Sal Wanying Fu

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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

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

August 2019-present

Spring 2016

PUBLICATIONS

S. W. Fu, D. R. Weisz, et al. 2022. Metallicity Distribution Functions of 13 Ultra-Faint Dwarf Galaxy Candidates 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. September 2022. Metallicity Distribution Functions of Local Group Dwarf Galaxies from Hubble Space Telescope Narrow-band Imaging. Seminar at Kim Group meeting, SNU, Seoul, Republic of Korea.

S. W. Fu, D. R. Weisz, et al. September 2022. Metallicity Distribution Functions of Ultra-Faint Dwarf Galaxies from Hubble Space Telescope Narrow-band Imaging. Seminar at KASI in Daejeon, Republic of Korea.

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. September 2022. Metallicity Distribution Functions of Local Group Dwarf Galaxies from Hubble Space Telescope Narrow-band Imaging. Seminar at Observatoire astronomique de Strasbourg in Strasbourg, France.
- S. W. Fu, D. R. Weisz, et al. September 2022. Metallicity Distribution Functions of Local Group Dwarf Galaxies from Hubble Space Telescope Narrow-band Imaging. Seminar at Kapteyn Astronomical Institute in Groningen, Netherlands.
- S. W. Fu, D. R. Weisz, et al. September 2022. Metallicity Distribution Functions of Ultra-Faint Dwarf Galaxies from Hubble Space Telescope Narrow-band Imaging. Seminar at KASI in Daejeon, Republic of Korea.
- 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.
- **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.

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, 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

Telescope Allocations	HST/WFC3	Cycle 29, GO-16686, 30 orbits (Co-I)	
	${ m HST/WFC3}$	The Metallicity Distribution Functions of Faint M31 Satellites Cycle 28, GO-16226, 23 orbits (PI)	
		Metallicity Distribution Functions of Quench	ned Field Dwarf Galaxies
	${\bf Magellan/MIKE}$	2020A, 2 Nights (Co-I) Chemical Evolution of the Hidden Giants: Crater II	
	${\bf Magellan/IMACS}$		
	Magellan/MIKE	2020A, 3 Nights (Co-I)	rater 11
		Chemical Abundances of the Hidden Giants:	Antlia II
Awards	Paul & Daisy Soros Fellowship for New Americans 2020		
TWAILDS	Hertz Fellowship Finalist NSF Graduate Research Fellowship, National Science Foun-		2020
			2019
	dation		
	Cranor Fellowship	, UC Berkeley Astrophysics	2019
	Barry M. Goldwater Scholar, Barry M. Goldwater Scholarship		2018
	and Excellence in Ed	ucation Foundation	
	Tileston Junior Physics Prize		Nov 2018
	Pomona College Department of Physics and Astronomy		
	Inaugural FUTURE of Physics at Caltech Cohort		Nov 2018
		cholar, Pomona College	Jun 2016-Jun 2019
	Tileston Sophomore Physics Prize Pomona College Department of Physics and Astronomy Moncrief Astronomy Prize		Jan 2018
			Sep 2016
	Pomona College Department of Physics and Astronomy		
TEACHING UC Berkeley (Fall 2019-present)			
Teaching	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 Spring 2019		
	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		Fall 2018
			Spring 2018
			Fall 2017
			Spring 2017
			Fall 2016
	ASTR2: Galaxies and Cosmology — Lab TA		Spring 2016
C	Community Partners	hip With Framont Academy Famineers	Jan 2019-May 2019
SERVICE	Community Partnership With Fremont Academy Femineers Physics Department Liaison		Jan 2016-May 2019
	Physics Cohort Program Organizer		Jan 2016-May 2019
	Carnegie Summer Student Program Student Leader		Jun 2018-Aug 2018
	Community Partnership With Fremont Academy Femineers		Mar 2018-May 2018
	Carnegie Summer Student Program Student Leader		Jun 2017-Aug 2017
	Social Justice in STEM Reading Group Co-Organizer		Jan 2017-May 2017
	Dhi Boto Vorre		May 2010 Proceed
Professional	Phi Beta Kappa American Astronomical Society, Junior Member		May 2019-Present Sep 2016-Present
SOCIETY		Research Honor Society, Associate Mem-	Sep 2018-Present
MEMBERSHIPS	ber	Tesearch Honor Society, Associate Melli-	Dep 2016-1 Tesem

Professional References Dr. Daniel R. Weisz Associate Professor, UC Berkeley dan.weisz@berkeley.edu

Dr. Gwen C. Rudie Staff Scientist, Carnegie Observatories gwen@carnegiescience.edu

Prof. Philip Choi Associate Professor, Pomona College philip.choi@pomona.edu Dr. Joshua D. Simon Staff Scientist, Carnegie Observatories jsimon@carnegiescience.edu

Prof. Jorge Moreno Assistant Professor, Pomona College jorge.moreno@pomona.edu