Luke A Barnard

List of Publications by Citations

69 papers	1,307 citations	20 h-index	32 g-index
81 ext. papers	1,600 ext. citations	3.2 avg, IF	4.68 L-index

#	Paper	IF	Citations
69	Solar forcing for CMIP6 (v3.2). *Geoscientific Model Development*, **2017**, 10, 2247-2302	6.3	199
68	On the origins and timescales of geoeffective IMF. *Space Weather*, **2016**, 14, 406-432	3.7	53
67	Reconstruction of geomagnetic activity and near-Earth interplanetary conditions over the past 167 yr Part 4: Near-Earth solar wind speed, IMF, and open solar flux. *Annales Geophysicae*, **2014**, 32, 383-399	2	53
66	Predicting space climate change. *Geophysical Research Letters*, **2011**, 38, n/a-n/a	4.9	53
65	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	2.6	44
64	Coronal mass ejections are not coherent magnetohydrodynamic structures. *Scientific Reports*, **2017**, 7, 4152	4.9	40
63	Evidence for solar wind modulation of lightning. *Environmental Research Letters*, **2014**, 9, 055004	6.2	40
62	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	4.9	36
61	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	2.5	35
60	Solar cycle 24: Implications for energetic particles and long-term space climate change. *Geophysical Research Letters*, **2011**, 38, n/a-n/a	4.9	33
59	Reconstruction of geomagnetic activity and near-Earth interplanetary conditions over the past 167 yr Part 1: A new geomagnetic data composite. *Annales Geophysicae*, **2013**, 31, 1957-1977	2	32
58	Tests of Sunspot Number Sequences: 3. Effects of Regression Procedures on the Calibration of Historic Sunspot Data. *Solar Physics*, **2016**, 291, 2829-2841	2.6	29
57	Reconstruction of geomagnetic activity and near-Earth interplanetary conditions over the past 167 yr Part 2: A new reconstruction of the interplanetary magnetic field. *Annales Geophysicae*, **2013**, 31, 1979-1992	2	28
56	AN ASSESSMENT OF SUNSPOT NUMBER DATA COMPOSITES OVER 1845 2014. *Astrophysical Journal*, **2016**, 824, 54	4.7	27
55	Near-Earth heliospheric magnetic field intensity since 1750: 1. Sunspot and geomagnetic reconstructions. *Journal of Geophysical Research: Space Physics*, **2016**, 121, 6048-6063	2.6	27
54	Validation of a priori CME arrival predictions made using real-time heliospheric imager observations. *Space Weather*, **2015**, 13, 35-48	3.7	25
53	Modulation of UK lightning by heliospheric magnetic field polarity. *Environmental Research Letters*, **2014**, 9, 115009	6.2	23

52	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	2.5	21
51	Solar cycle 24: what is the Sun up to?. *Astronomy and Geophysics*, **2012**, 53, 3.09-3.15	0.2	21
50	The Solar Stormwatch CME catalogue: Results from the first space weather citizen science project. *Space Weather*, **2014**, 12, 657-674	3.7	20
49	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	2.5	20
48	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	19
47	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	2.6	19
46	Reconstruction of geomagnetic activity and near-Earth interplanetary conditions over the past 167 yr Part 3: Improved representation of solar cycle 11. *Annales Geophysicae*, **2014**, 32, 367-381	2	19
45	Solar Forcing for CMIP6 (v3.1) **2016**,		19
44	Tests of Sunspot Number Sequences: 2. Using Geomagnetic and Auroral Data. *Solar Physics*, **2016**, 291, 2811-2828	2.6	18
43	Tests of Sunspot Number Sequences: 1. Using Ionosonde Data. *Solar Physics*, **2016**, 291, 2785-2809	2.6	16
42	An arch in the UK. *Astronomy and Geophysics*, **2015**, 56, 4.25-4.30	0.2	16
41	Near-Earth heliospheric magnetic field intensity since 1750: 2. Cosmogenic radionuclide reconstructions. *Journal of Geophysical Research: Space Physics*, **2016**, 121, 6064-6074	2.6	16
40	A homogeneous aa index: 2. Hemispheric asymmetries and the equinoctial variation. *Journal of Space Weather and Space Climate*, **2018**, 8, A58	2.5	16
39	Space climate and space weather over the past 400 years: 2. Proxy indicators of geomagnetic storm and substorm occurrence. *Journal of Space Weather and Space Climate*, **2018**, 8, A12	2.5	16
38	Testing the current paradigm for space weather prediction with heliospheric imagers. *Space Weather*, **2017**, 15, 782-803	3.7	15
37	The solar influence on the probability of relatively cold UK winters in the future. *Environmental Research Letters*, **2011**, 6, 034004	6.2	14
36	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	2.6	13
35	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	13

34	A homogeneous aa index: 1. Secular variation. *Journal of Space Weather and Space Climate*, **2018**, 8, A53	2.5	13
33	Generation of Inverted Heliospheric Magnetic Flux by Coronal Loop Opening and Slow Solar Wind Release. *Astrophysical Journal Letters*, **2018**, 868, L14	7.9	13
32	Tests of Sunspot Number Sequences: 4. Discontinuities Around 1946 in Various Sunspot Number and Sunspot-Group-Number Reconstructions. *Solar Physics*, **2016**, 291, 2843-2867	2.6	12
31	NEAR-EARTH COSMIC RAY DECREASES ASSOCIATED WITH REMOTE CORONAL MASS EJECTIONS. *Astrophysical Journal*, **2015**, 801, 5	4.7	11
30	A survey of gradual solar energetic particle events. *Journal of Geophysical Research*, **2011**, 116,		11
29	Time-of-day/time-of-year response functions of planetary geomagnetic indices. *Journal of Space Weather and Space Climate*, **2019**, 9, A20	2.5	10
28	The Variation of Geomagnetic Storm Duration with Intensity. *Solar Physics*, **2019**, 294, 1	2.6	10
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	2.5	10
26	The Development of a Space Climatology: 2. The Distribution of Power Input Into the Magnetosphere on a 3-Hourly Timescale. *Space Weather*, **2019**, 17, 157-179	3.7	9
25	Extracting Inner-Heliosphere Solar Wind Speed Information From Heliospheric Imager Observations. *Space Weather*, **2019**, 17, 925-938	3.7	9
24	The heliospheric Hale cycle over the last 300 years and its implications for a □lost□late 18th century solar cycle. *Journal of Space Weather and Space Climate*, **2015**, 5, A30	2.5	9
23	The Value of CME Arrival Time Forecasts for Space Weather Mitigation. *Space Weather*, **2020**, 18, e2020SW002507	3.7	8
22	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	8
21	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,	3	8
20	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	7
19	Extreme Space-Weather Events and the Solar Cycle. *Solar Physics*, **2021**, 296, 1	2.6	7
18	What can the annual 10Be solar activity reconstructions tell us about historic space weather?. *Journal of Space Weather and Space Climate*, **2018**, 8, A23	2.5	7
17	Ensemble CME Modeling Constrained by Heliospheric Imager Observations. *AGU Advances*, **2020**, 1, e2020AV000214	5.4	6

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16	The National Eclipse Weather Experiment: an assessment of citizen scientist weather observations. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2016**, 374,	3	6
15	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,	3	5
14	Ion Charge States and Potential Geoeffectiveness: The Role of Coronal Spectroscopy for Space-Weather Forecasting. *Space Weather*, **2018**, 16, 694-703	3.7	5
13	Tracking CMEs using data from the Solar Stormwatch project; observing deflections and other properties. *Space Weather*, **2017**, 15, 1125-1140	3.7	5
12	Solar Stormwatch: tracking solar eruptionsSOLAR STORMWATCH. *Astronomy and Geophysics*, **2015**, 56, 4.20-4.24	0.2	5
11	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	2.5	5
10	Why are ELEvoHI CME Arrival Predictions Different if Based on STEREO-A or STEREO-B Heliospheric Imager Observations?. *Space Weather*, **2021**, 19, e2020SW002674	3.7	5
9	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	2.5	4
8	The space environment before the space age. *Astronomy and Geophysics*, **2017**, 58, 2.12-2.16	0.2	3
7	Drag-Based CME Modeling With Heliospheric Images Incorporating Frontal Deformation: ELEvoHI 2.0. *Space Weather*, **2021**, 19, e2021SW002836	3.7	3
6	Forecasting Occurrence and Intensity of Geomagnetic Activity With Pattern-Matching Approaches. *Space Weather*, **2021**, 19, e2020SW002624	3.7	2
5	The Visual Complexity of Coronal Mass Ejections Follows the Solar Cycle. *Space Weather*, **2020**, 18, e2020SW002556	3.7	
4	Long-term variations in the heliosphere. *Proceedings of the International Astronomical Union*, **2018**, 13, 108-114	0.1	1
3	Modeling the Observed Distortion of Multiple (Ghost) CME Fronts in STEREO Heliospheric Imagers. *Astrophysical Journal Letters*, **2021**, 917, L16	7.9	1
2	Towards GIC forecasting: Statistical downscaling of the geomagnetic field to improve geoelectric field forecasts. *Space Weather*,e2021SW002903	3.7	
1	Inferring thermospheric composition from ionogram profiles: a calibration with the TIMED spacecraft. *Annales Geophysicae*, **2021**, 39, 309-319	2	