Shih-Yun Tang
湯士昀

Interested in searching for the youngest exoplanet around T Tauri stars with the radial velocity technique, exploring brown dwarf/free-floating planets' atmosphere with 1D radiative-convective model, and studying stellar groups in the Solar neighborhood with Gaia data.

sytang@lowell.edu https://shihyuntang.github.io

Northern Arizona University
Dept. of Astronomy & Planetary Science
Flagstaff, AZ 86011, USA

Lowell Observatory
1400 West Mars Hill Road
Flagstaff, AZ 86001, USA

Education

- **Ph.D., Astronomy and Planetary Sciences**, Northern Arizona University, Flagstaff, AZ, USA
  Jan. 2020 — Present
  - Advisors: Dr. Lisa Prato and Prof. Tyler Robinson
- **M.S., Physics**, National Central University, Taiwan — (GPA 3.88/4.0)
  Sep. 2017 — June 2019
  - Advisor: Prof. Wen-Ping Chen
- **B.A., Physics**, National Central University, Taiwan — (GPA 3.80/4.0)
  Sep. 2013 —June 2017
  - Advisor: Prof. Wen-Ping Chen

Awards/Scholarship

- 2018 The Physics Society of Taiwan, Undergraduate Excellent Thesis Award
- 2018 Scholarship for Outstanding Student
- 2018 Fellowship of MPIA summer internship (full financial support)
- 2018 Taiwan Physics Society Annual Meeting Poster Award
- 2017 The ICT Solution Provider scholarship
- 2016 Fellowship for Exchange Student
- 2016 Astronomy Society R.O.C. Annual Meeting Poster Award

Research Experience

- **Graduate Research Assistant**, Lowell Observatory (Jan. 2020 — Present)
  - Advisor: Dr. Lisa Prato
- **Graduate Research Assistant**, National Central University, Astronomy Institute, Taiwan (Sep. 2017 — June 2019)
  - Advisor: Prof. Wen-Ping Chen
- **Undergraduate Research Assistant**, National Central University, Astronomy Institute, Taiwan (Jan. 2015 —Sep 2016)
  - Advisor: Prof. Wen-Ping Chen

Internship

- **Max-Planck-Institute for Astronomy**, Germany (July 2018– Sep. 2018)
  - Advisor: Dr. Bertrand Goldman & Dr. Chien-Cheng Lin
  - Topic: *Multi-dimensional parameterization of members in nearby star clusters: Gaia DR2 and photometric distancing*
- **The Chinese University of Hong Kong** (Jun. 2016– Aug. 2016)
  - Advisor: Prof. Li, Hua-bai
  - Topic: *Optical performance testing of the ASTE polarimeter for the ASTE telescope*

Successful Proposals

- PI: Gemini, Fast Turnaround/GNIRS, 1.5 hours, program ID: GN-2017B-FT-18
- Co-I: CFHT, SPIRou, 19 hours, program ID: 20BH33

Open Source Projects | GitHub

- `IGRINS RV`**: https://github.com/shihyuntang/igrins_rv**
  A python open source pipeline for extracting radial velocity (RV) for the Immersion GRating INfrared Spectrometer (IGRINS) instrument.

Publications | 4/8 1st author | h-index: 4

☆ 2021: **Tang, Shih-Yun**; Robinson, Tyler D.; Marley, Mark S. et al., *Impacts of Water Latent Heat on the Thermal Structure of Ultra-Cool Objects: Brown Dwarfs and Free-Floating Planets,* The Astronomical Journal, submitted.

☆ 2021: **Tang, Shih-Yun**; Stahl, Asa G.; Johns-Krull, Christopher M. et al., *IGRINS RV: A Python package for precision radial velocities with Near-Infrared Spectra,* The Journal of Open Source Software, submitted.

- 2021: Stahl, Asa G.; **Tang, Shih-Yun**; Johns-Krull, Christopher M. et al., *IGRINS RV: A Precision RV Pipeline for IGRINS Using Modified Forward-Modeling in the Near-Infrared,* The Astronomical Journal, 161:283.
- 2021: Pang, Xiao-Ying; Li, Yuqian; Yu, Zeqiu; **Tang, Shih-Yun** et al., *3D Morphology of Open Clusters in the Solar Neighborhood,* The Astrophysical Journal, 912:162.
- 2020: Pang, Xiao-Ying; Li, Yuqian; **Tang, Shih-Yun** et al., *Different Fates of Young Star Clusters after Gas Expulsion,* The Astrophysical Journal Letters, 900:L4.
- 2020: Zhang, Yu; **Tang, Shih-Yun***; Chen, W. P. et al., *Diagnosing the Stellar Population and Tidal Structure of the Blanco1 Star Cluster,* The Astrophysical Journal, 889:99.

☆ 2019: **Tang, Shih-Yun**; Pang, Xiao-Ying; Yuan, Zhen et al., *Disrupted Open Clusters with tidal tails: Coma Berenices and its neighboring group,* The Astrophysical Journal, 877:12.

☆ 2018: **Tang, Shih-Yun**; Chen, W. P.; Chiang, P. S. et al., *Characterization of Stellar and Substellar Members in the Coma Berenices Star Cluster,* The Astrophysical Journal, 862:106.

Conference/WorkShop

- The 6th Emerging Researchers in Exoplanet Science Symposium (May 24-26, 2021) — **Talk**
  - Topic: *Impact of Water Latent Heat for Ultra-cool Object's Thermal Structures: Brown Dwarfs and Free-Floating Planets*
- Micro-Workshop for Stellar Initial Mass Function and Molecular Core Mass Function (Nov. 2019 @Taipei, Taiwan) — **Talk**
  - Topic: *Mass Function in the Nearby Open Clusters*
- 2019 The Astronomical Society of the Republic of China (Taiwan) annual meeting — **Talk**
- Star Cluster Workshop (Apl. 2019 @Kunming, China) — **Talk**
  - Topic: *Discovery of Tidal Tails in Disrupting Open Clusters: Coma Berenices and a Neighbor Stellar Group*
- ESO Workshop: A revolution in stellar physics with Gaia and large surveys (Sep. 2018 @Warsaw, Poland) — **Poster**
  - Topic: *Multi-dimensional Parameterization of Members in Nearby Star Clusters: Gaia DR2 and Photometric Distancing*
- Star Cluster Workshop (Jul. 2018 @Xinjiang, China) — **Talk**
  - Topic: *Characterization of Stellar and Substellar Members in the Coma Berenices Star Cluster*
- 2018 The Astronomical Society of the Republic of China (Taiwan) annual meeting — **Talk**