

John Carlstrom

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126
papers

9,874
citations

44
h-index

98
g-index

132
ext. papers

12,980
ext. citations

6.3
avg, IF

4.59
L-index

#	Paper	IF	Citations
126	First M87 Event Horizon Telescope Results. I. The Shadow of the Supermassive Black Hole. <i>Astrophysical Journal Letters</i> , 2019 , 875, L1	7.9	1110
125	Cosmology with the Sunyaev-Zel'dovich Effect. <i>Annual Review of Astronomy and Astrophysics</i> , 2002 , 40, 643-680	31.7	646
124	First M87 Event Horizon Telescope Results. VI. The Shadow and Mass of the Central Black Hole. <i>Astrophysical Journal Letters</i> , 2019 , 875, L6	7.9	466
123	First M87 Event Horizon Telescope Results. V. Physical Origin of the Asymmetric Ring. <i>Astrophysical Journal Letters</i> , 2019 , 875, L5	7.9	429
122	The 10 Meter South Pole Telescope. <i>Publications of the Astronomical Society of the Pacific</i> , 2011 , 123, 568-581	5	412
121	First M87 Event Horizon Telescope Results. IV. Imaging the Central Supermassive Black Hole. <i>Astrophysical Journal Letters</i> , 2019 , 875, L4	7.9	411
120	A MEASUREMENT OF THE DAMPING TAIL OF THE COSMIC MICROWAVE BACKGROUND POWER SPECTRUM WITH THE SOUTH POLE TELESCOPE. <i>Astrophysical Journal</i> , 2011 , 743, 28	4.7	404
119	GALAXY CLUSTERS DISCOVERED VIA THE SUNYAEV-ZEL'DOVICH EFFECT IN THE 2500-SQUARE-DEGREE SPT-SZ SURVEY. <i>Astrophysical Journal, Supplement Series</i> , 2015 , 216, 27	8	379
118	First M87 Event Horizon Telescope Results. II. Array and Instrumentation. <i>Astrophysical Journal Letters</i> , 2019 , 875, L2	7.9	325
117	First M87 Event Horizon Telescope Results. III. Data Processing and Calibration. <i>Astrophysical Journal Letters</i> , 2019 , 875, L3	7.9	267
116	GALAXY CLUSTERS SELECTED WITH THE SUNYAEV-ZEL'DOVICH EFFECT FROM 2008 SOUTH POLE TELESCOPE OBSERVATIONS. <i>Astrophysical Journal</i> , 2010 , 722, 1180-1196	4.7	265
115	EXTRAGALACTIC MILLIMETER-WAVE SOURCES IN SOUTH POLE TELESCOPE SURVEY DATA: SOURCE COUNTS, CATALOG, AND STATISTICS FOR AN 87 SQUARE-DEGREE FIELD. <i>Astrophysical Journal</i> , 2010 , 719, 763-783	4.7	218
114	GALAXY CLUSTERS DISCOVERED WITH A SUNYAEV-ZEL'DOVICH EFFECT SURVEY. <i>Astrophysical Journal</i> , 2009 , 701, 32-41	4.7	216
113	Dusty starburst galaxies in the early Universe as revealed by gravitational lensing. <i>Nature</i> , 2013 , 495, 344-7	50.4	215
112	A MEASUREMENT OF THE COSMIC MICROWAVE BACKGROUND DAMPING TAIL FROM THE 2500-SQUARE-DEGREE SPT-SZ SURVEY. <i>Astrophysical Journal</i> , 2013 , 779, 86	4.7	214
111	ALMA REDSHIFTS OF MILLIMETER-SELECTED GALAXIES FROM THE SPT SURVEY: THE REDSHIFT DISTRIBUTION OF DUSTY STAR-FORMING GALAXIES. <i>Astrophysical Journal</i> , 2013 , 767, 88	4.7	197
110	SPT-3G: a next-generation cosmic microwave background polarization experiment on the South Pole telescope 2014 ,		192

109	DETECTION OF LENSING SUBSTRUCTURE USING ALMA OBSERVATIONS OF THE DUSTY GALAXY SDP.81. <i>Astrophysical Journal</i> , 2016 , 823, 37	4.7	166
108	A MEASUREMENT OF SECONDARY COSMIC MICROWAVE BACKGROUND ANISOTROPIES FROM THE 2500 SQUARE-DEGREE SPT-SZ SURVEY. <i>Astrophysical Journal</i> , 2015 , 799, 177	4.7	152
107	Cluster Cosmology Constraints from the 2500 deg ² SPT-SZ Survey: Inclusion of Weak Gravitational Lensing Data from Magellan and the Hubble Space Telescope. <i>Astrophysical Journal</i> , 2019 , 878, 55	4.7	125
106	ALMA IMAGING AND GRAVITATIONAL LENS MODELS OF SOUTH POLE TELESCOPE-SELECTED DUSTY, STAR-FORMING GALAXIES AT HIGH REDSHIFTS. <i>Astrophysical Journal</i> , 2016 , 826, 112	4.7	124
105	Galaxy growth in a massive halo in the first billion years of cosmic history. <i>Nature</i> , 2018 , 553, 51-54	50.4	121
104	Measurements of the Temperature and E-mode Polarization of the CMB from 500 Square Degrees of SPTpol Data. <i>Astrophysical Journal</i> , 2018 , 852, 97	4.7	119
103	SUNYAEV-ZELDOVICH CLUSTER PROFILES MEASURED WITH THE SOUTH POLE TELESCOPE. <i>Astrophysical Journal</i> , 2010 , 716, 1118-1135	4.7	106
102	EXTRAGALACTIC MILLIMETER-WAVE POINT-SOURCE CATALOG, NUMBER COUNTS AND STATISTICS FROM 771 deg ² OF THE SPT-SZ SURVEY. <i>Astrophysical Journal</i> , 2013 , 779, 61	4.7	101
101	DISCOVERY AND COSMOLOGICAL IMPLICATIONS OF SPT-CL J2106-5844, THE MOST MASSIVE KNOWN CLUSTER AT $z > 1$. <i>Astrophysical Journal</i> , 2011 , 731, 86	4.7	100
100	Frequency multiplexed superconducting quantum interference device readout of large bolometer arrays for cosmic microwave background measurements. <i>Review of Scientific Instruments</i> , 2012 , 83, 073113	1.7	92
99	THE REDSHIFT DISTRIBUTION OF DUSTY STAR-FORMING GALAXIES FROM THE SPT SURVEY. <i>Astrophysical Journal</i> , 2016 , 822, 80	4.7	92
98	ISM Properties of a Massive Dusty Star-forming Galaxy Discovered at $z \sim 7$. <i>Astrophysical Journal Letters</i> , 2017 , 842, L15	7.9	84
97	SPTpol: an instrument for CMB polarization measurements with the South Pole Telescope 2012 ,		82
96	IMPROVED CONSTRAINTS ON COSMIC MICROWAVE BACKGROUND SECONDARY ANISOTROPIES FROM THE COMPLETE 2008 SOUTH POLE TELESCOPE DATA. <i>Astrophysical Journal</i> , 2011 , 736, 61	4.7	81
95	A massive core for a cluster of galaxies at a redshift of 4.3. <i>Nature</i> , 2018 , 556, 469-472	50.4	78
94	THE FIRST PUBLIC RELEASE OF SOUTH POLE TELESCOPE DATA: MAPS OF A 95 deg ² FIELD FROM 2008 OBSERVATIONS. <i>Astrophysical Journal</i> , 2011 , 743, 90	4.7	75
93	Observations of High-Redshift X-Ray Selected Clusters with the Sunyaev-Zeldovich Array. <i>Astrophysical Journal</i> , 2007 , 663, 708-716	4.7	75
92	Sunyaev-Zeldovich Effect-derived Distances to the High-Redshift Clusters MS 0451.60305 and Cl 0016+16. <i>Astrophysical Journal</i> , 2000 , 533, 38-49	4.7	74

91	Gravitational Test beyond the First Post-Newtonian Order with the Shadow of the M87 Black Hole. <i>Physical Review Letters</i> , 2020 , 125, 141104	7.4	74
90	First M87 Event Horizon Telescope Results. VIII. Magnetic Field Structure near The Event Horizon. <i>Astrophysical Journal Letters</i> , 2021 , 910, L13	7.9	70
89	Detection of the kinematic Sunyaev-Zel'dovich effect with DES Year 1 and SPT. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016 , 461, 3172-3193	4.3	68
88	A COSMIC MICROWAVE BACKGROUND LENSING MASS MAP AND ITS CORRELATION WITH THE COSMIC INFRARED BACKGROUND. <i>Astrophysical Journal Letters</i> , 2013 , 771, L16	7.9	63
87	Alma Observations of Massive Molecular Gas Filaments Encasing Radio Bubbles in the Phoenix Cluster. <i>Astrophysical Journal</i> , 2017 , 836, 130	4.7	61
86	First M87 Event Horizon Telescope Results. VII. Polarization of the Ring. <i>Astrophysical Journal Letters</i> , 2021 , 910, L12	7.9	58
85	The SPTpol Extended Cluster Survey. <i>Astrophysical Journal, Supplement Series</i> , 2020 , 247, 25	8	56
84	South Pole Telescope optics. <i>Applied Optics</i> , 2008 , 47, 4418-28	0.2	53
83	DEEPCHANDRA, HST-COS, AND MEGACAM OBSERVATIONS OF THE PHOENIX CLUSTER: EXTREME STAR FORMATION AND AGN FEEDBACK ON HUNDRED KILOPARSEC SCALES. <i>Astrophysical Journal</i> , 2015 , 811, 111	4.7	52
82	A MEASUREMENT OF THE SECONDARY-CMB AND MILLIMETER-WAVE-FOREGROUND BISPECTRUM USING 800 deg ² OF SOUTH POLE TELESCOPE DATA. <i>Astrophysical Journal</i> , 2014 , 784, 143	4.7	41
81	The Sunyaev-Zeldovich Effect in Abell 370. <i>Astrophysical Journal</i> , 2000 , 539, 39-51	4.7	40
80	Markov Chain Monte Carlo Joint Analysis of Chandra X-Ray Imaging Spectroscopy and Sunyaev-Zel'dovich Effect Data. <i>Astrophysical Journal</i> , 2004 , 614, 56-63	4.7	39
79	A Measurement of the Cosmic Microwave Background Lensing Potential and Power Spectrum from 500 deg ² of SPTpol Temperature and Polarization Data. <i>Astrophysical Journal</i> , 2019 , 884, 70	4.7	36
78	THE XXL SURVEY. V. DETECTION OF THE SUNYAEV-ZEL'DOVICH EFFECT OF THE REDSHIFT 1.9 GALAXY CLUSTER XLSSU J021744.1-034536 WITH CARMA. <i>Astrophysical Journal</i> , 2014 , 794, 157	4.7	34
77	THE MASSIVE AND DISTANT CLUSTERS OF WISE SURVEY. III. SUNYAEV-ZEL'DOVICH MASSES OF GALAXY CLUSTERS AT $z \sim 1$. <i>Astrophysical Journal</i> , 2015 , 806, 26	4.7	29
76	Constraints on Cosmological Parameters from the 500 deg ² SPTPOL Lensing Power Spectrum. <i>Astrophysical Journal</i> , 2020 , 888, 119	4.7	29
75	Polarimetric Properties of Event Horizon Telescope Targets from ALMA. <i>Astrophysical Journal Letters</i> , 2021 , 910, L14	7.9	28
74	Fabrication of large dual-polarized multichroic TES bolometer arrays for CMB measurements with the SPT-3G camera. <i>Superconductor Science and Technology</i> , 2015 , 28, 094002	3.1	27

73	CARMA MEASUREMENTS OF THE SUNYAEV-ZEL'DOVICH EFFECT IN RX J1347.5-1145. <i>Astrophysical Journal</i> , 2013 , 770, 112	4.7	27
72	Galaxy Clusters Selected via the Sunyaev-Zel'dovich Effect in the SPTpol 100-square-degree Survey. <i>Astronomical Journal</i> , 2020 , 159, 110	4.9	26
71	THEMIS: A Parameter Estimation Framework for the Event Horizon Telescope. <i>Astrophysical Journal</i> , 2020 , 897, 139	4.7	24
70	Detection of anti-correlation of hot and cold baryons in galaxy clusters. <i>Nature Communications</i> , 2019 , 10, 2504	17.4	24
69	The XXL Survey. <i>Astronomy and Astrophysics</i> , 2018 , 620, A2	5.1	24
68	First Sagittarius A* Event Horizon Telescope Results. I. The Shadow of the Supermassive Black Hole in the Center of the Milky Way. <i>Astrophysical Journal Letters</i> , 2022 , 930, L12	7.9	23
67	Mass Calibration of Optically Selected DES Clusters Using a Measurement of CMB-cluster Lensing with SPTpol Data. <i>Astrophysical Journal</i> , 2019 , 872, 170	4.7	21
66	Event Horizon Telescope imaging of the archetypal blazar 3C 279 at an extreme 20 microarcsecond resolution. <i>Astronomy and Astrophysics</i> , 2020 , 640, A69	5.1	21
65	Millimeter-wave Point Sources from the 2500 Square Degree SPT-SZ Survey: Catalog and Population Statistics. <i>Astrophysical Journal</i> , 2020 , 900, 55	4.7	21
64	Monitoring the Morphology of M87* in 2009-2017 with the Event Horizon Telescope. <i>Astrophysical Journal</i> , 2020 , 901, 67	4.7	20
63	Maps of the Southern Millimeter-wave Sky from Combined 2500 deg ² SPT-SZ and Planck Temperature Data. <i>Astrophysical Journal, Supplement Series</i> , 2018 , 239, 10	8	20
62	SPT-3G: A Multichroic Receiver for the South Pole Telescope. <i>Journal of Low Temperature Physics</i> , 2018 , 193, 1057-1065	1.3	20
61	First Sagittarius A* Event Horizon Telescope Results. III. Imaging of the Galactic Center Supermassive Black Hole. <i>Astrophysical Journal Letters</i> , 2022 , 930, L14	7.9	20
60	Year two instrument status of the SPT-3G cosmic microwave background receiver 2018 ,		19
59	Galaxy kinematics and mass calibration in massive SZE-selected galaxy clusters to z \leq 1.3. <i>Monthly Notices of the Royal Astronomical Society</i> , 2019 , 482, 1043-1061	4.3	19
58	A Comparison of Maps and Power Spectra Determined from South Pole Telescope and Planck Data. <i>Astrophysical Journal</i> , 2018 , 853, 3	4.7	18
57	First Sagittarius A* Event Horizon Telescope Results. V. Testing Astrophysical Models of the Galactic Center Black Hole. <i>Astrophysical Journal Letters</i> , 2022 , 930, L16	7.9	18
56	First Sagittarius A* Event Horizon Telescope Results. II. EHT and Multiwavelength Observations, Data Processing, and Calibration. <i>Astrophysical Journal Letters</i> , 2022 , 930, L13	7.9	16

55	First Sagittarius A* Event Horizon Telescope Results. IV. Variability, Morphology, and Black Hole Mass. <i>Astrophysical Journal Letters</i> , 2022 , 930, L15	7.9	16
54	Constraints on the Thermal Contents of the X-Ray Cavities of Cluster MS 0735.6+7421 with Sunyaev-Zel'dovich Effect Observations. <i>Astrophysical Journal</i> , 2019 , 871, 195	4.7	15
53	Analysis of Sunyaev-Zel'dovich effect mass-observable relations using South Pole Telescope observations of an X-ray selected sample of low-mass galaxy clusters and groups. <i>Monthly Notices of the Royal Astronomical Society</i> , 2015 , 448, 2085-2099	4.3	15
52	An Improved Measurement of the Secondary Cosmic Microwave Background Anisotropies from the SPT-SZ + SPTpol Surveys. <i>Astrophysical Journal</i> , 2021 , 908, 199	4.7	15
51	Optimization of Transition Edge Sensor Arrays for Cosmic Microwave Background Observations With the South Pole Telescope. <i>IEEE Transactions on Applied Superconductivity</i> , 2017 , 27, 1-4	1.8	14
50	Fractional polarization of extragalactic sources in the 500 deg ² SPTpol survey. <i>Monthly Notices of the Royal Astronomical Society</i> , 2019 , 490, 5712-5721	4.3	14
49	Optical Characterization of the SPT-3G Camera. <i>Journal of Low Temperature Physics</i> , 2018 , 193, 305-313	1.3	14
48	First Sagittarius A* Event Horizon Telescope Results. VI. Testing the Black Hole Metric. <i>Astrophysical Journal Letters</i> , 2022 , 930, L17	7.9	14
47	MILLIMETER TRANSIENT POINT SOURCES IN THE SPTpol 100 SQUARE DEGREE SURVEY. <i>Astrophysical Journal</i> , 2016 , 830, 143	4.7	13
46	Integrated performance of a frequency domain multiplexing readout in the SPT-3G receiver 2016 ,		13
45	Probing star formation in the dense environments of $z \sim 1$ lensing haloes aligned with dusty star-forming galaxies detected with the South Pole Telescope. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016 , 455, 1629-1646	4.3	13
44	Feedhorn-Coupled TES Polarimeters for Next-Generation CMB Instruments 2009 ,		13
43	Event Horizon Telescope observations of the jet launching and collimation in Centaurus A. <i>Nature Astronomy</i> ,	12.1	13
42	Tuning SPT-3G Transition-Edge-Sensor Electrical Properties with a Four-Layer TiAlN/TiAlN Thin-Film Stack. <i>Journal of Low Temperature Physics</i> , 2018 , 193, 695-702	1.3	12
41	Fabrication of Detector Arrays for the SPT-3G Receiver. <i>Journal of Low Temperature Physics</i> , 2018 , 193, 703-711	1.3	12
40	Performance and on-sky optical characterization of the SPTpol instrument 2012 ,		12
39	Design and Assembly of SPT-3G Cold Readout Hardware. <i>Journal of Low Temperature Physics</i> , 2018 , 193, 547-555	1.3	12
38	Cosmological lensing ratios with DES Y1, SPT, and Planck. <i>Monthly Notices of the Royal Astronomical Society</i> , 2019 , 487, 1363-1379	4.3	11

37	Millimeter Light Curves of Sagittarius A* Observed during the 2017 Event Horizon Telescope Campaign. <i>Astrophysical Journal Letters</i> , 2022 , 930, L19	7.9	11
36	Planar Orthomode Transducers for Feedhorn-coupled TES Polarimeters 2009 ,		9
35	Characterizing and Mitigating Intraday Variability: Reconstructing Source Structure in Accreting Black Holes with mm-VLBI. <i>Astrophysical Journal Letters</i> , 2022 , 930, L21	7.9	9
34	Detection of CMB-Cluster Lensing using Polarization Data from SPTpol. <i>Physical Review Letters</i> , 2019 , 123, 181301	7.4	8
33	A Study of AlMn Transition Edge Sensor Engineering for Stability. <i>Journal of Low Temperature Physics</i> , 2014 , 176, 383-391	1.3	8
32	South Pole Telescope software systems: control, monitoring, and data acquisition 2012 ,		8
31	On-Sky Performance of the SPT-3G Frequency-Domain Multiplexed Readout. <i>Journal of Low Temperature Physics</i> , 2020 , 199, 182-191	1.3	8
30	MAPS OF THE MAGELLANIC CLOUDS FROM COMBINED SOUTH POLE TELESCOPE AND PLANCK DATA. <i>Astrophysical Journal, Supplement Series</i> , 2016 , 227, 23	8	8
29	A Universal Power-law Prescription for Variability from Synthetic Images of Black Hole Accretion Flows. <i>Astrophysical Journal Letters</i> , 2022 , 930, L20	7.9	8
28	Design and characterization of the SPT-3G receiver 2018 ,		7
27	Selective Dynamical Imaging of Interferometric Data. <i>Astrophysical Journal Letters</i> , 2022 , 930, L18	7.9	7
26	Progress on ANL/KICP Bolometers for SPTpol. <i>IEEE Transactions on Applied Superconductivity</i> , 2011 , 21, 184-187	1.8	6
25	Optical properties of Feedhorn-coupled TES polarimeters for CMB polarimetry 2009 ,		5
24	Performance of AlMn Transition-Edge Sensor Bolometers in SPT-3G. <i>Journal of Low Temperature Physics</i> , 2020 , 199, 320-329	1.3	5
23	Design and Bolometer Characterization of the SPT-3G First-Year Focal Plane. <i>Journal of Low Temperature Physics</i> , 2018 , 193, 1085-1093	1.3	5
22	Thermal Links and Microstrip Transmission Lines in SPT-3G Bolometers. <i>Journal of Low Temperature Physics</i> , 2018 , 193, 712-719	1.3	5
21	Detection of Galactic and Extragalactic Millimeter-wavelength Transient Sources with SPT-3G. <i>Astrophysical Journal</i> , 2021 , 916, 98	4.7	5
20	Mo/Au Bilayer TES Resistive Transition Engineering. <i>IEEE Transactions on Applied Superconductivity</i> , 2015 , 25, 1-5	1.8	4

19	Measurements of the Cross-spectra of the Cosmic Infrared and Microwave Backgrounds from 95 to 1200 GHz. <i>Astrophysical Journal</i> , 2019 , 881, 96	4-7	4
18	Low temperature thermal transport in partially perforated silicon nitride membranes. <i>Applied Physics Letters</i> , 2009 , 94, 183504	3-4	4
17	The Design and Integrated Performance of SPT-3G. <i>Astrophysical Journal, Supplement Series</i> , 2022 , 258, 42	8	4
16	Characterization and performance of the second-year SPT-3G focal plane 2018 ,		4
15	Low Loss Superconducting Microstrip Development at Argonne National Lab. <i>IEEE Transactions on Applied Superconductivity</i> , 2015 , 25, 1-5	1.8	3
14	Control of Membrane Thermal Transport Supporting Superconducting Detector Development. <i>IEEE Transactions on Applied Superconductivity</i> , 2009 , 19, 489-492	1.8	3
13	Characterizing and Modeling the Noise and Complex Impedance of Feedhorn-Coupled TES Polarimeters 2009 ,		3
12	Design and Fabrication of Absorber Coupled TES Microbolometers on Continuous Silicon-Nitride Windows. <i>Journal of Low Temperature Physics</i> , 2008 , 151, 245-248	1.3	3
11	Sunyaev-Zel'dovich effect in galaxy clusters 1999 ,		3
10	CMB/kSZ and Compton- γ Maps from 2500 deg ² of SPT-SZ and Planck Survey Data. <i>Astrophysical Journal, Supplement Series</i> , 2022 , 258, 36	8	3
9	Optimal Cosmic Microwave Background Lensing Reconstruction and Parameter Estimation with SPTpol Data. <i>Astrophysical Journal</i> , 2021 , 922, 259	4-7	3
8	Imaging the Sunyaev-Zel'dovich Effect 2001 ,		3
7	Impact of Electrical Contacts Design and Materials on the Stability of Ti Superconducting Transition Shape. <i>Journal of Low Temperature Physics</i> , 2018 , 193, 732-738	1.3	3
6	SPT-SLIM: A Line Intensity Mapping Pathfinder for the South Pole Telescope. <i>Journal of Low Temperature Physics</i> , 1	1.3	3
5	Design and Fabrication of Argonne/KICP Detectors for CMB Polarization 2009 ,		2
4	Measurements of Bolometer Uniformity for Feedhorn Coupled TES Polarimeters 2009 ,		2
3	Broadband, millimeter-wave antireflection coatings for large-format, cryogenic aluminum oxide optics. <i>Applied Optics</i> , 2020 , 59, 3285-3295	1.7	2
2	SPT-SZ: a Sunyaev-Zel'dovich survey for galaxy clusters 2009 ,		1

- 1 Improving Cosmological Constraints from Galaxy Cluster Number Counts with CMB-cluster-lensing Data: Results from the SPT-SZ Survey and Forecasts for the Future. *Astrophysical Journal*, **2022**, 931, 139^{4.7} ○