Sal Wanying Fu

Contact Information Email: swfu@berkelev.edu Website: http://swfu.github.io

ORCID: https://orcid.org/0000-0003-2990-0830

Research Interests Near-field cosmology, satellite galaxies, photometric metallicities, Galactic dynamics, stellar streams, stellar halos, chemical evolution, large surveys

EDUCATION

Ph.D in Astrophysics, UC Berkeley, Berkeley, CA August 2019-present

PD Soros Fellow, NSF Graduate Research Fellow & Cranor Fellow

Advisor: Prof. Daniel R. Weisz

B.A. Physics, Pomona College, Claremont, CA May 2019

Academic advisors: Prof. Jorge Moreno, Prof. Philip Choi Research advisors: Dr. Joshua D. Simon, Dr. Gwen C. Rudie

Thesis: Small-Scale Tests of Λ CDM Cosmology

Research APPOINTMENTS Graduate Student Researcher, UC Berkeley Undergraduate Research Intern, Carnegie Observatories Undergraduate Research Assistant, Pomona College

Aug 2019-Present June 2016-Aug 2019

Spring 2016

PUBLICATIONS

- S. W. Fu, D. R. Weisz, et al. 2022. Metallicity Distribution Functions of 13 Ultra-Faint Dwarf Galaxies from Hubble Space Telescope Narrowband Imaging, in prep.
- S. W. Fu, D. R. Weisz, et al. 2022. Metallicity Distribution Function of the Eridanus II Ultra-faint Dwarf Galaxy from Hubble Space Telescope Narrowband Imaging, ApJ, 925, 6
- S. W. Fu, J. D. Simon, et al. 2019. Dynamical Histories of the Crater II and Hercules Dwarf Galaxies, ApJ, 883, 11
- **S. W. Fu**, J. D. Simon, et al. 2018. The Origin of the 300 km s^{-1} Stream Near Seque 1, ApJ, 866, 42

Talks

- S. W. Fu, D. R. Weisz, et al. August 2022. Metallicity Distribution Functions of Local Group Dwarf Galaxies from Hubble Space Telescope Narrow-band Imaging. Contributed talk to the Division H meeting at the 31st IAUGA in Busan, Republic of Korea.
- S. W. Fu, D. R. Weisz, et al. July 2022. Metallicity Distribution Functions of Local Group Dwarf Galaxies from Hubble Space Telescope Narrow-band Imaging. Contributed talk to "A Comprehensive View of Galaxy Evolution from the Milky Way to I-Zwicky" in Sesto, Italy.
- S. W. Fu, D. R. Weisz, et al. June 2022. Metallicity Distribution Functions of Ultrafaint Dwarf Galaxies from Hubble Space Telescope Narrow-band Imaging. Contributed talk to the 240th AAS Meeting in Pasadena, CA.
- S. W. Fu, J. D. Simon, and D. R. Weisz. November 2019. Dynamical History of the Crater II Dwarf Galaxy. Contributed talk to the "Local Local Group" Meeting at KIPAC in Stanford, CA.

Posters

- S. W. Fu, D. R. Weisz, et al. June 2022. Metallicity Distribution Functions of Local Group Dwarf Galaxies from Hubble Space Telescope Narrow-band Imaging. Contributed poster to the S4 Symposium at the annual European Astronomical Society meeting in Valencia, Spain.
- **S. W. Fu**, D. R. Weisz, et al. September 2020. *The Metallicity Distribution Functions of Ultra-Faint Dwarf Galaxies*. Contributed poster to the "Local Group Symposium," hosted virtually from STScI in Baltimore, MD.
- **S. W. Fu**, J. D. Simon, and D. R. Weisz. November 2019. *Dynamical History of the Crater II Dwarf Galaxy*. Contributed talk to the "Local Local Group" Meeting at KIPAC in Stanford, CA.
- S. W. Fu, J. D. Simon, and D. R. Weisz. November 2019. *Dynamical History of the Crater II Dwarf Galaxy*. Contributed talk to UC Berkeley lunch seminar in Berkeley, CA.
- S. W. Fu, J. D. Simon, and D. R. Weisz. June 2019. *Dynamical History of the Crater II Dwarf Galaxy*. Contributed talk to the "Science in Our Own Backyard: Exploring the Galaxy and the Local Group with WFIRST" conference in Pasadena, CA.
- **S. W. Fu**, J. D. Simon, et al. 2019. *Dynamical Histories of the Crater II and Hercules Dwarf Galaxies*. Poster presentation at 233rd AAS Meeting in Seattle, WA
- J. D. Simon, S. W. Fu, et al. 2019. The Nature of the Peculiar Milky Way Satellite Sagittarius II. iPoster presentation at 233rd AAS Meeting in Seattle, WA
- Sobeck J., ... **S. W. Fu**, et al. 2019. An Examination of the APOGEE-2 Survey Data for the Draco Dwarf Spheroidal Galaxy. Poster presentation at 233rd AAS Meeting in Seattle, WA
- W. Fu, J. D. Simon, et al. *Characterizing the 300 km/s Stream Near Segue 1*. Poster presentation at 231st AAS Meeting in Washington, D.C.
- **W. Fu**, J. D. Simon, et al. A Study of Low-Metallicity Red Giant Stars in the Ursa Minor Dwarf Spheroidal Galaxy Using APOGEE Survey Data. Poster Presentation at the 229th AAS Meeting in Grapevine, TX

Telescope Allocations **HST/WFC3** Cycle 29, GO-16686, 30 orbits (Co-I)

The Metallicity Distribution Functions of Faint M31 Satellites

HST/WFC3 Cycle 28, GO-16226, 23 orbits (PI)

Metallicity Distribution Functions of Quenched Field Dwarf Galaxies

Magellan/MIKE 2020A, 2 Nights (Co-I)

Chemical Evolution of the Hidden Giants: Crater II

Magellan/IMACS 2020A, 1 Night (Co-I)

Chemical Evolution of the Hidden Giants: Crater II

Magellan/MIKE 2020A, 3 Nights (Co-I)

Chemical Abundances of the Hidden Giants: Antlia II

	Paul & Daisy Soros Fellowship for New Americans Hertz Fellowship Finalist		2020
			2020
	NSF Graduate Research Fellowship, Nationa	l Science Foun-	2019
	dation Cranor Fellowship, UC Berkeley Astrophysics Barry M. Goldwater Scholar, Barry M. Goldwater Scholarship and Excellence in Education Foundation Tileston Junior Physics Prize Pomona College Department of Physics and Astronomy Inaugural FUTURE of Physics at Caltech Cohort Pomona College Scholar, Pomona College Tileston Sophomore Physics Prize		2019
			2019
			2010
			Nov 2018
			1107 2010
			Nov 2018
			Jun 2016-Jun 2019
			Jan 2018
	Pomona College Department of Physics and Astron	nomy	
	Moncrief Astronomy Prize		Sep 2016
	Pomona College Department of Physics and Astron	nomy	
Teaching	UC Berkeley (Fall 2019-present)		
LEACHING	ASTRON218: Galaxies, Graduate Student Instructor Ay160: Stellar Physics, Graduate Student Instructor		Fall 2021
			Fall 2019
	Pomona College (Spring 2016-Spring 2019)		
	PHYS128: Electronics (with community partnership) — Mentor ASTR101: Observational Astronomy — Mentor & Lab TA ASTR51: Introductory Astronomy — Mentor ASTR101: Observational Astronomy — Mentor & Lab TA ASTR51: Introductory Astronomy — Mentor PHYS70: Spacetime, Quanta and Entropy — Mentor & Lab TA ASTR2: Galaxies and Cosmology — Lab TA		Spring 2019
			Fall 2018
			Spring 2018
			Fall 2017
			Spring 2017 Fall 2016
			Spring 2016
	ADTILL. Galaxies and Cosmology — Lab TA		
SERVICE	Community Partnership With Fremont Academy Femineers Physics Department Liaison Physics Cohort Program Organizer Carnegie Summer Student Program Student Leader Community Partnership With Fremont Academy Femineers Carnegie Summer Student Program Student Leader Social Justice in STEM Reading Group Co-Organizer		$\mathrm{Jan}\ 2019\text{-}\mathrm{May}\ 2019$
			$\mathrm{Jan}\ 2016\text{-}\mathrm{May}\ 2019$
			Jan 2016-May 2019
			Jun 2018-Aug 2018
			Mar 2018-May 2018
			Jun 2017-Aug 2017
			Jan 2017-May 2017
Professional	Phi Beta Kappa		May 2019-Present
SOCIETY	American Astronomical Society, Junior Member		Sep 2016-Present
Memberships	Sigma Xi Scientific Research Honor Society, Associate Mem-		Sep 2018-Present
	ber		
Professional	Assistant Professor, UC Berkeley Staff Scientist,		Simon
References			Carnegie Observatories
	dan.weisz@berkeley.edu	jsimon@carneg	iescience.edu
	Dr. Gwen C. Rudie Prof. Jorge Mo Staff Scientist, Carnegie Observatories Assistant Profe		oreno
			fessor, Pomona College
	gwen@carnegiescience.edu	jorge.moreno@	
	Prof. Philip Choi		
	Associate Professor, Pomona College		
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philip.choi@pomona.edu