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

August 2019-present

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
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 Segue 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*. Talk at Kim Group meeting in Seoul National University in 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. Talk 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. July 2022. *Metallicity Distribution Functions of Local Group Dwarf Galaxies from Hubble Space Telescope Narrow-band Imaging*. Talk at Observatoire astronomique de Strasbourg in Strasbourg, France.
- 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. Talk at Kapteyn Astronomical Institute in Groningen, Netherlands.
- **S. W. Fu**, D. R. Weisz, et al. June 2022. *Metallicity Distribution Functions of Ultra*faint 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 the 229th AAS Meeting in Grapevine, TX

	HST/WFC3	Cycle 29, GO-16686, 30 orbits (Co-I)	
		The Metallicity Distribution Functions of Faint M31 Satellites	
	${ m HST/WFC3}$	Cycle 28, GO-16226, 23 orbits (PI)	
	2.5 11 /2.5777	Metallicity Distribution Functions of Quenched Field Dwarf Galaxie	
	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: C	rater II
	Magellan/MIKE	2020A, 3 Nights (Co-I)	
		Chemical Abundances of the Hidden Giants:	Antlia II
Awards	Paul & Daisy Soros Fellowship for New Americans 2020		
	Hertz Fellowship Finalist		2020
	NSF Graduate Research Fellowship, National Science Foundation		2019
	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 Pomona College Department of Physics and Astronomy Moncrief Astronomy Prize Pomona College Department of Physics and Astronomy		2019
			2018
			2010
			Nov 2018
			1107 2010
			Nov 2018
			Jun 2016-Jun 2019
			Jan 2018
			Sep 2016
TEACHING UC Berkeley (Fall 2019-present)			
TEACHING	ASTRON218: Galaxies, Graduate Student Instructor Ay160: Stellar Physics, Graduate Student Instructor		Fall 2021
			Fall 2019
	Pomona College (S	1011 2010	
	PHYS128: Electronic	Spring 2019	
		STR101: 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	d Cosmology — Lab TA	Spring 2016
Service	Community Partnership With Fremont Academy Femineers		Jan 2019-May 2019
J	Physics Department Liaison		$\mathrm{Jan}\ 2016\text{-}\mathrm{May}\ 2019$
	Physics Cohort Program Organizer Carnegie Summer Student Program Student Leader Community Partnership With Fremont Academy Femineers Carnegie Summer Student Program Student Leader		$\mathrm{Jan}\ 2016\text{-}\mathrm{May}\ 2019$
			$\mathrm{Jun}\ 2018\mathrm{-Aug}\ 2018$
			Mar 2018-May 2018
			Jun 2017-Aug 2017
	Social Justice in STE	M Reading Group Co-Organizer	Jan 2017-May 2017
Professional	Phi Beta Kappa		May 2019-Present
SOCIETY		mical Society, Junior Member	Sep 2016-Present
MEMBERSHIPS		Research Honor Society, Associate Mem-	Sep 2018-Present

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