

Samuel Hinton

PhD, Astrophysicist | Data Scientist | Software Engineer

Abstract

I'm a scientist with a strong focus on solving interesting problems in reproducible ways. My move from astrophysics into machine learning and sustainability is driven by a desire to try and explore problem areas with direct impact on the world. My core scientific philosophy is that a product is more useful than a paper. Make analyses and implementations accessible, packaged, documented, tested, and reproducible, and you've made ten times the impact.

Education

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| 2016–2020 | Doctor of Philosophy
Analysing supernovae in the Dark Energy Survey using Hierarchical Bayesian models to help constrain the nature of dark energy. | University of Queensland |
| 2010–2015 | Bachelor of Science (Physics) (Hons, 1 st)
Thesis: Analysed the Baryon Acoustic Oscillation signal imprinted in the large scale structure of the universe using the WiggleZ survey. Won the Astronomical Society of Australia's award for best Australian Astrophysics honours thesis of the year. | University of Queensland |
| 2010–2014 | Bachelor of Engineering (Software) (Hons, 1 st)
Thesis: Created the first online client-only web-application to compute redshifts from telescope spectra. Won the Groudpote prize, IEEE student thesis prize and IET student prize. | University of Queensland |

Experience

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| 2020–Now | Arenko Group
<i>Senior Data Scientist</i>
Designed and productionised probabilistic time-series forecasting models for UK energy markets. Implemented MLOps pipelines in AWS, including feature store, model versioning (mlflow), model serving, data engineering and orchestration (Prefect) and digestion (RDMS) in a microservice framework. Created library of transformations, models, and utilities in Python. Created interactive visualisations of market opportunities (matplotlib, plotly, Dash, angular). Mentored junior data scientists and helped grow the data science team. | London, UK |
| 2020 | COVID-19 Critical Care Consortium
<i>Lead Data Analyst</i>
Technical lead for the COVID-19 Critical Care Consortium. Created the data pipeline to automatically produce machine-learning-ready data products for use in the study. Created reports for clinical staff and hosted a dashboard for use in hospital sites to provide insights from the data products. | Brisbane, Queensland, Australia |
| 2020 | University of Queensland
<i>Postdoctoral Researcher</i>
Continued research in the areas of supernova cosmology and large scale structure, focusing heavily upon analysis pipelines and systematics control through efficient use of simulations and mocks. | Brisbane, Queensland, Australia |
| 2019 | SuperDataScience
<i>Course Instructor</i>
Created a course on statistical analysis in Python for students. Focused on applied statistics and utilisation of modern code packages, with attention given to visual output and workflows for continuous validation of methodology. | Sunshine Coast, Queensland, Australia |

2017, 2016	Lawrence Berkeley National Laboratory <i>Research Fellowship</i> Research fellowship to work on Bayesian Hierarchical Modelling and its applications to Supernova Cosmology. Specifically, investigating how to use high dimensional hierarchical models to model individual supernova instead of populations to provide better constraints on cosmology using supernova discovered by the Dark Energy Survey.	Berkeley, California
2015–2016	Gemini & Australian Astronomical Observatory <i>Research Intern</i> Utilised photometric data of Maffei 1 to determine globular cluster candidates and their properties for spectroscopic follow-up. Utilised data reduction pipelines, automated analysis methods in Python, and applied machine learning techniques to perform object classification.	La Serena, Chile
2010–2014	GBST <i>Software Developer</i> Developed business intelligence reporting solutions, designing and developing server and client based web application code, creation of large scale SQL queries, optimising queries, databases and applications for network, processing and memory constraints, developed back-end server code and front-end web applications.	Brisbane, Queensland, Australia

Noteable Awards

2019	Lindau Nobel Laureate Delegate	Representing Australia at LINO19.	Australian Academy of Science
2019	Future Superstar Award	Science's highest performing PhD student.	University of Queensland
2016	Bok Prize	Best astrophysics honours thesis in Australia.	Astronomical Society of Australia
2016	Australian Postgraduate Award		Australian Government
2016	Science Faculty Graduate of the Year		University of Queensland
2016	Australian Institute of Physics Prize	Top physics graduate.	University of Queensland
2016	University Medal (Science)		University of Queensland
2015	Australian Gemini Undergraduate Summer Studentships		AAO
2015	AAO Honours Scholarship		Australian Astronomical Observatory
2015	University Medal (Engineering)		University of Queensland

Other Awards

2015	Rhodes Scholarship Finalist		Oxford University
2015	A.W. Oakes Scholarship		St John's College
2015	Harriet Marks Bursary	Academic merit in science honours.	University of Queensland
2015	10x Deans Commendation		University of Queensland
2015	Helen Thompson Prize for All Round Excellence		St John's College
2015	IET Student Prize	Outstanding academic success.	The Institution of Engineering and Technology
2015	David Andrew Krnak Memorial Prize	Top engineering graduate.	University of Queensland
2014	UQ Future Leader		University of Queensland
2014	IEEE Student Thesis Prize	Best final year thesis.	IEEE
2014	GroundProbe Prize	Best final year thesis.	University of Queensland
2014	RWH Hawken Scholar		University of Queensland
2014	UQ Summer Research Scholarship		University of Queensland
2012	Walter Bruce Darker Scholarship		University of Queensland
2012	Exxon Mobil Achievement Award	Top mechanical engineering student.	University of Queensland
2011	Alstom Prize	Top electrical engineering student.	University of Queensland
2010	UQ Academic Excellence Scholarship		University of Queensland
2010	ICT Enabling Scholarship		University of Queensland
2010	John Black Prize		University of Queensland

Communication

2021	Industry Guest	CodeHers
	Gave workshops and presentations to highschool students on coding, machine learning, and careers in STEM.	
2021	Interviewed Data Scientist	SuperDataScience Podcast
	Participated in multiple SDS podcast episodes about topics in data science, from hypothesis testing to MLOps.	
2020	Scientific Correspondent	CNET, CBS
	Acted as a scientific correspondent for multiple organisations to break down complicated scientific research into everyday terms.	
2020	Coding@Home Industry Partner	Queensland Education, Coding@Home
	Shared the modern and future role of coding and machine learning from the perspective of an astronomer and scientist.	
2020	FameLab National Finalist	British Council
	National finalist in the FameLab program, with topic "Can you hear the Big bang?"	
2020	Science Friction Guest	ABC Radio National
	Discussed the huge transition from astrophysics to data analytics due to the COVID-19 pandemic, and the transferable skillset that science gives you.	
2020	NYSF Guest Panelist	National Youth Science Forum
	Shared my personal journey in science outreach, and presented on how to give effective presentations.	
2019-2017	ScopeTV Guest Scientist	ScopeTV, Channel 10
	Helped script, narrate and appear in ScopeTV educational astronomy episodes.	
2019	Science Says! Scientific Panelist	World Science Festival
	Panel scientist for Science Says, a comedy science show for Brisbane's World Science Festival.	
2019	Probably Science Podcast Guest Scientist	Probably Science Live Podcast and Comedy Show
	Guest scientist for Probably Science, joining the previous guests of Neil deGrasse Tyson, Sean Carroll and more.	
2019	2SER Radio Scientific Correspondent	Radio, 2SER
	Monthly scientific and astronomy updates.	
2019-2018	Podcast Host	Commuting the Cosmos
	Hosted and presented on a podcast about various space related concepts.	
2018	Curious Kids Writer	The Conversation
	Consulted and authored articles for The Conversation's Curious Kids program.	
2018	BrisScience Presenter	BrisScience & UQ
	Invited to talk at the monthly BrisScience event on the dark side of the universe.	
2018	Australian Survivor Invited Contestant, Academic Champion	Endemol Shine
	Cast as the academic champion for the 'Champions v. Contenders' season of Australian Survivor.	
2018-2017	School Guest Presenter	Clayfield College, Gumdale State School
	Talks to primary and secondary students on astronomy, science, STEM and career pathways.	
2019-2017	Science Communicator	Pint of Science, Physics in the Pub
	Gave public talks to a general audience about various topics in astronomy.	
2017	Invited Presenter	Research Education and Development Retreat
	Invited presenter at a progressional development program for physics PhD, honours and undergraduate students.	

2017	Workshop Organiser, Host and Presenter Created and presented a code workshop focusing on open-source science run across Australia.	CAASTRO Code Workshop
2017	Battle of the Brains Panel Scientist Invited participant in a games panel discussion for physicists during National Science Week.	National Science Week
2017	World Science Festival Tour Guide Scientific tour guide for the Large Hadron Collider exhibit during the World Science Festival.	Queensland Museum & UQ
2017	FameLab Australia Scientist State finalist FameLab scientist. Public communication through radio interview and stage presentation.	British Council
2016	Guest Scientist, An Evening with Dr Lisa Randall Gave the opening speech for the Brisbane event, talking about the exciting future of astronomy.	ThinkInc
2016	UQ Science Demo Troupe Member Joined the UQ Science Demo troupe to create resources for the group and participate in UQ demonstrations.	University of Queensland
2016	Uluru Astronomer in Residence Accompanied Sky Tours to answer scientific questions from the public and gave public lectures on popular astronomy topics.	CAASTRO

Teaching

2020	Data Manipulation in Python	SuperDataScience
2019	Python for Statistical Analysis	SuperDataScience
2019	Frontiers of Astrophysics Guest Lecturer	University of Queensland
2018	Introduction to Astrophysics Guest Lecturer	University of Queensland
2018	Cosmology Tutor and Guest Lecturer	University of Queensland
2018	Supervisor - Capstone Project	University of Queensland
2017	Computational Physics Tutor	University of Queensland
2017	Computational Physics Content Creator	University of Queensland
2017	Supervisor - Summer Project	University of Queensland
2015	5-Minute Physics Content Creator	University of Queensland

Presentations

June 2020	Data Science Pipelines	DataScienceGo Virtual Conference
May 2020	Getting Started with Pippin	Duke University
Jan 2020	Supernova Cosmology updates from the Dark Energy Survey	AAS
Oct 2019	Pippin: A pipeline for SN Ia cosmology	SCAM
Jul 2019	Barry - A BAO model fitting framework	Python in Astronomy
Mar 2019	The path towards Photometric Supernova Cosmology with DES	Cosmology on Safari
Feb 2019	Hitting the Limits of Supernova cosmology	ANITA
Nov 2017	Coding Practises for the Busy Astronomer	CAASTRO
Jun 2017	Hierachical Bayesian Models for Supernova Cosmology	Lawrence Berkeley National Lab
Dec 2016	Introduction to git and code management	University of Cambridge
Dec 2016	Hierachical Bayesian Models for Supernova Cosmology	University of Southampton
Dec 2016	Hierachical Bayesian Models for Supernova Cosmology	University of Portsmouth
Nov 2016	Sound waves in Space: Wigglez and the BAO	Swinburne University of Technology
Aug 2016	Publishing Packages in Python	University of Queensland
Aug 2016	ChainConsumer: Plots and LaTeX from MCMC chains	CAASTRO
May 2016	Hieracrhical Bayesian Models for Supernova Cosmology	Standford University
Feb 2016	Detecting Globular Clusters in Maffei 1	Gemini Institute
Nov 2015	Marz - Redshifting software inside your browser	OzDES Workshop

Publications

Core Author

- Binning is Sinning (Supernova Version): The Impact of Self-calibration in Cosmological Analyses with Type Ia Supernovae
Brout, Dillon, **Samuel R. Hinton**, and Dan Scolnic *ApJ* 912.2, L26 (May 2021) p. L26
- Pippin: A pipeline for supernova cosmology
Hinton, Samuel and Dillon Brout *Journal of Open Source Software* 5.47 (2020) p. 2122. *The Open Journal*
- BARRY and the BAO model comparison
Hinton, Samuel R., Cullan Howlett, and Tamara M. Davis *MNRAS* 493.3 (Apr. 2020) pp. 4078–4093
- Can redshift errors bias measurements of the Hubble Constant?
Davis, Tamara M. et al. *MNRAS* (Sept. 2019) p. 2279
- Steve: A Hierarchical Bayesian Model for Supernova Cosmology
Hinton, S. R. et al. *The Astrophysical Journal* 876.1 (Apr. 2019) p. 15. *American Astronomical Society*
- Measuring the 2D baryon acoustic oscillation signal of galaxies in WiggleZ: cosmological constraints
Hinton, S. R. et al. *MNRAS* 464 (Feb. 2017) pp. 4807–4822
- ChainConsumer: A Python Package for consuming MCMC chains!
Hinton, S. R. *JOSS* 1.4 (Aug. 2016). *The Open Journal*
- Marz: Manual and automatic redshifting software
Hinton, S.R. et al. *Astronomy and Computing* 15 (2016) pp. 61–71

Science Contributions

- OzDES multi-object fibre spectroscopy for the Dark Energy Survey: Results and second data release
Lidman, C. et al. *MNRAS* (May 2020)
- Supernova Siblings: Assessing the Consistency of Properties of Type Ia Supernovae that Share the Same Parent Galaxies
Scolnic, D. et al. *ApJ* 896.1, L13 (June 2020) p. L13
- First Cosmology Results using Supernovae Ia from the Dark Energy Survey: Survey Overview, Performance, and Supernova Spectroscopy
Smith, M. et al. *AJ* 160.6, 267 (Dec. 2020) p. 267
- First cosmology results using type Ia supernovae from the Dark Energy Survey: the effect of host galaxy properties on supernova luminosity
Smith, M. et al. *MNRAS* 494.3 (Apr. 2020) pp. 4426–4447
- The host galaxies of 106 rapidly evolving transients discovered by the Dark Energy Survey
Wiseman, P. et al. *MNRAS* 498.2 (Oct. 2020) pp. 2575–2593
- First Cosmology Results using Type Ia Supernovae from the Dark Energy Survey: Constraints on Cosmological Parameters
Abbott, T. M. C. et al. *ApJ* 872.2, L30 (Feb. 2019) p. L30
- First Cosmology Results Using SNe Ia from the Dark Energy Survey: Analysis, Systematic Uncertainties, and Validation
Brout, D. et al. *ApJ* 874.2, 150 (Apr. 2019) p. 150
- First Cosmology Results Using Type Ia Supernovae from the Dark Energy Survey: Photometric Pipeline and Light-curve Data Release
Brout, D. et al. *ApJ* 874.1, 106 (Mar. 2019) p. 106
- First cosmology results using Type Ia supernova from the Dark Energy Survey: simulations to correct supernova distance biases
Kessler, R. et al. *MNRAS* 485.1 (May 2019) pp. 1171–1187

- First cosmology results using Type Ia supernovae from the dark energy survey: effects of chromatic corrections to supernova photometry on measurements of cosmological parameters
Lasker, J. et al. *MNRAS* 485.4 (June 2019) pp. 5329–5344
- First cosmological results using Type Ia supernovae from the Dark Energy Survey: measurement of the Hubble constant
Macaulay, E. et al. *MNRAS* 486.2 (June 2019) pp. 2184–2196
- OzDES multifibre spectroscopy for the Dark Energy Survey: 3-yr results and first data release
Childress, M. J. et al. *Monthly Notices of the Royal Astronomical Society* 472 (Nov. 2017) pp. 273–288
- OzDES multifibre spectroscopy for the Dark Energy Survey: first-year operation and results
Yuan, F. et al. *Monthly Notices of the Royal Astronomical Society* 452 (Sept. 2015) pp. 3047–3063

Infrastructure / Data Contributions

- Dark Energy Survey Year 3 results: A 2.7% measurement of baryon acoustic oscillation distance scale at redshift 0.835
Abbott, T. M. C. et al. *Phys. Rev. D* 105.4, 043512 (Feb. 2022) p. 043512
- Dark Energy Survey Year 3 results: Cosmological constraints from galaxy clustering and weak lensing
Abbott, T. M. C. et al. *Phys. Rev. D* 105.2, 023520 (Jan. 2022) p. 023520
- Joint analysis of DES Year 3 data and CMB lensing from SPT and Planck III: Combined cosmological constraints
Abbott, T. M. C. et al. *arXiv e-prints, arXiv:2206.10824* (June 2022) *arXiv:2206.10824*
- VizieR Online Data Catalog: The Dark Energy Survey (DES): Data Release 2 (Abott+, 2021)
Abbott, T. M. C. et al. *VizieR Online Data Catalog, II/371* (Jan. 2022) pp. II/371
- Finding quadruply imaged quasars with machine learning - I. Methods
Akhazhanov, A. et al. *MNRAS* 513.2 (June 2022) pp. 2407–2421
- Consistent lensing and clustering in a low- S_8 Universe with BOSS, DES Year 3, HSC Year 1 and KiDS-1000
Amon, A. et al. *arXiv e-prints, arXiv:2202.07440* (Feb. 2022) *arXiv:2202.07440*
- Dark Energy Survey Year 3 results: Cosmology from cosmic shear and robustness to data calibration
Amon, A. et al. *Phys. Rev. D* 105.2, 023514 (Jan. 2022) p. 023514
- VizieR Online Data Catalog: TNOs from the full six years of DES (Bernardinelli+, 2022)
Bernardinelli, P. H. et al. *VizieR Online Data Catalog, J/ApJS/258/41* (May 2022) *J/ApJS/258/41*
- A Search of the Full Six Years of the Dark Energy Survey for Outer Solar System Objects
Bernardinelli, Pedro H. et al. *ApJS* 258.2, 41 (Feb. 2022) p. 41
- The Pantheon+ Analysis: Cosmological Constraints
Brout, Dillon et al. *arXiv e-prints, arXiv:2202.04077* (Feb. 2022) *arXiv:2202.04077*
- Dark Energy Survey Year 3 results: galaxy sample for BAO measurement
Carnero Rosell, A. et al. *MNRAS* 509.1 (Jan. 2022) pp. 778–799
- Dark Energy Survey Year 3 results: calibration of lens sample redshift distributions using clustering redshifts with BOSS/eBOSS
Cawthon, R. et al. *MNRAS* 513.4 (July 2022) pp. 5517–5539
- Joint analysis of DES Year 3 data and CMB lensing from SPT and Planck II: Cross-correlation measurements and cosmological constraints
Chang, C. et al. *arXiv e-prints, arXiv:2203.12440* (Mar. 2022) *arXiv:2203.12440*
- Constraining the Baryonic Feedback with Cosmic Shear Using the DES Year-3 Small-Scale Measurements
Chen, A. et al. *arXiv e-prints, arXiv:2206.08591* (June 2022) *arXiv:2206.08591*
- Measuring Cosmological Parameters with Type Ia Supernovae in redMaGiC galaxies
Chen, R. et al. *arXiv e-prints, arXiv:2202.10480* (Feb. 2022) *arXiv:2202.10480*
- Dark Energy Survey Year 3 results: marginalization over redshift distribution uncertainties using ranking of discrete realizations

- Cordero, Juan P. et al. *MNRAS* 511.2 (Apr. 2022) pp. 2170–2185
- Dark Energy Survey Year 3 results: Cosmology from combined galaxy clustering and lensing validation on cosmological simulations
DeRose, J. et al. *Phys. Rev. D* 105.12, 123520 (June 2022) p. 123520
- Using Host Galaxy Spectroscopy to Explore Systematics in the Standardisation of Type Ia Supernovae
Dixon, M. et al. *arXiv e-prints, arXiv:2206.12085* (June 2022) *arXiv:2206.12085*
- Dark Energy Survey Year 3 results: cosmological constraints from the analysis of cosmic shear in harmonic space
Doux, C. et al. *arXiv e-prints, arXiv:2203.07128* (Mar. 2022) *arXiv:2203.07128*
- The DECam Local Volume Exploration Survey Data Release 2
Drlica-Wagner, A. et al. *arXiv e-prints, arXiv:2203.16565* (Mar. 2022) *arXiv:2203.16565*
- Dark Energy Survey Year 3 Results: Measuring the Survey Transfer Function with Balrog
Everett, S. et al. *ApJS* 258.1, 15 (Jan. 2022) p. 15
- Cross-correlation of Dark Energy Survey Year 3 lensing data with ACT and Planck thermal Sunyaev-Zel'dovich effect observations. I. Measurements, systematics tests, and feedback model constraints
Gatti, M. et al. *Phys. Rev. D* 105.12, 123525 (June 2022) p. 123525
- Dark Energy Survey Year 3 Results: clustering redshifts - calibration of the weak lensing source redshift distributions with redMaGiC and BOSS/eBOSS
Gatti, M. et al. *MNRAS* 510.1 (Feb. 2022) pp. 1223–1247
- The Observed Evolution of the Stellar Mass-Halo Mass Relation for Brightest Central Galaxies
Golden-Marx, Jesse B. et al. *ApJ* 928.1, 28 (Mar. 2022) p. 28
- Multiwavelength optical and NIR variability analysis of the Blazar PKS 0027-426
Guise, E. et al. *MNRAS* 510.3 (Mar. 2022) pp. 3145–3177
- Dark Energy Survey Year 3 Results: Deep Field optical + near-infrared images and catalogue
Hartley, W. G. et al. *MNRAS* 509.3 (Jan. 2022) pp. 3547–3579
- Dark Energy Survey Year 3 results: imprints of cosmic voids and superclusters in the Planck CMB lensing map
Kovács, A. et al. *arXiv e-prints, arXiv:2203.11306* (Mar. 2022) *arXiv:2203.11306*
- The DES view of the Eridanus supervoid and the CMB cold spot
Kovács, A. et al. *MNRAS* 510.1 (Feb. 2022) pp. 216–229
- Galaxy-galaxy lensing with the DES-CMASS catalogue: measurement and constraints on the galaxy-matter cross-correlation
Lee, S. et al. *MNRAS* 509.2 (Jan. 2022) pp. 2033–2047
- Probing gravity with the DES-CMASS sample and BOSS spectroscopy
Lee, S. et al. *MNRAS* 509.4 (Feb. 2022) pp. 4982–4996
- Robust sampling for weak lensing and clustering analyses with the Dark Energy Survey
Lemos, P. et al. *arXiv e-prints, arXiv:2202.08233* (Feb. 2022) *arXiv:2202.08233*
- Early short course of neuromuscular blocking agents in patients with COVID-19 ARDS: a propensity score analysis
Li Bassi, Gianluigi et al. *Critical Care* 26.1 (2022) pp. 1–17. *BioMed Central*
- Dark Energy Survey Y3 results: blending shear and redshift biases in image simulations
MacCrann, N. et al. *MNRAS* 509.3 (Jan. 2022) pp. 3371–3394
- Milky Way Satellite Census. IV. Constraints on Decaying Dark Matter from Observations of Milky Way Satellite Galaxies
Mau, S. et al. *ApJ* 932.2, 128 (June 2022) p. 128
- The Dark Energy Survey Supernova Program results: Type Ia Supernova brightness correlates with host galaxy dust
Meldorf, Cole et al. *arXiv e-prints, arXiv:2206.06928* (June 2022) *arXiv:2206.06928*
- The Dark Energy Survey 5-year photometrically identified Type Ia Supernovae
Möller, A. et al. *MNRAS* (June 2022)

DeepZipper II: Searching for Lensed Supernovae in Dark Energy Survey Data with Deep Learning
Morgan, Robert et al. *arXiv e-prints, arXiv:2204.05924 (Apr. 2022) arXiv:2204.05924*

The Dark Energy Survey Bright Arcs Survey: Candidate Strongly Lensed Galaxy Systems from the Dark Energy Survey 5000 Square Degree Footprint
O'Donnell, J. H. et al. *ApJS* 259.1, 27 (Mar. 2022) p. 27

VizieR Online Data Catalog: DES Bright Arcs Survey: strong lens systems (O'Donnell+, 2022)
O'Donnell, J. H. et al. *VizieR Online Data Catalog, J/ApJS/259/27 (June 2022) J/ApJS/259/27*

Joint analysis of DES Year 3 data and CMB lensing from SPT and Planck I: Construction of CMB Lensing Maps and Modeling Choices
Omori, Y. et al. *arXiv e-prints, arXiv:2203.12439 (Mar. 2022) arXiv:2203.12439*

Cross-correlation of Dark Energy Survey Year 3 lensing data with ACT and Planck thermal Sunyaev-Zel'dovich effect observations. II. Modeling and constraints on halo pressure profiles
Pandey, S. et al. *Phys. Rev. D* 105.12, 123526 (June 2022) p. 123526

OzDES reverberation mapping program: Lag recovery reliability for 6-yr CIV analysis
Penton, A. et al. *MNRAS* 509.3 (Jan. 2022) pp. 4008–4023

Dark energy survey year 3 results: High-precision measurement and modeling of galaxy-galaxy lensing
Prat, J. et al. *Phys. Rev. D* 105.8, 083528 (Apr. 2022) p. 083528

Evolutionary genomic relationships and coupling in MK-STYX and STYX pseudophosphatases
Qi, Yi et al. *Scientific Reports* 12, 4139 (Mar. 2022) p. 4139

Dark Energy Survey Year 3 results: galaxy clustering and systematics treatment for lens galaxy samples
Rodríguez-Monroy, M. et al. *MNRAS* 511.2 (Apr. 2022) pp. 2665–2687

Dark Energy Survey Year 3 results: Exploiting small-scale information with lensing shear ratios
Sánchez, C. et al. *Phys. Rev. D* 105.8, 083529 (Apr. 2022) p. 083529

STRIDES: Automated uniform models for 30 quadruply imaged quasars
Schmidt, T. et al. *arXiv e-prints, arXiv:2206.04696 (June 2022) arXiv:2206.04696*

Dark Energy Survey Year 3 results: Cosmology from cosmic shear and robustness to modeling uncertainty
Secco, L. F. et al. *Phys. Rev. D* 105.2, 023515 (Jan. 2022) p. 023515

Dark Energy Survey Year 3 Results: Three-point shear correlations and mass aperture moments
Secco, L. F. et al. *Phys. Rev. D* 105.10, 103537 (May 2022) p. 103537

The Evolution of AGN Activity in Brightest Cluster Galaxies
Somboonpanyakul, T. et al. *AJ* 163.4, 146 (Apr. 2022) p. 146

Optical variability of quasars with 20-yr photometric light curves
Stone, Zachary et al. *MNRAS* 514.1 (July 2022) pp. 164–184

From the Fire: A Deeper Look at the Phoenix Stream
Tavangar, K. et al. *ApJ* 925.2, 118 (Feb. 2022) p. 118

SOAR/Goodman Spectroscopic Assessment of Candidate Counterparts of the LIGO/Virgo Event GW190814
Tucker, D. L. et al. *ApJ* 929.2, 115 (Apr. 2022) p. 115

Synthetic galaxy clusters and observations based on Dark Energy Survey Year 3 Data
Varga, T. N. et al. *MNRAS* 509.4 (Feb. 2022) pp. 4865–4885

The Dark Energy Survey Supernova Program: Cosmological biases from supernova photometric classification
Vincenzi, M. et al. *MNRAS* (June 2022)

Velocity dispersions of clusters in the Dark Energy Survey Y3 redMaPPer catalog
Wetzell, V. et al. *MNRAS* (June 2022)

Dark Energy Survey Year 3 results: galaxy-halo connection from galaxy-galaxy lensing
Zacharegkas, G. et al. *MNRAS* 509.3 (Jan. 2022) pp. 3119–3147

Dark energy survey year 3 results: Cosmology with peaks using an emulator approach

- Zürcher, D. et al. *MNRAS* 511.2 (Apr. 2022) pp. 2075–2104
- The Dark Energy Survey Data Release 2
Abbott, T. M. C. et al. *ApJS* 255.2, 20 (Aug. 2021) p. 20
- Probing Galaxy Evolution in Massive Clusters Using ACT and DES: Splashback as a Cosmic Clock
Adhikari, Susmita et al. *ApJ* 923.1, 37 (Dec. 2021) p. 37
- The WaZP galaxy cluster sample of the dark energy survey year 1
Aguena, M. et al. *MNRAS* 502.3 (Apr. 2021) pp. 4435–4456
- Galaxy clustering in harmonic space from the dark energy survey year 1 data: compatibility with real-space results
Andrade-Oliveira, F. et al. *MNRAS* 505.4 (Aug. 2021) pp. 5714–5724
- SN2017jgh: a high-cadence complete shock cooling light curve of a SN IIb with the Kepler telescope
Armstrong, P. et al. *MNRAS* 507.3 (Nov. 2021) pp. 3125–3138
- Risk Factors for 28-Day in-Hospital Mortality in Mechanically Ventilated Patients with COVID-19: An International Cohort Study
Bassi, Gianluigi Li et al. (2021)
- C/2014 UN₂₇₁ (Bernardinelli-Bernstein): The Nearly Spherical Cow of Comets
Bernardinelli, Pedro H. et al. *ApJ* 921.2, L37 (Nov. 2021) p. L37
- Variability-Selected Dwarf AGNs in the Dark Energy Survey Deep Fields
Burke, Colin J. et al. *arXiv e-prints*, *arXiv:2111.03079* (Nov. 2021) *arXiv:2111.03079*
- Cosmic Shear in Harmonic Space from the Dark Energy Survey Year 1 Data: Compatibility with Configuration Space Results
Camacho, H. et al. *arXiv e-prints*, *arXiv:2111.07203* (Nov. 2021) *arXiv:2111.07203*
- A Deeper Look at DES Dwarf Galaxy Candidates: Grus I and Indus II
Cantu, Sarah A. et al. *ApJ* 916.2, 81 (Aug. 2021) p. 81
- Constraints on dark matter to dark radiation conversion in the late universe with DES-Y1 and external data
Chen, A. et al. *Phys. Rev. D* 103.12, 123528 (June 2021) p. 123528
- Galaxy morphological classification catalogue of the Dark Energy Survey Year 3 data with convolutional neural networks
Cheng, Ting-Yun et al. *MNRAS* 507.3 (Nov. 2021) pp. 4425–4444
- Cosmological constraints from DES Y1 cluster abundances and SPT multiwavelength data
Costanzi, M. et al. *Phys. Rev. D* 103.4, 043522 (Feb. 2021) p. 043522
- COVID-19 symptoms at hospital admission vary with age and sex: results from the ISARIC prospective multinational observational study
Infection 49.5 (2021) pp. 889–905. *Springer Berlin Heidelberg Berlin/Heidelberg*
- Consistency of cosmic shear analyses in harmonic and real space
Doux, C. et al. *MNRAS* 503.3 (May 2021) pp. 3796–3817
- Dark energy survey internal consistency tests of the joint cosmological probes analysis with posterior predictive distributions
Doux, C. et al. *MNRAS* 503.2 (May 2021) pp. 2688–2705
- VizieR Online Data Catalog: WiggleZ Dark Energy Survey final DR (Drinkwater+, 2018)
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