Laila Andersson

List of Publications by Year
in descending order

136 papers	5,308 citations	87886 38 h-index	95259 68 g-index
155 all docs	155 docs citations	155 times ranked	2679 citing authors

#	Article	IF	Citations
1	The Mars Atmosphere and Volatile Evolution (MAVEN) Mission. Space Science Reviews, 2015, 195, 3-48.	8.1	563
2	The Space Physics Environment Data Analysis System (SPEDAS). Space Science Reviews, 2019, 215, 9.	8.1	332
3	Loss of the Martian atmosphere to space: Present-day loss rates determined from MAVEN observations and integrated loss through time. Icarus, 2018, 315, 146-157.	2.5	216
4	The Langmuir Probe and Waves (LPW) Instrument for MAVEN. Space Science Reviews, 2015, 195, 173-198.	8.1	183
5	MAVEN observations of the response of Mars to an interplanetary coronal mass ejection. Science, 2015, 350, aad0210.	12.6	166
6	Direct Observation of Localized Parallel Electric Fields in a Space Plasma. Physical Review Letters, 2001, 87, 045003.	7.8	151
7	Dayside electron temperature and density profiles at Mars: First results from the MAVEN Langmuir probe and waves instrument. Geophysical Research Letters, 2015, 42, 8846-8853.	4.0	116
8	Parallel electric fields in the upward current region of the aurora: Indirect and direct observations. Physics of Plasmas, 2002, 9, 3685-3694.	1.9	114
9	Characteristics of parallel electric fields in the downward current region of the aurora. Physics of Plasmas, 2002, 9, 3600-3609.	1.9	113
10	Photochemical escape of oxygen from Mars: First results from MAVEN in situ data. Journal of Geophysical Research: Space Physics, 2017, 122, 3815-3836.	2.4	106
11	The Global-Scale Observations of the Limb and Disk (GOLD) Mission. Space Science Reviews, 2017, 212, 383-408.	8.1	105
12	Auroral particle acceleration by strong double layers: The upward current region. Journal of Geophysical Research, 2004, 109, .	3.3	104
13	Characterizing Atmospheric Escape from Mars Today and Through Time, with MAVEN. Space Science Reviews, 2015, 195, 357-422.	8.1	99
14	Largeâ€amplitude electric fields associated with bursty bulk flow braking in the Earth's plasma sheet. Journal of Geophysical Research: Space Physics, 2015, 120, 1832-1844.	2.4	94
15	Early MAVEN Deep Dip campaign reveals thermosphere and ionosphere variability. Science, 2015, 350, aad0459.	12.6	90
16	Observations of Double Layers in Earthâ€™s Plasma Sheet. Physical Review Letters, 2009, 102, 155002.	7.8	88
17	New Features of Electron Phase Space Holes Observed by the THEMIS Mission. Physical Review Letters, 2009, 102, 225004.	7.8	86
18	Initial Observations by the GOLD Mission. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA027823.	2.4	80

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19	Nonlinear electric field structures in the inner magnetosphere. Geophysical Research Letters, 2014, 41, 5693-5701.	4.0	76
20	Role of plasma waves in Mars' atmospheric loss. Geophysical Research Letters, 2006, 33, .	4.0	71
21	Seasonal variability of Martian ion escape through the plume and tail from MAVEN observations. Journal of Geophysical Research: Space Physics, 2017, 122, 4009-4022.	2.4	66
22	The first in situ electron temperature and density measurements of the Martian nightside ionosphere. Geophysical Research Letters, 2015, 42, 8854-8861.	4.0	62
23	Magnetic reconnection in the nearâ€Mars magnetotail: MAVEN observations. Geophysical Research Letters, 2015, 42, 8838-8845.	4.0	59
24	MMS Observations of Electrostatic Waves in an Oblique Shock Crossing. Journal of Geophysical Research: Space Physics, 2018, 123, 9430-9442.	2.4	58
25	Solarâ€minimum quiet time ion energization and outflow in dynamic boundary related coordinates. Journal of Geophysical Research, 2008, 113, .	3.3	49
26	Enhanced O₂⁺ loss at Mars due to an ambipolar electric field from electron heating. Journal of Geophysical Research: Space Physics, 2016, 121, 4668-4678.	2.4	48
27	MAVEN Observations of the Effects of Crustal Magnetic Fields on Electron Density and Temperature in the Martian Dayside Ionosphere. Geophysical Research Letters, 2017, 44, 10812-10821.	4.0	42
28	Electron signatures and AlfvÃ©n waves. Journal of Geophysical Research, 2002, 107, SMP 15-1.	3.3	41
29	Altitude dependence of nightside Martian suprathermal electron depletions as revealed by MAVEN observations. Geophysical Research Letters, 2015, 42, 8877-8884.	4.0	41
30	Dust observations at orbital altitudes surrounding Mars. Science, 2015, 350, aad0398.	12.6	41
31	Sbursts and the Jupiter ionospheric AlfvÃ©n resonator. Journal of Geophysical Research, 2006, 111, .	3.3	40
32	Survey of magnetic reconnection signatures in the Martian magnetotail with MAVEN. Journal of Geophysical Research: Space Physics, 2017, 122, 5114-5131.	2.4	40
33	Variations of the Martian plasma environment during the ICME passage on 8 March 2015: A timeâ€dependent MHD study. Journal of Geophysical Research: Space Physics, 2017, 122, 1714-1730.	2.4	40
34	Sources of Ionospheric Variability at Mars. Journal of Geophysical Research: Space Physics, 2017, 122, 9670-9684.	2.4	40
35	MAVEN Observations of Solar Windâ€Driven Magnetosonic Waves Heating the Martian Dayside Ionosphere. Journal of Geophysical Research: Space Physics, 2018, 123, 4129-4149.	2.4	40
36	MAVEN and MEX Multiâ€instrument Study of the Dayside of the Martian Induced Magnetospheric Structure Revealed by Pressure Analyses. Journal of Geophysical Research: Space Physics, 2019, 124, 8564-8589.	2.4	39

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37	Double layers in the downward current region of the aurora. Nonlinear Processes in Geophysics, 2003, 10, 45-52.	1.3	38
38	Kinetic simulations of magnetic reconnection in presence of a background O⁺population. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	38
39	Electric Mars: The first direct measurement of an upper limit for the Martian â€œpolar windâ€•electric potential. Geophysical Research Letters, 2015, 42, 9128-9134.	4.0	38
40	Electron energetics in the Martian dayside ionosphere: Model comparisons with MAVEN data. Journal of Geophysical Research: Space Physics, 2016, 121, 7049-7066.	2.4	38
41	The Mars Topside Ionosphere Response to the X8.2 Solar Flare of 10 September 2017. Geophysical Research Letters, 2018, 45, 8005-8013.	4.0	38
42	Using Magnetic Topology to Probe the Sources of Mars' Nightside Ionosphere. Geophysical Research Letters, 2018, 45, 12,190.	4.0	36
43	Identifying STEVE's Magnetospheric Driver Using Conjugate Observations in the Magnetosphere and on the Ground. Geophysical Research Letters, 2019, 46, 12665-12674.	4.0	35
44	Mars' Ionopause: A Matter of Pressures. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA028145.	2.4	35
45	Vertical thermal O⁺ flows at 850 km in dynamic auroral boundary coordinates. Journal of Geophysical Research, 2010, 115, .	3.3	33
46	Neutral density response to solar flares at Mars. Geophysical Research Letters, 2015, 42, 8986-8992.	4.0	33
47	Photoelectrons and solar ionizing radiation at Mars: Predictions versus MAVEN observations. Journal of Geophysical Research: Space Physics, 2016, 121, 8859-8870.	2.4	33
48	MAVEN observations of dayside peak electron densities in the ionosphere of Mars. Journal of Geophysical Research: Space Physics, 2017, 122, 891-906.	2.4	33
49	Dynamic coordinates for auroral ion outflow. Journal of Geophysical Research, 2004, 109, .	3.3	32
50	A model of electromagnetic electron phase-space holes and its application. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	32
51	Ionospheric plasma density variations observed at Mars by MAVEN/LPW. Geophysical Research Letters, 2015, 42, 8862-8869.	4.0	32
52	Estimates of the suprathermal O+outflow characteristic energy and relative location in the auroral oval. Geophysical Research Letters, 2005, 32, .	4.0	31
53	Electron Phaseâ€Space Holes in Three Dimensions: Multispacecraft Observations by Magnetospheric Multiscale. Journal of Geophysical Research: Space Physics, 2018, 123, 9963-9978.	2.4	31
54	Quiet, Discrete Auroral Arcsâ€"Observations. Space Science Reviews, 2020, 216, 1.	8.1	31

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55	Electric and magnetic variations in the nearâ€Mars environment. Journal of Geophysical Research: Space Physics, 2017, 122, 8536-8559.	2.4	30
56	Observations and Modeling of the Mars Lowâ€Altitude Ionospheric Response to the 10 September 2017 Xâ€Class Solar Flare. Geophysical Research Letters, 2018, 45, 7382-7390.	4.0	30
57	Observations of plasma waves in the colliding jet region of a magnetic flux rope flanked by two active X lines at the subsolar magnetopause. Journal of Geophysical Research: Space Physics, 2014, 119, 6256-6272.	2.4	29
58	The Martian Photoelectron Boundary as Seen by MAVEN. Journal of Geophysical Research: Space Physics, 2017, 122, 10,472.	2.4	28
59	Comparative study of the Martian suprathermal electron depletions based on Mars Global Surveyor, Mars Express, and Mars Atmosphere and Volatile EvolutioN mission observations. Journal of Geophysical Research: Space Physics, 2017, 122, 857-873.	2.4	28
60	Kinetic instabilities in the lunar wake: ARTEMIS observations. Journal of Geophysical Research, 2012, 117, .	3.3	27
61	MAVEN observations of electronâ€induced whistler mode waves in the Martian magnetosphere. Journal of Geophysical Research: Space Physics, 2016, 121, 9717-9731.	2.4	27
62	The Combined Atmospheric Photochemistry and Ion Tracing code: Reproducing the Viking Lander results and initial outflow results. Icarus, 2010, 206, 120-129.	2.5	26
63	Mars Thermospheric Variability Revealed by MAVEN EUVM Solar Occultations: Structure at Aphelion and Perihelion and Response to EUV Forcing. Journal of Geophysical Research E: Planets, 2018, 123, 2248-2269.	3.6	26
64	Mars's Dayside Upper Ionospheric Composition Is Affected by Magnetic Field Conditions. Journal of Geophysical Research: Space Physics, 2019, 124, 3100-3109.	2.4	26
65	Invertedâ€V Electron Acceleration Events Concurring With Localized Auroral Observations at Mars by MAVEN. Geophysical Research Letters, 2020, 47, e2020GL087414.	4.0	26
66	Geomagnetic activity dependence of O+ in transit from the ionosphere. Journal of Atmospheric and Solar-Terrestrial Physics, 2009, 71, 1623-1629.	1.6	23
67	MAVEN observations of a giant ionospheric flux rope near Mars resulting from interaction between the crustal and interplanetary draped magnetic fields. Journal of Geophysical Research: Space Physics, 2017, 122, 828-842.	2.4	21
68	Martian Electron Temperatures in the Subsolar Region: MAVEN Observations Compared to a Oneâ€Dimensional Model. Journal of Geophysical Research: Space Physics, 2018, 123, 5960-5973.	2.4	21
69	Ionospheric Ambipolar Electric Fields of Mars and Venus: Comparisons Between Theoretical Predictions and Direct Observations of the Electric Potential Drop. Geophysical Research Letters, 2019, 46, 1168-1176.	4.0	21
70	Modeling Windâ€Driven Ionospheric Dynamo Currents at Mars: Expectations for InSight Magnetic Field Measurements. Geophysical Research Letters, 2019, 46, 5083-5091.	4.0	20
71	Three dimensional density cavities in guide field collisionless magnetic reconnection. Physics of Plasmas, 2012, 19, .	1.9	19
72	Hypervelocity dust impacts on the Wind spacecraft: Correlations between Ulysses and Wind interstellar dust detections. Journal of Geophysical Research: Space Physics, 2015, 120, 7121-7129.	2.4	18

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73	Ambipolar Electric Field in the Martian Ionosphere: MAVEN Measurements. Journal of Geophysical Research: Space Physics, 2019, 124, 4518-4524.	2.4	18
74	Localized Heating of the Martian Topside Ionosphere Through the Combined Effects of Magnetic Pumping by Largeâ€Scale Magnetosonic Waves and Pitch Angle Diffusion by Whistler Waves. Geophysical Research Letters, 2020, 47, e2019GL086408.	4.0	17
75	Inâ€Situ Measurements of Electron Temperature and Density in Mars' Dayside Ionosphere. Geophysical Research Letters, 2021, 48, e2021GL093623.	4.0	17
76	In Situ Measurements of Thermal Ion Temperature in the Martian Ionosphere. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029531.	2.4	17
77	Influence of suprathermal background electrons on strong auroral double layers: Observations. Physics of Plasmas, 2008, 15, 072901.	1.9	16
78	MAVEN Observations of Ionospheric Irregularities at Mars. Geophysical Research Letters, 2017, 44, 10,845.	4.0	16
79	Electric Mars: A large transâ€terminator electric potential drop on closed magnetic field lines above Utopia Planitia. Journal of Geophysical Research: Space Physics, 2017, 122, 2260-2271.	2.4	16
80	Globalâ€Scale Observations and Modeling of Farâ€Ultraviolet Airglow During Twilight. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027645.	2.4	16
81	Influence of suprathermal background electrons on strong auroral double layers: Vlasov-simulation parameter study. Physics of Plasmas, 2008, 15, 072902.	1.9	15
82	Influence of suprathermal background electrons on strong auroral double layers: Laminar and turbulent regimes. Physics of Plasmas, 2008, 15, 072903.	1.9	15
83	Acceleration of antiearthward electron fluxes in the auroral region. Journal of Geophysical Research, 2006, 111, .	3.3	14
84	Magnetic Reconnection in the Ionosphere of Mars: The Role of Collisions. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA028036.	2.4	14
85	Tidal Wave-Driven Variability in the Mars Ionosphere-Thermosphere System. Atmosphere, 2020, 11, 521.	2.3	14
86	Kinetic Modeling of Langmuir Probes in Space and Application to the MAVEN Langmuir Probe and Waves Instrument. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028956.	2.4	14
87	Characterizing Average Electron Densities in the Martian Dayside Upper Ionosphere. Journal of Geophysical Research E: Planets, 2019, 124, 76-93.	3.6	13
88	A global comparison of O⁺ upward flows at 850 km and outflow rates at 6000 km during nonstorm times. Journal of Geophysical Research, 2012, 117, .	3.3	12
89	Dawnward shift of the dayside O⁺ outflow distribution: The importance of field line history in O⁺ escape from the ionosphere. Journal of Geophysical Research, 2012, 117, .	3.3	12
90	MAVEN and the total electron content of the Martian ionosphere. Journal of Geophysical Research: Space Physics, 2017, 122, 3526-3537.	2.4	12

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91	Tidal Effects on the Longitudinal Structures of the Martian Thermosphere and Topside Ionosphere Observed by MAVEN. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028562.	2.4	12
92	Oxygen ion response to proton bursty bulk flows. Journal of Geophysical Research: Space Physics, 2016, 121, 7535-7546.	2.4	11
93	Selfâ€consistent evolution of auroral downwardâ€current region ion outflow and moving double layer. Geophysical Research Letters, 2009, 36, .	4.0	10
94	Investigation of Coatings for Langmuir Probes in an Oxygenâ€Rich Space Environment. Journal of Geophysical Research: Space Physics, 2018, 123, 6054-6064.	2.4	10
95	Flares at Earth and Mars: An Ionospheric Escape Mechanism?. Space Weather, 2018, 16, 1042-1056.	3.7	10
96	The Relationship Between Photoelectron Boundary and Steep Electron Density Gradient on Mars: MAVEN Observations. Journal of Geophysical Research: Space Physics, 2019, 124, 8015-8022.	2.4	10
97	Collisionless Electron Dynamics in the Magnetosheath of Mars. Geophysical Research Letters, 2019, 46, 11679-11688.	4.0	10
98	Correlations between enhanced electron temperatures and electric field wave power in the Martian ionosphere. Geophysical Research Letters, 2018, 45, 493-501.	4.0	9
99	Pressure Gradients Driving Ion Transport in the Topside Martian Atmosphere. Journal of Geophysical Research: Space Physics, 2019, 124, 6117-6126.	2.4	9
100	Spectral Analysis of Accelerated Electron Populations at Mars. Journal of Geophysical Research: Space Physics, 2019, 124, 8056-8065.	2.4	9
101	Global-Scale Observations of the Limb and Disk (Gold): New Observing Capabilities for the Ionosphere-Thermosphere. Geophysical Monograph Series, 0, , 319-326.	0.1	8
102	Lowâ€frequency oscillatory flow signatures and highâ€speed flows in the Earth's magnetotail. Journal of Geophysical Research: Space Physics, 2017, 122, 7042-7056.	2.4	8
103	Ion Heating in the Martian Ionosphere. Journal of Geophysical Research: Space Physics, 2017, 122, 10,612.	2.4	8
104	Low Electron Temperatures Observed at Mars by MAVEN on Dayside Crustal Magnetic Field Lines. Journal of Geophysical Research: Space Physics, 2019, 124, 7629-7637.	2.4	8
105	The Statistical Characteristics of Smallâ€Scale Ionospheric Irregularities Observed in the Martian Ionosphere. Journal of Geophysical Research: Space Physics, 2019, 124, 5874-5893.	2.4	8
106	The Penetration of Draped Magnetic Field Into the Martian Upper Ionosphere and Correlations With Upstream Solar Wind Dynamic Pressure. Journal of Geophysical Research: Space Physics, 2019, 124, 3021-3035.	2.4	8
107	Electron Temperature Response to Solar Forcing in the Lowâ€Latitude Martian Ionosphere. Journal of Geophysical Research E: Planets, 2019, 124, 3082-3094.	3.6	8
108	Test particle simulations of the effect of moving DLs on ion outflow in the auroral downwardâ€current region. Journal of Geophysical Research, 2008, 113, .	3.3	7

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109	First Evidence of Persistent Nighttime Temperature Structures in the Neutral Thermosphere of Mars. Geophysical Research Letters, 2018, 45, 8819-8825.	4.0	7
110	First Detection of Kilometerâ€Scale Density Irregularities in the Martian Ionosphere. Geophysical Research Letters, 2020, 47, e2020GL090906.	4.0	7
111	An assessment of the role of soft electron precipitation in global ion upwelling. Journal of Geophysical Research: Space Physics, 2014, 119, 7665-7678.	2.4	6
112	Ionospheric Electron Densities at Mars: Comparison of Mars Express Ionospheric Sounding and MAVEN Local Measurements. Journal of Geophysical Research: Space Physics, 2017, 122, 12,393.	2.4	6
113	Dawn/Dusk Asymmetry of the Martian UltraViolet Terminator Observed Through Suprathermal Electron Depletions. Journal of Geophysical Research: Space Physics, 2019, 124, 7283-7300.	2.4	6
114	Investigation of Coatings for Langmuir Probes: Effect of Surface Oxidation on Photoemission Characteristics. Journal of Geophysical Research: Space Physics, 2019, 124, 2357-2361.	2.4	6
115	MAVEN Case Studies of Plasma Dynamics in Lowâ€Altitude Crustal Magnetic Field at Mars 1: Dayside Ion Spikes Associated With Radial Crustal Magnetic Fields. Journal of Geophysical Research: Space Physics, 2019, 124, 1239-1261.	2.4	6
116	Subsolar Electron Temperatures in the Lower Martian Ionosphere. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027597.	2.4	6
117	Crossâ€Shock Electrostatic Potentials at Mars Inferred From MAVEN Measurements. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA029064.	2.4	6
118	Observations of Energized Electrons in the Martian Magnetosheath. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028984.	2.4	6
119	The Effects of Different Drivers on the Induced Martian Magnetosphere Boundary: A Case Study of September 2017. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028105.	2.4	5
120	Small Scale Magnetic Structure in the Induced Martian Ionosphere and Lower Magnetic Pileâ€Up Region. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	5
121	The Search for Double Layers in Space Plasmas. Geophysical Monograph Series, 2013, , 241-250.	0.1	4
122	Vlasov simulations of trapping and loss of auroral electrons. Annales Geophysicae, 2015, 33, 279-293.	1.6	4
123	On the Solar Wind Proton Temperature Anisotropy at Mars' Orbital Location. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029438.	2.4	4
124	Plasma Imaging, LOcal Measurement, and Tomographic Experiment (PILOT): A Mission Concept for Transformational Multi-Scale Observations of Mass and Energy Flow Dynamics in Earthâ€™s Magnetosphere. Frontiers in Astronomy and Space Sciences, 0, 9, .	2.8	4
125	The Influence of Magnetic Field Topology and Orientation on the Distribution of Thermal Electrons in the Martian Magnetotail. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028130.	2.4	3
126	Self-consistent electrostatic simulations of reforming double layers in the downward current region of the aurora. Annales Geophysicae, 2015, 33, 1331-1342.	1.6	3

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127	Morphological Characteristics of Strong Thermal Emission Velocity Enhancement Emissions. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA028110.	2.4	3
128	On the Altitude Patterns of Photoâ€Chemicalâ€Equilibrium in the Martian Ionosphere: A Special Role for Electron Temperature. Journal of Geophysical Research: Space Physics, 2021, 126, .	2.4	3
129	Neutral wind effects on ion outflow at Mars. Earth, Planets and Space, 2012, 64, 105-112.	2.5	2
130	Martian nonmigrating atmospheric tides in the thermosphere and ionosphere at solar minimum. Icarus, 2023, 393, 114767.	2.5	2
131	Electron Densities in the Ionosphere of Mars: Comparison of MAVEN/ROSE and MAVEN/LPW Measurements. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	2
132	Microâ€Scale Plasma Instabilities in the Interaction Region of the Solar Wind and the Martian Upper Atmosphere. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	2
133	Oscillatory Flows in the Magnetotail Plasma Sheet: Cluster Observations of the Distribution Function. Journal of Geophysical Research: Space Physics, 2019, 124, 2736-2754.	2.4	1
134	An empirical model of electron temperatures in the Mars ionosphere based on Langmuir probe measurements in the descending phase of solar cycle 24. Icarus, 2023, 393, 114721.	2.5	1
135	In Situ Electron Density From Active Sounding: The Influence of the Spacecraft Wake. Geophysical Research Letters, 2019, 46, 10250-10256.	4.0	0
136	Bipolar Electric Field Pulses in the Martian Magnetosheath and Solar Wind; Their Implication and Impact Accessed by System Scale Size. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	0