

Marco A Giorgetta

List of Publications by Year in descending order

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Version: 2024-02-01

88
papers

10,927
citations

66315

42
h-index

53190

85
g-index

111
all docs

111
docs citations

111
times ranked

9357
citing authors

#	ARTICLE	IF	CITATIONS
1	The daytime trapped lee wave pattern and evolution induced by two small-scale mountains of different heights. Quarterly Journal of the Royal Meteorological Society, 2022, 148, 1300-1318.	1.0	5
2	The ICON Earth System Model Version 1.0. Journal of Advances in Modeling Earth Systems, 2022, 14, .	1.3	16
3	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
4	Tropical Variability Simulated in ICON With a Spectral Cumulus Parameterization. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001732.	1.3	10
5	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
6	DCMIP2016: the splitting supercell test case. Geoscientific Model Development, 2019, 12, 879-892.	1.3	11
7	Developments in the MPI Earth System Model version 1.2 (MPI-ESM1.2) and Its Response to Increasing CO ₂ . Journal of Advances in Modeling Earth Systems, 2019, 11, 998-1038.	1.3	582
8	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
9	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
10	ICON, 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
11	ICON, 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
12	DCMIP2016: a review of non-hydrostatic dynamical core design and intercomparison of participating models. Geoscientific Model Development, 2017, 10, 4477-4509.	1.3	58
13	Radiative convective equilibrium as a framework for studying the interaction between convection and its large-scale environment. Journal of Advances in Modeling Earth Systems, 2016, 8, 1330-1344.	1.3	28
14	Large eddy simulation using the general circulation model <sc>ICON</sc>. Journal of Advances in Modeling Earth Systems, 2015, 7, 963-986.	1.3	136
15	Quasi-biennial oscillation of the tropical stratospheric aerosol layer. Atmospheric Chemistry and Physics, 2015, 15, 5557-5584.	1.9	24
16	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
17	The quasi-biennial oscillation in a warmer climate: sensitivity to different gravity wave parameterizations. Climate Dynamics, 2015, 45, 825-836.	1.7	36
18	Large-scale turbulence modelling via $\hat{\nu}$ -regularisation for atmospheric simulations. Journal of Turbulence, 2015, 16, 367-391.	0.5	4

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19	Kelvin and Rossbyâ€gravity wave packets in the lower stratosphere of some highâ€top CMIP5 models. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014, 119, 2156-2173.	1.2	35
20	Wave Forcing of the Quasi-Biennial Oscillation in the Max Planck Institute Earth System Model. <i>Journals of the Atmospheric Sciences</i> , 2014, 71, 1985-2006.	0.6	22
21	Northern winter climate change: Assessment of uncertainty in CMIP5 projections related to stratosphere-troposphere coupling. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014, 119, 7979-7998.	1.2	131
22	Regional hydrological cycle changes in response to an ambitious mitigation scenario. <i>Climatic Change</i> , 2013, 120, 389-403.	1.7	2
23	The respective roles of surface temperature driven feedbacks and tropospheric adjustment to CO2 in CMIP5 transient climate simulations. <i>Climate Dynamics</i> , 2013, 41, 3103-3126.	1.7	21
24	The effects of aggressive mitigation on steric sea level rise and sea ice changes. <i>Climate Dynamics</i> , 2013, 40, 531-550.	1.7	9
25	Atmospheric component of the MPIâ€M Earth System Model: ECHAM6. <i>Journal of Advances in Modeling Earth Systems</i> , 2013, 5, 146-172.	1.3	1,044
26	Seasonal aspects of the quasiâ€biennial oscillation in the Max Planck Institute Earth System Model and ERAâ€40. <i>Journal of Advances in Modeling Earth Systems</i> , 2013, 5, 406-421.	1.3	33
27	MACâ€v1: A new global aerosol climatology for climate studies. <i>Journal of Advances in Modeling Earth Systems</i> , 2013, 5, 704-740.	1.3	198
28	Climate and carbon cycle changes from 1850 to 2100 in MPIâ€ESM simulations for the Coupled Model Intercomparison Project phase 5. <i>Journal of Advances in Modeling Earth Systems</i> , 2013, 5, 572-597.	1.3	1,280
29	Response of the middle atmosphere to anthropogenic and natural forcings in the CMIP5 simulations with the Max Planck Institute Earth system model. <i>Journal of Advances in Modeling Earth Systems</i> , 2013, 5, 98-116.	1.3	66
30	The ICON-1.2 hydrostatic atmospheric dynamical core on triangular grids â€“ Part 1: Formulation and performance of the baseline version. <i>Geoscientific Model Development</i> , 2013, 6, 735-763.	1.3	84
31	Assessing and Understanding the Impact of Stratospheric Dynamics and Variability on the Earth System. <i>Bulletin of the American Meteorological Society</i> , 2012, 93, 845-859.	1.7	146
32	The preconditioning of major sudden stratospheric warmings. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	68
33	Tuning the climate of a global model. <i>Journal of Advances in Modeling Earth Systems</i> , 2012, 4, .	1.3	334
34	The role of stratosphereâ€troposphere coupling in the occurrence of extreme winter cold spells over northern Europe. <i>Journal of Advances in Modeling Earth Systems</i> , 2012, 4, .	1.3	69
35	Historical and future anthropogenic emission pathways derived from coupled climateâ€carbon cycle simulations. <i>Climatic Change</i> , 2011, 105, 91-108.	1.7	20
36	Climate change under aggressive mitigation: the ENSEMBLES multi-model experiment. <i>Climate Dynamics</i> , 2011, 37, 1975-2003.	1.7	75

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37	Climate and carbon-cycle variability over the last millennium. <i>Climate of the Past</i> , 2010, 6, 723-737.	1.3	284
38	Influences of the Indian Summer Monsoon on Water Vapor and Ozone Concentrations in the UTLS as Simulated by Chemistry-Climate Models. <i>Journal of Climate</i> , 2010, 23, 3525-3544.	1.2	17
39	Chemistry-Climate Model Simulations of Twenty-First Century Stratospheric Climate and Circulation Changes. <i>Journal of Climate</i> , 2010, 23, 5349-5374.	1.2	280
40	Solar cycle signal in a general circulation and chemistry model with internally generated quasi-biennial oscillation. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	54
41	Review of the formulation of present-generation stratospheric chemistry-climate models and associated external forcings. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	150
42	QBO modulation of the semiannual oscillation in MAECHAM5 and HAMMONIA. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	18
43	Icosahedral Shallow Water Model (ICOSWM): results of shallow water test cases and sensitivity to model parameters. <i>Geoscientific Model Development</i> , 2009, 2, 231-251.	1.3	30
44	Decadal Prediction. <i>Bulletin of the American Meteorological Society</i> , 2009, 90, 1467-1486.	1.7	662
45	Key Parameters for the Inconsistencies of the Incoming Solar Radiation Boundary Condition in Global Modeling. , 2009, , .		0
46	Correction to "Nonlinearity of the combined warm ENSO and QBO effects on the Northern Hemisphere polar vortex in MAECHAM5 simulations". <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	1
47	Effects of the quasi-biennial oscillation on low-latitude transport in the stratosphere derived from trajectory calculations. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	43
48	Nonlinearity of the combined warm ENSO and QBO effects on the Northern Hemisphere polar vortex in MAECHAM5 simulations. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	72
49	A GCM study on CO2 emission pathways to climate stabilization. <i>IOP Conference Series: Earth and Environmental Science</i> , 2009, 6, 052003.	0.2	0
50	Simulation of the climate impact of Mt. Pinatubo eruption using ECHAM5 " Part 1: Sensitivity to the modes of atmospheric circulation and boundary conditions. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 757-769.	1.9	40
51	The simulation of the Antarctic ozone hole by chemistry-climate models. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 6363-6376.	1.9	36
52	Clear sky UV simulations for the 21st century based on ozone and temperature projections from Chemistry-Climate Models. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 1165-1172.	1.9	40
53	Simulation of the climate impact of Mt. Pinatubo eruption using ECHAM5 " Part 2: Sensitivity to the phase of the QBO and ENSO. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 3001-3009.	1.9	39
54	Northern winter stratospheric temperature and ozone responses to ENSO inferred from an ensemble of Chemistry Climate Models. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 8935-8948.	1.9	56

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55	Forcing mechanism of the seasonally asymmetric quasi-biennial oscillation secondary circulation in ERA-40 and MAECHAM5. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	11
56	Coupled chemistry climate model simulations of the solar cycle in ozone and temperature. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	134
57	A model intercomparison analysing the link between column ozone and geopotential height anomalies in January. <i>Atmospheric Chemistry and Physics</i> , 2008, 8, 2519-2535.	1.9	8
58	Net effect of the QBO in a chemistry climate model. <i>Atmospheric Chemistry and Physics</i> , 2008, 8, 6505-6525.	1.9	14
59	Ensemble Held-Suarez Test with a Spectral Transform Model: Variability, Sensitivity, and Convergence. <i>Monthly Weather Review</i> , 2008, 136, 1075-1092.	0.5	27
60	Tests of Monte Carlo Independent Column Approximation in the ECHAM5 Atmospheric GCM. <i>Journal of Climate</i> , 2007, 20, 4995-5011.	1.2	23
61	Stratospheric dryness: model simulations and satellite observations. <i>Atmospheric Chemistry and Physics</i> , 2007, 7, 1313-1332.	1.9	109
62	Impact of an improved shortwave radiation scheme in the MAECHAM5 General Circulation Model. <i>Atmospheric Chemistry and Physics</i> , 2007, 7, 2503-2515.	1.9	77
63	Volcanic effects on climate: revisiting the mechanisms. <i>Atmospheric Chemistry and Physics</i> , 2007, 7, 4503-4511.	1.9	47
64	Stationary planetary wave propagation in Northern Hemisphere winter - climatological analysis of the refractive index. <i>Atmospheric Chemistry and Physics</i> , 2007, 7, 183-200.	1.9	54
65	Differences between the QBO in the first and in the second half of the ERA-40 reanalysis. <i>Atmospheric Chemistry and Physics</i> , 2007, 7, 599-608.	1.9	14
66	Sensitivity of the boreal winter circulation in the middle atmosphere to the quasi-biennial oscillation in MAECHAM5 simulations. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	31
67	Multimodel projections of stratospheric ozone in the 21st century. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	308
68	Propagation of ENSO temperature signals into the middle atmosphere: A comparison of two general circulation models and ERA-40 reanalysis data. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	179
69	Long-term evolution of upper stratospheric ozone at selected stations of the Network for the Detection of Stratospheric Change (NDSC). <i>Journal of Geophysical Research</i> , 2006, 111, n/a-n/a.	3.3	79
70	Assessment of temperature, trace species, and ozone in chemistry-climate model simulations of the recent past. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	414
71	Interannual variation patterns of total ozone and lower stratospheric temperature in observations and model simulations. <i>Atmospheric Chemistry and Physics</i> , 2006, 6, 349-374.	1.9	48
72	Sensitivity of Simulated Climate to Horizontal and Vertical Resolution in the ECHAM5 Atmosphere Model. <i>Journal of Climate</i> , 2006, 19, 3771-3791.	1.2	1,066

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73	The Influence of Sea Surface Temperatures on the Northern Winter Stratosphere: Ensemble Simulations with the MAECHAM5 Model. <i>Journal of Climate</i> , 2006, 19, 3863-3881.	1.2	368
74	Preface to Special Section on Climate Models at the Max Planck Institute for Meteorology. <i>Journal of Climate</i> , 2006, 19, 3769-3770.	1.2	11
75	Climatology and Forcing of the Quasi-Biennial Oscillation in the MAECHAM5 Model. <i>Journal of Climate</i> , 2006, 19, 3882-3901.	1.2	210
76	The HAMMONIA Chemistry Climate Model: Sensitivity of the Mesopause Region to the 11-Year Solar Cycle and CO2 Doubling. <i>Journal of Climate</i> , 2006, 19, 3903-3931.	1.2	247
77	Long-term changes and variability in a transient simulation with a chemistry-climate model employing realistic forcing. <i>Atmospheric Chemistry and Physics</i> , 2005, 5, 2121-2145.	1.9	109
78	Sensitivity of the quasi-biennial oscillation to CO2 doubling. <i>Geophysical Research Letters</i> , 2005, 32, .	1.5	17
79	How accurate did GCMs compute the insolation at TOA for AMIP-2?. <i>Geophysical Research Letters</i> , 2005, 32, .	1.5	5
80	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. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	95
81	Tropical Cumulus Convection and Upward-Propagating Waves in Middle-Atmospheric GCMs. <i>Journals of the Atmospheric Sciences</i> , 2003, 60, 2765-2782.	0.6	96
82	Forcing of the quasi-biennial oscillation from a broad spectrum of atmospheric waves. <i>Geophysical Research Letters</i> , 2002, 29, 86-1-86-4.	1.5	182
83	Stratosphäre als Wetterfrosch. <i>Physik Journal</i> , 2001, 57, 19-20.	0.1	0
84	An investigation of QBO signals in the east Asian and Indian monsoon in GCM experiments. <i>Climate Dynamics</i> , 1999, 15, 435-450.	1.7	90
85	Potential role of the quasi-biennial oscillation in the stratosphere-troposphere exchange as found in water vapor in general circulation model experiments. <i>Journal of Geophysical Research</i> , 1999, 104, 6003-6019.	3.3	70
86	The disposition of radiative energy in the global climate system: GCM-calculated versus observational estimates. <i>Climate Dynamics</i> , 1998, 14, 853-869.	1.7	87
87	Variability of the Indian Monsoon in the ECHAM3 Model: Sensitivity to Sea Surface Temperature, Soil Moisture, and the Stratospheric Quasi-Biennial Oscillation. <i>Journal of Climate</i> , 1998, 11, 1837-1858.	1.2	49
88	Voigt Line Approximation in the ECMWF Radiation Scheme. <i>Monthly Weather Review</i> , 1995, 123, 3381-3383.	0.5	3