

# Jian Rao

## List of Publications by Year in descending order

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Version: 2024-02-01

80  
papers

1,930  
citations

236925

25  
h-index

315739

38  
g-index

92  
all docs

92  
docs citations

92  
times ranked

1138  
citing authors

#	ARTICLE	IF	CITATIONS
1	A QBO Cookbook: Sensitivity of the Quasi-Biennial Oscillation to Resolution, Resolved Waves, and Parameterized Gravity Waves. <i>Journal of Advances in Modeling Earth Systems</i> , 2022, 14, e2021MS002568.	3.8	16
2	A dissection of the topographic effects from Eurasia and North America on the isentropic meridional mass circulation in Northern Winter. <i>Climate Dynamics</i> , 2022, 59, 1555-1578.	3.8	1
3	An Isentropic Mass Circulation View on the Extreme Cold Events in the 2020/21 Winter. <i>Advances in Atmospheric Sciences</i> , 2022, 39, 643-657.	4.3	19
4	Mean State of the Northern Hemisphere Stratospheric Polar Vortex in Three Generations of CMIP Models. <i>Journal of Climate</i> , 2022, 35, 4603-4625.	3.2	15
5	Impact of the Scandinavian Pattern on Long-Lived Cold Surges over the South China Sea. <i>Journal of Climate</i> , 2022, 35, 1773-1785.	3.2	9
6	On the Relationship Between the Stratospheric Quasi-Biennial Oscillation and Summer Precipitation in Northern China. <i>Geophysical Research Letters</i> , 2022, 49, .	4.0	7
7	Simulation and projection of the sudden stratospheric warming events in different scenarios by CESM2-WACCM. <i>Climate Dynamics</i> , 2022, 59, 3741-3761.	3.8	9
8	Observational Subseasonal Variability of the PM2.5 Concentration in the Beijing-Tianjin-Hebei Area during the January 2021 Sudden Stratospheric Warming. <i>Advances in Atmospheric Sciences</i> , 2022, 39, 1623-1636.	4.3	11
9	Projected changes of stratospheric final warmings in the Northern and Southern Hemispheres by CMIP5/6 models. <i>Climate Dynamics</i> , 2021, 56, 3353-3371.	3.8	23
10	Northern Hemisphere Sudden Stratospheric Warming and Its Downward Impact in Four Chinese CMIP6 Models. <i>Advances in Atmospheric Sciences</i> , 2021, 38, 187-202.	4.3	21
11	CMIP5/6 models project little change in the statistical characteristics of sudden stratospheric warmings in the 21st century. <i>Environmental Research Letters</i> , 2021, 16, 034024.	5.2	33
12	Influence of the El Niño-Southern Oscillation on entry stratospheric water vapor in coupled chemistry-ocean CCM1 and CMIP6 models. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 3725-3740.	4.9	8
13	The Strong Stratospheric Polar Vortex in March 2020 in Sub-Seasonal to Seasonal Models: Implications for Empirical Prediction of the Low Arctic Total Ozone Extreme. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2020JD034190.	3.3	17
14	The Impact of Split and Displacement Sudden Stratospheric Warmings on the Troposphere. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2020JD033989.	3.3	14
15	Downward propagation of sudden stratospheric warming signals and the local environment in the Beijing-Tianjin-Hebei region: A comparative study of the 2018 and 2019 winter cases. <i>Atmospheric Research</i> , 2021, 254, 105514.	4.1	14
16	The sudden stratospheric warming in January 2021. <i>Environmental Research Letters</i> , 2021, 16, 084029.	5.2	40
17	The January 2021 Sudden Stratospheric Warming and Its Prediction in Subseasonal to Seasonal Models. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2021JD035057.	3.3	26
18	Climatological features of blocking highs from the perspective of air mass and mass transport. <i>International Journal of Climatology</i> , 2020, 40, 782-794.	3.5	3

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19	Modeling study of the destructive interference between the tropical Indian Ocean and eastern Pacific in their forcing in the southern winter extratropical stratosphere during ENSO. <i>Climate Dynamics</i> , 2020, 54, 2249-2266.	3.8	20
20	Sub-seasonal variability of surface soil moisture over eastern China. <i>Climate Dynamics</i> , 2020, 55, 3527-3541.	3.8	4
21	Arctic Ozone Loss in March 2020 and its Seasonal Prediction in CFSv2: A Comparative Study With the 1997 and 2011 Cases. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2020JD033524.	3.3	40
22	Projected Strengthening of the Extratropical Surface Impacts of the Stratospheric Quasi-Biennial Oscillation. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL089149.	4.0	16
23	The Southern Hemisphere Minor Sudden Stratospheric Warming in September 2019 and its Predictions in S2S Models. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2020JD032723.	3.3	63
24	Predictability of the early winter Arctic oscillation from autumn Eurasian snowcover in subseasonal forecast models. <i>Climate Dynamics</i> , 2020, 55, 961-974.	3.8	14
25	Predicting the Downward and Surface Influence of the February 2018 and January 2019 Sudden Stratospheric Warming Events in Subseasonal to Seasonal (S2S) Models. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2019JD031919.	3.3	72
26	Impact of the Quasi-Biennial Oscillation on the Northern Winter Stratospheric Polar Vortex in CMIP5/6 Models. <i>Journal of Climate</i> , 2020, 33, 4787-4813.	3.2	38
27	The Generic Nature of the Tropospheric Response to Sudden Stratospheric Warmings. <i>Journal of Climate</i> , 2020, 33, 5589-5610.	3.2	26
28	How Does the Quasi-Biennial Oscillation Affect the Boreal Winter Tropospheric Circulation in CMIP5/6 Models?. <i>Journal of Climate</i> , 2020, 33, 8975-8996.	3.2	32
29	Predictability of Stratospheric Sudden Warmings in the Beijing Climate Center Forecast System with Statistical Error Corrections. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 8385-8400.	3.3	21
30	The 2019 New Year Stratospheric Sudden Warming and Its Real-time Predictions in Multiple S2S Models. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 11155-11174.	3.3	77
31	Modulation of the Northern Winter Stratospheric El Niño-Southern Oscillation Teleconnection by the PDO. <i>Journal of Climate</i> , 2019, 32, 5761-5783.	3.2	29
32	Statistical Characteristics of Major Sudden Stratospheric Warming Events in CESM1-WACCM: A Comparison with the JRA55 and NCEP/NCAR Reanalyses. <i>Atmosphere</i> , 2019, 10, 519.	2.3	29
33	Dynamical role of the Rocky Mountain controlled by East Asian topographies in modulating the tropospheric westerly jet in northern winter. <i>Atmospheric and Oceanic Science Letters</i> , 2019, 12, 66-72.	1.3	4
34	Combined Impact of El Niño-Southern Oscillation and Pacific Decadal Oscillation on the Northern Winter Stratosphere. <i>Atmosphere</i> , 2019, 10, 211.	2.3	19
35	Understanding the variation of stratosphere-troposphere coupling during stratospheric northern annular mode events from a mass circulation perspective. <i>Climate Dynamics</i> , 2019, 53, 5141-5164.	3.8	14
36	Sub-seasonal to Seasonal Hindcasts of Stratospheric Sudden Warming by BCC_CSM1.1(m): A Comparison with ECMWF. <i>Advances in Atmospheric Sciences</i> , 2019, 36, 479-494.	4.3	18

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37	Linking quasi-biweekly variability of the South Asian high to atmospheric heating over Tibetan Plateau in summer. <i>Climate Dynamics</i> , 2019, 53, 3419-3429.	3.8	21
38	The Rossby wave train patterns forced by shallower and deeper Tibetan Plateau atmospheric heat-source in summer in a linear baroclinic model. <i>Atmospheric and Oceanic Science Letters</i> , 2019, 12, 35-40.	1.3	3
39	Sub-seasonal prediction skill for the stratospheric meridional mass circulation variability in CFSv2. <i>Climate Dynamics</i> , 2019, 53, 631-650.	3.8	8
40	Interdecadal Variations of the Midlatitude Ozone Valleys in Summer. <i>Atmosphere</i> , 2019, 10, 677.	2.3	5
41	Topographic Forcing from East Asia and North America in the Northern Winter Stratosphere and Their Mutual Interference. <i>Journal of Climate</i> , 2019, 32, 8639-8658.	3.2	11
42	Parallel Comparison of Major Sudden Stratospheric Warming Events in CESM1-WACCM and CESM2-WACCM. <i>Atmosphere</i> , 2019, 10, 679.	2.3	41
43	Evaluating the Brewer-Dobson circulation and its responses to ENSO, QBO, and the solar cycle in different reanalyses. <i>Earth and Planetary Physics</i> , 2019, 3, 1-16.	1.1	17
44	The salient differences in China summer rainfall response to ENSO: phases, intensities and flavors. <i>Climate Research</i> , 2019, 78, 51-67.	1.1	16
45	A closer look at the relationships between meridional mass circulation pulses in the stratosphere and cold air outbreak patterns in northern hemispheric winter. <i>Climate Dynamics</i> , 2018, 51, 3125-3143.	3.8	23
46	Recent strengthening of the stratospheric Arctic vortex response to warming in the central North Pacific. <i>Nature Communications</i> , 2018, 9, 1697.	12.8	86
47	Varying stratospheric responses to tropical Atlantic SST forcing from early to late winter. <i>Climate Dynamics</i> , 2018, 51, 2079-2096.	3.8	27
48	A stochastic model with a low-frequency amplification feedback for the stratospheric northern annular mode. <i>Climate Dynamics</i> , 2018, 50, 3757-3773.	3.8	12
49	The Stratospheric Sudden Warming Event in February 2018 and its Prediction by a Climate System Model. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 13,332.	3.3	66
50	Varying Rossby Wave Trains from the Developing to Decaying Period of the Upper Atmospheric Heat Source over the Tibetan Plateau in Boreal Summer. <i>Advances in Atmospheric Sciences</i> , 2018, 35, 1114-1128.	4.3	8
51	On the Linkage among Strong Stratospheric Mass Circulation, Stratospheric Sudden Warming, and Cold Weather Events. <i>Monthly Weather Review</i> , 2018, 146, 2717-2739.	1.4	24
52	Tracking the delayed response of the northern winter stratosphere to ENSO using multi reanalyses and model simulations. <i>Climate Dynamics</i> , 2017, 48, 2859-2879.	3.8	22
53	On the contrasting decadal changes of diurnal surface temperature range between the Tibetan Plateau and southeastern China during the 1980s-2000s. <i>Advances in Atmospheric Sciences</i> , 2017, 34, 181-198.	4.3	25
54	Onset of the Bay of Bengal summer monsoon and the seasonal timing of ENSO's decay phase. <i>International Journal of Climatology</i> , 2017, 37, 4938-4948.	3.5	7

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55	Parallel comparison of the 1982/83, 1997/98 and 2015/16 super El Niños and their effects on the extratropical stratosphere. <i>Advances in Atmospheric Sciences</i> , 2017, 34, 1121-1133.	4.3	37
56	Feeling the Pulse of the Stratosphere: An Emerging Opportunity for Predicting Continental-Scale Cold-Air Outbreaks 1 Month in Advance. <i>Bulletin of the American Meteorological Society</i> , 2016, 97, 1475-1489.	3.3	32
57	Asymmetry and nonlinearity of the influence of ENSO on the northern winter stratosphere: 2. Model study with WACCM. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 9017-9032.	3.3	38
58	Asymmetry and nonlinearity of the influence of ENSO on the northern winter stratosphere: 1. Observations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 9000-9016.	3.3	52
59	Summer SST anomalies in the Indian Ocean and the seasonal timing of ENSO decay phase. <i>Climate Dynamics</i> , 2016, 47, 1827-1844.	3.8	11
60	A decomposition of ENSO's impacts on the northern winter stratosphere: competing effect of SST forcing in the tropical Indian Ocean. <i>Climate Dynamics</i> , 2016, 46, 3689-3707.	3.8	43
61	Attributing analysis on the model bias in surface temperature in the climate system model FGOALS-s2 through a process-based decomposition method. <i>Advances in Atmospheric Sciences</i> , 2015, 32, 457-469.	4.3	18
62	Understanding the systematic air temperature biases in a coupled climate system model through a process-based decomposition method. <i>Climate Dynamics</i> , 2015, 45, 1801-1817.	3.8	8
63	Dynamic Linkage between Cold Air Outbreaks and Intensity Variations of the Meridional Mass Circulation. <i>Journals of the Atmospheric Sciences</i> , 2015, 72, 3214-3232.	1.7	48
64	Comparison of the mass circulation and AO indices as indicators of cold air outbreaks in northern winter. <i>Geophysical Research Letters</i> , 2015, 42, 2442-2448.	4.0	26
65	Seasonal timing of stratospheric final warming associated with the intensity of stratospheric sudden warming in preceding winter. <i>Science China Earth Sciences</i> , 2015, 58, 615-627.	5.2	12
66	Relationship between Warm Air Mass Transport into the Upper Polar Atmosphere and Cold Air Outbreaks in Winter. <i>Journals of the Atmospheric Sciences</i> , 2015, 72, 349-368.	1.7	34
67	Parallel comparison of the northern winter stratospheric circulation in reanalysis and in CMIP5 models. <i>Advances in Atmospheric Sciences</i> , 2015, 32, 952-966.	4.3	29
68	Location and variation of the summertime upper-troposphere temperature maximum over South Asia. <i>Climate Dynamics</i> , 2015, 45, 2757-2774.	3.8	70
69	Occurrence of Winter Stratospheric Sudden Warming Events and the Seasonal Timing of Spring Stratospheric Final Warming. <i>Journals of the Atmospheric Sciences</i> , 2014, 71, 2319-2334.	1.7	93
70	Progress in research of stratosphere-troposphere interactions: Application of isentropic potential vorticity dynamics and the effects of the Tibetan Plateau. <i>Journal of Meteorological Research</i> , 2014, 28, 714-731.	2.4	8
71	A Mass Budget Analysis on the Interannual Variability of the Polar Surface Pressure in the Winter Season. <i>Journals of the Atmospheric Sciences</i> , 2014, 71, 3539-3553.	1.7	21
72	The boreal spring stratospheric final warming and its interannual and interdecadal variability. <i>Science China Earth Sciences</i> , 2014, 57, 710-718.	5.2	13

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73	An emerging precursor signal in the stratosphere in recent decades for the Indian summer monsoon onset. <i>Geophysical Research Letters</i> , 2014, 41, 7391-7396.	4.0	12
74	Changes in winter stratospheric circulation in CMIP5 scenarios simulated by the climate system model FGOALS-s2. <i>Advances in Atmospheric Sciences</i> , 2012, 29, 1374-1389.	4.3	10
75	Spatial Pattern and Zonal Shift of the North Atlantic Oscillation. Part II: Numerical Experiments. <i>Journals of the Atmospheric Sciences</i> , 2010, 67, 2827-2853.	1.7	12
76	Spatial Pattern and Zonal Shift of the North Atlantic Oscillation. Part I: A Dynamical Interpretation. <i>Journals of the Atmospheric Sciences</i> , 2010, 67, 2805-2826.	1.7	22
77	Winter season stratospheric circulation in the SAMIL/LASC general circulation model. <i>Advances in Atmospheric Sciences</i> , 2009, 26, 451-464.	4.3	10
78	Polar vortex oscillation viewed in an isentropic potential vorticity coordinate. <i>Advances in Atmospheric Sciences</i> , 2006, 23, 884-900.	4.3	17
79	Statistical Characteristics of ENSO Events in CMIP5 Models. , 0, .		3
80	Tropopause folding events to the northeast of Tibetan Plateau in boreal summer and their remote relation to the circulation anomalies over northeastern Atlantic. <i>Climate Dynamics</i> , 0, , 1.	3.8	1