Markus Rapp

List of Publications by Year
in descending order

175 papers	5,665 citations	87401 40 h-index	134545 62 g-index
224 all docs	224 docs citations	224 times ranked	2249 citing authors

#	Article	IF	Citations
1	Polar mesosphere summer echoes (PMSE): Review of observations and current understanding. Atmospheric Chemistry and Physics, 2004, 4, 2601-2633.	1.9	337
2	Modeling the microphysics of mesospheric ice particles: Assessment of current capabilities and basic sensitivities. Journal of Atmospheric and Solar-Terrestrial Physics, 2006, 68, 715-744.	0.6	261
3	Small-scale temperature variations in the vicinity of NLC: Experimental and model results. Journal of Geophysical Research, 2002, 107, AAC 11-1.	3.3	164
4	The Deep Propagating Gravity Wave Experiment (DEEPWAVE): An Airborne and Ground-Based Exploration of Gravity Wave Propagation and Effects from Their Sources throughout the Lower and Middle Atmosphere. Bulletin of the American Meteorological Society, 2016, 97, 425-453.	1.7	148
5	Neutral air turbulence and temperatures in the vicinity of polar mesosphere summer echoes. Journal of Geophysical Research, 2002, 107, ACL 9-1.	3.3	116
6	On the nature of PMSE: Electron diffusion in the vicinity of charged particles revisited. Journal of Geophysical Research, 2003, 108, .	3.3	114
7	ML-CIRRUS: The Airborne Experiment on Natural Cirrus and Contrail Cirrus with the High-Altitude Long-Range Research Aircraft HALO. Bulletin of the American Meteorological Society, 2017, 98, 271-288.	1.7	107
8	Modelling of particle charging in the polar summer mesosphere: Part 1â€"General results. Journal of Atmospheric and Solar-Terrestrial Physics, 2001, 63, 759-770.	0.6	96
9	Observations of positively charged nanoparticles in the nighttime polar mesosphere. Geophysical Research Letters, 2005, 32, .	1.5	94
10	Global and temporal distribution of meteoric smoke: A twoâ€dimensional simulation study. Journal of Geophysical Research, 2008, 113, .	3.3	92
11	Cleaner burning aviation fuels can reduce contrail cloudiness. Communications Earth & Environment, 2021, 2, .	2.6	92
12	MAARSY: The new MST radar on AndÃ¸yaâ€"System description and first results. Radio Science, 2012, 47, .	0.8	74
13	Distribution of meteoric smoke â€" sensitivity to microphysical properties and atmospheric conditions. Atmospheric Chemistry and Physics, 2006, 6, 4415-4426.	1.9	71
14	News from the Lower Ionosphere: A Review of Recent Developments. Surveys in Geophysics, 2009, 30, 525-559.	2.1	68
15	High Rossby-wave activity in austral winter 2002: Modulation of the general circulation of the MLT during the MaCWAVE/MIDAS northern summer program. Geophysical Research Letters, 2004, 31, .	1.5	66
16	Microphysical and turbulent measurements of the Schmidt number in the vicinity of polar mesosphere summer echoes. Geophysical Research Letters, 1998, 25, 893-896.	1.5	63
17	Gravity-wave influences on Arctic mesospheric clouds as determined by a Rayleigh lidar at Sondrestrom, Greenland. Journal of Geophysical Research, 2003, 108, .	3.3	63
18	Absolute density measurements in the middle atmosphere. Annales Geophysicae, 2001, 19, 571-580.	0.6	62

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19	Polar mesospheric clouds formed from space shuttle exhaust. Geophysical Research Letters, 2003, 30, n/a-n/a.	1.5	62
20	Trends of mesospheric gravity waves at northern middle latitudes during summer. Journal of Geophysical Research, 2011, 116, .	3.3	62
21	Turbulence measurements and implications for gravity wave dissipation during the MaCWAVE/MIDAS rocket program. Geophysical Research Letters, 2004, 31, .	1.5	60
22	The science case for the EISCAT_3D radar. Progress in Earth and Planetary Science, 2015, 2, .	1.1	60
23	Electron temperature control of PMSE. Geophysical Research Letters, 2000, 27, 3285-3288.	1.5	59
24	Meteoric smoke particles: Evidence from rocket and radar techniques. Advances in Space Research, 2007, 40, 809-817.	1.2	58
25	Polar mesosphere summer echoes (PMSE) studied at Bragg wavelengths of 2.8m, 67cm, and 16cm. Journal of Atmospheric and Solar-Terrestrial Physics, 2008, 70, 947-961.	0.6	58
26	First continuous temperature measurements within polar mesosphere summer echoes. Journal of Atmospheric and Solar-Terrestrial Physics, 2009, 71, 453-463.	0.6	58
27	Observations of extreme temperature and wind gradients near the summer mesopause during the MaCWAVE/MIDAS rocket campaign. Geophysical Research Letters, 2004, 31, .	1.5	55
28	The MaCWAVE/MIDAS rocket and ground-based measurements of polar summer dynamics: Overview and mean state structure. Geophysical Research Letters, 2004, 31, .	1.5	55
29	Evaluation of methods for gravity wave extraction from middle-atmospheric lidar temperature measurements. Atmospheric Measurement Techniques, 2015, 8, 4645-4655.	1.2	54
30	Meteor smoke particle properties derived from Arecibo incoherent scatter radar observations. Geophysical Research Letters, 2007, 34, .	1.5	52
31	Mass analysis of charged aerosol particles in NLC and PMSE during the ECOMA/MASS campaign. Annales Geophysicae, 2009, 27, 1213-1232.	0.6	51
32	Influences of source conditions on mountain wave penetration into the stratosphere and mesosphere. Geophysical Research Letters, 2015, 42, 9488-9494.	1.5	51
33	First tomographic observations of gravity waves by the infrared limb imager GLORIA. Atmospheric Chemistry and Physics, 2017, 17, 14937-14953.	1.9	51
34	Horizontal propagation of largeâ€amplitude mountain waves into the polar night jet. Journal of Geophysical Research D: Atmospheres, 2017, 122, 1423-1436.	1.2	49
35	The thermal and dynamical state of the atmosphere during polar mesosphere winter echoes. Atmospheric Chemistry and Physics, 2006, 6, 13-24.	1.9	48
36	Modelling of positively charged aerosols in the polar summer mesopause region. Earth, Planets and Space, 1999, 51, 799-807.	0.9	45

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37	Tidally induced variations of polar mesospheric cloud altitudes and ice water content using a data assimilation system. Journal of Geophysical Research, 2010, 115, .	3.3	45
38	Airborne Wind Lidar Measurements of Vertical and Horizontal Winds for the Investigation of Orographically Induced Gravity Waves. Journal of Atmospheric and Oceanic Technology, 2017, 34, 1371-1386.	0.5	45
39	PMSE dependence on aerosol charge number density and aerosol size. Journal of Geophysical Research, 2003, 108, .	3.3	44
40	Dregion electron number density limits for the existence of polar mesosphere summer echoes. Journal of Geophysical Research, 2002, 107, ACH 2-1.	3.3	42
41	On the efficiency of rocket-borne particle detection in the mesosphere. Atmospheric Chemistry and Physics, 2007, 7, 3701-3711.	1.9	41
42	Reduced meteoric smoke particle density at the summer pole â€" Implications for mesospheric ice particle nucleation. Advances in Space Research, 2008, 41, 41-49.	1.2	41
43	Measurement of positively and negatively charged particles inside PMSE during MIDAS SOLSTICE 2001. Journal of Geophysical Research, 2003, 108, .	3.3	40
44	Relations between small scale electron number density fluctuations, radar backscatter, and charged aerosol particles. Journal of Geophysical Research, 2003, 108, .	3.3	39
45	On microphysical processes of noctilucent clouds (NLC): observations and modeling of mean and width of the particle size-distribution. Atmospheric Chemistry and Physics, 2010, 10, 6661-6668.	1.9	39
46	Gravity wave momentum fluxes in the MLTâ€"Part II: Meteor radar investigations at high and midlatitudes in comparison with modeling studies. Journal of Atmospheric and Solar-Terrestrial Physics, 2011, 73, 911-920.	0.6	39
47	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
48	Measurements of meteor smoke particles during the ECOMA-2006 campaign: 1. Particle detection by active photoionization. Journal of Atmospheric and Solar-Terrestrial Physics, 2009, 71, 477-485.	0.6	37
49	Composite analysis of the temporal development of waves in the polar MLT region during stratospheric warmings. Journal of Atmospheric and Solar-Terrestrial Physics, 2012, 90-91, 86-96.	0.6	37
50	Investigation of gravity waves using horizontally resolved radial velocity measurements. Atmospheric Measurement Techniques, 2013, 6, 2893-2905.	1.2	37
51	Charging of mesospheric aerosol particles: the role of photodetachment and photoionization from meteoric smoke and ice particles. Annales Geophysicae, 2009, 27, 2417-2422.	0.6	36
52	SOUTHTRAC-GW: An Airborne Field Campaign to Explore Gravity Wave Dynamics at the Worldâ€™s Strongest Hotspot. Bulletin of the American Meteorological Society, 2021, 102, E871-E893.	1.7	36
53	The noctilucent cloud (NLC) display during the ECOMA/MASS sounding rocket flights on 3 August 2007: morphology on global to local scales. Annales Geophysicae, 2009, 27, 953-965.	0.6	34
54	Spectral properties of mesospheric ice clouds: Evidence for nonspherical particles. Journal of Geophysical Research, 2007, 112, .	3.3	33

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55	Does Strong Tropospheric Forcing Cause Largeâ€Amplitude Mesospheric Gravity Waves? A DEEPWAVE Case Study. Journal of Geophysical Research D: Atmospheres, 2017, 122, 11,422.	1.2	33
56	Simultaneous observations of a Mesospheric Inversion Layer and turbulence during the ECOMA-2010 rocket campaign. Annales Geophysicae, 2013, 31, 775-785.	0.6	32
57	Charge and size distribution of mesospheric aerosol particles measured inside NLC and PMSE during MIDAS MaCWAVE 2002. Journal of Atmospheric and Solar-Terrestrial Physics, 2006, 68, 114-123.	0.6	30
58	Gravity wave momentum fluxes from MF and meteor radar measurements in the polar MLT region. Journal of Geophysical Research: Space Physics, 2015, 120, 736-750.	0.8	30
59	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
60	Meteoric smoke particle properties derived using dual-beam Arecibo UHF observations of D-region spectra during different seasons. Journal of Atmospheric and Solar-Terrestrial Physics, 2009, 71, 1982-1991.	0.6	29
61	Rocketâ€borne in situ measurements of meteor smoke: Charging properties and implications for seasonal variation. Journal of Geophysical Research, 2010, 115, .	3.3	29
62	Observed versus simulated mountain waves over Scandinavia â€“ improvement of vertical winds, energy and momentum fluxes by enhanced model resolution?. Atmospheric Chemistry and Physics, 2017, 17, 4031-4052.	1.9	29
63	Capture rates of electrons and positive ions by mesospheric aerosol particles. Journal of Aerosol Science, 2000, 31, 1367-1369.	1.8	28
64	Electron temperature dependence of PMSE power: experimental and modelling results. Advances in Space Research, 2001, 28, 1077-1082.	1.2	28
65	Observational indications of downward-propagating gravity waves in middle atmosphere lidar data. Journal of Atmospheric and Solar-Terrestrial Physics, 2017, 162, 16-27.	0.6	28
66	Microphysical parameters of mesospheric ice clouds derived from calibrated observations of polar mesosphere summer echoes at Bragg wavelengths of 2.8 m and 30 cm. Journal of Geophysical Research, 2010, 115, .	3.3	27
67	Electron loss and meteoric dust in the mesosphere. Annales Geophysicae, 2012, 30, 1495-1501.	0.6	27
68	PMC Turbo: Studying Gravity Wave and Instability Dynamics in the Summer Mesosphere Using Polar Mesospheric Cloud Imaging and Profiling From a Stratospheric Balloon. Journal of Geophysical Research D: Atmospheres, 2019, 124, 6423-6443.	1.2	27
69	Intense turbulence observed above a mesospheric temperature inversion at equatorial latitude. Geophysical Research Letters, 2006, 33, .	1.5	26
70	The sensitivity of mesospheric ice layers to atmospheric background temperatures and water vapor. Advances in Space Research, 2007, 40, 794-801.	1.2	26
71	Influence of tides and gravity waves on layering processes in the polar summer mesopause region. Annales Geophysicae, 2008, 26, 4013-4022.	0.6	26
72	Gravity waves excited during a minor sudden stratospheric warming. Atmospheric Chemistry and Physics, 2018, 18, 12915-12931.	1.9	26

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73	Largeâ€Amplitude Mountain Waves in the Mesosphere Accompanying Weak Crossâ€Mountain Flow During DEEPWAVE Research Flight RF22. Journal of Geophysical Research D: Atmospheres, 2018, 123, 9992.	1.2	26
74	On the occurrence and formation of multiple layers of polar mesosphere summer echoes. Geophysical Research Letters, 2005, 32, .	1.5	25
75	Latitudinal dependence of noctilucent cloud growth. Geophysical Research Letters, 2006, 33, .	1.5	25
76	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
77	Bite-outs and other depletions of mesospheric electrons. Journal of Atmospheric and Solar-Terrestrial Physics, 2011, 73, 2201-2211.	0.6	25
78	Lidar observations of large-amplitude mountain waves in the stratosphere above Tierra del Fuego, Argentina. Scientific Reports, 2020, 10, 14529.	1.6	25
79	A new technique for the analysis of neutral air density fluctuations measured in situ in the middle atmosphere. Geophysical Research Letters, 2003, 30, .	1.5	24
80	The impact of planetary waves on the latitudinal displacement of sudden stratospheric warmings. Annales Geophysicae, 2013, 31, 1397-1415.	0.6	24
81	Atmospheric Conditions during the Deep Propagating Gravity Wave Experiment (DEEPWAVE). Monthly Weather Review, 2017, 145, 4249-4275.	0.5	24
82	Small scale density variations of electrons and charged particles in the vicinity of polar mesosphere summer echoes. Atmospheric Chemistry and Physics, 2003, 3, 1399-1407.	1.9	23
83	Meteor smoke influences on the D-region charge balance â€“ review of recent in situ measurements and one-dimensional model results. Annales Geophysicae, 2013, 31, 2049-2062.	0.6	23
84	Effects of meteoric smoke particles on the <i>D</i> region ion chemistry. Journal of Geophysical Research: Space Physics, 2015, 120, 10,823.	0.8	23
85	Derivation of turbulent energy dissipation rate with the Middle Atmosphere Alomar Radar System (MAARSY) and radiosondes at AndÃ¸ya, Norway. Annales Geophysicae, 2016, 34, 1209-1229.	0.6	23
86	MAARSY â€“ the new MST radar on AndÃ¸ya/Norway. Advances in Radio Science, 0, 8, 219-224.	0.7	22
87	First three-dimensional observations of polar mesosphere winter echoes: Resolving space-time ambiguity. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	22
88	Majority of PMSE spectral widths at UHF and VHF are compatible with a single scattering mechanism. Journal of Atmospheric and Solar-Terrestrial Physics, 2011, 73, 2142-2152.	0.6	22
89	Mesosphere and lower thermosphere zonal wind variations over low latitudes: Relation to local stratospheric zonal winds and global circulation anomalies. Journal of Geophysical Research D: Atmospheres, 2014, 119, 5913-5927.	1.2	22
90	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

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91	An intercomparison of stratospheric gravity wave potential energy densities from METOP GPS radio occultation measurements and ECMWF model data. Atmospheric Measurement Techniques, 2018, 11, 1031-1048.	1.2	21
92	Largeâ€Amplitude Mountain Waves in the Mesosphere Observed on 21 June 2014 During DEEPWAVE: 1. Wave Development, Scales, Momentum Fluxes, and Environmental Sensitivity. Journal of Geophysical Research D: Atmospheres, 2019, 124, 10364-10384.	1.2	21
93	Payload charging events in the mesosphere and their impact on Langmuir type electric probes. Annales Geophysicae, 2013, 31, 187-196.	0.6	20
94	The Geminid meteor shower during the ECOMA sounding rocket campaign: specular and head echo radar observations. Annales Geophysicae, 2013, 31, 473-487.	0.6	20
95	Modelling of particle charging in the polar summer mesosphere: Part 2â€"Application to measurements. Journal of Atmospheric and Solar-Terrestrial Physics, 2001, 63, 771-780.	0.6	19
96	Effect of ice particles on the mesospheric potassium layer at Spitsbergen (78Â°N). Journal of Geophysical Research, 2007, 112, .	3.3	19
97	Signatures of mesospheric particles in ionospheric data. Annales Geophysicae, 2009, 27, 823-829.	0.6	19
98	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
99	The Turbopause experiment: atmospheric stability and turbulent structure spanning the turbopause altitude. Annales Geophysicae, 2011, 29, 2327-2339.	0.6	19
100	Morphology of turbulence in the polar summer mesopause region during the MIDAS/SOLSTICE campaign 2001. Advances in Space Research, 2003, 31, 2069-2074.	1.2	18
101	Small-scale structures in neutrals and charged aerosol particles as observed during the ECOMA/MASS rocket campaign. Annales Geophysicae, 2009, 27, 1449-1456.	0.6	18
102	Testing linear gravity wave theory with simultaneous wind and temperature data from the mesosphere. Journal of Atmospheric and Solar-Terrestrial Physics, 2013, 93, 57-69.	0.6	18
103	Combination of Lidar and Model Data for Studying Deep Gravity Wave Propagation. Monthly Weather Review, 2016, 144, 77-98.	0.5	18
104	Mountain waves modulate the water vapor distribution in the UTLS. Atmospheric Chemistry and Physics, 2017, 17, 14853-14869.	1.9	18
105	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
106	Demonstration of an iron fluorescence lidar operating at 372â€‰â€‰nm wavelength using a newly-developed Nd:YAG laser. Optics Letters, 2017, 42, 2858.	1.7	18
107	Assessing middle atmosphere weather models using infrasound detections from microbaroms. Geophysical Journal International, 2019, 216, 1761-1767.	1.0	18
108	Coincident measurements of PMSE and NLC above ALOMAR (69Â° N, 16Â° E) by radar and lidar from 1999â€"2008. Atmospheric Chemistry and Physics, 2011, 11, 1355-1366.	1.9	17

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109	Multi-instrument comparisons of D-region plasma measurements. Annales Geophysicae, 2013, 31, 135-144.	0.6	17
110	Middle Atmosphere Variability and Model Uncertainties as Investigated in the Framework of the ARISE Project. , 2019, , 845-887.		17
111	Mesospheric Bore Evolution and Instability Dynamics Observed in PMC Turbo Imaging and Rayleigh Lidar Profiling Over Northeastern Canada on 13 July 2018. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD032037.	1.2	17
112	MAARSY â€" the new MST radar on AndÃ¸ya: first results of spaced antenna and Doppler measurements of atmospheric winds in the troposphere and mesosphere using a partial array. Advances in Radio Science, 0, 10, 291-298.	0.7	17
113	Rocket measurements of positive ions during polar mesosphere winter echo conditions. Atmospheric Chemistry and Physics, 2006, 6, 5515-5524.	1.9	16
114	Comment on â€œIce iron/sodium film as cause for high noctilucent cloud radar reflectivityâ€•by P. M. Bellan. Journal of Geophysical Research, 2009, 114, .	3.3	16
115	Studies of polar mesosphere summer echoes with the EISCAT VHF and UHF radars: Information contained in the spectral shape. Advances in Space Research, 2010, 45, 247-259.	1.2	16
116	Development of the mesospheric Na layer at 69Â° N during the Geminids meteor shower 2010. Annales Geophysicae, 2013, 31, 61-73.	0.6	16
117	Large Midlatitude Stratospheric Temperature Variability Caused by Inertial Instability: A Potential Source of Bias for Gravity Wave Climatologies. Geophysical Research Letters, 2018, 45, 10,682.	1.5	16
118	Turbulent energy dissipation rates observed by Doppler MST Radar and by rocket-borne instruments during the MIDAS/MaCWAVE campaign 2002. Annales Geophysicae, 2005, 23, 1147-1156.	0.6	15
119	Secondary charging effects due to icy dust particle impacts on rocket payloads. Annales Geophysicae, 2012, 30, 433-439.	0.6	15
120	Unusual appearance of motherâ€ofâ€pearl clouds above El Calafate, Argentina (50Â°21â€²S, 72Â°16â€²W). Weather, 2020, 75, 378-388.	0.6	15
121	Rocket probing of PMSE and NLC â€" Results from the recent MIDAS/MaCWAVE campaign. Advances in Space Research, 2003, 31, 2061-2067.	1.2	14
122	The role of charged ice particles for the creation of PMSE: A review of recent developments. Advances in Space Research, 2003, 31, 2033-2043.	1.2	14
123	Mountain-Wave Propagation under Transient Tropospheric Forcing: A DEEPWAVE Case Study. Monthly Weather Review, 2018, 146, 1861-1888.	0.5	14
124	Atmospheric band fitting coefficients derived from a self-consistent rocket-borne experiment. Atmospheric Chemistry and Physics, 2019, 19, 1207-1220.	1.9	13
125	PMSE-observations with the EISCAT VHF and UHF-radars: Statistical properties. Journal of Atmospheric and Solar-Terrestrial Physics, 2011, 73, 944-956.	0.6	12
126	Statistical characteristics of PMWE observations by the EISCAT VHF radar. Annales Geophysicae, 2013, 31, 359-375.	0.6	12

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127	Mesospheric Temperature During the Extreme Midlatitude Noctilucent Cloud Event on 18/19 July 2016. Journal of Geophysical Research D: Atmospheres, 2018, 123, 13,775.	1.2	12
128	Retrieval of intrinsic mesospheric gravity wave parameters using lidar and airglow temperature and meteor radar wind data. Atmospheric Measurement Techniques, 2019, 12, 5997-6015.	1.2	12
129	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
130	Charging of meteoric smoke and ice particles in the mesosphere including photoemission and photodetachment rates. Journal of Atmospheric and Solar-Terrestrial Physics, 2011, 73, 2212-2220.	0.6	11
131	New experiments to validate the radiation pattern of the Middle Atmosphere Alomar Radar System (MAARSY). Advances in Radio Science, 0, 11, 283-289.	0.7	11
132	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
133	In-situ density measurements in the mesosphere/lower thermosphere region with the TOTAL and CONE instruments. , 2013, , 1-11.		11
134	Nucleation of mesospheric cloud particles: Sensitivities and limits. Journal of Geophysical Research: Space Physics, 2016, 121, 2621-2644.	0.8	10
135	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
136	PMSE strength during enhanced D region electron densities: Faraday rotation and absorption effects at VHF frequencies. Journal of Atmospheric and Solar-Terrestrial Physics, 2014, 118, 113-118.	0.6	9
137	Observations of mesospheric ice particles from the ALWIN radar and SOFIE. Journal of Atmospheric and Solar-Terrestrial Physics, 2011, 73, 2176-2183.	0.6	8
138	Observations of NO in the upper mesosphere and lower thermosphere during ECOMA 2010. Annales Geophysicae, 2012, 30, 1611-1621.	0.6	8
139	Gravity wave influence on NLC: experimental results from ALOMAR, 69Â° N. Atmospheric Chemistry and Physics, 2013, 13, 11951-11963.	1.9	8
140	High-resolution vertical velocities and their power spectrum observed with the MAARSY radar â€" PartÂ1: frequency spectrum. Annales Geophysicae, 2018, 36, 577-586.	0.6	8
141	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
142	Highâ€Cadence Lidar Observations of Middle Atmospheric Temperature and Gravity Waves at the Southern Andes Hot Spot. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2021JD034683.	1.2	8
143	Comment on â€œThe response time of PMSE to ionospheric heatingâ€•by E. Belova et al.. Journal of Geophysical Research, 2003, 108, .	3.3	7
144	A reconsideration of spectral width measurements in PMSE with EISCAT. Advances in Space Research, 2006, 38, 2408-2412.	1.2	7

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145	PMSE and E-region plasma instability: In situ observations. Journal of Atmospheric and Solar-Terrestrial Physics, 2009, 71, 143-157.	0.6	7
146	D region meteoric smoke and neutral temperature retrieval using the poker flat incoherent scatter radar. Geophysical Research Letters, 2012, 39, .	1.5	7
147	PMSE observations with the EISCAT VHF- and UHF-radars: Ice particles and their effect on ambient electron densities. Journal of Atmospheric and Solar-Terrestrial Physics, 2013, 104, 270-276.	0.6	7
148	The Hiccup: a dynamical coupling process during the autumn transition in the Northern Hemisphere â€“ similarities and differences to sudden stratospheric warmings. Annales Geophysicae, 2015, 33, 199-206.	0.6	7
149	Horizontally resolved structures of radar backscatter from polar mesospheric layers. Advances in Radio Science, 0, 10, 285-290.	0.7	7
150	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
151	First experimental verification of summertime mesospheric momentum balance based on radar wind measurements at 69Â° N. Annales Geophysicae, 2015, 33, 1091-1096.	0.6	6
152	Validation of the radiation pattern of the Middle Atmosphere Alomar Radar System (MAARSY). Advances in Radio Science, 0, 10, 245-253.	0.7	6
153	In situ measurements of mesospheric turbulence during spring transition of the Arctic mesosphere. Geophysical Research Letters, 2002, 29, 115-1-115-4.	1.5	5
154	UV limb-scatter spectra of noctilucent clouds consistent with mono-modal particle size distribution. Geophysical Research Letters, 2007, 34, .	1.5	5
155	Localized mesosphere-stratosphere-troposphere radar echoes from the<i>E</i>region at 69Â°N: Properties and physical mechanisms. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	5
156	Multi beam observations of cosmic radio noise using a VHF radar with beam forming by a Butler matrix. Advances in Radio Science, 0, 9, 349-357.	0.7	5
157	Secondary electron emission from meteoric smoke particles inside the polar ionosphere. Annales Geophysicae, 2016, 34, 573-580.	0.6	5
158	Atomic oxygen number densities in the mesosphereâ€“lower thermosphere region measured by solid electrolyte sensors on WADIS-2. Atmospheric Measurement Techniques, 2019, 12, 2445-2461.	1.2	5
159	Nonlinear Simulations of Gravity Wave Tunneling and Breaking over Auckland Island. Journals of the Atmospheric Sciences, 2021, 78, 1567-1582.	0.6	5
160	Microphysical Properties of Mesospheric Aerosols: An Overview of In Situ-Results from the ECOMA Project. , 2011, , 67-74.		5
161	Gravityâ€Waveâ€Driven Seasonal Variability of Temperature Differences Between ECMWF IFS and Rayleigh Lidar Measurements in the Lee of the Southern Andes. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	1.2	5
162	Charged Aerosol Effects on the Scattering of Radar Waves from the D-Region. Springer Atmospheric Sciences, 2013, , 339-363.	0.4	4

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163	On the heterogeneous nucleation of mesospheric ice on meteoric smoke particles: Microphysical modeling. Journal of Atmospheric and Solar-Terrestrial Physics, 2014, 118, 180-189.	0.6	4
164	Reply to comment by P. M. Bellan on â€œComment on â€˜Ice iron/sodium film as cause for high noctilucent cloud radar reflectivityâ€™â€. Journal of Geophysical Research, 2010, 115, .	3.3	3
165	The impact of solar radiation on polar mesospheric ice particle formation. Atmospheric Chemistry and Physics, 2019, 19, 4311-4322.	1.9	3
166	A novel rocket-borne ion mass spectrometer with large mass range: instrument description and first-flight results. Atmospheric Measurement Techniques, 2021, 14, 983-993.	1.2	3
167	Measurement characteristics of an airborne microwave temperature profiler (MTP). Atmospheric Measurement Techniques, 2021, 14, 1689-1713.	1.2	3
168	Nighttime O(1D) and corresponding Atmospheric Band emission (762Ânm) derived from rocket-borne experiment. Journal of Atmospheric and Solar-Terrestrial Physics, 2021, 213, 105522.	0.6	2
169	An Interactive Library Classification Systems Module. Technical Services Quarterly, 2001, 18, 11-19.	0.1	1
170	Reply to comment by J. Klostermeyer on â€œNeutral air turbulence and temperatures in the vicinity of polar mesosphere summer echoesâ€•by F.-J. LÃ¼bken, M. Rapp, and P. Hoffmann. Journal of Geophysical Research, 2003, 108, .	3.3	1
171	Preface "Structure, composition, and dynamics of the middle atmosphere and lower ionosphere during a major meteor shower". Annales Geophysicae, 2013, 31, 1829-1831.	0.6	1
172	Corrigendum to "Development of the mesospheric Na layer at 69Â° N during the Geminids meteor shower 2010", published in Ann. Geophys., 31, 61â€“73, 2013. Annales Geophysicae, 2015, 33, 197-197.	0.6	1
173	Mapping the Earth's cosmic dust layer by differential solar occultation. , 2002, , .		0
174	Reply to Comment on â€œNucleation of Mesospheric Cloud Particles: Sensitivities and Limitsâ€. Journal of Geophysical Research: Space Physics, 2019, 124, 3167.	0.8	0
175	Assessment of the Precision of Spectral Model Turbulence Analysis Techniques Using Direct Numerical Simulation Data. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	1.2	0