Luke A Barnard

List of Publications by Year
in descending order

70 papers	1,875 citations	257450 24 h-index	302126 39 g-index
81 all docs	81 docs citations	81 times ranked	2320 citing authors

#	Article	IF	Citations
1	Solar forcing for CMIP6 (v3.2). Geoscientific Model Development, 2017, 10, 2247-2302.	3.6	293
2	Predicting space climate change. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	65
3	On the origins and timescales of geoeffective IMF. Space Weather, 2016, 14, 406-432.	3.7	65
4	Coronal mass ejections are not coherent magnetohydrodynamic structures. Scientific Reports, 2017, 7, 4152.	3.3	65
5	Reconstruction of geomagnetic activity and near-Earth interplanetary conditions over the past 167 yr â€“ Part 4: Near-Earth solar wind speed, IMF, and open solar flux. Annales Geophysicae, 2014, 32, 383-399.	1.6	60
6	The Maunder minimum and the Little Ice Age: an update from recent reconstructions and climate simulations. Journal of Space Weather and Space Climate, 2017, 7, A33.	3.3	54
7	Centennial variations in sunspot number, open solar flux, and streamer belt width: 1. Correction of the sunspot number record since 1874. Journal of Geophysical Research: Space Physics, 2014, 119, 5172-5182.	2.4	51
8	Evidence for solar wind modulation of lightning. Environmental Research Letters, 2014, 9, 055004.	5.2	49
9	The persistence of solar activity indicators and the descent of the Sun into Maunder Minimum conditions. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	45
10	Solar cycle 24: Implications for energetic particles and long-term space climate change. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	44
11	A Computationally Efficient, Time-Dependent Model of the Solar Wind for Use as a Surrogate to Three-Dimensional Numerical Magnetohydrodynamic Simulations. Solar Physics, 2020, 295, 1.	2.5	44
12	Semi-annual, annual and Universal Time variations in the magnetosphere and in geomagnetic activity: 1. Geomagnetic data. Journal of Space Weather and Space Climate, 2020, 10, 23.	3.3	42
13	Reconstruction of geomagnetic activity and near-Earth interplanetary conditions over the past 167 yr â€“ Part 1: A new geomagnetic data composite. Annales Geophysicae, 2013, 31, 1957-1977.	1.6	38
14	The Development of a Space Climatology: 1. Solar Wind Magnetosphere Coupling as a Function of Timescale and the Effect of Data Gaps. Space Weather, 2019, 17, 133-156.	3.7	35
15	AN ASSESSMENT OF SUNSPOT NUMBER DATA COMPOSITES OVER 1845â€“2014. Astrophysical Journal, 2016, 824, 54.	4.5	34
16	Tests of Sunspot Number Sequences: 3. Effects of Regression Procedures on the Calibration of Historic Sunspot Data. Solar Physics, 2016, 291, 2829-2841.	2.5	34
17	Nearâ€Earth heliospheric magnetic field intensity since 1750: 1. Sunspot and geomagnetic reconstructions. Journal of Geophysical Research: Space Physics, 2016, 121, 6048-6063.	2.4	33
18	Reconstruction of geomagnetic activity and near-Earth interplanetary conditions over the past 167 yr â€“ Part 2: A new reconstruction of the interplanetary magnetic field. Annales Geophysicae, 2013, 31, 1979-1992.	1.6	32

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19	Space climate and space weather over the past 400 years: 1. The power input to the magnetosphere. Journal of Space Weather and Space Climate, 2017, 7, A25.	3.3	29
20	Modulation of UK lightning by heliospheric magnetic field polarity. Environmental Research Letters, 2014, 9, 115009.	5.2	28
21	A homogeneous <i>aa</i> index: 2. Hemispheric asymmetries and the equinoctial variation. Journal of Space Weather and Space Climate, 2018, 8, A58.	3.3	28
22	Validation of a priori CME arrival predictions made using realâ€time heliospheric imager observations. Space Weather, 2015, 13, 35-48.	3.7	27
23	Space climate and space weather over the past 400â€‰years: 2. Proxy indicators of geomagnetic storm and substorm occurrence. Journal of Space Weather and Space Climate, 2018, 8, A12.	3.3	27
24	The Solar Stormwatch CME catalogue: Results from the first space weather citizen science project. Space Weather, 2014, 12, 657-674.	3.7	25
25	Centennial variations in sunspot number, open solar flux, and streamer belt width: 2. Comparison with the geomagnetic data. Journal of Geophysical Research: Space Physics, 2014, 119, 5183-5192.	2.4	24
26	A homogeneous <i>aa</i> index: 1. Secular variation. Journal of Space Weather and Space Climate, 2018, 8, A53.	3.3	24
27	Semi-annual, annual and Universal Time variations in the magnetosphere and in geomagnetic activity: 2. Response to solar wind power input and relationships with solar wind dynamic pressure and magnetospheric flux transport. Journal of Space Weather and Space Climate, 2020, 10, 30.	3.3	24
28	Solar cycle 24: what is the Sun up to?. Astronomy and Geophysics, 2012, 53, 3.09-3.15.	0.2	23
29	Extreme Space-Weather Events and the Solar Cycle. Solar Physics, 2021, 296, 1.	2.5	23
30	Reconstruction of geomagnetic activity and near-Earth interplanetary conditions over the past 167 yr â€“ Part 3: Improved representation of solar cycle 11. Annales Geophysicae, 2014, 32, 367-381.	1.6	22
31	Testing the current paradigm for space weather prediction with heliospheric imagers. Space Weather, 2017, 15, 782-803.	3.7	22
32	Time-of-day/time-of-year response functions of planetary geomagnetic indices. Journal of Space Weather and Space Climate, 2019, 9, A20.	3.3	22
33	Tests of Sunspot Number Sequences: 2. Using Geomagnetic and Auroral Data. Solar Physics, 2016, 291, 2811-2828.	2.5	21
34	Tests of Sunspot Number Sequences: 1. Using Ionosonde Data. Solar Physics, 2016, 291, 2785-2809.	2.5	20
35	Ensemble CME Modeling Constrained by Heliospheric Imager Observations. AGU Advances, 2020, 1, e2020AV000214.	5.4	20
36	Nearâ€Earth heliospheric magnetic field intensity since 1750: 2. Cosmogenic radionuclide reconstructions. Journal of Geophysical Research: Space Physics, 2016, 121, 6064-6074.	2.4	19

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37	Generation of Inverted Heliospheric Magnetic Flux by Coronal Loop Opening and Slow Solar Wind Release. Astrophysical Journal Letters, 2018, 868, L14.	8.3	19
38	The solar influence on the probability of relatively cold UK winters in the future. Environmental Research Letters, 2011, 6, 034004.	5.2	18
39	An arch in the UK. Astronomy and Geophysics, 2015, 56, 4.25-4.30.	0.2	18
40	The heliospheric Hale cycle over the last 300 years and its implications for a â€œlostâ€• late 18th century solar cycle. Journal of Space Weather and Space Climate, 2015, 5, A30.	3.3	17
41	The Development of a Space Climatology: 3. Models of the Evolution of Distributions of Space Weather Variables With Timescale. Space Weather, 2019, 17, 180-209.	3.7	17
42	A survey of gradual solar energetic particle events. Journal of Geophysical Research, 2011, 116, .	3.3	16
43	Semi-annual, annual and Universal Time variations in the magnetosphere and in geomagnetic activity: 3. Modelling. Journal of Space Weather and Space Climate, 2020, 10, 61.	3.3	16
44	The Variation of Geomagnetic Storm Duration with Intensity. Solar Physics, 2019, 294, 1.	2.5	15
45	Semi-annual, annual and Universal Time variations in the magnetosphere and in geomagnetic activity: 4. Polar Cap motions and origins of the Universal Time effect. Journal of Space Weather and Space Climate, 2021, 11, 15.	3.3	15
46	Differences between the CME fronts tracked by an expert, an automated algorithm, and the Solar Stormwatch project. Space Weather, 2015, 13, 709-725.	3.7	14
47	Dragâ€Based CME Modeling With Heliospheric Images Incorporating Frontal Deformation: ELEvoHI 2.0. Space Weather, 2021, 19, e2021SW002836.	3.7	13
48	Tests of Sunspot Number Sequences: 4. Discontinuities Around 1946 in Various Sunspot Number and Sunspot-Group-Number Reconstructions. Solar Physics, 2016, 291, 2843-2867.	2.5	12
49	The Development of a Space Climatology: 2. The Distribution of Power Input Into the Magnetosphere on a 3â€Hourly Timescale. Space Weather, 2019, 17, 157-179.	3.7	12
50	The Value of CME Arrival Time Forecasts for Space Weather Mitigation. Space Weather, 2020, 18, e2020SW002507.	3.7	12
51	NEAR-EARTH COSMIC RAY DECREASES ASSOCIATED WITH REMOTE CORONAL MASS EJECTIONS. Astrophysical Journal, 2015, 801, 5.	4.5	11
52	Extracting Innerâ€Heliosphere Solar Wind Speed Information From Heliospheric Imager Observations. Space Weather, 2019, 17, 925-938.	3.7	11
53	Using Ghost Fronts Within STEREO Heliospheric Imager Data to Infer the Evolution in Longitudinal Structure of a Coronal Mass Ejection. Space Weather, 2019, 17, 539-552.	3.7	11
54	Why are ELEvoHI CME Arrival Predictions Different if Based on STEREOâ€A or STEREOâ€B Heliospheric Imager Observations?. Space Weather, 2021, 19, e2020SW002674.	3.7	11

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55	The National Eclipse Weather Experiment: use and evaluation of a citizen science tool for schools outreach. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2016, 374, 20150223.	3.4	10
56	The National Eclipse Weather Experiment: an assessment of citizen scientist weather observations. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2016, 374, 20150220.	3.4	9
57	What can the annual ¹⁰Be solar activity reconstructions tell us about historic space weather?. Journal of Space Weather and Space Climate, 2018, 8, A23.	3.3	9
58	Modeling the Observed Distortion of Multiple (Ghost) CME Fronts in STEREO Heliospheric Imagers. Astrophysical Journal Letters, 2021, 917, L16.	8.3	9
59	Tracking CMEs using data from the Solar Stormwatch project; observing deflections and other properties. Space Weather, 2017, 15, 1125-1140.	3.7	8
60	Forecasting Occurrence and Intensity of Geomagnetic Activity With Patternâ€Matching Approaches. Space Weather, 2021, 19, e2020SW002624.	3.7	7
61	Quantifying the Uncertainty in CME Kinematics Derived From Geometric Modeling of Heliospheric Imager Data. Space Weather, 2022, 20, .	3.7	6
62	Solar Stormwatch: tracking solar eruptions. Astronomy and Geophysics, 2015, 56, 4.20-4.24.	0.2	5
63	Using the ionospheric response to the solar eclipse on 20 March 2015 to detect spatial structure in the solar corona. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2016, 374, 20150216.	3.4	5
64	Ion Charge States and Potential Geoeffectiveness: The Role of Coronal Spectroscopy for Spaceâ€Weather Forecasting. Space Weather, 2018, 16, 694-703.	3.7	5
65	The Visual Complexity of Coronal Mass Ejections Follows the Solar Cycle. Space Weather, 2020, 18, e2020SW002556.	3.7	4
66	Rate of Change of Large-Scale Solar-Wind Structure. Solar Physics, 2022, 297, .	2.5	4
67	The space environment before the space age. Astronomy and Geophysics, 2017, 58, 2.12-2.16.	0.2	3
68	Long-term variations in the heliosphere. Proceedings of the International Astronomical Union, 2018, 13, 108-114.	0.0	2
69	Inferring thermospheric composition from ionogram profiles: a calibration with the TIMED spacecraft. Annales Geophysicae, 2021, 39, 309-319.	1.6	0
70	Towards GIC forecasting: Statistical downscaling of the geomagnetic field to improve geoelectric field forecasts. Space Weather, 0, , e2021SW002903.	3.7	0