Martin Friedrich

List of Publications by Year
in descending order

67	1,542	257357	360920
papers	citations	24 h-index	35 g-index

74	74	74	816
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Observations of positively charged nanoparticles in the nighttime polar mesosphere. Geophysical Research Letters, 2005, 32, .	1.5	94
2	FIRI: A semiempirical model of the lower ionosphere. Journal of Geophysical Research, 2001, 106, 21409-21418.	3.3	91
3	News from the Lower Ionosphere: A Review of Recent Developments. Surveys in Geophysics, 2009, 30, 525-559.	2.1	68
4	Electrical structure of PMSE and NLC regions during the DROPPS Program. Geophysical Research Letters, 2001, 28, 1427-1430.	1.5	54
5	Tests of an ion-chemical model of the D- and lower E-region. Journal of Atmospheric and Solar-Terrestrial Physics, 1983, 45, 369-385.	0.9	51
6	Mass analysis of charged aerosol particles in NLC and PMSE during the ECOMA/MASS campaign. Annales Geophysicae, 2009, 27, 1213-1232.	0.6	51
7	The thermal and dynamical state of the atmosphere during polar mesosphere winter echoes. Atmospheric Chemistry and Physics, 2006, 6, 13-24.	1.9	48
8	FIRIâ€2018, an Updated Empirical Model of the Lower Ionosphere. Journal of Geophysical Research: Space Physics, 2018, 123, 6737-6751.	0.8	44
9	A neural network-based ionospheric model for the auroral zone. Journal of Atmospheric and Solar-Terrestrial Physics, 2007, 69, 1459-1470.	0.6	43
10	High-latitude plasma densities and their relation to riometer absorption. Journal of Atmospheric and Solar-Terrestrial Physics, 1983, 45, 127-135.	0.9	41
11	DROPPS: A study of the polar summer mesosphere with rocket, radar and lidar. Geophysical Research Letters, 2001, 28, 1407-1410.	1.5	39
12	In situ observations of meteor smoke particles (MSP) during the Geminids 2010: constraints on MSP size, work function and composition. Annales Geophysicae, 2012, 30, 1661-1673.	0.6	39
13	Electron density measurements in the lower D-region. Journal of Atmospheric and Solar-Terrestrial Physics, 1979, 41, 1195-1200.	0.9	36
14	Positive ion depletion in a noctilucent cloud. Geophysical Research Letters, 1996, 23, 93-96.	1.5	35
15	Collision frequencies in the high-latitude D-region. Journal of Atmospheric and Solar-Terrestrial Physics, 1983, 45, 267-271.	0.9	34
16	Measurements of meteor smoke particles during the ECOMA-2006 campaign: 2. Results. Journal of Atmospheric and Solar-Terrestrial Physics, 2009, 71, 486-496.	0.6	29
17	Rocketâ€borne in situ measurements of meteor smoke: Charging properties and implications for seasonal variation. Journal of Geophysical Research, 2010, 115, .	3.3	29
18	The MaCWAVE program to study gravity wave influences on the polar mesosphere. Annales Geophysicae, 2006, 24, 1159-1173.	0.6	29

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19	Influences of ice particles on the ion chemistry of the polar summer mesosphere. Journal of Geophysical Research, 2003, 108, .	3.3	28
20	A combined rocket-borne and ground-based study of the sodium layer and charged dust in the upper mesosphere. Journal of Atmospheric and Solar-Terrestrial Physics, 2014, 118, 151-160.	0.6	28
21	Variance of transionospheric VLF wave power absorption. Journal of Geophysical Research, 2010, 115, .	3.3	27
22	Electron loss and meteoric dust in the mesosphere. Annales Geophysicae, 2012, 30, 1495-1501.	0.6	27
23	Intense turbulence observed above a mesospheric temperature inversion at equatorial latitude. Geophysical Research Letters, 2006, 33, .	1.5	26
24	Detection of meteoric smoke particles in the mesosphere by a rocket-borne mass spectrometer. Journal of Atmospheric and Solar-Terrestrial Physics, 2014, 118, 161-179.	0.6	26
25	First in situ measurement of the vertical distribution of ice volume in a mesospheric ice cloud during the ECOMA/MASS rocket-campaign. Annales Geophysicae, 2009, 27, 755-766.	0.6	25
26	Bite-outs and other depletions of mesospheric electrons. Journal of Atmospheric and Solar-Terrestrial Physics, 2011, 73, 2201-2211.	0.6	25
27	The ECOMA 2007 campaign: rocket observations and numerical modelling of aerosol particle charging and plasma depletion in a PMSE/NLC layer. Annales Geophysicae, 2009, 27, 781-796.	0.6	21
28	Large electric potential perturbations in PMSE during DROPPS. Geophysical Research Letters, 2001, 28, 1435-1438.	1.5	20
29	Payload charging events in the mesosphere and their impact on Langmuir type electric probes. Annales Geophysicae, 2013, 31, 187-196.	0.6	20
30	Rocket and incoherent scatter radar common-volume electron measurements of the equatorial lower ionosphere. Geophysical Research Letters, 2006, 33, .	1.5	19
31	Signatures of mesospheric particles in ionospheric data. Annales Geophysicae, 2009, 27, 823-829.	0.6	19
32	Seasonal and solar activity variability of D-region electron density at 69Â°N. Journal of Atmospheric and Solar-Terrestrial Physics, 2011, 73, 925-935.	0.6	19
33	Implications of odd oxygen observations by the TIMED/SABER instrument for lower D region ionospheric modeling. Journal of Atmospheric and Solar-Terrestrial Physics, 2015, 124, 63-70.	0.6	19
34	Global modeling of the lowâ€•and middleâ€‹latitude ionospheric D and lower E regions and implications for HF radio wave absorption. Space Weather, 2017, 15, 115-130.	1.3	18
35	Spatial and temporal variability in MLT turbulence inferred from in situ and ground-based observations during the WADIS-1 sounding rocket campaign. Annales Geophysicae, 2017, 35, 547-565.	0.6	18
36	Empirical transition heights of cluster ions. Advances in Space Research, 1988, 8, 235-238.	1.2	17

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37	Equatorial dynamics observed by rocket, radar, and satellite during the CADRE/MALTED campaign: 1. Programmatics and small-scale fluctuations. Journal of Geophysical Research, 1997, 102, 26179-26190.	3.3	17
38	Multi-instrument comparisons of D-region plasma measurements. Annales Geophysicae, 2013, 31, 135-144.	0.6	17
39	Haloe nitric oxide measurements in view of ionospheric data. Journal of Atmospheric and Solar-Terrestrial Physics, 1998, 60, 1445-1457.	0.6	16
40	Electron densities during winter anomalous absorption of different intensityâ€”II. Journal of Atmospheric and Solar-Terrestrial Physics, 1979, 41, 1121-1125.	0.9	15
41	The quiet auroral ionosphere and its neutral background. Advances in Space Research, 2004, 33, 943-948.	1.2	15
42	Ion production and effective loss rate in the mesosphere and lower thermosphere during the Western European Winter Anomaly Campaign 1975/76. Journal of Atmospheric and Solar-Terrestrial Physics, 1979, 41, 1097-1103.	0.9	14
43	Measurement of nitric oxide and related parameters in the equatorial mesosphere and lower thermosphere. Planetary and Space Science, 1985, 33, 1169-1178.	0.9	14
44	Charge balance for the mesosphere with meteoric dust particles. Journal of Atmospheric and Solar-Terrestrial Physics, 2015, 127, 137-149.	0.6	12
45	A further generalisation of the Sen and Wyller magneto-ionic theory. Advances in Space Research, 1991, 11, 105-108.	1.2	11
46	The estimation of D-region electron densities from riometer data. Annales Geophysicae, 2003, 21, 603-613.	0.6	11
47	Coordinated investigation of plasma and neutral density fluctuations and particles during the MaCWAVE/MIDAS summer 2002 program. Geophysical Research Letters, 2004, 31, .	1.5	11
48	A rocket-borne mass analyzer for charged aerosol particles in the mesosphere. Review of Scientific Instruments, 2008, 79, 104502.	0.6	11
49	The Hotel Payload 2 campaign: Overview of NO, O and electron density measurements in the upper mesosphere and lower thermosphere. Journal of Atmospheric and Solar-Terrestrial Physics, 2011, 73, 2228-2236.	0.6	11
50	An Intercomparison of VLF and Sounding Rocket Techniques for Measuring the Daytime D Region Ionosphere: Theoretical Implications. Journal of Geophysical Research: Space Physics, 2018, 123, 8688-8697.	0.8	11
51	Simultaneous in situ measurements of small-scale structures in neutral, plasma, and atomic oxygen densities during the WADIS sounding rocket project. Atmospheric Chemistry and Physics, 2019, 19, 11443-11460.	1.9	11
52	In situ observations of small scale neutral and plasma dynamics in the mesosphere/lower thermosphere at 79Â°N. Advances in Space Research, 2006, 38, 2388-2393.	1.2	9
53	ALTAIR incoherent scatter observations of the equatorial daytime ionosphere. Geophysical Research Letters, 2006, 33, .	1.5	9
54	Long-term trends in the D - and E -region based on rocket-borne measurements. Journal of Atmospheric and Solar-Terrestrial Physics, 2017, 163, 78-84.	0.6	8

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55	Sounding rocket project â€œPMWEâ€•for investigation of polar mesosphere winter echoes. Journal of Atmospheric and Solar-Terrestrial Physics, 2021, 218, 105596.	0.6	8
56	Evidence of coupling between auroral zone activity and mid-latitude absorption. Journal of Atmospheric and Solar-Terrestrial Physics, 1980, 42, 183-188.	0.9	7
57	PMSE and E-region plasma instability: In situ observations. Journal of Atmospheric and Solar-Terrestrial Physics, 2009, 71, 143-157.	0.6	7
58	Estimate of size distribution of charged MSPs measured in situ in winter during the WADIS-2 sounding rocket campaign. Annales Geophysicae, 2017, 35, 979-998.	0.6	6
59	Ionospheric Eâ€“F valley observed by a sounding rocket at the low-latitude station Hainan. Annales Geophysicae, 2013, 31, 1459-1462.	0.6	5
60	Turbulence generated small-scale structures as PMWE formation mechanism: Results from a rocket campaign. Journal of Atmospheric and Solar-Terrestrial Physics, 2021, 217, 105559.	0.6	5
61	Microphysical Properties of Mesospheric Aerosols: An Overview of In Situ-Results from the ECOMA Project. , 2011, , 67-74.		5
62	First results of the polar cap ionosphere based on EISCAT Svalbard and Heiss Island rocket data. Advances in Space Research, 2006, 37, 1097-1101.	1.2	4
63	A new method of inferring the size, number density, and charge of mesospheric dust from its in situ collection by the DUSTY probe. Atmospheric Measurement Techniques, 2019, 12, 1673-1683.	1.2	4
64	Perturbations in EISCAT electron densities visualised by normalisation. Advances in Space Research, 2006, 38, 2413-2417.	1.2	3
65	A neural network-based ionospheric model for Arecibo. Advances in Space Research, 2008, 42, 776-781.	1.2	2
66	A steady-state model for the D- to F-region of the polar cap. Advances in Space Research, 2008, 42, 703-706.	1.2	1
67	Time constants in the ionosphere from neural network models. Advances in Space Research, 2013, 51, 691-695.	1.2	1