Franz-Josef LÃ¼bken

List of Publications by Year
in descending order

80 papers	3,280 citations	136950 32 h-index	161849 54 g-index
83 all docs	83 docs citations	83 times ranked	1021 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.	4.9	337
2	Seasonal variation of turbulent energy dissipation rates at high latitudes as determined by in situ measurements of neutral density fluctuations. Journal of Geophysical Research, 1997, 102, 13441-13456.	3.3	256
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	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
5	On the nature of PMSE: Electron diffusion in the vicinity of charged particles revisited. Journal of Geophysical Research, 2003, 108, .	3.3	114
6	Experiments revealing small impact of turbulence on the energy budget of the mesosphere and lower thermosphere. Journal of Geophysical Research, 1993, 98, 20369-20384.	3.3	98
7	Noctilucent clouds and the thermal structure near the Arctic mesopause in summer. Journal of Geophysical Research, 1996, 101, 9489-9508.	3.3	96
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.	1.6	96
9	On the extraction of turbulent parameters from atmospheric density fluctuations. Journal of Geophysical Research, 1992, 97, 20385-20395.	3.3	83
10	First in situ temperature measurements at the Antarctic summer mesopause. Geophysical Research Letters, 1999, 26, 3581-3584.	4.0	70
11	Microphysical and turbulent measurements of the Schmidt number in the vicinity of polar mesosphere summer echoes. Geophysical Research Letters, 1998, 25, 893-896.	4.0	63
12	Absolute density measurements in the middle atmosphere. Annales Geophysicae, 2001, 19, 571-580.	1.6	62
13	Stratospheric and solar cycle effects on longâ€term variability of mesospheric ice clouds. Journal of Geophysical Research, 2009, 114, .	3.3	62
14	First inâ€situ observations of neutral and plasma density fluctuations within a PMSE layer. Geophysical Research Letters, 1993, 20, 2311-2314.	4.0	60
15	Seasonal changes in gravity wave activity measured by lidars at mid-latitudes. Atmospheric Chemistry and Physics, 2008, 8, 6775-6787.	4.9	60
16	First continuous temperature measurements within polar mesosphere summer echoes. Journal of Atmospheric and Solar-Terrestrial Physics, 2009, 71, 453-463.	1.6	58
17	Temperature trends in the midlatitude summer mesosphere. Journal of Geophysical Research D: Atmospheres, 2013, 118, 13,347.	3.3	58
18	Observations of extreme temperature and wind gradients near the summer mesopause during the MaCWAVE/MIDAS rocket campaign. Geophysical Research Letters, 2004, 31, .	4.0	55

#	Article	IF	Citations
19	NLC observations during one solar cycle above ALOMAR. Journal of Atmospheric and Solar-Terrestrial Physics, 2009, 71, 424-433.	1.6	53
20	First measurements of thermal tides in the summer mesopause region at Antarctic latitudes. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	51
21	The thermal and dynamical state of the atmosphere during polar mesosphere winter echoes. Atmospheric Chemistry and Physics, 2006, 6, 13-24.	4.9	48
22	Simultaneous observation of noctilucent clouds, mesospheric summer echoes, and temperature at a midlatitude station (54Â°N). Journal of Geophysical Research, 2007, 112, .	3.3	48
23	NLC and the background atmosphere above ALOMAR. Atmospheric Chemistry and Physics, 2011, 11, 5701-5717.	4.9	47
24	Lidar temperature measurements of gravity waves over KÃ¼hlungsborn (54Â°N) from 1 to 105 km: A winter-summer comparison. Journal of Geophysical Research, 2006, 111, .	3.3	46
25	On the Anthropogenic Impact on Longâ€Term Evolution of Noctilucent Clouds. Geophysical Research Letters, 2018, 45, 6681-6689.	4.0	44
26	Weather in mesospheric ice layers. Geophysical Research Letters, 2006, 33, .	4.0	43
27	Lidar observations of gravity wave activity in the middle atmosphere over Davis (69Â°S, 78Â°E), Antarctica. Journal of Geophysical Research D: Atmospheres, 2015, 120, 4506-4521.	3.3	43
28	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
29	Temporal variability of tidal and gravity waves during a record long 10-day continuous lidar sounding. Atmospheric Chemistry and Physics, 2018, 18, 371-384.	4.9	39
30	Mesospheric temperature trends at mid-latitudes in summer. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	36
31	Inertia gravity wave in the stratosphere and mesosphere observed by Doppler wind and temperature lidar. Geophysical Research Letters, 2015, 42, 10,929.	4.0	35
32	Temperatures and horizontal winds in the Antarctic summer mesosphere. Journal of Geophysical Research, 2004, 109, .	3.3	34
33	Seasonal and latitudinal variation of noctilucent cloud altitudes. Geophysical Research Letters, 2008, 35, .	4.0	33
34	Trends in mesospheric ice layers in the Northern Hemisphere during 1961â€“2013. Journal of Geophysical Research D: Atmospheres, 2015, 120, 11,277.	3.3	33
35	BUGATTI experiments: Mass spectrometric studies of lower thermosphere eddy mixing and turbulence. Journal of Geophysical Research, 1990, 95, 7443-7465.	3.3	30
36	LITOS â€“ a new balloon-borne instrument for fine-scale turbulence soundings in the stratosphere. Atmospheric Measurement Techniques, 2011, 4, 55-66.	3.1	29

#	Article	IF	Citations
37	Intense turbulence observed above a mesospheric temperature inversion at equatorial latitude. Geophysical Research Letters, 2006, 33, .	4.0	26
38	The sensitivity of mesospheric ice layers to atmospheric background temperatures and water vapor. Advances in Space Research, 2007, 40, 794-801.	2.6	26
39	Temporal and spatial characteristics of the formation of strong noctilucent clouds. Journal of Atmospheric and Solar-Terrestrial Physics, 2013, 104, 151-166.	1.6	26
40	Latitudinal and interhemispheric variation of stratospheric effects on mesospheric ice layer trends. Journal of Geophysical Research, 2011, 116, .	3.3	24
41	Long-term variations of noctilucent clouds at ALOMAR. Journal of Atmospheric and Solar-Terrestrial Physics, 2017, 162, 79-89.	1.6	24
42	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.	4.9	23
43	Radar measurements of turbulence, electron densities, and absolute reflectivities during polar mesosphere winter echoes (PMWE). Advances in Space Research, 2007, 40, 758-764.	2.6	23
44	Tidal signatures in temperatures derived from daylight lidar soundings above KÃ¼hlungsborn (54Â°N,) Tj ETQq0 0 0 rgBT /Overlock 10 T	1.6	22
45	Solar Response and Longâ€Term Trend of Midlatitude Mesopause Region Temperature Based on 28 Years (1990â€“2017) of Na Lidar Observations. Journal of Geophysical Research: Space Physics, 2019, 124, 7140-7156.	2.4	22
46	Seasonal variation of gravity wave parameters using different filter methods with daylight lidar measurements at midlatitudes. Journal of Geophysical Research D: Atmospheres, 2017, 122, 2683-2695.	3.3	21
47	In-situ measurement of the Schmidt number within a PMSE layer. Geophysical Research Letters, 1994, 21, 1651-1654.	4.0	20
48	Diurnal variations of midlatitude NLC parameters observed by daylightâ€capable lidar and their relation to ambient parameters. Geophysical Research Letters, 2013, 40, 6390-6394.	4.0	20
49	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.	1.6	19
50	The Turbopause experiment: atmospheric stability and turbulent structure spanning the turbopause altitude. Annales Geophysicae, 2011, 29, 2327-2339.	1.6	19
51	First observation of one noctilucent cloud by a twin lidar in two different directions. Annales Geophysicae, 2002, 20, 1863-1868.	1.6	19
52	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.	1.6	18
53	Simultaneous observation of convective adjustment and turbulence generation in the mesosphere. Geophysical Research Letters, 1995, 22, 2477-2480.	4.0	17
54	Noctilucent cloud variability and mean parameters from 15â€‰years of lidar observations at a midâ€latitude site (54Â°N, 12Â°E). Journal of Geophysical Research D: Atmospheres, 2013, 118, 317-328.	3.3	17

#	Article	IF	Citations
55	Winds and temperatures of the Arctic middle atmosphere during January measured by Doppler lidar. Atmospheric Chemistry and Physics, 2017, 17, 13345-13359.	4.9	17
56	Rocket measurements of positive ions during polar mesosphere winter echo conditions. Atmospheric Chemistry and Physics, 2006, 6, 5515-5524.	4.9	16
57	Seasonal Cycle of Gravity Wave Potential Energy Densities from Lidar and Satellite Observations at 54Â° and 69Â°N. Journals of the Atmospheric Sciences, 2021, 78, 1359-1386.	1.7	16
58	Turbulent scattering for radars: A summary. Journal of Atmospheric and Solar-Terrestrial Physics, 2014, 107, 1-7.	1.6	14
59	Mesospheric temperature soundings with the new, daylight-capable IAP RMR lidar. Atmospheric Measurement Techniques, 2016, 9, 3707-3715.	3.1	14
60	Radar Observation of Extreme Vertical Drafts in the Polar Summer Mesosphere. Geophysical Research Letters, 2021, 48, e2021GL094918.	4.0	14
61	Advanced hodograph-based analysis technique to derive gravity-wave parameters from lidar observations. Atmospheric Measurement Techniques, 2020, 13, 479-499.	3.1	13
62	Role Of the Sun and the Middle atmosphere/thermosphere/ionosphere In Climate (ROSMIC): a retrospective and prospective view. Progress in Earth and Planetary Science, 2021, 8, .	3.0	13
63	Using polar mesosphere summer echoes and stratospheric/mesospheric winds to explain summer mesopause jumps in Antarctica. Journal of Atmospheric and Solar-Terrestrial Physics, 2017, 162, 106-115.	1.6	12
64	Long term trends of mesopheric ice layers: A model study. Journal of Atmospheric and Solar-Terrestrial Physics, 2021, 214, 105378.	1.6	12
65	Winter/summer transition in the Antarctic mesopause region. Journal of Geophysical Research D: Atmospheres, 2015, 120, 12394-12409.	3.3	11
66	Observations of Reduced Turbulence and Wave Activity in the Arctic Middle Atmosphere Following the January 2015 Sudden Stratospheric Warming. Journal of Geophysical Research D: Atmospheres, 2018, 123, 13259-13276.	3.3	11
67	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.	4.9	11
68	Analysis of small-scale structures in lidar observations of noctilucent clouds using a pattern recognition method. Journal of Atmospheric and Solar-Terrestrial Physics, 2017, 162, 48-56.	1.6	10
69	Case study of wave breaking with high-resolution turbulence measurements with LITOS and WRF simulations. Atmospheric Chemistry and Physics, 2017, 17, 7941-7954.	4.9	10
70	VAHCOLI, a new concept for lidars: technical setup, science applications, and first measurements. Atmospheric Measurement Techniques, 2021, 14, 3815-3836.	3.1	9
71	Local time dependence of polar mesospheric clouds: a model study. Atmospheric Chemistry and Physics, 2018, 18, 8893-8908.	4.9	8
72	Evaluation of wake influence on high-resolution balloon-sonde measurements. Atmospheric Measurement Techniques, 2019, 12, 4191-4210.	3.1	8

#	Article	IF	Citations
73	Highâ€Resolution Observations of Turbulence Distributions Across Tropopause Folds. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033857.	3.3	8
74	In situ measurements of mesospheric turbulence during spring transition of the Arctic mesosphere. Geophysical Research Letters, 2002, 29, 115-1-115-4.	4.0	5
75	Turbulence generated small-scale structures as PMWE formation mechanism: Results from a rocket campaign. Journal of Atmospheric and Solar-Terrestrial Physics, 2021, 217, 105559.	1.6	5
76	A new description of probability density distributions of polar mesospheric clouds. Atmospheric Chemistry and Physics, 2019, 19, 4685-4702.	4.9	4
77	Introduction to special section on Climate and Weather of the Sun Earth System. Journal of Geophysical Research, 2010, 115, .	3.3	3
78	Noctilucent Clouds: General Properties and Remote Sensing. Springer Polar Sciences, 2020, , 469-503.	0.1	3
79	Lidar Soundings Between 30 and 100 km Altitude During Day and Night for Observation of Temperatures, Gravity Waves and Tides. EPJ Web of Conferences, 2016, 119, 13001.	0.3	2
80	On the unusually bright and frequent noctilucent clouds in summer 2019 above Northern Germany. Journal of Atmospheric and Solar-Terrestrial Physics, 2021, 217, 105577.	1.6	2