Peter von der Gathen

List of Publications by Year
in descending order

71 papers	4,175 citations	109321 35 h-index	128289 60 g-index
80 all docs	80 docs citations	80 times ranked	2833 citing authors

#	Article	IF	Citations
1	Unprecedented Arctic ozone loss in 2011. Nature, 2011, 478, 469-475.	27.8	572
2	Arctic ozone loss and climate change. Geophysical Research Letters, 2004, 31, .	4.0	284
3	Prolonged stratospheric ozone loss in the 1995â€“96 Arctic winter. Nature, 1997, 389, 835-838.	27.8	216
4	Observational evidence for chemical ozone depletion over the Arctic in winter 1991â€“92. Nature, 1995, 375, 131-134.	27.8	178
5	Arctic winter 2005: Implications for stratospheric ozone loss and climate change. Geophysical Research Letters, 2006, 33, .	4.0	151
6	Validation of ozone measurements from the Atmospheric Chemistry Experiment (ACE). Atmospheric Chemistry and Physics, 2009, 9, 287-343.	4.9	134
7	Validation of Aura Microwave Limb Sounder Ozone by ozonesonde and lidar measurements. Journal of Geophysical Research, 2007, 112, .	3.3	133
8	Overview of the MOSAiC expedition: Atmosphere. Elementa, 2022, 10, .	3.2	121
9	Forced release of sodium from upper atmospheric dust particles. Geophysical Research Letters, 1987, 14, 76-79.	4.0	120
10	In situ measurements of stratospheric ozone depletion rates in the Arctic winter 1991/1992: A Lagrangian approach. Journal of Geophysical Research, 1998, 103, 5843-5853.	3.3	102
11	Chemical depletion of Arctic ozone in winter 1999/2000. Journal of Geophysical Research, 2002, 107, SOL 18-1.	3.3	95
12	A trajectoryâ€based estimate of the tropospheric ozone column using the residual method. Journal of Geophysical Research, 2007, 112, .	3.3	93
13	Ground-based assessment of the bias and long-term stability of 14 limb and occultation ozone profile data records. Atmospheric Measurement Techniques, 2016, 9, 2497-2534.	3.1	92
14	Chemical Ozone Loss in the Arctic Winter 1994/95 as Determined by the Match Technique. Journal of Atmospheric Chemistry, 1999, 32, 35-59.	3.2	90
15	Reconciliation of essential process parameters for an enhanced predictability of Arctic stratospheric ozone loss and its climate interactions (RECONCILE): activities and results. Atmospheric Chemistry and Physics, 2013, 13, 9233-9268.	4.9	88
16	Nearâ€Complete Local Reduction of Arctic Stratospheric Ozone by Severe Chemical Loss in Spring 2020. Geophysical Research Letters, 2020, 47, e2020GL089547.	4.0	75
17	Large loss of total ozone during the Arctic winter of 1999/2000. Geophysical Research Letters, 2000, 27, 3473-3476.	4.0	73
18	Ozone differential absorption lidar algorithm intercomparison. Applied Optics, 1999, 38, 6225.	2.1	71

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19	A multi-model analysis of vertical ozone profiles. Atmospheric Chemistry and Physics, 2010, 10, 5759-5783.	4.9	70
20	Arctic ozone loss in threshold conditions: Match observations in 1997/1998 and 1998/1999. Journal of Geophysical Research, 2001, 106, 7495-7503.	3.3	66
21	Title is missing!. Journal of Atmospheric Chemistry, 1998, 30, 187-207.	3.2	64
22	Strategic ozone sounding networks: Review of design and accomplishments. Atmospheric Environment, 2011, 45, 2145-2163.	4.1	63
23	Match observations in the Arctic winter 1996/97: High stratospheric ozone loss rates correlate with low temperatures deep inside the polar vortex. Geophysical Research Letters, 2000, 27, 205-208.	4.0	62
24	Three-dimensional model study of the Arctic ozone loss in 2002/2003 and comparison with 1999/2000 and 2003/2004. Atmospheric Chemistry and Physics, 2005, 5, 139-152.	4.9	62
25	Altitude and temperature of the mesopause at 69Â°N latitude in winter. Journal of Geophysical Research, 1988, 93, 11093-11101.	3.3	56
26	Comparison of empirically derived ozone losses in the Arctic vortex. Journal of Geophysical Research, 2002, 107, SOL 7-1.	3.3	56
27	Pole-to-pole validation of Envisat GOMOS ozone profiles using data from ground-based and balloon sonde measurements. Journal of Geophysical Research, 2004, 109, .	3.3	56
28	Impacts of midlatitude precursor emissions and local photochemistry on ozone abundances in the Arctic. Journal of Geophysical Research, 2012, 117, .	3.3	55
29	Validation of 10-year SAO OMI Ozone Profile (PROFOZ) product using ozonesonde observations. Atmospheric Measurement Techniques, 2017, 10, 2455-2475.	3.1	53
30	COVIDâ€19 Crisis Reduces Free Tropospheric Ozone Across the Northern Hemisphere. Geophysical Research Letters, 2021, 48, e2020GL091987.	4.0	51
31	Large chemical ozone loss in 2004/2005 Arctic winter/spring. Geophysical Research Letters, 2007, 34, .	4.0	50
32	A closer look at Arctic ozone loss and polar stratospheric clouds. Atmospheric Chemistry and Physics, 2010, 10, 8499-8510.	4.9	50
33	Bias determination and precision validation of ozone profiles from MIPAS-Envisat retrieved with the IMK-IAA processor. Atmospheric Chemistry and Physics, 2007, 7, 3639-3662.	4.9	49
34	Ozonesonde observations in the Arctic during 1989â€“2003: Ozone variability and trends in the lower stratosphere and free troposphere. Journal of Geophysical Research, 2007, 112, .	3.3	45
35	Climate change favours large seasonal loss of Arctic ozone. Nature Communications, 2021, 12, 3886.	12.8	44
36	Modeling the effect of denitrification on Arctic ozone depletion during winter 1999/2000. Journal of Geophysical Research, 2002, 107, SOL 65-1-SOL 65-18.	3.3	42

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37	Large decadal scale changes of polar ozone suggest solar influence. Atmospheric Chemistry and Physics, 2006, 6, 1835-1841.	4.9	33
38	Reconstruction of three-dimensional ozone fields using POAM III during SOLVE. Journal of Geophysical Research, 2002, 107, SOL 42-1.	3.3	29
39	Chemical ozone loss in the Arctic winter 2002/2003 determined with Match. Atmospheric Chemistry and Physics, 2006, 6, 2783-2792.	4.9	28
40	Vortex-averaged Arctic ozone depletion in the winter 2002/2003. Atmospheric Chemistry and Physics, 2005, 5, 131-138.	4.9	27
41	Climatology of UTLS ozone and the ratio of ozone and potential vorticity over northern Europe. Journal of Geophysical Research, 2003, 108, .	3.3	25
42	Mid-winter lower stratosphere temperatures in the Antarctic vortex: comparison between observations and ECMWF and NCEP operational models. Atmospheric Chemistry and Physics, 2007, 7, 435-441.	4.9	25
43	Ozone profiles in the high-latitude stratosphere and lower mesosphere measured by the Improved Limb Atmospheric Spectrometer (ILAS)-II: Comparison with other satellite sensors and ozonesondes. Journal of Geophysical Research, 2006, 111, .	3.3	24
44	Ozonesonde Quality Assurance: The JOSIEâ€“SHADOZ (2017) Experience. Bulletin of the American Meteorological Society, 2019, 100, 155-171.	3.3	23
45	An assessment of the ozone loss during the 1999â€“2000 SOLVE/THESEO 2000 Arctic campaign. Journal of Geophysical Research, 2002, 107, SOL 3-1.	3.3	22
46	Summertime low-ozone episodes at northern high latitudes. Quarterly Journal of the Royal Meteorological Society, 2003, 129, 3265-3275.	2.7	22
47	Heterogeneous conversion of HCl and ClONO2during the Arctic winter 1992/1993 initiating ozone depletion. Journal of Geophysical Research, 1995, 100, 11269.	3.3	21
48	Comparison of polar ozone loss rates simulated by one-dimensional and three-dimensional models with Match observations in recent Antarctic and Arctic winters. Journal of Geophysical Research, 2007, 112, .	3.3	20
49	High resolution simulation of recent Arctic and Antarctic stratospheric chemical ozone loss compared to observations. Journal of Atmospheric Chemistry, 2006, 55, 205-226.	3.2	19
50	Results of the 1998 Ny-Ã…lesund Ozone Monitoring Intercomparison. Journal of Geophysical Research, 1999, 104, 30515-30523.	3.3	17
51	The Increasing Surface Ozone and Tropospheric Ozone in Antarctica and Their Possible Drivers. Environmental Science & Technology, 2021, 55, 8542-8553.	10.0	15
52	Arctic and Antarctic ozone layer observations: chemical and dynamical aspects of variability and long-term changes in the polar stratosphere. Polar Research, 2000, 19, 193-204.	1.6	14
53	Statistical analysis of the precision of the Match method. Atmospheric Chemistry and Physics, 2005, 5, 2713-2727.	4.9	13
54	Northern Hemisphere Stratospheric Ozone Depletion Caused by Solar Proton Events: The Role of the Polar Vortex. Geophysical Research Letters, 2018, 45, 2115-2124.	4.0	13

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55	Saturation effects in Na lidar temperature measurements. Journal of Geophysical Research, 1991, 96, 3679-3690.	3.3	12
56	Arctic and Antarctic ozone layer observations: chemical and dynamical aspects of variability and long-term changes in the polar stratosphere. Polar Research, 2000, 19, 193-204.	1.6	10
57	Ozone loss from quasi-conservative coordinate mapping during the 1999â€“2000 SOLVE/THESEO 2000 campaigns. Journal of Geophysical Research, 2002, 107, SOL 16-1.	3.3	9
58	Ground-based assessment of the bias and long-term stability of fourteen limb and occultation ozone profile data records. , 2016, 9, 2497-2534.		9
59	Climatology of ozone in the troposphere and lower stratosphere over the European Arctic. Advances in Space Research, 2004, 34, 754-758.	2.6	8
60	Non-coincident inter-instrument comparisons of ozone measurements using quasi-conservative coordinates. Atmospheric Chemistry and Physics, 2004, 4, 2345-2352.	4.9	8
61	Chemical Evolution of the Exceptional Arctic Stratospheric Winter 2019/2020 Compared to Previous Arctic and Antarctic Winters. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD034356.	3.3	8
62	Global validation of ENVISAT ozone profiles using lidar measurements. International Journal of Remote Sensing, 2009, 30, 3987-3994.	2.9	6
63	Understanding the relation between Arctic ozone loss and the volume of polar stratospheric clouds. International Journal of Remote Sensing, 2009, 30, 4065-4070.	2.9	5
64	Estimation of Arctic polar vortex ozone loss during the winter of 1999â€“2000 using vortex-averaged airborne differential absorption lidar ozone measurements referenced to N2O isopleths. Journal of Geophysical Research, 2003, 108, .	3.3	4
65	Aerosol extinction and backscatter profiles by means of a multiwavelength Raman lidar: a new method without a priori assumptions. Applied Optics, 1995, 34, 463.	2.1	3
66	Climatology of ozone in the troposphere and lower stratosphere over the European Arctic. Advances in Space Research, 2004, 34, 754-754.	2.6	3
67	The evolution of polar stratospheric clouds above spitsbergen. Journal of Aerosol Science, 1997, 28, S423-S424.	3.8	2
68	Study of the seasonal ozone variations at European high latitudes. Advances in Space Research, 2011, 47, 740-747.	2.6	2
69	Stratospheric Ozone Variability over Spitsbergen in March - April 1991. Zeitschrift Fur Elektrotechnik Und Elektrochemie, 1992, 96, 277-280.	0.9	0
70	Generation of layering in the upper arctic troposphere away from the jet stream. Annales Geophysicae, 2003, 21, 1653-1665.	1.6	0
71	Ozone change in the polar atmosphere. , 1997, , 73-100.		0