Garrelt Mellema

List of Publications by Year
in descending order

108	6,245	57758	71685
papers	citations	44 h-index	76 g-index

109	109	109	2894
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The large-scale 21-cm power spectrum from reionization. Monthly Notices of the Royal Astronomical Society, 2022, 513, 5109-5124.	4.4	8
2	The multifrequency angular power spectrum in parameter studies of the cosmic 21-cm signal. Monthly Notices of the Royal Astronomical Society: Letters, 2022, 514, L31-L35.	3.3	7
3	Redshifted 21-cm bispectrum â€“ II. Impact of the spin temperature fluctuations and redshift space distortions on the signal from the Cosmic Dawn. Monthly Notices of the Royal Astronomical Society, 2021, 502, 3800-3813.	4.4	19
4	Constraining the state of the intergalactic medium during the Epoch of Reionization using MWA 21-cm signal observations. Monthly Notices of the Royal Astronomical Society, 2021, 503, 4551-4562.	4.4	37
5	Measuring the topology of reionization with Betti numbers. Monthly Notices of the Royal Astronomical Society, 2021, 505, 1863-1877.	4.4	22
6	Deep learning approach for identification of Hâ€‰<scp>ii</scp> regions during reionization in 21-cm observations. Monthly Notices of the Royal Astronomical Society, 2021, 505, 3982-3997.	4.4	16
7	Redshift-space distortions in simulations of the 21-cm signal from the cosmic dawn. Monthly Notices of the Royal Astronomical Society, 2021, 506, 3717-3733.	4.4	14
8	The Epoch of Reionization 21-cm bispectrum: the impact of light-cone effects and detectability. Monthly Notices of the Royal Astronomical Society, 2021, 508, 3848-3859.	4.4	10
9	A numerical study of 21-cm signal suppression and noise increase in direction-dependent calibration of LOFAR data. Monthly Notices of the Royal Astronomical Society, 2021, 509, 3693-3702.	4.4	15
10	Constraining the intergalactic medium at z â‰ˆ 9.1 using LOFAR Epoch of Reionization observations. Monthly Notices of the Royal Astronomical Society, 2020, 493, 4728-4747.	4.4	69
11	Tight constraints on the excess radio background at zÂ= 9.1 from LOFAR. Monthly Notices of the Royal Astronomical Society, 2020, 498, 4178-4191.	4.4	55
12	Improved upper limits on the 21â€‰cm signal power spectrum of neutral hydrogen at z â‰ˆ 9.1 from LOFAR. Monthly Notices of the Royal Astronomical Society, 2020, 493, 1662-1685.	4.4	185
13	Bubble mapping with the Square Kilometre Array â€“ I. Detecting galaxies with Euclid, JWST, WFIRST, and ELT within ionized bubbles in the intergalactic medium at z > 6. Monthly Notices of the Royal Astronomical Society, 2020, 493, 855-870.	4.4	8
14	The impact of inhomogeneous subgrid clumping on cosmic reionization. Monthly Notices of the Royal Astronomical Society, 2020, 491, 1600-1621.	4.4	19
15	Impact of Ly Î± heating on the global 21-cm signal from the Cosmic Dawn. Monthly Notices of the Royal Astronomical Society, 2020, 492, 634-644.	4.4	25
16	Redshifted 21-cm bispectrum â€“ I. Impact of the redshift space distortions on the signal from the Epoch of Reionization. Monthly Notices of the Royal Astronomical Society, 2020, 499, 5090-5106.	4.4	23
17	Interpreting LOFAR 21-cm signal upper limits at z â‰ˆ 9.1 in the context of high-z galaxy and reionization observations. Monthly Notices of the Royal Astronomical Society, 2020, 501, 1-13.	4.4	46
18	Tools21cm: A python package to analyse the large-scale 21-cm signal from the Epoch of Reionization and Cosmic Dawn. Journal of Open Source Software, 2020, 5, 2363.	4.6	19

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19	The first power spectrum limit on the 21-cm signal of neutral hydrogen during the Cosmic Dawn at zÂ= 20â€“25 from LOFAR. Monthly Notices of the Royal Astronomical Society, 2019, 488, 4271-4287.	4.4	77
20	Neutral island statistics during reionization from 21-cm tomography. Monthly Notices of the Royal Astronomical Society, 2019, 489, 1590-1605.	4.4	25
21	Evaluating the QSO contribution to the 21-cm signal from the Cosmic Dawn. Monthly Notices of the Royal Astronomical Society, 2019, 487, 1101-1119.	4.4	31
22	The 21-cm bispectrum as a probe of non-Gaussianities due to X-ray heating. Monthly Notices of the Royal Astronomical Society, 2019, 482, 2653-2669.	4.4	44
23	Optimal identification of Hâ€‰ii regions during reionization in 21-cm observations. Monthly Notices of the Royal Astronomical Society, 2018, 479, 5596-5611.	4.4	40
24	Prediction of the 21-cm signal from reionization: comparison between 3D and 1D radiative transfer schemes. Monthly Notices of the Royal Astronomical Society, 2018, 476, 1741-1755.	4.4	34
25	Bubble size statistics during reionization from 21-cm tomography. Monthly Notices of the Royal Astronomical Society, 2018, 473, 2949-2964.	4.4	50
26	Recovering the Hâ€‰ii region size statistics from 21-cm tomography. Monthly Notices of the Royal Astronomical Society, 2017, 471, 1936-1954.	4.4	36
27	Light cone effect on the reionization 21-cm signal â€“ II. Evolution, anisotropies and observational implications. Monthly Notices of the Royal Astronomical Society, 2014, 442, 1491-1506.	4.4	55
28	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
29	Stars and reionization: the cross-correlation of the 21â€‰cm line and the near-infrared background. Monthly Notices of the Royal Astronomical Society, 2014, 440, 298-306.	4.4	18
30	Simulating cosmic reionization: how large a volume is large enough?. Monthly Notices of the Royal Astronomical Society, 2014, 439, 725-743.	4.4	154
31	Initial LOFAR observations of epoch of reionization windows. Astronomy and Astrophysics, 2014, 568, A101.	5.1	67
32	2D GENUS TOPOLOGY OF 21-CM DIFFERENTIAL BRIGHTNESS TEMPERATURE DURING COSMIC REIONIZATION. Journal of the Korean Astronomical Society, 2014, 47, 49-67.	1.5	20
33	Reionization and the Cosmic Dawn with the Square Kilometre Array. Experimental Astronomy, 2013, 36, 235-318.	3.7	255
34	Will Nonlinear Peculiar Velocity and Inhomogeneous Reionization Spoil 21Âcm Cosmology from the Epoch of Reionization?. Physical Review Letters, 2013, 110, 151301.	7.8	24
35	The inhomogeneous reionization of the local intergalactic medium by metal-poor globular clusters. Monthly Notices of the Royal Astronomical Society, 2013, 431, 3087-3102.	4.4	10
36	LOFAR insights into the epoch of reionization from the cross-power spectrum of 21â€‰cm emission and galaxies. Monthly Notices of the Royal Astronomical Society, 2013, 432, 2615-2624.	4.4	23

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37	On the use of LyÎ± emitters as probes of reionization. Monthly Notices of the Royal Astronomical Society, 2013, 428, 1366-1381.	4.4	94
38	Probing reionization with LOFAR using 21-cm redshift space distortions. Monthly Notices of the Royal Astronomical Society, 2013, 435, 460-474.	4.4	69
39	The brightness and spatial distributions of terrestrial radio sources. Monthly Notices of the Royal Astronomical Society, 2013, 435, 584-596.	4.4	12
40	Prospects for detecting the 21Âcm forest from the diffuse intergalactic medium with LOFAR. Monthly Notices of the Royal Astronomical Society, 2013, 428, 1755-1765.	4.4	22
41	THE KINETIC SUNYAEV-ZEL'DOVICH EFFECT AS A PROBE OF THE PHYSICS OF COSMIC REIONIZATION: THE EFFECT OF SELF-REGULATED REIONIZATION. Astrophysical Journal, 2013, 769, 93.	4.5	64
42	The LOFAR radio environment. Astronomy and Astrophysics, 2013, 549, A11.	5.1	63
43	Initial deep LOFAR observations of epoch of reionization windows. Astronomy and Astrophysics, 2013, 550, A136.	5.1	128
44	Simulating cosmic reionization and the radiation backgrounds from the epoch of reionization. AIP Conference Proceedings, 2012, , .	0.4	3
45	DETECTING THE RISE AND FALL OF THE FIRST STARS BY THEIR IMPACT ON COSMIC REIONIZATION. Astrophysical Journal Letters, 2012, 756, L16.	8.3	96
46	Radiative transfer of energetic photons: X-rays and helium ionization in C2-Ray. Monthly Notices of the Royal Astronomical Society, 2012, 421, 2232-2250.	4.4	27
47	Redshift-space distortion of the 21-cm background from the epoch of reionization - I. Methodology re-examined. Monthly Notices of the Royal Astronomical Society, 2012, 422, 926-954.	4.4	102
48	Can 21-cm observations discriminate between high-mass and low-mass galaxies as reionization sources?. Monthly Notices of the Royal Astronomical Society, 2012, 423, 2222-2253.	4.4	80
49	Prospects of observing a quasar Hâ€ƒii region during the epoch of reionization with the redshifted 21-cm signal. Monthly Notices of the Royal Astronomical Society, 2012, 424, 762-778.	4.4	35
50	Light-cone effect on the reionization 21-cm power spectrum. Monthly Notices of the Royal Astronomical Society, 2012, 424, 1877-1891.	4.4	87
51	Topology and sizes of Hâ€ƒii regions during cosmic reionization. Monthly Notices of the Royal Astronomical Society, 2011, 413, 1353-1372.	4.4	82
52	Reionization of the Local Group of galaxies. Monthly Notices of the Royal Astronomical Society, 2011, 413, 2093-2102.	4.4	22
53	Radiation-magnetohydrodynamic simulations of Hâ€ƒii regions and their associated PDRs in turbulent molecular clouds. Monthly Notices of the Royal Astronomical Society, 2011, 414, 1747-1768.	4.4	130
54	Radiation-MHD Simulations of HII Region Expansion in Turbulent Molecular Clouds. Proceedings of the International Astronomical Union, 2010, 6, 297-300.	0.0	0

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55	Observational constraints on supermassive dark stars. Monthly Notices of the Royal Astronomical Society: Letters, 2010, 407, L74-L78.	3.3	21
56	A cross-correlation study between the cosmological 21 cm signal and the kinetic Sunyaev-Zel'dovich effect. Monthly Notices of the Royal Astronomical Society, 2010, 402, 2279-2290.	4.4	24
57	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
58	Measuring the history of cosmic reionization using the 21-cm probability distribution function from simulations. Monthly Notices of the Royal Astronomical Society, 2010, 406, 2521-2532.	4.4	30
59	Cosmological Reionization by the First Stars in the H[sub 2]-Dissociating Background. , 2010, , .		0
60	A PHYSICAL MODEL OF LyÎ± EMITTERS. Astrophysical Journal, 2009, 704, 724-732.	4.5	23
61	Reionization: characteristic scales, topology and observability. Astrophysics and Space Science, 2009, 320, 39-43.	1.4	7
62	Detection and extraction of signals from the epoch of reionization using higher-order one-point statistics. Monthly Notices of the Royal Astronomical Society, 2009, 393, 1449-1458.	4.4	52
63	Non-parametric foreground subtraction for 21-cm epoch of reionization experiments. Monthly Notices of the Royal Astronomical Society, 2009, 397, 1138-1152.	4.4	95
64	Radiation-magnetohydrodynamic simulations of the photoionization of magnetized globules. Monthly Notices of the Royal Astronomical Society, 2009, 398, 157-175.	4.4	68
65	Cosmological radiative transfer comparison project Ã¢Â€Â“ II. The radiation-hydrodynamic tests. Monthly Notices of the Royal Astronomical Society, 2009, 400, 1283-1316.	4.4	94
66	Fast large-scale reionization simulations. Monthly Notices of the Royal Astronomical Society, 2009, 393, 32-48.	4.4	91
67	Photo-Ionization Dynamics Simulation. Lecture Notes in Computational Science and Engineering, 2009, , 307-310.	0.3	0
68	Current models of the observable consequences of cosmic reionization and their detectability. Monthly Notices of the Royal Astronomical Society, 2008, 384, 863-874.	4.4	56
69	Numerical simulations of type III planetary migration Ã¢Â€Â“ I. Disc model and convergence tests. Monthly Notices of the Royal Astronomical Society, 2008, 386, 164-178.	4.4	43
70	Numerical simulations of type III planetary migration Ã¢Â€Â“ II. Inward migration of massive planets. Monthly Notices of the Royal Astronomical Society, 2008, 386, 179-198.	4.4	37
71	Numerical simulations of type III planetary migration - III. Outward migration of massive planets. Monthly Notices of the Royal Astronomical Society, 2008, 387, 1063-1079.	4.4	38
72	The effect of the intergalactic environment on the observability of LyÎ± emitters during reionization. Monthly Notices of the Royal Astronomical Society, 2008, 391, 63-83.	4.4	73

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73	Planetesimal and gas dynamics in binaries. Monthly Notices of the Royal Astronomical Society, 2008, 386, 973-988.	4.4	107
74	The Inhomogeneous Background of H2 Dissociating Radiation During Cosmic Reionization. , 2008, , .		1
75	Simulating Reionization: Character and Observability. , 2008, , .		2
76	The Theory and Simulation of the 21â€cm Background from the Epoch of Reionization. AIP Conference Proceedings, 2008, , .	0.4	5
77	Growing and moving low-mass planets in non-isothermal disks. Astronomy and Astrophysics, 2008, 478, 245-266.	5.1	83
78	Line ratios from shocked cloudlets in planetary nebulae. Astronomy and Astrophysics, 2008, 489, 1141-1150.	5.1	38
79	The Kinetic Sunyaevâ€Zelâ€™dovich Effect from Radiative Transfer Simulations of Patchy Reionization. Astrophysical Journal, 2007, 660, 933-944.	4.5	61
80	Reconstructing the Thomson Optical Depth due to Patchy Reionization with 21 cm Fluctuation Maps. Astrophysical Journal, 2007, 663, L1-L4.	4.5	16
81	Signature of patchy reionization in the polarization anisotropy of the CMB. Physical Review D, 2007, 76, .	4.7	35
82	Self-regulated reionization. Monthly Notices of the Royal Astronomical Society, 2007, 376, 534-548.	4.4	161
83	Dependence of the local reionization history on halo mass and environment: did Virgo reionize the Local Group?. Monthly Notices of the Royal Astronomical Society, 2007, 381, 367-376.	4.4	28
84	Dust flow in gas disks in the presence of embedded planets. Astronomy and Astrophysics, 2006, 453, 1129-1140.	5.1	164
85	RODEO: a new method for planet-disk interaction. Astronomy and Astrophysics, 2006, 450, 1203-1220.	5.1	31
86	Hybrid characteristics: 3D radiative transfer for parallel adaptive mesh refinement hydrodynamics. Astronomy and Astrophysics, 2006, 452, 907-920.	5.1	82
87	Dynamical HiiRegion Evolution in Turbulent Molecular Clouds. Astrophysical Journal, 2006, 647, 397-403.	4.5	105
88	Halting type I planet migration in non-isothermal disks. Astronomy and Astrophysics, 2006, 459, L17-L20.	5.1	233
89	A comparative study of disc-planet interaction. Monthly Notices of the Royal Astronomical Society, 2006, 370, 529-558.	4.4	320
90	Simulating cosmic reionization at large scales - I. The geometry of reionization. Monthly Notices of the Royal Astronomical Society, 2006, 369, 1625-1638.	4.4	300

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91	Cosmological radiative transfer codes comparison project ï¿½ï¿½ï¿½ I. The static density field tests. Monthly Notices of the Royal Astronomical Society, 2006, 371, 1057-1086.	4.4	181
92	Simulating cosmic reionization at large scales - II. The 21-cm emission features and statistical signals. Monthly Notices of the Royal Astronomical Society, 2006, 372, 679-692.	4.4	176
93	kSZ from patchy reionization: The view from the simulations. New Astronomy Reviews, 2006, 50, 909-917.	12.8	20
94	C2-ray: A new method for photon-conserving transport of ionizing radiation. New Astronomy, 2006, 11, 374-395.	1.8	180
95	Ionisation fronts and their interaction with density fluctuations: implications for reionisation. Proceedings of the International Astronomical Union, 2005, 1, 369-374.	0.0	2
96	Blowing up warped disks in 3D. Astronomy and Astrophysics, 2005, 444, 849-860.	5.1	12
97	Abundance Analysis of a Sample of Bipolar Type I Planetary Nebulae. AIP Conference Proceedings, 2005, , .	0.4	0
98	Rings in the haloes of planetary nebulae. Astronomy and Astrophysics, 2004, 417, 637-646.	5.1	56
99	Planets opening dust gaps in gas disks. Astronomy and Astrophysics, 2004, 425, L9-L12.	5.1	166
100	Rings in the haloes of planetary nebulae. Astronomy and Astrophysics, 2004, 424, 197-197.	5.1	0
101	High-resolution radio structure and optical kinematics of NGC 7027. Monthly Notices of the Royal Astronomical Society, 2003, 340, 381-397.	4.4	21
102	The fate of clouds in radio lobes. New Astronomy Reviews, 2003, 47, 243-247.	12.8	2
103	Shaping planetary nebulae: is it different for [WR] stars?. , 2001, 275, 147-157.		4
104	Photoevaporating Flows from the Cometary Knots in the Helix Nebula (NGC 7293). Astrophysical Journal, 2001, 548, 288-295.	4.5	38
105	An Axisymmetric, Radiative Bow Shock Model with a Realistic Treatment of Ionization and Cooling. Astrophysical Journal, Supplement Series, 1997, 109, 517-535.	7.7	32
106	Hydrodynamical Models of Outflow Collimation in Young Stellar Objects. Astrophysical Journal, 1996, 472, 684-702.	4.5	44
107	Shock focusing and jet collimation in young stars. Astrophysics and Space Science, 1995, 233, 145-153.	1.4	2
108	Predictions for the 21cm-galaxy cross-power spectrum observable with SKA and future galaxy surveys. Monthly Notices of the Royal Astronomical Society, 0, , .	4.4	11