Peter Braesicke

List of Publications by Year
in descending order

112 papers	5,342 citations	38 h-index	65 g-index
120 all docs	120 docs citations	120 times ranked	4294 citing authors

87723

106150

#	Article	IF	Citations
1	Multimodel projections of stratospheric ozone in the 21st century. Journal of Geophysical Research, 2007, 112, .	3.3	308
2	Impact of stratospheric ozone on Southern Hemisphere circulation change: A multimodel assessment. Journal of Geophysical Research, 2010, 115, .	3.3	280
3	Evaluation of the new UKCA climate-composition model â€" Part 1: The stratosphere. Geoscientific Model Development, 2009, 2, 43-57.	1.3	243
4	Multi-model assessment of stratospheric ozone return dates and ozone recovery in CCMVal-2 models. Atmospheric Chemistry and Physics, 2010, 10, 9451-9472.	1.9	215
5	Evaluation of the new UKCA climate-composition model â€" Part 2: The Troposphere. Geoscientific Model Development, 2014, 7, 41-91.	1.3	191
6	A comparison of model-simulated trends in stratospheric temperatures. Quarterly Journal of the Royal Meteorological Society, 2003, 129, 1565-1588.	1.0	189
7	Review of the formulation of presentâ€generation stratospheric chemistryâ€climate models and associated external forcings. Journal of Geophysical Research, 2010, 115, .	3.3	150
8	Multimodel climate and variability of the stratosphere. Journal of Geophysical Research, 2011, 116, .	3.3	139
9	Climate change projections and stratosphereâ€"troposphere interaction. Climate Dynamics, 2012, 38, 2089-2097.	1.7	137
10	Observations of the eruption of the Sarychev volcano and simulations using the HadGEM2 climate model. Journal of Geophysical Research, 2010, 115, .	3.3	128
11	Estimates of ozone return dates from Chemistry-Climate Model Initiative simulations. Atmospheric Chemistry and Physics, 2018, 18, 8409-8438.	1.9	128
12	A large ozone-circulation feedback and its implications for global warming assessments. Nature Climate Change, 2015, 5, 41-45.	8.1	115
13	Technical Note: Description and assessment of a nudged version of the new dynamics Unified Model. Atmospheric Chemistry and Physics, 2008, 8, 1701-1712.	1.9	110
14	Stratosphereâ€troposphere coupling and annular mode variability in chemistryâ€climate models. Journal of Geophysical Research, 2010, 115, .	3.3	107
15	The World Avoided by the Montreal Protocol. Geophysical Research Letters, 2008, 35, .	1.5	90
16	Pathways and timescales for troposphere-to-stratosphere transport via the tropical tropopause layer and their relevance for very short lived substances. Journal of Geophysical Research, 2007, 112, .	3.3	88
17	Implementation of the Fast-JX Photolysis scheme (v6.4) into the UKCA component of the MetUM chemistry-climate model (v7.3). Geoscientific Model Development, 2013, 6, 161-177.	1.3	84
18	Stratospheric aerosol particles and solar-radiation management. Nature Climate Change, 2012, 2, 713-719.	8.1	81

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19	Overview of experiment design and comparison of models participating in phase 1 of the SPARC Quasi-Biennial Oscillation initiative (QBOi). Geoscientific Model Development, 2018, 11, 1009-1032.	1.3	81
20	Projections of UV radiation changes in the 21st century: impact of ozone recovery and cloud effects. Atmospheric Chemistry and Physics, 2011, 11, 7533-7545.	1.9	75
21	Decline and recovery of total column ozone using a multimodel time series analysis. Journal of Geophysical Research, 2010, 115, .	3.3	74
22	Lightning NO_x, a key chemistryâ€“climate interaction: impacts of future climate change and consequences for tropospheric oxidising capacity. Atmospheric Chemistry and Physics, 2014, 14, 9871-9881.	1.9	74
23	Impact of stratospheric ozone recovery on tropospheric ozone and its budget. Geophysical Research Letters, 2010, 37, .	1.5	72
24	Improved predictability of the troposphere using stratospheric final warmings. Journal of Geophysical Research, 2011, 116, .	3.3	70
25	Evidence for changes in stratospheric transport and mixing over the past three decades based on multiple data sets and tropical leaky pipe analysis. Journal of Geophysical Research, 2010, 115, .	3.3	69
26	Using transport diagnostics to understand chemistry climate model ozone simulations. Journal of Geophysical Research, 2011, 116, .	3.3	68
27	Multimodel assessment of the upper troposphere and lower stratosphere: Extratropics. Journal of Geophysical Research, 2010, 115, .	3.3	67
28	Multimodel assessment of the factors driving stratospheric ozone evolution over the 21st century. Journal of Geophysical Research, 2010, 115, .	3.3	66
29	Drivers of changes in stratospheric and tropospheric ozone between year 2000 and 2100. Atmospheric Chemistry and Physics, 2016, 16, 2727-2746.	1.9	66
30	Future Arctic ozone recovery: the importance of chemistry and dynamics. Atmospheric Chemistry and Physics, 2016, 16, 12159-12176.	1.9	63
31	Aerosol microphysics simulations of the Mt.~Pinatubo eruption with the UM-UKCA composition-climate model. Atmospheric Chemistry and Physics, 2014, 14, 11221-11246.	1.9	62
32	Impacts of climate change, ozone recovery, and increasing methane on surface ozone and the tropospheric oxidizing capacity. Journal of Geophysical Research D: Atmospheres, 2013, 118, 1028-1041.	1.2	55
33	Global multi-year O₃-CO correlation patterns from models and TES satellite observations. Atmospheric Chemistry and Physics, 2011, 11, 5819-5838.	1.9	54
34	The impact of polar stratospheric ozone loss on Southern Hemisphere stratospheric circulation and climate. Atmospheric Chemistry and Physics, 2014, 14, 13705-13717.	1.9	53
35	Reassessment of causes of ozone column variability following the eruption of Mount Pinatubo using a nudged CCM. Atmospheric Chemistry and Physics, 2009, 9, 4251-4260.	1.9	52
36	Interannual variability of tropospheric composition: the influence of changes in emissions, meteorology and clouds. Atmospheric Chemistry and Physics, 2010, 10, 2491-2506.	1.9	52

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37	Chemistryâ€climate model simulations of spring Antarctic ozone. Journal of Geophysical Research, 2010, 115, .	3.3	51
38	Skin Cancer Risks Avoided by the Montreal Protocolâ€”Worldwide Modeling Integrating Coupled Climateâ€Chemistry Models with a Risk Model for <scp>UV</scp>. Photochemistry and Photobiology, 2013, 89, 234-246.	1.3	50
39	Using machine learning to build temperature-based ozone parameterizations for climate sensitivity simulations. Environmental Research Letters, 2018, 13, 104016.	2.2	48
40	Multimodel estimates of atmospheric lifetimes of longâ€lived ozoneâ€depleting substances: Present and future. Journal of Geophysical Research D: Atmospheres, 2014, 119, 2555-2573.	1.2	42
41	Stratospheric ozone changes under solar geoengineering: implications for UV exposure and air quality. Atmospheric Chemistry and Physics, 2016, 16, 4191-4203.	1.9	41
42	Evaluation of the Quasiâ€Biennial Oscillation in global climate models for the SPARC QBOâ€initiative. Quarterly Journal of the Royal Meteorological Society, 2022, 148, 1459-1489.	1.0	41
43	Attribution of observed changes in stratospheric ozone and temperature. Atmospheric Chemistry and Physics, 2011, 11, 599-609.	1.9	40
44	Effects of climate-induced changes in isoprene emissions after the eruption of Mount Pinatubo. Atmospheric Chemistry and Physics, 2010, 10, 7117-7125.	1.9	39
45	Modelling future changes to the stratospheric source gas injection of biogenic bromocarbons. Geophysical Research Letters, 2012, 39, .	1.5	38
46	Response of the Quasiâ€Biennial Oscillation to a warming climate in global climate models. Quarterly Journal of the Royal Meteorological Society, 2022, 148, 1490-1518.	1.0	36
47	Denitrification, dehydration and ozone loss during the 2015/2016 Arctic winter. Atmospheric Chemistry and Physics, 2017, 17, 12893-12910.	1.9	35
48	How sensitive is the recovery of stratospheric ozone to changes in concentrations of very short-lived bromocarbons?. Atmospheric Chemistry and Physics, 2014, 14, 10431-10438.	1.9	34
49	Changing ozone and changing circulation in northern mid-latitudes: Possible feedbacks?. Geophysical Research Letters, 2003, 30, .	1.5	32
50	Anthropogenic forcing of the Northern Annular Mode in CCMValâ€2 models. Journal of Geophysical Research, 2010, 115, .	3.3	32
51	On the role of ozone feedback in the ENSO amplitude response under global warming. Geophysical Research Letters, 2017, 44, 3858-3866.	1.5	32
52	Heterogeneous reaction of N₂O₅ with airborne TiO₂ particles and its implication for stratospheric particle injection. Atmospheric Chemistry and Physics, 2014, 14, 6035-6048.	1.9	31
53	Sensitivity of dynamics and ozone to different representations of SSTs in the Unified Model. Quarterly Journal of the Royal Meteorological Society, 2004, 130, 2033-2045.	1.0	30
54	Circulation anomalies in the Southern Hemisphere and ozone changes. Atmospheric Chemistry and Physics, 2013, 13, 10677-10688.	1.9	29

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55	An evaluation of tropical waves and wave forcing of the QBO in the QBOi models. Quarterly Journal of the Royal Meteorological Society, 2022, 148, 1541-1567.	1.0	29
56	Seasonal and inter-annual variations in troposphere-to-stratosphere transport from the tropical tropopause layer. Atmospheric Chemistry and Physics, 2008, 8, 3689-3703.	1.9	27
57	Inclusion of mountain-wave-induced cooling for the formation of PSCs over the Antarctic Peninsula in a chemistryâ€“climate model. Atmospheric Chemistry and Physics, 2015, 15, 1071-1086.	1.9	27
58	Kick-starting ancient warming. Nature Geoscience, 2009, 2, 156-159.	5.4	26
59	A case study of the Borneo Vortex genesis and its interactions with the global circulation. Journal of Geophysical Research, 2011, 116, .	3.3	26
60	Deriving Global OH Abundance and Atmospheric Lifetimes for Longâ€Lived Gases: A Search for CH₃CCl₃ Alternatives. Journal of Geophysical Research D: Atmospheres, 2017, 122, 11,914.	1.2	26
61	The potential to narrow uncertainty in projections of stratospheric ozone over the 21st century. Atmospheric Chemistry and Physics, 2010, 10, 9473-9486.	1.9	25
62	Assessment of the breakup of the Antarctic polar vortex in two new chemistryâ€climate models. Journal of Geophysical Research, 2010, 115, .	3.3	25
63	The Impact of Stratospheric Ozone Feedbacks on Climate Sensitivity Estimates. Journal of Geophysical Research D: Atmospheres, 2018, 123, 4630-4641.	1.2	25
64	Teleconnections of the Quasiâ€Biennial Oscillation in a multiâ€model ensemble of QBOâ€resolving models. Quarterly Journal of the Royal Meteorological Society, 2022, 148, 1568-1592.	1.0	23
65	Modelling deep convection and its impacts on the tropical tropopause layer. Atmospheric Chemistry and Physics, 2010, 10, 11175-11188.	1.9	21
66	ICON-ART 2.1: a flexible tracer framework and its application for composition studies in numerical weather forecasting and climate simulations. Geoscientific Model Development, 2018, 11, 4043-4068.	1.3	21
67	Tropical convective transport and the Walker circulation. Atmospheric Chemistry and Physics, 2012, 12, 9791-9797.	1.9	20
68	A new health check of the ozone layer at global and regional scales. Geophysical Research Letters, 2014, 41, 4363-4372.	1.5	18
69	Dynamical variability in the modelling of chemistryâ€“climate interactions. Faraday Discussions, 2005, 130, 27.	1.6	17
70	Influences of the Indian Summer Monsoon on Water Vapor and Ozone Concentrations in the UTLS as Simulated by Chemistryâ€“Climate Models. Journal of Climate, 2010, 23, 3525-3544.	1.2	17
71	Heterogeneous reaction of ClONO₂ with TiO₂ and SiO₂ aerosol particles: implications for stratospheric particle injection for climate engineering. Atmospheric Chemistry and Physics, 2016, 16, 15397-15412.	1.9	16
72	An emission module for ICON-ART 2.0: implementation and simulations of acetone. Geoscientific Model Development, 2017, 10, 2471-2494.	1.3	16

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73	Comparison of ECHAM5/MESSy Atmospheric Chemistry (EMAC) simulations of the Arctic winter 2009/2010 and 2010/2011 with Envisat/MIPAS and Aura/MLS observations. Atmospheric Chemistry and Physics, 2018, 18, 8873-8892.	1.9	15
74	Might dimming the sun change atmospheric ENSO teleconnections as we know them?. Atmospheric Science Letters, 2011, 12, 184-188.	0.8	13
75	On the climatological probability of the vertical propagation of stationary planetary waves. Atmospheric Chemistry and Physics, 2016, 16, 8447-8460.	1.9	13
76	On the occurrence and evolution of extremely high temperatures at the polar winter stratopause - A GCM study. Geophysical Research Letters, 2000, 27, 1467-1470.	1.5	12
77	The equatorial stratospheric semiannual oscillation and timeâ€mean winds in QBOi models. Quarterly Journal of the Royal Meteorological Society, 2022, 148, 1593-1609.	1.0	12
78	QBO, SAO, and tropical waves in the Berlin TSM GCM: Sensitivity to radiation, vertical resolution, and convection. Journal of Geophysical Research, 2000, 105, 24771-24790.	3.3	11
79	The stratospheric response to changes in ozone and carbon dioxide as modelled with a GCM including parameterised ozone chemistry. Meteorologische Zeitschrift, 2006, 15, 343-354.	0.5	11
80	Sensitivity of polar stratospheric cloud formation to changes in water vapour and temperature. Atmospheric Chemistry and Physics, 2016, 16, 101-121.	1.9	11
81	Properties of strong offâ€shore Borneo vortices: a composite analysis of flow pattern and composition as captured by ERAâ€Interim. Atmospheric Science Letters, 2012, 13, 128-132.	0.8	10
82	From climatological to small-scale applications: simulating water isotopologues with ICON-ART-Iso (version 2.3). Geoscientific Model Development, 2018, 11, 5113-5133.	1.3	10
83	Mid-infrared optical parametric oscillator pumped by a high-pulse-energy, Q-switched Ho³⁺:YAG laser. Applied Optics, 2021, 60, F21.	0.9	10
84	How Do Weakening of the Stratospheric Polar Vortex in the Southern Hemisphere Affect Regional Antarctic Sea Ice Extent?. Geophysical Research Letters, 2021, 48, e2021GL092582.	1.5	10
85	Mountain-wave-induced polar stratospheric clouds and their representation in the global chemistry model ICON-ART. Atmospheric Chemistry and Physics, 2021, 21, 9515-9543.	1.9	10
86	A Lagrangian Perspective on Stable Water Isotopes During the West African Monsoon. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2021JD034895.	1.2	10
87	The global and multi-annual MUSICA IASI {H₂O, <i>Î´</i>D} pair dataset. Earth System Science Data, 2021, 13, 5273-5292.	3.7	10
88	Ozone concentration changes in the Asian summer monsoon anticyclone and lower stratospheric water vapour: An idealised model study. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	9
89	The sensitivity of Western European NO₂ columns to interannual variability of meteorology and emissions: a modelâ€"GOME study. Atmospheric Science Letters, 2008, 9, 182-188.	0.8	8
90	A model intercomparison analysing the link between column ozone and geopotential height anomalies in January. Atmospheric Chemistry and Physics, 2008, 8, 2519-2535.	1.9	8

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91	Interannual variability of the boreal summer tropical UTLS in observations and CCMVal-2 simulations. Atmospheric Chemistry and Physics, 2016, 16, 8695-8714.	1.9	8
92	Is Enhanced Predictability of the Amundsen Sea Low in Subseasonal to Seasonal Hindcasts Linked to Stratosphereâ€Troposphere Coupling?. Geophysical Research Letters, 2020, 47, e2020GL089700.	1.5	8
93	Variability of total ozone due to the NAO as represented in two different model systems. Meteorologische Zeitschrift, 2003, 12, 203-208.	0.5	8
94	Polar stratospheric clouds initiated by mountain waves in a global chemistryâ€“climate model: a missing piece in fully modelling polar stratospheric ozone depletion. Atmospheric Chemistry and Physics, 2020, 20, 12483-12497.	1.9	8
95	Trend analysis of CTM-derived northern hemisphere winter total ozone using self-consistent proxies: How well can we explain dynamically induced trends?. Quarterly Journal of the Royal Meteorological Society, 2006, 132, 1969-1983.	1.0	7
96	Antarctic ozone depletion between 1960 and 1980 in observations and chemistryâ€“climate model simulations. Atmospheric Chemistry and Physics, 2016, 16, 15619-15627.	1.9	7
97	Simulating the atmospheric response to the 11-year solar cycle forcing with the UM-UKCA model: the role of detection method and natural variability. Atmospheric Chemistry and Physics, 2019, 19, 5209-5233.	1.9	7
98	Corrigendum to "Heterogeneous reaction of N₂O₅ with airborne TiO₂ particles and its implication for stratospheric particle injection" published in Atmos. Chem. Phys., 14, 6035â€“6048, 2014. Atmospheric Chemistry and Physics, 2014, 14, 8233-8234.	1.9	6
99	An assessment of the climatological representativeness of IAGOS-CARIBIC trace gas measurements using EMAC model simulations. Atmospheric Chemistry and Physics, 2017, 17, 2775-2794.	1.9	6
100	Nitrification of the lowermost stratosphere during the exceptionally cold Arctic winter 2015â€“2016. Atmospheric Chemistry and Physics, 2019, 19, 13681-13699.	1.9	6
101	Sensitivity of the midâ€winter Arctic stratosphere to QBO width in a simplified chemistryâ€“climate model. Atmospheric Science Letters, 2011, 12, 268-272.	0.8	5
102	Converting potential temperature to altitude in the stratosphere. Eos, 1997, 78, 410-410.	0.1	4
103	The Overlooked Role of the Stratosphere Under a Solar Constant Reduction. Geophysical Research Letters, 2022, 49, .	1.5	4
104	Observations of Stratosphere-Troposphere Coupling During Major Solar Eclipses from FORMOSAT-3/COSMIC Constellation. Space Science Reviews, 2012, 168, 261-282.	3.7	3
105	Separating the role of direct radiative heating and photolysis in modulating the atmospheric response to the amplitude of the 11-year solar cycle forcing. Atmospheric Chemistry and Physics, 2019, 19, 9833-9846.	1.9	3
106	Adaptive Lossy Compression of Complex Environmental Indices Using Seasonal Auto-Regressive Integrated Moving Average Models. , 2017, , .		2
107	A modular software framework for compression of structured climate data. , 2018, , .		2
108	Concept and Analysis of Information Spaces to improve Prediction-Based Compression. , 2018, , .		1

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109	The European Climate Research Alliance (ECRA): Collaboration from bottom-up. Advances in Geosciences, 0, 46, 1-10.	12.0	1
110	Effects of Climate-induced Changes in Isoprene Emissions after the eruption of Mount Pinatubo. Procedia Environmental Sciences, 2011, 6, 199-205.	1.3	0
111	Tropopause altitude determination from temperature profile measurements of reduced vertical resolution. Atmospheric Measurement Techniques, 2019, 12, 4113-4129.	1.2	0
112	Challenge of modelling GLORIA observations of upper troposphereâ€“lowermost stratosphere trace gas and cloud distributions at high latitudes: a case study with state-of-the-art models. Atmospheric Chemistry and Physics, 2022, 22, 2843-2870.	1.9	0