Stephan Fueglistaler

List of Publications by Year
in descending order

84 papers	4,746 citations	126907 33 h-index	114465 63 g-index
112 all docs	112 docs citations	112 times ranked	3893 citing authors

#	Article	IF	Citations
1	Cause of the intense tropics-wide tropospheric warming in response to El NiÃ±o. Journal of Climate, 2022, , 1-30.	3.2	1
2	Springtime arctic ozone depletion forces northern hemisphere climate anomalies. Nature Geoscience, 2022, 15, 541-547.	12.9	27
3	Anomalous Dynamics of QBO Disruptions Explained by 1D Theory with External Triggering. Journals of the Atmospheric Sciences, 2021, 78, 373-383.	1.7	8
4	The Peculiar Trajectory of Global Warming. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033629.	3.3	12
5	Tropical Water Fluxes Dominated by Deep Convection Up to Near Tropopause Levels. Geophysical Research Letters, 2021, 48, e2020GL091471.	4.0	3
6	Projections of tropical heat stress constrained by atmospheric dynamics. Nature Geoscience, 2021, 14, 133-137.	12.9	54
7	Natural variability contributes to modelâ€“satellite differences in tropical tropospheric warming. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	27
8	Large internal variability dominates over global warming signal in observed lower stratospheric QBO amplitude. Journal of Climate, 2021, , 1-43.	3.2	3
9	The El NiÃ±oâ€“Southern Oscillation Pattern Effect. Geophysical Research Letters, 2021, 48, e2021GL095261.	4.0	5
10	On the Controlling Factors for Globally Extreme Humid Heat. Geophysical Research Letters, 2021, 48, e2021GL096082.	4.0	17
11	On the Cooling-to-Space Approximation. Journals of the Atmospheric Sciences, 2020, 77, 465-478.	1.7	14
12	Simple Spectral Models for Atmospheric Radiative Cooling. Journals of the Atmospheric Sciences, 2020, 77, 479-497.	1.7	28
13	Linearity of Outgoing Longwave Radiation: From an Atmospheric Column to Global Climate Models. Geophysical Research Letters, 2020, 47, e2020GL089235.	4.0	15
14	Reduction of Bias from Parameter Variance in Geophysical Data Estimation: Method and Application to Ice Water Content and Sedimentation Flux Estimated from Lidar. Journals of the Atmospheric Sciences, 2020, 77, 835-857.	1.7	1
15	How Tropical Convection Couples High Moist Static Energy Over Land and Ocean. Geophysical Research Letters, 2020, 47, e2019GL086387.	4.0	20
16	Mean-Flow Damping Forms the Buffer Zone of the Quasi-Biennial Oscillation: 1D Theory. Journals of the Atmospheric Sciences, 2020, 77, 1955-1967.	1.7	5
17	A Satellite-Based Climatology of Central and Southeastern U.S. Mesoscale Convective Systems. Monthly Weather Review, 2020, 148, 2607-2621.	1.4	11
18	Climate Impacts From Large Volcanic Eruptions in a Highâ€Resolution Climate Model: The Importance of Forcing Structure. Geophysical Research Letters, 2019, 46, 7690-7699.	4.0	28

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19	Observational Evidence for Two Modes of Coupling Between Sea Surface Temperatures, Tropospheric Temperature Profile, and Shortwave Cloud Radiative Effect in the Tropics. Geophysical Research Letters, 2019, 46, 9890-9898.	4.0	37
20	Multitimescale variations in modeled stratospheric water vapor derived from three modern reanalysis products. Atmospheric Chemistry and Physics, 2019, 19, 6509-6534.	4.9	23
21	On the Causal Relationship Between the Moist Diabatic Circulation and Cloud Rapid Adjustment to Increasing CO₂. Journal of Advances in Modeling Earth Systems, 2019, 11, 3836-3851.	3.8	3
22	The Buffer Zone of the Quasi-Biennial Oscillation. Journals of the Atmospheric Sciences, 2019, 76, 3553-3567.	1.7	9
23	Mechanism for Increasing Tropical Rainfall Unevenness With Global Warming. Geophysical Research Letters, 2019, 46, 14836-14843.	4.0	18
24	Regional dry-season climate changes due to three decades of Amazonian deforestation. Nature Climate Change, 2017, 7, 200-204.	18.8	165
25	Seasonal Prediction Skill of Northern Extratropical Surface Temperature Driven by the Stratosphere. Journal of Climate, 2017, 30, 4463-4475.	3.2	37
26	Mechanism of Fast Atmospheric Energetic Equilibration Following Radiative Forcing by CO₂. Journal of Advances in Modeling Earth Systems, 2017, 9, 2468-2482.	3.8	11
27	Stratospheric aerosol-Observations, processes, and impact on climate. Reviews of Geophysics, 2016, 54, 278-335.	23.0	265
28	The distribution of precipitation and the spread in tropical upper tropospheric temperature trends in CMIP5/AMIP simulations. Geophysical Research Letters, 2015, 42, 6000-6007.	4.0	20
29	IGCM4: a fast, parallel and flexible intermediate climate model. Geoscientific Model Development, 2015, 8, 1157-1167.	3.6	14
30	Microphysical, radiative, and dynamical impacts of thin cirrus clouds on humidity in the tropical tropopause layer and lower stratosphere. Geophysical Research Letters, 2014, 41, 6949-6955.	4.0	17
31	Tropical temperature trends in Atmospheric General Circulation Model simulations and the impact of uncertainties in observed SSTs. Journal of Geophysical Research D: Atmospheres, 2014, 119, 13,327.	3.3	48
32	Vertical Mixing and the Temperature and Wind Structure of the Tropical Tropopause Layer. Journals of the Atmospheric Sciences, 2014, 71, 1609-1622.	1.7	7
33	Cirrus, Transport, and Mixing in the Tropical Upper Troposphere. Journals of the Atmospheric Sciences, 2014, 71, 1339-1352.	1.7	7
34	Cloud and Radiative Balance Changes in Response to ENSO in Observations and Models. Journal of Climate, 2014, 27, 3100-3113.	3.2	12
35	Tropical response to stratospheric sudden warmings and its modulation by the QBO. Journal of Geophysical Research D: Atmospheres, 2014, 119, 7382-7395.	3.3	34
36	Departure from Clausius-Clapeyron scaling of water entering the stratosphere in response to changes in tropical upwelling. Journal of Geophysical Research D: Atmospheres, 2014, 119, 1962-1972.	3.3	17

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37	The role of largeâ€scale convective organization for tropical high cloud amount. Geophysical Research Letters, 2014, 41, 5259-5263.	4.0	0
38	Stratospheric sudden warmings in an idealized GCM. Journal of Geophysical Research D: Atmospheres, 2014, 119, 11,054.	3.3	19
39	Cirrus and water vapour transport in the tropical tropopause layer â€" Part 2: Roles of ice nucleation and sedimentation, cloud dynamics, and moisture conditions. Atmospheric Chemistry and Physics, 2014, 14, 12225-12236.	4.9	18
40	Variability and trends in dynamical forcing of tropical lower stratospheric temperatures. Atmospheric Chemistry and Physics, 2014, 14, 13439-13453.	4.9	17
41	Maintenance of the Stratospheric Structure in an Idealized General Circulation Model. Journals of the Atmospheric Sciences, 2013, 70, 3341-3358.	1.7	19
42	Impacts of Atmospheric Temperature Trends on Tropical Cyclone Activity. Journal of Climate, 2013, 26, 3877-3891.	3.2	83
43	Large differences in reanalyses of diabatic heating in the tropical upper troposphere and lower stratosphere. Atmospheric Chemistry and Physics, 2013, 13, 9565-9576.	4.9	86
44	Horizontal water vapor transport in the lower stratosphere from subtropics to high latitudes during boreal summer. Journal of Geophysical Research D: Atmospheres, 2013, 118, 8111-8127.	3.3	100
45	The relation between atmospheric humidity and temperature trends for stratospheric water. Journal of Geophysical Research D: Atmospheres, 2013, 118, 1052-1074.	3.3	62
46	The importance of the tropical tropopause layer for equatorial Kelvin wave propagation. Journal of Geophysical Research D: Atmospheres, 2013, 118, 5160-5175.	3.3	25
47	Changes in polar stratospheric temperature climatology in relation to stratospheric sudden warming occurrence. Geophysical Research Letters, 2012, 39, .	4.0	9
48	Horizontal transport affecting trace gas seasonality in the Tropical Tropopause Layer (TTL). Journal of Geophysical Research, 2012, 117, .	3.3	80
49	Tracking Kelvin waves from the equatorial troposphere into the stratosphere. Journal of Geophysical Research, 2012, 117, .	3.3	10
50	Statistical analysis of global variations of atmospheric relative humidity as observed by AIRS. Journal of Geophysical Research, 2012, 117, .	3.3	8
51	Stepwise changes in stratospheric water vapor?. Journal of Geophysical Research, 2012, 117, .	3.3	37
52	Kelvin waves and shear-flow turbulent mixing in the TTL in (re-)analysis data. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	17
53	The influence of summertime convection over Southeast Asia on water vapor in the tropical stratosphere. Journal of Geophysical Research, 2011, 116, .	3.3	76
54	The annual cycle in lower stratospheric temperatures revisited. Atmospheric Chemistry and Physics, 2011, 11, 3701-3711.	4.9	41

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55	Sensitivity of stratospheric Br_y to uncertainties in very short lived substance emissions and atmospheric transport. Atmospheric Chemistry and Physics, 2011, 11, 1379-1392.	4.9	27
56	Insight from ozone and water vapour on transport in the tropical tropopause layer (TTL). Atmospheric Chemistry and Physics, 2011, 11, 407-419.	4.9	71
57	Trend in ice moistening the stratosphere â€“ constraints from isotope data of water and methane. Atmospheric Chemistry and Physics, 2010, 10, 201-207.	4.9	15
58	A climatological perspective of deep convection penetrating the TTL during the Indian summer monsoon from the AVHRR and MODIS instruments. Atmospheric Chemistry and Physics, 2010, 10, 4573-4582.	4.9	59
59	Tropical dehydration processes constrained by the seasonality of stratospheric deuterated water. Nature Geoscience, 2010, 3, 262-266.	12.9	50
60	Advectionâ€condensation paradigm for stratospheric water vapor. Journal of Geophysical Research, 2010, 115, .	3.3	75
61	The impact of geoengineering aerosols on stratospheric temperature and ozone. Environmental Research Letters, 2009, 4, 045108.	5.2	199
62	The diabatic heat budget of the upper troposphere and lower/mid stratosphere in ECMWF reanalyses. Quarterly Journal of the Royal Meteorological Society, 2009, 135, 21-37.	2.7	91
63	Tropical tropopause layer. Reviews of Geophysics, 2009, 47, .	23.0	827
64	Geo-engineering side effects: Heating the tropical tropopause by sedimenting sulphur aerosol?. IOP Conference Series: Earth and Environmental Science, 2009, 6, 452017.	0.3	0
65	The SCOUT-O3 Darwin Aircraft Campaign: rationale and meteorology. Atmospheric Chemistry and Physics, 2009, 9, 93-117.	4.9	53
66	Water vapor transport and dehydration above convective outflow during Asian monsoon. Geophysical Research Letters, 2008, 35, .	4.0	93
67	A Low-Level Circulation in the Tropics. Journals of the Atmospheric Sciences, 2008, 65, 1019-1034.	1.7	28
68	Trends and variability of midlatitude stratospheric water vapour deduced from the re-evaluated Boulder balloon series and HALOE. Atmospheric Chemistry and Physics, 2008, 8, 1391-1402.	4.9	107
69	Technical Note: Chemistry-climate model SOCOL: version 2.0 with improved transport and chemistry/microphysics schemes. Atmospheric Chemistry and Physics, 2008, 8, 5957-5974.	4.9	105
70	Effects of convective ice lofting on H₂O and HDO in the tropical tropopause layer. Journal of Geophysical Research, 2007, 112, .	3.3	58
71	Impact of clouds on radiative heating rates in the tropical lower stratosphere. Journal of Geophysical Research, 2006, 111, .	3.3	44
72	A modelling study of the impact of cirrus clouds on the moisture budget of the upper troposphere. Atmospheric Chemistry and Physics, 2006, 6, 1425-1434.	4.9	19

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73	Oxalic acid as a heterogeneous ice nucleus in the upper troposphere and its indirect aerosol effect. Atmospheric Chemistry and Physics, 2006, 6, 3115-3129.	4.9	145
74	Influence of tropospheric SO2emissions on particle formation and the stratospheric humidity. Geophysical Research Letters, 2005, 32, n/a-n/a.	4.0	38
75	Stratospheric water vapor predicted from the Lagrangian temperature history of air entering the stratosphere in the tropics. Journal of Geophysical Research, 2005, 110, .	3.3	224
76	Control of interannual and longer-term variability of stratospheric water vapor. Journal of Geophysical Research, 2005, 110, .	3.3	174
77	Tropical troposphere-to-stratosphere transport inferred from trajectory calculations. Journal of Geophysical Research, 2004, 109, n/a-n/a.	3.3	188
78	Dehydration potential of ultrathin clouds at the tropical tropopause. Geophysical Research Letters, 2003, 30, .	4.0	54
79	Extreme NAT supersaturations in mountain wave ice PSCs: A clue to NAT formation. Journal of Geophysical Research, 2003, 108, .	3.3	55
80	Ultrathin Tropical Tropopause Clouds (UTTCs): II. Stabilization mechanisms. Atmospheric Chemistry and Physics, 2003, 3, 1093-1100.	4.9	34
81	Detailed modeling of mountain wave PSCs. Atmospheric Chemistry and Physics, 2003, 3, 697-712.	4.9	54
82	NAT-rock formation by mother clouds: a microphysical model study. Atmospheric Chemistry and Physics, 2002, 2, 93-98.	4.9	58
83	Large NAT particle formation by mother clouds: Analysis of SOLVE/THESEO-2000 observations. Geophysical Research Letters, 2002, 29, 52-1.	4.0	38
84	Mountain polar stratospheric cloud measurements by Ground Based FTIR Solar Absorption Spectroscopy. Geophysical Research Letters, 2001, 28, 2189-2192.	4.0	14