

Education:

Ph.D. Physics, University of California, Berkeley, 1989
M.A. Physics, University of California, Berkeley, 1984
B.S. Physics, Stanford University, 1982, with honors and distinction

Academic Employment History:

2003- present
Professor, Department of Astrophysical and Planetary Sciences, CU Boulder
1998 – 2003
Associate Professor, Department of Astrophysical and Planetary Sciences
1997 - 1998
Associate Research Professor, Department of Astrophysics and Planetary Sciences
1995-1997
Assistant Research Professor, Department of Astrophysical, Planetary and Atmospheric Sciences, CU Boulder
1989-1998
Research Associate, Center for Astrophysics and Space Astronomy

Honors and Awards:

Boulder Faculty Assembly Award for Leadership and Service, 2018
Boulder Faculty Assembly Award for Excellence in Research, Scholarly and Creative Work, 2011
NASA Exceptional Public Service Medal, 2010
Robert H. Goddard Exceptional Achievement: Engineering – Teams, for Hubble Instrument Development
NASA Group Achievement Awards for the FUSE mission redesign, the 1995 Australia rocket campaign, the Hale Bopp Rocket Campaign, and the FUSE mission as a whole

Primary Research Efforts:

1992 – 1998, 2007 – 2011 and 2014 - 2024
Principal Investigator, Ultraviolet Sounding Rocket program
2019 – 2023
Principal Investigator, NASA APRA study for UV holographic Echelle designs
1998 – 2013
Principal Investigator, Cosmic Origins Spectrograph, a Hubble Space Telescope instrument installed during servicing mission 4 in May, 2009.
1993 – 1998
Principal Investigator for the Spectrograph portion of the Far Ultraviolet Spectroscopic Explorer (FUSE); I was responsible for the spectrograph optical design and development. The FUSE mission PI was H. Warren Moos (JHU). (Launched in 1999)

Previously a Principal Investigator on the following programs:

Planetary sounding rocket program
Modern Universe Space Telescope (MUST) Vision Mission Study

James C. Green

IUE observing program
EUVE observing programs
NASA UVG-R&A Grating Design program
NASA UVG-R&A Grating Fabrication Program
NASA Astrophysics Data Program (ADP)

University Service:

2000 – 2004 and 2007 – 2013

Director, Center for Astrophysics and Space Astronomy, CU Boulder

2004 – 2007

Chair, Department of Astrophysical and Planetary Sciences, CU Boulder

2012 - 2013

BFA representative for APS Department

National Service:

Member: Board of Directors, BoldlyGo, a philanthropic organization to enable privately funded space missions. Position is uncompensated. (2018 – 2021)

Space Telescope Institute Council (New member in fall 2020 – 2021)

Member NASA Advisory Council: Science Committee (2015 – 2016)

NASA Cosmic Origins Program Analysis Group: Executive Committee (2014-2016)

Member: NOAO Visiting Committee (2013)

Co-Chair: Wide Field Infrared Survey Telescope (WFIRST) Science Definition Team (2010 – 2012)

Member of NASA Astrophysics Senior Review (2010)

NASA Origins subcommittee

NASA Astrophysics Working Group

NASA Sounding Rocket Working Group

Graduate Student Advising:

Ryan McLean (PhD 2000) (1)

Kurt Gunderson (PhD 2000) (1)

Remy Indebetuw (PhD 2001) (2)

Matthew Beasley (PhD 2003) (1)

Catherine Boone (PhD 2005)

Nathaniel Cunningham (PhD 2006) (1)

Eric Schindhelm (PhD 2011) (3)

Brennan Gantner (PhD 2012) (1)

Nicholas Erickson (current)

1: Awarded NASA Graduate Student Fellowship

2: Awarded Chancellor's Fellowship and NSF Fellowship

3: Awarded NASA Earth and Space Science Fellowship

Education Outreach:

Led Project Centaur, incorporating a Centaurus high school student built payload on a NASA sounding rocket (launched in 1999)

Peer Reviewed Publications:

1. Green, J. and Bowyer, S., 1986, "**An Analysis Of A New Class Of Grazing Incidence Spectroscopic Telescope**," *Appl. Opt.*, **25**, 12, 1991-1996
2. Bowyer, S. and Green, J., 1988, "**The Fabrication, Evaluation And Performance Of Machined Metal Grazing Incidence Telescopes**," *Applied Optics*, **27**, 8, 1414-1422.
3. Green, J., Bowyer, S., and Jelinsky, P., 1990, "**Possible Detection Of An Emission Feature Near 584 Å In The Direction Of G191-B2B**," *Ap. J.*, **353**, 612-616.
4. Green, J., Jelinsky, P., and Bowyer, S., 1990, "**The Extreme Ultraviolet Spectrum Of G191-B2B And The Ionization Of The Local Interstellar Medium**," *Ap. J.*, **359**, 499-505.
5. Green, J., Cash, W., Cook, T., Stern, S. A., 1991, "**The Spectrum Of Comet Austin From 910-1180 Å**," *Science*, **251**, 408-410.
6. Stern, S. A., Green, J., Cash, W., Cook, T. A., 1992, "**Helium And Argon Abundance Constraints And The Thermal Evolution Of Comet Austin**," *Icarus*, **95**, 157-161.
7. Green, J., Snow, T., Cook, T., Cash, W., and Poplawski, O., 1992, "**The Anomalous Extinction Curve In The Direction Of ρ Oph from 950 - 1180 Å**," *Ap. J.*, **395**, 289-294.
8. Wilkinson, E., Green, J., and Cash, W., 1992, "**Extreme Ultraviolet Spectroscopy of G191-B2B: Direct Observation of Ionization Edges**," *Ap. J. Lett.*, **397**, L51-L54.
9. Green, J., Wilkinson, E., Ayres, T., and Cash, W., 1992, "**Extreme Ultraviolet Spectroscopy Of Capella**," *Ap. J. Lett.*, **397**, L99-102.
10. Wilkinson, E., Green, J., and Cash, W., 1993, "**The Extreme Ultraviolet Spectrograph A Radial Groove Grating, Sounding Rocket Borne, Astronomical Instrument**," *Ap. J. Suppl.*, **89**, 211-220.
11. Dupree, A., Brickhouse, N., Doschek, G., Green, J., and Raymond, J., 1993, "**The Extreme Ultraviolet Spectrum Of Alpha Aurigae (Capella)**," *Ap. J. Lett.*, **418**, L41-44.
12. Stern, S. A., Slater, D. C., Cash, W. C., Wilkinson, E., Green, J. C., and Gladstone, G. R., 1996, "**Rocket FUV Observation Of The Io Plasma Torus During The Shoemaker Levy 9 Impacts**," *Geophys Res. Lett.*
13. Wilkinson, E., and Green, J.C., 1996, "First Generation, Grazing Incidence Gratings For Use In Converging Extreme Ultraviolet Light Beams," *Appl. Opt.* **34**, 4685-4696.
14. Clayton, G. C., Green, J. C., Wolff, M. J., Zellner, N. E. B., Code, A. D., and Davidsen, A. F., 1996, "**Astro-2 Observations Of Interstellar Dust And Gas In The Large Magellanic Cloud**," *Ap. J.* March 20 issue, 313-319
15. Stern, S.A., Slater, D.C., Gladstone, G.R. Wilkinson, E., Cash, W., Green, J. C., Hunten, and Owen, T.C., 1996, "**The 825-1110 Å Spectrum Of Venus**," *Icarus*, 200-204.
16. Gunderson, K., Clayton, G., and Green, J., 1997, "**Molecular Hydrogen In The Large Magellanic Cloud**," *PASP*, 1998, **110**,
17. Moos, H. W. et al (incl Green, J. C.), "**Overview of the Far Ultraviolet Explorer Mission**", *ApJ Letters*, 538, L1, 2000
18. Sahnou, D. J., et al (incl Green, J. C.), "**On-Orbit Performance of the Far Ultraviolet Explorer Satellite**", *ApJ Letters*, L7, 2000
19. Shull, J. M., Giroux, M. L., Penton, S. V., Tumlinson, J., Stocke, J. T., Jenkins, E. B., Moos, H. W., Oegerle, W. R., Savage, B. D., Sembach, K. R., York, D. G., Green, J. C., and

- Woodgate, B. E., “**Far Ultraviolet Explorer Observations of the Low-Redshift Ly β Forest**”, ApJ Letters, L13, 2000
20. Savage, B. D., Sembach, K. R., Jenkins, E. B., Shull, J. M., York, D. G., Sonneborn, G., Moos, H. W., Friedman, S. D., Green, J. C., Oegerle, W. R., Blair, W. P., Kruk, J. W., and Murphy, E. M., **Far Ultraviolet Spectroscopic Explorer Observations of O VI Absorption in the Galactic Halo**, ApJ Letter, L27, 2000
 21. Shull, J. M., Tumlinson, J., Jenkins, E. B., Moos, H. W., Rachford, B. L., Savage, B. D., Sembach, K. R., Snow, T. P., Sonneborn, G., York, D. G., Blair, W. P., Green, J. C., Friedman, S. D., and Sahnou, D. J., “**Far Ultraviolet Explorer Observations of Diffuse Interstellar Molecular Hydrogen**”, ApJ Letters, L73, 2000
 22. Gunderson, K., Wilkinson, E., Green, J., Barstow, M., “**Extreme Ultraviolet Spectroscopy of the Hot White Dwarf G191-B2B**”, ApJ, **562**, 2001
 23. Indebetouw, R. McLean, R., Wilkinson, E., and Green, J., “**The Hot Carbon, Oxygen and Nitrogen Echelle Spectrograph**”, Rev Sci Inst, **72**, 2001
 24. Moos, H. W., et al (including Green, J. C.) “**Abundances of Deuterium, Nitrogen and Oxygen in the Local Interstellar Medium: Overview of First Results from the FUSE Mission**”, ApJ Suppl, **140**, 2002
 25. Wakker, B.P. et al., (Including Green, J.C.), “**The Far Ultraviolet Spectroscopic Explorer Survey of O VI Absorption in and near the Galaxy**”, *ApJSuppl*, **146**, 2003
 26. Beasley, M., Boone, C., Cunningham, N., Green, J., and Wilkinson, E., “**Imaging Spectrograph for Interstellar Shocks: A Narrowband Imaging Payload for the Far Ultraviolet**”, 2004, Applied Optics, **43**, 46333B
 27. Finkelstein, et al., (including J. Green), “**Optical Structure and Proper-Motion Age of the Oxygen-rich Supernova Remnant 1E 0102-7219 in the Small Magellanic Cloud**”, 2006, The ApJ, Volume 641, Issue 2, pp. 919-929.
 28. Froning, Cynthia S.; Green, James C., “**The cosmic origins spectrograph: capabilities and prelaunch performance**”, 2009,Ap&SS.320..181F
 29. France, Kevin; Beasley, Matthew; Keeney, Brian A.; Danforth, Charles W.; Froning, Cynthia S.; Green, James C.; Shull, J. Michael, “**Cosmic Origins Spectrograph Observations of the Chemical Composition of SNR LMC N132D**”, 2009ApJ...707L..27F
 30. McCandliss, Stephan R.; France, Kevin; Osterman, Steven; Green, James C.; McPhate, Jason B.; Wilkinson, Erik, “**Far-UV sensitivity of the Cosmic Origins Spectrograph**”, 2010, ApJ, 709L, 183
 31. France, Kevin; Stocke, John T.; Yang, Hao; Linsky, Jeffrey L.; Wolven, Brian C.; Froning, Cynthia S.; Green, James C.; Osterman, Steven N.. “**Searching for Far-ultraviolet Auroral/Dayglow Emission from HD 209458b**”,2010, ApJ, 712, 1277
 32. Linsky, Jeffrey L.; Yang, Hao; France, Kevin; Froning, Cynthia S.; Green, James C.; Stocke, John T.; Osterman, Steven N. “**Observations of Mass Loss from the Transiting Exoplanet HD 209458b**”, 2010, ApJ, 717, 1291
 33. Savage, B. D.; Narayanan, A.; Wakker, B. P.; Stocke, J. T.; Keeney, B. A.; Shull, J. M.; Sembach, K. R.; Yao, Y.; Green, J. C., “**O VI Absorbers Tracing Hot Gas Associated with a Pair of Galaxies at $z = 0.167$** ”, 2010 ApJ, 719, 152
 34. France, Kevin; Nell, Nicholas; Green, James C.; Leitherer, Claus, “**Diffuse Far-UV Line Emission from the Low-redshift Lyman Break Galaxy Analog KISSR242**”, 2010, ApJ, 722L, 80

35. Narayanan, Anand; Savage, Blair D.; Wakker, Bart P.; Danforth, Charles W.; Yao, Yangsen; Keeney, Brian A.; Shull, J. Michael; Sembach, Kenneth R.; Froning, Cynthia S.; Green, James C., “**Cosmic Origins Spectrograph Detection of Ne VIII Tracing Warm-Hot Gas Toward PKS 0405-123**”, 2011 ApJ, 730, 15
36. France, Kevin; Schindhelm, Eric; Burgh, Eric B.; Herczeg, Gregory J.; Harper, Graham M.; Brown, Alexander; Green, James C.; Linsky, Jeffrey L.; Yang, Hao; Abgrall, Hervé; Ardila, David R.; Bergin, Edwin; Bethell, Thomas; Brown, Joanna M.; Calvet, Nuria; Espaillat, Catherine; Gregory, Scott G.; Hillenbrand, Lynne A.; Hussain, Gaitee; Ingleby, Laura; Johns-Krull, Christopher M.; Roueff, Evelyne; Valenti, Jeff A.; Walter, Frederick M., “**The Far-ultraviolet "Continuum" in Protoplanetary Disk Systems. II. Carbon Monoxide Fourth Positive Emission and Absorption**”, 2011, ApJ, 734, 31
37. Osterman, S.; Green, J.; Froning, C.; Béland, S.; Burgh, E.; France, K.; Penton, S.; Delker, T.; Ebbets, D.; Sahnou, D.; Bacinski, J.; Kimble, R.; Andrews, J.; Wilkinson, E.; McPhate, J.; Siegmund, O.; Ake, T.; Aloisi, A.; Biagetti, C.; Diaz, R.; Dixon, W.; Friedman, S.; Ghavamian, P.; Goudfrooij, P.; Hartig, G.; Keyes, C.; Lennon, D.; Massa, D.; Niemi, S.; Oliveira, C.; Osten, R.; Proffitt, C.; Smith, T.; Soderblom, D., “**The Cosmic Origins Spectrograph: on-orbit instrument performance**”, 2011, Ap&SS, 335, 257
38. Danforth, Charles W.; Stocke, John T.; Keeney, Brian A.; Penton, Steven V.; Shull, J. Michael; Yao, Yangsen; Green, James C., “**A Hubble Space Telescope/Cosmic Origins Spectrograph Search for Warm-hot Baryons in the Mrk 421 Sight Line**”, 2011, ApJ, 743, 18
39. Froning, Cynthia S.; Cantrell, Andrew G.; Maccarone, Thomas J.; France, Kevin; Khargharia, Juthika; Winter, Lisa M.; Robinson, Edward L.; Hynes, Robert I.; Broderick, Jess W.; Markoff, Sera; Torres, Manuel A. P.; Garcia, Michael; Baily, Charles D.; Prochaska, J. Xavier; Werk, Jessica; Thom, Chris; Béland, Stéphane; Danforth, Charles W.; Keeney, Brian; Green, James C., “**Multiwavelength Observations of A0620-00 in Quiescence**”, 2011, ApJ, 743, 26
40. Green, James C.; Froning, Cynthia S.; Osterman, Steve; Ebbets, Dennis; Heap, Sara H.; Leitherer, Claus; Linsky, Jeffrey L.; Savage, Blair D.; Sembach, Kenneth; Shull, J. Michael; Siegmund, Oswald H. W.; Snow, Theodore P.; Spencer, John; Stern, S. Alan; Stocke, John; Welsh, Barry; Béland, Stéphane; Burgh, Eric B.; Danforth, Charles; France, Kevin; Keeney, Brian; McPhate, Jason; Penton, Steven V.; Andrews, John; Brownsberger, Kenneth; Morse, Jon; Wilkinson, Erik, “**The Cosmic Origins Spectrograph**”, 2012, ApJ, 744, 60
41. Schindhelm, Eric; France, Kevin; Burgh, Eric B.; Herczeg, Gregory J.; Green, James C.; Brown, Alexander; Brown, Joanna M.; Valenti, Jeff A., “**Characterizing CO Fourth Positive Emission in Young Circumstellar Disks**”, 2012, ApJ, 746, 97
42. Keeney, Brian A.; Danforth, Charles W.; Stocke, John T.; France, Kevin; Green, James C., “**On the Significance of Absorption Features in HST/COS Data**”, 2012, PASP, 124, 830
43. Stocke, John T.; Keeney, Brian A.; Danforth, Charles W.; Shull, J. Michael; Froning, Cynthia S.; Green, James C.; Penton, Steven V.; Savage, Blair D., “**Characterizing the Circumgalactic Medium of Nearby Galaxies with HST/COS and HST/STIS Absorption-line Spectroscopy**”, 2013, ApJ, 763, 148
44. Keeney, Brian A.; Stocke, John T.; Rosenberg, Jessica L.; Danforth, Charles W.; Ryan-Weber, Emma V.; Shull, J. Michael; Savage, Blair D.; Green, James C., “**HST/COS Spectra of Three QSOs That Probe the Circumgalactic Medium of a Single Spiral Galaxy: Evidence for Gas Recycling and Outflow**”, 2013, ApJ, 765, 27

45. France, Kevin; Nell, Nicholas; Kane, Robert; Burgh, Eric B.; Beasley, Matthew; Green, James C., “**H₂ Excitation Structure on the Sightlines to δ Scorpii and ζ Ophiuci: First Results from the Sub-orbital Local Interstellar Cloud Experiment**”, 2013, *ApJ*, 772, 9
46. Tofany, Barton W.; Winter, Lisa M.; Borguet, Benoit; Edmonds, Doug; Danforth, Charles; Green, James; Arav, Nahum, “**Ultraviolet characteristics, outflow properties and variability of active galactic nucleus Markarian 1513**”, 2014, *Monthly Notices of the Royal Astronomical Society*, Volume 439, Issue 4, p.3649-3665
47. Savage, B. D.; Kim, T.-S.; Wakker, B. P.; Keeney, B.; Shull, J. M.; Stocke, J. T.; Green, J. C., “**The Properties of Low Redshift Intergalactic O VI Absorbers Determined from High S/N Observations of 14 QSOs with the Cosmic Origins Spectrograph**”, 2014, *he Astrophysical Journal Supplement*, Volume 212, Issue 1, article id. 8, 63 pp.
48. Stocke, John T.; Keeney, Brian A.; Danforth, Charles W.; Syphers, David; Yamamoto, H.; Shull, J. Michael; Green, James C.; Froning, Cynthia; Savage, Blair D.; Wakker, Bart; Kim, Tae-Sun; Ryan-Weber, Emma V.; Kacprzak, Glenn G., “**Absorption-line Detections of 105-106 K Gas in Spiral-rich Groups of Galaxies**, 2014, *The Astrophysical Journal*, Volume 791, Issue 2, article id. 128, 33 pp.
49. Danforth, C. W., Keeney, B. A., Tilton, E. M., Shull, J. M., Stocke, J. T., Stevans, M., . . . Osterman, S. N. “**An HST/COS Survey of the Low-Redshift Intergalactic Medium I. Survey, Methodology and Overall Results**”. (2016). *ApJ*, 817(2)
50. France, Kevin; Hoadley, Keri; Fleming, Brian T.; Kane, Robert; Nell, Nicholas; Beasley, Matthew; Green, James C., “**The SLICE, CHESS, and SISTINE Ultraviolet Spectrographs: Rocket-Borne Instrumentation Supporting Future Astrophysics Missions**”, 2016, *Journal of Astronomical Instrumentation*, Vol. 5
51. Keeney, Brian A.; Stocke, John T.; Danforth, Charles W.; Shull, J. Michael; Pratt, Cameron T.; Froning, Cynthia S.; Green, James C.; Penton, Steven V.; Savage, Blair D., “**Characterizing the Circumgalactic Medium of Nearby Galaxies with HST/COS and HST/STIS Absorption-Line Spectroscopy: II. Methods and Models**” 2017, *ApJS* 230, 6
52. Keeney BA, Stocke JT, Pratt CT, Davis JD, Syphers D, Danforth CW, Shull JM, Froning CS, Green JC, Penton SV, et. al. "A Galaxy Redshift Survey Near HST/COS AGN Sight Lines." *ApJS*. 2018, 237, 1

Significant Non-Refereed Publication:

Green, J.; Schechter, P.; Baltay, C.; Bean, R.; Bennett, D.; Brown, R.; Conselice, C.; Donahue, M.; Fan, X.; Gaudi, B. S.; Hirata, C.; Kalirai, J.; Lauer, T.; Nichol, B.; Padmanabhan, N.; Perlmutter, S.; Rauscher, B.; Rhodes, J.; Roellig, T.; Stern, D.; Sumi, T.; Tanner, A.; Wang, Y.; Weinberg, D.; Wright, E.; Gehrels, N.; Sambruna, R.; Traub, W.; Anderson, J.; Cook, K.; Garnavich, P.; Hillenbrand, L.; Ivezić, Z.; Kerins, E.; Lunine, J.; McDonald, P.; Penny, M.; Phillips, M.; Rieke, G.; Riess, A.; van der Marel, R.; Barry, R. K.; Cheng, E.; Content, D.; Cutri, R.; Goulioud, R.; Grady, K.; Helou, G.; Jackson, C.; Kruk, J.; Melton, M.; Peddie, C.; Rioux, N.; Seiffert, M., “**Wide-Field InfraRed Survey Telescope (WFIRST) Final Report**”, 2012, arXiv1208.4012G

65+ non-refereed publications, including more than 50 in the Proceedings of the SPIE
More than 65 Abstracts in the Bulletin of the American Astronomical Society