Aiyuan Yang | Curriculum Vitae

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Education & Background

Max Planck Institute for Radio Astronomy (MPIfR) — **Aug. 2018 – Now**
Postdoctoral researcher — *Bonn, Germany*

National Astronomical Observatories (NAOC), CAS — **Sep. 2014 – Aug. 2018**
Ph.D. student of Astrophysics — *Beijing, China*

University of Hertfordshire — **Feb. 2016 – Oct. 2017**
SKA Joint Ph.D. student of Astrophysics — *Hatfield, UK*

Xinjiang Astronomical Observatories (XAOC), CAS & NAOC — **Sep. 2011 – Jul. 2014**
XAOC & NAOC Joint Master student of Astrophysics — *Xinjiang & Beijing, China*

Xinjiang University (XJU) — **Sep. 2007 – Jul. 2011**
Student of Physics — *Xinjiang, China*

Research Interests

- The birth of H II regions, HC H II and UC H II regions
- Outflows and radio jets in massive star formation
- Multi-band study (from radio to near-infrared) of ISM
- Multi-band (from radio to sub-mm) study of RRLs
- Young PNe: kinematic distances and masers
- Kinematic distances of radio objects using HI and CO
- Observations of radio interferometer and single-dish telescopes

Publications

As of Dec. 2021: **7 first-author published papers, 3 In preparation**;
12 co-authored published papers, 4 under review;
19 papers in total, 127 citations. See my ADS/NASA Library

First-Author Papers

10. **A. Y. Yang**∗,K. M. Menten; & The GLOSTAR Team, **In Prep.**; "*The GLOSTAR survey: planetary nubulae*"
9. **A. Y. Yang**∗, K. M. Menten; & The GLOSTAR Team, **In Prep.**; "*The GLOSTAR survey: young H II regions*"
8. **A. Y. Yang**∗, K. M. Menten; & The GLOSTAR Team, **In Prep.**; "*The GLOSTAR survey: Radio Source Catalog III. VLA B-configuration*";
7. **A. Y. Yang**∗, J. S. Urquhart; M. A. Thompson; K. M. Menten; F. Wyrowski; 2021, & The SEDIGISM Team, A&A, 658A, 160Y; "*The SEDIGISM survey: a search for molecular outflows*"; arXiv:2111.10850
6. **A. Y. Yang**∗; J. S. Urquhart; M. A. Thompson; K. M. Menten; F. Wyrowski; A. Brunthaler; W. W. Tian; M. Rugel; X. L. Yang; S. Yao; M. Mutale, 2021, A&A, 645A, 110Y, 2021, " *A population of hypercompact H II regions identified from young H II regions*"; arXiv:2011.07620
5. **A. Y. Yang**∗; M. A. Thompson; W. W. Tian, S. Bihr; H. Beuther; L. Hindson, 2019, MNRAS, 482, 2681Y; "*A search for hyper-compact H II regions in the Galactic Plane*"; arXiv:1809.00404
4. **A. Y. Yang**∗; M. A. Thompson∗; J. S. Urquhart; W. W. Tian; 2018, ApJS, 235, 3; "*Massive Outflows Associated with ATLASGAL Clumps*"; arXiv:1712.04599
3. **A. Y. Yang**∗; W. W. Tian∗; H. Zhu; D. Wu; 2016, ApJS, 223, 6; "*Kinematic Distances of Galactic Planetary Nebulae*"; arXiv:1601.03269
2. **A. Y. Yang**∗; H. Zhu; W. W. Tian; D. Wu; 2015, Progress in Astronomy (Chinese), 33, 284; "*The Current Research of Planetary Nebulae Distance*"
1. **A. Y. Yang**; J. L. Han∗; N. Wang; 2014, SCIENCE CHINA Physics, Mechanics & Astronomy, 57(8), 1600-1606; "*A New Method to Analysis Pulsar Nulling Phenomena*"; arXiv:1310.6610

Co-Author Papers

16. S. A. Dzib, **A. Y. Yang**, J. S. Urquhart, K. M. Menten; & The GLOSTAR Team, **Submitted.**; "*GLOSTAR — Radio Source Catalog II:* $28° < \ell < 36°$ *and* $|b| < 1°$*, VLA B-configuration*"
15. K. R. Neralwar; K. M. Menten; ..., **A. Y. Yang**; 2021, & The SEDIGISM Team; A&A, **Submitted.**; "*The SEDIGISM survey: Connection between cloud morphology and integrated properties*"; Paper link
14. K. R. Neralwar; K. M. Menten; ...; **A. Y. Yang**; & The SEDIGISM Team, 2021, A&A, **Submitted.**; *The SEDIGISM survey: the influence of spiral arms on the molecular gas distribution of the inner Milky Way*; Paper link
13. Shan Su-Su; Fan Yang;...; **A. Y. Yang**;...; 2021, ApJS, **Submitted.**; "*Significant TESS Timing Offsets of 31 Hot Jupiters*", arXiv:2111.06678
12. W. J. Yang, K. M. Menten, **A. Y. Yang**, F. Wyrowski, Y. Gong, S. P. Ellingsen, C. Henkel, X. Chen, Y. Xu, 2022, A&A, 658A, 192Y; "*Redshifted methanol absorption tracing infall motions of high-mass star formation regions*" arXiv:2201.01792
11. Jun Yang; ..., **A. Y. Yang**, ...; 2021, MNRAS, 511, 280Y; "*Structural and spectral properties of Galactic plane variable radio sources* ", arXiv:2112.12526

10. J. S. Urquhart; . . .; **A. Y. Yang**; . . ., K. M. Menten; . . ., 2022, MNRAS, 510, 3389U; "*ATLASGAL – Evolutionary trends in high-mass star formation*"; arXiv:2111.12816
9. D. Colombo; K. M. Menten; . . ., **A. Y. Yang**; & The SEDIGISM Team, 2021, A&A, **Accepted**; "*The SEDIGISM survey: the influence of spiral arms on the molecular gas distribution of the inner Milky Way*"; arXiv:2110.06071
8. A. Brunthaler; K. M. Menten; . . ., **A. Y. Yang**; & The GLOSTAR Team, 2021, A&A, 651, A85, **MPIfR/NRAO press release**, " *A global view on star formation: The GLOSTAR Galactic Plane Survey I. Overview and first results for the Galactic longitude range* $28° < \ell < 36°$ "; arXiv:2106.00377
7. Dokara, Rohit., K. M. Menten, . . ., **A. Y. Yang**; & The GLOSTAR Team; 2021, A&A, 651, A86, **MPIfR/NRAO press release**; "*A global view on star formation: The GLOSTAR Galactic plane survey. II. Supernova Remnants in the first quadrant of the Milky Way*"; arXiv:2103.06267
6. Ortiz-León Gisela N.; K. M. Menten; . . ., **A. Y. Yang**; & The GLOSTAR Team; , 2021, A&A, 651, A87, **MPIfR/NRAO press release**; "*A Global View on Star Formation: The GLOSTAR Galactic Plane Survey. III. 6.7 GHz Methanol maser survey in Cygnus X* "; arXiv:2105.07471
5. H. Nguyen, K. M. Menten,. . ., **A. Y. Yang**; & The GLOSTAR Team; 2021; A&A, 651, A88, **MPIfR/NRAO press release**; "*A global view on star formation: The GLOSTAR Galactic plane survey IV. Radio continuum detections of young stellar objects in the Galactic Centre region*"; arXiv:2105.03212
4. Eden, D. J., . . ., **A. Y. Yang**; & The CHIMPS Team; 2020, MNRAS, 498, 5936E; "*CHIMPS2: survey description and* ^{12}CO *emission in the Galactic Centre*"; arXiv:2009.05073
3. S. S. Shan; H. Zhu; W. W. Tian; H. Y. Zhang; **A. Y. Yang**; M. F. Zhang; 2019, RAA, 19, 92S; "*The distance measurements of supernova remnants in the fourth Galactic quadrant*"; arXiv:1901.02882
2. S. S. Shan; H. Zhu; W. W. Tian; M. F. Zhang; H. Y. Zhang; D. Wu; **A. Y. Yang**; 2019, ApJS, 236, 35S; "*Distances of Galactic Supernova Remnants Using Red Clump Stars*"; arXiv:1810.06014
1. M. A. Thompson; . . .; **A. Y. Yang**; 2016; "*MeerGAL: the MeerKAT Galactic Plane Survey*"

Proposals — Total: 1161.2 hrs

Approved: 1107.8 hrs | New Submitted: 53.4 hrs | PI: 352.9 hrs | Co-I: 808.3 hrs
Observing experience: IRAM-30 m (>50 hrs, on site+remote) | APEX (>200 hrs, 4 weeks onsite) Effelsberg 100 m (>200 hrs, remote) | VLA (>80 hrs, 11 PI observations)

- **PI proposals | Total Approved: 335.5 hrs | New Submitted: 17.4 hrs**
  16. PI: **Aiyuan Yang, Submitted**, CoI: J. S. Urquhart, ID: VLA/22B-181, Aug. 2021, C-config. 4 h;
  15. PI: **Aiyuan Yang, Submitted**, CoI: k M Menten et al., ID: VLA/22B-182, Aug. 2021, C-config. 13.4 h;
  14. PI: **Aiyuan Yang, Approved**, CoI: J. S. Urquhart, ID: VLA/22A-297, Aug. 2021, A-config. 12 h;
  13. PI: **Aiyuan Yang, Approved**, Effelsberg ID: 19-21, 2021, 20.6 h;
  12. PI: **Aiyuan Yang, Approved**, Effelsberg ID: 101-21, 2021, 36 h;
  11. PI: **Aiyuan Yang, Observed**, CoI: the GLOSTAR team., ID: VLA/21B-131, 2020, 2 h;
  10. PI: **Aiyuan Yang, Observed**, CoI: F. Wyrowski, K. M. Menten et al., Effelsberg ID: 77-19,2019, 96.5 h;
  9. PI: **Aiyuan Yang, Observed**, CoI: F. Wyrowski, K. M. Menten et al., IRAM ID: 043-19, 2019, 33 h;
  8. PI: **Aiyuan Yang, Observed**, CoI: M. A. Thompson, W. W. Tian, ID: VLA/19B-040, Feb. 2019, D-config, 13 h;
  7. PI: **Aiyuan Yang, Observed**, CoI: M. A. Thompson, W. W. Tian, ID: VLA/19B-041, Feb. 2019, D-config, 4.5 h;
  6. PI: **Aiyuan Yang, Observed**, CoI: F. Wyrowski, K. M. Menten et al., APEX project ID: 9516A-2019, 77.3h;
  5. PI: **Aiyuan Yang, Observed**, CoI: M. A. Thompson, W. W. Tian, ID: VLA/18B-064, Feb. 2018, C-config, 4.5 h;
  4. PI: **Aiyuan Yang, Observed**, CoI: M. A. Thompson, W. W. Tian, ID: VLA/18B-063, Feb. 2018, C-config, 13 h;
  3. PI: **Aiyuan Yang, Observed**, CoI: M. A. Thompson, W. W. Tian, ID: VLA/18B-065, Feb. 2018, C-config, 9 h;
  2. PI: **Aiyuan Yang, Observed**, CoI: M. A. Thompson, W. W. Tian, ID: VLA/18A-066, 2018, A-config, 13.5 h;
  1. PI: **Aiyuan Yang, Observed**, CoI: M. A. Thompson, W. W. Tian, ID: VLA/17A-070, C-config, Aug. 2017, 3 h;
- **Co-I proposals| Total Approved: 772.3 hrs | New Submitted: 36 hrs**
  8. CoI: **Aiyuan Yang, Approved**, PI: Wenjin Yang; & K. M. Menten et al., Effelsberg ID: 17-21,2021, 37.6 h;
  7. CoI: **Aiyuan Yang, Approved**, PI: K. M. Menten, Effelsberg ID: 102-20, 2020, 600 h;
  6. CoI: **Aiyuan Yang, Approved**, PI: M. Rugel; & K. M. Menten et al., Effelsberg ID: 13-20, 2020, 30 h;
  5. CoI: **Aiyuan Yang, Approved**, PI: R. Dokara; & K. M. Menten, et al., ID: VLA/22A-172, 2021, D-config, 8.7 h;
  4. CoI: **Aiyuan Yang, Approved**, PI: A. Brunthaler; & K. M. Menten et al., ID: VLBA/22A-390, 2021, 72 h;
  3. CoI: **Aiyuan Yang, Approved**, PI: J. S. Urquhart; & K. M. Menten et al., ID: ATCA/C3446, 2021, 24 h;
  2. CoI: **Aiyuan Yang, Submitted**, PI: J. S. Urquhart; & K. M. Menten et al., Telescope: ATCA, 2022, 36 h;
  1. CoI: **Laure Yang, Submitted**, PI: J. S. Urquhart; & K. M. Menten et al., Telescope: ATCA, 2022, 36 h;

Language and Skills

- **Computer Language**: python, C, R, and HTML
- **Language**: English (fluent), Deutsch (beginner); Chinese (first language)
- **software**: CASA, Obit, KVIS, TOPCAT, DS9, AEGEAN, BLOBCAT, Latex, and GILDAS

Honors and Awards

- CAS Presidential Scholarship, "中科院院长奖" (2018)
- China Scholarship Council Scholarship, SKA project, China-UK, "国家留学基金委奖学金" (2016)
- National Scholarship of China, "国家奖学金" (2016)
- Advanced Micro Devices (AMD) Scholarship at NAOC, "AMD奖学金" (2015)
- Merit Student at CAS, "中科院三好学生" (2015)
- Volunteer of the CAS Public Science Day, "中科院公众科学日志愿者" (2013)
- Valuable volunteer of IAU XXIII General Assembly, "第28届国际天文学联合大会(IAU)志愿者" (2012)
- Enrolled in CAS without entrance examination, "推荐免试中科院研究生" (2011)
- Outstanding student leader of College of Physics Science and Technology at XJU (2009)
- Government grants for outstanding students (2007-2011)

Presentations

- Invited online talk, The SEDIGISM workshop, Bonn, Germany, Sep. 2021, "*Molecular outflows in the SEDIGISM*"
- MPIfR submm Group Talk, Bonn, Germany, 16th Feb. 2021, "*Hypercompact H II regions identified from young H II regions*"
- MPIfR Group Talk, Bonn, Germany, 13th Nov. 2018, "*A multi-wavelength study of the ISM around stars: clumps, HII regions, planetary nebulae* "
- Seminar talk, Chinese radio astronomy annual conference, Hefei, Anhui, China, Nov. 2017, "*Searching for hyper-compact H II regions using JVLA survey data*"
- Seminar talk, the 2nd Chinese annual conference of SKA, Shanghai, China, Dec., 2017, "*A search for steep positive radio spectrum object: make predictions for SKA and its precursors*"

Professional References

Prof. Dr. Karl M. Menten
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University of Kent, Canterbury, CT2 7NH, UK;
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