Leonhard Pfister

List of Publications by Year
in descending order

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43 papers	2,081 citations	218381 26 h-index	276539 41 g-index
45 all docs	45 docs citations	45 times ranked	1567 citing authors

#	Article	IF	Citations
1	Transport and freeze-drying in the tropical tropopause layer. Journal of Geophysical Research, 2004, 109, .	3.3	228
2	Aerosol composition of the tropical upper troposphere. Atmospheric Chemistry and Physics, 2009, 9, 4363-4385.	1.9	159
3	Aircraft measurements of microphysical properties of subvisible cirrus in the tropical tropopause layer. Atmospheric Chemistry and Physics, 2008, 8, 1609-1620.	1.9	126
4	Aircraft observations of thin cirrus clouds near the tropical tropopause. Journal of Geophysical Research, 2001, 106, 9765-9786.	3.3	122
5	Ice nucleation and dehydration in the Tropical Tropopause Layer. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 2041-2046.	3.3	113
6	Ice nucleation and cloud microphysical properties in tropical tropopause layer cirrus. Atmospheric Chemistry and Physics, 2010, 10, 1369-1384.	1.9	107
7	A conceptual model of the dehydration of air due to freeze-drying by optically thin, laminar cirrus rising slowly across the tropical tropopause. Journal of Geophysical Research, 2001, 106, 17237-17252.	3.3	101
8	Mesoscale Disturbances in the Tropical Stratosphere Excited by Convection: Observations and Effects on the Stratospheric Momentum Budget. Journals of the Atmospheric Sciences, 1993, 50, 1058-1075.	0.6	92
9	Seasonal differences of verticalâ€transport efficiency in the tropical tropopause layer: On the interplay between tropical deep convection, largeâ€scale vertical ascent, and horizontal circulations. Journal of Geophysical Research, 2012, 117, .	3.3	80
10	The NASA Airborne Tropical Tropopause Experiment: High-Altitude Aircraft Measurements in the Tropical Western Pacific. Bulletin of the American Meteorological Society, 2017, 98, 129-143.	1.7	79
11	Formation of large (â‰ƒ100 Î¼m) ice crystals near the tropical tropopause. Atmospheric Chemistry and Physics, 2008, 8, 1621-1633.	1.9	69
12	Influence of convection on the water isotopic composition of the tropical tropopause layer and tropical stratosphere. Journal of Geophysical Research, 2010, 115, .	3.3	55
13	Dynamical, convective, and microphysical control on wintertime distributions of water vapor and clouds in the tropical tropopause layer. Journal of Geophysical Research D: Atmospheres, 2015, 120, 10,483.	1.2	53
14	Convective Influence on the Humidity and Clouds in the Tropical Tropopause Layer During Boreal Summer. Journal of Geophysical Research D: Atmospheres, 2018, 123, 7576-7593.	1.2	52
15	Physical processes controlling ice concentrations in synoptically forced, midlatitude cirrus. Journal of Geophysical Research D: Atmospheres, 2013, 118, 5348-5360.	1.2	51
16	High humidities and subvisible cirrus near the tropical tropopause. Geophysical Research Letters, 1999, 26, 2347-2350.	1.5	46
17	Detailed structure of the tropical upper troposphere and lower stratosphere as revealed by balloon sonde observations of water vapor, ozone, temperature, and winds during the NASA TCSP and TC4 campaigns. Journal of Geophysical Research, 2010, 115, .	3.3	46
18	Impact of radiative heating, wind shear, temperature variability, and microphysical processes on the structure and evolution of thin cirrus in the tropical tropopause layer. Journal of Geophysical Research, 2011, 116, .	3.3	42

#	Article	IF	Citations
19	Ubiquitous influence of waves on tropical high cirrus clouds. Geophysical Research Letters, 2016, 43, 5895-5901.	1.5	42
20	Highâ€frequency gravity waves and homogeneous ice nucleation in tropical tropopause layer cirrus. Geophysical Research Letters, 2016, 43, 6629-6635.	1.5	39
21	Convective Hydration of the Upper Troposphere and Lower Stratosphere. Journal of Geophysical Research D: Atmospheres, 2018, 123, 4583-4593.	1.2	39
22	A meteorological overview of the TC4 mission. Journal of Geophysical Research, 2010, 115, .	3.3	35
23	Microphysical Properties of Tropical Tropopause Layer Cirrus. Journal of Geophysical Research D: Atmospheres, 2018, 123, 6053-6069.	1.2	35
24	Water Vapor, Clouds, and Saturation in the Tropical Tropopause Layer. Journal of Geophysical Research D: Atmospheres, 2019, 124, 3984-4003.	1.2	34
25	Physical processes controlling ice concentrations in cold cirrus near the tropical tropopause. Journal of Geophysical Research, 2012, 117, .	3.3	33
26	Dehydration in the tropical tropopause layer: A case study for model evaluation using aircraft observations. Journal of Geophysical Research D: Atmospheres, 2014, 119, 5299-5316.	1.2	28
27	On the Susceptibility of Cold Tropical Cirrus to Ice Nuclei Abundance. Journals of the Atmospheric Sciences, 2016, 73, 2445-2464.	0.6	28
28	Implications of persistent ice supersaturation in cold cirrus for stratospheric water vapor. Geophysical Research Letters, 2005, 32, .	1.5	27
29	Small-Scale Wind Fluctuations in the Tropical Tropopause Layer from Aircraft Measurements: Occurrence, Nature, and Impact on Vertical Mixing. Journals of the Atmospheric Sciences, 2017, 74, 3847-3869.	0.6	23
30	Physical processes controlling the spatial distributions of relative humidity in the tropical tropopause layer over the Pacific. Journal of Geophysical Research D: Atmospheres, 2017, 122, 6094-6107.	1.2	20
31	Heterogeneous Ice Nucleation in the Tropical Tropopause Layer. Journal of Geophysical Research D: Atmospheres, 2018, 123, 12,210.	1.2	16
32	Investigation of the transport processes controlling the geographic distribution of carbon monoxide at the tropical tropopause. Journal of Geophysical Research D: Atmospheres, 2015, 120, 2067-2086.	1.2	10
33	Impact of Convectively Detrained Ice Crystals on the Humidity of the Tropical Tropopause Layer in Boreal Winter. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2020JD032894.	1.2	9
34	Identifying robust transport features of the upper tropical troposphere. Journal of Geophysical Research D: Atmospheres, 2015, 120, 6758-6776.	1.2	7
35	Air parcel trajectory dispersion near the tropical tropopause. Journal of Geophysical Research D: Atmospheres, 2016, 121, 3759-3775.	1.2	7
36	Erythemal Radiation, Column Ozone, and the North American Monsoon. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD032283.	1.2	7

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37	Observational Evidence of Horizontal Transportâ€Driven Dehydration in the TTL. Geophysical Research Letters, 2019, 46, 7848-7856.	1.5	6
38	Diagnostics of Convective Transport Over the Tropical Western Pacific From Trajectory Analyses. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD034341.	1.2	5
39	Ash Particles Detected in the Tropical Lower Stratosphere. Geophysical Research Letters, 2018, 45, 11,483.	1.5	4
40	An Evaluation of the Representation of Tropical Tropopause Cirrus in the CESM/CARMA Model Using Satellite and Aircraft Observations. Journal of Geophysical Research D: Atmospheres, 2019, 124, 8659-8687.	1.2	4
41	Analyzing dynamical circulations in the tropical tropopause layer through empirical predictions of cirrus cloud distributions. Journal of Geophysical Research D: Atmospheres, 2014, 119, 2831-2845.	1.2	1
42	Long-range transport of Asian emissions to the West Pacific tropical tropopause layer. Journal of Atmospheric Chemistry, 0, , 1.	1.4	1
43	The viability of trajectory analysis for diagnosing dynamical and chemical influences on ozone concentrations in the UTLS. Journal of Geophysical Research D: Atmospheres, 2017, 122, 6025-6042.	1.2	0