David M Willis

List of Publications by Year
in descending order

65 papers	1,912 citations	218381 26 h-index	253896 43 g-index
67 all docs	67 docs citations	67 times ranked	763 citing authors

#	Article	IF	Citations
1	Midday auroral breakup events and related energy and momentum transfer from the magnetosheath. Journal of Geophysical Research, 1990, 95, 1039-1060.	3.3	188
2	The dependence of high-latitude dayside ionospheric flows on the North-South component of the IMF: A high time resolution correlation analysis using EISCAT â€œPolarâ€• and AMPTE UKS and IRM data. Planetary and Space Science, 1988, 36, 471-498.	0.9	138
3	Response time of the high-latitude dayside ionosphere to sudden changes in the north-south component of the IMF. Planetary and Space Science, 1988, 36, 1415-1428.	0.9	95
4	Eastward propagation of a plasma convection enhancement following a southward turning of the interplanetary magnetic field. Geophysical Research Letters, 1986, 13, 72-75.	1.5	80
5	Nonâ€Maxwellian ion velocity distributions observed using EISCAT. Geophysical Research Letters, 1987, 14, 111-114.	1.5	78
6	EISCAT observations of bursts of rapid flow in the high latitude dayside ionosphere. Geophysical Research Letters, 1986, 13, 909-912.	1.5	76
7	Structure of the magnetopause. Reviews of Geophysics, 1971, 9, 953-985.	9.0	71
8	The Greenwich Photo-heliographic Results (1874â€‰â€“â€‰1976): Summary of the Observations, Applications, Datasets, Definitions and Errors. Solar Physics, 2013, 288, 117-139.	1.0	71
9	Variability of the interplanetary medium at 1 a.u. over 24 years: 1963â€“1986. Planetary and Space Science, 1991, 39, 411-423.	0.9	68
10	Temporal and Spatial Evolutions of a Large Sunspot Group and Great Auroral Storms Around the Carrington Event in 1859. Space Weather, 2019, 17, 1553-1569.	1.3	68
11	Initial EISCAT observations of plasma convection at invariant latitudes 70Â°â€“77Â°. Journal of Atmospheric and Solar-Terrestrial Physics, 1984, 46, 635-641.	0.9	66
12	A survey of simultaneous observations of the high-latitude ionosphere and interplanetary magnetic field with EISCAT and AMPTE-UKS. Journal of Atmospheric and Solar-Terrestrial Physics, 1986, 48, 987-1008.	0.9	46
13	The Great Space Weather Event during 1872 February Recorded in East Asia. Astrophysical Journal, 2018, 862, 15.	1.6	44
14	The Microstructure of the Magnetopause. Geophysical Journal International, 1975, 41, 355-389.	1.0	42
15	Seasonal variation of oriental sunspot sightings. Nature, 1980, 287, 617-619.	13.7	42
16	Solar and auroral evidence for an intense recurrent geomagnetic storm during December in AD 1128. Annales Geophysicae, 2001, 19, 289-302.	0.6	41
17	Ionospheric response to changes in the interplanetary magnetic field observed by EISCAT and AMPTEâ€“UKS. Nature, 1985, 318, 451-452.	13.7	40
18	Ion flows and heating at a contracting polar-cap boundary. Planetary and Space Science, 1988, 36, 1229-1253.	0.9	39

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19	The earliest datable observation of the aurora borealis. Astronomy and Geophysics, 2004, 45, 6.15-6.17.	0.1	38
20	The Greenwich Photo-heliographic Results (1874â€‰â€“â€‰1976): Procedures for Checking and Correcting the Sunspot Digital Datasets. Solar Physics, 2013, 288, 141-156.	1.0	38
21	Sporadic aurorae observed in East Asia. Annales Geophysicae, 2007, 25, 417-436.	0.6	34
22	Simultaneous auroral observations described in the historical records of China, Japan and Korea from ancient times to AD 1700. Annales Geophysicae, 2000, 18, 1-10.	0.6	33
23	Increasing Lifetime of Recurrent Sunspot Groups WithinÂthe Greenwich Photoheliographic Results. Solar Physics, 2010, 262, 299-313.	1.0	29
24	The Greenwich Photo-heliographic Results (1874â€‰â€“â€‰1976): Initial Corrections to the Printed Publications. Solar Physics, 2013, 288, 157-170.	1.0	29
25	Identification of possible intense historical geomagnetic storms using combined sunspot and auroral observations from East Asia. Annales Geophysicae, 2005, 23, 945-971.	0.6	28
26	The energetics of Sun-weather relationships: magnetospheric processes. Journal of Atmospheric and Solar-Terrestrial Physics, 1976, 38, 685-698.	0.9	26
27	The magnetopause: microstructure and interaction with magnetospheric plasma. Journal of Atmospheric and Solar-Terrestrial Physics, 1978, 40, 301-322.	0.9	25
28	Scattered power from non-thermal, F-region plasma observed by EISCATâ€”evidence for coherent echoes?. Journal of Atmospheric and Solar-Terrestrial Physics, 1988, 50, 467-485.	0.9	24
29	Large-amplitude standing planetary waves induced in the troposphere by the Sun. Journal of Atmospheric and Solar-Terrestrial Physics, 1977, 39, 1357-1367.	0.9	23
30	Flow in the high latitude ionosphere: measurements at 15s resolution made using the EISCAT â€˜Polarâ€™ experiment. Journal of Atmospheric and Solar-Terrestrial Physics, 1988, 50, 423-446.	0.9	23
31	Statistics of the largest geomagnetic storms per solar cycle (1844-1993). Annales Geophysicae, 1997, 15, 719-728.	0.6	23
32	Re-examination of the Daily Number of Sunspot Groups for the Royal Observatory, Greenwich (1874â€‰â€“â€‰1885). Solar Physics, 2016, 291, 2519-2552.	1.0	21
33	Studies of the cusp and auroral zone with incoherent scatter radar: the scientific and technical case for a polar-cap radar. Journal of Atmospheric and Solar-Terrestrial Physics, 1990, 52, 645-663.	0.9	20
34	Tests of Sunspot Number Sequences: 1. Using Ionosonde Data. Solar Physics, 2016, 291, 2785-2809.	1.0	20
35	The Greenwich Photo-heliographic Results (1874â€‰â€“â€‰1885): Observing Telescopes, Photographic Processes, and Solar Images. Solar Physics, 2016, 291, 2553-2586.	1.0	18
36	Do the Chinese Astronomical Records Dated AD 776 January 12/13 Describe an Auroral Display or a Lunar Halo? A Critical Re-examination. Solar Physics, 2019, 294, 1.	1.0	16

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37	Equation for the field lines of an axisymmetric magnetic multipole. Geophysical Journal International, 1987, 89, 1011-1022.	1.0	15
38	Shortâ€term variability of solar wind number density, speed and dynamic pressure as a function of the interplanetary magnetic field components: A survey over two solar cycles. Geophysical Research Letters, 1990, 17, 1825-1828.	1.5	9
39	â€˜Vapours like fire lightâ€™ are Korean aurorae. Astronomy and Geophysics, 2008, 49, 3.34-3.38.	0.1	9
40	Statistics of the largest sunspot and facular areas per solar cycle. Solar Physics, 1979, 64, 237-246.	1.0	8
41	Possible configurations of the magnetic field in the outer magnetosphere during geomagnetic polarity reversals. Annales Geophysicae, 2000, 18, 11-27.	0.6	8
42	The presence of large sunspots near the central solar meridian at the times of modern Japanese auroral observations. Annales Geophysicae, 2006, 24, 2743-2758.	0.6	8
43	Sunspot Observations on 10 and 11 February 1917: A Case Study in Collating Known and Previously Undocumented Records. Space Weather, 2018, 16, 1740-1752.	1.3	8
44	The Celestial Sign in the Anglo-Saxon Chronicle in the 770s: Insights on Contemporary Solar Activity. Solar Physics, 2019, 294, 1.	1.0	8
45	Equations for the field lines of a sectorial magnetic multipole. Geophysical Journal International, 1988, 95, 625-632.	1.0	7
46	Synoptic data for solar-terrestrial physics: the U.K. contribution to long-term monitoring. Journal of Atmospheric and Solar-Terrestrial Physics, 1994, 56, 871-886.	0.9	6
47	The presence of large sunspots near the central solar meridian at the times of major geomagnetic storms. Annales Geophysicae, 2009, 27, 185-197.	0.6	6
48	Unaided-eye Sunspot Observations in 1769 November: A Comparison of Graphical Records in the East and the West. Solar Physics, 2019, 294, 1.	1.0	6
49	Seasonal and Secular Variations of the Oriental Sunspot Sightings. , 1988, , 187-202.		6
50	Solar proton entry to the magnetosphere on 18 November 1968 and 25 February 1969â€"I. Interpretation of satellite data using trajectory computations in a model magnetosphere. Journal of Atmospheric and Solar-Terrestrial Physics, 1974, 36, 995-1017.	0.9	4
51	Solar proton entry to the magnetosphere on 18 November 1968 and 25 February 1969â€"II. Comparison of trajectory computations in two model magnetospheres. Journal of Atmospheric and Solar-Terrestrial Physics, 1974, 36, 1019-1035.	0.9	4
52	Simplified representations of the magnetopause boundary surface for a quantitative model of the magnetosphere. Journal of Atmospheric and Solar-Terrestrial Physics, 1974, 36, 1037-1044.	0.9	4
53	Ultraviolet spectra of asteroids. Nature, 1980, 287, 701-703.	13.7	4
54	Scientific Interpretation of Historical Auroral Records. Highlights of Astronomy, 2002, 12, 346-349.	0.0	4

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55	Quadrupole and octupole parameters of Jupiter's main magnetic field. Geophysical Journal International, 1982, 68, 765-776.	1.0	3
56	Uncertainties in field-line tracing in the magnetosphere. Part I: the axisymmetric part of the internal geomagnetic field. Annales Geophysicae, 1997, 15, 165-180.	0.6	3
57	Early observation of the aurora australis: AD 1640. Astronomy and Geophysics, 2009, 50, 5.20-5.24.	0.1	3
58	A Transit of Venus Possibly Misinterpreted as an Unaided-Eye Sunspot Observation in China on 9 December 1874. Solar Physics, 2019, 294, 1.	1.0	3
59	Evidence for Recurrent Auroral Activity in the Twelfth and Seventeenth Centuries. Thirty Years of Astronomical Discovery With UKIRT, 2015, , 61-90.	0.3	3
60	Atmospheric water vapour of extraterrestrial origin: a discussion of its possible role in Sun-weather relationships. Journal of Atmospheric and Solar-Terrestrial Physics, 1978, 40, 513-528.	0.9	2
61	A direct analytic method of calculating the quadrupole parameters of a planetary magnetic field. Geophysical Journal International, 1982, 68, 751-764.	1.0	2
62	Uncertainties in field-line tracing in the magnetosphere. Part II: the complete internal geomagnetic field. Annales Geophysicae, 1997, 15, 181-196.	0.6	2
63	Going with the floe. Astronomy and Geophysics, 2016, 57, 2.37-2.42.	0.1	2
64	Provenance of the cross sign of 806 in the Anglo-Saxon Chronicle: a possible lunar halo over continental Europe?. History of Geo- and Space Sciences, 2020, 11, 81-92.	0.1	2
65	Phase variations at millimetric wavelengths on an Earth-space path through model atmospheres. Electronics Letters, 1974, 10, 281.	0.5	1