

Junhao Liu

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Research Interests

- Magnetic field and dust polarization in star-forming region.
- Jets and outflows associated with star formation activities.

Education

Sep 2015 - **Ph.D. in Astrophysics**, School of Astronomy & Space Science, Nanjing University, Present, Nanjing, China.
Advisor: Prof. Keping Qiu

Sep 2011 - **B.S. in Astronomy**, School of Astronomy & Space Science, Nanjing University, Nanjing, China.
Jun 2015

Research Experience

Aug 2018 - **Pre-doctoral Fellow**, Center for Astrophysics | Harvard & Smithsonian, Cambridge, US.
Present, Advisor: Dr. Qizhou Zhang

Technical Skills

Skilled Python
Working CASA, MIRIAD, MIR, POLARIS, RADEX, GILDAS
Experience

Approved PI Proposals

- 2019 ALMA Cycle 7: 2019.1.00833.S; Grade-B; 14.5 hours allocated. "A dust polarization survey of dense cores in IRDC G28.34: are magnetic fields aligned with outflows?"
- 2019 SMA 2019A: 2019A-S032; re-submission; 4 B tracks allocated. "A pilot dust polarization survey of massive dense cores in Cygnus-X"
- 2018 SMA 2018A: 2018A-S030; 4 B tracks allocated but not observed. "A pilot dust polarization survey of massive dense cores in Cygnus-X"
- 2019 JCMT 2019B: M19BP037; re-submission; Tier 1; 4.6 hours allocated. "Dust polarization survey of massive dense cores in Cygnus-X"
- 2018 JCMT 2018B: M18BP047; Tier 2; 10 hours allocated but partially observed. "Dust polarization survey of massive dense cores in Cygnus-X"

Approved Co-I Proposals

- 2016 SMA 2016A: 2016A-S021; PI: Keping Qiu. "Completing the SMA survey of massive cores in Cygnus X"
- 2018 NOEMA 2018 summer: S18AS; PI: Keping Qiu. "Anatomy of a massive and quiescent filament feeding massive star formation"

- 2019 JCMT 2019A: M19AP029; PI: Bo Hu. "DR21 south filament"
- 2016 JCMT 2016B: M16BP040; PI: Keping Qiu. "SMA and JCMT CO 2-1 Survey of Massive Outflows in Cygnus-X"

Observation Experience

- Feb 2018 Tianma-65m on-site observation. 5 days. Shanghai, China
- Sep 2017 JCMT on-site observation. 7 nights. Mauna Kea, HI, US
- Jun 2015 CSO remote observation. 5 days.

Publications ([ADS link](#))

First Author Papers

- 2019 "The JCMT BISTRO Survey: The Magnetic Field in the Starless Core ρ Ophiuchus C", **Junhao Liu**, Keping Qiu, and 129 coauthors, ApJ, 877, 43
- 2018 "An Isothermal Outflow in High-mass Star-forming Region G240.31+0.07", **Junhao Liu**, Keping Qiu, Friedrich Wyrowski, Karl Menten, Rolf Güsten, Yue Cao, and Yuwei wang, ApJ, 860, 106

Contributing Papers

- 2019 "Magnetic fields in the infrared dark cloud G34.43+0.24", Soam, Archana; Liu, Tie; Andersson, B-G; Lee, Chang Won; **Liu, Junhao**; and 9 co-authors, ApJ, 883, 1
- 2019 "Surveys of Clumps, Cores, and Condensations in Cygnus X. I. A New Catalog of ~ 0.1 pc Massive Dense Cores", Cao, Yue; Qiu, Keping; Zhang, Qizhou; Wang, Yuwei; Hu, Bo; and **Liu, Junhao**, ApJS, 241, 1
- 2017-2019 BISTRO papers. ApJ, 842, 66; ApJ, 859, 4; ApJ, 861, 65; ApJ, 876, 42; ApJ, 877, 88

Talks & Posters

- May 2019 Poster. "ALMA Insight into Magnetic Fields In IRDC G28.34+0.06". Workshop on Polarization in Protoplanetary Disks and Jets in San Cugat, Spain
- Aug 2018 Conference Talk. "Magnetic fields in Ophiuchus C". Molecular Clouds and Star Formation Colloquium in Lhasa, China
- Nov 2017 Conference Talk. "An Isothermal Outflow in High-mass Star-forming Region G240.31+0.07". Molecular Clouds and Star Formation Colloquium in Yichang, China
- Aug 2017 Conference Talk. "First results of BISTRO: Ophiuchus C". Chinese Astronomical Society Meeting in Urumqi, China