Weijia Sun

Curriculum Vitae

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Education

2016–now **Ph.D., Astrophysics**, *Department of Astronomy, School of Physics, Peking University*, Beijing, China.

Supervisor: *Prof. Licai Deng (NAOC)*

2012–2015 **B.Sc., Astrophysics**, *Department of Astronomy, School of Physics, Peking University*, Beijing, China.

Supervisor: *Prof. Eric Peng (PKU)*

Thesis: A search for planetary nebulae in Virgo cluster globular clusters

References

[1] **Weijia Sun**, Xiao-Wei Duan, Licai Deng, et al. "Exploring the stellar rotation of early-type stars in the LAMOST Medium-Resolution Survey. II. Statistics". In: *arXiv e-prints*, arXiv:2108.01213 (Aug. 2021), arXiv:2108.01213. arXiv: 2108.01213 [astro-ph.SR].

[2] **Weijia Sun**, Xiao-Wei Duan, Licai Deng, et al. "Exploring the stellar rotation of early-type stars in the LAMOST Medium-Resolution Survey. I. Catalog". In: *arXiv e-prints*, arXiv:2108.01212 (Aug. 2021), arXiv:2108.01212. arXiv: 2108.01212 [astro-ph.SR].

[3] Xiao-Wei Duan, Xiao-Dian Chen, **Weijia Sun**, et al. "Blueshifted hydrogen emission and shock wave of RR Lyrae variables in SDSS and LAMOST". In: *arXiv e-prints*, arXiv:2107.13573 (July 2021), arXiv:2107.13573. arXiv: 2107.13573 [astro-ph.SR].

[4] **Weijia Sun**, Richard de Grijs, Licai Deng, et al. "Binary-driven stellar rotation evolution at the main-sequence turn-off in star clusters". In: *Monthly Notices of the Royal Astronomical Society* 502.3 (Apr. 2021), pp. 4350–4358.

[5] **Weijia Sun**, Xiaodian Chen, Licai Deng, et al. "Physical Parameters of Late-type Contact Binaries in the Northern Catalina Sky Survey". In: *The Astrophysical Journal Supplement Series* 247.2, 50 (Apr. 2020), p. 50.

[6] **Weijia Sun**, Eric W. Peng, Youkyung Ko, et al. "The Next Generation Virgo Cluster Survey. XVII. A Search for Planetary Nebulae in Virgo Cluster Globular Clusters". In: *The Astrophysical Journal* 885.2, 145 (Nov. 2019), p. 145.

[7] **Weijia Sun**, Chengyuan Li, Licai Deng, et al. "Tidal-locking-induced Stellar Rotation Dichotomy in the Open Cluster NGC 2287?" In: *The Astrophysical Journal* 883.2 (Oct. 2019), p. 182.

[8] Chengyuan Li, **Weijia Sun**, Richard de Grijs, et al. "Extended Main-sequence Turnoffs in the Double Cluster h and χ Persei: The Complex Role of Stellar Rotation". In: *The Astrophysical Journal* 876.1 (May 2019), p. 65.

[9] **Weijia Sun**, Richard de Grijs, Licai Deng, et al. "Stellar Rotation and the Extended Main-sequence Turnoff in the Open Cluster NGC 5822". In: *The Astrophysical Journal* 876.2 (May 2019), p. 113.

[10] Chengyuan Li, **Weijia Sun**, Jongsuk Hong, et al. "Blue Straggler Stars beyond the Milky Way. IV. Radial Distributions and Dynamical Implications". In: *The Astrophysical Journal* 871.2 (Feb. 2019), p. 171.

[11] **Weijia Sun**, Chengyuan Li, Richard de Grijs, et al. "Blue Straggler Stars beyond the Milky Way. II. A Binary Origin for Blue Straggler Stars in Magellanic Cloud Clusters". In: *The Astrophysical Journal* 862.2 (Aug. 2018), p. 133.

[12] **Weijia Sun**, Richard de Grijs, Zhou Fan, et al. "The Star Cluster Mass-Galactocentric Radius Relation: Implications for Cluster Formation". In: *The Astrophysical Journal* 816.1 (Jan. 2016), p. 9.

Skills

- Spectroscopic data reduction and analysis
- Stellar photometry reduction
- Preparation and execution of Observing Programs
- MCMC statistics

Conferences & Talks

2021 ACAMAR Future of Traditional Survey Science workshop, Online, September 22, 2021

Contributed talk: Exploring the stellar rotation of early-type stars in the LAMOST Medium-Resolution Survey

2021 Seminar at Shanghai Astronomical Observatory, China, July 14, 2021

Seminar: Stellar rotation in stellar physics

2020 Chinese Astronomical Society 2020 Annual Meeting, Beijing, China, October 12-14, 2020

Contributed talk: Stellar rotation: the missing piece in star clusters

2020 AAAstro-seminar at Macquarie University, Australia, August 21, 2020

Invited talk: Stellar rotation: the missing piece in star clusters

2019 The Next Generation Virgo Cluster Survey (NGVS) Team Meeting, Beijing, China, June 10-13, 2019

Invited talk: PNe in GCs of M87 and M49

2019 IAU Symposium 351 & MODEST-19, Star Clusters: from the Milky Way to the Early Universe, Bologna, Italy, May 27-31, 2019

Poster

2018 Star clusters and the Milky Way, The XII Luoxiahong workshop in Astrophysics, Langzhong, China, November 20-21. 2018

Contributed talk: The origin of blue straggler stars in the Magellanic Clouds clusters

2017 Star clusters and the Milky Way, The XI Luoxiahong workshop in Astrophysics, Nanchong, China, October 9-11. 2017

Contributed talk: Population study of stellar rotation rates in clusters

2017 Stellar Populations and the Distance Scale, Beijing, China, September 11-16, 2017

2017 Chinese Astronomical Society 2017 Annual Meeting, Urumchi, China, August 7-11, 2017

Observation Experience

2021 Awarded 5 h at the CFHT as co-I in semester 2021B

2021 Awarded 5 h at the SALT as PI in semester 2021-1

2020 Awarded 5 h at the SALT as PI in semester 2020-2

2020 Awarded 7 h at the SALT as PI in semester 2020-1

2019 Awarded 6 h at the SALT as PI in semester 2019-2

2019 Visitor observer for the awarded 2 nights at Lijiang 2.4m telescope (PI: Chunguang Zhang)

2017 Awarded 4.5 h at the SALT as co-I in semester 2018-2 (PI: Michael Albrow)

2017 Awarded 4.5 h at the SALT as co-I in semester 2018-1 (PI: Michael Albrow)

2017 Awarded 15 h at the SALT as co-I in semester 2017-2 (PI: Michael Albrow)

2016 Visitor observer for the awarded 5 nights at Palomar P200 (PI: Eric Peng)

Selected Honors

2016 Presidential Scholarship, Peking University

2016 Outstanding Undergraduate Thesis Award, Peking University

Teaching & Outreach

2021 Technical supporter for the conference "ACAMAR Future of Traditional Survey Science workshop"

2020 Technical supporter for the conference "ACAMAR Virtual Workshop"

2017 Volunteer for the conference "Stellar Populations and the Distance Scale", Beijing

Coding

- Python (proficient)
- R
- LaTeX
- Unix

Language

English Professional working proficiency

Chinese Native or bilingual proficiency