Cosmology group publications (July 2012-November 2014)

[1] P. Astier, C. Balland, M. Brescia, E. Cappellaro, R. G. Carlberg, *et al.*, "Extending the supernova Hubble diagram to z ˜ 1.5 with the Euclid space mission," A&A **572**, A80 (Dec. 2014), arXiv:1409.8562

[2] J. Mosher, J. Guy, R. Kessler, P. Astier, J. Marriner, *et al.*, "Cosmological Parameter Uncertainties from SALT-II Type Ia Supernova Light Curve Models," ApJ **793**, 16 (Sep. 2014), arXiv:1401.4065

[3] J. Neveu, V. Ruhlmann-Kleider, P. Astier, M. Besançon, A. Conley, *et al.*, "First experimental constraints on the disformally coupled Galileon model," A&A **569**, A90 (Sep. 2014), arXiv:1403.0854 [gr-qc]

[4] A. Rasmussen, P. Antilogus, P. Astier, C. Claver, P. Doherty, *et al.*, "A framework for modeling the detailed optical response of thick, multiple segment, large format sensors for precision astronomy applications," in *Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series*, Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series, Vol. 9150 (2014) p. 17, arXiv:1407.5655 [astro-ph.IM]

[5] M. Betoule, R. Kessler, J. Guy, J. Mosher, D. Hardin, *et al.*, "Improved cosmological constraints from a joint analysis of the SDSS-II and SNLS supernova samples," A&A **568**, A22 (Aug. 2014), arXiv:1401.4064

[6] P. E. Doherty, P. Antilogus, P. Astier, J. Chiang, D. K. Gilmore, *et al.*, "Electro-optical testing of fully depleted CCD image sensors for the Large Synoptic Survey Telescope camera," in *Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series*, Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series, Vol. 9154 (2014) p. 18

[7] P. Antilogus, P. Astier, P. Doherty, A. Guyonnet, and N. Regnault, "The brighter-fatter effect and pixel correlations in CCD sensors," Journal of Instrumentation **9**, C03048 (Mar. 2014), arXiv:1402.0725 [astro-ph.IM]

[8] D. A. Howell, D. Kasen, C. Lidman, M. Sullivan, A. Conley, *et al.*, "Two Superluminous Supernovae from the Early Universe Discovered by the Supernova Legacy Survey," ApJ **779**, 98 (Dec. 2013), arXiv:1310.0470 [astro-ph.CO]

[9] P. Astier, P. El Hage, J. Guy, D. Hardin, M. Betoule, *et al.*, "Photometry of supernovae in an image series: methods and application to the SuperNova Legacy Survey (SNLS)," A&A **557**, A55 (Sep. 2013), arXiv:1306.5153 [astro-ph.IM]

[10] M. Betoule, J. Marriner, N. Regnault, J.-C. Cuillandre, P. Astier, *et al.*, "Improved photometric calibration of the SNLS and the SDSS supernova surveys," A&A **552**, A124 (Apr. 2013), arXiv:1212.4864 [astro-ph.CO]

[11] C. Lidman, V. Ruhlmann-Kleider, M. Sullivan, J. Myzska, P. Dobbie, *et al.*, "An Efficient Approach to Obtaining Large Numbers of Distant Supernova Host Galaxy Redshifts," PASA **30**, e001 (Jan. 2013), arXiv:1205.1306 [astro-ph.CO]

[12] P. Astier, "The expansion of the universe observed with supernovae," ArXiv e-prints(Nov. 2012), arXiv:1211.2590 [astro-ph.CO]

[13] P. Hudelot, J.-C. Cuillandre, K. Withington, Y. Goranova, H. McCracken, *et al.*, "VizieR Online Data Catalog: The CFHTLS Survey (T0007 release) (Hudelot+ 2012)," VizieR Online Data Catalog **2317**, 0 (Sep. 2012)

[14] J.-C. J. Cuillandre, K. Withington, P. Hudelot, Y. Goranova, H. McCracken, *et al.*, "Introduction to the CFHT Legacy Survey final release (CFHTLS T0007)," in *Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series*, Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series, Vol. 8448 (2012) p. 0

[15] N. Regnault, E. Barrelet, A. Guyonnet, C. Juramy, P.-F. Rocci, *et al.*, "(Sn)DICE: A Calibration System Designed for Wide Field Imagers," ArXiv e-prints(Aug. 2012), arXiv:1208.6301 [astro-ph.IM]

[16] K. Perrett, M. Sullivan, A. Conley, S. González-Gaitán, R. Carlberg, *et al.*, "Evolution in the Volumetric Type Ia Supernova Rate from the Supernova Legacy Survey," AJ **144**, 59 (Aug. 2012), arXiv:1206.0665 [astro-ph.CO]

[17] P. Astier and R. Pain, "Observational evidence of the accelerated expansion of the universe," Comptes Rendus Physique **13**, 521–538 (Jul. 2012), arXiv:1204.5493 [astro-ph.CO]

[18] S. González-Gaitán, A. Conley, F. B. Bianco, D. A. Howell, M. Sullivan, *et al.*, "The Rise Time of Normal and Subluminous Type Ia Supernovae," ApJ **745**, 44 (Jan. 2012), arXiv:1109.5757 [astro-ph.GA]

[19] S. J. Smartt, S. Valenti, M. Fraser, C. Inserra, D. R. Young, *et al.*, "PESSTO : survey description and products from the first data release by the Public ESO Spectroscopic Survey of Transient Objects," ArXiv e-prints(Nov. 2014), arXiv:1411.0299 [astro-ph.SR]

[20] C. Juramy, P. Antilogus, P. Bailly, S. Baumont, M. Dhellot, *et al.*, "Driving a CCD with two ASICs: CABAC and ASPIC," in *Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series*, Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series, Vol. 9154 (2014) p. 1

[21] A. F Villaverde, D. Henriques, K. Smallbone, S. Bongard, J. Schmid, *et al.*, "BioPreDyn-bench: benchmark problems for kinetic modelling in systems biology," ArXiv e-prints(Jul. 2014), arXiv:1407.5856 [q-bio.QM]

[22] R. Scalzo, G. Aldering, P. Antilogus, C. Aragon, S. Bailey, *et al.*, "Type Ia supernova bolometric light curves and ejected mass estimates from the Nearby Supernova Factory," MNRAS **440**, 1498–1518 (May 2014), arXiv:1402.6842

[23] A. G. Kim, G. Aldering, P. Antilogus, C. Aragon, S. Bailey, *et al.*, "Type Ia Supernova Hubble Residuals and Host-galaxy Properties," ApJ **784**, 51 (Mar. 2014), arXiv:1401.3352 [astro-ph.CO]

[24] U. Feindt, M. Kerschhaggl, M. Kowalski, G. Aldering, P. Antilogus, *et al.*, "Measuring cosmic bulk flows with Type Ia supernovae from the Nearby Supernova Factory," A&A **560**, A90 (Dec. 2013), arXiv:1310.4184 [astro-ph.CO]

[25] M. Rigault, Y. Copin, G. Aldering, P. Antilogus, C. Aragon, *et al.*, "Evidence of environmental dependencies of Type Ia supernovae from the Nearby Supernova Factory indicated by local Hα," A&A **560**, A66 (Dec. 2013), arXiv:1309.1182 [astro-ph.CO]

[26] M. Childress, G. Aldering, P. Antilogus, C. Aragon, S. Bailey, *et al.*, "Host Galaxy Properties and Hubble Residuals of Type Ia Supernovae from the Nearby Supernova Factory," ApJ **770**, 108 (Jun. 2013), arXiv:1304.4720 [astro-ph.CO]

[27] M. Childress, G. Aldering, P. Antilogus, C. Aragon, S. Bailey, *et al.*, "Host Galaxies of Type Ia Supernovae from the Nearby Supernova Factory," ApJ **770**, 107 (Jun. 2013), arXiv:1304.4719 [astro-ph.CO]

[28] R. Pereira, R. C. Thomas, G. Aldering, P. Antilogus, C. Baltay, *et al.*, "Spectrophotometric time series of SN 2011fe from the Nearby Supernova Factory," A&A **554**, A27 (Jun. 2013), arXiv:1302.1292 [astro-ph.CO]

[29] A. G. Kim, R. C. Thomas, G. Aldering, P. Antilogus, C. Aragon, *et al.*, "Standardizing Type Ia Supernova Absolute Magnitudes Using Gaussian Process Data Regression," ApJ **766**, 84 (Apr. 2013), arXiv:1302.2925 [astro-ph.CO]

[30] C. Buton, Y. Copin, G. Aldering, P. Antilogus, C. Aragon, *et al.*, "Atmospheric extinction properties above Mauna Kea from the Nearby SuperNova Factory spectro-photometric data set," A&A **549**, A8 (Jan. 2013), arXiv:1210.2619 [astro-ph.IM]

[31] R. Scalzo, G. Aldering, P. Antilogus, C. Aragon, S. Bailey, *et al.*, "A Search for New Candidate Super-Chandrasekhar-mass Type Ia Supernovae in the Nearby Supernova Factory Data Set," ApJ **757**, 12 (Sep. 2012), arXiv:1207.2695

[32] P. O'Connor, I. Kotov, P. Z. Takacs, J. S. Frank, S. Plate, *et al.*, "Development of the LSST raft tower modules," in *Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series*, Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series, Vol. 8453 (2012) p. 0

[33] F. K. Röpke, M. Kromer, I. R. Seitenzahl, R. Pakmor, S. A. Sim, *et al.*, "Constraining Type Ia Supernova Models: SN 2011fe as a Test Case," ApJ **750**, L19 (May 2012), arXiv:1203.4839 [astro-ph.SR]

[34] X. Wang, L. Wang, A. V. Filippenko, E. Baron, M. Kromer, *et al.*, "Evidence for Type Ia Supernova Diversity from Ultraviolet Observations with the Hubble Space Telescope," ApJ **749**, 126 (Apr. 2012), arXiv:1110.5809 [astro-ph.HE]

[35] A. Gabrielli, M. Joyce, and J. Morand, "Finite-N corrections to Vlasov dynamics and the range of pair interactions," Phys. Rev. E **90**, 062910 (Dec. 2014), arXiv:1408.0999 [cond-mat.stat-mech]

[36] D. Benhaiem, M. Joyce, and B. Marcos, "Self-similarity and stable clustering in a family of scale-free cosmologies," MNRAS **443**, 2126–2153 (Sep. 2014), arXiv:1309.2753

[37] M. Bilen Can, M. Joyce, and B. Wyser, "Chains in Weak Order Posets Associated to Involutions," ArXiv e-prints(Sep. 2014), arXiv:1409.4227 [math.CO]

[38] I. P. Carucci, M. Sparre, S. H. Hansen, and M. Joyce, "Particle ejection during mergers of dark matter halos," J. Cosmology Astropart. Phys. **6**, 057 (Jun. 2014), arXiv:1405.6725

[39] M. Joyce, J. Morand, F. Sicard, and P. Viot, "Scaling Quasistationary States in Long-Range Systems with Dissipation," Physical Review Letters **112**, 070602 (Feb. 2014), arXiv:1309.3464 [cond-mat.stat-mech]

[40] A. L. Rudolph, B. Lamine, M. Joyce, H. Vignolles, and D. Consiglio, "Introduction of interactive learning into French university physics classrooms," ArXiv e-prints(Nov. 2013), arXiv:1311.3622 [physics.ed-ph]

[41] M. Joyce, S. Kawaguchi, and J. H. Silverman, "Landen transforms as families of (commuting) rational self-maps of projective space," ArXiv e-prints(Aug. 2013), arXiv:1308.5355 [math.AG]

[42] D. Benhaiem, M. Joyce, and F. Sicard, "Exponents of non-linear clustering in scale-free one-dimensional cosmological simulations," MNRAS **429**, 3423–3432 (Mar. 2013), arXiv:1211.6642 [astro-ph.CO]

[43] M. Joyce and F. S. Labini, "Evolution of isolated overdensities as a control on cosmological N-body simulations," MNRAS **429**, 1088–1101 (Feb. 2013), arXiv:1210.1140 [astro-ph.CO]

[44] M. Joyce, K. B. Marshall, M. R. Halford, H. Aller, and M. Aller, "Multi-wavelength Analysis of Three Blazars," in *American Astronomical Society Meeting Abstracts #219*, American Astronomical Society Meeting Abstracts, Vol. 219 (2012) p. 243.32

[45] M. Joyce, B. Marcos, and F. Sylos Labini, "Mass Ejection and Vlasov-Poisson Limit in the Collapse of a Cold Spherical Self-Gravitating Cloud," in *Twelfth Marcel Grossmann Meeting on General Relativity* (2012) p. 2107