Dawn Erb

Professor, Department of Physics, University of Wisconsin-Milwaukee
3135 N Maryland Ave, Milwaukee, WI 53211
(414) 229-3654 | erbd@uwm.edu | https://dawnerb.github.io/

Research Interests

Galaxy formation and evolution
Low mass galaxies at all redshifts
Evolution of the circumgalactic and intergalactic medium at high redshift
Chemical evolution, kinematics and stellar populations of galaxies at high redshift
Feedback processes in starburst galaxies
Gas ejection and accretion in high redshift galaxies

Employment

University of Wisconsin-Milwaukee — *Milwaukee, WI*
Professor, Department of Physics — *2021 –*

University of Wisconsin-Milwaukee — *Milwaukee, WI*
Associate Professor, Department of Physics — *2014 – 2021*

University of Wisconsin-Madison — *Madison, WI*
Visiting Associate Professor, Department of Astronomy — *2014 –*

Stockholm University — *Stockholm, Sweden*
Visiting Professor, Department of Astronomy — *2018*

University of Wisconsin-Milwaukee — *Milwaukee, WI*
Assistant Professor, Department of Physics — *2010 – 2014*

University of Wisconsin-Madison — *Madison, WI*
Visiting Assistant Professor, Department of Astronomy — *2010 – 2014*

University of California Santa Barbara — *Santa Barbara, CA*
Spitzer Postdoctoral Fellow — *2008 – 2010*

Harvard-Smithsonian Center for Astrophysics — *Cambridge, MA*
CfA Postdoctoral Fellow — *2005 – 2008*

Education

California Institute of Technology — *Pasadena, CA*
Ph.D. Astrophysics — *2005*

- *"The Properties of Star-Forming Galaxies at z~2: Kinematics, Stellar Populations, and Metallicities" — Research Advisor: Professor Charles C. Steidel*

University of Washington — *Seattle, WA*
B.S. Physics, Summa cum laude
B.S. Astronomy, Summa cum laude — *2000*

Awards and Honors

Research Mentor of the Year, UWM Office of Undergraduate Research — *2020*
Wenner-Gren Foundation Visiting Researcher Award, Stockholm University — *2018*
Kavli Fellow, National Academy of Sciences Kavli Frontiers of Science — *2018*
UWM Research Foundation Award — *2017*
Spitzer Fellowship — *2008*

Center for Astrophysics Fellowship *2005*

Baer Prize in Astronomy *University of Washington, 2000*

Higgs-Osborn Prize in Experimental Physics *University of Washington, 2000*

Grants and Proposals

Total extramural funding ***$1,675,000***

Space Telescope Science Institute *8 orbits, $57,216*

Unveiling the Source of Extreme Ionization in a Lensed Galaxy at $z = 2.6$ *Hubble Space Telescope Cycle 29 (2021)*

National Science Foundation *$381,351*

The Extreme Galaxy Reference Sample: Low Metallicity Galaxies Across Cosmic Time *2019*

UWM Research Growth Initiative *$73,000*

The Extreme Census of the Local Universe: The Most Highly Ionized Galaxies in the Northern Sky *2019*

NASA Keck PI Data Awards *$144,800 total*

15 nights (KCWI, LRIS, MOSFIRE, ESI, DEIMOS) *2013 – 2022*

UWM Collaborative Research Team Development Award *$14,770*

The Milwaukee Urban Observatory *2018 – 2020*

Space Telescope Science Institute *3 orbits, $50,972*

The Brightest Lens in the Sky: Stellar Populations on ~50 pc Scales at the Peak Epoch of Star Formation *Hubble Space Telescope Cycle 25 (2017)*

Space Telescope Science Institute *7 orbits, $62,595*

Lyman-alpha Imaging at ~20 pc Resolution in a Low Mass Lensed Galaxy at z=1.85 *Hubble Space Telescope Cycle 24 (2016)*

Space Telescope Science Institute *20 orbits, UWM budget $113,360*

The Evolution of C/O in Low Metallicity Dwarf Galaxies (PI Danielle Berg) *Hubble Space Telescope Cycle 24 (2016)*

Space Telescope Science Institute *2 orbits, $7,625*

Stellar Populations and Physical Conditions at ~100 pc Resolution in a Lensed Galaxy at z~4 (PI Danielle Berg) *Hubble Space Telescope Cycle 23 (2015)*

National Science Foundation Early Career Award *$779,965*

CAREER: The Early Stages of Galaxy Evolution *2013*

Space Telescope Science Institute *26 orbits, UWM budget $18,000*

Gaseous outflows from low mass galaxies: Understanding local laboratories for high redshift star formation (PI Alaina Henry) *Hubble Space Telescope Cycle 20 (2012)*

NASA Herschel Science Center *UWM budget $9,647*

The Herschel Proto-cluster Survey: SPIRE Mapping of the Nodes of the Cosmic Web at z>2 (PI Yuichi Matsuda) *OT2 (2012)*

Space Telescope Science Institute *30 orbits, UWM budget $93,000*

The Bottom of the Iceberg: Faint z~2 Galaxies and the Enrichment of the IGM *Hubble Space Telescope Cycle 19 (2011)*

Space Telescope Science Institute *248 orbits, UWM budget $42,000*

3D-HST: A Spectroscopic Galaxy Evolution Treasury (PI Pieter van Dokkum) *Hubble Space Telescope Cycle 18 (2010)*

UWM Research Growth Initiative *$307,000*

The Youngest Galaxies in the Young Universe *2010*

Professional Service and Appointments

Hubble Space Telescope proposal review	*2006, 2010, 2013, 2016, 2019 (panel chair), 2022*
Gemini Telescope Board of Directors	*2017 – 2019*
Hubble Space Telescope Users Committee	*2015 – 2019*
Associate Editor, Publications of the Astronomical Society of Australia	*2013 – 2015*
NSF review panel	*2007, 2008, 2010, 2013, 2020*
NOAO telescope allocation committee	*2012 – 2015*
Spitzer Space Telescope review panel	*2010, 2011 (panel chair)*
NASA Postdoctoral Program review	*2011, 2015*
NRAO proposal review	*2007 – 2008*
Peer review	*2004 – present*

Nature, Science, The Astrophysical Journal, The Astrophysical Journal Letters, The Astronomical Journal, Monthly Notices of the Royal Astronomical Society, Astronomy & Astrophysics, Publications of the Astronomical Society of the Pacific

Students and Postdocs Supervised

Undergraduate:

Claire Bolda *2021 –*

Lyα Emission and Large Scale Structure at $z \sim 2$

Natalie Meyers *2020*

The Milwaukee Urban Observatory

Nik Prusinksi *2017 – 2020*

Star Formation and Galactic Outflows at $z \sim 1.5$

Renee Spiewak *2015 – 2016*

Emission Line Ratios of Galaxies from the Sloan Digital Sky Survey

Matthew Miranda *2015*

Emission Line Ratios of Galaxies from the Sloan Digital Sky Survey

David Day *2011*

Extreme Galaxies in the Sloan Digital Sky Survey

Graduate:

Aritra Aich *2020 –*

Stellar Populations of Lensed Galaxies at High Redshift

Prasanth Kumar *2020 –*

Spectral Analysis of Low Metallicity Galaxies

Tim Baker *2021 –*

High Resolution Spectroscopy of a Strong LyC Emitter

Matthew Coon *2015 – 2017*

Masters thesis: "Star Formation Density and Galactic Outflows at $z \sim 2$"

Lindsey Whiting *2014 – 2017*

Masters thesis: "Outflow Absorption Lines and Their Correlation with Galaxy Properties at $0.8 < z < 1.6$"

Postdoctoral:

Annalisa Citro *2018 – 2022*

Danielle Berg *2014 – 2017*

Ralf Kotulla *2010 – 2013*

Teaching

Astronomy 103: Survey of Astronomy *Spring 2013, 2014, 2015, 2017, 2018, 2019, 2021; Fall 2015, 2017, 2019, 2021*

Astronomy 320: Astronomy II: Extragalactic Astronomy and Cosmology *Spring 2011*

Astronomy 401: Astrophysics II: Extragalactic Astrophysics and Cosmology *Spring 2013*

Astronomy 401/Physics 903: Astrophysics II: Extragalactic Astrophysics and Cosmology *Spring 2015, 2017, 2019, 2021*

Physics 817: Cosmology *Fall 2011, Spring 2014, Spring 2018, Fall 2019, Spring 2022*

Outreach

Advisor, UWM Astronomy Club *2010 – present*

Maker Faire Milwaukee: Center for Gravitation, Cosmology & Astrophysics booth *2016, 2017, 2019*

Public lectures *2012 – present*

- *Osher Lifetime Learning Institute*
- *UWM Science Bag*
- *UWM Planetarium*
- *Wehr Astronomical Society*
- *NCRAL 2014: Gazing at the Stars*
- *James Madison High School, Milwaukee*
- *Milwaukee Astronomical Society*
- *Vieau School, Milwaukee*

Invited Conference Presentations

Mapping the circumgalactic medium with Lyα emission *September 2019*

GMT Community Science Meeting, Carlsbad, CA

Small galaxies, big halos: Lyα emission in the CGM of low-mass galaxies at z~2 *July 2019*

Small Galaxies, Cosmic Questions, Durham, UK

Lyα Emission and the Circumgalactic Medium in Low Mass Galaxies *June 2019*

What matter(s) between galaxies, Spineto, Italy

Lyα Emission and the Circumgalactic Medium in Low Mass Galaxies *September 2018*

Escape of Lyman radiation from galactic labyrinths, Kolymbari, Crete, Greece

Lyα Emission in Low Metallicity Galaxies at z~2 *March 2018*

Tokyo Spring Sakura Cosmic Lyα Workshop, University of Tokyo

Observing Outflows at High Redshifts *October 2017*

Characterizing Galaxies with Spectroscopy with a view for JWST, Lorentz Center, Leiden, Netherlands

Star Formation and Feedback in Low Metallicity Galaxies at z~2 *April 2017*

Keynote presentation, MidAmerican Regional Astrophysics Conference, University of Kansas

The Rest-Frame UV Spectra of Low Mass Galaxies at z~2 *July 2016*

32nd Institut d'Astrophysique de Paris Colloquium, Cosmic dawn of galaxy formation: linking observations and theory with new-generation spectral models. Paris

Lyα Profiles and Lyman Continuum Emission in Star-Forming Galaxies *April 2016*

Escape of Lyman radiation from galactic labyrinths, Kolymbari, Crete, Greece

The physical conditions in young, low metallicity galaxies at high redshift *July 2015*

Understanding Nebular Emission in High Redshift Galaxies, Pasadena, CA

Galactic Outflows and Galactic Structure at z~2 *July 2014*

Good Sense and Dominant Ideology in Galaxy Formation and Evolution, Ascona, Switzerland

Gas Flows and Galaxy Formation *January 2013*

Plenary talk, 221st Meeting of the American Astronomical Society, Long Beach, CA

Rising Star Formation Histories and the Evolution of the Mass-Metallicity Relation *July 2012*

Galaxies: Insight Out, Leiden, the Nethelands

Rising Star Formation Histories and the Evolution of the Mass-Metallicity Relation *June 2012*

Metals in Tuscany, Spineto, Italy

Chemical Abundances in Star-Forming Galaxies at High Redshift *August 2009*

International Astronomical Union Symposium 265, Rio de Janeiro

Star Formation and Chemical Enrichment in the Youngest Galaxies *July 2009*

SFR@50, Spineto, Italy

The Mass-Dependent Spectral Properties of High Redshift Galaxies *February 2009*

Napa Valley Galaxy Evolution Workshop, Napa, CA

Galaxy Metallicity in the Redshift Desert *July 2009*

Harvesting the Desert: The Universe Between Redshifts 1 and 3, Marseille

Observing Distant Galaxies with the GMT *March 2008*

Science with the Giant Magellan Telescope, Australian National University, Canberra, Australia

Gas Masses and Gas Fractions: Applications of the Kennicutt-Schmidt Law at High Redshift *December 2006*

University of California San Diego Kennicutt-Schmidt Workshop

Galactic Winds, Galaxy Masses and Metallicities at $1<z<3$: An observational perspective *July 2006*

Chemodynamics: From First Stars to Local Galaxies, Lyon, France

Colloquia and Seminars

University of Arizona *November 2021*

NOIRLab *October 2021*

New York University *March 2019*

University of Oslo *December 2018*

University of Geneva *November 2018*

University of Copenhagen *November 2018*

Stockholm University *September 2018*

University of Kansas *April 2017*

University of Toronto *December 2016*

University of Wisconsin Madison	*September 2016*
University of Arizona	*March 2016*
University of Washington	*March 2016*
Ohio State University	*March 2016*
Arizona State University	*September 2015*
Northwestern University	*April 2015*
Space Telescope Science Institute	*March 2014*
University of Virginia/NRAO	*September 2013*
University of Minnesota	*April 2013*
University of Texas Austin	*March 2013*
University of Wisconsin Madison	*February 2013*
Cornell University	*November 2012*
University of Notre Dame	*March 2012*
Indiana University	*November 2011*
Northwestern University	*April 2010*
University of Wisconsin Madison	*April 2010*
University of Chicago	*October 2009*
Texas A&M University	*September 2009*
University of Wisconsin Milwaukee	*March 2009*
Princeton University	*February 2009*
University of Massachusetts Amherst	*October 2008*
Carnegie Observatories	*March 2008*
Harvard University	*March 2008*
Ohio State University	*February 2008*
University of Utah	*January 2008*
University of Michigan	*January 2008*
University of California San Diego	*January 2008*
Harvard University	*February 2007*
Space Telescope Science Institute	*February 2007*
University of California Los Angeles	*February 2007*
University of Central Lancashire, Preston, UK	*July 2006*
University of California Santa Cruz	*May 2006*
University of Toronto	*February 2006*

Refereed Publications

Total citations	***15,510***
Total citations to first author papers	***2,818***
h-index	***55***

89. "Characterizing Extreme Emission Line Galaxies. II. A Self-consistent Model of Their Ionizing Spectrum." Olivier, G. M., Berg, D. A., Chisholm, J., **Erb, D. K.**, Pogge, R. W., Skillman, E. D. 2022. Astrophysical Journal, 938, 16

88. "CLASSY. II. A Technical Overview of the COS Legacy Archive Spectroscopic Survey." James, B. L., Berg, D. A., King, T., Sahnow, D. J., Mingozzi, M., Chisholm, J., Heckman, T., Martin, C. L., Stark, D. P., Aloisi, A., Amorín, R. O., Arellano-Córdova, K. Z., Bayliss, M., Bordoloi, R., Brinchmann, J., Charlot, S., Chen, Z., Chevallard, J., Clark, I., **Erb, D. K.**, Feltre, A., Hayes, M., Henry, A., Hernandez, S., Jaskot, A., Kewley, L. J., Kumari, N., Leitherer, C., Llerena, M., Maseda, M., Nanayakkara, T., Ouchi, M., Plat, A., Pogge,

R. W., Ravindranath, S., Rigby, J. R., Scarlata, C., Senchyna, P., Skillman, E. D., Steidel, C. C., Strom, A. L., Sugahara, Y., Wilkins, S. M., Wofford, A., Xu, X., Classy Team 2022. Astrophysical Journal Supplement, 262, 37

87. "The COS Legacy Archive Spectroscopy Survey (CLASSY) Treasury Atlas." Berg, D. A., James, B. L., King, T., McDonald, M., Chen, Z., Chisholm, J., Heckman, T., Martin, C. L., Stark, D. P., Aloisi, A., Amorín, R. O., Arellano-Córdova, K. Z., Bayliss, M., Bordoloi, R., Brinchmann, J., Charlot, S., Chevallard, J., Clark, I., **Erb, D. K.**, Feltre, A., Gronke, M., Hayes, M., Henry, A., Hernandez, S., Jaskot, A., Jones, T., Kewley, L. J., Kumari, N., Leitherer, C., Llerena, M., Maseda, M., Mingozzi, M., Nanayakkara, T., Ouchi, M., Plat, A., Pogge, R. W., Ravindranath, S., Rigby, J. R., Sanders, R., Scarlata, C., Senchyna, P., Skillman, E. D., Steidel, C. C., Strom, A. L., Sugahara, Y., Wilkins, S. M., Wofford, A., Xu, X., Classy Team 2022. Astrophysical Journal Supplement, 261, 31

86. "Tracing Lyα and LyC Escape in Galaxies with Mg II Emission." Xu, X., Henry, A., Heckman, T., Chisholm, J., Worseck, G., Gronke, M., Jaskot, A., McCandliss, S. R., Flury, S. R., Giavalisco, M., Ji, Z., Amorín, R. O., Berg, D. A., Borthakur, S., Bouche, N., Carr, C., **Erb, D. K.**, Ferguson, H., Garel, T., Hayes, M., Makan, K., Marques-Chaves, R., Rutkowski, M., Östlin, G., Rafelski, M., Saldana-Lopez, A., Scarlata, C., Schaerer, D., Trebitsch, M., Tremonti, C., Verhamme, A., Wang, B. 2022. Astrophysical Journal, 933, 202

85. "(Re)Solving reionization with Lyα: how bright Lyα Emitters account for the $z \sim 2$-8 cosmic ionizing background." Matthee, J., Naidu, R. P., Pezzulli, G., Gronke, M., Sobral, D., Oesch, P. A., Hayes, M., **Erb, D.**, Schaerer, D., Amorín, R., Tacchella, S., Paulino-Afonso, A., Llerena, M., Calhau, J., Röttgering, H. 2022. Monthly Notices of the Royal Astronomical Society, 512, 5960

84. "The synchrony of production and escape: half the bright Lyα emitters at z $\approx$ 2 have Lyman continuum escape fractions $\approx$50 per cent." Naidu, R. P., Matthee, J., Oesch, P. A., Conroy, C., Sobral, D., Pezzulli, G., Hayes, M., **Erb, D.**, Amorín, R., Gronke, M., Schaerer, D., Tacchella, S., Kerutt, J., Paulino-Afonso, A., Calhau, J., Llerena, M., Röttgering, H. 2022. Monthly Notices of the Royal Astronomical Society, 510, 4582

83. "SDSS J1059+4251, a Highly Magnified $z = 2.8$ Star-forming Galaxy: ESI Observations of the Rest-frame UV Spectrum." Citro, A., **Erb, D. K.**, Pettini, M., Auger, M. W., Becker, G. D., James, B. L. 2021. Astrophysical Journal, 922, 187

82. "Characterizing Extreme Emission Line Galaxies I: A Four-Zone Ionization Model for Very-High-Ionization Emission." Berg, D. A., Chisholm, J., **Erb, D. K.**, Skillman, E. D., Pogge, R. W., Olivier, G. M. 2021, Astrophysical Journal, 922, 170

81. "The Geometry of Cold, Metal-enriched Gas around Galaxies at z $\sim$ 1.2." Lundgren, B. F., Creech, S., Brammer, G., Kirse, N., Peek, M., Wake, D., York, D. G., Chisholm, J., **Erb, D. K.**, Kulkarni, V. P., Straka, L., Tremonti, C., van Dokkum, P. 2021, Astrophysical Journal, 913, 50

80. "Connecting Galactic Outflows and Star Formation: Inferences from Hα Maps and Absorption-line Spectroscopy at 1 $\lesssim$ z $\lesssim$ 1.5." Prusinski, N. Z., **Erb, D. K.**, Martin, C. L. 2021, Astronomical Journal, 161, 212

79. "The KBSS-KCWI Survey: The connection between extended Lyα halos and galaxy azimuthal angle at $z \sim 2 - 3$." Chen, Y., Steidel, C. C., **Erb, D. K**, Law, D. R., Trainor, R. F., Reddy, N. A., Shapley, A. E., Pahl, A. J., Strom, A. L., Lamb, N. R., Li, Z., Rudie, G. C. 2021, Monthly Notices of the Royal Astronomical Society, 508, 18

78. "Ultrafaint [C II] Emission in a Redshift = 2 Gravitationally Lensed Metal-poor Dwarf Galaxy." Rybak, M., da Cunha, E., Groves, B., Hodge, J. A., Aravena, M., Maseda, M., Boogaard, L., Berg, D., Charlot, S., Decarli, R., **Erb, D. K.**, Nelson, E., Pacifici, C., Schmidt, K. B., Walter, F., van der Wel, A. 2021, Astrophysical Journal, 909, 130

77. "The Keck Baryonic Structure Survey: using foreground/background galaxy pairs to trace the structure and kinematics of circumgalactic neutral hydrogen at z ~ 2." Chen, Y., Steidel, C. C., Hummels, C. B., Rudie, G. C., Dong, B., Trainor, R. F., Bogosavljević, M., **Erb, D. K.**, Pettini, M., Reddy, N. A., Shapley, A. E., Strom, A. L., Theios, R. L., Faucher-Giguère, C.-A., Hopkins, P. F., Kereš, D. 2020, Monthly Notices of the Royal Astronomical Society, 499, 1721

76. "Subkiloparsec Imaging of Lyα Emission in a Low-mass, Highly Ionized, Gravitationally Lensed Galaxy at z=1.84." **Erb, D. K.**, Berg, D. A., Auger, M. W., Kaplan, D. L., Brammer, G., & Pettini, M. 2019, Astrophysical Journal, 884, 7

75. "Intense C IV and He II Emission in z~0 Galaxies: Probing High-energy Ionizing Photons." Berg, D. A., Chisholm, J., **Erb, D. K.**, Pogge, R., Henry, A., & Olivier, G. M. 2019, Astrophysical Journal Letters, 878, L3

74. "The Chemical Evolution of Carbon, Nitrogen, and Oxygen in Metal-poor Dwarf Galaxies." Berg, D. A., **Erb, D. K.**, Henry, R. B. C., Skillman, E. D., & McQuinn, K. B. W. 2019, Astrophysical Journal, 874, 93

73. "The Kinematics of Extended Lyα Emission in a Low-mass, Low-metallicity Galaxy at z=2.3." **Erb, D. K.**, Steidel, C. C., & Chen, Y. 2018, Astrophysical Journal Letters, 862, L10

72. "A Window on the Earliest Star Formation: Extreme Photoionization Conditions of a High-ionization, Low-metallicity Lensed Galaxy at z~2." Berg, D. A., **Erb, D. K.**, Auger, M. W., Pettini, M., & Brammer, G. B. 2018, Astrophysical Journal, 859, 164

71. "The Redshift Evolution of Rest-UV Spectroscopic Properties in Lyman-break Galaxies at z~2–4." Du, X., Shapley, A. E., Reddy, N. A., Jones, T., Stark, D. P., Steidel, C. C., Strom, A. L., Rudie, G. C., **Erb, D. K.**, Ellis, R. S., & Pettini, M. 2018, Astrophysical Journal, 860, 75

70. "A Close Relationship between Lyα and Mg II in Green Pea Galaxies." Henry, A., Berg, D. A., Scarlata, C., Verhamme, A., & **Erb, D.** 2018, Astrophysical Journal, 855, 96

69. “A High Fraction of Lyα Emitters among Galaxies with Extreme Emission Line Ratios at z~2.” **Erb, D. K.**, Pettini, M., Steidel, C. C., Strom, A. L., Rudie, G. C., Trainor, R. F., Shapley, A. E., & Reddy, N. A. 2016, Astrophysical Journal, 830, 52

68. “Carbon and Oxygen Abundances in Low Metallicity Dwarf Galaxies.” Berg, D. A., Skillman, E. D., Henry, R. B. C., **Erb, D. K.**, & Carigi, L. 2016, Astrophysical Journal, 827, 126

67. “Herschel protocluster survey: a search for dusty star-forming galaxies in protoclusters at z=2–3.” Kato, Y., Matsuda, Y., Smail, I., Swinbank, A. M., Hatsukade, B., Umehata, H., Tanaka, I., Saito, T., Iono, D., Tamura, Y., Kohno, K., **Erb, D. K.**, Lehmer, B. D., Geach, J. E., Steidel, C. C., Alexander, D. M., Yamada, T., & Hayashino, T. 2016, Monthly Notices of the Royal Astronomical Society, 460, 3861

66. “Lyα Emission from Green Peas: The Role of Circumgalactic Gas Density, Covering, and Kinematics.” Henry, A., Scarlata, C., Martin, C. L., & **Erb, D.** 2015, Astrophysical Journal, 809, 19

65. “Feedback in low-mass galaxies in the early Universe.” **Erb, D. K.** 2015, Nature, 523, 169

64. “Strong Nebular Line Ratios in the Spectra of z~2–3 Star Forming Galaxies: First Results from KBSS-MOSFIRE.” Steidel, C. C., Rudie, G. C., Strom, A. L., Pettini, M., Reddy, N. A., Shapley, A. E., Trainor, R. F., **Erb, D. K.**, Turner, M. L., Konidaris, N. P., Kulas, K. R., Mace, G., Matthews, K., & McLean, I. S. 2014, Astrophysical Journal, 795, 165

63. “The Lyα Properties of Faint Galaxies at z~2–3 with Systemic Redshifts and Velocity Dispersions from Keck-MOSFIRE.” **Erb, D. K.**, Steidel, C. C., Trainor, R. F., Bogosavljević, M., Shapley, A. E., Nestor, D. B., Kulas, K. R., Law, D. R., Strom, A. L., Rudie, G. C., Reddy, N. A., Pettini, M., Konidaris, N. P., Mace, G., Matthews, K., & McLean, I. S. 2014, Astrophysical Journal, 795, 33

62. “Large-scale Star-formation-driven Outflows at $1<z<2$ in the 3D-HST Survey.” Lundgren, B. F., Brammer, G., van Dokkum, P., Bezanson, R., Franx, M., Fumagalli, M., Momcheva, I., Nelson, E., Skelton, R. E., Wake, D., Whitaker, K., da Cunha, E., **Erb, D. K.**, Fan, X., Kriek, M., Labbé, I., Marchesini, D., Patel, S., Rix, H. W., Schmidt, K., & van der Wel, A. 2012, Astrophysical Journal, 760, 49

61. “Stellar Populations of Ultraviolet-selected Active Galactic Nuclei Host Galaxies at z~2–3.” Hainline, K. N., Shapley, A. E., Greene, J. E., Steidel, C. C., Reddy, N. A., & **Erb, D. K.** 2012, Astrophysical Journal, 760, 74

60. “A HST/WFC3-IR Morphological Survey of Galaxies at z=1.5-3.6. II. The Relation between Morphology and Gas-phase Kinematics.” Law, D. R., Steidel, C. C., Shapley, A. E., Nagy, S. R., Reddy, N. A., & **Erb, D. K.** 2012, Astrophysical Journal, 759, 29

59. “Galactic Outflows in Absorption and Emission: Near-ultraviolet Spectroscopy of Galaxies at $1<z<2$.” **Erb, D. K.**, Quider, A. M., Henry, A. L., & Martin, C. L. 2012, Astrophysical Journal, 759, 26

58. “3D-HST Grism Spectroscopy of a Gravitationally Lensed, Low-metallicity Starburst Galaxy at z=1.847.” Brammer, G. B., Sánchez-Janssen, R., Labbé, I., da Cunha, E., **Erb, D. K.**, Franx, M., Fumagalli, M., Lundgren, B., Marchesini, D., Momcheva, I., Nelson, E., Patel, S., Quadri, R., Rix, H.-W., Skelton, R. E., Schmidt, K. B., van der Wel, A., van Dokkum, P. G., Wake, D. A., & Whitaker, K. E. 2012, Astrophysical Journal Letters, 758, L17

57. “A Census of Oxygen in Star-forming Galaxies: An Empirical Model Linking Metallicities, Star Formation Rates, and Outflows.” Zahid, H. J., Dima, G. I., Kewley, L. J., **Erb, D. K.**, & Davé, R. 2012, Astrophysical Journal, 757, 54

56. “High velocity dispersion in a rare grand-design spiral galaxy at redshift z=2.18.” Law, D. R., Shapley, A. E., Steidel, C. C., Reddy, N. A., Christensen, C. R., & **Erb, D. K.** 2012, Nature, 487, 338

55. “The Characteristic Star Formation Histories of Galaxies at Redshifts z~2–7.” Reddy, N. A., Pettini, M., Steidel, C. C., Shapley, A. E., **Erb, D. K.**, & Law, D. R. 2012, Astrophysical Journal, 754, 25

54. “3D-HST: A Wide-field Grism Spectroscopic Survey with the Hubble Space Telescope.” Brammer, G. B., van Dokkum, P. G., Franx, M., Fumagalli, M., Patel, S., Rix, H.-W., Skelton, R. E., Kriek, M., Nelson, E., Schmidt, K. B., Bezanson, R., da Cunha, E., **Erb, D. K.**, Fan, X., Förster Schreiber, N., Illingworth, G. D., Labbé, I., Leja, J., Lundgren, B., Magee, D., Marchesini, D., McCarthy, P., Momcheva, I., Muzzin, A., Quadri, R., Steidel, C. C., Tal, T., Wake, D., Whitaker, K. E., & Williams, A. 2012, Astrophysical Journals, 200, 13

53. “The Gaseous Environment of High-z Galaxies: Precision Measurements of Neutral Hydrogen in the Circumgalactic Medium of z~2–3 Galaxies in the Keck Baryonic Structure Survey.” Rudie, G. C., Steidel, C. C., Trainor, R. F., Rakic, O., Bogosavljević, M., Pettini, M., Reddy, N., Shapley, A. E., **Erb, D. K.**, & Law, D. R. 2012, Astrophysical Journal, 750, 67

52. “An HST/WFC3-IR Morphological Survey of Galaxies at z=1.5-3.6. I. Survey Description and Morphological Properties of Star-forming Galaxies.” Law, D. R., Steidel, C. C., Shapley, A. E., Nagy, S. R., Reddy, N. A., & **Erb, D. K.** 2012, Astrophysical Journal, 745, 85

51. “First Results from the 3D-HST Survey: The Striking Diversity of Massive Galaxies at $z>1$.” van Dokkum, P. G., Brammer, G., Fumagalli, M., Nelson, E., Franx, M., Rix, H.-W., Kriek, M., Skelton, R. E., Patel, S., Schmidt, K. B., Bezanson, R., Bian, F., da Cunha, E., **Erb, D. K.**, Fan, X., Förster Schreiber, N., Illingworth, G. D., Labbé, I., Lundgren, B., Magee, D., Marchesini, D., McCarthy, P., Muzzin, A., Quadri, R., Steidel, C. C., Tal, T., Wake, D., Whitaker, K. E., & Williams, A. 2011, Astrophysical Journal Letters, 743, L15

50. “Filamentary Large-scale Structure Traced by Six Lyα Blobs at z=2.3.” **Erb, D. K.**, Bogosavljević, M., & Steidel, C. C. 2011, Astro-

physical Journal Letters, 740, L31

49. "Constraints on the Assembly and Dynamics of Galaxies. II. Properties of Kiloparsec-scale Clumps in Rest-frame Optical Emission of z~2 Star-forming Galaxies." Förster Schreiber, N. M., Shapley, A. E., Genzel, R., Bouché, N., Cresci, G., Davies, R., **Erb, D. K.**, Genel, S., Lutz, D., Newman, S., Shapiro, K. L., Steidel, C. C., Sternberg, A., & Tacconi, L. J. 2011, Astrophysical Journal, 739, 45

48. "Diffuse Lyα Emitting Halos: A Generic Property of High-redshift Star-forming Galaxies." Steidel, C. C., Bogosavljević, M., Shapley, A. E., Kollmeier, J. A., Reddy, N. A., **Erb, D. K.**, & Pettini, M. 2011, Astrophysical Journal, 736, 160

47. "Constraints on the Assembly and Dynamics of Galaxies. I. Detailed Rest-frame Optical Morphologies on Kiloparsec Scale of z~2 Star-forming Galaxies." Förster Schreiber, N. M., Shapley, A. E., **Erb, D. K.**, Genzel, R., Steidel, C. C., Bouché, N., Cresci, G., & Davies, R. 2011, Astrophysical Journal, 731, 65

46. "Excess AGN activity in the z=2.30 Protocluster in HS 1700+64." Digby-North, J. A., Nandra, K., Laird, E. S., Steidel, C. C., Georgakakis, A., Bogosavljević, M., **Erb, D. K.**, Shapley, A. E., Reddy, N. A., & Aird, J. 2010, Monthly Notices of the Royal Astronomical Society, 407, 846

45. "Physical Conditions in a Young, Unreddened, Low-metallicity Galaxy at High Redshift." **Erb, D. K.**, Pettini, M., Shapley, A. E., Steidel, C. C., Law, D. R., & Reddy, N. A. 2010, Astrophysical Journal, 719, 1168

44. "The Structure and Kinematics of the Circumgalactic Medium from Far-ultraviolet Spectra of z~2–3 Galaxies." Steidel, C. C., **Erb, D. K.**, Shapley, A. E., Pettini, M., Reddy, N., Bogosavljević, M., Rudie, G. C., & Rakic, O. 2010, Astrophysical Journal, 717, 289

43. "Dust Obscuration and Metallicity at High Redshift: New Inferences from UV, Hα, and 8 μm Observations of z~2 Star-forming Galaxies." Reddy, N. A., **Erb, D. K.**, Pettini, M., Steidel, C. C., & Shapley, A. E. 2010, Astrophysical Journal, 712, 1070

42. "The Relationship between Stellar Populations and Lyα Emission in Lyman Break Galaxies." Kornei, K. A., Shapley, A. E., **Erb, D. K.**, Steidel, C. C., Reddy, N. A., Pettini, M., & Bogosavljević, M. 2010, Astrophysical Journal, 711, 693

41. "The SINS Survey: SINFONI Integral Field Spectroscopy of z~2 Star-forming Galaxies." Förster Schreiber, N. M., Genzel, R., Bouché, N., Cresci, G., Davies, R., Buschkamp, P., Shapiro, K., Tacconi, L. J., Hicks, E. K. S., Genel, S., Shapley, A. E., **Erb, D. K.**, Steidel, C. C., Lutz, D., Eisenhauer, F., Gillessen, S., Sternberg, A., Renzini, A., Cimatti, A., Daddi, E., Kurk, J., Lilly, S., Kong, X., Lehnert, M. D., Nesvadba, N., Verma, A., McCracken, H., Arimoto, N., Mignoli, M., & Onodera, M. 2009, Astrophysical Journal, 706, 1364

40. "The SINS Survey: Broad Emission Lines in High-Redshift Star-Forming Galaxies." Shapiro, K. L., Genzel, R., Quataert, E., Förster Schreiber, N. M., Davies, R., Tacconi, L., Armus, L., Bouché, N., Buschkamp, P., Cimatti, A., Cresci, G., Daddi, E., Eisenhauer, F., **Erb, D. K.**, Genel, S., Hicks, E. K. S., Lilly, S. J., Lutz, D., Renzini, A., Shapley, A., Steidel, C. C., & Sternberg, A. 2009, Astrophysical Journal, 701, 955

39. "Dynamics of Galactic Disks and Mergers at z~1.6: Spatially Resolved Spectroscopy with Keck Laser Guide Star Adaptive Optics." Wright, S. A., Larkin, J. E., Law, D. R., Steidel, C. C., Shapley, A. E., & **Erb, D. K.** 2009, Astrophysical Journal, 699, 421

38. "The Kiloparsec-scale Kinematics of High-redshift Star-forming Galaxies." Law, D. R., Steidel, C. C., **Erb, D. K.**, Larkin, J. E., Pettini, M., Shapley, A. E., & Wright, S. A. 2009, Astrophysical Journal, 697, 2057

37. "The SINS Survey: Modeling the Dynamics of z~2 Galaxies and the High-z Tully-Fisher Relation." Cresci, G., Hicks, E. K. S., Genzel, R., Schreiber, N. M. F., Davies, R., Bouché, N., Buschkamp, P., Genel, S., Shapiro, K., Tacconi, L., Sommer-Larsen, J., Burkert, A., Eisenhauer, F., Gerhard, O., Lutz, D., Naab, T., Sternberg, A., Cimatti, A., Daddi, E., **Erb, D. K.**, Kurk, J., Lilly, S. L., Renzini, A., Shapley, A., Steidel, C. C., & Caputi, K. 2009, Astrophysical Journal, 697, 115

36. "From Rings to Bulges: Evidence for Rapid Secular Galaxy Evolution at z~2 from Integral Field Spectroscopy in the SINS Survey." Genzel, R., Burkert, A., Bouché, N., Cresci, G., Förster Schreiber, N. M., Shapley, A., Shapiro, K., Tacconi, L. J., Buschkamp, P., Cimatti, A., Daddi, E., Davies, R., Eisenhauer, F., **Erb, D. K.**, Genel, S., Gerhard, O., Hicks, E., Lutz, D., Naab, T., Ott, T., Rabien, S., Renzini, A., Steidel, C. C., Sternberg, A., & Lilly, S. J. 2008, Astrophysical Journal, 687, 59

35. "Kinemetry of SINS High-Redshift Star-Forming Galaxies: Distinguishing Rotating Disks from Major Mergers." Shapiro, K. L., Genzel, R., Förster Schreiber, N. M., Tacconi, L. J., Bouché, N., Cresci, G., Davies, R., Eisenhauer, F., Johansson, P. H., Krajnović, D., Lutz, D., Naab, T., Arimoto, N., Arribas, S., Cimatti, A., Colina, L., Daddi, E., Daigle, O., **Erb, D.**, Hernandez, O., Kong, X., Mignoli, M., Onodera, M., Renzini, A., Shapley, A., & Steidel, C. 2008, Astrophysical Journal, 682, 231

34. "Submillimeter Galaxies at z~2: Evidence for Major Mergers and Constraints on Lifetimes, IMF, and CO-H_2 Conversion Factor." Tacconi, L. J., Genzel, R., Smail, I., Neri, R., Chapman, S. C., Ivison, R. J., Blain, A., Cox, P., Omont, A., Bertoldi, F., Greve, T., Förster Schreiber, N. M., Genel, S., Lutz, D., Swinbank, A. M., Shapley, A. E., **Erb, D. K.**, Cimatti, A., Daddi, E., & Baker, A. J. 2008, Astrophysical Journal, 680, 246

33. "Multiwavelength Constraints on the Cosmic Star Formation History from Spectroscopy: The Rest-Frame Ultraviolet, Hα, and Infrared Luminosity Functions at Redshifts $1.9<z<3.4$." Reddy, N. A., Steidel, C. C., Pettini, M., Adelberger, K. L., Shapley, A. E., **Erb, D. K.**, & Dickinson, M. 2008, Astrophysical Journals, 175, 48

32. "A Model for Star Formation, Gas Flows, and Chemical Evolution in Galaxies at High Redshifts." **Erb, D. K.** 2008, Astrophysical

Journal, 674, 151

31. “Dynamical Properties of z~2 Star-forming Galaxies and a Universal Star Formation Relation.” Bouché, N., Cresci, G., Davies, R., Eisenhauer, F., Förster Schreiber, N. M., Genzel, R., Gillessen, S., Lehnert, M., Lutz, D., Nesvadba, N., Shapiro, K. L., Sternberg, A., Tacconi, L. J., Verma, A., Cimatti, A., Daddi, E., Renzini, A., **Erb, D. K.**, Shapley, A., & Steidel, C. C. 2007, Astrophysical Journal, 671, 303
30. “The Sightline to Q2343-BX415: Clues to Galaxy Formation in a Quasar Environment.” Rix, S. A., Pettini, M., Steidel, C. C., Reddy, N. A., Adelberger, K. L., **Erb, D. K.**, & Shapley, A. E. 2007, Astrophysical Journal, 670, 15
29. “Integral Field Spectroscopy of High-Redshift Star-forming Galaxies with Laser-guided Adaptive Optics: Evidence for Dispersion-dominated Kinematics.” Law, D. R., Steidel, C. C., **Erb, D. K.**, Larkin, J. E., Pettini, M., Shapley, A. E., & Wright, S. A. 2007, Astrophysical Journal, 669, 929
28. “Morphologies of Galaxies in and around a Protocluster at z=2.300.” Peter, A. H. G., Shapley, A. E., Law, D. R., Steidel, C. C., **Erb, D. K.**, Reddy, N. A., & Pettini, M. 2007, Astrophysical Journal, 668, 23
27. “Lyman break galaxies: A ten-year perspective.” Pettini, M., Steidel, C. C., Adelberger, K. L., Dickinson, M., **Erb, D. K.**, Giavalisco, M., Law, D. R., Reddy, N. A., & Shapley, A. E. 2007, Nuovo Cimento B Serie, 122, 1043
26. “Lost and Found: A New Position and Infrared Counterpart for the X-Ray Binary Scutum X-1.” Kaplan, D. L., Levine, A. M., Chakrabarty, D., Morgan, E. H., **Erb, D. K.**, Gaensler, B. M., Moon, D.-S., & Cameron, P. B. 2007, Astrophysical Journal, 661, 437
25. “Integral Field Spectroscopy of a Candidate Disk Galaxy at z~1.5 Using Laser Guide Star Adaptive Optics.” Wright, S. A., Larkin, J. E., Barczys, M., **Erb, D. K.**, Iserlohe, C., Krabbe, A., Law, D. R., McElwain, M. W., Quirrenbach, A., Steidel, C. C., & Weiss, J. 2007, Astrophysical Journal, 658, 78
24. “The Physical Nature of Rest-UV Galaxy Morphology during the Peak Epoch of Galaxy Formation.” Law, D. R., Steidel, C. C., **Erb, D. K.**, Pettini, M., Reddy, N. A., Shapley, A. E., Adelberger, K. L., & Simenc, D. J. 2007, Astrophysical Journal, 656, 1
23. “A Spectroscopic Survey of Redshift $1.4<z<3.0$ Galaxies in the GOODS-North Field: Survey Description, Catalogs, and Properties.” Reddy, N. A., Steidel, C. C., **Erb, D. K.**, Shapley, A. E., & Pettini, M. 2006, Astrophysical Journal, 653, 1004
22. “The Direct Detection of Lyman Continuum Emission from Star-forming Galaxies at z~3.” Shapley, A. E., Steidel, C. C., Pettini, M., Adelberger, K. L., & **Erb, D. K.** 2006, Astrophysical Journal, 651, 688
21. “Hα Observations of a Large Sample of Galaxies at z~2: Implications for Star Formation in High-Redshift Galaxies.” **Erb, D. K.**, Steidel, C. C., Shapley, A. E., Pettini, M., Reddy, N. A., & Adelberger, K. L. 2006, Astrophysical Journal, 647, 128
20. “SINFONI Integral Field Spectroscopy of z~2 UV-selected Galaxies: Rotation Curves and Dynamical Evolution.” Förster Schreiber, N. M., Genzel, R., Lehnert, M. D., Bouché, N., Verma, A., **Erb, D. K.**, Shapley, A. E., Steidel, C. C., Davies, R., Lutz, D., Nesvadba, N., Tacconi, L. J., Eisenhauer, F., Abuter, R., Gilbert, A., Gillessen, S., & Sternberg, A. 2006, Astrophysical Journal, 645, 1062
19. “The Stellar, Gas, and Dynamical Masses of Star-forming Galaxies at z~2.” **Erb, D. K.**, Steidel, C. C., Shapley, A. E., Pettini, M., Reddy, N. A., & Adelberger, K. L. 2006, Astrophysical Journal, 646, 107
18. “The Mass-Metallicity Relation at $z>2$.” **Erb, D. K.**, Shapley, A. E., Pettini, M., Steidel, C. C., Reddy, N. A., & Adelberger, K. L. 2006, Astrophysical Journal, 644, 813
17. “Star Formation and Extinction in Redshift z~2 Galaxies: Inferences from Spitzer MIPS Observations.” Reddy, N. A., Steidel, C. C., Fadda, D., Yan, L., Pettini, M., Shapley, A. E., **Erb, D. K.**, & Adelberger, K. L. 2006, Astrophysical Journal, 644, 792
16. “Predictions and Strategies for Integral-Field Spectroscopy of High-Redshift Galaxies.” Law, D. R., Steidel, C. C., & **Erb, D. K.** 2006, Astronomical Journal, 131, 70
15. “A Census of Optical and Near-Infrared Selected Star-forming and Passively Evolving Galaxies at Redshift z~2.” Reddy, N. A., **Erb, D. K.**, Steidel, C. C., Shapley, A. E., Adelberger, K. L., & Pettini, M. 2005, Astrophysical Journal, 633, 748
14. “The Connection between Galaxies and Intergalactic Absorption Lines at Redshift $2<z<3$.” Adelberger, K. L., Shapley, A. E., Steidel, C. C., Pettini, M., **Erb, D. K.**, & Reddy, N. A. 2005, Astrophysical Journal, 629, 636
13. “Spectroscopic Identification of a Protocluster at z=2.300: Environmental Dependence of Galaxy Properties at High Redshift.” Steidel, C. C., Adelberger, K. L., Shapley, A. E., **Erb, D. K.**, Reddy, N. A., & Pettini, M. 2005, Astrophysical Journal, 626, 44
12. “Ultraviolet to Mid-Infrared Observations of Star-forming Galaxies at z~2: Stellar Masses and Stellar Populations.” Shapley, A. E., Steidel, C. C., **Erb, D. K.**, Reddy, N. A., Adelberger, K. L., Pettini, M., Barmby, P., & Huang, J. 2005, Astrophysical Journal, 626, 698
11. “Strong Spatial Clustering of Ultraviolet-selected Galaxies with Magnitude $K_s < 20.5$ and Redshift z~2.” Adelberger, K. L., **Erb, D. K.**, Steidel, C. C., Reddy, N. A., Pettini, M., & Shapley, A. E. 2005, Astrophysical Journal Letters, 620, L75
10. “The Spatial Clustering of Star-forming Galaxies at Redshifts $1.4<z<3.5$.” Adelberger, K. L., Steidel, C. C., Pettini, M., Shapley, A. E., Reddy, N. A., & **Erb, D. K.** 2005, Astrophysical Journal, 619, 697

9. “Evidence for Solar Metallicities in Massive Star-forming Galaxies at z>2.” Shapley, A. E., **Erb, D. K.**, Pettini, M., Steidel, C. C., & Adelberger, K. L. 2004, Astrophysical Journal, 612, 108
8. “Deep Mid-Infrared Observations of Lyman Break Galaxies.” Barmby, P., Huang, J.-S., Fazio, G. G., Surace, J. A., Arendt, R. G., Hora, J. L., Pahre, M. A., Adelberger, K. L., Eisenhardt, P., **Erb, D. K.**, Pettini, M., Reach, W. T., Reddy, N. A., Shapley, A. E., Steidel, C. C., Stern, D., Wang, Z., & Willner, S. P. 2004, Astrophysical Journals, 154, 97
7. “The Kinematics of Morphologically Selected z~2 Galaxies in the GOODS-North Field.” **Erb, D. K.**, Steidel, C. C., Shapley, A. E., Pettini, M., & Adelberger, K. L. 2004, Astrophysical Journal, 612, 122
6. “Optical Selection of Star-forming Galaxies at Redshifts 1<z<3.” Adelberger, K. L., Steidel, C. C., Shapley, A. E., Hunt, M. P., **Erb, D. K.**, Reddy, N. A., & Pettini, M. 2004, Astrophysical Journal, 607, 226
5. “A Survey of Star-forming Galaxies in the 1.4<z<2.5 Redshift Desert: Overview.” Steidel, C. C., Shapley, A. E., Pettini, M., Adelberger, K. L., **Erb, D. K.**, Reddy, N. A., & Hunt, M. P. 2004, Astrophysical Journal, 604, 534
4. “Hα Spectroscopy of Galaxies at z>2: Kinematics and Star Formation.” **Erb, D. K.**, Shapley, A. E., Steidel, C. C., Pettini, M., Adelberger, K. L., Hunt, M. P., Moorwood, A. F. M., & Cuby, J.-G. 2003, Astrophysical Journal, 591, 101
3. “X-Ray/Optical Studies of Two Outbursts of the Intermediate Polar YY DO Draconis.” Szkody, P., Nishikida, K., **Erb, D.**, Mukai, K., Hellier, C., Uemura, M., Kato, T., Pavlenko, E., Katysheva, N., Shugarov, S., & Cook, L. 2002, Astronomical Journal, 123, 413
2. “The Intriguing New Cataclysmic Variable KUV 03580+0614.” Szkody, P., Gänsicke, B., Fried, R. E., Heber, U., & **Erb, D. K.** 2001, Publications of the Astronomical Society of the Pacific, 113, 1215
1. “Candidate RR Lyrae Stars Found in Sloan Digital Sky Survey Commissioning Data.” Ivezić, Ž., Goldston, J., Finlator, K., Knapp, G. R., Yanny, B., McKay, T. A., Amrose, S., Krisciunas, K., Willman, B., Anderson, S., Schaber, C., **Erb, D.**, Logan, C., Stubbs, C., Chen, B., Neilsen, E., Uomoto, A., Pier, J. R., Fan, X., Gunn, J. E., Lupton, R. H., Rockosi, C. M., Schlegel, D., Strauss, M. A., Annis, J., Brinkmann, J., Csabai, I., Doi, M., Fukugita, M., Hennessy, G. S., Hindsley, R. B., Margon, B., Munn, J. A., Newberg, H. J., Schneider, D. P., Smith, J. A., Szokoly, G. P., Thakar, A. R., Vogeley, M. S., Waddell, P., Yasuda, N., York, D. G., & SDSS Collaboration 2000, Astronomical Journal, 120, 963