

BRANT E. ROBERTSON

Curriculum Vitae

Address:

Kavli Institute for
Cosmological Physics
University of Chicago
5640 South Ellis Avenue
Chicago, IL 60637

Phone: (773) 702-7842
Fax: (773) 834-8279
brant@kicp.uchicago.edu
<http://kicp.uchicago.edu/~brant>

Date of Birth: April 22, 1979
Place of Birth: Indianapolis, IN
Citizenship: USA

Degrees

Ph.D., Astronomy	Harvard University	June 2006
M.A., Astronomy	Harvard University	June 2003
B.S., Physics & Astronomy <i>cum laude, with Distinction in Physics</i>	University of Washington	June 2001

Teaching and Experience

Spitzer Fellow	Kavli Institute for Cosmological Physics, University of Chicago	Fall 2006-
Natural Sciences Representative System Administrator	Graduate Student Council, Harvard University Center for Parallel Astrophysical Computing	2004-2005 2002-2004
Teaching Fellow	“Cosmic Connections”, Harvard University	Spring 2003
Teaching Fellow	“Matter in the Universe”, Harvard University	Spring 2002

Honors and Awards

John P. and Carol J. Merrill Graduate Fellowship	Harvard University	2002-2003
Agassiz Fellowship	Harvard University	2002-2003
Harvard Scholar’s Grant	Harvard University	2001-2002
Phi Beta Kappa	University of Washington	2001
Washington State NASA Space Grant Scholar	University of Washington	1997-2001
Mary Gates Research Scholarship	University of Washington	1997-1999
Mary Gates Honors Scholarship	University of Washington	1997

Outreach Activities

Numerical Simulation Visualization Collaboration	National Center for Supercomputing Applications and Denver Museum of Natural Science	August 2005 -
Public Lecture Series: “Dark Matter and the Growth of Supermassive Black Holes”	Adler Planetarium	May 2007

Professional Societies

American Astronomical Society

Journals Refereed and Science Panels

NSF Panel: “Galaxies: Theory and Simulation”, April 2007

Referee: The Astrophysical Journal

Referee: The Astrophysical Journal Letters

Referee: Monthly Notices of the Royal Astronomical Society

Referee: Astronomy & Astrophysics

Referee: Revista Mexicana de Astronomía y Astrofísica

Citations

Citations from the NASA ADS Database as of August 12, 2008: **1753**

First-Author Publications

1. “High-Redshift Galaxy Kinematics: Constraints on Disk Formation”, **Robertson, B.**, and Bullock, J. S., ApJL, accepted
2. “Simulating High-Redshift Galaxies: Applications to Long Duration Gamma-Ray Burst Hosts”, **Robertson, B.**, to appear in the Proceedings of the IAU 254, Copenhagen, 9-13 June 2008
3. “Molecular Hydrogen and Global Star Formation Relations in Galaxies”, **Robertson, B.**, and Kravtsov, A. V., ApJ, 680, 1083
4. “Photometric Properties of the Most Massive High-Redshift Galaxies”, **Robertson, B.**, Li, Y., Cox, T. J., Hernquist, L., and Hopkins, P. F., ApJ, 667, 949
5. “The Fundamental Scaling Relations of Elliptical Galaxies”, **Robertson, B.**, Cox, T. J., Hernquist, L., Franx, M., Hopkins, P. F., Martini, P., and Springel, V., ApJ, 641, 21
6. “The Evolution of the $M_{\text{BH}} - \sigma$ Relation”, **Robertson, B.**, Hernquist, L., Cox, T. J., Di Matteo, T., Hopkins, P. F., Martini, P., and Springel, V., ApJ, 641, 90
7. “A Merger-driven Scenario for Cosmological Disk Galaxy Formation”, **Robertson, B.**, Bullock, J. S., Cox, T. J., Di Matteo, T., Hernquist, L., Springel, V., and Yoshida, N., ApJ, 645, 986
8. “ Λ -Cold Dark Matter, Stellar Feedback, and the Galactic Halo Abundance Pattern”, **Robertson, B.**, Bullock, J. S., Font, A. S., Johnston, K. V., and Hernquist, L., ApJ, 632, 872
9. “Disk Galaxy Formation in a Λ -Cold Dark Matter Universe”, **Robertson, B.**, Yoshida, N., Springel, V., and Hernquist, L., ApJ, 606, 32

Collaborative Publications

1. “A Semi-Analytic Model for the Co-evolution of Galaxies, Black Holes, and Active Galactic Nuclei”, Somerville, R. S., Hopkins, P. F., Cox, T. J., **Robertson, B.**, and Hernquist, L., MNRAS, accepted
2. “Tracing Galaxy Formation with Stellar Halos II: Relating Substructure in Phase- and Abundance-Space to Accretion Histories”, Johnston, K. V., Bullock, J. S., Sharma, S., Font, A., **Robertson, B.**, and Leitner, S. N., ApJ, accepted

3. “The Role of Galactic Winds on Molecular Gas Emission from Galaxy Mergers”, Narayanan, D., Cox, T. J., Kelly, B., Davé, R., Hernquist, L., Di Matteo, T., Hopkins, P. F., Kulesa, C., **Robertson, B.**, and Walker, C. K., *ApJS*, 176, 331
4. “On the Origin of Dynamically Cold Rings Around the Milky Way”, Younger, J. D., Besla, G., Cox, T. J., Hernquist, L., **Robertson, B.**, and Willman, B., *ApJL*, 676, 21
5. “The Nature of CO Emission from $z \sim 6$ Quasars”, Narayanan, D., Li, Y., Cox, T. J., Hernquist, L., Hopkins, P. F., Chakrabarti, S., Davé, R., Di Matteo, T., Gao, L., Kulesa, C., **Robertson, B.**, and Walker, C. K., *ApJ*, 174, 13
6. “An Observed Fundamental Plane Relation for Supermassive Black Holes”, Hopkins, P. F., Hernquist, L., Cox, T. J., **Robertson, B.**, and Krause, E., *ApJ*, 669, 67
7. “A Theoretical Interpretation of the Black Hole Fundamental Plane”, Hopkins, P. F., Hernquist, L., Cox, T. J., **Robertson, B.**, and Krause, E., *ApJ*, 669, 45
8. “Are the Magellanic Clouds on Their First Passage about the Milky Way?”, Besla, G., Kallivayalil, N., Hernquist, L., **Robertson, B.**, Cox, T. J., van der Marel, R. P., and Alcock, C., *ApJ*, 668, 949
9. “The Stellar Content of Galaxy Halos: A Comparison between Λ CDM Models and Observations of M31”, Font, A. S., Johnston, K. V., Ferguson, A. M. N., Bullock, J. S., **Robertson, B.**, Tumlinson, J., and Guhathakurta, P., *ApJ*, 673, 215
10. “Formation of $z \sim 6$ quasars from hierarchical galaxy mergers”, Li, Y., Hernquist, L., **Robertson, B.**, Cox, T. J., Hopkins, P. F., Springel, V., Gao, L., Di Matteo, T., Zentner, A. R., Jenkins, A., and Yoshida, N., *ApJ*, 665, 187
11. “Feedback-Driven Evolution of the Far-Infrared Spectral Energy Distributions of Luminous and Ultraluminous Infrared Galaxies”, Chakrabarti, S., Cox, T. J., Hernquist, L., Hopkins, P. F., **Robertson, B.**, and Di Matteo, T., *ApJ*, 658, 840
12. “The Relation Between Quasar and Merging Galaxy Luminosity Functions and the Merger-driven Star Formation Rate of the Universe”, Hopkins, P. F., Somerville, R. S., Hernquist, L., Cox, T. J., **Robertson, B.**, and Li, Y., *ApJ*, 652, 864
13. “An Upper Limit to the Degree of Evolution Between Supermassive Black Holes and their Host Galaxies”, Hopkins, P. F., **Robertson, B.**, Krause, E., Hernquist, L., and Cox, T. J., *ApJ*, 652, 107
14. “Kinematic Structure of Merger Remnants”, Cox, T. J., Dutta, S. N., Di Matteo, T., Hernquist, L., Hopkins, P. F., **Robertson, B.**, and Springel, V., *ApJ*, 650, 791
15. “Is There a Fundamental Line for Disk Galaxies?”, Simon, J. D., Prada, F., Vilchez, J. M., Blitz, L., and **Robertson, B.**, *ApJ*, 649, 709
16. “Phase-Space Distributions of Chemical Abundances in Milky Way-Type Galaxy Halos”, Font, A. S., Johnston, K. V., Bullock, J. S., and **Robertson, B.**, *ApJ*, 646, 886
17. “X-Ray Emission from Hot Gas in Galaxy Mergers”, Cox, T. J., Di Matteo, T., Hernquist, L., Hopkins, P. F., **Robertson, B.**, and Springel, V., *ApJ*, 643, 692
18. “Molecular Outflows in Galaxy Merger Simulations with Embedded Active Galactic Nuclei”, Narayanan, D., Cox, T. J., **Robertson, B.**, Davé, R., Di Matteo, T., Hernquist, L., Hopkins, P. F., Kulesa, C., and Walker, C. K., *ApJ*, 642, 107

19. “The Luminosity Dependence of Quasar Clustering”, Lidz, A., Hopkins, P. F., Cox, T. J., Hernquist, L., and **Robertson, B.**, ApJ, 641, 41
20. “Determining the Properties and Evolution of Red Galaxies from the Quasar Luminosity Function”, Hopkins, P. F., Hernquist, L., Cox, T. J., **Robertson, B.**, and Springel, V., ApJ, 163, 50
21. “A Unified, Merger-driven Model of the Origin of Starbursts, Quasars, the Cosmic X-Ray Background, Supermassive Black Holes, and Galaxy Spheroids”, Hopkins, P. F., Hernquist, L., Cox, T. J., Di Matteo, T., **Robertson, B.**, and Springel, V., ApJS, 163, 1
22. “The Evolution in the Faint-End Slope of the Quasar Luminosity Function”, Hopkins, P. F., Hernquist, L., Cox, T. J., **Robertson, B.**, Di Matteo, T., and Springel, V., ApJ, 639, 700
23. “Chemical Abundance Distributions of Galactic Halos and Their Satellite Systems in a CDM Universe”, Font, A. S., Johnston, K. V., Bullock, J. S., and **Robertson, B.**, ApJ, 638, 585
24. “Luminosity-dependent Quasar Lifetimes: Reconciling the Optical and X-Ray Quasar Luminosity Functions”, Hopkins, P. F., Hernquist, L., Cox, T. J., Di Matteo, T., **Robertson, B.**, and Springel, V., ApJ, 632, 81
25. “Luminosity-dependent Quasar Lifetimes: A New Interpretation of the Quasar Luminosity Function”, Hopkins, P. F., Hernquist, L., Cox, T. J., Di Matteo, T., **Robertson, B.**, and Springel, V., ApJ, 630, 716
26. “Black Holes in Galaxy Mergers: Evolution of Quasars”, Hopkins, P. F., Hernquist, L., Cox, T. J., Di Matteo, T., Martini, P., **Robertson, B.**, and Springel, V., ApJ, 630, 705
27. “A Physical Model for the Origin of Quasar Lifetimes”, Hopkins, P. F., Hernquist, L., Martini, P., Cox, T. J., **Robertson, B.**, Di Matteo, T., and Springel, V., ApJ, 625, 71
28. “A High-Resolution Study of the Hydra A Cluster with Chandra: Comparison of the Core Mass Distribution with Theoretical Predictions and Evidence for Feedback in the Cooling Flow”, David, L. P., Nulsen, P. E. J., McNamara, B. R., Forman, W., Jones, C., Ponman, T., **Robertson, B.**, and Wise, M., ApJ, 557, 546
29. “Constraints on the Structure of Dark Matter Halos from the Rotation Curves of Low Surface Brightness Galaxies”, van den Bosch, F. C., **Robertson, B.**, Dalcanton, J. J., and de Blok, W. J. G. , AJ, 119, 1579