#)
30. Scicluna, P. + 90 authors including ([Gong, Y.](#)); MNRAS, 512, 1091, [The Nearby Evolved Stars Survey II: Constructing a volume-limited sample and first results from the James Clerk Maxwell Telescope](#)

29. Skalidis, R.; Tassis, K. ; Panopoulou, G. V. ; Pineda, J. L. ; **Gong, Y.** ; Mandarakas, N. ; Blinov, D. ; Kiehlmann, S. ; Kypriotakis, J. A.; A&A, submitted, **HI-H₂ transition: exploring the role of the magnetic field**
28. Tang, X. D. ; Henkel, C. ; Menten, K. M. ; **Gong, Y.** ; Chen, C. -H. R. ; Li, D. L. ; Lee, M. -Y. ; Mangum, J. G. ; Ao, Y. P. ; Mühle, S. ; Aalto, S. ; García-Burillo, S. ; Martín, S. ; Viti, S. ; Muller, S. ; Costagliola, F. ; Asiri, H. ; Levshakov, S. A. ; Spaans, M. ; Ott, J. Impellizzeri, C. M. V. ; Fukui, Y. ; He, Y. X. ; Esimbek, J. ; Zhou, J. J. ; Zheng, X. W. ; Zhao, X. ; Li, J. S.; A&A, 665, A12, **Kinetic temperature of massive star-forming molecular clumps measured with formaldehyde IV. The ALMA view of N113 and N159W in the LMC**
27. Brunthaler, A.; Menten, K. M.; Dzib, S. A.; Cotton, W. D.; Wyrowski, F.; Dokara, R.; **Gong, Y.**; Medina, S-N. X.; MÃijller, P.; Nguyen, H.; Ortiz-LeÃşn, G. N.; Reich, W.; Rugel, M. R.; Urquhart, J. S.; Winkel, B.; Yang, A. Y.; Beuther, H.; Billington, S.; Carrasco-Gonzales, C.; Csengeri, T. Murugesan, C.; Pandian, J. D.; Roy, N.; A&A, 651, A85, **A global view on star formation: The GLOSTAR Galactic Plane Survey. I. Overview and first results for the Galactic longitude range $28^\circ < l < 36^\circ$** MPIFR/NRAO press release
26. Ortiz-León, Gisela N.; Plunkett, Adele; Loinard, Laurent; Dzib, Sergio A.; Rodríguez-Garza, Carolina B.; Pillai, Thushara; **Gong, Yan**; Brunthaler, Andreas; A&A, AJ, 162, 68, **Discovery of 22 GHz Water Masers in the Serpens South Region**
25. Ortiz-León, Gisela N.; Menten, Karl M.; Brunthaler, Andreas; Csengeri, Timea; Urquhart, James S.; Wyrowski, Friedrich; **Gong, Yan**; Rugel, Michael R.; Dzib, Sergio A.; Yang, Aiyuan; Nguyen, Hans; Cotton, William D.; Medina, Sac Nicté X.; Dokara, Rohit; Koenig, Carsten; Beuther, Henrik; Pandian, Jagadheep D.; Reich, Wolfgang; Roy, Nirupam; A&A, 651, A87, **A Global View on Star Formation: The GLOSTAR Galactic Plane Survey III. 6.7 GHz Methanol maser survey in Cygnus X** MPIFR/NRAO press release
24. Nguyen, H.; Rugel, M. R.; Menten, K. M.; Brunthaler, A.; Dzib, S. A.; Yang, A. Y.; Kauffmann, J.; Pillai, T.; Nandakumar, G.; Schultheis, M.; Urquhart, J. S.; Dokara, R.; **Gong, Y.**; Medina, S-N. X.; Ortiz-LeÃşn, G. N.; Reich, W.; Wyrowski, F.; Beuther, H.; Cotton, W. D.; Csengeri, T. Pandian, J. D.; Roy, N.; A&A, 651, A88, **A global view on star formation: The GLOSTAR Galactic plane survey IV. Radio continuum detections of young stellar objects in the Galactic Centre region** MPIFR/NRAO press release
23. Dokara, Rohit; Brunthaler, A.; Menten, K. M.; Dzib, S. A.; Reich, W.; Cotton, W. D.; Anderson, L. D.; Chen, C. -H. R.; **Gong, Y.**; Medina, S. -N. X.; Ortiz-León, G. N.; Rugel, M.; Urquhart, J. S.; Wyrowski, F.; Yang, A. Y.; Beuther, H.; Billington, S. J.; Csengeri, T.; Carrasco-González, C.; Roy, N.; 2021, A&A, 651, A86, **A global view on star formation: The GLOSTAR Galactic plane survey. II. Supernova Remnants in the first quadrant of the Milky Way** MPIFR/NRAO press release
22. Li, Fei; Wang, Junzhi; Gao, Feng; Liu, Shu; Zhang, Zhi-Yu; Li, Shanghuo; **Gong, Yan**; Li, Juan; Shi, Yong; 2021, MNRAS, 503, 4508, **Dense gas in local galaxies revealed by multiple tracers**
21. Jacob, A. M.; Menten, K. M.; **Gong, Y.**; Bergman, P.; Tiwari, M.; Bruenken, S.; Olofsson, A.O.H.; 2021, A&A, 647, A42 **Hunting for the elusive methylene radical**, Highlight
20. **Gong, Y.**; Belloche, A.; Du, F. J.; Menten, K. M.; Henkel, C.; Li, G. X.; Wyrowski, F.; Mao, R. Q.; 2021, A&A, 646, A170, **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-Novio, 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, 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-Leñón, 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.; Alkhaja, 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

- 06/2021: e-poster, **EAS2021**
"Physical and chemical structure of the Serpens filament: fast formation and gravity-driven accretion"
- 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^AT_EX, KARMA, MONTAGE, HTML, vi, Emacs, NOD3, Markdown
- Operating systems: Linux, Mac OS, Windows
- Observing experience: IRAM-30 m (>500 hours, on site+remote); PMO-13.7 m (>100 hours, on site); Effelsberg-100 m (>2000 hours, on site+remote); APEX (>250 hours, four weeks, on site+remote); 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

Director of Dept. Millimeter and Submillimeter
Astronomy
Max-Planck Institut für Radioastronomie
Auf dem Hügel 69
D-53121 Bonn
Phone: (0049) 228 525 471
kmenten@mpifr-bonn.mpg.de

Prof. Dr. Rui-qing Mao

Deputy director of Purple Mountain Observatory
Purple Mountain Observatory, CAS
2 West Beijing Road
Nanjing 210008, China
Phone: (0086) 25 8333 2018
rqmao@pmo.ac.cn

Dr. Christian Henkel

Staff of Dept. Millimeter and Submillimeter As-
tronomy
Max-Planck Institut für Radioastronomie
Auf dem Hügel 69
D-53121 Bonn
Phone: (0049) 228 525 305
chenkel@mpifr-bonn.mpg.de