

Stephan Fueglistaler

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

88

papers

3,765

citations

32

h-index

60

g-index

112

ext. papers

4,260

ext. citations

6.2

avg, IF

5.52

L-index

#	Paper	IF	Citations
88	Cause of the intense tropics-wide tropospheric warming in response to El Niño. <i>Journal of Climate</i> , 2022 , 1-30	4.4	
87	On the Controlling Factors for Globally Extreme Humid Heat. <i>Geophysical Research Letters</i> , 2021 , 48, e2021GL096082	4.9	2
86	Large internal variability dominates over global warming signal in observed lower stratospheric QBO amplitude. <i>Journal of Climate</i> , 2021 , 1-43	4.4	2
85	The El Niño Southern Oscillation Pattern Effect. <i>Geophysical Research Letters</i> , 2021 , 48, e2021GL095261	4.9	1
84	Projections of tropical heat stress constrained by atmospheric dynamics. <i>Nature Geoscience</i> , 2021 , 14, 133-137	18.3	16
83	Natural variability contributes to model-satellite differences in tropical tropospheric warming. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	10
82	Anomalous Dynamics of QBO Disruptions Explained by 1D Theory with External Triggering. <i>Journals of the Atmospheric Sciences</i> , 2021 , 78, 373-383	2.1	1
81	The Peculiar Trajectory of Global Warming. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021 , 126, e2020JD033629	4.4	3
80	Tropical Water Fluxes Dominated by Deep Convection Up to Near Tropopause Levels. <i>Geophysical Research Letters</i> , 2021 , 48, e2020GL091471	4.9	1
79	Reduction of Bias from Parameter Variance in Geophysical Data Estimation: Method and Application to Ice Water Content and Sedimentation Flux Estimated from Lidar. <i>Journals of the Atmospheric Sciences</i> , 2020 , 77, 835-857	2.1	1
78	Mean-Flow Damping Forms the Buffer Zone of the Quasi-Biennial Oscillation: 1D Theory. <i>Journals of the Atmospheric Sciences</i> , 2020 , 77, 1955-1967	2.1	3
77	A Satellite-Based Climatology of Central and Southeastern U.S. Mesoscale Convective Systems. <i>Monthly Weather Review</i> , 2020 , 148, 2607-2621	2.4	3
76	How Tropical Convection Couples High Moist Static Energy Over Land and Ocean. <i>Geophysical Research Letters</i> , 2020 , 47, e2019GL086387	4.9	9
75	Simple Spectral Models for Atmospheric Radiative Cooling. <i>Journals of the Atmospheric Sciences</i> , 2020 , 77, 479-497	2.1	13
74	Linearity of Outgoing Longwave Radiation: From an Atmospheric Column to Global Climate Models. <i>Geophysical Research Letters</i> , 2020 , 47, e2020GL089235	4.9	8
73	On the Cooling-to-Space Approximation. <i>Journals of the Atmospheric Sciences</i> , 2020 , 77, 465-478	2.1	5
72	Multitimescale variations in modeled stratospheric water vapor derived from three modern reanalysis products. <i>Atmospheric Chemistry and Physics</i> , 2019 , 19, 6509-6534	6.8	16

71	Climate Impacts From Large Volcanic Eruptions in a High-Resolution Climate Model: The Importance of Forcing Structure. <i>Geophysical Research Letters</i> , 2019 , 46, 7690-7699	4.9	15
70	Observational Evidence for Two Modes of Coupling Between Sea Surface Temperatures, Tropospheric Temperature Profile, and Shortwave Cloud Radiative Effect in the Tropics. <i>Geophysical Research Letters</i> , 2019 , 46, 9890-9898	4.9	22
69	On the Causal Relationship Between the Moist Diabatic Circulation and Cloud Rapid Adjustment to Increasing CO ₂ . <i>Journal of Advances in Modeling Earth Systems</i> , 2019 , 11, 3836-3851	7.1	2
68	The Buffer Zone of the Quasi-Biennial Oscillation. <i>Journals of the Atmospheric Sciences</i> , 2019 , 76, 3553-3567	6	
67	Mechanism for Increasing Tropical Rainfall Unevenness With Global Warming. <i>Geophysical Research Letters</i> , 2019 , 46, 14836-14843	4.9	10
66	Regional dry-season climate changes due to three decades of Amazonian deforestation. <i>Nature Climate Change</i> , 2017 , 7, 200-204	21.4	113
65	Seasonal Prediction Skill of Northern Extratropical Surface Temperature Driven by the Stratosphere. <i>Journal of Climate</i> , 2017 , 30, 4463-4475	4.4	29
64	Mechanism of Fast Atmospheric Energetic Equilibration Following Radiative Forcing by CO ₂ . <i>Journal of Advances in Modeling Earth Systems</i> , 2017 , 9, 2468-2482	7.1	8
63	Stratospheric aerosol observations, processes, and impact on climate. <i>Reviews of Geophysics</i> , 2016 , 54, 278-335	23.1	179
62	IGCM4: a fast, parallel and flexible intermediate climate model. <i>Geoscientific Model Development</i> , 2015 , 8, 1157-1167	6.3	10
61	The distribution of precipitation and the spread in tropical upper tropospheric temperature trends in CMIP5/AMIP simulations. <i>Geophysical Research Letters</i> , 2015 , 42, 6000-6007	4.9	13
60	Cloud and Radiative Balance Changes in Response to ENSO in Observations and Models. <i>Journal of Climate</i> , 2014 , 27, 3100-3113	4.4	11
59	Tropical response to stratospheric sudden warmings and its modulation by the QBO. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014 , 119, 7382-7395	4.4	28
58	Departure from Clausius-Clapeyron scaling of water entering the stratosphere in response to changes in tropical upwelling. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014 , 119, 1962-1972	4.4	14
57	The role of large-scale convective organization for tropical high cloud amount. <i>Geophysical Research Letters</i> , 2014 , 41, 5259-5263	4.9	
56	Stratospheric sudden warmings in an idealized GCM. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014 , 119, 11,054-11,064	4.4	15
55	Cirrus and water vapour transport in the tropical tropopause layer [Part 2: Roles of ice nucleation and sedimentation, cloud dynamics, and moisture conditions. <i>Atmospheric Chemistry and Physics</i> , 2014 , 14, 12225-12236	6.8	14
54	Variability and trends in dynamical forcing of tropical lower stratospheric temperatures. <i>Atmospheric Chemistry and Physics</i> , 2014 , 14, 13439-13453	6.8	11

53	Microphysical, radiative, and dynamical impacts of thin cirrus clouds on humidity in the tropical tropopause layer and lower stratosphere. <i>Geophysical Research Letters</i> , 2014 , 41, 6949-6955	4.9	13
52	Tropical temperature trends in Atmospheric General Circulation Model simulations and the impact of uncertainties in observed SSTs. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014 , 119, 13,327	4.4	41
51	Vertical Mixing and the Temperature and Wind Structure of the Tropical Tropopause Layer. <i>Journals of the Atmospheric Sciences</i> , 2014 , 71, 1609-1622	2.1	6
50	Cirrus, Transport, and Mixing in the Tropical Upper Troposphere. <i>Journals of the Atmospheric Sciences</i> , 2014 , 71, 1339-1352	2.1	6
49	Maintenance of the Stratospheric Structure in an Idealized General Circulation Model. <i>Journals of the Atmospheric Sciences</i> , 2013 , 70, 3341-3358	2.1	14
48	Impacts of Atmospheric Temperature Trends on Tropical Cyclone Activity. <i>Journal of Climate</i> , 2013 , 26, 3877-3891	4.4	75
47	Large differences in reanalyses of diabatic heating in the tropical upper troposphere and lower stratosphere. <i>Atmospheric Chemistry and Physics</i> , 2013 , 13, 9565-9576	6.8	70
46	Horizontal water vapor transport in the lower stratosphere from subtropics to high latitudes during boreal summer. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013 , 118, 8111-8127	4.4	84
45	The relation between atmospheric humidity and temperature trends for stratospheric water. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013 , 118, 1052-1074	4.4	54
44	The importance of the tropical tropopause layer for equatorial Kelvin wave propagation. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013 , 118, 5160-5175	4.4	18
43	Horizontal transport affecting trace gas seasonality in the Tropical Tropopause Layer (TTL). <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		72
42	Tracking Kelvin waves from the equatorial troposphere into the stratosphere. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		8
41	Statistical analysis of global variations of atmospheric relative humidity as observed by AIRS. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		6
40	Stepwise changes in stratospheric water vapor?. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		30
39	Changes in polar stratospheric temperature climatology in relation to stratospheric sudden warming occurrence. <i>Geophysical Research Letters</i> , 2012 , 39, n/a-n/a	4.9	8
38	Kelvin waves and shear-flow turbulent mixing in the TTL in (re-)analysis data. <i>Geophysical Research Letters</i> , 2011 , 38, n/a-n/a	4.9	13
37	The influence of summertime convection over Southeast Asia on water vapor in the tropical stratosphere. <i>Journal of Geophysical Research</i> , 2011 , 116,		66
36	The annual cycle in lower stratospheric temperatures revisited. <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 3701-3711	6.8	36

35	Sensitivity of stratospheric Br_y to uncertainties in very short lived substance emissions and atmospheric transport. <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 1379-1392	6.8	24
34	Insight from ozone and water vapour on transport in the tropical tropopause layer (TTL). <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 407-419	6.8	62
33	Tropical dehydration processes constrained by the seasonality of stratospheric deuterated water. <i>Nature Geoscience</i> , 2010 , 3, 262-266	18.3	44
32	Advection-condensation paradigm for stratospheric water vapor. <i>Journal of Geophysical Research</i> , 2010 , 115,		65
31	Trend in ice moistening the stratosphere Constraints from isotope data of water and methane. <i>Atmospheric Chemistry and Physics</i> , 2010 , 10, 201-207	6.8	13
30	A climatological perspective of deep convection penetrating the TTL during the Indian summer monsoon from the AVHRR and MODIS instruments. <i>Atmospheric Chemistry and Physics</i> , 2010 , 10, 4573-4582	6.8	47
29	The impact of geoengineering aerosols on stratospheric temperature and ozone. <i>Environmental Research Letters</i> , 2009 , 4, 045108	6.2	169
28	The diabatic heat budget of the upper troposphere and lower/mid stratosphere in ECMWF reanalyses. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2009 , 135, 21-37	6.4	83
27	Tropical tropopause layer. <i>Reviews of Geophysics</i> , 2009 , 47,	23.1	701
26	Geo-engineering side effects: Heating the tropical tropopause by sedimenting sulphur aerosol?. <i>IOP Conference Series: Earth and Environmental Science</i> , 2009 , 6, 452017	0.3	
25	The SCOUT-O3 Darwin Aircraft Campaign: rationale and meteorology. <i>Atmospheric Chemistry and Physics</i> , 2009 , 9, 93-117	6.8	45
24	Water vapor transport and dehydration above convective outflow during Asian monsoon. <i>Geophysical Research Letters</i> , 2008 , 35,	4.9	80
23	A Low-Level Circulation in the Tropics. <i>Journals of the Atmospheric Sciences</i> , 2008 , 65, 1019-1034	2.1	23
22	Trends and variability of midlatitude stratospheric water vapour deduced from the re-evaluated Boulder balloon series and HALOE. <i>Atmospheric Chemistry and Physics</i> , 2008 , 8, 1391-1402	6.8	89
21	Technical Note: Chemistry-climate model SOCOL: version 2.0 with improved transport and chemistry/microphysics schemes. <i>Atmospheric Chemistry and Physics</i> , 2008 , 8, 5957-5974	6.8	92
20	Effects of convective ice lofting on H ₂ O and HDO in the tropical tropopause layer. <i>Journal of Geophysical Research</i> , 2007 , 112,		51
19	Impact of clouds on radiative heating rates in the tropical lower stratosphere. <i>Journal of Geophysical Research</i> , 2006 , 111,		37
18	A modelling study of the impact of cirrus clouds on the moisture budget of the upper troposphere. <i>Atmospheric Chemistry and Physics</i> , 2006 , 6, 1425-1434	6.8	18

17	Oxalic acid as a heterogeneous ice nucleus in the upper troposphere and its indirect aerosol effect. <i>Atmospheric Chemistry and Physics</i> , 2006 , 6, 3115-3129	6.8	121
16	Influence of tropospheric SO ₂ emissions on particle formation and the stratospheric humidity. <i>Geophysical Research Letters</i> , 2005 , 32, n/a-n/a	4.9	35
15	Stratospheric water vapor predicted from the Lagrangian temperature history of air entering the stratosphere in the tropics. <i>Journal of Geophysical Research</i> , 2005 , 110,		192
14	Control of interannual and longer-term variability of stratospheric water vapor. <i>Journal of Geophysical Research</i> , 2005 , 110,		148
13	Tropical troposphere-to-stratosphere transport inferred from trajectory calculations. <i>Journal of Geophysical Research</i> , 2004 , 109, n/a-n/a		162
12	Ultrathin Tropical Tropopause Clouds (UTTCs): II. Stabilization mechanisms. <i>Atmospheric Chemistry and Physics</i> , 2003 , 3, 1093-1100	6.8	23
11	Detailed modeling of mountain wave PSCs. <i>Atmospheric Chemistry and Physics</i> , 2003 , 3, 697-712	6.8	46
10	Dehydration potential of ultrathin clouds at the tropical tropopause. <i>Geophysical Research Letters</i> , 2003 , 30,	4.9	44
9	Extreme NAT supersaturations in mountain wave ice PSCs: A clue to NAT formation. <i>Journal of Geophysical Research</i> , 2003 , 108,		44
8	NAT-rock formation by mother clouds: a microphysical model study. <i>Atmospheric Chemistry and Physics</i> , 2002 , 2, 93-98	6.8	48
7	Large NAT particle formation by mother clouds: Analysis of SOLVE/THESEO-2000 observations. <i>Geophysical Research Letters</i> , 2002 , 29, 52-1	4.9	24
6	Mountain polar stratospheric cloud measurements by Ground Based FTIR Solar Absorption Spectroscopy. <i>Geophysical Research Letters</i> , 2001 , 28, 2189-2192	4.9	11
5	A climatological perspective of deep convection penetrating the TTL during the Indian summer monsoon from the AVHRR and MODIS instruments		3
4	Large differences in the diabatic heat budget of the tropical UTLS in reanalyses		3
3	A modelling study of moisture redistribution by thin cirrus clouds		1
2	Variability and trends in dynamical forcing of tropical lower stratospheric temperatures		1
1	IGCM4: a fast, parallel and flexible intermediate climate model		1