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RESEARCH INTERESTS

Galaxy formation and evolution, Intergalactic Medium (IGM) and quasar absorption systems such as damped Lyman alpha systems (DLAs), metal enrichment of IGM/DLAs, star formation

EDUCATION

- Ph.D. in Physics**, The University of California, San Diego June 2011
Thesis: *Star Formation in Damped Lyman-alpha systems and the Outskirts of Lyman Break Galaxies*
Advisor: Prof. Arthur Wolfe
- Masters of Science in Astronomy**, The University of California, Los Angeles June 2006
Thesis: *Photometric Stellar Variability in the Galactic Center*
Advisor: Prof. Andrea Ghez
- Bachelor of Science in Physics and Astronomy**, The University of Arizona May 2004
Magna Cum Laude and Honors
Thesis: *The Star Clusters of the Small Magellanic Cloud: Age Distribution*
Advisor: Prof. Dennis Zaritsky

WORK EXPERIENCE

- Support Scientist**, Supervisor: Christina Oliveira August 2016-present
Space Telescope Science Institute (STScI), Baltimore, MD
- Cosmic Origins Spectrograph (COS) on HST (UV spectroscopy)
 - Near-infrared HST grism spectroscopy of clumpy galaxies
 - UV HST grism spectroscopy of $z \sim 2$ quasars
 - Spectroscopy of $z > 5$ quasars to study absorption systems
- Postdoctoral Fellow**, Advisor: Jonathan P. Gardner 2014-2016
NASA Postdoctoral Program Fellow
Goddard Space Flight Center, Greenbelt, MD
- Ultraviolet HST imaging to measure galaxy properties
 - Evolution of the star formation rate efficiency of HI gas (DLAs)
- Postdoctoral researcher**, Advisor: Harry Teplitz 2011-2014
California Institute of Technology (at IPAC), Pasadena, CA
- Chemical abundances of high redshift HI gas (DLAs) at $z \sim 5$
 - Ultraviolet HST imaging of distant galaxies (UVUDF, GOODS-N)
 - Near-infrared HST grism spectroscopy of $z \sim 1$ galaxies (WISP team)

- Graduate student researcher**, Advisor: Prof. Arthur Wolfe 2006-2011
University of California, San Diego
- Chemical abundance evolution of high redshift HI gas (neutral atomic hydrogen gas - DLAs) via high resolution spectroscopy from $z \sim 1$ to $z \sim 5$
 - Star formation efficiency of HI gas (DLAs) at $z \sim 3$
 - Ultraviolet imaging of high redshift galaxies (Lyman break galaxies at $z \sim 3$)
- Graduate student researcher**, Advisor: Prof. Andrea Ghez 2004-2006
University of California, Los Angeles
- The variability of stars near the super massive black hole Sgr A*.
- Undergraduate student researcher**, Advisor: Prof. Dennis Zaritsky 2002-2004
University of Arizona
- The history of star formation in the Small Magellanic Cloud
- Summer student researcher**, Advisor: Prof. Jack. Hughes 2004
Rutgers University
- Analysis of Chandra X-ray observations of the supernova remnant 0506-68.0
- Science Undergraduate Laboratory Internship (SULI):** 2003
Lawrence Berkeley National Laboratory, Advisor: Dr. Aldering
- Analysis of optical image data to find supernovae and avoid contaminants such as variable stars and asteroids.
- Undergraduate Research Fellowship (ERULF):** 2001
Brookhaven National Laboratory, Advisor: Prof. Wit Busza
- Continuous performance validation of the silicon detectors of the PHOBOS experiment at RHIC and collect initial data.

OBSERVING EXPERIENCE

W.M. Keck Observatory: 10m telescopes	Total: 41 nights
• HIRES: High Resolution Echelle Spectrometer	16 nights
• ESI: Echelle Spectrograph and Imager	14 nights
• LRIS: Low Resolution Imaging Spectrometer	5 nights
• NIRC: Near Infrared Camera	3 nights
• NIRC2: Near Infrared Camera 2	2 nights
• OSIRIS: OH Suppressing Infrared Integral-field Spectrograph	1 night
Palomar Observatory: 200-inch Telescope	Total: 17 nights
• LFC: Large Format Camera	12 nights
• DBSP: The Double Spectrograph	5 nights
Magellan Observatory: Baade & Clay 6.5m telescopes	Total: 6 nights
• FIRE: Folded-port InfraRed Echellette	2 nights
• IMACS: Inamori-Magellan Areal Camera & Spectrograph	1 night
• FourSTAR: Infrared Camera	1 night
• LDSS3: Low Dispersion Survey Spectrograph 3	2 nights
WIYN Observatory: 3.5m telescope (Mini-Mosaic Imager)	Total: 3 nights

GRANTS AND FUNDING

Total external research funding: \$436,308 as PI, excluding fellowships (>\$250,000).

In addition, brought in over \$3 million as a Co-I on other grants. Titles listed in next section.

Grant	Year	Involvement	Value
HST AR, Cycle 24 (14580)	2017-2020	PI	\$181,011
NASA Keck 2017A	2017-2019	PI	\$12,400
NASA Keck 2016B	2016-2018	PI	\$15,000
HST GO, Cycle 23 (14209)	2016-1019	funding PI, science Co-I	\$15,072
HST GO, Cycle 23 (14178)	2016-1019	funding PI, science Co-I	\$89,303
HST GO, Cycle 23 (14127)	2016-1019	funding PI, science Co-I	\$87,566
HST GO, Cycle 21 (13309)	2014-1017	funding PI, science Co-I	\$12,429
HST GO, Cycle 21 (13389)	2014-1017	funding PI, science Co-I	\$35,927
Total			\$436,308

SUCCESSFUL TELESCOPE PROPOSALS AND GRANTS

Hubble Space Telescope

- PI** AR (14580) The Role of Galaxy Morphology in the Mass-Metallicity-SFR Relation (**\$181,011**; 2016 Cycle 24)
- Co-I** GO (14127) First Measurement of the Small Scale Structure of Circumgalactic Gas via Grism Spectra of Close Quasar Pairs (**\$87,566**; 2015 Cycle 23)
- Co-I** GO (14209) The Final UV Frontier: Legacy Near-UV Imaging of the Frontier Fields (**\$15,072**; 2015 Cycle 23)
- Co-I** GO/PAR (14178) WFC3 Infrared Spectroscopic Parallel Survey: The WISP Deep Fields (**\$89,303**; 2015 Cycle 23)
- Co-I** SNAP (13309) UV Snapshot of Low-redshift Massive Star-forming Galaxies: Searching for the Analogs of High-redshift Clumpy Galaxies (**\$12,429**; 2013 Cycle 21)
- Co-I** GO (13389) The Ultraviolet Frontier: Completing the Census of Star Formation at Its Peak Epoch (**\$35,927**; 2015 Cycle 21)
- Co-I** GO/PAR (12568,12902,13352,13517) WFC3 Infrared Spectroscopic Parallel Survey WISP: A Survey of Star Formation Across Cosmic Time (2011-2014 Cycle 19-22)
- Co-I** AR (12821) Probing the Lyman continuum in sub-M* galaxies at $z \sim 1$ (2012; Cycle 22)
- Co-I** GO (12534) Panchromatic Hubble Ultra Deep Field: Ultraviolet Coverage (2011; C21)
- Co-I** AR (12645) H I Selected Survey for Damped Lyman alpha systems with $z < 1$ (2011; C19)
- Co-I** AR (10656) An HST/NICMOS Study of our Galaxy's Central Supermassive Black Hole (2006; Cycle 14)

Spitzer Space Telescope

- Co-I** GO (12093) Measuring Low Mass Galaxies In The WFC3 Infrared Spectroscopic Parallels Survey (2015)
- Co-I** GO (10041) Mass Assembly In The WFC3 Infrared Spectroscopic Parallels Survey (2013)
- Co-I** GO (90230) Low Mass Galaxy Evolution In The WFC3 Infrared Spectroscopic Parallels Survey (2012)

Ground Based Telescopes

- PI W.M. Keck Telescopes (2 NASA-Keck proposals, 1 night 2016B 2 nights 2017A, **\$27,400**)
- PI ESO Very Large Telescope (1 proposal, 26 hours, 2016B)
- PI Palomar 200 inch (4 proposals, 17 nights 2011-2013)
- Co-I W.M. Keck Telescopes (23 UC-Keck proposals with Arthur Wolfe, 40 nights 2006-2012)
- Co-I Palomar 200 inch (1 proposals, 4 nights, 2013)
- Co-I Magellan Baade Telescope (1 proposal, 4 nights, 2012)
- Co-I ESO Very Large Telescope (2 proposals, 18 hours, 2014-2015)
- Co-I ALMA (3 proposals: 2016.1.00569.S, 2015.1.01564.S, 2013.1.00526.S)

COMPUTER EXPERIENCE

Programming Languages: IDL, Python

Data Reduction & Analysis: XIDL, IRAF, PYRAF, SExtractor, SexSeg, ColorPro, TFIT, BPZ, EAZY, DrizzlePac (AstroDrizzle, TweakReg), aXe

TEACHING AND MENTORING EXPERIENCE

- Mentor for Undergraduate Student in Astronomy Research:** Anthony Pahl 2016
 - NASA Summer Mentor at Goddard Space Flight Center, MD (10 weeks)
 - Remotely via University of Minnesota, MN (ongoing through 2017)
- UCSD Instructor of Physics:** University of California, San Diego 2010
 - Instructor for Physics 1A: Introductory Mechanics.
- Guest Lecturer:** Maui Community College 2008
 - Astronomy instructor and team leader for the Po'okela short course, part of the summer bridge program for Native Hawaiian high school seniors. Taught inquiry based activities for 1 week.
- Teaching Assistant:** University of California, San Diego 2006-2007
 - Introductory astronomy lecture (Physics 5 and Physics 7) 2007
 - Physics laboratory on waves and circuits (Physics 2CL) 2006
- Guest Lecturer:** University of California, Santa Cruz 2007
 - Astronomy instructor for the CfAO Mainland Short Course, teaching inquiry activities to minority college students for 1 week.
- Guest Lecturer:** Hawaii Island observatories 2006
 - Astronomy instructor for the CfAO Akamai Observatory Short Course for Hawaii Island, teaching inquiry activities to minority Native Hawaiian college students for 1 week.
- Teaching Assistant:** University of California, Los Angeles 2004
 - Astronomy lab for non-majors
- Teaching Assistant:** University of Arizona 2001-2004
 - Mechanics lab for non-majors 2001-2003
 - Electricity, magnetism, and optics for non-majors 2004

OUTREACH

Explore@NASAGoddard open house volunteer: Goddard Space Flight Center	2015
Reach For Tomorrow volunteer: University of California, San Diego	2008-2011
• Outreach volunteer for disadvantaged K12 students (1 day/year)	
Tech Trek volunteer: University of California, San Diego	2008-2010
• Outreach volunteer for female K12 students (1 day/year)	
Po'okela short course: Maui Community College, HI	2008
• Outreach team leader for native Hawaiian students (1 week + prep)	
CfAO Mainland short course: University of California Santa Cruz	2007
• Outreach volunteer for disadvantaged students (1 week + prep)	
CfAO Akamai Observatory short course: Waimea, Hawaii	2006
• Outreach volunteer for native Hawaiian students (1 week + prep)	
Planetarium show volunteer: University of California, Los Angeles	2004-2006
Science Ambassador: University of Arizona	2003-2004

PROFESSIONAL DEVELOPMENT AS EDUCATOR

Active teaching methods in Astronomy Survey Courses	2009-2011
• NASA Center for Astronomy Education (CAE) workshops	
• AAS meeting #213, Long Beach, California	2009
• AAS meeting #217, Seattle, Washington	2011
Professional Development Program (PDP):	2006-2008
• NSF Center for Adaptive Optics, Maui, Hawaii (Workshops to instruct graduate students on inquiry based teaching and then put those skills into practice by designing new inquiries and teaching them in educational programs.)	
• Design team leader for stellar population inquiry activity	2008
• Design team leader for galaxy evolution inquiry activity	2007
• Team member for re-design of optics inquiry activity	2006

AWARDS AND HONORS

• Lindau Nobel Laureate meeting participant	2016
• Distinguished Fellow	2016
- Kosciuszko Foundation Collegium of Eminent Scientists	
• NASA Postdoctoral Program Fellowship	2014-2016
• Certificate in Teaching Innovative Laboratory Experiences	2010
- Institute for Scientist & Engineer Educators	
• Summer Graduate Teaching Fellowship, University of California, San Diego	2010
• UCLA Department of Physics & Astronomy Fellowship	2004-2005

- Excellence in Undergraduate Research Award in Physics
- University of Arizona, College of Science 2004
- Baird Scholarship, Baird Foundation, University of Arizona 2000-2004
- Weaver Award for Undergraduate Research, University of Arizona, Physics 2003
- Galileo Circle Scholarship, University of Arizona, College of Science 2003-2004
- Vesto M. Slipher Scholarship, University of Arizona, Physics 2003
- Phi Beta Kappa initiated 2002
- Glenn C. Purviance Scholarship, University of Arizona, Physics 2002
- George Gregson-Science Scholarship, University of Arizona, Physics 2001
- Vomaska Scholarship, University of Arizona, Physics 2000
- Academy of Achievement attendee 2000

PROFESSIONAL ACTIVITIES

- Referee for Scientific Journals** 2011-2016
 - Astrophysical Journal, Astronomy and Astrophysics,
Monthly Notices of the Royal Astronomical Society
- Review Panels and Telescope Allocation Committees** 2014-2016
 - Astrophysics Data Analysis Program (ADAP) Panel
 - Hubble Space Telescope Panel
 - Spitzer Space Telescope Panel
 - CFHT Taiwan TAC
- Committee work**
 - Wrote summary on high redshift galaxy surveys with a UV-optical
Space telescope (LUVOIR) for the Cosmic Origins Program Analysis
Group (COPAG) accepted by PASP August 2015
- Press Releases**
 - Hubble Team Unveils Most Colorful View of Universe
Captured by Space Telescope June 2014
<http://hubblesite.org/newscenter/archive/releases/2014/27>
 - Hubble Reveals Stellar Fireworks in 'Skyrocket' Galaxy June 2016
<http://hubblesite.org/newscenter/archive/releases/2016/23/>
- Local Leadership**
 - Ran a discussion group on galaxy related science at Goddard 2014-2016
 - Founded and ran a department social hour at UCSD 2006-2011
- Professional Memberships**
 - American Astronomical Society (AAS) 2009-present
 - International Astronomical Union (IAU) 2015-present

SELECTED REFEREED PUBLICATIONS (1st and 2nd author)

51 refereed journal papers published or accepted to date, garnering 1,773+ citations (372+ of which are for 8 first author papers), leading to an H-index of 24.

Guo, Y., **Rafelski, Marc**, Faber, S. M., Koo, D.C., Krumholz, M.R., Trump, J.R., Willner, S. P., Amorín, R., Barro, G., Bell, E.F., Gardner, J.P., Gawiser, E., Hathi, N.P., Koekemoer, A.M., Pacifici, C., Pérez-González, P.G., Ravindranath, S., Reddy, N., Teplitz, H.I., Yesuf, H., *The Bursty Star Formation Histories of Low-mass Galaxies at $0.4 < z < 1$ Revealed by Star Formation Rates Measured from FUV and H_{β}* , 2016 *Astrophysical Journal* 833, 1

Marc Rafelski, Gardner, J.P., Fumagalli, M., Neeleman, M., Teplitz, H.I., Grogin, N., Koekemoer, A., Scarlata, C., *The Star Formation Rate Efficiency of Neutral Atomic-dominated Hydrogen Gas in the Outskirts of Star Forming Galaxies from $z \sim 1-3$* , 2016 *Astrophysical Journal* 825, 87

Marc Rafelski, Teplitz, H.I., Gardner, J.P., Coe, D., Bond, N.A., Koekemoer, A., Grogin, N., Kurczynski, P., McGrath, E.J., Bourque, M., Atek, H., Brown, T.M., Coe, D., Colbert, J.W., Codoreanu, A., Ferguson, H.C., Finkelstein, S.L., Gawiser, E., Giavalisco, M., Gronwall, C., Hanish, D.J., Lee, K., Mehta, V., de Mello, D.F., Ravindranath, S., Ryan, R.E., Scarlata, C., Siana, B.D., Soto, E., Voyer, E.N., *UVUDF: Ultraviolet Through Near-infrared Catalog and Photometric Redshifts of Galaxies in the Hubble Ultra Deep Field*, 2015, *Astronomical Journal*, 150, 31

Marc Rafelski, Marcel Neeleman, Michele Fumagalli, Arthur Wolfe, Jason X. Prochaska, *The Rapid Decline in Metallicity of Damped Ly-alpha Systems at $z \sim 5$* , 2014, *Astrophysical Journal Letters*, 782, L29

Teplitz, H.I., **Rafelski, Marc**, Kurczynski, P., Bond, N.A., Grogin, N., Koekemoer, A., Atek, H., Brown, T.M., Coe, D., Colbert, J.W., Ferguson, H.C., Finkelstein, S.L., Gardner, J.P., Gawiser, E., Giavalisco, M., Gronwall, C., Hanish, D.J., Lee, K., de Mello, D.F., Ravindranath, S., Ryan, R.E., Siana, B.D., Scarlata, C., Soto, E., Voyer, E.N., Wolfe, A.M., *UVUDF: Ultraviolet Imaging of the Hubble Ultradeep Field with Wide-field Camera 3*, 2013, *Astronomical Journal*, 146, 159

Marc Rafelski, Arthur M. Wolfe, Jason X. Prochaska, Alexander Mendez, Marcel Neeleman, *Metallicity Evolution of Damped Lyman Alpha Systems out to $z \sim 5$* , 2012, *Astrophysical Journal*, 755, 89

Marc Rafelski, Arthur M. Wolfe, Hsiao-Wen Chen, *Star Formation from DLA Gas in the Outskirts of Lyman Break Galaxies at $z \sim 3$* , 2011, *Astrophysical Journal*, 736, 48

Marc Rafelski, Arthur M. Wolfe, Jeff Cooke, Hsiao-Wen Chen, Taft E. Armandroff, Gregory D. Wirth, *Deep Keck u-band Imaging of the Hubble Ultra Deep Field: A Catalog of $z \sim 3$ Lyman Break Galaxies*, 2009, *Astrophysical Journal*, 703, 2050

Marc Rafelski, Ghez, A. M., Hornstein, S. D., Lu, J. R., Morris, M., *Photometric Stellar Variability in the Galactic Center*, 2007, *Astrophysical Journal*, 659, 1241

Hughes, John P., **Rafelski, Marc**, Warren, Jessica S., Rakowski, Cara, Slane, Patrick, Burrows, David, Nousek, John, *The Chandra View of the Supernova Remnant 0506-68.0 in the Large Magellanic Cloud*, 2006, *Astrophysical Journal*, 645, L117

Marc Rafelski & Dennis Zaritsky, *The Star Clusters of the Small Magellanic Cloud: Age Distribution*, 2005, *Astronomical Journal*, 129, 2701

OTHER REFEREED PUBLICATIONS

Bagley, M.B., Scarlata, C., Henry, A., **Marc Rafelski**, Malkan, M., Teplitz, H.Y., Dai, S., Baronchelli, I., Colbert, J., Rutkowski, M., Mehta, V., Dressler, A., McCarthy, P., Bunker, A., Atek, H. Garel, T., Martin, C.L., Hathi, N., Siana, B., *A High Space Density of Luminous Lyman Alpha Emitters at $z \sim 6.5$* , accepted *Astrophysical Journal* 2016

Scowen, P.A., Tripp, T., Beasley, M. Ardila, D., Andersson, B-G, Apellániz, J., Barstow, M., Bianchi, L., Calzetti, D., Clampin, M., Evans, C.J., France, K., García, M., Gomez de Castro, A., Harris, W., Hartigan, P., Howk, C., Hutchings, J., Larruquert, J., Lillie, C.F., Matthews, G., McCandliss, S., Polidan, R., Perez, **Rafelski, M.**, Roederer, I.U., Sana, H., Sanders, W.T., Schiminovich, D., Thronson, H., Tumlinson, J., Vallergera, J. Wofford, A., *Finding the UV-Visible Path Forward: Proceedings of the Community Workshop to Plan the Future of UV/Visible Space Astrophysics*, accepted *Publications of the Astronomical Society of the Pacific*, 2016

Pacifici, Camilla; Kassin, Susan A.; Weiner, Benjamin J.; Holden, Bradford; Gardner, Jonathan P.; Faber, Sandra M.; Ferguson, Henry C.; Koo, David C.; Primack, Joel R.; Bell, Eric F.; Dekel, Avishai; Gawiser, Eric; Giavalisco, Mauro; **Rafelski, Marc**; Simons, Raymond C.; Barro, Guillermo; Croton, Darren J.; Dave, Romeel; Fontana, Adriano; Grogin, Norman A.; Koekemoer, Anton M.; Lee, Seong-Kook; Salmon, Brett; Somerville, Rachel; Behroozi, Peter, *The evolution of star formation histories of quiescent galaxies*, accepted *Astrophysical Journal* 2016

Vicki L. Toy; Antonino Cucchiara; Sylvain Veilleux; Michele Fumagalli; **Marc Rafelski**; Alireza Rahmati; S. Bradley Cenko; John I. Capone; Dheeraj R. Pasham; *Exploring Damped Lyman-alpha System Host Galaxies Using Gamma-Ray Bursts*, 2016 *Astrophysical Journal* 832, 2

Alavi, Anahita; Siana, Brian; Richard, Johan; **Rafelski, Marc**; Jauzac, Mathilde; Limousin, Marceau; Freeman, William R.; Scarlata, Claudia; Robertson, Brant; Stark, Daniel P.; Teplitz, Harry I., *The Evolution Of The Faint End Of The UV Luminosity Function During The Peak Epoch Of Star Formation ($1 < z < 3$)*, 2016 *Astrophysical Journal* 832, 56

Kaveh Vasei, Brian Siana, Alice E. Shapley, Anna M. Quider, Anahita Alavi, **Marc Rafelski**, Charles C. Steidel, Max Pettini, Geraint F. Lewis, *The Lyman Continuum Escape Fraction of The Cosmic Horseshoe: A Test of Indirect Estimates*, 2016 *Astrophysical Journal* 831, 38

Elmegreen, Debra Meloy; Elmegreen, Bruce G.; Sanchez Almeida, Jorge; Munoz-Tunon, Casiana; Mendez-Abreu, Jairo; Gallagher, John S.; **Rafelski, Marc**; Filho, Mercedes; Ceverino, Daniel, *Hubble Space Telescope Observations of Accretion-Induced Star Formation in the Tadpole Galaxy Kiso 5639*, 2016 *Astrophysical Journal* 825, 2

- Japelj, J.; Vergani, S. D.; Salvaterra, R.; D'Avanzo, P.; Mannucci, F.; Fernandez-Soto, A.; Boissier, S.; Hunt, L. K.; Atek, H.; Rodríguez-Muñoz, L.; Scodreggio, M.; Cristiani, S.; Le Floc'h, E.; Flores, H.; Gallego, J.; Ghirlanda, G.; Gomboc, A.; Hammer, F.; Perley, D. A.; Pescalli, A.; Petitjean, P.; Puech, M.; **Rafelski, M.**; Tagliaferri, G., *Are LGRBs biased tracers of star formation? Clues from the host galaxies of the Swift/BAT6 complete sample of bright LGRBs. II: star formation rates and metallicities at $z < 1$* , 2016 *Astronomy & Astrophysics* 590, 129
- Zanella, A.; Scarlata, C.; Corsini, E. M.; Bedregal, A. G.; Dalla Bontà, E.; Atek, H.; Bunker, A. J.; Colbert, J.; Dai, Y. S.; Henry, A.; Malkan, M.; Martin, C.; **Rafelski, M.**; Rutkowski, M. J.; Siana, B.; Teplitz, H., *The role of quenching time in the evolution of the mass-size relation of passive galaxies from the WISP survey*, 2016 *Astrophysical Journal Letters*, 824, 2
- Guo, Yicheng; Koo, David C.; Lu, Yu; Forbes, John C.; **Rafelski, Marc**; Trump, Jonathan R.; Amorín, Ricardo; Barro, Guillermo; Davé, Romeel; Faber, S. M.; Hathi, Nimish P.; Yesuf, Hassen; Cooper, Michael C.; Dekel, Avishai; Guhathakurta, Puragra; Kirby, Evan N.; Koekemoer, Anton M.; Pérez-González, Pablo G.; Lin, Lihwai; Newman, Jeffery A.; Primack, Joel R.; Rosario, David J.; Willmer, Christopher N. A.; Yan, Renbin, *Stellar Mass--Gas-phase Metallicity Relation at $0.5 < z < 0.7$: A Power Law with Increasing Scatter toward the Low-mass Regime*, 2016 *Astrophysical Journal*, 822, 2
- Kurczynski, Peter, Gawiser, Eric, Acquaviva, Viviana, Bell, Eric F., Dekel, Avishai, de Mello, Duilia F., Ferguson, Henry C., Gardner, Jonathan P., Grogin, Norman A., Guo, Yicheng, Hopkins, Philip F., Koekemoer, Anton M., Koo, David C., Lee, Seong-Kook, Mobasher, Bahram, Primack, Joel R., **Rafelski, Marc**, Soto, Emmaris, Teplitz, Harry I., *Evolution of Intrinsic Scatter in the SFR-Stellar Mass Correlation at $0.5 < z < 3$* , 2016 *Astrophysical Journal Letters* 820, 1
- Neeleman, Marcel, Prochaska, J. Xavier, Ribaldo, Joseph, Lehner, Nicolas, Howk, J. Christopher, **Rafelski, Marc**, Kanekar, Nissim, *The HI Content of the Universe over the Past 10 Gyrs*, 2016 *Astrophysical Journal*, 818, 113
- Schreiber, Corentin, Elbaz, David, Pannella, Maurilio, Ciesla, Laure, Wang, Tao, Koekemoer, Anton M., **Rafelski, Marc**, Daddi, Emanuele, *Observational evidence of a slow downfall of star formation efficiency in massive galaxies during the last 10 Gyr*, 2016 *Astronomy & Astrophysics* 589, 35
- Rutkowski, Michael J., Scarlata, Claudia, Haardt, Francesco, Siana, Brian, Henry, Alaina, **Rafelski, Marc**, Hayes, Matthew, Salvato, Mara, Pahl, Anthony J., Mehta, Vihang, Beck, Melanie, Malkan, Matthew, Teplitz, Harry I., *The Lyman Continuum Escape Fraction of Low-Mass Star-Forming Galaxies at $z \sim 1$* . 2016 *Astrophysical Journal*, 819, 81
- Mehta, Vihang, Scarlata, Claudia, Colbert, James W., Dai, Sophia, Dressler, Alan, Henry, Alaina, Malkan, Matt, **Rafelski, Marc**, Siana, Brian, Teplitz, Harry, Bagley, Micaela, Beck, Melanie, Ross, Nathaniel R., Rutkowski, Michael, Wang, Yun, *Predicting the redshift 2 $H\alpha$ luminosity function using [OIII] emission line galaxies* 2015 *Astrophysical Journal*, 811, 141
- Finkelstein, Steven L., Ryan, Russell E., Jr., Papovich, Casey, Dickinson, Mark, Song, Mimi, Somerville, Rachel, Ferguson, Henry C., Salmon, Brett, Giavalisco, Mauro, Koekemoer, Anton M., Ashby, Matthew L. N., Behroozi, Peter, Castellano, Marco, Dunlop, James S., Faber,

- Sandy M., Fazio, Giovanni G., Fontana, Adriano, Grogin, Norman A., Hathi, Nimish, Jaacks, Jason, Kocevski, Dale D., Livermore, Rachael, McLure, Ross J., Merlin, Emiliano, Mobasher, Bahram, Newman, Jeffrey A., **Rafelski, Marc**, Tilvi, Vithal, Willner, S. P., *The Evolution of the Galaxy Rest-Frame Ultraviolet Luminosity Function Over the First Two Billion Years*, 2015 *Astrophysical Journal*, 810, 71
- Cucchiara, A., Fumagalli, M., **Rafelski, M.**, Kocevski, D., Prochaska, J. X., Cooke, R. J., Becker, G. D., *Unveiling the Secrets of Metallicity and Massive Star Formation Using DLAs along Gamma-ray Bursts*, 2015, *Astrophysical Journal*, 804, 51
- Yicheng Guo, Henry C. Ferguson, Eric F. Bell, David C. Koo, Christopher J. Conselice, Mauro Giavalisco, Susan Kassin, Yu Lu, Ray Lucas, Nir Mandelker, Daniel M. McIntosh, Joel R. Primack, Swara Ravindranath, Guillermo Barro, Daniel Ceverino, Avishai Dekel, Sandra M. Faber, Jerome J. Fang, Anton M. Koekemoer, Kai Noeske, **Marc Rafelski**, Amber Straughn, *Clumpy Galaxies in CANDELS: I. The Definition of UV Clumps and the Fraction of Clumpy Galaxies at $0.5 < z < 3$* , 2015 *Astrophysical Journal*, 800, 39
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TALKS AND POSTERS

29 oral presentations and 12 poster presentations at a range of universities and institutes across the United States, Europe, Australia, and Asia

What Shapes Galaxies: STScI, Baltimore, MD 04/2016

- **Poster:** *The Star Formation Rate Efficiency of Atomic-dominated Hydrogen Gas from $z \sim 1$ to $z \sim 3$*

Outskirts of Galaxies: Toledo, Spain 03/2016

- **Talk:** *SFR Efficiency of Atomic-dominated Hydrogen Gas in the Outskirts of Star Forming Galaxies from $z \sim 1$ to $z \sim 3$*

American Astronomical Society Meeting #227: Florida

- **Talk:** *The Star Formation Rate Efficiency of Atomic-dominated Hydrogen Gas from $z \sim 1$ to $z \sim 3$* 01/2016

Census, Evolution, Physics (Galaxies): Yale University, New Haven, CT 11/2015

- **Invited Talk:** *Overview of the WFC3 Infrared Spectroscopic Parallel Survey (WISPs)*

CAS Research Seminar: Johns Hopkins University 11/2015

- **Invited Talk:** *On the Non-evolution of the Star Formation Rate Efficiency of HI Rich Galaxies from $z \sim 1-3$*

CANDELS Team Meeting: University of California, Santa Cruz 07/2015

- **Talk:** *UV Data and Science*

Thirty Meter Telescope Science Forum: AAAS, Washington DC 06/2015

- **Talk:** *Uncovering the Origin of the Rapid Decline in Metallicity of Hydrogen-Rich Galaxies at $z \sim 5$*

Finding the UV-Visible Path Forward: Goddard, Greenbelt, MD 06/2015

- **Invited talk:** *Motivations for a future UV-visible telescope: High-redshift Galaxy and Deep-field Studies*

IGM@50: Is the Intergalactic Medium Driving Star Formation: Sarteano, Italy 06/2015

- **Invited talk:** *Evolution in the Star Formation Rate Efficiency of Damped Lyman-alpha Systems*

Astrophysics Colloquium: Durham University, UK 06/2015

- **Invited Talk:** *Evolution of the Star Formation Properties and Chemical Composition of Hydrogen Rich Galaxies in the Early Universe*

Hubble 2020: Space Telescope Science Institute 04/2015

- **Poster:** *Ultraviolet Through Near-infrared HST Imaging and Photometric Redshifts of Galaxies in the Hubble Ultra Deep Field*

- Physics Colloquium:** The Catholic University of America, Washington D.C. 02/2015
- **Invited Talk:** Chemical Composition and Star Formation Properties of Hydrogen Rich Galaxies in the Early Universe
- Galaxies in Absorption:** Paris, France 09/2014
- **Talk:** *The Metal Enrichment and Star Formation of DLAs Over Cosmic Time*
- The Role of Hydrogen in the Evolution of Galaxies:** Kuching, Malaysia 09/2014
- **Talk:** *The Metallicity Evolution Neutral Atomic Hydrogen gas out to High Redshift*
- Intergalactic Matters:** Heidelberg, Germany 06/2014
- **Poster:** *The Rapid Decline in Metallicity of Damped Lyman-alpha systems at $z \sim 5$*
- Astrophysics Colloquium:** Melbourne University of Technology 05/2014
- **Invited Talk:** *Metallicity Evolution and Star Formation Properties of Damped Ly-alpha Systems*
- The Near-Field Deep-Field Connection:** University of California, Irvine 02/2014
- **Poster:** *The Rapid Decline in Metallicity of Damped Lyman-alpha systems at $z \sim 5$*
 - **Discussion Talk:** *CGM of the Milky Way and Beyond*
- CAS Research Seminar:** Johns Hopkins University 12/2013
- **Invited Talk:** *Star Formation Properties and Metallicity Evolution of HI Rich Galaxies at High Redshift*
- Astronomy Seminar:** University of California, Riverside 11/2013
- **Invited Talk:** *Star Formation Properties and Metallicity Evolution of HI Rich Galaxies at High Redshift*
- Astrophysics Colloquium:** University of Minnesota 11/2013
- **Invited Talk:** *Star Formation Properties and Metallicity Evolution of HI Rich Galaxies at High Redshift*
- CANDELS Team Meeting:** University of Kentucky 8/2013
- **Talk:** Data Challenges for CANDELS UV Data
 - **Talk:** Overview of CANDELS UV Data in GOODS North
- Intergalactic Interactions:** Royal Observatory, Edinburgh, Scotland 6/2013
- **Talk:** *On the possible break in the metallicity evolution of DLAs at $z \sim 5$*
- CANDELS Team Meeting:** University of California, Santa Cruz 9/2012
- **Talk:** *Data Reduction Challenges for Binned UV Data*
- Keck Science Meeting:** University of California, San Diego 9/2012
- **Talk:** *Metallicity Evolution of Damped Lyman-alpha Systems out to $z \sim 5$*

- Galactic Scale Star Formation:** Heidelberg, Germany 8/2012
- **Talk:** *Measuring the evolution of the star formation rate efficiency from $z \sim 1-4$*
- UV Astronomy: HST and Beyond:** Kaua'i, Hawai'i 6/2012
- **Poster:** *Ultraviolet Observations of the Hubble Ultra Deep Field*
- American Astronomical Society Meeting #220:** Anchorage, AK 6/2012
- **Talk:** *Ultraviolet Observations of the Hubble Ultra Deep Field*
- The 2012 Greater IPAC Science Symposium:** 3/2012
California Institute of Technology
- **Talk:** *Star Formation from DLA Gas in the Outskirts of Lyman Break Galaxies*
- Keck Science Meeting:** California Institute of Technology 9/2011
- **Talk:** *Metallicity Evolution of Damped Ly-alpha Systems out to $z \sim 5$*
- A Quarter Century of DLAs: Celebrating the career of Arthur Wolfe** 7/2011
Ringberg Castle, Germany
- **Invited Talk:** *Star Formation from DLA Gas in the Outskirts of Lyman Break Galaxies at $z \sim 3$*
- Star Formation in Galaxies - the Herschel Era:** 6/2011
Ringberg Castle, Germany
- **Invited Talk:** *Star Formation from DLA Gas in the Outskirts of Lyman Break Galaxies at $z \sim 3$*
- Center for Galaxy Evolution Inaugural Workshop:** Irvine, CA 3/2011
- **Poster:** *Star Formation from DLA Gas in the Outskirts of Lyman Break Galaxies at $z \sim 3$*
- American Astronomical Society Meeting #217:** Seattle, WA 1/2011
- **Talk:** *Low Surface Brightness Emission in the Outskirts of LBGs at $z \sim 3$: Possible Star Formation in Atomic-dominated DLA Gas*
- Learning from Inquiry in Practice: The PDP Community Interchange** 1/2010
Santa Cruz, CA
- **Poster:** *Stellar Populations Inquiry*
- Keck Science Meeting:** California Institute of Technology 9/2009
- **Poster:** *Search for Spatially Extended Star Formation Around Lyman Break Galaxies*
- SFR@50: Filling the Cosmos with Stars:** Sarteano, Italy 7/2009
- **Invited Talk:** *Search for Spatially Extended Star Formation around Lyman Break Galaxies in the Hubble Ultra Deep Field*
- American Astronomical Society Meeting #213, Long Beach, CA** 1/2009
- **Poster:** *Lyman Break Galaxies in the Hubble Ultra Deep Field through Deep U-Band Imaging*

- Keck Science Meeting:** University of California, Santa Cruz 9/2008
• **Poster:** *Ultra Deep Keck u-band Imaging of the Hubble Ultra Deep Field*
- Keck Science Meeting:** University of California, Irvine 9/2006
• **Poster:** *Photometric Stellar Variability in the Galactic Center*
- From the Center of the Milky Way to Nearby Low-Luminosity Galactic Nuclei,** Bad Honnef, Germany 4/2006
• **Poster:** *Photometric Stellar Variability in the Galactic Center*