

Rapport d'activité LPNHE 2020–2021

Liste de publications du groupe Cosmo

25 novembre 2021

Articles

1. Héliion du Mas des Bourboux, James Rich, Andreu Font-Ribera et al. « The Completed SDSS-IV Extended Baryon Oscillation Spectroscopic Survey : Baryon Acoustic Oscillations with Ly α Forests ». *ApJ* 901.2, 153 (oct. 2020), p. 153. DOI : [10.3847/1538-4357/abb085](https://doi.org/10.3847/1538-4357/abb085). arXiv : [2007.08995](https://arxiv.org/abs/2007.08995) [[astro-ph.CO](#)]
2. Romina Ahumada, Carlos Allende Prieto, Andrés Almeida et al. « The 16th Data Release of the Sloan Digital Sky Surveys : First Release from the APOGEE-2 Southern Survey and Full Release of eBOSS Spectra ». *ApJS* 249.1, 3 (juil. 2020), p. 3. DOI : [10.3847/1538-4365/ab929e](https://doi.org/10.3847/1538-4365/ab929e). arXiv : [1912.02905](https://arxiv.org/abs/1912.02905) [[astro-ph.GA](#)]
3. Brad W. Lyke, Alexandra N. Higley, J. N. McLane et al. « The Sloan Digital Sky Survey Quasar Catalog : Sixteenth Data Release ». *ApJS* 250.1, 8 (sept. 2020), p. 8. DOI : [10.3847/1538-4365/aba623](https://doi.org/10.3847/1538-4365/aba623). arXiv : [2007.09001](https://arxiv.org/abs/2007.09001) [[astro-ph.GA](#)]
4. R. Graziani, M. Rigault, N. Regnault et al. « Peculiar velocity cosmology with type Ia supernovae ». *arXiv e-prints*, arXiv :2001.09095 (jan. 2020), arXiv :2001.09095. arXiv : [2001.09095](https://arxiv.org/abs/2001.09095) [[astro-ph.CO](#)]
5. Shadab Alam, Christian Arnold, Alejandro Aviles et al. « Testing the theory of gravity with DESI : estimators, predictions and simulation requirements ». *arXiv e-prints*, arXiv :2011.05771 (nov. 2020), arXiv :2011.05771. arXiv : [2011.05771](https://arxiv.org/abs/2011.05771) [[astro-ph.CO](#)]
6. James Farr, Andreu Font-Ribera, Héliion du Mas des Bourboux et al. « LyaCoLoRe : synthetic datasets for current and future Lyman- α forest BAO surveys ». *J. Cosmology Astropart. Phys.* 2020.3, 068 (mar. 2020), p. 068. DOI : [10.1088/1475-7516/2020/03/068](https://doi.org/10.1088/1475-7516/2020/03/068). arXiv : [1912.02763](https://arxiv.org/abs/1912.02763) [[astro-ph.CO](#)]
7. Ignasi Pérez-Ràfols, Matthew M. Pieri, Michael Blomqvist et al. « Spectroscopic QUasar Extractor and redshift (z) Estimator SQUEZE - I. Methodology ». *MNRAS* 496.4 (août 2020), p. 4931-4940. DOI : [10.1093/mnras/stz3467](https://doi.org/10.1093/mnras/stz3467). arXiv : [1903.00023](https://arxiv.org/abs/1903.00023) [[astro-ph.GA](#)]
8. Ignasi Pérez-Ràfols et Matthew M. Pieri. « Spectroscopic QUasar extractor and redshift (z) estimator SQUEZE - II. Universality of the results ». *MNRAS* 496.4 (août 2020), p. 4941-4950. DOI : [10.1093/mnras/staa1786](https://doi.org/10.1093/mnras/staa1786). arXiv : [1911.04891](https://arxiv.org/abs/1911.04891) [[astro-ph.GA](#)]

9. Carolina Cuesta-Lazaro, Baojiu Li, Alexander Eggemeier et al. « Towards a non-Gaussian model of redshift space distortions ». *MNRAS* 498.1 (oct. 2020), p. 1175-1193. DOI : [10.1093/mnras/staa2249](https://doi.org/10.1093/mnras/staa2249). arXiv : [2002.02683](https://arxiv.org/abs/2002.02683) [astro-ph.CO]
10. Ashley J. Ross, Julian Bautista, Rita Tojeiro et al. « The Completed SDSS-IV extended Baryon Oscillation Spectroscopic Survey : Large-scale structure catalogues for cosmological analysis ». *MNRAS* 498.2 (oct. 2020), p. 2354-2371. DOI : [10.1093/mnras/staa2416](https://doi.org/10.1093/mnras/staa2416). arXiv : [2007.09000](https://arxiv.org/abs/2007.09000) [astro-ph.CO]
11. Richard Neveux, Etienne Burtin, Arnaud de Mattia et al. « The completed SDSS-IV extended Baryon Oscillation Spectroscopic Survey : BAO and RSD measurements from the anisotropic power spectrum of the quasar sample between redshift 0.8 and 2.2 ». *MNRAS* 499.1 (nov. 2020), p. 210-229. DOI : [10.1093/mnras/staa2780](https://doi.org/10.1093/mnras/staa2780). arXiv : [2007.08999](https://arxiv.org/abs/2007.08999) [astro-ph.CO]
12. Alex Smith, Etienne Burtin, Jiamin Hou et al. « The completed SDSS-IV extended Baryon Oscillation Spectroscopic Survey : N-body mock challenge for the quasar sample ». *MNRAS* 499.1 (nov. 2020), p. 269-291. DOI : [10.1093/mnras/staa2825](https://doi.org/10.1093/mnras/staa2825). arXiv : [2007.09003](https://arxiv.org/abs/2007.09003) [astro-ph.CO]
13. Omar Ruiz-Macias, Pauline Zarrouk, Shaun Cole et al. « Preliminary Target Selection for the DESI Bright Galaxy Survey (BGS) ». *Research Notes of the American Astronomical Society* 4.10, 187 (oct. 2020), p. 187. DOI : [10.3847/2515-5172/abc25a](https://doi.org/10.3847/2515-5172/abc25a). arXiv : [2010.11283](https://arxiv.org/abs/2010.11283) [astro-ph.GA]
14. P. -F. Léget, P. Astier, N. Regnault et al. « Improving the astrometric solution of the Hyper Suprime-Cam with anisotropic Gaussian processes ». *A&A* 650, A81 (juin 2021), A81. DOI : [10.1051/0004-6361/202140463](https://doi.org/10.1051/0004-6361/202140463). arXiv : [2103.09881](https://arxiv.org/abs/2103.09881) [astro-ph.IM]
15. F. Sylos Labini et M. Joyce. « Gravitational collapse from cold uniform asymmetric initial conditions ». *A&A* 652, A8 (août 2021), A8. DOI : [10.1051/0004-6361/202141040](https://doi.org/10.1051/0004-6361/202141040). arXiv : [2106.02388](https://arxiv.org/abs/2106.02388) [astro-ph.CO]
16. LSST Dark Energy Science Collaboration (LSST DESC), Bela Abolfathi, David Alonso et al. « The LSST DESC DC2 Simulated Sky Survey ». *ApJS* 253.1, 31 (mar. 2021), p. 31. DOI : [10.3847/1538-4365/abd62c](https://doi.org/10.3847/1538-4365/abd62c). arXiv : [2010.05926](https://arxiv.org/abs/2010.05926) [astro-ph.IM]
17. Jiamin Hou, Ariel G. Sánchez, Ashley J. Ross et al. « The completed SDSS-IV extended Baryon Oscillation Spectroscopic Survey : BAO and RSD measurements from anisotropic clustering analysis of the quasar sample in configuration space between redshift 0.8 and 2.2 ». *MNRAS* 500.1 (jan. 2021), p. 1201-1221. DOI : [10.1093/mnras/staa3234](https://doi.org/10.1093/mnras/staa3234). arXiv : [2007.08998](https://arxiv.org/abs/2007.08998) [astro-ph.CO]
18. Michael Joyce, Lehman Garrison et Daniel Eisenstein. « Quantifying resolution in cosmological N-body simulations using self-similarity ». *MNRAS* 501.4 (mar. 2021), p. 5051-5063. DOI : [10.1093/mnras/staa3434](https://doi.org/10.1093/mnras/staa3434). arXiv : [2004.07256](https://arxiv.org/abs/2004.07256) [astro-ph.CO]
19. M. Leroy, L. Garrison, D. Eisenstein et al. « Testing dark matter halo properties using self-similarity ». *MNRAS* 501.4 (mar. 2021), p. 5064-5072. DOI : [10.1093/mnras/staa3435](https://doi.org/10.1093/mnras/staa3435). arXiv : [2004.08406](https://arxiv.org/abs/2004.08406) [astro-ph.CO]
20. Omar Ruiz-Macias, Pauline Zarrouk, Shaun Cole et al. « Characterizing the target selection pipeline for the Dark Energy Spectroscopic Instrument Bright Galaxy Survey ». *MNRAS*

- 502.3 (avr. 2021), p. 4328-4349. DOI : [10.1093/mnras/stab292](https://doi.org/10.1093/mnras/stab292). arXiv : [2007.14950](https://arxiv.org/abs/2007.14950) [astro-ph.GA]
21. Pauline Zarrouk, Mehdi Rezaie, Anand Raichoor et al. « Baryon acoustic oscillations in the projected cross-correlation function between the eBOSS DR16 quasars and photometric galaxies from the DESI Legacy Imaging Surveys ». *MNRAS* 503.2 (mai 2021), p. 2562-2582. DOI : [10.1093/mnras/stab298](https://doi.org/10.1093/mnras/stab298). arXiv : [2009.02308](https://arxiv.org/abs/2009.02308) [astro-ph.CO]
 22. Lehman H. Garrison, Michael Joyce et Daniel J. Eisenstein. « Good and proper : self-similarity of N-body simulations with proper force softening ». *MNRAS* 504.3 (juil. 2021), p. 3550-3560. DOI : [10.1093/mnras/stab1096](https://doi.org/10.1093/mnras/stab1096). arXiv : [2102.08972](https://arxiv.org/abs/2102.08972) [astro-ph.CO]
 23. Mehdi Rezaie, Ashley J. Ross, Hee-Jong Seo et al. « Primordial non-Gaussianity from the completed SDSS-IV extended Baryon Oscillation Spectroscopic Survey - I : Catalogue preparation and systematic mitigation ». *MNRAS* 506.3 (sept. 2021), p. 3439-3454. DOI : [10.1093/mnras/stab1730](https://doi.org/10.1093/mnras/stab1730). arXiv : [2106.13724](https://arxiv.org/abs/2106.13724) [astro-ph.CO]
 24. M. Moniez, J. Neveu, S. Dagoret-Campagne et al. « A transmission hologram for slitless spectrophotometry on a convergent telescope beam. 1. Focus and resolution ». *MNRAS* 506.4 (oct. 2021), p. 5589-5605. DOI : [10.1093/mnras/stab2109](https://doi.org/10.1093/mnras/stab2109). arXiv : [2106.08802](https://arxiv.org/abs/2106.08802) [astro-ph.IM]
 25. Sean Morrison, Matthew M. Pieri, Debopam Som et al. « Probing large-scale UV background inhomogeneity associated with quasars using metal absorption ». *MNRAS* 506.4 (oct. 2021), p. 5750-5763. DOI : [10.1093/mnras/stab2091](https://doi.org/10.1093/mnras/stab2091). arXiv : [2012.00772](https://arxiv.org/abs/2012.00772) [astro-ph.CO]
 26. Shadab Alam, Marie Aubert, Santiago Avila et al. « Completed SDSS-IV extended Baryon Oscillation Spectroscopic Survey : Cosmological implications from two decades of spectroscopic surveys at the Apache Point Observatory ». *Phys. Rev. D* 103.8, 083533 (avr. 2021), p. 083533. DOI : [10.1103/PhysRevD.103.083533](https://doi.org/10.1103/PhysRevD.103.083533). arXiv : [2007.08991](https://arxiv.org/abs/2007.08991) [astro-ph.CO]
 27. Solène Chabanier, Thomas Etourneau, Jean-Marc Le Goff et al. « The Completed SDSS-IV extended Baryon Oscillation Spectroscopic Survey : The Damped Lyman- α systems Catalog ». *arXiv e-prints*, arXiv :[2107.09612](https://arxiv.org/abs/2107.09612) (juil. 2021), arXiv :[2107.09612](https://arxiv.org/abs/2107.09612). arXiv : [2107.09612](https://arxiv.org/abs/2107.09612) [astro-ph.CO]
 28. Lauren Ennesser, Paul Martini, Andreu Font-Ribera et al. « The impact and mitigation of broad absorption line quasars in Lyman- α forest correlations ». *arXiv e-prints*, arXiv :[2111.09439](https://arxiv.org/abs/2111.09439) (nov. 2021), arXiv :[2111.09439](https://arxiv.org/abs/2111.09439). arXiv : [2111.09439](https://arxiv.org/abs/2111.09439) [astro-ph.CO]

Actes de conférences

1. A. N. Higley, B. W. Lyke, A. D. Myers et al. « The Sloan Digital Sky Survey Quasar Catalog Sixteenth Data Release ». *American Astronomical Society Meeting Abstracts #235*. T. 235. American Astronomical Society Meeting Abstracts. Jan. 2020, p. 219.03
2. K. S. Dawson, W. Percival, J. Bautista et al. « Introduction : the Extended Baryon Spectroscopic Survey ». *American Astronomical Society Meeting Abstracts #235*. T. 235. American Astronomical Society Meeting Abstracts. Jan. 2020, p. 413.01

3. A. de Mattia, J. Bautista, K. Dawson et al. « Emission Line Galaxies as a Distinct Tracer ». *American Astronomical Society Meeting Abstracts #235*. T. 235. American Astronomical Society Meeting Abstracts. Jan. 2020, p. 413.03
4. G. Rossi, K. Dawson, W. Percival et al. « N-Body Simulations and Model Testing ». *American Astronomical Society Meeting Abstracts #235*. T. 235. American Astronomical Society Meeting Abstracts. Jan. 2020, p. 413.04
5. P. Zarrouk. « Measurements of Growth of Structure from Galaxies and Quasars ». *American Astronomical Society Meeting Abstracts #235*. T. 235. American Astronomical Society Meeting Abstracts. Jan. 2020, p. 413.06
6. E. Mueller, eBOSS Collaboration, K. Dawson et al. « Impact of SDSS Clustering Measurements on the Cosmological Model ». *American Astronomical Society Meeting Abstracts #235*. T. 235. American Astronomical Society Meeting Abstracts. Jan. 2020, p. 413.07
7. Sandrine Perruchot, Pierre-Éric Blanc, Julien Guy et al. « Testing the 10 spectrograph units for DESI : approach and results ». *Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series*. T. 11447. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series. Déc. 2020, p. 1144786. DOI : [10.1117/12.2561275](https://doi.org/10.1117/12.2561275). arXiv : [2101.12181](https://arxiv.org/abs/2101.12181) [astro-ph.IM]
8. Adam Snyder, Aurélien Barrau, Andrew Bradshaw et al. « Laboratory measurements of instrumental signatures of the LSST camera focal plane ». *Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series*. T. 11454. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series. Déc. 2020, p. 1145439. DOI : [10.1117/12.2562915](https://doi.org/10.1117/12.2562915)
9. P. Zarrouk. « The DESI Bright Galaxy Survey : from target selection to preliminary clustering ». *American Astronomical Society Meeting Abstracts*. T. 53. American Astronomical Society Meeting Abstracts. Jan. 2021, p. 303.03