

# David M Willis

## List of Publications by Citations

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65  
papers

1,618  
citations

24  
h-index

39  
g-index

66  
ext. papers

1,702  
ext. citations

5.5  
avg, IF

4.04  
L-index

#	Paper	IF	Citations
65	Midday auroral breakup events and related energy and momentum transfer from the magnetosheath. <i>Journal of Geophysical Research</i> , <b>1990</b> , 95, 1039		155
64	The dependence of high-latitude dayside ionospheric flows on the North-South component of the IMF: A high time resolution correlation analysis using EISCAT Polar and AMPTE UKS and IRM data. <i>Planetary and Space Science</i> , <b>1988</b> , 36, 471-498	2	128
63	Response time of the high-latitude dayside ionosphere to sudden changes in the north-south component of the IMF. <i>Planetary and Space Science</i> , <b>1988</b> , 36, 1415-1428	2	86
62	Eastward propagation of a plasma convection enhancement following a southward turning of the interplanetary magnetic field. <i>Geophysical Research Letters</i> , <b>1986</b> , 13, 72-75	4.9	72
61	EISCAT observations of bursts of rapid flow in the high latitude dayside ionosphere. <i>Geophysical Research Letters</i> , <b>1986</b> , 13, 909-912	4.9	71
60	Non-Maxwellian ion velocity distributions observed using EISCAT. <i>Geophysical Research Letters</i> , <b>1987</b> , 14, 111-114	4.9	68
59	Structure of the magnetopause. <i>Reviews of Geophysics</i> , <b>1971</b> , 9, 953	23.1	67
58	Variability of the interplanetary medium at 1 a.u. over 24 years: 1963-1986. <i>Planetary and Space Science</i> , <b>1991</b> , 39, 411-423	2	60
57	The Greenwich Photo-heliographic Results (1874 - 1976): Summary of the Observations, Applications, Datasets, Definitions and Errors. <i>Solar Physics</i> , <b>2013</b> , 288, 117-139	2.6	58
56	Initial EISCAT observations of plasma convection at invariant latitudes 70-77. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , <b>1984</b> , 46, 635-641		47
55	A survey of simultaneous observations of the high-latitude ionosphere and interplanetary magnetic field with EISCAT and AMPTE-UKS. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , <b>1986</b> , 48, 987-1008		44
54	Temporal and Spatial Evolutions of a Large Sunspot Group and Great Auroral Storms Around the Carrington Event in 1859. <i>Space Weather</i> , <b>2019</b> , 17, 1553-1569	3.7	43
53	Seasonal variation of oriental sunspot sightings. <i>Nature</i> , <b>1980</b> , 287, 617-619	50.4	40
52	Ionospheric response to changes in the interplanetary magnetic field observed by EISCAT and AMPTE-UKS. <i>Nature</i> , <b>1985</b> , 318, 451-452	50.4	37
51	Solar and auroral evidence for an intense recurrent geomagnetic storm during December in AD 1128. <i>Annales Geophysicae</i> , <b>2001</b> , 19, 289-302	2	36
50	The Great Space Weather Event during 1872 February Recorded in East Asia. <i>Astrophysical Journal</i> , <b>2018</b> , 862, 15	4.7	33
49	The Greenwich Photo-heliographic Results (1874 - 1976): Procedures for Checking and Correcting the Sunspot Digital Datasets. <i>Solar Physics</i> , <b>2013</b> , 288, 141-156	2.6	33

48	Ion flows and heating at a contracting polar-cap boundary. <i>Planetary and Space Science</i> , <b>1988</b> , 36, 1229-1253		32
47	The Microstructure of the Magnetopause. <i>Geophysical Journal International</i> , <b>1975</b> , 41, 355-389	2.6	29
46	Increasing Lifetime of Recurrent Sunspot Groups Within the Greenwich Photoheliographic Results. <i>Solar Physics</i> , <b>2010</b> , 262, 299-313	2.6	28
45	Sporadic aurorae observed in East Asia. <i>Annales Geophysicae</i> , <b>2007</b> , 25, 417-436	2	27
44	The earliest datable observation of the aurora borealis. <i>Astronomy and Geophysics</i> , <b>2004</b> , 45, 6.15-6.17	0.2	25
43	The Greenwich Photo-heliographic Results (1874 – 1976): Initial Corrections to the Printed Publications. <i>Solar Physics</i> , <b>2013</b> , 288, 157-170	2.6	24
42	The energetics of Sun-weather relationships: magnetospheric processes. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , <b>1976</b> , 38, 685-698		24
41	Flow in the high latitude ionosphere: measurements at 15s resolution made using the EISCAT Bolar Experiment. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , <b>1988</b> , 50, 423-446		23
40	Identification of possible intense historical geomagnetic storms using combined sunspot and auroral observations from East Asia. <i>Annales Geophysicae</i> , <b>2005</b> , 23, 945-971	2	22
39	Scattered power from non-thermal, F-region plasma observed by EISCAT – evidence for coherent echoes?. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , <b>1988</b> , 50, 467-485		22
38	Large-amplitude standing planetary waves induced in the troposphere by the Sun. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , <b>1977</b> , 39, 1357-1367		22
37	The magnetopause: microstructure and interaction with magnetospheric plasma. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , <b>1978</b> , 40, 301-322		22
36	Simultaneous auroral observations described in the historical records of China, Japan and Korea from ancient times to AD 1700. <i>Annales Geophysicae</i> , <b>2000</b> , 18, 1-10	2	21
35	Re-examination of the Daily Number of Sunspot Groups for the Royal Observatory, Greenwich (1874 – 1885). <i>Solar Physics</i> , <b>2016</b> , 291, 2519-2552	2.6	20
34	The Greenwich Photo-heliographic Results (1874 – 1885): Observing Telescopes, Photographic Processes, and Solar Images. <i>Solar Physics</i> , <b>2016</b> , 291, 2553-2586	2.6	17
33	Do the Chinese Astronomical Records Dated AD 776 January 12/13 Describe an Auroral Display or a Lunar Halo? A Critical Re-examination. <i>Solar Physics</i> , <b>2019</b> , 294, 1	2.6	16
32	Tests of Sunspot Number Sequences: 1. Using Ionosonde Data. <i>Solar Physics</i> , <b>2016</b> , 291, 2785-2809	2.6	16
31	Statistics of the largest geomagnetic storms per solar cycle (1844-1993). <i>Annales Geophysicae</i> , <b>1997</b> , 15, 719-728	2	16

30	Studies of the cusp and auroral zone with incoherent scatter radar: the scientific and technical case for a polar-cap radar. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , <b>1990</b> , 52, 645-663		13
29	Equation for the field lines of an axisymmetric magnetic multipole. <i>Geophysical Journal International</i> , <b>1987</b> , 89, 1011-1022	2.6	10
28	Short-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. <i>Geophysical Research Letters</i> , <b>1990</b> , 17, 1825-1828	4.9	8
27	The Celestial Sign in the Anglo-Saxon Chronicle in the 770s: Insights on Contemporary Solar Activity. <i>Solar Physics</i> , <b>2019</b> , 294, 1	2.6	7
26	The presence of large sunspots near the central solar meridian at the times of major geomagnetic storms. <i>Annales Geophysicae</i> , <b>2009</b> , 27, 185-197	2	6
25	Ūapours like fire lightŪare Korean aurorae. <i>Astronomy and Geophysics</i> , <b>2008</b> , 49, 3.34-3.38	0.2	6
24	The presence of large sunspots near the central solar meridian at the times of modern Japanese auroral observations. <i>Annales Geophysicae</i> , <b>2006</b> , 24, 2743-2758	2	6
23	Possible configurations of the magnetic field in the outer magnetosphere during geomagnetic polarity reversals. <i>Annales Geophysicae</i> , <b>2000</b> , 18, 11-27	2	6
22	Statistics of the largest sunspot and facular areas per solar cycle. <i>Solar Physics</i> , <b>1979</b> , 64, 237-246	2.6	6
21	Sunspot Observations on 10 and 11 February 1917: A Case Study in Collating Known and Previously Undocumented Records. <i>Space Weather</i> , <b>2018</b> , 16, 1740-1752	3.7	6
20	Unaided-eye Sunspot Observations in 1769 November: A Comparison of Graphical Records in the East and the West. <i>Solar Physics</i> , <b>2019</b> , 294, 1	2.6	5
19	Synoptic data for solar-terrestrial physics: the U.K. contribution to long-term monitoring. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , <b>1994</b> , 56, 871-886		5
18	Scientific Interpretation of Historical Auroral Records. <i>Highlights of Astronomy</i> , <b>2002</b> , 12, 346-349		4
17	Equations for the field lines of a sectorial magnetic multipole. <i>Geophysical Journal International</i> , <b>1988</b> , 95, 625-632	2.6	4
16	Ultraviolet spectra of asteroids. <i>Nature</i> , <b>1980</b> , 287, 701-703	50.4	4
15	Solar proton entry to the magnetosphere on 18 November 1968 and 25 February 1969Ū Interpretation of satellite data using trajectory computations in a model magnetosphere. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , <b>1974</b> , 36, 995-1017		4
14	Solar proton entry to the magnetosphere on 18 November 1968 and 25 February 1969Ū. Comparison of trajectory computations in two model magnetospheres. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , <b>1974</b> , 36, 1019-1035		4
13	Simplified representations of the magnetopause boundary surface for a quantitative model of the magnetosphere. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , <b>1974</b> , 36, 1037-1044		4

12	Seasonal and Secular Variations of the Oriental Sunspot Sightings <b>1988</b> , 187-202		4
11	Early observation of the aurora australis: AD 1640. <i>Astronomy and Geophysics</i> , <b>2009</b> , 50, 5.20-5.24	0.2	3
10	Evidence for Recurrent Auroral Activity in the Twelfth and Seventeenth Centuries. <i>Thirty Years of Astronomical Discovery With UKIRT</i> , <b>2015</b> , 61-90	0.3	3
9	A Transit of Venus Possibly Misinterpreted as an Unaided-Eye Sunspot Observation in China on 9 December 1874. <i>Solar Physics</i> , <b>2019</b> , 294, 1	2.6	2
8	Uncertainties in field-line tracing in the magnetosphere. Part I: the axisymmetric part of the internal geomagnetic field. <i>Annales Geophysicae</i> , <b>1997</b> , 15, 165-180	2	2
7	Quadrupole and octupole parameters of Jupiter's main magnetic field. <i>Geophysical Journal International</i> , <b>1982</b> , 68, 765-776	2.6	2
6	Atmospheric water vapour of extraterrestrial origin: a discussion of its possible role in Sun-weather relationships. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , <b>1978</b> , 40, 513-528		2
5	Provenance of the cross sign of 806 in the Anglo-Saxon Chronicle: a possible lunar halo over continental Europe?. <i>History of Geo- and Space Sciences</i> , <b>2020</b> , 11, 81-92	1	2
4	Going with the floe. <i>Astronomy and Geophysics</i> , <b>2016</b> , 57, 2.37-2.42	0.2	2
3	Uncertainties in field-line tracing in the magnetosphere. Part II: the complete internal geomagnetic field. <i>Annales Geophysicae</i> , <b>1997</b> , 15, 181-196	2	1
2	A direct analytic method of calculating the quadrupole parameters of a planetary magnetic field. <i>Geophysical Journal International</i> , <b>1982</b> , 68, 751-764	2.6	1
1	Phase variations at millimetric wavelengths on an Earth-space path through model atmospheres. <i>Electronics Letters</i> , <b>1974</b> , 10, 281	1.1	1