Laila Andersson

List of Publications by Citations

132 papers	3,924 citations	33 h-index	58 g-index
155 ext. papers	4,612 ext. citations	4.1 avg, IF	4.8 L-index

#	Paper	IF	Citations
132	The Mars Atmosphere and Volatile Evolution (MAVEN) Mission. *Space Science Reviews*, **2015**, 195, 3-48	7.5	405
131	The Space Physics Environment Data Analysis System (SPEDAS). *Space Science Reviews*, **2019**, 215, 9	7.5	205
130	Direct observation of localized parallel electric fields in a space plasma. *Physical Review Letters*, **2001**, 87, 045003	7.4	138
129	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	3.8	136
128	The Langmuir Probe and Waves (LPW) Instrument for MAVEN. *Space Science Reviews*, **2015**, 195, 173-198	7.5	134
127	MAVEN observations of the response of Mars to an interplanetary coronal mass ejection. *Science*, **2015**, 350, aad0210	33.3	131
126	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	4.9	103
125	Parallel electric fields in the upward current region of the aurora: Indirect and direct observations. *Physics of Plasmas*, **2002**, 9, 3685-3694	2.1	102
124	Characteristics of parallel electric fields in the downward current region of the aurora. *Physics of Plasmas*, **2002**, 9, 3600-3609	2.1	100
123	Auroral particle acceleration by strong double layers: The upward current region. *Journal of Geophysical Research*, **2004**, 109,		91
122	Characterizing Atmospheric Escape from Mars Today and Through Time, with MAVEN. *Space Science Reviews*, **2015**, 195, 357-422	7.5	88
121	New features of electron phase space holes observed by the THEMIS mission. *Physical Review Letters*, **2009**, 102, 225004	7.4	79
120	Early MAVEN Deep Dip campaign reveals thermosphere and ionosphere variability. *Science*, **2015**, 350, aad0459	33.3	77
119	Observations of double layers in earth's plasma sheet. *Physical Review Letters*, **2009**, 102, 155002	7.4	77
118	Photochemical escape of oxygen from Mars: First results from MAVEN in situ data. *Journal of Geophysical Research: Space Physics*, **2017**, 122, 3815-3836	2.6	74
117	Large-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	2.6	73
116	Nonlinear electric field structures in the inner magnetosphere. *Geophysical Research Letters*, **2014**, 41, 5693-5701	4.9	64

115	The Global-Scale Observations of the Limb and Disk (GOLD) Mission. *Space Science Reviews*, **2017**, 212, 383-408	7.5	63
114	Role of plasma waves in Mars' atmospheric loss. *Geophysical Research Letters*, **2006**, 33,	4.9	63
113	The first in situ electron temperature and density measurements of the Martian nightside ionosphere. *Geophysical Research Letters*, **2015**, 42, 8854-8861	4.9	50
112	Solar-minimum quiet time ion energization and outflow in dynamic boundary related coordinates. *Journal of Geophysical Research*, **2008**, 113, n/a-n/a		47
111	Magnetic reconnection in the near-Mars magnetotail: MAVEN observations. *Geophysical Research Letters*, **2015**, 42, 8838-8845	4.9	45
110	Seasonal variability of Martian ion escape through the plume and tail from MAVEN observations. *Journal of Geophysical Research: Space Physics*, **2017**, 122, 4009-4022	2.6	43
109	MMS Observations of Electrostatic Waves in an Oblique Shock Crossing. *Journal of Geophysical Research: Space Physics*, **2018**, 123, 9430-9442	2.6	40
108	Electron signatures and Alfvn waves. *Journal of Geophysical Research*, **2002**, 107, SMP 15-1		39
107	Kinetic simulations of magnetic reconnection in presence of a background O+ population. *Journal of Geophysical Research*, **2011**, 116, n/a-n/a		37
106	Enhanced O2+ loss at Mars due to an ambipolar electric field from electron heating. *Journal of Geophysical Research: Space Physics*, **2016**, 121, 4668-4678	2.6	36
105	Double layers in the downward current region of the aurora. *Nonlinear Processes in Geophysics*, **2003**, 10, 45-52	2.9	36
104	Altitude dependence of nightside Martian suprathermal electron depletions as revealed by MAVEN observations. *Geophysical Research Letters*, **2015**, 42, 8877-8884	4.9	35
103	S bursts and the Jupiter ionospheric Alfvn resonator. *Journal of Geophysical Research*, **2006**, 111,		35
102	Electron energetics in the Martian dayside ionosphere: Model comparisons with MAVEN data. *Journal of Geophysical Research: Space Physics*, **2016**, 121, 7049-7066	2.6	34
101	Dust observations at orbital altitudes surrounding Mars. *Science*, **2015**, 350, aad0398	33.3	33
100	Sources of Ionospheric Variability at Mars. *Journal of Geophysical Research: Space Physics*, **2017**, 122, 9670-9684	2.6	33
99	Dynamic coordinates for auroral ion outflow. *Journal of Geophysical Research*, **2004**, 109,		31
98	Variations of the Martian plasma environment during the ICME passage on 8 March 2015: A time-dependent MHD study. *Journal of Geophysical Research: Space Physics*, **2017**, 122, 1714-1730	2.6	30

97	A model of electromagnetic electron phase-space holes and its application. *Journal of Geophysical Research*, **2011**, 116, n/a-n/a		30
96	Vertical thermal O+ flows at 850 km in dynamic auroral boundary coordinates. *Journal of Geophysical Research*, **2010**, 115, n/a-n/a		30
95	Initial Observations by the GOLD Mission. *Journal of Geophysical Research: Space Physics*, **2020**, 125, e2020JA027823	2.6	30
94	Photoelectrons and solar ionizing radiation at Mars: Predictions versus MAVEN observations. *Journal of Geophysical Research: Space Physics*, **2016**, 121, 8859-8870	2.6	29
93	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	4.9	28
92	Electric Mars: The first direct measurement of an upper limit for the Martian solar wind electric potential. *Geophysical Research Letters*, **2015**, 42, 9128-9134	4.9	28
91	MAVEN observations of dayside peak electron densities in the ionosphere of Mars. *Journal of Geophysical Research: Space Physics*, **2017**, 122, 891-906	2.6	27
90	Ionospheric plasma density variations observed at Mars by MAVEN/LPW. *Geophysical Research Letters*, **2015**, 42, 8862-8869	4.9	27
89	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	2.6	26
88	Estimates of the suprathermal O+ outflow characteristic energy and relative location in the auroral oval. *Geophysical Research Letters*, **2005**, 32,	4.9	26
87	Survey of magnetic reconnection signatures in the Martian magnetotail with MAVEN. *Journal of Geophysical Research: Space Physics*, **2017**, 122, 5114-5131	2.6	25
86	Electric and magnetic variations in the near-Mars environment. *Journal of Geophysical Research: Space Physics*, **2017**, 122, 8536-8559	2.6	25
85	MAVEN Observations of Solar Wind-Driven Magnetosonic Waves Heating the Martian Dayside Ionosphere. *Journal of Geophysical Research: Space Physics*, **2018**, 123, 4129-4149	2.6	25
84	The Mars Topside Ionosphere Response to the X8.2 Solar Flare of 10 September 2017. *Geophysical Research Letters*, **2018**, 45, 8005-8013	4.9	24
83	The Combined Atmospheric Photochemistry and Ion Tracing code: Reproducing the Viking Lander results and initial outflow results. *Icarus*, **2010**, 206, 120-129	3.8	24
82	Electron Phase-Space Holes in Three Dimensions: Multispacecraft Observations by Magnetospheric Multiscale. *Journal of Geophysical Research: Space Physics*, **2018**, 123, 9963-9978	2.6	24
81	Observations and Modeling of the Mars Low-Altitude Ionospheric Response to the 10 September 2017 X-Class Solar Flare. *Geophysical Research Letters*, **2018**, 45, 7382-7390	4.9	23
80	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	2.6	22

79	Geomagnetic activity dependence of O+ in transit from the ionosphere. *Journal of Atmospheric and Solar-Terrestrial Physics*, **2009**, 71, 1623-1629	2	22
78	The Martian Photoelectron Boundary as Seen by MAVEN. *Journal of Geophysical Research: Space Physics*, **2017**, 122, 10,472-10,485	2.6	21
77	Neutral density response to solar flares at Mars. *Geophysical Research Letters*, **2015**, 42, 8986-8992	4.9	21
76	Kinetic instabilities in the lunar wake: ARTEMIS observations. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		21
75	Identifying STEVE's Magnetospheric Driver Using Conjugate Observations in the Magnetosphere and on the Ground. *Geophysical Research Letters*, **2019**, 46, 12665-12674	4.9	21
74	Using Magnetic Topology to Probe the Sources of Mars' Nightside Ionosphere. *Geophysical Research Letters*, **2018**, 45, 12,190-12,197	4.9	21
73	Quiet, Discrete Auroral Arcs Observations. *Space Science Reviews*, **2020**, 216, 1	7.5	19
72	Martian Electron Temperatures in the Subsolar Region: MAVEN Observations Compared to a One-Dimensional Model. *Journal of Geophysical Research: Space Physics*, **2018**, 123, 5960-5973	2.6	19
71	MAVEN observations of electron-induced whistler mode waves in the Martian magnetosphere. *Journal of Geophysical Research: Space Physics*, **2016**, 121, 9717-9731	2.6	19
70	Three dimensional density cavities in guide field collisionless magnetic reconnection. *Physics of Plasmas*, **2012**, 19, 032119	2.1	18
69	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	4.1	17
68	Mars's Dayside Upper Ionospheric Composition Is Affected by Magnetic Field Conditions. *Journal of Geophysical Research: Space Physics*, **2019**, 124, 3100-3109	2.6	16
67	Influence of suprathermal background electrons on strong auroral double layers: Observations. *Physics of Plasmas*, **2008**, 15, 072901	2.1	16
66	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	2.6	15
65	Influence of suprathermal background electrons on strong auroral double layers: Vlasov-simulation parameter study. *Physics of Plasmas*, **2008**, 15, 072902	2.1	14
64	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	2.6	13
63	MAVEN and MEX Multi-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	2.6	13
62	Influence of suprathermal background electrons on strong auroral double layers: Laminar and turbulent regimes. *Physics of Plasmas*, **2008**, 15, 072903	2.1	13

61	Acceleration of antiearthward electron fluxes in the auroral region. *Journal of Geophysical Research*, **2006**, 111,		12
60	Ambipolar Electric Field in the Martian Ionosphere: MAVEN Measurements. *Journal of Geophysical Research: Space Physics*, **2019**, 124, 4518-4524	2.6	11
59	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	4.9	11
58	MAVEN Observations of Ionospheric Irregularities at Mars. *Geophysical Research Letters*, **2017**, 44, 10,845	4.9	11
57	Electric Mars: A large trans-terminator electric potential drop on closed magnetic field lines above Utopia Planitia. *Journal of Geophysical Research: Space Physics*, **2017**, 122, 2260-2271	2.6	11
56	MAVEN and the total electron content of the Martian ionosphere. *Journal of Geophysical Research: Space Physics*, **2017**, 122, 3526-3537	2.6	10
55	Inverted-V Electron Acceleration Events Concurring With Localized Auroral Observations at Mars by MAVEN. *Geophysical Research Letters*, **2020**, 47, e2020GL087414	4.9	10
54	Modeling Wind-Driven Ionospheric Dynamo Currents at Mars: Expectations for InSight Magnetic Field Measurements. *Geophysical Research Letters*, **2019**, 46, 5083-5091	4.9	10
53	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, n/a-n/a		10
52	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, n/a-n/a		10
51	Mars' Ionopause: A Matter of Pressures. *Journal of Geophysical Research: Space Physics*, **2020**, 125, e2020JA028145	2.6	10
50	Oxygen ion response to proton bursty bulk flows. *Journal of Geophysical Research: Space Physics*, **2016**, 121, 7535-7546	2.6	10
49	Self-consistent evolution of auroral downward-current region ion outflow and moving double layer. *Geophysical Research Letters*, **2009**, 36,	4.9	9
48	Characterizing Average Electron Densities in the Martian Dayside Upper Ionosphere. *Journal of Geophysical Research E: Planets*, **2019**, 124, 76-93	4.1	9
47	Correlations between enhanced electron temperatures and electric field wave power in the Martian ionosphere. *Geophysical Research Letters*, **2018**, 45, 493-501	4.9	8
46	In-Situ Measurements of Electron Temperature and Density in Mars' Dayside Ionosphere. *Geophysical Research Letters*, **2021**, 48, e2021GL093623	4.9	8
45	The Relationship Between Photoelectron Boundary and Steep Electron Density Gradient on Mars: MAVEN Observations. *Journal of Geophysical Research: Space Physics*, **2019**, 124, 8015-8022	2.6	7
44	Low Electron Temperatures Observed at Mars by MAVEN on Dayside Crustal Magnetic Field Lines. *Journal of Geophysical Research: Space Physics*, **2019**, 124, 7629-7637	2.6	7

43	Tidal Wave-Driven Variability in the Mars Ionosphere-Thermosphere System. *Atmosphere*, **2020**, 11, 521	2.7	7
42	Global-Scale Observations of the Limb and Disk (Gold): New Observing Capabilities for the Ionosphere-Thermosphere. *Geophysical Monograph Series*, **2013**, 319-326	1.1	7
41	Test particle simulations of the effect of moving DLs on ion outflow in the auroral downward-current region. *Journal of Geophysical Research*, **2008**, 113, n/a-n/a		7
40	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	2.6	7
39	Ionospheric Electron Densities at Mars: Comparison of Mars Express Ionospheric Sounding and MAVEN Local Measurements. *Journal of Geophysical Research: Space Physics*, **2017**, 122, 12,393-12,405	2.6	6
38	Ion Heating in the Martian Ionosphere. *Journal of Geophysical Research: Space Physics*, **2017**, 122, 10,612-10,625	2.6	6
37	Magnetic Reconnection in the Ionosphere of Mars: The Role of Collisions. *Journal of Geophysical Research: Space Physics*, **2020**, 125, e2020JA028036	2.6	6
36	Collisionless Electron Dynamics in the Magnetosheath of Mars. *Geophysical Research Letters*, **2019**, 46, 11679-11688	4.9	6
35	Localized Heating of the Martian Topside Ionosphere Through the Combined Effects of Magnetic Pumping by Large-Scale Magnetosonic Waves and Pitch Angle Diffusion by Whistler Waves. *Geophysical Research Letters*, **2020**, 47, e2019GL086408	4.9	5
34	Global-Scale Observations and Modeling of Far-Ultraviolet Airglow During Twilight. *Journal of Geophysical Research: Space Physics*, **2020**, 125, e2019JA027645	2.6	5
33	Flares at Earth and Mars: An Ionospheric Escape Mechanism?. *Space Weather*, **2018**, 16, 1042-1056	3.7	5
32	Pressure Gradients Driving Ion Transport in the Topside Martian Atmosphere. *Journal of Geophysical Research: Space Physics*, **2019**, 124, 6117-6126	2.6	5
31	An assessment of the role of soft electron precipitation in global ion upwelling. *Journal of Geophysical Research: Space Physics*, **2014**, 119, 7665-7678	2.6	5
30	Low-frequency oscillatory flow signatures and high-speed flows in the Earth's magnetotail. *Journal of Geophysical Research: Space Physics*, **2017**, 122, 7042-7056	2.6	5
29	Electron Temperature Response to Solar Forcing in the Low-Latitude Martian Ionosphere. *Journal of Geophysical Research E: Planets*, **2019**, 124, 3082-3094	4.1	5
28	First Evidence of Persistent Nighttime Temperature Structures in the Neutral Thermosphere of Mars. *Geophysical Research Letters*, **2018**, 45, 8819-8825	4.9	5
27	Investigation of Coatings for Langmuir Probes in an Oxygen-Rich Space Environment. *Journal of Geophysical Research: Space Physics*, **2018**, 123, 6054-6064	2.6	5
26	Investigation of Coatings for Langmuir Probes: Effect of Surface Oxidation on Photoemission Characteristics. *Journal of Geophysical Research: Space Physics*, **2019**, 124, 2357-2361	2.6	4

25	Subsolar Electron Temperatures in the Lower Martian Ionosphere. *Journal of Geophysical Research: Space Physics*, **2020**, 125, e2019JA027597	2.6	4
24	Dawn/Dusk Asymmetry of the Martian UltraViolet Terminator Observed Through Suprathermal Electron Depletions. *Journal of Geophysical Research: Space Physics*, **2019**, 124, 7283-7300	2.6	4
23	The Search for Double Layers in Space Plasmas. *Geophysical Monograph Series*, **2013**, 241-250	1.1	4
22	Tidal Effects on the Longitudinal Structures of the Martian Thermosphere and Topside Ionosphere Observed by MAVEN. *Journal of Geophysical Research: Space Physics*, **2020**, 126, e2020JA028562	2.6	4
21	The Statistical Characteristics of Small-Scale Ionospheric Irregularities Observed in the Martian Ionosphere. *Journal of Geophysical Research: Space Physics*, **2019**, 124, 5874-5893	2.6	3
20	MAVEN Case Studies of Plasma Dynamics in Low-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	2.6	3
19	Vlasov simulations of trapping and loss of auroral electrons. *Annales Geophysicae*, **2015**, 33, 279-293	2	3
18	In Situ Measurements of Thermal Ion Temperature in the Martian Ionosphere. *Journal of Geophysical Research: Space Physics*, **2021**, 126, e2021JA029531	2.6	3
17	First Detection of Kilometer-Scale Density Irregularities in the Martian Ionosphere. *Geophysical Research Letters*, **2020**, 47, e2020GL090906	4.9	3
16	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	2.6	2
15	Spectral Analysis of Accelerated Electron Populations at Mars. *Journal of Geophysical Research: Space Physics*, **2019**, 124, 8056-8065	2.6	2
14	Neutral wind effects on ion outflow at Mars. *Earth, Planets and Space*, **2012**, 64, 105-112	2.9	2
13	Self-consistent electrostatic simulations of reforming double layers in the downward current region of the aurora. *Annales Geophysicae*, **2015**, 33, 1331-1342	2	2
12	On the Altitude Patterns of Photo-Chemical-Equilibrium in the Martian Ionosphere: A Special Role for Electron Temperature. *Journal of Geophysical Research: Space Physics*, **2021**, 126,	2.6	2
11	Oscillatory Flows in the Magnetotail Plasma Sheet: Cluster Observations of the Distribution Function. *Journal of Geophysical Research: Space Physics*, **2019**, 124, 2736	2.6	1
10	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	2.6	1
9	Cross-Shock Electrostatic Potentials at Mars Inferred From MAVEN Measurements. *Journal of Geophysical Research: Space Physics*, **2021**, 126, e2020JA029064	2.6	1
8	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	2.6	1

7	On the Solar Wind Proton Temperature Anisotropy at Mars' Orbital Location. *Journal of Geophysical Research: Space Physics*, **2021**, 126, e2021JA029438	2.6	1
6	Hot Electron Temperature Layer in the Martian Atmosphere		1
5	Morphological Characteristics of Strong Thermal Emission Velocity Enhancement Emissions. *Journal of Geophysical Research: Space Physics*, **2020**, 125, e2020JA028110	2.6	0
4	Observations of Energized Electrons in the Martian Magnetosheath. *Journal of Geophysical Research: Space Physics*, **2021**, 126, e2020JA028984	2.6	0
3	An empirical model of electron temperatures in the Mars ionosphere based on Langmuir probe measurements in the descending phase of solar cycle 24. *Icarus*, **2021**, 114721	3.8	0
2	In Situ Electron Density From Active Sounding: The Influence of the Spacecraft Wake. *Geophysical Research Letters*, **2019**, 46, 10250-10256	4.9	
1	Martian nonmigrating atmospheric tides in the thermosphere and ionosphere at solar minimum. *Icarus*, **2021**, 114767	3.8	