JINGHUA YUAN

Curriculum Vitae (January 8, 2018)

Birth	December 21, 1985, in Heze, Shandong Province, China
Address	National Astronomical Observatories, Chinese Academy of Sciences, A20 Datun Road, Chaoyang District, Beijing 10012, China
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APPOINTMENTS

Assistant Research Fellow 2014-
National Astronomical Observatories, Chinese Academy of Sciences

EDUCATION

PhD Astrophysics 2009-2014
University of Chinese Academy of Sciences
"Multi-wavelength investigations on feedback of massive star formation"
Thesis advisor: Dr. Jinzeng Li (NAOC) / Prof. Yuefang Wu (PKU)

BS Physics 2005-2009
University of Jinan
"Applications of MATLAB in the Electrodynamics Teaching".
Academic/Research advisors: Prof. Yi Jin

RESEARCH INTERESTS

- Star formation
- Astrochemistry
- Protoplanetary disks

FUNDING

- National Natural Science Foundation (NSFC), "Identification and pilot investigations of massive starless clumps", RMB 260,000 (PI, 2016 - 2018).
- NSFC, "Clustered and Triggered Star Formation under the Influence of HII Regions", RMB 812,000 (co-I, 1/16 - 12/19).

- NSFC, "Selection and classification of young stellar objects and multiwavelength investigation of embedded clusters", RMB 300,000 (co-I, 1/15 - 12/17).
- Beijing Natural Science Foundation, "Source selection criteria and multiwavelength investigations of embedded clusters", RMB 60,000 (co-I, 1/14 - 12/15).
- National Astronomical Observatory of China, "High Resolution Study of an Extended Green Object: G22.04+0.22", RMB 30,000 (PI, 6/14 - 5/16).
- Ministry of Science and Technology of the P.R.China, "Building a 40-m antenna in San Juan for collaborative VLBI observations and research", RMB 74,190,000 (co-I, 1/11 - 12/15).
- NSFC, "Multiwavelength investigations of the formation and early evolutions of open clusters", RMB 550,000 (co-I, 1/11 - 12/13).

Peer-Reviewed Journal Papers [ADS Link][arXiv]

First-authored Papers

6. **Yuan, Jinghua**; Li, Jin-Zeng; Wu, Yuefang; Ellingsen, Simon P.; Henkel, Christian; Wang, Ke; Liu, Tie; Liu, Hong-Li; Zavagno, Annie; Ren, Zhiyuan; Huang, Ya-Fang, "High-mass Star Formation through Filamentary Collapse and Clump-fed Accretion in G22", *ApJ,* 852, 12 (2018).
5. **Yuan, Jinghua**; Wu, Yuefang; Ellingsen, Simon P.; Evans, Neal J., II; Henkel, Christian; Wang, Ke; Liu, Hong-Li; Liu, Tie; Li, Jin-Zeng; Zavagno, Annie, "High-mass Starless Clumps in the inner Galactic Plane: the Sample and Dust Properties", *ApJS,* 231, 11 (2017).
4. **Yuan, Jinghua**; Wu, Yuefang; Liu, Tie; Zhang, Tianwei; Zeng Li, Jin; Liu, Hong-Li; Meng, Fanyi; Chen, Ping; Hu, Runjie; Wang, Ke, "Dense Gas in Molecular Cores Associated with Planck Galactic Cold Clumps", *ApJ,* 820, 37 (2016).
3. **Yuan, Jing-Hua**; Wu, Yuefang; Li, Jin Zeng; Liu, Hongli, "Expanding Shell and Star Formation in the Infrared Dust Bubble N6", *ApJ,* 797, 40 (2014).
2. **Yuan, Jing-Hua**; Wu, Yuefang; Li, Jin Zeng; Yu, Wentao; Miller, Martin, "A mapping study of L1174 with 13CO J=2-1 and 12CO J=3-2: star formation triggered by a Herbig Ae/Be star", *MNRAS,* 429, 954 (2013).
1. **Yuan, Jing-Hua**; Li, Jin Zeng; Huang, Ya Fang; Hsia, Chih-Hao; Miao, Jingqi, "The discovery based on GLIMPSE data of a protostar driving a bipolar outflow", *A&A,* 540, A95 (2012).

Co-authored Papers

11. Ward-Thompson, Derek; Pattle, Kate; ... **Yuan, Jinghua**; et al., "First Results from BISTRO: A SCUBA-2 Polarimeter Survey of the Gould Belt", *ApJ,* 842, 66 (2017).
10. Liu, Hong-Li; Figueira, Miguel; Zavagno, Annie; ... Wu, Yuefang; **Yuan, Jing-Hua**; Huang, Maohai, "Herschel observations of the Galactic H II region RCW 79", *A&A,* 602, A95 (2017).
9. Zhang, Chuan-Peng; **Yuan, Jing-Hua**; Xu, Jin-Long; et al., "Searching for initial stage of massive star formation around the H II region G18.2–0.3", *RAA,* 17, 057 (2017).

8. Zhang, Chuan-Peng; **Yuan, Jing-Hua**; Li, Guang-Xing; et al., "A multi-wavelength observation and investigation towards six infrared dark clouds", *A&A,* 598, A76 (2017).

7. Gama, D. R. G.; Lepine, J. R. D.; Mendoza, E.; Wu, Y.; **Yuan, J.**, "CO observations and investigation of triggered star formation towards N10 infrared bubble and surroundings", *ApJ,* 830, 57 (2016).

6. Zhang, Si-Ju; Wu, Yuefang; Li, Jin Zeng; **Yuan, Jing-Hua**; Liu, Hong-Li; Dong, Xiaoyi; Huang, Ya-Fang, "Feedback of the HBe star IL Cep on nearby molecular cloud and star formation", *MNRAS,* 458, 4222 (2016).

5. Liu, Hong-Li; Li, Jin-Zeng; Wu, Yuefang; **Yuan, Jing-Hua**; Liu, Tie; Dubner, G.; Paron, S.; Ortega, M. E.; Molinari, Sergio; Huang, Maohai; and 4 coauthors, "Interactions of the Infrared Bubble N4 with Its Surroundings", *ApJ,* 818, 95 (2016).

4. Liu, Tie; Zhang, Qizhou; Kim, Kee-Tae; Wu, Yuefang; Lee, Chang Won; ...; **Yuan, Jinghua**; Li, Di; et al., "Planck Cold Clumps in the λ Orionis Complex. I. Discovery of an Extremely Young Class 0 Protostellar Object and a Proto-brown Dwarf Candidate in the Bright-rimmed Clump PGCC G192.32-11.88", *ApJS,* 222, 7 (2016).

3. Zhang, Chuan-Peng; Li, Guang-Xing; Wyrowski, Friedrich; Wang, Jun-Jie; **Yuan, Jing-Hua**; Xu, Jin-Long; Gong, Yan; Yeh, Cosmos C.; Menten, Karl M., "N131: A dust bubble born from the disruption of a gas filament", *A&A,* 585, A117 (2016).

2. Paron, S.; Ortega, M. E.; Dubner, G.; **Yuan, Jing-Hua**; Petriella, A.; Giacani, E.; Li, Jin Zeng; Wu, Yuefang; et al., "H II Region G46.5-0.2: The Interplay between Ionizing Radiation, Molecular Gas, and Star Formation", *AJ,* 149, 193 (2015).

1. Liu, Hong-Li; Wu, Yuefang; Li, JinZeng; **Yuan, Jing-Hua**; Liu, Tie; Dong, Xiaoyi, "A Feedback-driven Bubble G24.136+00.436: A Possible Site of Triggered Star Formation", *ApJ,* 798, 30 (2015).

Submitted and in Preparation

8. **Yuan, Jinghua**; et al, *WISE Extended Green Objects (WEGOS): A New Sample of Outflow Candidates in the Whole Sky,* in preparation

7. Li, Hao; Li, Jin-Zeng; **Yuan, Jinghua**; Huang, Ya-Fang; Ren, Zhiyuan, *Gas compression and likely triggered star formation in the infrared bubble N107*, A&A, submitted

6. Wang, Zi; **Yuan, Jinghua**; Wu, Yuefang; Qin, Sheng-Li; Li, Jin-Zeng, *Simultaneous formation of two high-mass stars within 0.1 pc region of EGO G014.33-0.64*, in preparation

5. Zhou, Chenlin; Zhu, Ming; **Yuan, Jinghua**; Wu, Yuefang; Yuan, Lixia, *Star Formation in IRDC G31.97+0.07*, in preparation

4. Zhang, Chuan-Peng; Liu, Tie; **Yuan, Jinghua**; Sanhueza, Patricio; Traficante, Alessio; et al., *The TOP-SCOPE Survey of PGCCs: PMO and SCUBA-2 Observations of 64 PGCCs in the 2nd Galactic Quadrant*, in preparation

3. Wu, Yuefang; Lin, Lianghao; Liu, Xunchuan; Chen, Xi; Ju, Binggang; Zhang, Chao; Liu, Tie; **Yuan, Jinghua**; Wang, Junzhi; Shen, Zhiqiang; Kim, Kee-Tae; Qin, Sheng-Li; et al., *Linear Carbon Chain Molecules in L1489*, in preparation

2. Wu, Yuefang; Liu, Xunchua; **Yuan, Jinghua**; Chen, Xi; Lin, Lianghao; Liu, Tie; et al. *Linear Carbon Chain Molecules in Molecular Outflow Sources and Lupus I Region*, in preparation

1. Liu Hong-Li; Li, Hua-Bai; Stutz, Amelia; **Yuan, Jinghua**, *Global Properties of the Filament G350.5 and its star formation*, in preparation

Conference Papers

6. Huang, Ya-Fang; Li, Jin-Zeng; **Yuan, Jing-Hua**; Liu, Hong-Li, "Efficient Selection and Classification of Infrared Excess Emission Stars Based on AKARI and 2MASS Data", *IAUS,* 316, 147 (2017).

5. Li, Jin-Zeng; **Yuan, Jinghua**; Liu, Hong-Li; Wu, Yuefang; Huang, Ya-Fang, "Drama of HII regions: Clustered and Triggered Star Formation", *IAUS,* 316, 129 (2015).

4. Wu, Y.; Liu, T.; Meng, F.; **Yuan, J.**; Zhang, T.; Chen, P.; Hu, R.; Li, D.; Qin, S.; Ju, B., "Physical properties of Planck Cold Dust Clumps", *EAS Publications Series,* Volume 75-76, pp.277-280 (2016).

3. Zhang, Chengpeng; Wu, Yuefang; **Yuan, Jing-Hua,**; Liu Tie, "The feedback of Herbig Ae/Be stars", *Proceedings of the International Astronomical Union,* Volume 11, Issue S315 (2015).

2. Liu, Tie; Wu, Yuefang; Mardones, Diego; Kim, Kee-Tae; Menten, Karl M.; ...; **Yuan, Jinghua**; Belloche, Arnaud; Henkel, Christian; et al., "Follow-Up Observations Toward Planck Cold Clumps with Ground-Based Radio Telescopes", *APRIM proceeding,* PKAS, 30, 79 (2015).

1. Gama, D.; Lepine, J.; Wu, Y.; **Yuan, J.**, "The Bubble N10", *XIV Latin American Regional IAU Meeting,* Vol. 44, pp. 135-135 (2014).

Approved Observing Proposals

- **PI, 36 hours (six tracks), SMA # 2017B**
  Internal structures of high-mass starless clumps in different environments
- **PI, 90 hours, KVN in single dish mode # 2015B**
  Dense gas in high-mass starless clump candidates
- **PI, 13 hours, ASTE, # 2015A**
  Parsec-Scale Kinematics of Massive Outflow Candidates
- **PI, 15 hours, JCMT # 2015A**
  A study of outflows and infalls in EGOs with molecular lines at submillimeter
- **PI, 16 hours, CSO # 2014B**
  A study of outflows and infalls in EGOs with molecular lines at millimeter
- **co-I, 30 hours, JVLA, # 2018A (PI: Siyi Feng)**
  Temperature and density structure of high mass, low luminosity/mass ratio clumps
- **co-I, 17 hours, JCMT, # 2018A (PI: Lixia Yuan)**
  JCMT observations of the 'hub' filament of G181.84+0.31

- **co-I, 75 hours, IRAM 30-m, # 2017B (PI: Siyi Feng)**
  Initial star-forming activities towards the high-mass, low luminosity-to-mass ratio clumps
- **co-I, 26 hours, Nobeyama 45-m, # 2017B (PI: Lixia Yuan)**
  Follow-up observation of the filamentary flows in G181.84+0.31
- **co-I, 35 hours, Nobeyama 45-m, # 2017B (PI: Siyi Feng)**
  Initial star-forming activities towards the high-mass, low luminosity/mass ratio clumps
- **co-I, 30 hours, JCMT, # 2016B (PI: Chuan-Peng Zhang)**
  The depletion of different species in dark and dense clumps
- **co-I, >300 hours, TRAO, # from 2015 (PI: Tie Liu)**
  TRAO Observations of PGCCs
- **co-I, > 200 hours, JCMT, # from 2015 (PI: Tie Liu)**
  SCOPE: SCUBA-2 Continuum Observations of Pre-protostellar Evolution
- **co-I, > 200 hours, JCMT, # from 2015 (PI: Gregory Herczeg)**
  A Transient search for variable protostars – HOW DO STARS GAIN THEIR MASS?
- **co-I, > 200 hours, JCMT, # from 2015 (PI: D. Ward-Thompson)**
  BISTRO: B-fields In STar forming RegiOns
- **Co-I, 618 hours, SMT 10-m , # from 2015 (PI: Ke Wang)**
  SMT "All-sky" Mapping of PLanck Interstellar Nebulae in the Galaxy (SAMPLING)

MEETINGS AND CONFERENCES

- **Molecular Cloud and Star Formation Workshop 2017, Yichang, China, Oct. 2017**
  High-mass star formation through filamentary collapse and clump-fed accretion in G22 (**oral talk**)
- **IAUS336: Astrophysical Masers – Unlocking the Mysteries of the Universe, Cagliari, Italy, Sep. 2017**
  Filamentary Flows and Clump-fed High-mass Star Formation in G22 (**poster**)
- **The Chinese Annual Astronomy Meeting 2017**, **Urumqi, China**, **Aug. 2017**
  Filamentary Flows and Clump-fed High-mass Star Formation in G22 (**oral talk**)
- **2017 Asia-Pacific Regional IAU Meeting**, **Taipei, Taiwan**, **July 2017**
  Hunting for high-mass starless clumps in the inner Galactic Plane (**oral talk**)
  Dynamic massive star formation in G22.04+0.22: hot core, multipolar outflow, global infall, and millimeter methanol masers (**poster**)
- **Workshop for follow-up surveys of Planck Galactic Cold Clumps**, **Beijing, China**, **Dec. 2016**
  High-Mass Starless Clumps in the Galactic Plane (**oral talk**)
  A Demo on the Reduction of CO Data Collected using PMO 13.7-m (**oral talk**)
- **Star Formation Workshop**, **Dali, China**, **Sep. 2016**
  Identification of High-Mass Starless Clumps in the Galactic Plane (**oral talk**)
  Dramas of Hii Regions — regulating ISM and star formation (**oral talk**)

- **Chinese Radio Astronomy and Technology 2016**, **Urumqi, China**, **Aug. 2016**
- **The Chinese Annual Astronomy Meeting 2015**, **Beijing, China**, **Oct. 2015**
  Identification of High-Mass Starless Clumps in the Galactic Plane (**oral talk**)
- **The 3rd Chinese-German Workshop on Star and Planet Formation**, **Nanjing, China**, **Mar. 2015**
  Dramas of HII regions — clustered and triggered star formation (**oral talk**)
- **The 3rd Chinese Regional JCMT workshop**, **Beijing, China**, **Jan. 2015**
- **IAU 28th General Assembly**, **Beijing, China**, **Aug. 2012** (**poster**)
- **The 13th Synthesis Imaging Workshop**, **Socorro, NM, US**, **June 2012**
- **Chinese Radio Astronomy and Technology 2011**, **Kunming**, **July 2011**
- **Star formation and Galactic Structure Workshop**, **Yixing, China**, **Mar. 2011**

SKILLS

- Advanced: Python, GILDAS
- Experienced: MIRIAD, CASA, Ds9, Montage, LaTeX, STARLINK
- Operating Systems: Linux, Mac OS, Windows
- Languages: Chinese (mother tongue), English (fluent)

AWARDS

- 2014 Pacemaker to Merit Student, University of Chinese Academy of Sciences (UCAS)
- 2013 National Scholarship for Graduated Students (PhD level), Ministry of Education of the P.R. China
- 2013 UCAS-BHP Billiton Scholarship, UCAS and BHPB
- 2013 Merit Student, UCAS