

# Recently Discussed Papers at Journal Club

30 November 2015

[arXiv: 1511.05124](#) [introduced by Lawrence]

Title: *Effects of nonlinear inhomogeneity on the cosmic expansion with numerical relativity*  
Authors: Eloisa Bentivegna, Marco Bruni

[arXiv:1405.0525](#) **Phys. Rev. D 90 (2014) 023009** [introduced by Hadis]

Title: *Generalized self-veto probability for atmospheric neutrinos*  
Authors: Thomas K. Gaisser, Kyle Jero, Albrecht Karle, and Jakob van Sante

23 November 2015

[arXiv: 1504.00227](#) [introduced by Kiran]

Title: *The gamma-ray and neutrino sky: A consistent picture of Fermi-LAT, Milagro, and IceCube results*  
Authors: Daniele Gaggero, Dario Grasso, Antonio Marinelli, Alfredo Urbano, Mauro Valli

16 November 2015

[arXiv: 1511.02938](#) [introduced by Brendan]

Title: *Fermi-LAT Observations of High-Energy Gamma-Ray Emission Toward the Galactic Center*  
Authors: The Fermi-LAT Collaboration

[arXiv:1507.04266](#) **Phys. Rev. D 92 (2015) 043515** [introduced by Yong-Zhuang]

Title: *The deceleration parameter in "tilted" Friedmann universes*  
Authors: Christos G. Tsagas, Miltiadis I. Kadiatzoglou

2 November 2015

[arXiv: 1510.06424](#) [introduced by Dylan]

Title: *A Bright Gamma-ray Galactic Center Excess and Dark Dwarfs: Strong Tension for Dark Matter Annihilation Despite Milky Way Halo Profile and Diffuse Emission Uncertainties*  
Authors: Kevork N. Abazajian, Ryan E. Keeley

[arXiv:1508.01725](#) **JCAP 10 (2015) 013** [introduced by Nezihe]

Title: *Turnaround radius in an accelerated universe with quasi-local mass*  
Authors: Valerio Faraoni, Marianne Lapierre-Léonard, Angus Prain

28 September 2015

[arXiv: 1507.0659](#) [introduced by Lawrence]

Title: *CMB seen through random Swiss Cheese*  
Authors: Mikko Lavinto, Syksy Rasanen

21 September 2015

[arXiv:1411.4385](#) [introduced by Kiran]

Title: *Status of High-Energy Neutrino Astronomy*  
Authors: Marek Kowalski

17 August 2015

[arXiv:1405.0525](#) **Phys. Rev. D 90 (2014) 023009** [introduced by Hadis]

Title: *A generalized self-veto probability for atmospheric neutrinos*  
Authors: Thomas K. Gaisser, Kyle Jero, Albrecht Karle, Jakob van Santen

10 August 2015

[arXiv:1506.04587](#) [introduced by Brendan]

Title: *The Luminous Convolution Model for spiral galaxy rotation curves*  
Authors: S. Cisneros, J.G. O'Brien, N.S. Oblath, J.A. Formaggio

3 August 2015

[arXiv:1506.05478](#) [introduced by Nezihe]

Title: *Is the baryon acoustic oscillation peak a cosmological standard ruler?*  
Authors: Boudewijn F. Roukema, Thomas Buchert, Hirokazu Fujii, Jan J. Ostrowski

27 July 2015

[arXiv:1502.01020](#) [introduced by Dylan]

Title: *Search for Gamma-ray Emission from Dark Matter Annihilation in the Large Magellanic Cloud*  
Authors: Matthew R. Buckley, Eric Charles, Jennifer M. Gaskins, Alyson M. Brooks, Alex Drlica-Wagner, Pierrick Martin, Geng Zhao

13 July 2015

[arXiv:1502.01762](#) [introduced by Lawrence]

Title: *Kinematic Bias in Cosmological Distance Measurement*  
Authors: Nick Kaiser, Michael J. Hudson

29 June 2015

[Wide ranging discussion on Hawking evaporation](#) [introduced by Hadleigh]

For a full list see top 14 papers at: <http://hadleighfrost.com/physics/>

22 June 2015

[arXiv:1504.03753](#) [introduced by Kiran]

Title: *Measurement of the Atmospheric Electron Neutrino Spectrum with IceCube*  
Authors: IceCube Collaboration: M. G. Aartsen et al

15 June 2015

[arXiv:1505.04649](#) [introduced by Yongzhuang]

Title: *Gravity as the breakdown of conformal invariance*  
Authors: Giovanni Amelino-Camelia, Michele Arzano, Giulia Gubitosi, Joao Magueijo

8 June 2015

[arXiv:1305.0830](#) **Phys. Rev. D 88 (2013) 083009** [introduced by Moe]

Title: *Pulsars Cannot Account for the Inner Galaxy's GeV Excess*  
Authors: Dan Hooper, Ilias Cholis, Tim Linden, Jennifer Siegal-Gaskins, Tracy Slatyer

25 May 2015

[arXiv:1504.04782](#) [introduced by Brendan]

Title: *When Dark Matter interacts with Cosmic Rays or Interstellar Matter: A Morphological Study*  
Authors: Eric Carlson, Stefano Profumo

18 May 2015

[arXiv:1410.1749](#) **Phys.Rev. D91 (2015) 022001** [introduced by Hadis]

Title: *Atmospheric and Astrophysical Neutrinos above 1 TeV*  
Authors: IceCube Collaboration (M.G. Aartsen et al.)

11 May 2015

[arXiv:1504.01676](#) [introduced by Nezihe]

Title: *Cosmological ensemble and directional averages of observables*  
Authors: Camille Bonvin, Chris Clarkson, Ruth Durrer, Roy Maartens, Obinna Umeh

4 May 2015

[arXiv:1504.05175](#) [introduced by Dylan]

Title: *Secondary antiprotons as galactic dark matter probe*  
Authors: Carmelo Evoli, Daniele Gaggero, Dario Grasso

25 November 2014

[http://fermi.gsfc.nasa.gov/science/mtgs/symposia/2014/program/17\\_Anderson.pdf](http://fermi.gsfc.nasa.gov/science/mtgs/symposia/2014/program/17_Anderson.pdf) [reintroduced by Chris]

Title: *A search for dark matter annihilation in dwarf spheroidal galaxies with Pass 8 data*  
Authors: Brandon Anderson Fermi-LAT collaboration

Phys. Rev. Lett. 113 (2014) 101102 [introduced by Nezihe]  
Title: *Gravitational Waves from Periodic Three-Body Systems*  
Authors: V. Dmitrašinovic, Milovan Šuvakov, and Ana Hudomal

18 November 2014

[arXiv:1404.5307](#) [introduced by Cheng-Yang]

Title: *The Lagrangian for mass dimension one fermions*  
Authors: Cheng-Yang Lee

[arXiv:1310.0828](#) Front. Phys. China 8 (2013) 748-758 [introduced by Kiran]  
Title: *Cosmic Ray Energy Spectrum from Measurements of Air Showers*  
Authors: Thomas K. Gaisser, Todor Stanev, Serap Tilav

11 November 2014

[http://fermi.gsfc.nasa.gov/science/mtgs/symposia/2014/program/08\\_Murgia.pdf](http://fermi.gsfc.nasa.gov/science/mtgs/symposia/2014/program/08_Murgia.pdf) [introduced by Oscar]

Title: *Observation of the high-energy gamma ray emission towards the galactic center*  
Authors: Simona Murgia, Troy Porter

[http://fermi.gsfc.nasa.gov/science/mtgs/symposia/2014/program/17\\_Anderson.pdf](http://fermi.gsfc.nasa.gov/science/mtgs/symposia/2014/program/17_Anderson.pdf) [introduced by Oscar]

Title: *A search for dark matter annihilation in dwarf spheroidal galaxies with Pass 8 data*  
Authors: Brandon Anderson Fermi-LAT collaboration

[arXiv:1410.6675](#) [introduced by David]

Title: *Local conformal symmetry: the missing component for space and time*  
Authors: Gerard 't Hooft

[arXiv:1410.6675](#) [introduced by David]

Title: *Back-reaction of the Hawking radiation flux on a gravitationally collapsing star II: Fireworks instead of firewalls*  
Authors: Laura Mersini-Houghton, Harald P. Pfeiffer

[hep-ph/0203239](#) Phys.Rev. D65, 097303 (2002) [introduced by Hadis]

Title: *Measuring High Energy Neutrino-Nucleon Cross Sections With Future Neutrino Telescopes*  
Authors: Dan Hooper

28 October 2014

[arXiv:1410.6168](#) [introduced by Chris]

Title: *Discovery of a new galactic center excess consistent with upscattered starlight*  
Authors: Kevork N. Abazajian, Nicolas Canac, Shunsaku Horiuchi, Manoj Kaplinghat, Anna Kwa

[arXiv:1410.4248](#) [introduced by Nezihe]

Title: *Towards black hole entropy in shape dynamics*  
Authors: Gabriel Herczeg, Vasudev Shyam

21 October 2014

[arXiv:1410.3470](#) [introduced by Ahsan]

Title: *Cosmic microwave background anisotropies in the timescape cosmology*  
Authors: M. Ahsan Nazer, David L. Wiltshire

[arXiv:1310.0828](#) [introduced by Dylan]

Title: *Dark Matter Constraints from Observations of 25 Milky Way Satellite Galaxies with the Fermi Large Area Telescope*  
Authors: M. Ackermann et al [Fermi-LAT Collaboration]

[arXiv:1410.3470](#) [introduced by Ahsan]

Title: *Cosmic microwave background anisotropies in the timescape cosmology*  
Authors: M. Ahsan Nazer, David L. Wiltshire

[arXiv:1310.0828](#) [introduced by Dylan]

Title: *Dark Matter Constraints from Observations of 25 Milky Way Satellite Galaxies with the Fermi Large Area Telescope*  
Authors: M. Ackermann et al [Fermi-LAT Collaboration]

14 October 2014

[arXiv:1410.2242](#) [introduced by Oscar]

Title: *A Comprehensive Search for Dark Matter Annihilation in Dwarf Galaxies*  
Authors: Alex Geringer-Sameth, Savvas M. Koushiappas, Matthew G. Walker

[arXiv:1410.1687](#) [introduced by David]

Title: *Can an inhomogeneous metric be detected with the baryonic acoustic oscillation peak?*  
Authors: Boudewijn F. Roukema, Thomas Buchert, Jan J. Ostrowski, Martin J. France

[arXiv:1409.1572](#) [introduced by Chris]

Title: *Improving the Sensitivity of Gamma-Ray Telescopes to Dark Matter Annihilation in Dwarf Spheroidal Galaxies*  
Authors: Eric Carlson, Dan Hooper, Tim Linden

**7 October 2014**

[arXiv:1410.1678](#) [introduced by Oscar]

Title: *Cosmic-Ray Models of the Ridge-Like Excess of Gamma Rays in the Galactic Center*  
Authors: Oscar Macias, Roland Crocker, Chris Gordon, Stefano Profumo

**30 September 2014**

[arXiv:1409.0395](#) [introduced by Nezihe]

Title: *Discrete Newtonian Cosmology: Perturbations*  
Authors: George F. R. Ellis, Gary W. Gibbons

[arXiv:1409.0042](#) [introduced by Oscar]

Title: *Background model systematics for the Fermi GeV excess*  
Authors: Francesca Calore, Ilias Cholis, Christoph Weniger

**23 September 2014**

[arXiv:1409.5738](#) [introduced by Chris]

Title: *Planck intermediate results. XXX. The angular power spectrum of polarized dust emission at intermediate and high Galactic latitudes*  
Authors: R. Adam et al [Planck Collaboration]

**Phys. Rev. Lett. 113, 121102 (2014)** [introduced by Oscar ]

Title: *Electron and Positron Fluxes in Primary Cosmic Rays Measured with the Alpha Magnetic Spectrometer on the International Space Station*  
Authors: M Aguilar et al [AMS Collaboration]

**16 September 2014**

[arXiv:1409.1573](#) [introduced by Oscar]

Title: *Towards a Supersymmetric Description of the Fermi Galactic Center Excess*  
Author: Matthew Cahill-Rowley, Jamie Gainer, JoAnne Hewett, Tom Rizzo

[arXiv:1409.0917](#) [introduced by Nezihe]

Title: *Identification of a gravitational arrow of time*  
Author: Julian Barbour, Tim Koslowski, Flavio Mercati

[arXiv:1408.6224](#) [introduced by Chris]

Title: *A Critical Reevaluation of Radio Constraints on Annihilating Dark Matter*  
Author: Ilias Cholis, Dan Hooper, Tim Linden

**9 September 2014**

[arXiv:1309.3764](#) **Phys.Rev. D88, 086006 (2013)** [introduced by Yong-Zhuang]

Title: *Gauss-Bonnet correction to Holographic thermalization: two-point functions, circular Wilson loops and entanglement entropy*  
Authors: Yong-Zhuang Li, Shao-Feng Wu, Guo-Hong Yang

[arXiv:1306.0210](#) **JHEP 1309 (2013) 057** [introduced by Yong-Zhuang]

Title: *Linear growth of entanglement entropy in holographic thermalization captured by horizon interiors and mutual information*  
Authors: Yong-Zhuang Li, Shao-Feng Wu, Yong-Qiang Wang, Guo-Hong Yang

**26 August 2014**

[arXiv:1408.4388](#) [introduced by Oscar]

Title: *Comment on the paper "Dark matter searches going bananas: the contribution of Potassium (and Chlorine) to the 3.5 keV line" by T. Jeltema and S. Profumo*  
Author: A. Boyarsky, J. Franse, D. Iakubovskiy, O. Ruchayskiy

[arXiv: 1406.7369](#) [introduced by Chris]

Title: *Parametrization of gamma-ray production cross-sections for pp interactions in a broad proton energy range from the kinematic threshold to PeV energies*

Authors: Ervin Kafexhiu, Felix Aharonian, Andrew M. Taylor, Gabriela S. Vila

**19 August 2014**

[arXiv:1408.3989](#) [introduced by Hadleigh]

Title: *Observing Shape in Spacetime*

Author: Sean Gryb

[arXiv: 1407.4665](#) [introduced by Oscar]

Title: *Is there a "too big to fail" problem in the field?*

Authors: Emmanouil Papastergis, Riccardo Giovanelli, Martha P. Haynes, Francesco Shankar

[arXiv:1405.7059](#) *Astrophys. J.* 790 (2014) 86 [introduced by Chris]

Title: *The Cosmic Ray Population of the Galactic Central Molecular Zone*

Authors: Tova M. Yoast-Hull, J.S. Gallagher, Ellen G. Zweibel

**12 August 2014**

[arXiv:1408.1944](#) [introduced by Hadleigh]

Title: *Does it Make Sense to Speak of Self-Locating Uncertainty in the Universal Wave Function? Remarks on Sebens and Carroll*

Author: Adrian Kent

[arXiv: 1408.1699](#) [introduced by Oscar]

Title: *Dark matter searches going bananas: the contribution of Potassium (and Chlorine) to the 3.5 keV line*

Authors: Tesla E. Jeltema, Stefano Profumo

[arXiv:1407.1944](#) [introduced by Nezihe]

Title: *An extension of cosmological dynamics with York time*

Author: Philipp Roser

**5 August 2014**

[arXiv:1407.5625](#) [introduced by Oscar]

Title: *Challenges in Explaining the Galactic Center Gamma-Ray Excess with Millisecond Pulsars*

Author: Ilias Cholis, Dan Hooper, Tim Linden

**29 July 2014**

[arXiv:1407.3384](#) [introduced by Hadleigh]

Title: *Why do we remember the past and not the future? The 'time oriented coarse graining' hypothesis*

Author: Carlo Rovelli

[CMS PAS HIG-14-005](#) [introduced by Oscar]

Title: *Search for lepton flavor violating decays of the Higgs boson*

Authors: CMS Collaboration

[arXiv:1405.1566](#) [introduced by Ahsan]

Title: *Detection of a Supervoid Aligned with the Cold Spot of the Cosmic Microwave Background*

Authors: István Szapudi et al

[arXiv:1312.1615](#) [introduced by Hadleigh]

Title: *Action principle for cellular automata and the linearity of quantum mechanics*

Authors: Hans-Thomas Elze

**3 June 2014**

[arXiv:1406.0283](#) [introduced by Ahsan]

Title: *Magnetic Fields in the Milky Way*

Authors: Marijke Haverkorn

[arXiv:1405.7860](#) [introduced by Hadleigh]

Title: *What is the distance to the CMB? How relativistic corrections remove the tension with local  $H_0$  measurements*  
Authors: Chris Clarkson, Obinna Umeh, Roy Maartens, Ruth Durrer

[arXiv:1402.3244](#) **Phys. Rev. Lett. 112, 201802 (2014)** [introduced by Oscar]  
Title: *Search for Invisible Decays of a Higgs Boson Produced in Association with a Z Boson in ATLAS*  
Authors: G. Aad et al. (ATLAS Collaboration)

27 May 2014

[arXiv:1405.5535](#) [introduced by Nezihe]

Title: *What drives the time evolution of the spacetime geometry?*  
Author: T. Padmanabhan

[arXiv:1405.4484](#) [introduced by Oscar]

Title: *The detection of a cosmic-ray electron-positron anisotropy is a sufficient (but not necessary) condition to discard a Dark Matter origin for the anomalous positron fraction*  
Author: Stefano Profumo

20 May 2014

<https://wbitp.caltech.edu/workshops> [introduced by Chris]

Title: *BICEP2 Results: A View from the Outside*  
Author: M. Zaldarriaga

[arXiv:1405.4137](#) [introduced by Hadleigh]

Title: *Prospects of detecting spacetime torsion*  
Authors: Dirk Puetzfeld, Yuri N. Obukhov

[arXiv:1405.4011](#) [introduced by Hadleigh]

Title: *Cosmic coincidence or graviton mass?*  
Author: Saurya Das

[arXiv:1405.3915](#) [introduced by Hadleigh]

Title: *How the quantum emerges from gravity*  
Authors: Anushrut Sharma, Tejinder P. Singh

[arXiv:1405.3771](#) [introduced by Hadleigh]

Title: *Matter may matter*  
Authors: Zahra Haghani, Tiberiu Harko, Hamid Reza Sepangi, Shahab Shahidi

[arXiv:1405.1030](#) [introduced by Oscar]

Title: *Searching for Dark Matter Annihilation in the Smith High-Velocity Cloud*  
Authors: Alex Drlica-Wagner, German A. Gomez-Vargas, John W. Hewitt, Tim Linden, Luigi Tibaldo

13 May 2014

[arXiv:1405.1031](#) [introduced by Oscar]

Title: *Detecting Dark Matter with Imploding Pulsars in the Galactic Center*  
Authors: Joseph Bramante, Tim Linden

[arXiv:1404.2185](#) [introduced by Nezihe]

Title: *Light propagation in the averaged universe*  
Authors: Samae Bagheri, Dominik J Schwarz

[arXiv:1402.0376](#) [introduced by David]

Title: *Impact of local structure on the cosmic radio dipole*  
Authors: Matthias Rubart, David Bacon, Dominik J Schwarz

6 May 2014

[arXiv:1405.0298](#) [introduced by Chris]

Title: *De Sitter Space Without Quantum Fluctuations*  
Authors: Kimberly K. Boddy, Sean M. Carroll, Jason Pollack

[arXiv:1404.7546](#) [introduced by Oscar]

Title: *What could we learn from a sharply falling positron fraction?*  
Authors: Timur Delahaye, Kumiko Kotera, Joseph Silk

**29 April 2014**

[arXiv:1404.1801](#) [introduced by David]

Title: *Baryon Acoustic Oscillations in the Ly forest of BOSS DR11 quasars*  
Authors: T. Debulac et al [BOSS collaboration]

**15 April 2014**

[arXiv:1404.2318](#) [introduced by Chris]

Title: *Millisecond pulsar interpretation of the Galactic center gamma-ray excess*  
Authors: Qiang Yuan, Bing Zhang

[arXiv:1404.1455](#) [introduced by Oscar]

Title: *First Axion Results from the XENON100 Experiment*  
Authors: E. Aprile et al [XENON Collaboration]

**8 April 2014**

[arXiv:1402.2976](#) [introduced by Nezihe]

Title: *On the universality of void density profiles*  
Authors: E. Ricciardelli, V. Quilis, J. Varela

**1 April 2014**

[arXiv:1403.5372](#) [introduced by Oscar]

Title: *Inferred cosmic-ray spectrum from Fermi -LAT -ray observations of the Earth's limb*  
Authors: M. Ackermann et al [Fermi-LAT Collaboration]

[arXiv:1402.3123](#) [introduced by David]

Title: *Swiss-cheese models and the Dyer-Roeder approximation*  
Author: Pierre Fleury

[arXiv:1312.5696](#) [introduced by Ahsan]

Title: *Separate Constraints on Early and Late Cosmology*  
Authors: Benjamin Audren

**25 March 2014**

[arXiv:1403.5027](#) [introduced by Oscar]

Title: *The Effective Hooperon*  
Authors: Alexandre Alves, Stefano Profumo, Farinaldo S. Queiroz, William Shepherd

[arXiv:1403.4216](#) [introduced by Chris]

Title: *Tensor Detection Severely Constrains Axion Dark Matter*  
Authors: David J. E. Marsh, Daniel Grin, Renee Hlozek, Pedro G. Ferreira

[arXiv:1312.7304](#) [introduced by Dylan]

Title: *Gamma rays and neutrinos from a cosmic ray source in the Galactic Center region*  
Authors: A.D. Supanitsky

**18 March 2014**

[arXiv:1403.2301](#) [introduced by Chris]

Title: *BICEP2 I: Detection Of B-mode Polarization at Degree Angular Scales*  
Authors: P.A.R. Ade et al - BICEP collaboration

**11 March 2014**

[arXiv:1402.2301](#) [introduced by Oscar]

Title: *Detection of An Unidentified Emission Line in the Stacked X-ray spectrum of Galaxy Clusters*  
Authors: Esra Bulbul, Maxim Markevitch, Adam Foster, Randall K. Smith, Michael Loewenstein, Scott W. Randall

[arXiv:1312.1538](#) [introduced by Nezihe]

Title: *Gravitational Energy, Local Holography and Non-equilibrium Thermodynamics*  
Authors: Laurent Freidel

**4 March 2014**

[arXiv:1402.6703](#) [introduced by Oscar]

Title: *The Characterization of the Gamma-Ray Signal from the Central Milky Way: A Compelling Case for Annihilating Dark Matter*  
Authors: Tansu Daylan, Douglas P. Finkbeiner, Dan Hooper, Tim Linden, Stephen K. N. Portillo, Nicholas L. Rodd, Tracy R. Slatyer

[arXiv:1402.5429](#) [introduced by Nezihe]

Title: *Evidence for a Lower Value for  $H_0$  from Cosmic Chronometers Data?*  
Authors: Vinicius C. Busti, Chris Clarkson, Marina Seikel

**25 February 2014**

[arXiv:1401.1146](#) [introduced by Nezihe]

Title: *Is the Universe Simpler than  $\Lambda$ CDM?*  
Authors: Matthew G. Walker, Abraham Loeb

[arXiv:1312.1146](#) [introduced by Ahsan]

Title: *A Tale of Two Redshifts*  
Authors: Bruce A. Bassett, Yabebal Fantaye, Renée Hložek, Cristiano Sabiu, Mat Smith

**18 February 2014**

[arXiv:1402.2236](#) [introduced by David]

Title: *Curvature vs Distances: testing the Copernican Principle*  
Authors: Domenico Sapone, Elisabetta Majerotto, Savvas Nesseris

**Physics 6 (2013) 136, on Phys. Rev. Lett. 111 (2013) 251301** [introduced by Oscar]

Title: *Viewpoint: Ups and Downs in the Search for Dark Matter*  
Author: Rafael F. Lang

[arXiv:1307.5830](#) Phys. Rev. Lett. 111 (2013) 141301 [introduced by Ahsan]

Title: *Detection of B-mode Polarization in the Cosmic Microwave Background with Data from the South Pole Telescope*  
Authors: D. Hanson et al [SPT collaboration]

**11 February 2014**

[arXiv:1305.3884](#) Nature 501 (2013) 517-520 [introduced by Chris]

Title: *Swings between rotation and accretion power in a binary millisecond pulsar*  
Authors: A. Papitto et al

[arXiv:1212.6267](#) [introduced by Ahsan]

Title: *Constraints on Cosmology from the Cosmic Microwave Background Power Spectrum of the 2500 deg<sup>2</sup> SPT-SZ Survey*  
Authors: Z. Hou et al [SPT collaboration]

**4 February 2014**

[arXiv:1401.7973](#) [introduced by Chris Blake]

Title: *The value of  $H_0$  in the inhomogeneous Universe*  
Authors: Ido Ben-Dayan, Ruth Durrer, Giovanni Marozzi, Dominik J. Schwarz

[arXiv:1401.6458](#) [introduced by Oscar]

Title: *Extended gamma-ray emission from Coy Dark Matter*  
Authors: Celine Boehm, Matthew J. Dolan, Christopher McCabe, Michael Spannowsky, Chris J. Wallace

[arXiv:1310.6810](#) [introduced by Ahsan]

Title: *On the complementarity of galaxy clustering with cosmic shear and flux magnification*  
Authors: Christopher Duncan, Benjamin Joachimi, Alan Heavens, Catherine Heymans, Hendrik Hildebrandt

**28 January 2014**

[arXiv:1401.0706](#) [introduced by Chris Blake]

Title: *A clear and measurable signature of modified gravity in the galaxy velocity fields*  
Authors: Wojciech A. Hellwing, Alexandre Barreira, Carlos S. Frenk, Baojiu Li, Shaun Cole



[arXiv:1310.6810](#) [introduced by Chris Blake]

Title: *Using the topology of large-scale structure in the WiggleZ Dark Energy Survey as a cosmological standard ruler*  
Authors: Chris Blake, J. Berian James, Gregory B. Poole

[arXiv:astro-ph/0605581](#) **Astrophys. J. 647 (2006) 692-708, Erratum-ibid. 662 (2007) 779** [introduced by Oscar]  
Title: *Parameterization of Gamma, e<sup>+</sup>/e<sup>-</sup> and Neutrino Spectra Produced by p-p Interaction in Astronomical Environment*  
Authors: Tuneoyoshi Kamae, Niklas Karlsson, Tsunefumi Mizuno, Toshinori Abe, Tatsumi Koi

**21 January 2014**

[arXiv:1312.6671](#) [introduced by Oscar]

Title: *The Contribution of Cosmic Rays Interacting With Molecular Clouds to the Galactic Center Gamma-Ray Excess*  
Authors: Oscar Macias, Chris Gordon

[arXiv:1312.4297](#) [introduced by Nezihe]

Title: *Homothetic motions and Newtonian cosmology*  
Authors: Xavier Jaén, Alfred Molina

[arXiv:1306.0955](#) [introduced by David]

Title: *Directional dependence of CMB parity asymmetry*  
Author: W. Zhao

**17 December 2013**

[arXiv:1312.3313](#) [introduced by David]

Title: *Planck Data Reconsidered*  
Authors: David Spergel, Raphael Flauger, Renee Hlozek

[arXiv:1312.2952](#) [introduced by Chris]

Title: *Constraining the origin of the rising cosmic ray positron fraction with the boron-to-carbon ratio*  
Authors: Ilias Cholis, Dan Hooper

[arXiv:1310.0526](#) [introduced by Nezihe]

Title: *Weyl gravity as general relativity*  
Author: James T. Wheeler

**3 December 2013**

[arXiv:1310.0828](#) [reintroduced by Chris]

Title: *Dark Matter Constraints from Observations of 25 Milky Way Satellite Galaxies with the Fermi Large Area Telescope*  
Authors: [Fermi-LAT Collaboration](#), M. Ackermann et al

[arXiv:1305.1584](#) [introduced by Oscar]

Title: *Constraining the Galactic millisecond pulsar population using Fermi Large Area Telescope*  
Authors: Tristan Grégoire, Jürgen Knödseder

**26 November 2013**

[arXiv:1311.5241](#) [introduced by Ahsan]

Title: *Evolution of linear perturbations in spherically symmetric dust models*  
Authors: Sean February, Julien Larena, Chris Clarkson, Denis Pollney

[arXiv:1311.4991](#) [introduced by Dylan]

Title: *Supernova explosions in magnetized, primordial dark matter halos*  
Authors: D. Seifried, R. Banerjee, D. Schleicher

[arXiv:1310.8214](#) [introduced by Oscar]

Title: *First results from the LUX dark matter experiment at the Sanford Underground Research Facility*  
Authors: LUX Collaboration, D.S. Akerib et al

**19 November 2013**

[arXiv:1310.7632](#) [introduced by Nezihe]

Title: *Gravitational entropies in LTB dust models*  
Authors: Roberto A Sussman, Julien Larena

[arXiv:1305.1324](#) [introduced by Oscar]

Title: *AMS02 results support the secondary origin of cosmic ray positrons*  
Authors: Kfir Blum, Boaz Katz, Eli Waxman

**12 November 2013**

[arXiv:1305.4530](#) JCAP 10 (2013) 016 [introduced by Ahsan]

Title: *ISW effect as probe of features in the expansion history of the Universe*  
Authors: Santanu Das, Arman Shafieloo, Tarun Souradeep

[arXiv:1009.2630](#) ApJ 726 (2011) 60 [introduced by Oscar]

Title: *The high-energy, arcminute-scale galactic center gamma-ray source*  
Authors: M. Chernyakova, D. Malyshev, F.A. Aharonian, R.M. Crocker, D.I. Jones

**5 November 2013**

[arXiv:1311.0054](#) [introduced by Nezihe]

Title: *Relative information at the foundation of physics*  
Author: Carlo Rovelli

**29 October 2013**

[arXiv:1308.2153](#) [introduced by Oscar]

Title: *Supersymmetry with Light Dark Matter confronting the recent CDMS and LHC Results*  
Authors: Alexandre Arbe, Marco Battaglia, Farvah Mahmoud

**15 October 2013**

[arXiv:1206.6882](#) Astrophys.J. 762 (2013) 33 [introduced by Oscar]

Title: *Interacting Cosmic Rays with Molecular Clouds: A Bremsstrahlung Origin of Diffuse High Energy Emission from the Inner 2deg by 1deg of the Galactic Center*  
Authors: F. Yusef-Zadeh et al

**In Proceedings of the International Conference: "Road to Reality with Roger Penrose"** [introduced by Nezihe]

Title: *Gravitational energy: a quasi-local, Hamiltonian approach*  
Authors: K. Grabowska, J. Kijowski

**8 October 2013**

[arXiv:1310.0828](#) [introduced by Oscar]

Title: *Dark Matter Constraints from Observations of 25 Milky Way Satellite Galaxies with the Fermi Large Area Telescope*  
Authors: [Fermi-LAT Collaboration](#), M. Ackermann et al

[arXiv:1309.5695](#) [introduced by Nezihe]

Title: *Intermediate homogenization of the Universe and the problem of gravitational entropy*  
Authors: Krzysztof Bolejko, William R. Stoeger

**1 October 2013**

[arXiv:1309.5960](#) [introduced by Oscar]

Title: *Warm Dark Matter: The End is Nigh*  
Authors: Aurel Schneider, Donnino Anderhalden, Andrea Maccio, Juerg Diemand

**24 September 2013**

[arXiv:1309.3847](#) [introduced by Nezihe]

Title: *Alignments of galaxies within cosmic filaments from SDSS DR7*  
Authors: Youcai Zhang, Xiaohu Yang, Huiyuan Wang, Lei Wang, H. J. Mo, Frank C. van den Bosch

**17 September 2013**

[arXiv:1309.0721](#) [introduced by Oscar]

Title: *The Discovery of the Higgs Boson with the CMS Detector and its Implications for Supersymmetry and Cosmology*  
Author: W. de Boer (CMS Collaboration)

[arXiv:1307.3937](#) [introduced by Nezihe]

Title: *Gravitational theoretical development supporting MOND*  
Authors: Edmund A. Chadwick, Timothy F. Hodgkinson and Graham S. McDonald

**10 September 2013**

[arXiv:1308.6582](#) [introduced by Oscar]

Title: *Introduction to extragalactic sources of very high-energy photons*  
Author: C. Pfrommer

**3 September 2013**

[arXiv:1308.1852](#) [introduced by Nezihe]

Title: *Discrete Newtonian Cosmology*  
Authors: Gary W Gibbons, George F R Ellis

[arXiv:1308.5870](#) [introduced by Ahsan]

Title: *Evidence for massive neutrinos from CMB and lensing observations*  
Authors: Richard A. Battye, Adam Moss

[arXiv:1303.5080](#) [introduced by Ahsan]

Title: *Planck 2013 results. XX. Cosmology from Sunyaev-Zeldovich cluster counts*  
Authors: Planck Collaboration: P.A.R. Ade et al

**20 August 2013**

[arXiv:1308.2228](#) [introduced by Oscar]

Title: *Separating astrophysical sources from indirect dark matter signals*  
Author: Jennifer M. Siegal-Gaskins

**13 August 2013**

[arXiv:1307.7152](#) [introduced by Oscar]

Title: *Bremsstrahlung gamma rays from light Dark Matter*  
Authors: Marco Cirelli, Pasquale D. Serpico, Gabrijela Zaharijas

**6 August 2013**

[arXiv:1307.3561](#) [introduced by Oscar]

Title: *Phenomenology of Dirac Neutralino Dark Matter*  
Authors: Matthew R. Buckley, Dan Hooper, Jason Kumar

[arXiv:1304.3253](#) [introduced by Nezihe]  
Title: *Variations on Birkhoff's Theorem*  
Authors: George F R Ellis, Rituparno Goswami

**29 July 2013**

[arXiv:1307.6862](#) [introduced by Oscar]  
Title: *Fermi Bubbles under Dark Matter Scrutiny. Part I: Astrophysical Analysis*  
Authors: Wei-Chih Huang, Alfredo Urbano, Wei Xue

[arXiv:1307.2571](#) [introduced by Nezihe]  
Title: *Cosmology with Void-Galaxy Correlations*  
Authors: Nico Hamaus, Benjamin D. Wandelt, P. M. Sutter, Guilhem Lavaux, Michael S. Warren

**23 July 2013**

[arXiv:1303.6868](#) **Phys. Rev. Lett. 111, 031302 (2013)** [introduced by Oscar]  
Title: *Model Independent Determination of the Dark Matter Mass from Direct Detections Experiments*  
Authors: Bradley J. Kavanagh and Anne M. Green

**16 July 2013**

[arXiv:1306.1039](#) [introduced by Nezihe]  
Title: *An Optimal Choice of Reference for the Quasi-Local Gravitational Energy and Angular Momentum*  
Authors: Gang Sun, Chiang-Mei Chen, Jian-Liang Liu, James M. Nester

[arXiv:1307.0826](#) [introduced by Oscar]  
Title: *Is the CMB telling us that dark matter is weaker than weakly interacting?*  
Author: Dan Hooper

**9 July 2013**

[arXiv:1306.3345](#) [introduced by Nezihe]

Title: *A covariant action principle for dissipative fluid dynamics: From formalism to fundamental physics*

Authors: N. Andersson, G. L. Comer

[arXiv:1307.0708](#) [introduced by Cheng-Yang]

Title: *The Higgs field as an inflaton*

Author: Fedor Bezrukov

## 2 July 2013

[arXiv:1306.5725](#) [introduced by Oscar]

Title: *Dark Matter and Pulsar Model Constraints from Galactic Center Fermi-LAT Gamma Ray Observations*

Authors: Chris Gordon, Oscar Macias

[arXiv:1306.6772](#) [introduced by Chris]

Title: *First Fermi-LAT Catalog of Sources Above 10 GeV*

Authors: Fermi-LAT Collaboration

## 18 June 2013

[arXiv:1306.3208](#) [introduced by Ahsan and David]

Title: *Timescape cosmology with radiation fluid*

Authors: James A.G. Duley, M. Ahsan Nazer, David L. Wiltshire

## 11 June 2013

[arXiv:1306.0563](#) [introduced by Chris]

Title: *Systematic Uncertainties In Constraining Dark Matter Annihilation From The Cosmic Microwave Background*

Authors: Silvia Galli, Tracy R. Slatyer, Marcos Valdes, Fabio Iocco

[arXiv:1305.7509](#) [introduced by Cheng-Yang]

Title: *On a local mass dimension one Fermi field of spin one-half and the theoretical crevice that allows it*

Author: Dharam Vir Ahluwalia

[arXiv:1305.2466](#) [introduced by Oscar]

Title: *Gravitational Waves from Gamma-Ray Pulsar Glitches*

Authors: Elan Stopnitzky, Stefano Profumo

## 4 June 2013

[arXiv:1304.7791](#) [introduced by Nezihe]

Title: *Can all cosmological observations be accurately interpreted with a unique geometry?*

Authors: Pierre Fleury, Helene Dupuy, Jean-Philippe Uzan

[arXiv:1303.3271](#) **Phys.Rev.Lett. 110, 211302 (2013)** [introduced by Oscar]

Title: *A Dark-Disk Universe*

Authors: JiJi Fan, Andrey Katz, Lisa Randall, Matthew Reece

## 28 May 2013

[arXiv:1304.1566](#) [introduced by Ahsan]

Title: *On negative mass*

Authors: Jonathan Belletête, M. B. Paranjape

[arXiv:hep-th/0410212](#) **Int.J.Mod.Phys. D13, 2003 (2004)** [introduced by Cheng-Yang]

Title: *Generalized Quantum Relativistic Kinematics: a Stability Point of View*

Authors: C. Chryssomalakos, E. Okon

## 21 May 2013

[arXiv:1303.3121](#) [reintroduced by Ahsan]

Title: *Cosmic variance and the measurement of the local Hubble parameter*

Authors: Valerio Marra, Luca Amendola, Ignacy Sawicki, and Wessel Valkenburg

[arXiv:1304.5243](#) [introduced by Oscar]

Title: *Non-thermal WIMPs as "Dark Radiation" in Light of ATACAMA, SPT, WMAP9 and Planck*

Authors: Chris Kelso, Stefano Profumo, Farinaldo S. Queiroz

[arXiv:1305.0830](#) [introduced by Chris]

Title: *Pulsars Cannot Account for the Inner Galaxy's GeV Excess*

Author: Dan Hooper, Ilias Cholis, Tim Linden, Jennifer Siegal-Gaskins, Tracy Slatyer

## 14 May 2013

[arXiv:1305.1971](#) [introduced by Chris]

Title: *Goldstone Bosons as Fractional Cosmic Neutrinos*

Author: Steven Weinberg

[arXiv:1304.2785](#) [introduced by Nezihe]  
Title: *Inflationary paradigm in trouble after Planck2013*  
Authors: Anna Ijjas, Paul J. Steinhardt, and Abraham Loeb

**7 May 2013**

[arXiv:????????](#) [introduced by Cheng-Yang]

[arXiv:1304.5524](#) [introduced by Oscar]  
Title: *A Clustering Analysis of the Morphology of the 130 GeV Gamma-Ray Feature*  
Authors: Eric Carlson, Tim Linden, Stefano Profumo, Christoph Weniger

**30 April 2013**

[arXiv:1304.5229](#) [introduced by Chris]  
Title: *Adiabatic and Isocurvature Perturbation Projections in Multi-Field Inflation*  
Authors: Chris Gordon, Paul M. Saffin

[arXiv:1303.5612](#) [introduced by Nezihe]  
Title: *A Gravitational Entropy Proposal*  
Author: Timothy Clifton, George F R Ellis and Reza Tavakol

**23 April 2013**

[Phys. Rev. Lett. 110 \(2013\) 141102](#) [introduced by Oscar]  
Title: *First Result from the Alpha Magnetic Spectrometer on the International Space Station: Precision Measurement of the Positron Fraction in Primary Cosmic Rays of 0.5–350 GeV*  
Authors: AMS Collaboration: M. Aguilar et al

[gr-qc/0701120 \[JCAP06\(2007\)018\]](#) [introduced by Chen-Yang]  
Title: *A spinor theory of gravity and the cosmological framework*  
Author: M. Novello

**16 April 2013**

[arXiv:1304.3706](#) [introduced by Oscar]  
Title: *Silicon Detector Results from the First Five-Tower Run of CDMS II*  
Authors: CDMS Collaboration: R. Agnese et al

[arXiv:1303.4444](#) [introduced by Nezihe]  
Title: *Virialization-induced curvature as a physical explanation for dark energy*  
Author: Boudewijn F. Roukema, Jan J. Ostrowski, Thomas Buchert

**9 April 2013**

[arXiv:1304.1270](#) [introduced by Chris]  
Title: *The CMB asymmetry from inflation*  
Author: David H. Lyth

[arXiv:1304.0759](#) [introduced by Oscar]  
Title: *Dark matter in galaxies: the dark matter particle mass is about 2 keV*  
Authors: H. J. de Vega, N. G. Sanchez

[arXiv:1303.6614](#) [introduced by David]  
Title: *On the Statistical Significance of the Bulk Flow Measured by the PLANCK Satellite*  
Author: F. Atrio-Barandela

[arXiv:1303.5051](#) [introduced by David]  
Title: *On Preferred Axes in WMAP Cosmic Microwave Background Data after Subtraction of the Integrated Sachs-Wolfe Effects*  
Authors: A. Rassat, J.-L. Starck

**26 March 2013**

[arXiv:1302.5076](#) [introduced by Chris]  
Title: *Planck 2013 results. XVI. Cosmological parameters*  
Authors: Planck Collaboration: P.A.R. Ade et al

[arXiv:1303.5082](#) [introduced by Chris]  
Title: *Planck 2013 results. XXII. Constraints on inflation*  
Authors: Planck Collaboration: P.A.R. Ade et al

[arXiv:1303.5083](#) [introduced by Chris]  
Title: *Planck 2013 results. XXIII. Isotropy and Statistics of the CMB*  
Authors: Planck Collaboration: P.A.R. Ade et al

[arXiv:1303.5087](#) [introduced by Chris]  
Title: *Planck 2013 results. XXVII. Doppler boosting of the CMB: Eppur si muove*  
Authors: Planck Collaboration: P.A.R. Ade et al

[arXiv:1303.5090](#) [introduced by David]  
Title: *Planck intermediate results. XIII. Constraints on peculiar velocities*  
Authors: Planck Collaboration: P.A.R. Ade et al

**19 March 2013**

[arXiv:1302.1915](#) [introduced by Oscar]  
Title: *Gamma Rays from Cosmic-Ray Proton Scattering in AGN Jets: the Intra-Cluster Gas vastly outshines Dark Matter*  
Author: Stefano Profumo, Lorenzo Ubaldi, Mikhail Gorchtein

[arXiv:1303.3121](#) [introduced by David]  
Title: *Cosmic variance and the measurement of the local Hubble parameter*  
Authors: Valerio Marra, Luca Amendola, Ignacy Sawicki, and Wessel Valkenburg

**12 March 2013**

[arXiv:1303.2015](#) [introduced by Oscar]  
Title: *Search for a neutrino emission from the Fermi Bubbles with the ANTARES telescope*  
Author: Simone Biagi

[arXiv:1302.6264](#) [introduced by Nezihe]  
Title: *The Solution to the Problem of Time in Shape Dynamics*  
Authors: Julian Barbour, Tim Koslowski, Flavio Mercati

**5 March 2013**

[arXiv:1210.40534](#) **Phys. Rev. D87 (2013) 023528** [introduced by Kei-ichi]  
Title: *Inflationary Dynamics with a Non-Abelian Gauge Field*  
Authors: Kei-ichi Maeda, Kei Yamamoto

[arXiv:1302.4753](#) [introduced by David]  
Title: *Interpretation of the Hubble diagram in a non-homogeneous universe*  
Authors: Pierre Fleury Hélène Dupuy, Jean-Philippe Uzan

**26 February 2013**

[arXiv:1302.4753](#) [introduced by Ahsan]  
Title: *Perturbed Recombination from Dark Matter Annihilation*  
Authors: Cora Dvorkin, Kfir Blum, Matias Zaldarriaga

**19 February 2013**

[arXiv:1302.3226](#) [introduced by Ahsan]  
Title: *Solution to the cosmological constant problem*  
Authors: T. Padmanabhan, Hamsa Padmanabhan

[arXiv:1301.3307](#) [introduced by Oscar]  
Title: *Detection of the Characteristic Pion-Decay Signature in Supernova Remnants*  
Authors: The Fermi-LAT collaboration: M. Ackermann et al

**12 February 2013**

[arXiv:1301.3459](#) [introduced by Chris]  
Title: *Cosmological Parameters from Pre-Planck CMB Measurements*  
Authors: Erminia Calabrese et al

[arXiv:????????](#) [introduced by Oscar]

[arXiv:1301.1312](#) [introduced by Ahsan]  
Title: *The blackness of the cosmic microwave background spectrum as a probe of the distance-duality relation*  
Authors: George Ellis, Robert Poltis, Jean-Philippe Uzan, Amanda Weltman

**5 February 2013**

[arXiv:1211.6256](#) [reintroduced by Roy]  
Title: *A structure in the early universe at  $z \sim 1.3$  that exceeds the homogeneity scale of the  $R$ - $W$  concordance cosmology*  
Authors: Roger G. Clowes, Kathryn A. Harris, Srinivasan Raghunathan, Luis E. Campusano, Ilona K. Soechting, Matthew J. Graham

[arXiv:????????](#) [introduced by Chris]

[arXiv:1209.3142](#) **Phys. Rev. Lett. 110, 021302 (2013)** [introduced by David]  
Title: *Antilensing: The Bright Side of Voids*  
Authors: Krzysztof Bolejko, Chris Clarkson, Roy Maartens, David Bacon, Nikolai Meures, and Emma Beynon

**29 January 2013**

[arXiv:1206.4887](#) [introduced by Ahsan]  
Title: *Late time anisotropy as an imprint of cosmological backreaction*  
Authors: Giovanni Marozzi, Jean-Philippe Uzan

[arXiv:????????](#) [introduced by Oscar]

[arXiv:1301.5559](#) [introduced by David]  
Title: *Cosmic radio dipole from NVSS and WENSS*  
Authors: Matthias Rubart and Dominik J. Schwarz

## 22 January 2013

[arXiv:1211.5160](#) [introduced by Nezihe]  
Title: *Interesting Evidence for a Low-Level Oscillation Superimposed on the Local Hubble Flow*  
Author: Morley B Bell

[arXiv:1301.0446](#), **Nature 493, 62-65 (2013)** [introduced by Peter]  
Title: *A Vast Thin Plane of Co-rotating Dwarf Galaxies Orbiting the Andromeda Galaxy*  
Authors: Rodrigo A. Ibata, Geraint F. Lewis, et al

## A few of the papers discussed in 2012:

[arXiv:1211.6256](#) [introduced by David]  
Title: *A structure in the early universe at  $z \sim 1.3$  that exceeds the homogeneity scale of the  $R$ - $W$  concordance cosmology*  
Authors: Roger G. Clowes, Kathryn A. Harris, Srinivasan Raghunathan, Luis E. Campusano, Ilona K. Soechting, Matthew J. Graham

[arXiv:1211.5275](#) [introduced by David]  
Title: *Excess ellipticity of hot and cold spots in the WMAP data?*  
Authors: Eirik Berntsen, Frode K. Hansen

[arXiv:1211.2915](#) [introduced by Peter]  
Title: *Visualization of structures and cosmic flows in the Local Universe*  
Authors: Daniel Pomarede, Helene Courtois, R. Brent Tully

[arXiv:1211.2616](#) [introduced by David]  
Title: *Baryon Acoustic Oscillations in the Ly-alpha forest of BOSS quasars*  
Authors: N.G. Busca et al

[arXiv:1211.1926](#) [introduced by David]  
Title: *Observational Aspects of an Inhomogeneous Cosmology*  
Authors: Christoph Saulder, Steffen Mieske and Werner W. Zeilinger

[arXiv:1210.5446](#) [introduced by David]  
Title: *Zel'dovich approximation and General Relativity*  
Authors: Cornelius Rampf, Gerasimos Rigopoulos

[arxiv:1210.2432](#) [introduced by David]  
Title: *The challenge of large and empty voids in SDSS DR7 redshift survey*  
Authors: Saeed Tavasoli, Kaveh Vasei, Roya Mohayaee

[arXiv:1209.5659](#) *Astrophys. J.* 759, L7 (2012) [introduced by David]  
Title: *The challenge of the largest structures in the universe to cosmology*  
Authors: Park, C., Choi, Y.-Y., Kim, J., Gott, J.R., Kim, S.S. and Kim, K.-P.

[arXiv:1209.1085](#) [introduced by David]  
Title: *Observational Cosmology in Macroscopic Gravity*  
Authors: Timothy Clifton, Alan Coley, Robert van den Hoogen

[arXiv:1208.1058](#) [introduced by David]  
Title: *A first application of the Alcock-Paczynski test to stacked cosmic voids*  
Authors: P. M. Sutter, Guilhem Lavaux, Benjamin D. Wandelt, David H. Weinberg

[arXiv:1206.4887](#) [introduced by Ahsan]  
Title: *Late time anisotropy as an imprint of cosmological backreaction*  
Authors: Giovanni Marozzi, Jean-Philippe Uzan

[arXiv:1206.0736](#) *Phys. Rev. Lett.* 109, 021102 (2012) [5 pages] [introduced by Ahsan]  
Title: *Lithium Synthesis in Microquasar Accretion*  
Authors: Fabio Iocco and Miguel Pato