

Gianni Bernardi

List of Publications by Year in descending order

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139
papers

11,092
citations

30070

54
h-index

30922

102
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142
all docs

142
docs citations

142
times ranked

5415
citing authors

#	ARTICLE	IF	CITATIONS
1	Automated Detection of Antenna Malfunctions in Large N Interferometers: A Case Study With the Hydrogen Epoch of Reionization Array. <i>Radio Science</i> , 2022, 57, .	1.6	2
2	Radio footprints of a minor merger in the Shapley Supercluster: From supercluster down to galactic scales. <i>Astronomy and Astrophysics</i> , 2022, 660, A81.	5.1	18
3	HERA Phase I Limits on the Cosmic 21 cm Signal: Constraints on Astrophysics and Cosmology during the Epoch of Reionization. <i>Astrophysical Journal</i> , 2022, 924, 51.	4.5	63
4	Validation of the HERA Phase I Epoch of Reionization 21 cm Power Spectrum Software Pipeline. <i>Astrophysical Journal</i> , 2022, 924, 85.	4.5	11
5	First Results from HERA Phase I: Upper Limits on the Epoch of Reionization 21 cm Power Spectrum. <i>Astrophysical Journal</i> , 2022, 925, 221.	4.5	82
6	Radio Antenna Design for Sky-Averaged 21cm Cosmology Experiments: The REACH Case. <i>Journal of Astronomical Instrumentation</i> , 2022, 11, .	1.5	11
7	MeqSilhouette v2: spectrally resolved polarimetric synthetic data generation for the event horizon telescope. <i>Monthly Notices of the Royal Astronomical Society</i> , 2022, 512, 490-504.	4.4	7
8	Simulations of primary beam effects on the cosmic bispectrum phase observed with the Hydrogen Epoch of Reionization Array. <i>Monthly Notices of the Royal Astronomical Society</i> , 2022, 512, 2716-2727.	4.4	1
9	The northern cross fast radio burst project – II. Monitoring of repeating FRB 20180916B, 20181030A, 20200120E, and 20201124A. <i>Monthly Notices of the Royal Astronomical Society</i> , 2022, 513, 1858-1866.	4.4	4
10	Antenna beam characterization for the global 21-cm experiment LEDA and its impact on signal model parameter reconstruction. <i>Monthly Notices of the Royal Astronomical Society</i> , 2022, 515, 1580-1597.	4.4	8
11	A Southern-Hemisphere all-sky radio transient monitor for SKA-Low prototype stations. <i>Publications of the Astronomical Society of Australia</i> , 2021, 38, .	3.4	8
12	An X-ray burst from a magnetar enlightening the mechanism of fast radio bursts. <i>Nature Astronomy</i> , 2021, 5, 401-407.	10.1	104
13	A MeerKAT view on galaxy clusters: a radio–optical study of Abell 1300 and MACSJ1931.8+2634. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 504, 2924-2939.	4.4	1
14	H ₁ intensity mapping with MeerKAT: calibration pipeline for multidish autocorrelation observations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 505, 3698-3721.	4.4	41
15	Spectral index of the Galactic foreground emission in the 50–87 MHz range. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 505, 1575-1588.	4.4	13
16	A 21-cm power spectrum at 48 MHz, using the Owens Valley Long Wavelength Array. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 506, 5802-5817.	4.4	23
17	A Real Time Processing system for big data in astronomy: Applications to HERA. <i>Astronomy and Computing</i> , 2021, 36, 100489.	1.7	6
18	Effects of model incompleteness on the drift-scan calibration of radio telescopes. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 506, 4578-4592.	4.4	2

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19	New constraints on the magnetic field in cosmic web filaments. <i>Astronomy and Astrophysics</i> , 2021, 652, A80.	5.1	16
20	Methods of Error Estimation for Delay Power Spectra in 21 cm Cosmology. <i>Astrophysical Journal, Supplement Series</i> , 2021, 255, 26.	7.7	9
21	Peering into the dark (ages) with low-frequency space interferometers. <i>Experimental Astronomy</i> , 2021, 51, 1641-1676.	3.7	10
22	The correlation calibration of PAPER-64 data. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 510, 1680-1696.	4.4	1
23	Detection of cosmic structures using the bispectrum phase. II. First results from application to cosmic reionization using the Hydrogen Epoch of Reionization Array. <i>Physical Review D</i> , 2020, 102, .	4.7	17
24	Foreground modelling via Gaussian process regression: an application to HERA data. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 495, 2813-2826.	4.4	19
25	The Northern Cross fast radio burst project "I. Overview and pilot observations at 408 MHz. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 494, 1229-1236.	4.4	14
26	Absolute Calibration Strategies for the Hydrogen Epoch of Reionization Array and Their Impact on the 21 cm Power Spectrum. <i>Astrophysical Journal</i> , 2020, 890, 122.	4.5	35
27	Mitigating Internal Instrument Coupling for 21 cm Cosmology. II. A Method Demonstration with the Hydrogen Epoch of Reionization Array. <i>Astrophysical Journal</i> , 2020, 888, 70.	4.5	41
28	Imaging and Modeling Data from the Hydrogen Epoch of Reionization Array. <i>Astrophysical Journal, Supplement Series</i> , 2020, 247, 67.	7.7	7
29	Redundant-baseline calibration of the hydrogen epoch of reionization array. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 499, 5840-5861.	4.4	33
30	Understanding the HERA Phase I receiver system with simulations and its impact on the detectability of the EoR delay power spectrum. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 500, 1232-1242.	4.4	29
31	Measuring HERA's Primary Beam in Situ: Methodology and First Results. <i>Astrophysical Journal</i> , 2020, 897, 5.	4.5	8
32	Gamma-Ray and X-Ray Observations of the Periodic-repeater FRB 180916 during Active Phases. <i>Astrophysical Journal Letters</i> , 2020, 893, L42.	8.3	25
33	The Lowest-frequency Fast Radio Bursts: Sardinia Radio Telescope Detection of the Periodic FRB 180916 at 328 MHz. <i>Astrophysical Journal Letters</i> , 2020, 896, L40.	8.3	65
34	Optimizing sparse RFI prediction using deep learning. <i>Monthly Notices of the Royal Astronomical Society</i> , 2019, 488, 2605-2615.	4.4	29
35	The HERA-19 Commissioning Array: Direction-dependent Effects. <i>Astrophysical Journal</i> , 2019, 882, 58.	4.5	20
36	A Simplified, Lossless Reanalysis of PAPER-64. <i>Astrophysical Journal</i> , 2019, 883, 133.	4.5	97

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55	FIRST SEASON MWA EOR POWER SPECTRUM RESULTS AT REDSHIFT 7. <i>Astrophysical Journal</i> , 2016, 833, 102.	4.5	147
56	THE IMPORTANCE OF WIDE-FIELD FOREGROUND REMOVAL FOR 21 cm COSMOLOGY: A DEMONSTRATION WITH EARLY MWA EPOCH OF REIONIZATION OBSERVATIONS. <i>Astrophysical Journal</i> , 2016, 819, 8.	4.5	65
57	A large light-mass component of cosmic rays at 10^{17} – $10^{17.5}$ electronvolts from radio observations. <i>Nature</i> , 2016, 531, 70-73.	27.8	116
58	A high reliability survey of discrete Epoch of Reionization foreground sources in the MWA EoR0 field. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 461, 4151-4175.	4.4	27
59	THE MURCHISON WIDEFIELD ARRAY 21 cm POWER SPECTRUM ANALYSIS METHODOLOGY. <i>Astrophysical Journal</i> , 2016, 825, 114.	4.5	67
60	Bayesian constraints on the global 21-cm signal from the Cosmic Dawn. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 461, 2847-2855.	4.4	100
61	CONSTRAINING POLARIZED FOREGROUNDS FOR EoR EXPERIMENTS. I. 2D POWER SPECTRA FROM THE PAPER-32 IMAGING ARRAY. <i>Astrophysical Journal</i> , 2016, 823, 88.	4.5	32
62	LOFAR MSSS: detection of a low-frequency radio transient in 400 h of monitoring of the North Celestial Pole. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 456, 2321-2342.	4.4	60
63	Limits on Fast Radio Bursts and other transient sources at 182 MHz using the Murchison Widefield Array. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 458, 3506-3522.	4.4	70
64	The 154 MHz radio sky observed by the Murchison Widefield Array: noise, confusion, and first source count analyses. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 459, 3314-3325.	4.4	47
65	First limits on the 21 cm power spectrum during the Epoch of X-ray heating. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 460, 4320-4347.	4.4	79
66	CHIPS: THE COSMOLOGICAL H I POWER SPECTRUM ESTIMATOR. <i>Astrophysical Journal</i> , 2016, 818, 139.	4.5	98
67	GLEAM: The Galactic and Extragalactic All-Sky MWA Survey. <i>Publications of the Astronomical Society of Australia</i> , 2015, 32, .	3.4	221
68	Ionospheric Modelling using GPS to Calibrate the MWA. I: Comparison of First Order Ionospheric Effects between GPS Models and MWA Observations. <i>Publications of the Astronomical Society of Australia</i> , 2015, 32, .	3.4	13
69	MURCHISON WIDEFIELD ARRAY OBSERVATIONS OF ANOMALOUS VARIABILITY: A SERENDIPITOUS NIGHT-TIME DETECTION OF INTERPLANETARY SCINTILLATION. <i>Astrophysical Journal Letters</i> , 2015, 809, L12.	8.3	19
70	Power spectrum analysis of ionospheric fluctuations with the Murchison Widefield Array. <i>Radio Science</i> , 2015, 50, 574-597.	1.6	30
71	Empirical covariance modeling for 21 cm power spectrum estimation: A method demonstration and new limits from early Murchison Widefield Array 128-tile data. <i>Physical Review D</i> , 2015, 91, .	4.7	99
72	PAPER-64 CONSTRAINTS ON REIONIZATION: THE 21 cm POWER SPECTRUM AT $z = 8.4$. <i>Astrophysical Journal</i> , 2015, 809, 61.	4.5	227

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73	PAPER-64 CONSTRAINTS ON REIONIZATION. II. THE TEMPERATURE OF THE $z = 8.4$ INTERGALACTIC MEDIUM. <i>Astrophysical Journal</i> , 2015, 809, 62.	4.5	79
74	A SEARCH FOR FAST RADIO BURSTS AT LOW FREQUENCIES WITH MURCHISON WIDEFIELD ARRAY HIGH TIME RESOLUTION IMAGING. <i>Astronomical Journal</i> , 2015, 150, 199.	4.7	45
75	An analysis of the halo and relic radio emission from Abell 3376 from Murchison Widefield Array observations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2015, 451, 4207-4214.	4.4	12
76	Quantifying ionospheric effects on time-domain astrophysics with the Murchison Widefield Array. <i>Monthly Notices of the Royal Astronomical Society</i> , 2015, 453, 2732-2747.	4.4	24
77	Real-time imaging of density ducts between the plasmasphere and ionosphere. <i>Geophysical Research Letters</i> , 2015, 42, 3707-3714.	4.0	61
78	Measuring phased-array antenna beam patterns with high dynamic range for the Murchison Widefield Array using 137 MHz ORBCOMM satellites. <i>Radio Science</i> , 2015, 50, 614-629.	1.6	42
79	The LOFAR Multifrequency Snapshot Sky Survey (MSSS). <i>Astronomy and Astrophysics</i> , 2015, 582, A123.	5.1	85
80	Probing Atmospheric Electric Fields in Thunderstorms through Radio Emission from Cosmic-Ray-Induced Air Showers. <i>Physical Review Letters</i> , 2015, 114, 165001.	7.8	41
81	FOREGROUND MODEL AND ANTENNA CALIBRATION ERRORS IN THE MEASUREMENT OF THE SKY-AVERAGED $\hat{\nu} \approx 21$ cm SIGNAL AT $z \approx 20$. <i>Astrophysical Journal</i> , 2015, 799, 90.	4.5	79
82	A digital-receiver for the Murchison Widefield Array. <i>Experimental Astronomy</i> , 2015, 39, 73-93.	3.7	17
83	THE SPECTRAL VARIABILITY OF THE GHz-PEAKED SPECTRUM RADIO SOURCE PKS 1718-649 AND A COMPARISON OF ABSORPTION MODELS. <i>Astronomical Journal</i> , 2015, 149, 74.	4.7	36
84	CONFIRMATION OF WIDE-FIELD SIGNATURES IN REDSHIFTED 21 cm POWER SPECTRA. <i>Astrophysical Journal Letters</i> , 2015, 807, L28.	8.3	73
85	The Murchison Widefield Array Correlator. <i>Publications of the Astronomical Society of Australia</i> , 2015, 32, .	3.4	39
86	The High Time and Frequency Resolution Capabilities of the Murchison Widefield Array. <i>Publications of the Astronomical Society of Australia</i> , 2015, 32, .	3.4	44
87	The Low-Frequency Environment of the Murchison Widefield Array: Radio-Frequency Interference Analysis and Mitigation. <i>Publications of the Astronomical Society of Australia</i> , 2015, 32, .	3.4	107
88	Polarization leakage in epoch of reionization windows – I. Low Frequency Array observations of the 3C196 field. <i>Monthly Notices of the Royal Astronomical Society</i> , 2015, 451, 3709-3727.	4.4	58
89	FOREGROUNDS IN WIDE-FIELD REDSHIFTED 21 cm POWER SPECTRA. <i>Astrophysical Journal</i> , 2015, 804, 14.	4.5	122
90	Digital Signal Processing Using Stream High Performance Computing. <i>Journal of Astronomical Instrumentation</i> , 2015, 04, .	1.5	40

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91	Modelling of the spectral energy distribution of Fornax A: leptonic and hadronic production of high-energy emission from the radio lobes. Monthly Notices of the Royal Astronomical Society, 2015, 446, 3478-3491.	4.4	41
92	The Cosmic Dawn and Epoch of Reionisation with SKA. , 2015, , .		57
93	Cosmic Dawn and Epoch of Reionization Foreground Removal with the SKA. , 2015, , .		10
94	A SCALABLE HYBRID FPGA/GPU FX CORRELATOR. Journal of Astronomical Instrumentation, 2014, 03, .	1.5	14
95	Absolutely calibrated radio polarimetry of the inner Galaxy at 2.3 and 4.8 GHz. Monthly Notices of the Royal Astronomical Society, 2014, 437, 2936-2947.	4.4	26
96	Overcoming real-world obstacles in 21 cm power spectrum estimation: A method demonstration and results from early Murchison Widefield Array data. Physical Review D, 2014, 89, .	4.7	151
97	Constraining the epoch of reionization with the variance statistic: simulations of the LOFAR case. Monthly Notices of the Royal Astronomical Society, 2014, 443, 1113-1124.	4.4	54
98	wsclean: an implementation of a fast, generic wide-field imager for radio astronomy. Monthly Notices of the Royal Astronomical Society, 2014, 444, 606-619.	4.4	562
99	STUDY OF REDSHIFTED H I FROM THE EPOCH OF REIONIZATION WITH DRIFT SCAN. Astrophysical Journal, 2014, 793, 28.	4.5	10
100	A close-pair binary in a distant triple supermassive black hole system. Nature, 2014, 511, 57-60.	27.8	94
101	The LOFAR pilot surveys for pulsars and fast radio transients. Astronomy and Astrophysics, 2014, 570, A60.	5.1	89
102	First look Murchison Widefield Array observations of Abell 3667. , 2014, , .		0
103	A survey for transients and variables with the Murchison Widefield Array 32-tile prototype at 154 MHz. Monthly Notices of the Royal Astronomical Society, 2014, 438, 352-367.	4.4	54
104	The Murchison Widefield Array Commissioning Survey: A Low-Frequency Catalogue of 14 110 Compact Radio Sources over 6 100 Square Degrees. Publications of the Astronomical Society of Australia, 2014, 31, .	3.4	62
105	Galactic interstellar turbulence across the southern sky seen through spatial gradients of the polarization vector. Astronomy and Astrophysics, 2014, 566, A5.	5.1	38
106	Initial LOFAR observations of epoch of reionization windows. Astronomy and Astrophysics, 2014, 568, A101.	5.1	67
107	Reionization and the Cosmic Dawn with the Square Kilometre Array. Experimental Astronomy, 2013, 36, 235-318.	3.7	255
108	Science with the Murchison Widefield Array. Publications of the Astronomical Society of Australia, 2013, 30, .	3.4	260

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109	The Murchison Widefield Array: The Square Kilometre Array Precursor at Low Radio Frequencies. Publications of the Astronomical Society of Australia, 2013, 30, .	3.4	892
110	The EoR sensitivity of the Murchison Widefield Array. Monthly Notices of the Royal Astronomical Society: Letters, 2013, 429, L5-L9.	3.3	62
111	Probing reionization with LOFAR using 21-cm redshift space distortions. Monthly Notices of the Royal Astronomical Society, 2013, 435, 460-474.	4.4	69
112	A 189 MHz, 2400 deg ² POLARIZATION SURVEY WITH THE MURCHISON WIDEFIELD ARRAY 32-ELEMENT PROTOTYPE. Astrophysical Journal, 2013, 771, 105.	4.5	79
113	Calibrating high-precision Faraday rotation measurements for LOFAR and the next generation of low-frequency radio telescopes. Astronomy and Astrophysics, 2013, 552, A58.	5.1	98
114	Giant magnetized outflows from the centre of the Milky Way. Nature, 2013, 493, 66-69.	27.8	171
115	LOFAR: The LOW-Frequency ARray. Astronomy and Astrophysics, 2013, 556, A2.	5.1	1,755
116	Initial deep LOFAR observations of epoch of reionization windows. Astronomy and Astrophysics, 2013, 550, A136.	5.1	128
117	A STUDY OF FUNDAMENTAL LIMITATIONS TO STATISTICAL DETECTION OF REDSHIFTED H I FROM THE EPOCH OF REIONIZATION. Astrophysical Journal, 2013, 776, 6.	4.5	123
118	Imaging neutral hydrogen on large scales during the Epoch of Reionization with LOFAR. Monthly Notices of the Royal Astronomical Society, 2012, 425, 2964-2973.	4.4	46
119	DIRECTION-DEPENDENT POLARIZED PRIMARY BEAMS IN WIDE-FIELD SYNTHESIS IMAGING. Journal of Astronomical Instrumentation, 2012, 01, 1250003.	1.5	2
120	FIRST LIGHT FOR THE FIRST STATION OF THE LONG WAVELENGTH ARRAY. Journal of Astronomical Instrumentation, 2012, 01, .	1.5	116
121	FAST HOLOGRAPHIC DECONVOLUTION: A NEW TECHNIQUE FOR PRECISION RADIO INTERFEROMETRY. Astrophysical Journal, 2012, 759, 17.	4.5	76
122	A new layout optimization technique for interferometric arrays, applied to the Murchison Widefield Array. Monthly Notices of the Royal Astronomical Society, 2012, 425, 1781-1788.	4.4	20
123	Subtraction of point sources from interferometric radio images through an algebraic forward modelling scheme. Monthly Notices of the Royal Astronomical Society, 2011, 413, 411-422.	4.4	30
124	Realistic simulations of the Galactic polarized foreground: consequences for 21-cm reionization detection experiments. Monthly Notices of the Royal Astronomical Society, 2010, 409, 1647-1659.	4.4	101
125	Post-correlation radio frequency interference classification methods. Monthly Notices of the Royal Astronomical Society, 2010, , .	4.4	138
126	Power spectrum extraction for redshifted 21-cm Epoch of Reionization experiments: the LOFAR case. Monthly Notices of the Royal Astronomical Society, 2010, , no-no.	4.4	43

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127	Foregrounds for observations of the cosmological 21Åcm line. <i>Astronomy and Astrophysics</i> , 2010, 522, A67.	5.1	94
128	Interferometric Imaging with the 32 Element Murchison Wide-Field Array. <i>Publications of the Astronomical Society of the Pacific</i> , 2010, 122, 1353-1366.	3.1	45
129	Foregrounds for observations of the cosmological 21Åcm line. <i>Astronomy and Astrophysics</i> , 2009, 500, 965-979.	5.1	148
130	Non-parametric foreground subtraction for 21-cm epoch of reionization experiments. <i>Monthly Notices of the Royal Astronomical Society</i> , 2009, 397, 1138-1152.	4.4	95
131	Foreground simulations for the LOFAR-epoch of reionization experiment. <i>Monthly Notices of the Royal Astronomical Society</i> , 2008, 389, 1319-1335.	4.4	217
132	High Galactic latitude polarized emission at 1.4 GHz and implications for cosmic microwave background observations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2005, 358, 1-12.	4.4	41
133	Polarization Observations in a Low Synchrotron Emission Field at 1.4 GHz. <i>Astrophysical Journal</i> , 2003, 594, L5-L8.	4.5	22
134	The Parkes Galactic Meridian Survey: observations and CMB polarization foreground analysis. <i>Monthly Notices of the Royal Astronomical Society</i> , 0, , no-no.	4.4	9
135	The Murchison Widefield Array Transients Survey (MWATS). A search for low frequency variability in a bright Southern hemisphere sample. <i>Monthly Notices of the Royal Astronomical Society</i> , 0, , .	4.4	9
136	Polarized Redundant-Baseline Calibration for 21Åcm Cosmology Without Adding Spectral Structure. <i>Monthly Notices of the Royal Astronomical Society</i> , 0, , .	4.4	28
137	Design and characterization of the Large-aperture Experiment to Detect the Dark Age (LEDA) radiometer systems. <i>Monthly Notices of the Royal Astronomical Society</i> , 0, , .	4.4	91
138	On the contamination of the global 21Åcm signal from polarized foregrounds. <i>Monthly Notices of the Royal Astronomical Society</i> , 0, , .	4.4	29
139	Characterizing Beam Errors for Radio Interferometric Observations of Reionization. <i>Monthly Notices of the Royal Astronomical Society</i> , 0, , .	4.4	0