Stephan Fueglistaler

List of Publications by Citations

88	3,765	32	60
papers	citations	h-index	g-index
112	4,260	6.2	5.52
ext. papers	ext. citations	avg, IF	L-index

#	Paper	IF	Citations
88	Tropical tropopause layer. *Reviews of Geophysics*, **2009**, 47,	23.1	701
87	Stratospheric water vapor predicted from the Lagrangian temperature history of air entering the stratosphere in the tropics. *Journal of Geophysical Research*, **2005**, 110,		192
86	Stratospheric aerosol Observations, processes, and impact on climate. *Reviews of Geophysics*, **2016**, 54, 278-335	23.1	179
85	The impact of geoengineering aerosols on stratospheric temperature and ozone. *Environmental Research Letters*, **2009**, 4, 045108	6.2	169
84	Tropical troposphere-to-stratosphere transport inferred from trajectory calculations. *Journal of Geophysical Research*, **2004**, 109, n/a-n/a		162
83	Control of interannual and longer-term variability of stratospheric water vapor. *Journal of Geophysical Research*, **2005**, 110,		148
82	Oxalic acid as a heterogeneous ice nucleus in the upper troposphere and its indirect aerosol effect. *Atmospheric Chemistry and Physics*, **2006**, 6, 3115-3129	6.8	121
81	Regional dry-season climate changes due to three decades of Amazonian deforestation. *Nature Climate Change*, **2017**, 7, 200-204	21.4	113
80	Technical Note: Chemistry-climate model SOCOL: version 2.0 with improved transport and chemistry/microphysics schemes. *Atmospheric Chemistry and Physics*, **2008**, 8, 5957-5974	6.8	92
79	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	6.8	89
78	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	4.4	84
77	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	6.4	83
76	Water vapor transport and dehydration above convective outflow during Asian monsoon. *Geophysical Research Letters*, **2008**, 35,	4.9	80
75	Impacts of Atmospheric Temperature Trends on Tropical Cyclone Activity. *Journal of Climate*, **2013**, 26, 3877-3891	4.4	75
74	Horizontal transport affecting trace gas seasonality in the Tropical Tropopause Layer (TTL). *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		72
73	Large differences in reanalyses of diabatic heating in the tropical upper troposphere and lower stratosphere. *Atmospheric Chemistry and Physics*, **2013**, 13, 9565-9576	6.8	70
72	The influence of summertime convection over Southeast Asia on water vapor in the tropical stratosphere. *Journal of Geophysical Research*, **2011**, 116,		66

71	Advection-condensation paradigm for stratospheric water vapor. *Journal of Geophysical Research*, **2010**, 115,		65
70	Insight from ozone and water vapour on transport in the tropical tropopause layer (TTL). *Atmospheric Chemistry and Physics*, **2011**, 11, 407-419	6.8	62
69	The relation between atmospheric humidity and temperature trends for stratospheric water. *Journal of Geophysical Research D: Atmospheres*, **2013**, 118, 1052-1074	4.4	54
68	Effects of convective ice lofting on H2O and HDO in the tropical tropopause layer. *Journal of Geophysical Research*, **2007**, 112,		51
67	NAT-rock formation by mother clouds: a microphysical model study. *Atmospheric Chemistry and Physics*, **2002**, 2, 93-98	6.8	48
66	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	6.8	47
65	Detailed modeling of mountain wave PSCs. *Atmospheric Chemistry and Physics*, **2003**, 3, 697-712	6.8	46
64	The SCOUT-O3 Darwin Aircraft Campaign: rationale and meteorology. *Atmospheric Chemistry and Physics*, **2009**, 9, 93-117	6.8	45
63	Tropical dehydration processes constrained by the seasonality of stratospheric deuterated water. *Nature Geoscience*, **2010**, 3, 262-266	18.3	44
62	Dehydration potential of ultrathin clouds at the tropical tropopause. *Geophysical Research Letters*, **2003**, 30,	4.9	44
61	Extreme NAT supersaturations in mountain wave ice PSCs: A clue to NAT formation. *Journal of Geophysical Research*, **2003**, 108,		44
60	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	4.4	41
59	Impact of clouds on radiative heating rates in the tropical lower stratosphere. *Journal of Geophysical Research*, **2006**, 111,		37
58	The annual cycle in lower stratospheric temperatures revisited. *Atmospheric Chemistry and Physics*, **2011**, 11, 3701-3711	6.8	36
57	Influence of tropospheric SO2 emissions on particle formation and the stratospheric humidity. *Geophysical Research Letters*, **2005**, 32, n/a-n/a	4.9	35
56	Stepwise changes in stratospheric water vapor?. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		30
55	Seasonal Prediction Skill of Northern Extratropical Surface Temperature Driven by the Stratosphere. *Journal of Climate*, **2017**, 30, 4463-4475	4.4	29
54	Tropical response to stratospheric sudden warmings and its modulation by the QBO. *Journal of Geophysical Research D: Atmospheres*, **2014**, 119, 7382-7395	4.4	28

53	Sensitivity of stratospheric Br_y to uncertainties in very short lived substance emissions and atmospheric transport. *Atmospheric Chemistry and Physics*, **2011**, 11, 1379-1392	6.8	24
52	Large NAT particle formation by mother clouds: Analysis of SOLVE/THESEO-2000 observations. *Geophysical Research Letters*, **2002**, 29, 52-1	4.9	24
51	A Low-Level Circulation in the Tropics. *Journals of the Atmospheric Sciences*, **2008**, 65, 1019-1034	2.1	23
50	Ultrathin Tropical Tropopause Clouds (UTTCs): II. Stabilization mechanisms. *Atmospheric Chemistry and Physics*, **2003**, 3, 1093-1100	6.8	23
49	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	4.9	22
48	The importance of the tropical tropopause layer for equatorial Kelvin wave propagation. *Journal of Geophysical Research D: Atmospheres*, **2013**, 118, 5160-5175	4.4	18
47	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	6.8	18
46	Multitimescale variations in modeled stratospheric water vapor derived from three modern reanalysis products. *Atmospheric Chemistry and Physics*, **2019**, 19, 6509-6534	6.8	16
45	Projections of tropical heat stress constrained by atmospheric dynamics. *Nature Geoscience*, **2021**, 14, 133-137	18.3	16
44	Climate Impacts From Large Volcanic Eruptions in a High-Resolution Climate Model: The Importance of Forcing Structure. *Geophysical Research Letters*, **2019**, 46, 7690-7699	4.9	15
43	Stratospheric sudden warmings in an idealized GCM. *Journal of Geophysical Research D: Atmospheres*, **2014**, 119, 11,054-11,064	4.4	15
42	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	4.4	14
41	Cirrus and water vapour transport in the tropical tropopause layer –Part 2: Roles of ice nucleation and sedimentation, cloud dynamics, and moisture conditions. *Atmospheric Chemistry and Physics*, **2014**, 14, 12225-12236	6.8	14
40	Maintenance of the Stratospheric Structure in an Idealized General Circulation Model. *Journals of the Atmospheric Sciences*, **2013**, 70, 3341-3358	2.1	14
39	The distribution of precipitation and the spread in tropical upper tropospheric temperature trends in CMIP5/AMIP simulations. *Geophysical Research Letters*, **2015**, 42, 6000-6007	4.9	13
38	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	4.9	13
37	Kelvin waves and shear-flow turbulent mixing in the TTL in (re-)analysis data. *Geophysical Research Letters*, **2011**, 38, n/a-n/a	4.9	13
36	Trend in ice moistening the stratosphere –constraints from isotope data of water and methane. *Atmospheric Chemistry and Physics*, **2010**, 10, 201-207	6.8	13

35	Simple Spectral Models for Atmospheric Radiative Cooling. *Journals of the Atmospheric Sciences*, **2020**, 77, 479-497	2.1	13
34	Cloud and Radiative Balance Changes in Response to ENSO in Observations and Models. *Journal of Climate*, **2014**, 27, 3100-3113	4.4	11
33	Variability and trends in dynamical forcing of tropical lower stratospheric temperatures. *Atmospheric Chemistry and Physics*, **2014**, 14, 13439-13453	6.8	11
32	Mountain polar stratospheric cloud measurements by Ground Based FTIR Solar Absorption Spectroscopy. *Geophysical Research Letters*, **2001**, 28, 2189-2192	4.9	11
31	IGCM4: a fast, parallel and flexible intermediate climate model. *Geoscientific Model Development*, **2015**, 8, 1157-1167	6.3	10
30	Natural variability contributes to model-satellite differences in tropical tropospheric warming. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	10
29	Mechanism for Increasing Tropical Rainfall Unevenness With Global Warming. *Geophysical Research Letters*, **2019**, 46, 14836-14843	4.9	10
28	How Tropical Convection Couples High Moist Static Energy Over Land and Ocean. *Geophysical Research Letters*, **2020**, 47, e2019GL086387	4.9	9
27	Mechanism of Fast Atmospheric Energetic Equilibration Following Radiative Forcing by CO2. *Journal of Advances in Modeling Earth Systems*, **2017**, 9, 2468-2482	7.1	8
26	Tracking Kelvin waves from the equatorial troposphere into the stratosphere. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		8
25	Changes in polar stratospheric temperature climatology in relation to stratospheric sudden warming occurrence. *Geophysical Research Letters*, **2012**, 39, n/a-n/a	4.9	8
24	Linearity of Outgoing Longwave Radiation: From an Atmospheric Column to Global Climate Models. *Geophysical Research Letters*, **2020**, 47, e2020GL089235	4.9	8
23	Vertical Mixing and the Temperature and Wind Structure of the Tropical Tropopause Layer. *Journals of the Atmospheric Sciences*, **2014**, 71, 1609-1622	2.1	6
22	Cirrus, Transport, and Mixing in the Tropical Upper Troposphere. *Journals of the Atmospheric Sciences*, **2014**, 71, 1339-1352	2.1	6
21	Statistical analysis of global variations of atmospheric relative humidity as observed by AIRS. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		6
20	The Buffer Zone of the Quasi-Biennial Oscillation. *Journals of the Atmospheric Sciences*, **2019**, 76, 3553-3567	2.1	6
19	On the Cooling-to-Space Approximation. *Journals of the Atmospheric Sciences*, **2020**, 77, 465-478	2.1	5
18	Mean-Flow Damping Forms the Buffer Zone of the Quasi-Biennial Oscillation: 1D Theory. *Journals of the Atmospheric Sciences*, **2020**, 77, 1955-1967	2.1	3

17	A climatological perspective of deep convection penetrating the TTL during the Indian summer monsoon from the AVHRR and MODIS instruments		3
16	Large differences in the diabatic heat budget of the tropical UTLS in reanalyses		3
15	A Satellite-Based Climatology of Central and Southeastern U.S. Mesoscale Convective Systems. *Monthly Weather Review*, **2020**, 148, 2607-2621	2.4	3
14	The Peculiar Trajectory of Global Warming. *Journal of Geophysical Research D: Atmospheres*, **2021**, 126, e2020JD033629	4.4	3
13	On the Controlling Factors for Globally Extreme Humid Heat. *Geophysical Research Letters*, **2021**, 48, e2021GL096082	4.9	2
12	Large internal variability dominates over global warming signal in observed lower stratospheric QBO amplitude. *Journal of Climate*, **2021**, 1-43	4.4	2
11	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	7.1	2
10	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	2.1	1
9	A modelling study of moisture redistribution by thin cirrus clouds		1
8	Variability and trends in dynamical forcing of tropical lower stratospheric temperatures		1
7	IGCM4: a fast, parallel and flexible intermediate climate model		1
6	The El Ni�Southern Oscillation Pattern Effect. *Geophysical Research Letters*, **2021**, 48, e2021GL095261	4.9	1
5	Anomalous Dynamics of QBO Disruptions Explained by 1D Theory with External Triggering. *Journals of the Atmospheric Sciences*, **2021**, 78, 373-383	2.1	1
4	Tropical Water Fluxes Dominated by Deep Convection Up to Near Tropopause Levels. *Geophysical Research Letters*, **2021**, 48, e2020GL091471	4.9	1
3	The role of large-scale convective organization for tropical high cloud amount. *Geophysical Research Letters*, **2014**, 41, 5259-5263	4.9	
2	Geo-engineering side effects: Heating the tropical tropopause by sedimenting sulphur aerosol?. *IOP Conference Series: Earth and Environmental Science*, **2009**, 6, 452017	0.3	
1	Cause of the intense tropics-wide tropospheric warming in response to El Ni�. *Journal of Climate*, **2022**, 1-30	4.4	