YAN GONG

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I am an astronomer working at Purple Mountain Observatory.

Updated on October 24, 2025

RESEARCH INTERESTS

- Molecular clouds and star formation
- Astrochemistry
- Circumstellar envelopes of late-type stars
- Astronomical masers

EDUCATION

• Purple Mountain Observatory 2009.09-2016.07

Ph.D in Astrophysics

Thesis: A search for triggered star formation and a 1.3 cm spectral line survey

Advisors: Prof. Dr. Rui-qing Mao & Dr. Christian Henkel

• Central China Normal University 2005.09-2009.07

B.Sc. in physics

EMPLOYMENT

• Purple Mountain Observatory 2024.12-present

Research Associate

Purple Mountain Observatory
2024.01-2024.12

Guest scientist

• Max-Planck-Institut für Radioastronomie 2024.01-present

Guest scientist

• Max-Planck-Institut für Radioastronomie 2021.09-2023.12

Scientific Staff Host: Prof. Karl M. Menten

• Max-Planck-Institut für Radioastronomie 2017.09-2021.09

Postdoc Host: Prof. Karl M. Menten

• Purple Mountain Observatory 2016.06-2017.08

Research assistant

HONOR AND AWARDS

• 2017 Excellent Doctoral Dissertation of Chinese Academy of Sciences

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

REFEREEING DUTIES

PASJ, MNRAS, RAA, ALMA, FAST, JCMT

SKILLS OF NOTE

Software/Language GILDAS, python, IDL, CASA, MIRIAD (basic), html/css (basic), markdown, NOD3, DS9,

LATEX, KARMA, MONTAGE, vi, emacs

Operating systems Linux, Mac OS, Windows

Observing experience IRAM-30 m (>1000 hours, on site+remote; PI: 262 hours); PMO-13.7 m (>800 hours,

on site/service); Effelsberg-100 m (>2000 hours, on site+remote; PI: >100 hours);

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APEX (>300 hours, four weeks, on site+remote; PI: 398 hours); Onsala-20 m (a week, onsite); SMT-10 m (a week, remote), ALMA (17.2 hours), ACA (\sim 240 hours),

VLA (>100 hours; PI: 15 hours), SMA (>50 hours; PI: 27 hours) Chinese (mother tongue), English (fluent), and German (A1)

Speaking language

PROFESSIONAL REFERENCES

Prof. Dr. Rui-qing Mao (Purple Mountain Observatory)

Deputy director of Purple Mountain Observatory

E-mail: rqmao@pmo.ac.cn

Prof. Dr. Jing Li (Purple Mountain Observatory)

Head of Millimeter and Submillimeter Astronomy group

E-mail: lijing@pmo.ac.cn

Prof. Dr. Arshia M. Jacob (Universität zu Köln)

Head of Galactic Ecosystems group E-mail: ajacob@ph1.uni-koeln.de

Dr. Christian Henkel (Max-Planck-Institut für Radioastronomie)

Staff of Dept. Millimeter and Submillimeter Astronomy

E-mail: chenkel@mpifr-bonn.mpg.de

Dr. Arnaud Belloche (Max-Planck-Institut für Radioastronomie)

Staff of Dept. Millimeter and Submillimeter Astronomy

E-mail: belloche@mpifr-bonn.mpg.de

Dr. Wolfgang Reich (Max-Planck-Institut für Radioastronomie)

Former station manager of the Effelsberg 100m telescope

E-mail: wreich@mpifr-bonn.mpg.de

PRESENTATIONS

- 2025.09 [Contributed talk] Xiangshan Forum, Symposium on Submm-wave/THz Astronomy Frontier Sciences and key Technologies, Delingha, China, "Astrochemistry and the origin of life"
- 2025.08 [Contributed talk] Special Colloquium, Max Planck Institute for Radio Astronomy, Bonn, Germany, "China's Roadmap for Submillimeter Astronomy"
- 2025.08 [Contributed talk] WE-Heraeus Seminar titled, "Charting the Cosmos: From Cosmic Stellar Nurseries to Evolved Stars using High Powered Telescopes", Wasem Kloster Engelthal, Ingelheim, Germany, "Molecules in the Magellanic Clouds"
- 2025.08 [Contributed talk] The 2025 Symposium on Molecular Clouds and Star Formation, Southwest Jiaotong University, Emeishan, China, "Effelsberg Continuum Results from the GLOSTAR survey"
- 2025.07 [Invited talk] XAO, Urumqi, China, "Molecules in the Magellanic Clouds"
- 2025.03 [Contributed talk] Gaochun, Nanjing, China, "[CII] line intensity mapping the epoch of reionization"
- 2024.12 [Contributed talk] 25th East Asia Submillimeter-wave Receiver Technology Workshop, Daejeon, Korea, "Tracing Molecular Clouds from Pristine to Extreme: Insights from HCNH⁺ observations"
- 2024.11 [Invited talk] KIAA Colloquium, Beijing, China, "Exploring the Cycle of the Interstellar Medium: Insights from the GLOSTAR Survey, Molecular Chemistry, and Maser Studies"
- 2024.10 [Invited talk] International Symposium on Polar Sciences The 40th anniversary of CHINARE, Shanghai, China, "Unveiling the Mystery of Stellar Physics with THz HCN Lasers: Resolving Stellar Atmpspheres from Dome A"
- 2024.10 [Contributed talk] The Eleventh Interstellar Physics and Chemistry workshop, Lishui, China, "Tracing Molecular Clouds from Pristine to Extreme: Insights from HCNH⁺ observations"
- 2024.08 [invited talk] QTT workshop, XAO, Urumqi, China, "Studying ISM with QTT"
- 2024.04 [invited talk] Martes talk #42, Nanjing University, Nanjing, China, "Decoding interstellar and circumstellar environments with molecular tools"
- 2023.08 [invited talk], Shanghai Astronomical Observatory, Shanghai, China, "Recent progress on the GLOSTAR survey"
- 2023.07 [invited talk], Zhejiang lab, Hangzhou, China, "Decoding interstellar and circumstellar environments

with molecular tools"

- 2023.07 [invited talk], Anhui Normal University, Wuhu, China, "Recent progress on the GLOSTAR survey"
- 2023.07 [invited talk], PMO Youth Forum, Purple Mountain Observatory, Nanjing, China, "Recent progress on the GLOSTAR survey"
- 2021.06 [e-poster], EAS2021, "Physical and chemical structure of the Serpens filament: fast formation and gravity-driven accretion"
- 2020.11 [invited-talk (on-line)] Guangzhou University, China, "The Serpens filament as a key to the initial conditions of filament evolution"
- 2020.02 [contributed talk] APEX2020, Schloss Ringberg, Germany, "The Serpens filament as a key to the initial conditions of filament evolution"
- 2019.06 [invited talk] the CASSACA & Calan star formation joint meeting, CASSACA, Santiago, Chile, "L1188: a tangoing molecule cloud complex"
- 2018.06 [invited talk] Star and Planet Formation Seminar, ESO, Garching, Germany, "The Serpens filament: at the onset of slightly supercritical collapse"
- 2016.11 [contributed talk] The Chinese Annual Astronomy/Astrophysics Meeting, Wuhan, China, "Star formation triggered by a collision of molecular clouds in L1188"
- 2016.04 [contributed talk] JCMT PI Science, Mitaka, Japan, "Studying the thermal state of dense gas with JCMT"
- 2015.08 [contributed talk] Zhangheng academic seminar, Delingha, China, "Molecular clouds and star formation toward the Galactic plane within $216.25^{\circ} \le l \le 218.75^{\circ}$ and $0.75^{\circ} \le b \le 1.25^{\circ}$ "
- 2015.07 [invited talk] Scientific talk at XAO, Urumqi, China, "A 1.3 cm line survey toward Orion KL"
- 2015.07 [contributed talk] MPIFR group meeting, Bonn, Germany, "A 1.3 cm line survey toward IRC +10216"
- 2013.07 [poster] Protostars & Planets VI,, Heidelberg, Germnay, "Triggered Star Formation at the End of the Galactic Bar?"
- 2012.08 [poster] The 28th IAU, Beijing, China, "Molecular gas around infrared dust bubbles"

REFEREED PUBLICATIONS

A full list via ADS

15 first-author paper, 6 second-author paper, 4 third-author paper

73 Oxygen isotopes reveal low-mass star dominance in the Small Magellanic Cloud

Gong, Yan; Zhang, Zhi-yu; Henkel, Christian; Chen, C.-H. Rosie; Yang, Wenjin; Tang, Xindi; Hunt, Leslie K.; Weiss, Axel; Wu, Gang; Yan, Yaoting; Grishunin, Konstantin; Menten, Karl M., 2025, ApJ, accepted

72. The Diamond Ring in Cygnus X: Advanced stage of an expanding bubble of ionised carbon

Dannhauer, Simon M.; Vider, Sebastian; Schneider, Nicola; Simon, Robert; Comeron, Fernando; Keilmann, Eduard; Walch, Stefanie; Bonne, Lars; Kabanovic, Slawa; Ossenkopf-Okada, Volker; Seifried, Daniel; Csengeri, Timea; Djupvik, Amanda; **Gong, Yan**; Brunthaler, Andreas; Rugel, Michael; Riechers, Dominik A.; Bontemps, Sylvain; Honingh, Netty; Graf, Urs U.; Tielens, A. G. G. M., 2025, A&A, accepted

71. Scientific Objectives of the Xue-shan-mu-chang 15-meter Submillimeter Telescope

XSMT Project Collaboration Group; Ao, Yiping; Chang, Jin; Chen, Zhiwei; Cui, Xiangqun; Du, Kaiyi; Du, Fujun; Gong, Yan; Han, Zhanwen; Herczeg, Gregory; Ho, Luis C.; Hu, Jie; Jing, Yipeng; Jiao, Sihan; Ju, Binggang; Li, Jing; Li, Xiaohu; Li, Xiangdong; Lin, Lingrui; Lin, Zhenhui; Liu, Daizhong; Liu, Dong; Liu, Guoxi; Lou, Zheng; Lu, Dengrong; Mao, Ruiqing; Miao, Wei; Qian, Yuan; Qiu, Keping; Shen, Zhiqiang; Shi, Yong; Shi, Shengcai; Shu, Chenggang; Sun, Jixian; Sun, Xiaohui; Sun, Yichen; Wang, Junzhi; Wang, Ke; Wang, Na; Wang, Ran; Wang, Tao; Wu, Jingwen; Wu, Xiangping; Wu, Xuefeng; Xiao, Di; Yao, Qijun; Yao, Yong; Zhang, Wen; Zhang, Xuguo; Zhang, Zhiyu; Zheng, Yuanpeng, 2025, Science China Physics, Mechanics & Astronomy, accepted

70. Ammonia in the hot core W51-IRS2: Maser line profiles, variability and saturation

Alkhuja, E.; Henkel, C.; Yan, Y. T.; Winkel, B.; **Gong, Y.**; Wu, G.; Wilson, T. L.; Wootten, A.; Malawi, A., 2025, A&A, 700, A192

69. Network of velocity-coherent filaments formed by supersonic turbulence in a very-high-velocity HI cloud phys.org

Liu, Xunchuan; Liu, Tie; Li, Pak-Shing; Mai, Xiaofeng; Henkel, Christian; Goldsmith, Paul F.; Qin, Sheng-Li; Gong, Yan; Lu, Xing; Xu, Fengwei; Luo, Qiuyi; Liu, Hong-Li; Zhang, Tianwei; Cheng, Yu; Di, Yihuan; Wu,

Yuefang; Gu, Qilao; Tang, Ningyu; Yang, Aiyuan; Shen, Zhiqiang, 2025, Nature Astronomy, 9, 1366

68. Molecular Clouds at the Edge of the Galaxy I. Variation of CO J=2-1/1-0 Line Ratio phys.org

Luo, C. S.; Tang, X. D.; Henkel, C.; Menten, K. M.; Sun, Y.; **Gong, Y.**; Zheng, X. W.; Li, D. L.; He, Y. X.; Lu, X.; Ao, Y. P.; Chen, X. P.; Liu, T.; Wang, K.; Wu, J. W.; Esimbek, J.; Zhou, J. J.; Qiu, J. J.; Zhao, X.; Li, J. S.; Zhao, Q.; Liu, L. D., 2025, A&A, 698, 54

67. New submillimetre HCN lasers in carbon-rich evolved stars

Yang, W.; Wong, K. T.; Wiesemeyer, H.; Menten, K. M.; **Gong, Y.**; Cernicharo, J.; De Beck, E.; Klein, B.; Durán, C. A., 2025, A&A, 696, A60

66. Shock-induced HCNH⁺ abundance enhancement in the heart of the starburst galaxy NGC 253 unveiled by ALCHEMI

Gong, Y.; Henkel, C.; Bop, C. T.; Mangum, J. G.; Behrens, E.; Du, F. J.; Zhang, S. B.; Martin, S.; Menten, K. M.; Harada, N.; Bouvier, M.; Tang, X. D.; Tanaka, K.; Viti, S.; Yan, Y. T.; Yang, W.; Mao, R. Q.; Quan, D. H., 2025, A&A, 696, A31

65. Molecular inventory of a young eruptive star's environment – Case study of the classical FU Orionis star V1057 Cyg

Szabó, Zs. M.; Belloche, A.; Menten, K. M.; **Gong, Y.**; Kóspál, Á.; Ábrahám, P.; Yang, W.; Cyganowski, C. J.; Wyrowski, F., 2025, A&A, 694, A329

64. Inadequate turbulent support in low-metallicity molecular clouds

Lin, Lingrui; Zhang, Zhi-Yu; Wang, Junzhi; Papadopoulos, Padelis P.; Shi, Yong; **Gong, Yan**; Sun, Yan; Sun, Yichen; Bisbas, Thomas G.; Romano, Donatella; Li, Di; Liu, Hauyu Baobab; Qiu, Keping; Liu, Lijie; Luo, Gan; Tsai, Chao-Wei; Wu, Jingwen; Feng, Siyi; Zhang, Bo 2025, NatAs, 9, 406

63. Dynamic Massive Star Formation: Radio Flux Variability in Regions

Yang, A. Y.; Thompson, M. A.; Urquhart, J. S.; Brunthaler, A.; Menten, K. M.; **Gong, Yan**; Tsai, Chao-Wei; Patel, A. L.; Li, D.; Cotton, W. D. 2025, A&A, 694, A26

62. Nitrogen Abundance Distribution in the inner Milky Way

Pineda, Jorge L.; Horiuchi, Shinji; Anderson, L. D.; Luisi, Matteo; Langer, William D.; Goldsmith, Paul F.; Kuiper, Thomas B. H.; Fischer, Christian; **Gong, Yan**; Brunthaler, Andreas; Rugel, Michael; Menten, Karl M., 2024, ApJ, 932, 89

61. A global view on star formation: The GLOSTAR Galactic plane survey. XI. Radio source catalog IV: $2^{\circ} < l < 28^{\circ}$, $36^{\circ} < l < 60^{\circ}$ and $|b| < 1^{\circ}$ A&A cover page

Medina, S. -N. X.; Dzib, S. A.; Urquhart, J. S.; Yang, A. Y.; Brunthaler, A.; Menten, K. M.; Wyrowski, F.; Cotton, W. D.; Cheema, A.; Dokara, R.; **Gong, Y.**; Khan, S.; Nguyen, H.; Ortiz-Leon, G. N.; Rugel, M. R.; Veena, V. S.; Beuther, H.; Csengeri, T.; Pandian, J. D.; Roy, N., 2024, A&A, 689, A196

60. Hyperfine structure of the methanol molecule as traced by Class I methanol masers

Agafonova, I. I.; Bayandina, O. S.; **Gong, Y.**; Henkel, C.; Kim, Kee-Tae; Kozlov, M. G.; Lankhaar, B.; Levshakov, S. A.; Menten, K. M.; Ubachs, W.; Val'tts, I. E.; Yang, W., 2024, MNRAS, 533, 1714

59. A global view on star formation: The GLOSTAR Galactic plane survey X. Galactic HII region catalog using radio recombination lines

Khan, S.; Rugel, M. R.; Brunthaler, A.; Menten, K. M.; Wyrowski, F.; Urquhart, J. S.; **Gong, Y.**; Yang, A. Y.; Nguyen, H.; Dokara, R.; Dzib, S. A.; Medina, S.-N. X.; Ortiz-León, G. N.; Pandian, J. D.; Beuther, H.; Veena, V. S.; Neupane, S.; Cheema, A.; Reich, W.; Roy, N., 2024, A&A, 689, A81

58. Spatial Distribution of C₄H and c-C₂H₂ in Cold Molecular Cores

Liu, Yijia; Wang, Junzhi; Liu, Shu; Tang, Ningyu; **Gong, Yan**; Li, Yuqiang; Li, Juan; Luo, Rui; Xu, Yani, 2024, ApJ, 969, 33

57. Kinetic temperature of massive star-forming molecular clumps measured with formaldehyde V. The massive filament DR21

Zhao, X.; Tang, X. D.; Henkel, C.; **Gong, Y.**; Lin, Y.; Li, D. L.; He, Y. X.; Ao, Y. P.; Lu, X.; Liu, T.; Sun, Y.; Wang, K.; Chen, X. P.; Esimbek, J.; Zhou, J. J.; Wu, J. W.; Qiu, J. J.; Zheng, X. W.; Li, J. S.; Luo, C. S.; Zhao, Q. 2024, A&A, 687, A207

56. First detection of CF⁺ in the Large Magellanic Cloud

Gong, Yan, Menten Karl M., Jacob Arshia M., Christian Henkel, Chen C.-H. Rosie, 2024, A&A, 687, A29

55. Discovery of widespread non-metastable ammonia masers in the Milky Way

Yan, Y. T.; Henkel, C.; Menten, K. M.; Wilson, T. L.; Wootten, A.; **Gong, Y.**; Wyrowski, F.; Yang, W.; Brunthaler, A.; Kraus, A.; Winkel, B., 2024, A&A, 686, A205

54. Magnetically Aligned Striations in the L914 Filamentary Cloud

Sun, Li; Chen, Xuepeng; Fang, Min; Zhang, Shaobo; **Gong, Yan**; Feng, Jiancheng; Li, Xuefu; Yan, Qing-Zeng; Yang, Ji, 2024, AJ, 167, 176

53. Massive clumps in W43-main: Structure formation in an extensively shocked molecular cloud

Lin, Yuxin; Wyrowski, Friedrich; Liu, Hauyu Baobab; **Gong, Yan**; Sipilä, Olli; Izquierdo, Andrés F.; Csengeri, Timea; Ginsburg, Adam; Li, Guang-Xing; Spezzano, Silvia; Pineda, Jaime E.; Leurini, Silvia; Caselli, Paola; Menten, Karl M., 2024, A&A, 685, 101

52. The first Ka-band (26.1-35 GHz) blind line survey towards Orion KL

Liu, Xunchuan; Liu, Tie; Shen, Zhiqiang; Qin, Sheng-Li; Luo, Qiuyi; **Gong, Yan**; Cheng, Yu; Henkel, Christian; Gu, Qilao; Zhu, Fengyao; Zhang, Tianwei; Zhao, Rongbing; Wu, Yajun; Li, Bin; Li, Juan; Zhao, Zhang; Wang, Jinqing; Zhong, Weiye; Liu, Qinghui; Xia, Bo; Fu, Li; Yan, Zhen; Zhang, Chao; Wang, Lingling; Ye, Qian; Yang, Aiyuan; Xu, Fengwei; Zhang, Chao; Dutta, Somnath; Li, Shanghuo; Liu, Meizhu; Yang, Dongting; Li, Chuanshou; Chen, Li 2024, ApJS, 271, 3

51. Maser Investigation toward Off-Plane Stars (MIOPS): detection of SiO masers in the Galactic thick disk and halo

Yang, Wenjin; Wu, Yuanwei; **Gong, Yan**; Mauron, Nicolas; Zhang, Bo; Menten, Karl M.; Mai, Xiaofeng; Liu, Dejian; Li, Juan; Li, Jingjing, 2024, ApJ, 961, 190

50. A global view on star formation: The GLOSTAR Galactic plane survey. IX. Radio Source Catalog III: $2^{\circ} < l < 28^{\circ}, 36^{\circ} < l < 40^{\circ}, 56^{\circ} < l < 60^{\circ}$ and $|b| < 1^{\circ}$, VLA B-configuration

Yang, A. Y.; Dzib, S. A.; Urquhart, J. S.; Brunthaler, A.; Medina, S.-N. X.; Menten, K. M.; Wyrowski, F.; Ortiz-León, G. N.; Cotton, W. D.; **Gong, Y.**; Dokara, R.; Rugel, M. R.; Beuther, H.; Pandian, J. D.; Csengeri, T.; Veena, V. S.; Roy, N.; Nguyen, H.; Winkel, B.; Ott, J.; Carrasco-Gonzalez, C.; Khan, S.; Cheema, A., 2023, A&A, 680, A92

49. Sulfur Isotope Ratios in the Large Magellanic Cloud

Gong, Y.; Henkel, C.; Menten, K. M.; R. Chen, C.-H.; Zhang, Z. Y.; Yan, Y. T.; Weiss, A.; Langer, N.; Wang, J. Z.; Mao, R. Q.; Tang, X. D.; Yang, W.; Ao, Y. P.; Wang, M., 2023, A&A, 679, L6

48. Protonated hydrogen cyanide as a tracer of pristine molecular gas

Gong, Y.; Du, F. J.; Henkel, C.; Jacob, A. M.; Belloche, A.; Wang, J. Z.; Menten, K. M.; Yang, W.; Quan, D. H.; Bop, C. T.; Ortiz-León, G. N.; Tang, X. D.; Rugel, M. R.; Liu, S., 2023, A&A, 679, A39

47. A global view on star formation: The GLOSTAR Galactic plane survey VIII. Formaldehyde absorption in Cygnus X

Gong, Y.; Ortiz-León, G. N.; Rugel, M. R.; Menten, K. M.; Brunthaler, A.; Wyrowski, F.; Henkel, C.; Beuther, H.; Dzib, S. A.; Urquhart, J. S.; Yang, A. Y.; Pandian, J. D.; Dokara, R.; Veena, V. S.; Nguyen, H.; Medina, S. -N. X.; Cotton, W. D.; Reich, W.; Winkel, B.; Müller, P.; Skretas, I.; Csengeri, T.; Khan, S.; Cheema, A., 2023, A&A, 678, A130

46. High-resolution APEX/LAsMA 12 CO and 13 CO (3-2) observation of the G333 giant molecular cloud complex : I. Evidence for gravitational acceleration in hub-filament systems

Zhou, J. W.; Wyrowski, F.; Neupane, S.; Urquhart, J. S.; Evans, N. J., II; Vázquez-Semadeni, E.; Menten, K. M.; Gong, Y.; Liu, T.; 2023, A&A, 676, A69

45. ATLASGAL: 3-mm class I methanol masers in high-mass star formation regions

Yang, W.; **Gong, Y.**; Menten, K. M.; Urquhart, J. S.; Henkel, C.; Wyrowski, F.; Csengeri, T.; Ellingsen, S. P.; Bemis, A. R.; Jang, J.; 2023, A&A, 675, A112

44. The Effelsberg survey of FU Orionis and EX Lupi objects II. H₂O maser observations

Szabó, Zs. M.; **Gong, Y.**; Yang, W.; Menten, K. M.; Bayandina, O. S.; Cyganowski, C. J.; Kóspál, Á.; Ábrahám, P.; Belloche, A.; Wyrowski., F.; 2023, A&A, 674, A202

- 43. The distance to the Serpens South Cluster from H₂O masers
- Ortiz-León, Gisela N.; Dzib, Sergio A.; Loinard, Laurent; **Gong Yan**; Pillai Thushara; Plunkett Adele; 2023, A&A, 673, L1
- 42. The Effelsberg survey of FU Orionis and EX Lupi objects I. Host environments of FUors/EXors traced by NH₃
- Szabó, Zs. M.; Gong, Y.; Menten, K. M.; Yang, W.; Cyganowski, C. J.; Kóspál, Á.; Ábrahám, P.; Belloche, A.; Wyrowski., F.; 2023, A&A, 672, A158
- 41. Direct measurements of carbon and sulfur isotope ratios in the Milky Way
- Yan, Y. T.; Henkel, C.; Kobayashi, C.; Menten, K. M.; **Gong, Y.**; Zhang, J. S.; Yu, H. Z.; Yang, K.; Xie, J. J.; Wang, Y. X.; 2022, A&A, 670, A98
- 40. A global view on star formation: The GLOSTAR Galactic plane survey. VII. Supernova remnants in the Galactic longitude range $28^\circ < l < 36^\circ$
- Dokara, R.; **Gong, Y.**; Reich, W.; Rugel, M.; Brunthaler, A.; Menten, K.; Cotton, W.; Dzib, S.; Khan, S.; Medina, S.; Nguyen, H.; Ortiz-León, G.; Urquhart, J.; Wyrowski, F.; Yang, A.; Anderson, L. D.; Beuther, H.; Csengeri, T.; Müller, P.; Ott, J.; Pandian, J. D.; Roy, N.; 2022, A&A, 671, A145
- 39. A global view on star formation: The GLOSTAR Galactic plane survey. VI. Radio Source Catalog II: 28° $< l < 36^\circ$ and $|b| < 1^\circ$, VLA B-configuration
- Dzib, S. A.; Yang, A. Y.; Urquhart, J. S.; Medina, S.-N. X.; Brunthaler, A.; Menten, K. M.; Wyrowski, F.; Cotton, W. D.; Dokara, R.; Ortiz-León, G. N.; Rugel, M. R.; Nguyen, H.; **Gong, Y.**; Chakraborty, A.; Beuther, H.; Billington, S. J.; Carrasco-Gonzalez, C.; Csengeri, T.; Hofner, P.; Ott, J.; Pandian, J. D.; Roy, N.; Yanza, V.; 2022, A&A, 670, A9
- 38. Discovery of non-metastable ammonia masers in Sagittarius B2
- Yan, Y. T.; Henkel, C.; Menten, K. M.; **Gong, Y.**; Nguyen, H.; Ott, J.; Ginsburg, A.; Wilson, T. L.; Brunthaler, A.; Belloche, A.; Zhang, J. S.; Budaiev, N.; Jeff, D.; 2022, A&A, 666, L15
- 37. A Global View on Star Formation: The GLOSTAR Galactic Plane Survey V. 6.7 GHz Methanol Maser Catalogue Nguyen, H.; Rugel, M. R.; Murugeshan, C.; Menten, K. M.; Brunthaler, A.; Urquhart, J. S.; Dokara, R.; Dzib, S. A.; **Gong, Y.**; Khan, S.; Medina, S-N. X.; Ortiz-León, G. N.; Reich, W.; Wyrowski, F.; Yang, A. Y.; Beuther, H.; Cotton, W. D.; Pandian, J. D.; 2022, A&A, 666, A59
- 36. Water Masers as an Early Tracer of Star Formation
- Ladeyschikov, Dmitry A.; **Gong, Yan**; Sobolev, Andrey M.; Menten, Karl M.; Urquhart, James S.; Breen, Shari L.; Shakhvorostova, Nadezhda N.; Bayandina, Olga S.; Tsivilev, Alexander P.; 2022, ApJS, 261, 14
- 35. And then they were two: detection of non-thermal radio emission from the bow shocks of two runaway stars
- Moutzouri, M.; Mackey, J.; Carrasco González, C.; **Gong, Y.**; Brose, R.; Zargaryan, D.; Toalá, J. A.; Menten, K. M.; Gvaramadze, V. V.; Rugel, M. R.; 2022, A&A, 663, A80
- 34. Vibrationally excited HCN transitions in circumstellar envelopes of carbon-rich AGB stars
- Jeste, M.; Gong, Y.; Wong, K. T.; Menten, K. M.; Kamiński, T.; Wyrowski, F.; 2022, A&A, 666, A69
- 33. Widespread subsonic turbulence in Ophiuchus North 1
- Gong, Y.; Liu, S.; Wang, J. Z.; Zhu, W. S.; Li, G. X.; Yang, W. J.; Sun, J. X.; 2022, A&A, 663, A82
- 32. Redshifted methanol absorption tracing infall motions of high-mass star formation regions
- Yang, W. J.; Menten, K. M.; Yang, A. Y.; Wyrowski, F.; **Gong, Y.**; Ellingsen, S. P.; Henkel, C.; Chen, X.; Xu, Y.; 2022, A&A, 658, A192
- 31. Discovery of ammonia (9,6) masers in two high-mass star-forming regions
- 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.; 2022, A&A, 659, A5
- 30. The Nearby Evolved Stars Survey II: Constructing a volume-limited sample and first results from the James Clerk Maxwell Telescope
- Scicluna, P. + 90 authors including (Gong, Y.); 2022, MNRAS, 512, 1091

- 29. HI-H₂ transition: Exploring the role of the magnetic field. A case study toward the Ursa Major cirrus
- Skalidis, R.; Tassis, K.; Panopoulou, G. V.; Pineda, J. L.; **Gong, Y.**; Mandarakas, N.; Blinov, D.; Kiehlmann, S.; Kypriotakis, J. A.; 2022, A&A, 665, A77
- 28. Kinetic temperature of massive star-forming molecular clumps measured with formaldehyde IV. The ALMA view of N113 and N159W in the LMC
- 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.; 2021, A&A, 665, A12
- 27. A global view on star formation: The GLOSTAR Galactic Plane Survey. I. Overview and first results for the Galactic longitude range $28^{\circ} < l < 36^{\circ}$ A&A/MPIFR/NRAO press release

Brunthaler, A.; Menten, K. M.; Dzib, S. A.; Cotton, W. D.; Wyrowski, F.; Dokara, R.; **Gong, Y.**; Medina, S-N. X.; Müller, P.; Nguyen, H.; Ortiz-León, G. N.; Reich, W.; Rugel, M. R.; Urquhart, J. S.; Winkel, B.; Yang, A. Y.; Beuther, H.; Billington, S.; Carrasco-Gonzales, C.; Csengeri, T. Murugeshan, C.; Pandian, J. D.; Roy, N.; 2021, A&A, 651, A85

- 26. Discovery of 22 GHz Water Masers in the Serpens South Region
- Ortiz-León, Gisela N.; Plunkett, Adele; Loinard, Laurent; Dzib, Sergio A.; Rodríguez-Garza, Carolina B.; Pillai, Thushara; **Gong, Yan**; Brunthaler, Andreas; 2021, AJ, 162, 68
- 25. A Global View on Star Formation: The GLOSTAR Galactic Plane Survey III. 6.7 GHz Methanol maser survey in Cygnus X A&A/MPIFR/NRAO press release

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 Nicte X.; Dokara, Rohit; Koenig, Carsten; Beuther, Henrik; Pandian, Jagadheep D.; Reich, Wolfgang; Roy, Nirupam; 2021, A&A, 651, A87

- 24. A global view on star formation: The GLOSTAR Galactic plane survey IV. Radio continuum detections of young stellar objects in the Galactic Centre region A&A/MPIFR/NRAO press release
- 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-León, G. N.; Reich, W.; Wyrowski, F.; Beuther, H.; Cotton, W. D.; Csengeri, T. Pandian, J. D.; Roy, N.; 2021, A&A, 651, A88
- 23. A global view on star formation: The GLOSTAR Galactic plane survey. II. Supernova Remnants in the first quadrant of the Milky Way A&A/MPIFR/NRAO press release

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

- 22. Dense gas in local galaxies revealed by multiple tracers
- Li, Fei; Wang, Junzhi; Gao, Feng; Liu, Shu; Zhang, Zhi-Yu; Li, Shanghuo; **Gong, Yan**; Li, Juan; Shi, Yong; 2021, MNRAS, 503, 4508
- 21. Hunting for the elusive methylene radical A&A highlight

Jacob, A. M.; Menten, K. M.; **Gong, Y.**; Bergman, P.; Tiwari, M.; Bruenken, S.; Olofsson, A.O.H.; 2021, A&A, 647, A42

- 20. Physical and chemical structure of the Serpens filament: fast formation and gravity-driven accretion **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
- 19. Evidence for dense gas heated by the explosion in Orion KL
- 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
- 18. New maser species tracing spiral-arm accretion flows in a high-mass young stellar object

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

- 17. Interstellar glycolamide: A comprehensive rotational study and an astronomical search in Sgr B2(N)
- 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, 639, A135
- 16. Local molecular gas toward the Aquila Rift region
- 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
- 15. 36 GHz methanol lines from nearby galaxies: maser or quasi-thermal emission?
- 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
- 14. Search for further evidence for cloud-cloud collisions in L1188

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

13. ALMA view of the 12C/13C isotopic ratio in starburst galaxies

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., 2019, A&A, 629, A6

12. GLOSTAR: Radio Source Catalog I. $28^{\circ} < l < 36^{\circ}$ and $|b| < 1^{\circ}$

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-León, G. N.; Ott, J.; Pandian, J. D.; Roy, N.; Sarkar, E.; Wang, Y. Winkel, B., 2019, A&A, 627, A175

- 11. The Milky Way Imaging Scroll Painting (MWISP): Project Details and Initial Results from the Galactic Longitudes of 25.8–49.7
- 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
- 10. The Serpens filament at the onset of slightly supercritical collapse

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

9. Molecular line emission in NGC 4945, imaged with ALMA

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

8. Kinetic temperature of massive star-forming molecular clumps measured with formaldehyde. III. The Orion molecular cloud 1

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

- 7. Is HESS J1912+101 Associated with an Old Supernova Remnant?
- Su, Yang; Zhou, Xin; Yang, Ji; Chen, Yang; Chen, Xuepeng; Gong, Yan; Zhang, Shaobo, 2017, ApJ, 845, 48
- 6. SiS in the Circumstellar Envelope of IRC +10216: Maser and Quasi-thermal Emission

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

5. L1188: a promising candidate of cloud-cloud collision triggering the formation of the low- and intermediatemass stars

Gong, Yan; Fang, Min; Mao, Ruiqing; Zhang, Shaobo; Wang, Yuan; Su, Yang; Chen, Xuepeng; Yang, Ji; Wang, Hongchi; Lu, Dengrong, 2017, ApJL, 835, L14

4. Molecular clouds and star formation toward the Galactic plane within $216.25^{\circ} \le l \le 218.75^{\circ}$ and $-0.75^{\circ} \le b \le 1.25^{\circ}$

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

3. N131: A dust bubble born from the disruption of a gas filament

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

2. A 1.3 cm line survey toward Orion KL

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

1. A 1.3 cm line survey toward IRC +10216

Gong, Y.; Henkel, C.; Spezzano, S.; Thorwirth, S.; Menten, K. M.; Wyrowski, F.; Mao, R. Q.; Klein, B, 2015, A&A, 574, A56