

Sedona Price

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Research Interests

Galaxy evolution, high redshift galaxies, gas and stellar kinematics

Education

Exp. 2017	Ph.D. Astrophysics , <i>University of California, Berkeley</i> Advisor: Mariska Kriek
2013	M.A. Astrophysics , <i>University of California, Berkeley</i>
2011	B.S. Physics , <i>with honors, California Institute of Technology</i>

Research Positions

2011-present	Graduate Student, UC Berkeley
2008-2010	Summer Undergraduate Research Fellow, Caltech

Fellowships & Awards

2012-2015	NSF Graduate Research Fellowship, UC Berkeley
2014	Outstanding Graduate Student Instructor Award, UC Berkeley
2010	Charles and Valerie Elachi Fellow (SURF), Caltech
2009	SURF Board SURF Scholar, Caltech
2009	Margie Lauritsen Leighton Prize, Caltech
2008	Larson Scholar (Summer Undergraduate Research Fellowship; SURF), Caltech

Observing Experience

W. M. Keck Observatory, Keck I 10 m telescope, MOSFIRE (9.5 nights), OSIRIS (3.5 nights), LRIS (0.5 night)

Teaching

2013	Astro C10, <i>Co-head GSI, Introductory course for non-majors</i> , UC Berkeley
2012	Astro 7b, <i>Introductory course for majors</i> , UC Berkeley
2011	Astro C10, <i>Introductory course for non-majors</i> , UC Berkeley
2010, 2011	Physics 6, <i>Sophomore physics major lab</i> , Caltech

Service

—	Referee, <i>The Astrophysical Journal (ApJ)</i>
2013-2016	Mentor Master, <i>co-head of grad student mentoring program</i> , UC Berkeley
2014-2015	Co-supervisor, <i>undergraduate student Meng Luo</i> , UC Berkeley
2013-2015	Mentor, <i>mentoring junior graduate student</i> , UC Berkeley
2012-2015	Graduate Student Representative, <i>Astronomy Department</i> , UC Berkeley

Outreach

2014-present	Mentoring Group, <i>Society of Women in Physical Sciences</i> , UC Berkeley
2016 May	Solar Viewing, <i>Ecology Center Festival</i> , UC Berkeley
2012-2016	Annual Cal Day, <i>Astronomy Department exposition</i> , UC Berkeley
2011-2015	Annual Bay Area Science Festival, <i>Science@Cal</i> , UC Berkeley
2013-2015	Annual Astronomy Demo Day, <i>Meher School 5th grade class</i> , UC Berkeley
2012-2014	Mentor, <i>Berkeley Compass Project</i> , UC Berkeley
2012	Expanding Your Horizons workshop, <i>for middle school girls</i> , UC Berkeley

Presentations

Conferences:

2016 Sep	Talk, Keck Science Meeting, Pasadena, CA
2016 Aug	Talk, Santa Cruz Galaxy Workshop, Santa Cruz, CA
2016 Jul	Talk, Munich Joint Conference, <i>Discs in Galaxies</i> , Garching, Germany
2016 Apr	Poster, STScI Spring Symposium, <i>What Shapes Galaxies?</i> , Baltimore, MD
2015 Aug	Talk, IAU Symposium 319, <i>Galaxies at High Redshift and Their Evolution over Cosmic Time</i> , Honolulu, HI
2013 May	Talk, Lorenz Center Workshop, <i>Galaxy formation from $z=5$ to $z=0$</i> , Leiden, the Netherlands

Seminars:

2016 Nov	Tea talk, Caltech, Pasadena, CA
2016 Nov	Lunch seminar, Carnegie Observatories, Pasadena, CA
2016 Nov	Invited seminar, CfA/Harvard, Cambridge, MA
2016 Nov	Invited lunch talk, MIT, Cambridge, MA
2015 Nov	Lunch talk, UC Berkeley, CA
2013 Oct	Lunch talk, UC Berkeley, CA

Collaborative Meetings:

3 talks at MOSDEF collaboration meetings; 2 talks at 3D-HST collaboration meetings

First Author Publications

1. **Price, S. H.**, Kriek, M., Shapley, A. E., et al., “*The MOSDEF Survey: Dynamical and Baryonic Masses and Kinematic Structures of Star-Forming Galaxies at $1.4 \leq z \leq 2.6$* ,” 2016, [ApJ, 819, 80](#)
2. **Price, S. H.**, Kriek, M., Brammer, G. B., et al., “*Direct Measurements of Dust Attenuation in $z \sim 1.5$ Star-Forming Galaxies from 3D-HST: Implications for Dust Geometry and Star Formation Rates*,” 2014, [ApJ, 788, 86](#)

Publications to be Submitted

1. **Price, S. H.**, Kriek, M., Feldmann, R., et al., “*Testing the recovery of intrinsic galaxy sizes and masses of $z \sim 2$ massive galaxies using cosmological simulations*,” 2016, to be submitted

Publications in Preparation

1. **Price, S. H.**, Kriek, M., Feldmann, R., et al., “*Using mock spectra and photometry from the MassiveFIRE simulation to test the recovery of kinematics and dynamical masses*,” in preparation
2. **Price, S. H.**, Kriek, M., et al., “*The MOSDEF Survey: Kinematics and structure of star-forming galaxies and their evolution from $z \sim 3$ to $z \sim 1.5$* ,” in preparation

Contributing Author Publications

1. Shivaiei, I., Reddy, N. A., Shapley, A. E., et al., including **SHP**, “*The MOSDEF Survey: Metallicity dependence of the PAH emission at High Redshift: Implications for 24 micron-inferred IR luminosities and star formation rates at $z \sim 2$* ,” 2016, [arXiv:1609.04814](#)
2. Azadi, M., Coil, A. L., Aird, J., et al., including **SHP**, “*The MOSDEF survey: AGN multi-wavelength identification, selection biases and host galaxy properties*,” 2016, [arXiv:1608.05890](#)
3. Momcheva, I. G., Brammer, G. B., van Dokkum, P. G., et al., including **SHP**, “*The 3D-HST Survey: Hubble Space Telescope WFC3/G141 Grism Spectra, Redshifts, and Emission Line Measurements for $\sim 100,000$ Galaxies*,” 2016, [ApJS, 225, 27](#)
4. Sanders, R. L., Shapley, A. E., Kriek, M., et al., including **SHP**, “*The MOSDEF Survey: Detection of $[\text{OIII}]\lambda 4363$ and the Direct-method Oxygen Abundance of a Star-forming Galaxy at $z = 3.08$* ,” 2016, [ApJL, 825, L23](#)
5. Shivaiei, I., Kriek, M., Reddy, N. A., et al., including **SHP**, “*The MOSDEF Survey: The Strong Agreement between $H\alpha$ and UV-to-FIR Star Formation Rates for $z \sim 2$ Star-forming Galaxies*,” 2016, [ApJL, 820, L23](#)
6. Sanders, R. L., Shapley, A. E., Kriek, M., et al., including **SHP**, “*The MOSDEF Survey: Electron Density and Ionization Parameter at $z \sim 2.3$* ,” 2016, [ApJ, 816, 23](#)
7. Shivaiei, I., Reddy, N. A., Shapley, A. E., et al., including **SHP**, “*The MOSDEF Survey: Dissecting the Star Formation Rate versus Stellar Mass Relation Using $H\alpha$ and $H\beta$ Emission Lines at $z \sim 2$* ,” 2015, [ApJ, 815, 98](#)
8. Kriek, M., Shapley, A. E., Reddy, N. A., et al., including **SHP**, “*The MOSFIRE Deep Evolution Field (MOSDEF) Survey: Rest-frame Optical Spectroscopy for ~ 1500 H-selected Galaxies at $1.37 < z < 3.8$* ,” 2015, [ApJS, 218, 15](#)
9. Reddy, N. A., Kriek, M., Shapley, A. E., et al., including **SHP**, “*The MOSDEF Survey: Measurements of Balmer Decrements and the Dust Attenuation Curve at Redshifts $z \sim 1.4-2.6$* ,” 2015, [ApJ, 806, 259](#)

10. Shapley, A. E., Reddy, N. A., Kriek, M., et al., including **SHP**, “*The MOSDEF Survey: Excitation Properties of $z \sim 2.3$ Star-forming Galaxies*,” 2015, [ApJ](#), 801, 88
11. Coil, A. L., Aird, J., Reddy, N., et al., including **SHP**, “*The MOSDEF Survey: Optical Active Galactic Nucleus Diagnostics at $z \sim 2.3$* ,” 2015, [ApJ](#), 801, 35
12. Sanders, R. L., Shapley, A. E., Kriek, M., et al., including **SHP**, “*The MOSDEF Survey: Mass, Metallicity, and Star-formation Rate at $z \sim 2.3$* ,” 2015, [ApJ](#), 799, 138
13. Skelton, R. E., Whitaker, K. E., Momcheva, I. G., et al., including **SHP**, “*3D-HST WFC3-selected Photometric Catalogs in the Five CANDELS/3D-HST Fields: Photometry, Photometric Redshifts, and Stellar Masses*,” 2014, [ApJS](#), 214, 24
14. Bergé, J., **Price, S.**, Amara, A., & Rhodes, J., “*On point spread function modelling: towards optimal interpolation*,” 2012, [MNRAS](#), 419, 2356

Grants

2016	AAS International Travel Grant, Munich Joint Conference
2015	AAS International Travel Grant, IAU Symposium 319
2012-2015	NSF Graduate Research Fellowship, UC Berkeley