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Education

PhD 1998, Department of Physics, California Institute of Technology.

SB 1992, Department of Physics, Massachusetts Institute of Technology.

Positions

Assistant Professor, Department of Physics, New York University, 2001–present.

Lecturer (part-time), Department of Physics, Princeton University, 1998–2001.

Long-term member, Institute for Advanced Study, 1997–2001.

TA (Instructor), Department of Physics, California Institute of Technology, 1993–1997.

RA, Canadian Institute for Theoretical Astrophysics, summers 1990, 1991, 1992.

RA, Epistemology and Learning group, MIT Media Lab, 1989–1992.

Service

Panel Chair, Time Allocation Committee, *Spitzer Space Telescope*, 2005.

Leader, Calibration Task Force, Sloan Digital Sky Survey, 2000–2003.

Panel Member, Time Allocation Committee, National Optical Astronomy Observatory, 2000–2002.

Co-coordinator, Oort Meeting on Galaxy Formation, Leiden University, 2001.

Panel Member, Time Allocation Committee, *Hubble Space Telescope*, 1999.

Honors

New York University “Golden Dozen” Teaching Award, 2004.

Princeton University Engineering Council Teaching Award, 2000.

Caltech Undergraduate Teaching Award, Associated Students of Caltech, 1996.

J. S. Stemple Memorial Prize, Caltech, for Physics PhD oral candidacy exam, 1995.

Phi Beta Kappa, 1992.

Sigma Xi, 1992.

Award of merit, International Physics Olympiad, Bad Ischl, Austria, 1988.

Grants

NASA Long-Term Space Astrophysics Grant (NAG5-11669; Hogg, PI), *Tools for Galaxy Astrophysics in the Era of the Space Infrared Telescope Facility*, \$498,770, 2002–2007.

NSF Information Technology Research Grant (AST-0428465; Hogg, PI), *Automated Astrometry for Time-Domain and Distributed Astrophysics*, \$504,140, 2004–2006.

NASA *Galaxy Evolution Explorer* Archival Research Grant (Blanton, PI), *K-corrections for GALEX*, \$42,500, 2004–2005.

NASA *Hubble Space Telescope* Archival Research Grant (Blanton, PI), *Comparing the ACS Ultra Deep Field to Low Redshift Galaxy Observations*, \$70,000, 2003–2004.

NSF-REU Supplement to NSF Group Grant (PHY-0101738; Farrar, PI), *Theoretical Particle Physics, Astrophysics and Cosmology*, \$16,000, 2003–2004.

NSF Group Grant (PHY-0101738; Farrar, PI), *Theoretical Particle Physics, Astrophysics and Cosmology*, \$686,000, 2001–2004.

Hubble Postdoctoral Fellowship, 1997–2000.

NSF Graduate Fellowship, 1992–1995.

NSERC (Canada) Summer Research Grants, 1991, 1992.

Refereed publications

1. Hogg, D. W., Quinlan, G. D., & Tremaine, S., 1991, Dynamical limits on dark matter in the Solar System, *Astron. J.* **101** 2274–2286.
2. Hogg, D. W., Jackson, C., Żytkow, A. N., Irwin, M., Webster, R., & Tremaine, S., 1994, A photographic search for satellites of Neptune, *Icarus* **107** 304–310.
3. Hogg, D. W. & Blandford, R. D., 1994, The gravitational lens system B1422+231: Dark matter, superluminal expansion and the Hubble Constant, *Mon. Not. R. Astr. Soc.* **268** 889–893.
4. Djorgovski, S. *et al*, 1995, Deep galaxy counts in the *K* band with the Keck Telescope, *Astrophys. J.* **438** L13–L16.
5. Smail, I., Hogg, D. W., Yan, L., & Cohen, J. G., 1995, Deep optical galaxy counts with the Keck Telescope, *Astrophys. J.* **449** L105–L108.
6. Smail, I., Hogg, D. W., Blandford, R., Cohen, J. G., Edge, A. C., & Djorgovski, S. G., 1995, Discovery of two giant arcs in the rich cluster A2219 with the Keck Telescope, *Mon. Not. R. Astr. Soc.* **277** 1–10.
7. Eisenhardt, P. R., Armus, L., Hogg, D. W., Soifer, B. T., Neugebauer, G., & Werner, M. W., 1996, Hubble Space Telescope observations of the luminous IRAS source FSC10214+4724: A gravitationally lensed infrared quasar, *Astrophys. J.* **461** 72–83.
8. Cohen, J. G., Hogg, D. W., Pahre, M. A., & Blandford, R., 1996, Strong redshift clustering of distant galaxies, *Astrophys. J.* **462** L9–L12.
9. Hogg, D. W., Blandford, R., Kundić, T., Fassnacht, C. D., & Malhotra, S., 1996, A candidate gravitational lens in the Hubble Deep Field, *Astrophys. J.* **467** L73–L75.
10. Cohen, J. G., Cowie, L. L., Hogg, D. W., Songaila, A., Blandford, R., Hu, E. M., & Shopbell, P., 1996, Redshift clustering in the Hubble Deep Field, *Astrophys. J.* **471** L5–L9.
11. Hogg, D. W., Neugebauer, G., Armus, L., Matthews, K., Pahre, M. A., Soifer, B. T., & Weinberger, A. J., 1997, Near infrared imaging of the Hubble Deep Field with the Keck Telescope, *Astron. J.* **113** 474–482. (Erratum *Astron. J.* **113** 2338.)
12. Reid, I. N., Gizis, J. E., Cohen, J., Pahre, M. A., Hogg, D. W., Cowie, L., Hu, E., & Songaila, A., 1997, Faint M dwarfs and the structure of the Galactic disk, *Pubs. Astr. Soc. Pac.* **109** 559–565.
13. Hogg, D. W., Pahre, M. A., McCarthy, J. K., Cohen, J. G., Blandford, R., Smail, I., & Soifer, B. T., 1997, Counts and colours of faint galaxies in the *U* and *R* bands, *Mon. Not. R. Astr. Soc.* **288** 404–410.
14. Hogg, D. W. & Phinney, E. S., 1997, The fading of young stellar populations and the luminosity functions of dwarf, irregular and starburst galaxies, *Astrophys. J.* **488** L95–L99.
15. Kundić, T., Hogg, D. W., Blandford, R. D., Cohen, J. G., Lubin, L. M., & Larkin, J. E., 1997, The external shear acting on gravitational lens B 1422+231, *Astron. J.* **114** 2276–2283.
16. Hogg, D. W., 1998, *On the evolution of field galaxies*, PhD thesis, Caltech.
17. Hogg, D. W. *et al*, 1998, A blind test of photometric redshift prediction, *Astron. J.* **115** 1418–1422.
18. Hogg, D. W., & Turner, E. L., 1998, A maximum likelihood method for improving faint source flux and color estimates, *Pubs. Astr. Soc. Pac.* **110** 727–731.
19. Hogg, D. W., Cohen, J. G., Blandford, R., & Pahre, M. A., 1998, The O II luminosity density of the Universe, *Astrophys. J.* **504** 622–628.
20. Sykes, C. M. *et al*, 1998, The complex gravitational lens system B1933+503, *Mon. Not. R. Astr. Soc.* **301**

310–314.

21. Nguyen, H. T., Eisenhardt, P. R., Werner, M. W., Goodrich, R., Hogg, D. W., Armus, L., Soifer, B. T., & Neugebauer, G., 1998, Imaging polarimetry of the gravitational lens FSC10214+4724, *Astron. J.* **117** 671–676.
22. Cohen, J. G., Hogg, D. W., Pahre, M. A., Blandford, R., Shopbell, P., & Richberg, K., 1999, Caltech Faint Field Galaxy Redshift Survey. VII. Data analysis techniques and redshifts in the field J0053+1234, *Astrophys. J. Suppl. Ser.* **120** 171–178.
23. Cohen, J. G., Blandford, R., Hogg, D. W., Pahre, M. A., & Shopbell, P. L., 1999, Caltech Faint Field Galaxy Redshift Survey. VIII. Analysis for the field J0053+1234, *Astrophys. J.* **512** 30–47.
24. Barkana, R., Blandford, R., & Hogg, D. W., 1999, A possible gravitational lens in the Hubble Deep Field South, *Astrophys. J.* **513** L91–L94.
25. Fruchter, A. S. *et al*, 1999, HST and Palomar imaging of GRB 990123: Implications for the nature of gamma-ray bursts and their hosts, *Astrophys. J.* **519** L13–L16.
26. Hogg, D. W. & Fruchter, A. S., 1999, The faint-galaxy hosts of gamma-ray bursts, *Astrophys. J.* **520** 54–58.
27. Carlberg, R. G. *et al*, 2000, Caltech Faint Galaxy Redshift Survey. XI. The merger rate to redshift 1 from kinematic pairs, *Astrophys. J.* **532** L1–L4.
28. Hogg, D. W., Pahre, M. A., Adelberger, K. L., Blandford, R., Cohen, J. G., Gautier, T. N., Jarrett, T., Neugebauer, G., & Steidel, C. C., 2000, Caltech Faint Field Galaxy Redshift Survey. IX. Source detection and photometry in the Hubble Deep Field region, *Astrophys. J. Suppl. Ser.* **127** 1–9.
29. Hogg, D. W., Neugebauer, G., Cohen, J. G., Dickinson, M. E., Djorgovski, S. G., Matthews, K., & Soifer, B. T., 2000, Three-micron imaging of the Hubble Deep Field, *Astron. J.* **119** 1519–1525.
30. Cohen, J. G., Hogg, D. W., Blandford, R., Cowie, L. L., Hu, E., Songaila, A., Shopbell, P., & Richberg, K., 2000, Caltech Faint Galaxy Redshift Survey. X. A redshift survey in the region of the Hubble Deep Field North, *Astrophys. J.* **538** 29–52.
31. van den Bergh, S., Cohen, J. G., Hogg, D. W., & Blandford, R., 2000, Caltech Faint Galaxy Redshift Survey. XIV. Galaxy morphology in the HDF (North) and its flanking fields to $z = 1.2$, *Astron. J.* **120** 2190–2205.
32. Hogg, D. W., Cohen, J. G., & Blandford, R., 2000, The Caltech Faint Galaxy Redshift Survey. XII. Clustering of galaxies, *Astrophys. J.* **545** 32–42.
33. Hogg, D. W., 2001, Confusion errors in astrometry and counterpart association, *Astron. J.* **121** 1207–1213.
34. Blanton, M. R. *et al*, 2001, The luminosity function of galaxies in SDSS commissioning data, *Astron. J.* **121** 2358–2380.
35. Smette, A. *et al*, 2001, HST/STIS observations of GRB 000301C: CCD imaging and NUV MAMA spectroscopy, *Astrophys. J.* **556** 70–76.
36. Yasuda, N. *et al*, 2001, Galaxy number counts from the Sloan Digital Sky Survey commissioning data, *Astron. J.* **122** 1104–1124.
37. Hogg, D. W., Finkbeiner, D. P., Schlegel, D. J., & Gunn, J. E., 2001, A photometricity and extinction monitor at the Apache Point Observatory, *Astron. J.* **122** 2129–2138.
38. Eisenstein, D. J. *et al*, 2001, Spectroscopic target selection for the Sloan Digital Sky Survey: The Luminous Red Galaxy Sample, *Astron. J.* **122** 2267–2280.
39. Stoughton, C. *et al*, 2002, Sloan Digital Sky Survey: Early Data Release, *Astron. J.* **123** 485–548.
40. Schneider, D. P. *et al*, 2002, The Sloan Digital Sky Survey Quasar Catalog. I. Early Data Release, *Astron. J.* **123** 567–577.
41. Hogg, D. W. *et al*, 2002, The luminosity density of red galaxies, *Astron. J.* **124** 646–651.
42. Hogg, D. W. *et al*, 2003, The overdensities of galaxy environments as a function of luminosity and color, *Astrophys. J. Lett.* **585** L5–L9.

43. Eisenstein, D. J. *et al*, 2003, Average spectra of massive galaxies in the SDSS, *Astrophys. J.* **585** 694–713.
44. Bernardi, M. *et al*, 2003, Early-type galaxies in the SDSS. I. The sample, *Astron. J.* **125** 1817–1848.
45. Bernardi, M. *et al*, 2003, Early-type galaxies in the SDSS. II. Correlations between observables, *Astron. J.* **125** 1849–1865.
46. Bernardi, M. *et al*, 2003, Early-type galaxies in the SDSS. III. The fundamental plane, *Astron. J.* **125** 1866–1881.
47. Blanton, M. R., Brinkmann, J., Csabai, I., Doi, M., Eisenstein, D., Fukugita, M., Gunn, J. E., Hogg, D. W., & Schlegel, D. J., 2003, Estimating fixed-frame galaxy magnitudes in the SDSS, *Astron. J.* **125** 2348–2360.
48. Blanton, M. R. *et al*, 2003, The galaxy luminosity function and luminosity density at redshift $z = 0.1$, *Astrophys. J.* **592** 819–838.
49. Blanton, M. R. *et al*, 2003, The broadband optical properties of galaxies with redshifts $0.02 < z < 0.2$, *Astrophys. J.* **594** 186–207.
50. Abazajian, K. *et al*, 2003, The First Data Release of the Sloan Digital Sky Survey, *Astron. J.* **126** 2081–2086.
51. Hogg, D. W. *et al*, 2004, The dependence on environment of the color–magnitude relation of galaxies, *Astrophys. J. Lett.* **601** L29–L32.
52. Quintero, A. D. *et al*, 2004, Selection and photometric properties of K+A galaxies, *Astrophys. J.* **602** 190–199.
53. Lupton, R., Blanton, M. R., Fekete, G., Hogg, D. W., O’Mullane, W., Szalay, A., & Wherry, N., 2004, Preparing red–green–blue images from CCD data, *Pubs. Astron. Soc. Pac.* **116** 133–137.
54. Tegmark, M. *et al*, 2004, The three-dimensional power spectrum of galaxies from the Sloan Digital Sky Survey, *Astrophys. J.* **606** 702–740.
55. Tegmark, M. *et al*, 2004, Cosmological parameters from SDSS and WMAP, *Phys. Rev. D* **69** 103501.
56. Abazajian, K. *et al*, 2004, The Second Data Release of the Sloan Digital Sky Survey, *Astron. J.* **128** 502–512.
57. Finkbeiner, D. P. *et al*, 2004, Sloan Digital Sky Survey imaging of low Galactic latitude fields: Technical summary and data release, *Astron. J.* **128** 2577–2592.
58. Abazajian, K. *et al*, 2005, The Third Data Release of the Sloan Digital Sky Survey, *Astron. J.* **129** 1755–1759.
59. Zehavi, I., *et al*, 2005, The intermediate-scale clustering of luminous red galaxies, *Astrophys. J.* **621** 22–31.
60. Hogg, D. W., Eisenstein, D. J., Blanton, M. R., Bahcall, N. A., Brinkmann, J., Gunn, J. E., & Schneider, D. P., 2005, Cosmic homogeneity demonstrated with luminous red galaxies, *Astrophys. J.* **624** 54–58.
61. Hogg, D. W., Tremonti, C. A., Blanton, M. R., Finkbeiner, D. P., Padmanabhan, N., Quintero, A. D., Schlegel, D. J., & Wherry, N., 2005, Mid-infrared and visible photometry of galaxies: Anomalously low polycyclic aromatic hydrocarbon emission from low-luminosity galaxies, *Astrophys. J.* **624** 162–167.
62. Blanton, M. R., Eisenstein, D. J., Hogg, D. W., Schlegel, D. J., & Brinkmann, J., 2005, The relationship between environment and the broad-band optical properties of galaxies in the SDSS, *Astrophys. J.* in press (arXiv:astro-ph/0310453).
63. Willman, B., Blanton, M. R., West, A. A., Dalcanton, J. J., Hogg, D. W., Schneider, D. P., Wherry, N., Yanny, B., & Brinkmann, J., 2005, A new Milky Way companion: Unusual globular cluster or extreme dwarf satellite?, *Astrophys. J.* in press (arXiv:astro-ph/0410416).
64. Eisenstein, D. J. *et al*, 2005, Detection of the baryon acoustic peak in the large-scale correlation function of SDSS Luminous Red Galaxies, *Astrophys. J.* in press (arXiv:astro-ph/0501171).

Publications in preparation

Berlind, A. A., Blanton, M. R., Hogg, D. W., Weinberg, D. H., Davé, R., Eisenstein, D. J., & Katz, N., Interpreting the relationship between galaxy luminosity, color and environment, *Astrophys. J.* submitted (arXiv:astro-ph/0406633).

Blanton, M. R. *et al*, NYU-VAGC: A galaxy catalog based on new public surveys, *Astron. J.* submitted (arXiv:astro-ph/0410166).

Blanton, M. R., Eisenstein, D. J., Hogg, D. W., & Zehavi, I. I., The scale-dependence of relative galaxy bias: Encouragement for the “halo model” description, *Astrophys. J.* submitted (arXiv:astro-ph/0411037).

Hogg, D. W., Blanton, M. R., Roweis, S. T., & Johnston, K. V., Modeling the local stellar velocity distribution function with Hipparcos data. I. The velocity ellipsoid, *Astrophys. J.* submitted.

Willman, B. *et al*, A new Milky Way dwarf galaxy in Ursa Major, *Astrophys. J.* submitted (arXiv:astro-ph/0503552).

Unrefereed publications

Hogg, D. W., Martin, F., & Resnick, M., 1991, Braitenberg Creatures, *E&L Memo 13*, Epistemology and Learning Group, MIT Media Laboratory, Cambridge, Massachusetts.

Smail, I., Couch, W. J., Ellis, R. S., & Hogg, D. W., 1995, Gravitational lensing by the rich cluster AC114, *Clusters of Galaxies*, eds. Durret, F., Mazure, A., & Tran Thanh Van, J., Editions Frontières, 425.

Djorgovski, S. *et al*, 1995, Deep galaxy counts in the *K* band with the Keck Telescope, *Examining the Big Bang and Diffuse Background Radiation*, ed. Kafatos, M., Kluwer, Dordrecht.

Blandford, R. D. & Hogg, D. W., 1996, Gravitational telescopes, *Astrophysical Applications of Gravitational Lensing*, eds. Kochanek, C. S., & Hewitt, J. N., Cambridge University Press, Cambridge.

Hogg, D. W., Cohen, J. G., Blandford, R., Shopbell, P., Cowie, L. L., Hu, E. M., & Songaila, A., 1997, The redshift distribution in the Hubble Deep Field, *The Hubble Space Telescope and the High Redshift Universe*, eds. Tanvir, N. R., Aragón-Salamanca, A., & Wall, J. V., Cambridge University Press, Cambridge, 147–148.

Hogg, D. W., Blandford, R., Fassnacht, C. D., Kundić, T., Brainerd, T. G., & Malhotra, S., 1997, Strong and weak gravitational lensing in the Hubble Deep Field, *The Hubble Space Telescope and the High Redshift Universe*, eds. Tanvir, N. R., Aragón-Salamanca, A., & Wall, J. V., Cambridge University Press, Cambridge, 267–268.

Arav, N. & Hogg, D. W., 1997, What is the redshift of gamma-ray burst 970508?, arXiv:astro-ph/9706068.

Hogg, D. W. & Turner, E. L., 1998, GRB971214, association with a Galactic star? *GRB Coordinates Network Circular* 150.

Cohen, J. G., Hogg, D. W., Blandford, R., Pahre, M. A., & Shopbell, P. L., 1998, The extremely red objects found thus far in the Caltech Faint Galaxy Redshift Survey, *Infrared Surveys: A Prelude to SIRTf*, eds. Bica, M. D., Cutri, R. M., & Madore, B. F., ASP Conference Series 177, 51–56.

Thorsett, S. E. & Hogg, D. W., 1999, Possible identification of SN1999E with GRB980910, *GRB Coordinates Network Circular* 197.

Hogg, D. W., 1999, Distance measures in cosmology, arXiv:astro-ph/9905116.

Hogg, D. W., 1999, Faint field surveys: The view from Pasadena, *The High Redshift Universe: Galaxy Formation and Evolution at High Redshift*, eds. Bunker, A. J., & van Breugel, W. J. M., Astronomical Society of the Pacific, San Francisco, 224–233.

Hogg, D. W., Constraints on photometric calibration from observations of high-redshift type Ia supernovae, arXiv:astro-ph/0001419.

Smette, A. *et al*, 2000, Ultraviolet Spectra of GRBs: Potential with STIS, *The Greatest Explosions Since the Big Bang: Supernovae and Gamma-Ray Bursts*, eds. Livio, M., Panagia, N., & Sahu, K., STScI, Baltimore.

- Hogg, D. W. & Zaldarriaga, M., 2000, The big bang's radical brother (book review), *Science* **290** 2079–2080.
- Hogg, D. W., 2001, The Sloan Digital Sky Survey, *IAU Symposium 204: The Extragalactic Infrared Background and its Cosmological Implications*, eds. Harwit, M., & Hauser, M. G., Astronomical Society of the Pacific, San Francisco, 209.
- Hogg, D. W., 2001, A meta-analysis of cosmic star-formation history, [arXiv:astro-ph/0105280](https://arxiv.org/abs/astro-ph/0105280).
- Hogg, D. W., Baldry, I. K., Blanton, M. R., & Eisenstein, D. J., 2002, The *K* correction, [arXiv:astro-ph/0210394](https://arxiv.org/abs/astro-ph/0210394).
- Wherry, N., Blanton, M. R., & Hogg, D. W., 2004, A more informative picture of the HST Ultra Deep Field, [arXiv:astro-ph/0406274](https://arxiv.org/abs/astro-ph/0406274).
- Hogg, D. W. & Mahajan, S., 2004, Introductory physics: The new scholasticism (book review), [arXiv:physics/0412107](https://arxiv.org/abs/physics/0412107).

Miscellaneous publications

- Danner, R. & Hogg, D. W., 1996, *The Palomar Observatory*, a 20-minute video presentation for the Palomar Observatory Visitor Center.
- Hogg, D. W., 1997, *Special Relativity*, lecture notes employed in Caltech's first-year physics course, 1995–2000, and Princeton's, 1999–2001 and 2003–2004.