

Andrey V. Kravtsov

List of Publications

Refereed publications:

"The Robustness of Density Profiles in Dissipationless Mergers"

Stelios Kazantzidis, Andrew Zenter, **Andrey V. Kravtsov**
2005, *Astrophys.J.* submitted

"The shape of dark matter halos: dependence on mass, redshift, radius, and formation"

Brandon Allgood, Ricardo Flores, Joel R. Primack, **Andrey V. Kravtsov**, Risa H. Wechsler,
Andreas Faltenbacher, James S. Bullock
2005, *MNRAS*, submitted [astro-ph/0508497]

"The shape of galaxy cluster dark matter haloes: systematics of its imprint on cluster gas, and comparison to observations"

Ricardo Flores, Brandon Allgood, **Andrey V. Kravtsov**, Joel R. Primack, David A. Buote,
James S. Bullock
2005, *MNRAS*, submitted [astro-ph/0508226]

"Chandra sample of relaxed galaxy clusters: mass, gas fraction, and mass-temperature relation"

Alexey Vikhlinin, **Andrey V. Kravtsov**, William Forman, Christine Jones,
Maxim Markevitch, Steven S. Murray, L. Van Speybroeck
2005, *Astrophys.J.*, submitted [astro-ph/0507092]

"Impact of Dark Matter Substructure on the Matter and Weak Lensing Power Spectra"

Bradley Hagan, Chung-Pei Ma, **Andrey V. Kravtsov**
2005, *Astrophys.J.*, in press [astro-ph/0504557]

"Galaxy-galaxy lensing: dissipationless simulations versus the halo model"

Rachel Mandelbaum, Argyro Tasitsiomi, Uros Seljak, **Andrey V. Kravtsov**, Risa Wechsler
2005, *MNRAS*, 362, 1451-1462 [astro-ph/0410711]

"Anisotropic distribution of galactic satellites"

Andrew Zentner, **Andrey V. Kravtsov**, Oleg Y. Gnedin, Anatoly A. Klypin
2005, *Astrophys.J.*, 629, 219-232 [astro-ph/0502496]

"Effects of cooling and star formation on the baryon fractions in clusters"

Andrey V. Kravtsov, Daisuke Nagai, Alexey Vikhlinin
2005, *Astrophys.J.*, 625, 588-598 [astro-ph/0501227]

"The Physics of Galaxy Clustering I: A Model for Subhalo Populations"

Andrew Zentner, Andreas Berlind, James S. Bullock, **Andrey V. Kravtsov**, Risa Wechsler
2005, *Astrophys.J.*, 624, 505-525 [astro-ph/0411586]

"Formation of globular clusters in hierarchical cosmology"

Andrey V. Kravtsov, Oleg Y. Gnedin
2005, *Astrophys.J.*, 623, 650-665 [astro-ph/0305199]

"Supersonic motions of galaxies in clusters"

Andreas Faltenbacher, **Andrey V. Kravtsov**, Daisuke Nagai, Stefan Gottloeber
2005, MNRAS, 358, 139–148 [astro-ph/0408488]

"The radial distribution of galaxies in LCDM clusters"

Daisuke Nagai, **Andrey V. Kravtsov**
2005, Astrophys.J., 618, 557–568 [astro-ph/0408273]

"Response of dark matter halos to condensation of baryons: cosmological simulations and improved adiabatic contraction model"

Oleg Y. Gnedin, **Andrey V. Kravtsov**, Anatoly A. Klypin, Daisuke Nagai
2004, Astrophys.J., 616, 16–26 [astro-ph/0406247]

"Modeling galaxy–mass correlations in dissipationless simulations"

Argyro Tasitsiomi, **Andrey V. Kravtsov**, Risa H. Wechsler, Joel R. Primack
2004, Astrophys.J., 614, 533–546 [astro-ph/0404168]

"The effect of gas cooling on the shapes of dark matter halos"

Stelios Kazantzidis, **Andrey V. Kravtsov**, Andrew R. Zentner,
Brandon Allgood, Daisuke Nagai, Ben Moore
2004, Astrophys.J. Letters, 611, L73–L76 [astro-ph/0405189]

"The tumultuous lives of galactic dwarfs and the missing satellites problem"

Andrey V. Kravtsov, Oleg Y. Gnedin, Anatoly A. Klypin
2004, Astrophys.J., 609, 482–497 [astro-ph/0401088]

"The Dark Side of the Halo Occupation Distribution"

Andrey V. Kravtsov, Andreas A. Berlind, Risa H. Wechsler,
Anatoly A. Klypin, Stefan Gottloeber, Brandon Allgood, Joel Primack
2004, Astrophys.J., 609, 35–49 [astro-ph/0308519]

"Density profiles of LCDM clusters"

Argyro Tasitsiomi, **Andrey V. Kravtsov**, Stefan Gottloeber, Anatoly A. Klypin
2004, Astrophys.J., 607, 125–139 [astro-ph/0311062]

"Constrained Simulations of the Real Universe: the Local Supercluster"

Anatoly A. Klypin, Yehuda Hoffman, **Andrey V. Kravtsov**, Stefan Gottloeber
2003, Astrophys.J., 596, 19 [astro-ph/0107104]

"On the Origin of the Global Schmidt Law of Star Formation"

Andrey V. Kravtsov
2003, ApJ Letters, 590, L1 [astro-ph/0303240]

"Lensing Optical Depth for Substructure and Isolated Dark Matter Halos"

Jacqueline Chen, **Andrey V. Kravtsov**, Charles R. Keeton
2003, Astrophys.J., 592, 24 [astro-ph/0302005]

"Cold fronts in CDM clusters"

Daisuke Nagai, **Andrey V. Kravtsov**
2003, Astrophys.J., 587, 514 [astro-ph/0206469]

- "Effect of internal flows on Synyaev–Zeldovich measurements of cluster peculiar velocities"*
Daisuke Nagai, **Andrey V. Kravtsov**, Arthur Kosowsky
2003, *Astrophys.J.*, 587, 524 [astro-ph/0208308]
- "Sample variance considerations for cluster surveys"*
Wayne Hu, **Andrey V. Kravtsov**
2003, *Astrophys.J.*, 584, 702 [astro-ph/0203169]
- "The origin of angular momentum in dark matter halos"*
Mayrita Vitvitska, Anatoly Klypin, **Andrey V. Kravtsov**, James S. Bullock,
Risa Wechsler, Joel R. Primack
2002, *Astrophys. J.*, 581, 799–809 [astro-ph/0105349]
- "Spatial distribution of galactic halos and their merger histories"*
Stefan Gottlöber, Martin Kerscher, **Andrey V. Kravtsov**, Andreas Faltenbacher,
Anatoly A. Klypin, Volker Müller,
2002, *Astronomy & Astrophys.*, 387, 778–787 [astro-ph/0203148]
- "Constrained Simulations of the Real Universe: II. Observational Signatures of gas in the Local Supercluster region"*
Andrey V. Kravtsov, Anatoly A. Klypin, Yehuda Hoffman
2002, *Astrophys.J.*, 571, 563 [astro-ph/0109077]
- "Concentrations of Dark Halos from their Assembly Histories"*
Risa H. Wechsler, James S. Bullock, Joel R. Primack, **Andrey V. Kravtsov**, Avishai Dekel
2002, *Astrophys.J.*, 568, 52 [astro-ph/0108151]
- "Angular momentum profiles of Warm Dark Matter halos"*
James S. Bullock, **Andrey V. Kravtsov**, Pedro Colin
2002, *ApJL*, 564, L1 [astro-ph/0109077]
- "A Universal Angular Momentum Profile for Galactic Halos"*
James S. Bullock, Avishai Dekel, Tsafir Kolatt, **Andrey V. Kravtsov**, Anatoly A. Klypin,
Cristiano Porciani, Joel R. Primack
2001, *Astrophys.J.*, 555, 240 [astro-ph/0011001]
- "Resolving the Structure of Cold Dark Matter Halos"*
Anatoly A. Klypin, **Andrey V. Kravtsov**, James S. Bullock, Joel R. Primack
2001, *Astrophys.J.*, 554, 903 [astro-ph/0006343]
- "Profiles of dark haloes: evolution, scatter and environment"*
James S. Bullock, Tsafir S. Kolatt, Yair Sigad, Somerville, R.S., **Andrey V. Kravtsov**,
Anatoly A. Klypin, Joel R. Primack, Avishai Dekel
2001, *MNRAS*, 321, 559 [ADS] [astro-ph/9908159]
- "Hierarchical Galaxy Formation and Substructure in the Galaxy's Stellar Halo"*
James S. Bullock, **Andrey V. Kravtsov**, David H. Weinberg
2001, *Astrophys. J.*, 548, 33 [astro-ph/0007295]
- "Merging History as a Function of Halo Environment"*
Stefan Gottloeber, Anatoly A. Klypin, **Andrey V. Kravtsov**
2001, *Astrophys. J.*, 546, 223 [astro-ph/0004132]

"The Galactic Halo Formation and the Evolution of Bias"

Pedro Colin, Anatoly A. Klypin, **Andrey V. Kravtsov**, Alexei M. Khokhlov
2001, Revista Mexicana A. 11, 113

"On the supernovae heating of the intergalactic medium"

Andrey V. Kravtsov and Gustavo Yepes
2000, MNRAS, 318, 227 [astro-ph/0004333]

"On the effects of resolution in dissipationless cosmological simulations"

Alexander Knebe, **Andrey V. Kravtsov**, Stefan Gottloeber, Anatoly Klypin
2000, MNRAS, 317, 630 [astro-ph/9912257]

"Velocity bias in a LCDM model"

Pedro Colin, Anatoly A. Klypin, **Andrey V. Kravtsov**
2000, Astrophys. J., 539, 561 [astro-ph/9907337]

"Reionization and the Abundance of Galactic Satellites"

James S. Bullock, **Andrey V. Kravtsov**, David H. Weinberg
2000, Astrophys. J., 539, 517 [astro-ph/0002214]

"Density profiles of dark matter halos: diversity and dependence on environment"

Vladimir Avila-Reese, Claudio Firmani, Anatoly A. Klypin, **Andrey V. Kravtsov**
1999, MNRAS, 310, 527 [astro-ph/9906260]

"Quantifying the evolution of higher-order clustering"

Jens Schmalzing, Stefan Gottloeber, Anatoly A. Klypin, **Andrey V. Kravtsov**
1999, MNRAS, 309, 1007 [astro-ph/9906475]

"Where are the missing galactic satellites?"

Anatoly A. Klypin, **Andrey V. Kravtsov**, Octavio Valenzuela, Francisco Prada
1999, Astrophys. J., 522, 82–92 [astro-ph/9901240]

"Evolution of bias in different cosmological models"

Pedro Colin, Anatoly A. Klypin, **Andrey V. Kravtsov**, Alexei M. Khokhlov
1999, Astrophys. J., 523, 32 [astro-ph/9809202]

"The origin and evolution of halo bias in linear and nonlinear regimes"

Andrey V. Kravtsov and Anatoly A. Klypin
1999, Astrophys. J., 520, 437 [astro-ph/9812311]

"Young galaxies: what turns them on?"

Tsafrir S. Kolatt, James S. Bullock, Rachel Somerville, Yair Sigad, P. Jonsson,
Andrey V. Kravtsov, Anatoly A. Klypin, Joel R. Primack, Avishai Dekel
1999, Astrophys. J. 523, L109 [astro-ph/9906104]

"Galaxies in N-body simulations: overcoming the overmerging problem"

Anatoly A. Klypin, Stefan Gottlöber, **Andrey V. Kravtsov**, Alexei M. Khokhlov
1999, Astrophys. J. 516, 530 [ADS] [astro-ph/9708176]

"The cores of dark matter dominated galaxies: theory vs. observations"

Andrey V. Kravtsov, Anatoly A. Klypin, James S. Bullock, Joel R. Primack
1998, *Astrophys.J.*, 502, 48 [astro-ph/9708176]

"Adaptive Refinement Tree – a new high-resolution N-body code for cosmological simulations"

Andrey V. Kravtsov, Anatoly A. Klypin, Alexei M. Khokhlov
1997, *Astrophys.J.Supplement* 111, 73 [astro-ph/9701195]

"The search for and investigation of Large Quasar Groups"

Boris V. Komberg, **Andrey V. Kravtsov**, Vladimir N. Lukash
1996, *MNRAS*, 282, 713 [astro-ph/9602090]

"A possibility to reveal the parent populations for the objects with active nuclei on the basis of comparing their spatial correlation functions"

Boris V. Komberg, **Andrey V. Kravtsov**
1995, *Astronomy and Astrophysics Transactions*, 8(4), 241
(Journal of Russian Astronomical Society published in english)

"The investigation of spatial clustering of quasars using two-point spatial correlation function"

Boris V. Komberg, **Andrey V. Kravtsov**, Vladimir N. Lukash
1994, *Astronomy and Astrophysics*, 286, L19

Selected Publications in Conference Proceedings:

"Formation of Globular Clusters in Hierarchical Cosmology"

Andrey V. Kravtsov, Oleg Y. Gnedin

2004, in proceedings of the STScI Symposium "The Local Group as an Astrophysical Laboratory" (STScI, Baltimore, May 2003)

"Simulating Formation of Galaxy Clusters"

Daisuke Nagai, **Andrey V. Kravtsov**

2004, in the proceedings of the IAU Colloquium 195 "Outskirts of galaxy clusters: intense life in the suburbs" (Torino, Italy, March 2004) [astro-ph/0404350]

"High-resolution Simulations of Galaxy Clusters"

Daisuke Nagai, **Andrey V. Kravtsov**

2003, in proceedings of the AAS HEAD Meeting #7, #13.10

"Simulations of the Local Universe"

Stefan Gottloeber, Anatoly Klypin, **Andrey V. Kravtsov**, Yehuda Hoffman

2002, in the proceedings of the "First Joint HLRB and KONWIHR Result and Reviewing Workshop" (Munich, October 2002) [astro-ph/0208398]

"CDM: Numerical Predictions on Small Scales"

Andrey V. Kravtsov

2001, 20th Texas Symposium on relativistic astrophysics, Austin, Texas
Melville, NY: American Institute of Physics, 2001, xix, 938 p. AIP conference proceedings,
Vol. 586. Edited by J. Craig Wheeler and Hugo Martel.

"Spatial and Velocity Biases"

Anatoly Klypin, **Andrey V. Kravtsov**, Pedro Colin

In proceedings of the Conference "Cosmic Flows", Victoria, UVic, July 1999
[astro-ph/9910372]

"Survival of substructures in DM halos and evolution of bias"

Anatoly Klypin, **Andrey V. Kravtsov**, Pedro Colin, Alexei M. Khokhlov

Galaxy Dynamics, proceedings of a conference held at Rutgers University, 8–12 Aug 1998.
ASP Conference Series, edited by D. R. Merritt, M. Valluri, and J. A. Sellwood

"Galactic Halo Formation and Evolution of Bias"

Pedro Colin, Anatoly Klypin, **Andrey V. Kravtsov**, Alexei M. Khokhlov

IX Latin American Regional IAU Meeting, "Focal Points in Latin American Astronomy",
held in Tonantzintla, Mexico, Nov 9–13, 1998, Eds: Aguilar, A.; Carraminana, A.;

"Evolution of Dark Matter Halos"

Joel S. Primack, James S. Bullock, **Andrey V. Kravtsov**, Anatoly Klypin

In Proceedings of the Rutgers Conference (Rutgers, August 1998)

"Evolution of halo clustering and bias in a LCDM model"

Andrey V. Kravtsov, Anatoly Klypin, Pedro Colin, Alexei M. Khokhlov

In Proceedings of the international conference "Large-Scale Structure: from recombination
to Garching" (Garching, Germany, August 1998)

"Evolution of dark matter halos in a cosmological environment"

Stefan Gottlöber, Anatoly Klypin, **Andrey V. Kravtsov**
in ASP Conference Series Vol. 176, p. 418–429 "Observational cosmology: the development of galaxy system" (Sesto, Italy, July 1998), G. Giuricin, M. Mezetti, P. Salucci, eds.

"Evolution of isolated halos and halos inside of groups and clusters in a LCDM model"

Stefan Gottlöber, Anatoly Klypin, **Andrey V. Kravtsov**
In Proceedings of the international conference "Large–Scale Structure: from recombination to Garching" (Garching, Germany, August 1998)

"Evolution of structure in the Universe"

Andrey V. Kravtsov
In Proceedings of the international Vatican Observatory meeting on Research and Education (Castel Gandolfo, Italy, June 1998)

"The cores of dark matter dominated galaxies: theory vs. observations"

Andrey V. Kravtsov, Anatoly Klypin, James Bullock, Joel Primack
In Proceedings of the UC Santa Cruz Workshop "Galactic halos", D. Zaritsky, ed., 421–425 (Santa Cruz, August 1997)

"Effects of dynamical friction on the evolution of the Intracluster Medium"

Andrey V. Kravtsov, Anatoly A. Klypin
in Proceedings of The Potsdam International Workshop "LSS: tracks and traces" (Potsdam, September 1997), V. Müller et al., eds., p. 31

"The cores of dark matter dominated galaxies: theory vs. observations"

Andrey V. Kravtsov
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"Large–scale distribution of quasars"

Boris V. Komberg, **Andrey V. Kravtsov**, Vladimir N. Lukash
in Proceedings of The 1st International Conference of Cosmoparticle Physics "Cosmion–94" (Moscow, Dec. 1994), 1996, in press [astro–ph/9502056]

Preprints (unpublished):

"Origin and destiny of the diffuse component in dark matter halos"

Tsafir S. Kolatt, James S. Bullock, Yair Sigad, **Andrey V. Kravtsov**, Anatoly A. Klypin, Joel R. Primack, Avishai Dekel
[astro–ph/0010223]

"Interaction rates of dark–matter halos and subhalos"

Tsafir S. Kolatt, James S. Bullock, Yair Sigad, **Andrey V. Kravtsov**, Anatoly A. Klypin, Joel R. Primack, Avishai Dekel
[astro–ph/0010222]

"Mass and velocity functions of halos, subhalos, and galactic halos"

Yair Sigad, Tsafir S. Kolatt, James S. Bullock, **Andrey V. Kravtsov**, Anatoly A. Klypin, Joel R. Primack, Avishai Dekel
[astro–ph/0005323]

"Dynamical friction and evolution of the intracluster medium"

Andrey V. Kravtsov and Anatoly A. Klypin
1997, NMSU preprint

"Large-scale distribution of quasars in deep pencil-beam surveys"

Andrey V. Kravtsov
[astro-ph/9608112]