Marco A Giorgetta

List of Publications by Year
in descending order

88	10,927	66315	53190
papers	citations	42 h-index	85 g-index

111	111	111	9357
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Climate and carbon cycle changes from 1850 to 2100 in MPIâ€ESM simulations for the Coupled Model Intercomparison Project phase 5. Journal of Advances in Modeling Earth Systems, 2013, 5, 572-597.	1.3	1,280
2	Sensitivity of Simulated Climate to Horizontal and Vertical Resolution in the ECHAM5 Atmosphere Model. Journal of Climate, 2006, 19, 3771-3791.	1.2	1,066
3	Atmospheric component of the MPIâ€M Earth System Model: ECHAM6. Journal of Advances in Modeling Earth Systems, 2013, 5, 146-172.	1.3	1,044
4	Decadal Prediction. Bulletin of the American Meteorological Society, 2009, 90, 1467-1486.	1.7	662
5	Developments in the MPIâ€M Earth System Model version 1.2 (MPIâ€ESM1.2) and Its Response to Increasing CO₂. Journal of Advances in Modeling Earth Systems, 2019, 11, 998-1038.	1.3	582
6	Assessment of temperature, trace species, and ozone in chemistry-climate model simulations of the recent past. Journal of Geophysical Research, 2006, 111, .	3.3	414
7	The Influence of Sea Surface Temperatures on the Northern Winter Stratosphere: Ensemble Simulations with the MAECHAM5 Model. Journal of Climate, 2006, 19, 3863-3881.	1.2	368
8	Tuning the climate of a global model. Journal of Advances in Modeling Earth Systems, 2012, 4, .	1.3	334
9	Multimodel projections of stratospheric ozone in the 21st century. Journal of Geophysical Research, 2007, 112, .	3.3	308
10	Climate and carbon-cycle variability over the last millennium. Climate of the Past, 2010, 6, 723-737.	1.3	284
11	Chemistryâ€“Climate Model Simulations of Twenty-First Century Stratospheric Climate and Circulation Changes. Journal of Climate, 2010, 23, 5349-5374.	1.2	280
12	The HAMMONIA Chemistry Climate Model: Sensitivity of the Mesopause Region to the 11-Year Solar Cycle and CO2 Doubling. Journal of Climate, 2006, 19, 3903-3931.	1.2	247
13	Climatology and Forcing of the Quasi-Biennial Oscillation in the MAECHAM5 Model. Journal of Climate, 2006, 19, 3882-3901.	1.2	210
14	MACâ€v1: A new global aerosol climatology for climate studies. Journal of Advances in Modeling Earth Systems, 2013, 5, 704-740.	1.3	198
15	Forcing of the quasi-biennial oscillation from a broad spectrum of atmospheric waves. Geophysical Research Letters, 2002, 29, 86-1-86-4.	1.5	182
16	Propagation of ENSO temperature signals into the middle atmosphere: A comparison of two general circulation models and ERA-40 reanalysis data. Journal of Geophysical Research, 2006, 111, .	3.3	179
17	Review of the formulation of presentâ€generation stratospheric chemistryâ€climate models and associated external forcings. Journal of Geophysical Research, 2010, 115, .	3.3	150
18	Assessing and Understanding the Impact of Stratospheric Dynamics and Variability on the Earth System. Bulletin of the American Meteorological Society, 2012, 93, 845-859.	1.7	146

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19	Large eddy simulation using the general circulation model <scp>ICON</scp>. Journal of Advances in Modeling Earth Systems, 2015, 7, 963-986.	1.3	136
20	Coupled chemistry climate model simulations of the solar cycle in ozone and temperature. Journal of Geophysical Research, 2008, 113, .	3.3	134
21	Northern winter climate change: Assessment of uncertainty in CMIP5 projections related to stratosphere-troposphere coupling. Journal of Geophysical Research D: Atmospheres, 2014, 119, 7979-7998.	1.2	131
22	ICONâ€A, the Atmosphere Component of the ICON Earth System Model: I. Model Description. Journal of Advances in Modeling Earth Systems, 2018, 10, 1613-1637.	1.3	123
23	Long-term changes and variability in a transient simulation with a chemistry-climate model employing realistic forcing. Atmospheric Chemistry and Physics, 2005, 5, 2121-2145.	1.9	109
24	Stratospheric dryness: model simulations and satellite observations. Atmospheric Chemistry and Physics, 2007, 7, 1313-1332.	1.9	109
25	Tropical Cumulus Convection and Upward-Propagating Waves in Middle-Atmospheric GCMs. Journals of the Atmospheric Sciences, 2003, 60, 2765-2782.	0.6	96
26	A new interactive chemistry-climate model: 2. Sensitivity of the middle atmosphere to ozone depletion and increase in greenhouse gases and implications for recent stratospheric cooling. Journal of Geophysical Research, 2003, 108, .	3.3	95
27	An investigation of QBO signals in the east Asian and Indian monsoon in GCM experiments. Climate Dynamics, 1999, 15, 435-450.	1.7	90
28	The disposition of radiative energy in the global climate system: GCM-calculated versus observational estimates. Climate Dynamics, 1998, 14, 853-869.	1.7	87
29	The ICON-1.2 hydrostatic atmospheric dynamical core on triangular grids â€“ Part 1: Formulation and performance of the baseline version. Geoscientific Model Development, 2013, 6, 735-763.	1.3	84
30	Long-term evolution of upper stratospheric ozone at selected stations of the Network for the Detection of Stratospheric Change (NDSC). Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	79
31	Impact of an improved shortwave radiation scheme in the MAECHAM5 General Circulation Model. Atmospheric Chemistry and Physics, 2007, 7, 2503-2515.	1.9	77
32	Climate change under aggressive mitigation: the ENSEMBLES multi-model experiment. Climate Dynamics, 2011, 37, 1975-2003.	1.7	75
33	Nonlinearity of the combined warm ENSO and QBO effects on the Northern Hemisphere polar vortex in MAECHAM5 simulations. Journal of Geophysical Research, 2009, 114, .	3.3	72
34	Potential role of the quasi-biennial oscillation in the stratosphere-troposphere exchange as found in water vapor in general circulation model experiments. Journal of Geophysical Research, 1999, 104, 6003-6019.	3.3	70
35	The role of stratosphereâ€troposphere coupling in the occurrence of extreme winter cold spells over northern Europe. Journal of Advances in Modeling Earth Systems, 2012, 4, .	1.3	69
36	The preconditioning of major sudden stratospheric warmings. Journal of Geophysical Research, 2012, 117, .	3.3	68

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37	Response of the middle atmosphere to anthropogenic and natural forcings in the CMIP5 simulations with the Max Planck Institute Earth system model. Journal of Advances in Modeling Earth Systems, 2013, 5, 98-116.	1.3	66
38	DCMIP2016: a review of non-hydrostatic dynamical core design and intercomparison of participating models. Geoscientific Model Development, 2017, 10, 4477-4509.	1.3	58
39	Northern winter stratospheric temperature and ozone responses to ENSO inferred from an ensemble of Chemistry Climate Models. Atmospheric Chemistry and Physics, 2009, 9, 8935-8948.	1.9	56
40	Stationary planetary wave propagation in Northern Hemisphere winter â€“ climatological analysis of the refractive index. Atmospheric Chemistry and Physics, 2007, 7, 183-200.	1.9	54
41	Solar cycle signal in a general circulation and chemistry model with internally generated quasiâ€biennial oscillation. Journal of Geophysical Research, 2010, 115, .	3.3	54
42	Variability of the Indian Monsoon in the ECHAM3 Model: Sensitivity to Sea Surface Temperature, Soil Moisture, and the Stratospheric Quasi-Biennial Oscillation. Journal of Climate, 1998, 11, 1837-1858.	1.2	49
43	Interannual variation patterns of total ozone and lower stratospheric temperature in observations and model simulations. Atmospheric Chemistry and Physics, 2006, 6, 349-374.	1.9	48
44	Volcanic effects on climate: revisiting the mechanisms. Atmospheric Chemistry and Physics, 2007, 7, 4503-4511.	1.9	47
45	ICONâ€A, The Atmosphere Component of the ICON Earth System Model: II. Model Evaluation. Journal of Advances in Modeling Earth Systems, 2018, 10, 1638-1662.	1.3	44
46	Effects of the quasiâ€biennial oscillation on lowâ€latitude transport in the stratosphere derived from trajectory calculations. Journal of Geophysical Research, 2009, 114, .	3.3	43
47	Simulation of the climate impact of Mt. Pinatubo eruption using ECHAM5 â€“ Part 1: Sensitivity to the modes of atmospheric circulation and boundary conditions. Atmospheric Chemistry and Physics, 2009, 9, 757-769.	1.9	40
48	Clear sky UV simulations for the 21st century based on ozone and temperature projections from Chemistry-Climate Models. Atmospheric Chemistry and Physics, 2009, 9, 1165-1172.	1.9	40
49	Simulation of the climate impact of Mt. Pinatubo eruption using ECHAM5 â€“ Part 2: Sensitivity to the phase of the QBO and ENSO. Atmospheric Chemistry and Physics, 2009, 9, 3001-3009.	1.9	39
50	The simulation of the Antarctic ozone hole by chemistry-climate models. Atmospheric Chemistry and Physics, 2009, 9, 6363-6376.	1.9	36
51	The quasi-biennial oscillation in a warmer climate: sensitivity to different gravity wave parameterizations. Climate Dynamics, 2015, 45, 825-836.	1.7	36
52	Kelvin and Rossbyâ€gravity wave packets in the lower stratosphere of some highâ€top CMIP5 models. Journal of Geophysical Research D: Atmospheres, 2014, 119, 2156-2173.	1.2	35
53	Seasonal aspects of the quasiâ€biennial oscillation in the Max Planck Institute Earth System Model and ERAâ€40. Journal of Advances in Modeling Earth Systems, 2013, 5, 406-421.	1.3	33
54	Sensitivity of the boreal winter circulation in the middle atmosphere to the quasi-biennial oscillation in MAECHAM5 simulations. Journal of Geophysical Research, 2007, 112, .	3.3	31

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55	Icosahedral Shallow Water Model (ICOSWM): results of shallow water test cases and sensitivity to model parameters. Geoscientific Model Development, 2009, 2, 231-251.	1.3	30
56	Radiative convective equilibrium as a framework for studying the interaction between convection and its largeâ€scale environment. Journal of Advances in Modeling Earth Systems, 2016, 8, 1330-1344.	1.3	28
57	Ensemble Heldâ€“Suarez Test with a Spectral Transform Model: Variability, Sensitivity, and Convergence. Monthly Weather Review, 2008, 136, 1075-1092.	0.5	27
58	Quasi-biennial oscillation of the tropical stratospheric aerosol layer. Atmospheric Chemistry and Physics, 2015, 15, 5557-5584.	1.9	24
59	Tests of Monte Carlo Independent Column Approximation in the ECHAM5 Atmospheric GCM. Journal of Climate, 2007, 20, 4995-5011.	1.2	23
60	Wave Forcing of the Quasi-Biennial Oscillation in the Max Planck Institute Earth System Model. Journals of the Atmospheric Sciences, 2014, 71, 1985-2006.	0.6	22
61	The respective roles of surface temperature driven feedbacks and tropospheric adjustment to CO2 in CMIP5 transient climate simulations. Climate Dynamics, 2013, 41, 3103-3126.	1.7	21
62	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
63	Historical and future anthropogenic emission pathways derived from coupled climateâ€“carbon cycle simulations. Climatic Change, 2011, 105, 91-108.	1.7	20
64	Convectively Generated Gravity Waves in High Resolution Models of Tropical Dynamics. Journal of Advances in Modeling Earth Systems, 2018, 10, 2564-2588.	1.3	20
65	QBO modulation of the semiannual oscillation in MAECHAM5 and HAMMONIA. Journal of Geophysical Research, 2010, 115, .	3.3	18
66	Sensitivity of the quasi-biennial oscillation to CO2doubling. Geophysical Research Letters, 2005, 32, .	1.5	17
67	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
68	Tropical Deep Convection Impact on Southern Winter Stationary Waves and Its Modulation by the Quasi-Biennial Oscillation. Journal of Climate, 2019, 32, 7453-7467.	1.2	17
69	The ICON Earth System Model Version 1.0. Journal of Advances in Modeling Earth Systems, 2022, 14, .	1.3	16
70	Differences between the QBO in the first and in the second half of the ERA-40 reanalysis. Atmospheric Chemistry and Physics, 2007, 7, 599-608.	1.9	14
71	Net effect of the QBO in a chemistry climate model. Atmospheric Chemistry and Physics, 2008, 8, 6505-6525.	1.9	14
72	Preface to Special Section on Climate Models at the Max Planck Institute for Meteorology. Journal of Climate, 2006, 19, 3769-3770.	1.2	11

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73	Forcing mechanism of the seasonally asymmetric quasiâ€biennial oscillation secondary circulation in ERAâ€40 and MAECHAM5. Journal of Geophysical Research, 2008, 113, .	3.3	11
74	DCMIP2016: the splitting supercell test case. Geoscientific Model Development, 2019, 12, 879-892.	1.3	11
75	Tropical Variability Simulated in ICONâ€A With a Spectral Cumulus Parameterization. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001732.	1.3	10
76	The effects of aggressive mitigation on steric sea level rise and sea ice changes. Climate Dynamics, 2013, 40, 531-550.	1.7	9
77	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
78	How accurate did GCMs compute the insolation at TOA for AMIP-2?. Geophysical Research Letters, 2005, 32, .	1.5	5
79	The daytime trapped lee wave pattern and evolution induced by two smallâ€scale mountains of different heights. Quarterly Journal of the Royal Meteorological Society, 2022, 148, 1300-1318.	1.0	5
80	Large-scale turbulence modelling via Î±-regularisation for atmospheric simulations. Journal of Turbulence, 2015, 16, 367-391.	0.5	4
81	A Large-Eddy Simulation Study on the Diurnally Evolving Nonlinear Trapped Lee Waves over a Two-Dimensional Steep Mountain. Journals of the Atmospheric Sciences, 2021, 78, 399-415.	0.6	4
82	Voigt Line Approximation in the ECMWF Radiation Scheme. Monthly Weather Review, 1995, 123, 3381-3383.	0.5	3
83	Regional hydrological cycle changes in response to an ambitious mitigation scenario. Climatic Change, 2013, 120, 389-403.	1.7	2
84	The Influence of the Spectral Truncation on the Simulation of Waves in the Tropical Stratosphere. Journals of the Atmospheric Sciences, 2015, 72, 3819-3828.	0.6	2
85	Correction to â€œNonlinearity of the combined warm ENSO and QBO effects on the Northern Hemisphere polar vortex in MAECHAM5 simulationsâ€• Journal of Geophysical Research, 2009, 114, .	3.3	1
86	StratosphÃre als Wetterfrosch. Physik Journal, 2001, 57, 19-20.	0.1	0
87	Key Parameters for the Inconsistencies of the Incoming Solar Radiation Boundary Condition in Global Modeling. , 2009, , .		0
88	A GCM study on CO2 emission pathways to climate stabilization. IOP Conference Series: Earth and Environmental Science, 2009, 6, 052003.	0.2	0