Stephan Fueglistaler

List of Publications by Year
in descending order

84 papers	4,746 citations	126708 33 h-index	114278 63 g-index
112 all docs	112 docs citations	112 times ranked	3893 citing authors

#	Article	IF	Citations
1	Tropical tropopause layer. Reviews of Geophysics, 2009, 47, .	9.0	827
2	Stratospheric aerosol-Observations, processes, and impact on climate. Reviews of Geophysics, 2016, 54, 278-335.	9.0	265
3	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
4	The impact of geoengineering aerosols on stratospheric temperature and ozone. Environmental Research Letters, 2009, 4, 045108.	2.2	199
5	Tropical troposphere-to-stratosphere transport inferred from trajectory calculations. Journal of Geophysical Research, 2004, 109, n/a-n/a.	3.3	188
6	Control of interannual and longer-term variability of stratospheric water vapor. Journal of Geophysical Research, 2005, 110, .	3.3	174
7	Regional dry-season climate changes due to three decades of Amazonian deforestation. Nature Climate Change, 2017, 7, 200-204.	8.1	165
8	Oxalic acid as a heterogeneous ice nucleus in the upper troposphere and its indirect aerosol effect. Atmospheric Chemistry and Physics, 2006, 6, 3115-3129.	1.9	145
9	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.	1.9	107
10	Technical Note: Chemistry-climate model SOCOL: version 2.0 with improved transport and chemistry/microphysics schemes. Atmospheric Chemistry and Physics, 2008, 8, 5957-5974.	1.9	105
11	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.	1.2	100
12	Water vapor transport and dehydration above convective outflow during Asian monsoon. Geophysical Research Letters, 2008, 35, .	1.5	93
13	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.	1.0	91
14	Large differences in reanalyses of diabatic heating in the tropical upper troposphere and lower stratosphere. Atmospheric Chemistry and Physics, 2013, 13, 9565-9576.	1.9	86
15	Impacts of Atmospheric Temperature Trends on Tropical Cyclone Activity. Journal of Climate, 2013, 26, 3877-3891.	1.2	83
16	Horizontal transport affecting trace gas seasonality in the Tropical Tropopause Layer (TTL). Journal of Geophysical Research, 2012, 117, .	3.3	80
17	The influence of summertime convection over Southeast Asia on water vapor in the tropical stratosphere. Journal of Geophysical Research, 2011, 116, .	3.3	76
18	Advectionâ€condensation paradigm for stratospheric water vapor. Journal of Geophysical Research, 2010, 115, .	3.3	75

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19	Insight from ozone and water vapour on transport in the tropical tropopause layer (TTL). Atmospheric Chemistry and Physics, 2011, 11, 407-419.	1.9	71
20	The relation between atmospheric humidity and temperature trends for stratospheric water. Journal of Geophysical Research D: Atmospheres, 2013, 118, 1052-1074.	1.2	62
21	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.	1.9	59
22	NAT-rock formation by mother clouds: a microphysical model study. Atmospheric Chemistry and Physics, 2002, 2, 93-98.	1.9	58
23	Effects of convective ice lofting on H₂O and HDO in the tropical tropopause layer. Journal of Geophysical Research, 2007, 112, .	3.3	58
24	Extreme NAT supersaturations in mountain wave ice PSCs: A clue to NAT formation. Journal of Geophysical Research, 2003, 108, .	3.3	55
25	Dehydration potential of ultrathin clouds at the tropical tropopause. Geophysical Research Letters, 2003, 30, .	1.5	54
26	Detailed modeling of mountain wave PSCs. Atmospheric Chemistry and Physics, 2003, 3, 697-712.	1.9	54
27	Projections of tropical heat stress constrained by atmospheric dynamics. Nature Geoscience, 2021, 14, 133-137.	5.4	54
28	The SCOUT-O3 Darwin Aircraft Campaign: rationale and meteorology. Atmospheric Chemistry and Physics, 2009, 9, 93-117.	1.9	53
29	Tropical dehydration processes constrained by the seasonality of stratospheric deuterated water. Nature Geoscience, 2010, 3, 262-266.	5.4	50
30	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.	1.2	48
31	Impact of clouds on radiative heating rates in the tropical lower stratosphere. Journal of Geophysical Research, 2006, 111, .	3.3	44
32	The annual cycle in lower stratospheric temperatures revisited. Atmospheric Chemistry and Physics, 2011, 11, 3701-3711.	1.9	41
33	Large NAT particle formation by mother clouds: Analysis of SOLVE/THESEO-2000 observations. Geophysical Research Letters, 2002, 29, 52-1.	1.5	38
34	Influence of tropospheric SO2emissions on particle formation and the stratospheric humidity. Geophysical Research Letters, 2005, 32, n/a-n/a.	1.5	38
35	Stepwise changes in stratospheric water vapor?. Journal of Geophysical Research, 2012, 117, .	3.3	37
36	Seasonal Prediction Skill of Northern Extratropical Surface Temperature Driven by the Stratosphere. Journal of Climate, 2017, 30, 4463-4475.	1.2	37

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37	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.	1.5	37
38	Ultrathin Tropical Tropopause Clouds (UTTCs): II. Stabilization mechanisms. Atmospheric Chemistry and Physics, 2003, 3, 1093-1100.	1.9	34
39	Tropical response to stratospheric sudden warmings and its modulation by the QBO. Journal of Geophysical Research D: Atmospheres, 2014, 119, 7382-7395.	1.2	34
40	A Low-Level Circulation in the Tropics. Journals of the Atmospheric Sciences, 2008, 65, 1019-1034.	0.6	28
41	Climate Impacts From Large Volcanic Eruptions in a Highâ€Resolution Climate Model: The Importance of Forcing Structure. Geophysical Research Letters, 2019, 46, 7690-7699.	1.5	28
42	Simple Spectral Models for Atmospheric Radiative Cooling. Journals of the Atmospheric Sciences, 2020, 77, 479-497.	0.6	28
43	Sensitivity of stratospheric Br_y to uncertainties in very short lived substance emissions and atmospheric transport. Atmospheric Chemistry and Physics, 2011, 11, 1379-1392.	1.9	27
44	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, .	3.3	27
45	Springtime arctic ozone depletion forces northern hemisphere climate anomalies. Nature Geoscience, 2022, 15, 541-547.	5.4	27
46	The importance of the tropical tropopause layer for equatorial Kelvin wave propagation. Journal of Geophysical Research D: Atmospheres, 2013, 118, 5160-5175.	1.2	25
47	Multitimescale variations in modeled stratospheric water vapor derived from three modern reanalysis products. Atmospheric Chemistry and Physics, 2019, 19, 6509-6534.	1.9	23
48	The distribution of precipitation and the spread in tropical upper tropospheric temperature trends in CMIP5/AMIP simulations. Geophysical Research Letters, 2015, 42, 6000-6007.	1.5	20
49	How Tropical Convection Couples High Moist Static Energy Over Land and Ocean. Geophysical Research Letters, 2020, 47, e2019GL086387.	1.5	20
50	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.	1.9	19
51	Maintenance of the Stratospheric Structure in an Idealized General Circulation Model. Journals of the Atmospheric Sciences, 2013, 70, 3341-3358.	0.6	19
52	Stratospheric sudden warmings in an idealized GCM. Journal of Geophysical Research D: Atmospheres, 2014, 119, 11,054.	1.2	19
53	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.	1.9	18
54	Mechanism for Increasing Tropical Rainfall Unevenness With Global Warming. Geophysical Research Letters, 2019, 46, 14836-14843.	1.5	18

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55	Kelvin waves and shear-flow turbulent mixing in the TTL in (re-)analysis data. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	17
56	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.	1.5	17
57	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.	1.2	17
58	Variability and trends in dynamical forcing of tropical lower stratospheric temperatures. Atmospheric Chemistry and Physics, 2014, 14, 13439-13453.	1.9	17
59	On the Controlling Factors for Globally Extreme Humid Heat. Geophysical Research Letters, 2021, 48, e2021GL096082.	1.5	17
60	Trend in ice moistening the stratosphere â€“ constraints from isotope data of water and methane. Atmospheric Chemistry and Physics, 2010, 10, 201-207.	1.9	15
61	Linearity of Outgoing Longwave Radiation: From an Atmospheric Column to Global Climate Models. Geophysical Research Letters, 2020, 47, e2020GL089235.	1.5	15
62	Mountain polar stratospheric cloud measurements by Ground Based FTIR Solar Absorption Spectroscopy. Geophysical Research Letters, 2001, 28, 2189-2192.	1.5	14
63	IGCM4: a fast, parallel and flexible intermediate climate model. Geoscientific Model Development, 2015, 8, 1157-1167.	1.3	14
64	On the Cooling-to-Space Approximation. Journals of the Atmospheric Sciences, 2020, 77, 465-478.	0.6	14
65	Cloud and Radiative Balance Changes in Response to ENSO in Observations and Models. Journal of Climate, 2014, 27, 3100-3113.	1.2	12
66	The Peculiar Trajectory of Global Warming. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033629.	1.2	12
67	Mechanism of Fast Atmospheric Energetic Equilibration Following Radiative Forcing by CO₂. Journal of Advances in Modeling Earth Systems, 2017, 9, 2468-2482.	1.3	11
68	A Satellite-Based Climatology of Central and Southeastern U.S. Mesoscale Convective Systems. Monthly Weather Review, 2020, 148, 2607-2621.	0.5	11
69	Tracking Kelvin waves from the equatorial troposphere into the stratosphere. Journal of Geophysical Research, 2012, 117, .	3.3	10
70	Changes in polar stratospheric temperature climatology in relation to stratospheric sudden warming occurrence. Geophysical Research Letters, 2012, 39, .	1.5	9
71	The Buffer Zone of the Quasi-Biennial Oscillation. Journals of the Atmospheric Sciences, 2019, 76, 3553-3567.	0.6	9
72	Statistical analysis of global variations of atmospheric relative humidity as observed by AIRS. Journal of Geophysical Research, 2012, 117, .	3.3	8

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73	Anomalous Dynamics of QBO Disruptions Explained by 1D Theory with External Triggering. Journals of the Atmospheric Sciences, 2021, 78, 373-383.	0.6	8
74	Vertical Mixing and the Temperature and Wind Structure of the Tropical Tropopause Layer. Journals of the Atmospheric Sciences, 2014, 71, 1609-1622.	0.6	7
75	Cirrus, Transport, and Mixing in the Tropical Upper Troposphere. Journals of the Atmospheric Sciences, 2014, 71, 1339-1352.	0.6	7
76	Mean-Flow Damping Forms the Buffer Zone of the Quasi-Biennial Oscillation: 1D Theory. Journals of the Atmospheric Sciences, 2020, 77, 1955-1967.	0.6	5
77	The El NiÃ±oâ€"Southern Oscillation Pattern Effect. Geophysical Research Letters, 2021, 48, e2021GL095261.	1.5	5
78	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.	1.3	3
79	Tropical Water Fluxes Dominated by Deep Convection Up to Near Tropopause Levels. Geophysical Research Letters, 2021, 48, e2020GL091471.	1.5	3
80	Large internal variability dominates over global warming signal in observed lower stratospheric QBO amplitude. Journal of Climate, 2021, , 1-43.	1.2	3
81	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.	0.6	1
82	Cause of the intense tropics-wide tropospheric warming in response to El NiÃ±o. Journal of Climate, 2022, , 1-30.	1.2	1
83	Geo-engineering side effects: Heating the tropical tropopause by sedimenting sulphur aerosol?. IOP Conference Series: Earth and Environmental Science, 2009, 6, 452017.	0.2	0
84	The role of largeâ€scale convective organization for tropical high cloud amount. Geophysical Research Letters, 2014, 41, 5259-5263.	1.5	0