

Andrew W Yau

List of Publications by Year in descending order

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137
papers

3,939
citations

109321

35
h-index

133252

59
g-index

149
all docs

149
docs citations

149
times ranked

1484
citing authors

#	ARTICLE	IF	CITATIONS
1	Sources of Ion Outflow in the High Latitude Ionosphere. <i>Space Science Reviews</i> , 1997, 80, 1-25.	8.1	298
2	Energetic auroral and polar ion outflow at DE 1 altitudes: Magnitude, composition, magnetic activity dependence, and long-term variations. <i>Journal of Geophysical Research</i> , 1985, 90, 8417-8432.	3.3	252
3	Theories and Observations of Ion Energization and Outflow in the High Latitude Magnetosphere. <i>Space Science Reviews</i> , 1997, 80, 27-48.	8.1	166
4	Distribution of upflowing ionospheric ions in the high-altitude polar cap and auroral ionosphere. <i>Journal of Geophysical Research</i> , 1984, 89, 5507-5522.	3.3	157
5	Particle and wave observations of low-altitude ionospheric ion acceleration events. <i>Journal of Geophysical Research</i> , 1983, 88, 341-355.	3.3	135
6	Long-term (solar cycle) and seasonal variations of upflowing ionospheric ion events at DE 1 altitudes. <i>Journal of Geophysical Research</i> , 1985, 90, 6395-6407.	3.3	135
7	Akebono/Suprathermal Mass Spectrometer observations of low-energy ion outflow: Dependence on magnetic activity and solar wind conditions. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	130
8	EXOS D (Akebono) suprathermal mass spectrometer observations of the polar wind. <i>Journal of Geophysical Research</i> , 1993, 98, 11191-11203.	3.3	128
9	The polar wind: Recent observations. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2007, 69, 1936-1983.	1.6	115
10	Large amplitude wave packets observed in the ionosphere in association with transverse ion acceleration. <i>Journal of Geophysical Research</i> , 1986, 91, 7113-7118.	3.3	100
11	Quantitative parametrization of energetic ionospheric ion outflow. <i>Geophysical Monograph Series</i> , 1988, , 211-217.	0.1	92
12	Effective collision frequency of electrons in noble gases. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1981, 14, 1485-1495.	1.6	75
13	Role of plasma waves in Mars' atmospheric loss. <i>Geophysical Research Letters</i> , 2006, 33, .	4.0	71
14	Electron energy measurements in pulsating auroras. <i>Canadian Journal of Physics</i> , 1981, 59, 1106-1115.	1.1	68
15	Altitude profile of the polar wind velocity and its relationship to ionospheric conditions. <i>Geophysical Research Letters</i> , 1993, 20, 2825-2828.	4.0	63
16	CASSIOPE Enhanced Polar Outflow Probe (e-POP) Mission Overview. <i>Space Science Reviews</i> , 2015, 189, 3-14.	8.1	60
17	Polar/Toroidal Imaging Mass-Angle Spectrograph observations of suprathermal ion outflow during solar minimum conditions. <i>Journal of Geophysical Research</i> , 2001, 106, 6059-6066.	3.3	54
18	Supply of thermal ionospheric ions to the central plasma sheet. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	54

#	ARTICLE	IF	CITATIONS
19	Long-term variation of the polar wind velocity and its implication for the ion acceleration process: Akebono/suprathermal ion mass spectrometer observations. Journal of Geophysical Research, 2004, 109, .	3.3	54
20	The Earth: Plasma Sources, Losses, and Transport Processes. Space Science Reviews, 2015, 192, 145-208.	8.1	54
21	Rocketborne measurements of particle pulsation in pulsating aurora. Journal of Geophysical Research, 1981, 86, 5673-5681.	3.3	50
22	Observations in the transverse ion energization region. Geophysical Research Letters, 1991, 18, 725-728.	4.0	50
23	Observations of plasma waves within regions of perpendicular ion acceleration. Geophysical Research Letters, 1986, 13, 1113-1116.	4.0	49
24	Solar minimum quiet time ion energization and outflow in dynamic boundary related coordinates. Journal of Geophysical Research, 2008, 113, .	3.3	49
25	The suprathermal ion mass spectrometer(SMS) onboard the Akebono (EXOS-D) satellite. Journal of Geomagnetism and Geoelectricity, 1990, 42, 511-536.	0.9	47
26	Electron scattering from noble gases. Journal of Physics B: Atomic and Molecular Physics, 1978, 11, 2907-2922.	1.6	46
27	Statistical analysis of upflowing ion beam and conic distributions at DE 1 altitudes. Journal of Geophysical Research, 1990, 95, 12091-12102.	3.3	44
28	Observations of Polar Wind and Thermal Ion Outflow by Akebono/SMS.. Journal of Geomagnetism and Geoelectricity, 1996, 48, 319-325.	0.9	44
29	The helium components of energetic terrestrial ion upflows: Their occurrence, morphology, and intensity. Journal of Geophysical Research, 1988, 93, 7558-7564.	3.3	43
30	EXOS D (Akebono) observations of molecular NO ⁺ and N ₂ ⁺ upflowing ions in the high altitude auroral ionosphere. Journal of Geophysical Research, 1993, 98, 11205-11224.	3.3	43
31	Sources of Ion Outflow in the High Latitude Ionosphere. , 1997, , 1-25.		43
32	Thermal ion observations of depletion and refilling in the plasmaspheric trough. Journal of Geophysical Research, 1992, 97, 1081-1096.	3.3	41
33	Quiet time solar illumination effects on the fluxes and characteristic energies of ionospheric outflow. Journal of Geophysical Research, 2006, 111, .	3.3	40
34	Theories and Observations of Ion Energization and Outflow in the High Latitude Magnetosphere. , 1997, , 27-48.		40
35	Electron scattering from noble gases. II. Argon, krypton and xenon. Journal of Physics B: Atomic and Molecular Physics, 1980, 13, 377-384.	1.6	39
36	The CASSIOPE/e-POP Magnetic Field Instrument (MGF). Space Science Reviews, 2015, 189, 27-39.	8.1	37

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37	Thermal ion upflow in the cusp ionosphere and its dependence on soft electron energy flux. Journal of Geophysical Research, 2010, 115, .	3.3	35
38	Transport of thermal low-energy ionospheric oxygen (O^{+}) ions between the ionosphere and the plasma sheet and ring current at quiet times preceding magnetic storms. Journal of Geophysical Research, 2012, 117, .	3.3	34
39	Akebono observations of electron temperature anisotropy in the polar wind. Journal of Geophysical Research, 1995, 100, 17451.	3.3	33
40	Alfvénic Dynamics and Fine Structuring of Discrete Auroral Arcs: Swarm and e-POP Observations. Geophysical Research Letters, 2018, 45, 545-555.	4.0	33
41	On the sources of energization of molecular ions at ionospheric altitudes. Journal of Geophysical Research, 1994, 99, 23257.	3.3	32
42	The Canadian Enhanced Polar Outflow Probe (e-POP) mission in ILWS. Advances in Space Research, 2006, 38, 1870-1877.	2.6	31
43	Minor ion composition in the polar ionosphere. Geophysical Research Letters, 1991, 18, 345-348.	4.0	27
44	The Freja F3C Cold Plasma Analyzer. Space Science Reviews, 1994, 70, 541-561.	8.1	27
45	Simultaneous observations of H^{+} and O^{+} ions at two altitudes by the Akebono and Dynamics Explorer 1 satellites. Journal of Geophysical Research, 1993, 98, 11177-11190.	3.3	26
46	Toward a unified master-equation theory of thermal decomposition reactions: Analytic solution for diatomic dissociation. The Journal of Physical Chemistry, 1979, 83, 134-149.	2.9	25
47	Pitch angle distributions of low-energy ions in the near-Earth magnetosphere. Journal of Geophysical Research, 1987, 92, 12241-12254.	3.3	25
48	Observations of very low-energy (<10 eV) ion outflows dominated by O^{+} ions in the region of enhanced electron density in the polar cap magnetosphere during geomagnetic storms. Journal of Geophysical Research, 2010, 115, .	3.3	23
49	Low-Altitude Ion Heating, Downflowing Ions, and BBELF Waves in the Return Current Region. Journal of Geophysical Research: Space Physics, 2018, 123, 3087-3110.	2.4	22
50	ULF Waves Modulating and Acting as Mass Spectrometer for Dayside Ionospheric Outflow Ions. Geophysical Research Letters, 2019, 46, 8633-8642.	4.0	22
51	Observations of particle precipitation, electric field, and optical morphology of an artificially perturbed auroral arc: Project Waterhole. Journal of Geophysical Research, 1981, 86, 5601-5613.	3.3	21
52	Ion temperature measurements from the Akebono suprathermal mass spectrometer: Application to the polar wind. Journal of Geophysical Research, 1997, 102, 17523-17539.	3.3	21
53	The CASSIOPE/e-POP Suprathermal Electron Imager (SEI). Space Science Reviews, 2015, 189, 65-78.	8.1	20
54	The effects of IMF and convection on thermal ion outflow in magnetosphere-ionosphere coupling. Journal of Atmospheric and Solar-Terrestrial Physics, 2008, 70, 2132-2143.	1.6	19

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55	Ion depletion zones in the polar wind: EXOS D suprathermal ion mass spectrometer observations in the polar cap. <i>Journal of Geophysical Research</i> , 1993, 98, 11439-11448.	3.3	17
56	Fast Auroral Imager (FAI) for the e-POP Mission. <i>Space Science Reviews</i> , 2015, 189, 15-25.	8.1	17
57	Imaging and Rapid-Scanning Ion Mass Spectrometer (IRM) for the CASSIOPE e-POP Mission. <i>Space Science Reviews</i> , 2015, 189, 41-63.	8.1	17
58	Simulations and observations of plasma depletion, ion composition, and airglow emissions in two auroral ionospheric depletion experiments. <i>Journal of Geophysical Research</i> , 1985, 90, 8387-8406.	3.3	16
59	A reformulation of the theory of unimolecular reactions. <i>Canadian Journal of Chemistry</i> , 1978, 56, 1389-1414.	1.1	15
60	Vertical ion flow in the polar ionosphere. <i>Geophysical Monograph Series</i> , 1988, , 229-240.	0.1	15
61	Model/data comparisons of ionospheric outflow as a function of invariant latitude and magnetic local time. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	15
62	Topside Ionospheric Disturbances Detected Using Radio Occultation Measurements During the August 2017 Solar Eclipse. <i>Geophysical Research Letters</i> , 2019, 46, 7069-7078.	4.0	15
63	Unimolecular reactions of N ₂ O and CO ₂ at high pressure. <i>Canadian Journal of Chemistry</i> , 1979, 57, 1731-1742.	1.1	14
64	Sub-kilometer thermal plasma structure near 1750 km altitude in the polar cusp/cleft. <i>Geophysical Research Letters</i> , 1994, 21, 1907-1910.	4.0	14
65	Enhanced N ₂ and O ₂ densities inferred from EISCAT observations of Pc5 waves and associated electron precipitation. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 549-566.	2.4	12
66	First results of HF radio science with e-POP RRI and SuperDARN. <i>Radio Science</i> , 2017, 52, 78-93.	1.6	12
67	Lindemann unimolecular fall-off in weak-collision systems at high temperature. <i>Chemical Physics Letters</i> , 1978, 60, 140-144.	2.6	11
68	Waterhole auroral arc modification experiments: Electrodynamic response. <i>Journal of Geophysical Research</i> , 1985, 90, 8377-8386.	3.3	11
69	Auroral ion composition during large magnetic storms. <i>Canadian Journal of Physics</i> , 1992, 70, 500-509.	1.1	11
70	Fine-structure excitation of carbon by atomic hydrogen impact. <i>Astrophysical Journal</i> , 1976, 206, 652.	4.5	11
71	Effect of finite electrode area ratio on high-frequency Langmuir probe measurements. <i>Journal Physics D: Applied Physics</i> , 2012, 45, 075205.	2.8	10
72	Rocketborne observations of ion convection and electric fields in dayside and nightside visual auroral arcs. <i>Journal of Geophysical Research</i> , 1981, 86, 6899-6907.	3.3	9

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73	Observations of a transverse magnetic field perturbation at two altitudes on the equatorward edge of the magnetospheric cusp. <i>Journal of Geophysical Research</i> , 1993, 98, 21463-21470.	3.3	9
74	Imaging thermal plasma mass and velocity analyzer. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 7326-7333.	2.4	9
75	Seasonal and Hemispheric Asymmetries of F_{min} Region Polar Cap Plasma Density: Swarm and CHAMP Observations. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2020JA028084.	2.4	9
76	Information theory and bulk rotational or vibrational relaxation processes. <i>Canadian Journal of Chemistry</i> , 1977, 55, 737-742.	1.1	8
77	Accelerated Auroral and Polar-Cap Ions : Outflow at De-1 Altitudes. <i>Geophysical Monograph Series</i> , 0, , 72-76.	0.1	8
78	Strong ambipolar-driven ion upflow within the cleft ion fountain during low geomagnetic activity. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 6950-6969.	2.4	8
79	Enhanced Polar Outflow Probe Ionospheric Radio Occultation Measurements at High Latitudes: Receiver Bias Estimation and Comparison With Ground-Based Observations. <i>Radio Science</i> , 2018, 53, 166-182.	1.6	8
80	Eclipse-Induced Changes to Topside Ion Composition and Field-Aligned Ion Flows in the August 2017 Solar Eclipse: e-POP Observations. <i>Geophysical Research Letters</i> , 2018, 45, 10,829.	4.0	8
81	Citizen Radio Science: An Analysis of Amateur Radio Transmissions With e-POP RRI. <i>Radio Science</i> , 2018, 53, 933-947.	1.6	8
82	The Polar Outflow Probe (POP): Science Objectives and Instrument Development. <i>Canadian Aeronautics and Space Journal</i> , 2002, 48, 39-49.	0.1	8
83	Conjugate Observation of Magnetospheric Chorus Propagating to the Ionosphere by Ducting. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL095933.	4.0	8
84	Depletion core in ionospheric depletion experiments: Snowplow effects or plasma recombination?. <i>Geophysical Research Letters</i> , 1984, 11, 319-322.	4.0	7
85	Polarization Characteristics Inferred From the Radio Receiver Instrument on the Enhanced Polar Outflow Probe. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 1648-1662.	2.4	7
86	Tangential electric fields in a drifting auroral arc. <i>Geophysical Research Letters</i> , 1981, 8, 373-376.	4.0	6
87	Preliminary results from Project Waterhole – an auroral modification experiment. <i>Canadian Journal of Physics</i> , 1981, 59, 1175-1182.	1.1	6
88	Localized electron density enhancements in the high-altitude polar ionosphere and their relationships with storm-enhanced density (SED) plumes and polar tongues of ionization (TOI). <i>Annales Geophysicae</i> , 2011, 29, 367-375.	1.6	6
89	An assessment of the role of soft electron precipitation in global ion upwelling. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 7665-7678.	2.4	6
90	Scientific Objectives of the Canadian CASSIOPE Enhanced Polar Outflow Probe (e-POP) Small Satellite Mission. , 2011, , 355-364.		6

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91	Perturbed normal-mode analysis of induction times, relaxation times, and reaction rates in unimolecular reactions. Canadian Journal of Chemistry, 1979, 57, 1723-1730.	1.1	5
92	Planned observations of thermal plasma drifts and solar wind interactions in the Martian ionosphere. Earth, Planets and Space, 1998, 50, 195-198.	2.5	5
93	Radio-Frequency Ion Mass Spectrometer Measurements of Ion Composition, Velocity and Temperature: the EXOS-D Suprathermal Mass Spectrometer. Geophysical Monograph Series, 2013, , 307-312.	0.1	5
94	Low-Altitude Transverse Ionospheric Ion Acceleration. Geophysical Monograph Series, 0, , 39-42.	0.1	5
95	The unimolecular isomerisation of monofluorocyclopropane: a reaction with multiple fall-off characteristics?. Canadian Journal of Chemistry, 1977, 55, 1595-1598.	1.1	4
96	On the reliability of the inversion of the Arrhenius rate law. Canadian Journal of Chemistry, 1979, 57, 2458-2463.	1.1	4
97	Low energy upflowing ion events observed by EXOS-D: Initial results. Geophysical Research Letters, 1991, 18, 337-340.	4.0	4
98	Plasma density enhancements in the high-altitude polar cap region observed on Akebono. Geophysical Research Letters, 2002, 29, 41-1-41-4.	4.0	4
99	Suprathermal plasma analyzer for the measurement of low-energy electron distribution in the ionosphere. Review of Scientific Instruments, 2011, 82, 074501.	1.3	4
100	Waterhole: An Auroral-Ionosphere Perturbation Experiment. Geophysical Monograph Series, 0, , 199-205.	0.1	4
101	Density of states and the steepest descent method: a non-iterative procedure. Canadian Journal of Chemistry, 1977, 55, 992-995.	1.1	3
102	Specific decomposition rate constants in unimolecular reactions. Canadian Journal of Chemistry, 1980, 58, 1516-1526.	1.1	3
103	First satellite imaging of auroral pulsations by the Fast Auroral Imager on e-POP. Geophysical Research Letters, 2015, 42, 6877-6882.	4.0	3
104	The Earth: Plasma Sources, Losses, and Transport Processes. Space Sciences Series of ISSI, 2016, , 145-208.	0.0	3
105	The Canadian Enhanced Polar Outflow Probe (e-POP) Mission:. Data Science Journal, 2009, 8, S38-S44.	1.3	3
106	Cold Plasma Source of Upflowing Ionospheric Ions in the Nightside Auroral Ionosphere. Journal of Geomagnetism and Geoelectricity, 1996, 48, 947-957.	0.9	3
107	Altitude Distribution of Large and Small-Scale Equatorial Ionospheric Irregularities Sampled From an Elliptical Low-Earth Orbit. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	3
108	Entropy production in bulk isothermal relaxation. Canadian Journal of Chemistry, 1977, 55, 1588-1591.	1.1	2

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109	On the uniform-interactions-mixing assumption in the theory of radiationless transitions. <i>Molecular Physics</i> , 1979, 38, 333-335.	1.7	2
110	Studies of the electron-impact ionization cross section of vibrationally excited oxygen employing a shock-heated molecular beam. <i>Physical Review A</i> , 1988, 38, 2782-2788.	2.5	2
111	Soft ion precipitation at very high latitudes during northward interplanetary magnetic field. <i>Journal of Geophysical Research</i> , 1994, 99, 15025.	3.3	2
112	Large area sea mapping with Ground-Ionosphere-Ocean-Space (GIOS). , 2016, , .		2
113	The vibrational relaxation of molecules in a shock heated Ar-N ₂ and Ar-CO mixture molecular beam. <i>Journal Physics D: Applied Physics</i> , 1986, 19, 1843-1852.	2.8	1
114	Akebono Observations of the Polar Wind and Suprathermal Auroral Ions: An Overview.. <i>Journal of Geomagnetism and Geoelectricity</i> , 1996, 48, 45-56.	0.9	1
115	CASSIOPE Enhanced Polar Outflow Probe (e-POP) Small Satellite Mission: Space Plasma Observations and International Collaborations. , 2009, , .		1
116	Ion Acceleration in the Low- and Mid-Altitude Auroral Ionosphere. <i>Geophysical Monograph Series</i> , 0, , 183-193.	0.1	1
117	Electron conic distributions produced by solar ionizing radiation in planetary atmospheres. <i>Advances in Space Research</i> , 2015, 55, 2566-2572.	2.6	1
118	The Freja F3C Cold Plasma Analyzer. , 1994, , 137-157.		1
119	EXOS-D Observations of Thermal Ion Energy Distributions in Transverse Ion Energization Regions.. <i>Journal of Geomagnetism and Geoelectricity</i> , 1995, 47, 1161-1169.	0.9	1
120	Modeling and Validating a SuperDARN Radar's Poynting Flux Profile. <i>Radio Science</i> , 2022, 57, .	1.6	1
121	A reformulation of the theory of unimolecular reactions. <i>Canadian Journal of Chemistry</i> , 1980, 58, 626-626.	1.1	0
122	Particle precipitation and ionospheric convection morphology in dayside aurora. <i>Canadian Journal of Physics</i> , 1986, 64, 1446-1451.	1.1	0
123	The Outer Radiation Belt Injection, Transport, Acceleration and Loss Satellite (ORBITALS): A Proposed Canadian Small Satellite Mission for ILWS. , 2009, , .		0
124	ARGO Science Mission. , 2009, , .		0
125	The Role of Quiet Time Ionospheric Plasma in the Storm Time Inner Magnetosphere. <i>Geophysical Monograph Series</i> , 0, , 329-340.	0.1	0
126	Appreciation of 2017 GRL Peer Reviewers. <i>Geophysical Research Letters</i> , 2018, 45, 4494-4528.	4.0	0

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127	Space Weather Effects in the Ionosphere, in the Thermosphere and at Earth's Surface. , 2019, , 229-250.		0
128	Thank You to Our 2018 Peer Reviewers. Geophysical Research Letters, 2019, 46, 12608-12636.	4.0	0
129	Swarm-E observations of natural and stimulated emissions in the topside ionosphere. , 2019, , .		0
130	Thank You to Our 2019 Peer Reviewers. Geophysical Research Letters, 2020, 47, e2020GL088048.	4.0	0
131	Glow discharge excited at low to high radio frequencies around active dipoles in the ionosphere. Canadian Journal of Physics, 2021, 99, 358-366.	1.1	0
132	Thank You to Our 2020 Peer Reviewers. Geophysical Research Letters, 2021, 48, e2021GL093126.	4.0	0
133	MULTISCALE GEOSPACE PHYSICS IN CANADA. , 2005, , 487-508.		0
134	Whistlers and Related Phenomenon Observed by e-POP-RRI. , 2020, , .		0
135	Thank You to Our 2021 Peer Reviewers. Geophysical Research Letters, 2022, 49, .	4.0	0
136	Modeling the radio wave polarization in transionspheric propagation. , 2022, , .		0
137	Satellite attitude effects on the reception of transionospheric HF signals: Examples from the Radio Receiver Instrument onboard e-POP/Swarm-E. , 2022, , .		0