Heini Wernli

List of Publications by Year
in descending order

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227 papers	15,826 citations	13087 68 h-index	22808 112 g-index
326 all docs	326 docs citations	326 times ranked	9610 citing authors

#	Article	IF	Citations
1	A Lagrangianâ€based analysis of extratropical cyclones. I: The method and some applications. Quarterly Journal of the Royal Meteorological Society, 1997, 123, 467-489.	1.0	564
2	Stratosphere-troposphere exchange: A review, and what we have learned from STACCATO. Journal of Geophysical Research, 2003, 108, .	3.3	413
3	IMILAST: A Community Effort to Intercompare Extratropical Cyclone Detection and Tracking Algorithms. Bulletin of the American Meteorological Society, 2013, 94, 529-547.	1.7	391
4	Surface Cyclones in the ERA-40 Dataset (1958â€“2001). Part I: Novel Identification Method and Global Climatology. Journals of the Atmospheric Sciences, 2006, 63, 2486-2507.	0.6	359
5	Aerosol- and updraft-limited regimes of cloud droplet formation: influence of particle number, size and hygroscopicity on the activation of cloud condensation nuclei (CCN). Atmospheric Chemistry and Physics, 2009, 9, 7067-7080.	1.9	305
6	The LAGRANTO Lagrangian analysis tool â€“ version 2.0. Geoscientific Model Development, 2015, 8, 2569-2586.	1.3	298
7	Interannual variability of Greenland winter precipitation sources: Lagrangian moisture diagnostic and North Atlantic Oscillation influence. Journal of Geophysical Research, 2008, 113, .	3.3	289
8	SALâ€”A Novel Quality Measure for the Verification of Quantitative Precipitation Forecasts. Monthly Weather Review, 2008, 136, 4470-4487.	0.5	289
9	HyMeX: A 10-Year Multidisciplinary Program on the Mediterranean Water Cycle. Bulletin of the American Meteorological Society, 2014, 95, 1063-1082.	1.7	288
10	A 15-Year Climatology of Warm Conveyor Belts. Journal of Climate, 2004, 17, 218-237.	1.2	267
11	Quantifying the Relevance of Cyclones for Precipitation Extremes. Journal of Climate, 2012, 25, 6770-6780.	1.2	249
12	Balancing Europeâ€™s wind-power output through spatial deployment informed by weather regimes. Nature Climate Change, 2017, 7, 557-562.	8.1	236
13	Warm Conveyor Belts in the ERA-Interim Dataset (1979â€“2010). Part I: Climatology and Potential Vorticity Evolution. Journal of Climate, 2014, 27, 3-26.	1.2	226
14	Quantifying the relevance of atmospheric blocking for coâ€located temperature extremes in the Northern Hemisphere on (subâ€)daily time scales. Geophysical Research Letters, 2012, 39, .	1.5	224
15	A global climatology of stratosphereâ€“troposphere exchange using the ERA-Interim data set from 1979 to 2011. Atmospheric Chemistry and Physics, 2014, 14, 913-937.	1.9	222
16	A northern hemispheric climatology of cross-tropopause exchange for the ERA15 time period (1979â€“1993). Journal of Geophysical Research, 2003, 108, .	3.3	219
17	Dynamical aspects of the life cycle of the winter storm 'Lothar' (24â€“26 December 1999). Quarterly Journal of the Royal Meteorological Society, 2002, 128, 405-429.	1.0	206
18	A Lagrangianâ€based analysis of extratropical cyclones. II: A detailed caseâ€study. Quarterly Journal of the Royal Meteorological Society, 1997, 123, 1677-1706.	1.0	195

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19	Isotope composition of air moisture over the Mediterranean Sea: an index of the air-sea interaction pattern. Tellus, Series B: Chemical and Physical Meteorology, 2003, 55, 953-965.	0.8	193
20	Heavy precipitation on the alpine southside: An upper-level precursor. Geophysical Research Letters, 1998, 25, 1435-1438.	1.5	191
21	Tropical troposphere-to-stratosphere transport inferred from trajectory calculations. Journal of Geophysical Research, 2004, 109, n/a-n/a.	3.3	188
22	Northern Hemisphere Extratropical Cyclones: A Comparison of Detection and Tracking Methods and Different Reanalyses. Monthly Weather Review, 2008, 136, 880-897.	0.5	186
23	A Lagrangian Climatology of Tropical Moisture Exports to the Northern Hemispheric Extratropics. Journal of Climate, 2010, 23, 987-1003.	1.2	186
24	Importance of latent heat release in ascending air streams for atmospheric blocking. Nature Geoscience, 2015, 8, 610-614.	5.4	183
25	The Convective and Orographicallyâ€induced Precipitation Study (COPS): the scientific strategy, the field phase, and research highlights. Quarterly Journal of the Royal Meteorological Society, 2011, 137, 3-30.	1.0	181
26	Identification and ERA-15 Climatology of Potential Vorticity Streamers and Cutoffs near the Extratropical Tropopause. Journals of the Atmospheric Sciences, 2007, 64, 1569-1586.	0.6	179
27	The key role of diabatic processes in modifying the upperâ€tropospheric wave guide: a North Atlantic caseâ€study. Quarterly Journal of the Royal Meteorological Society, 2011, 137, 2174-2193.	1.0	177
28	Tropopause folds and cross-tropopause exchange: A global investigation based upon ECMWF analyses for the time period March 2000 to February 2001. Journal of Geophysical Research, 2003, 108, .	3.3	161
29	Seasonality and extent of extratropical TST derived from in-situ CO measurements during SPURT. Atmospheric Chemistry and Physics, 2004, 4, 1427-1442.	1.9	152
30	Warm Conveyor Belts in the ERA-Interim Dataset (1979â€“2010). Part II: Moisture Origin and Relevance for Precipitation. Journal of Climate, 2014, 27, 27-40.	1.2	150
31	A Lagrangian â€œ1-year climatologyâ€•of (deep) cross-tropopause exchange in the extratropical Northern Hemisphere. Journal of Geophysical Research, 2002, 107, ACL 13-1.	3.3	143
32	An event-based jet-stream climatology and typology. International Journal of Climatology, 2006, 26, 283-301.	1.5	143
33	Deuterium excess as a proxy for continental moisture recycling and plant transpiration. Atmospheric Chemistry and Physics, 2014, 14, 4029-4054.	1.9	138
34	Air parcel trajectory analysis of stable isotopes in water vapor in the eastern Mediterranean. Journal of Geophysical Research, 2008, 113, .	3.3	133
35	A New Perspective of Stratosphereâ€“Troposphere Exchange. Bulletin of the American Meteorological Society, 2003, 84, 1565-1574.	1.7	132
36	Strong influence of lowermost stratospheric ozone on lower tropospheric background ozone changes over Europe. Geophysical Research Letters, 2007, 34, .	1.5	128

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37	The Palette of Fronts and Cyclones within a Baroclinic Wave Development. Journals of the Atmospheric Sciences, 1991, 48, 1666-1689.	0.6	124
38	An intercomparison of results from three trajectory models. Meteorological Applications, 2001, 8, 127-135.	0.9	121
39	Influence of microphysical processes on the potential vorticity development in a warm conveyor belt: a caseâ€study with the limitedâ€area model COSMO. Quarterly Journal of the Royal Meteorological Society, 2012, 138, 407-418.	1.0	121
40	The role of upperâ€level dynamics and surface processes for the Pakistan flood of July 2010. Quarterly Journal of the Royal Meteorological Society, 2013, 139, 1780-1797.	1.0	118
41	Measuring variations of Î´¹⁸O and Î´²H in atmospheric water vapour using two commercial laser-based spectrometers: an instrument characterisation study. Atmospheric Measurement Techniques, 2012, 5, 1491-1511.	1.2	116
42	Observations of meteoric material and implications for aerosol nucleation in the winter Arctic lower stratosphere derived from in situ particle measurements. Atmospheric Chemistry and Physics, 2005, 5, 3053-3069.	1.9	113
43	Interannual variability of Greenland winter precipitation sources: 2. Effects of North Atlantic Oscillation variability on stable isotopes in precipitation. Journal of Geophysical Research, 2008, 113, .	3.3	113
44	Atmospheric processes triggering the central European floods in June 2013. Natural Hazards and Earth System Sciences, 2014, 14, 1691-1702.	1.5	111
45	Global Climatologies of Eulerian and Lagrangian Flow Features based on ERA-Interim. Bulletin of the American Meteorological Society, 2017, 98, 1739-1748.	1.7	108
46	ML-CIRRUS: The Airborne Experiment on Natural Cirrus and Contrail Cirrus with the High-Altitude Long-Range Research Aircraft HALO. Bulletin of the American Meteorological Society, 2017, 98, 271-288.	1.7	107
47	Atmospheric Rivers Emerge as a Global Science and Applications Focus. Bulletin of the American Meteorological Society, 2017, 98, 1969-1973.	1.7	106
48	The North Atlantic Waveguide and Downstream Impact Experiment. Bulletin of the American Meteorological Society, 2018, 99, 1607-1637.	1.7	105
49	Kilometer-Scale Climate Models: Prospects and Challenges. Bulletin of the American Meteorological Society, 2020, 101, E567-E587.	1.7	96
50	A Lagrangian investigation of hot and cold temperature extremes in Europe. Quarterly Journal of the Royal Meteorological Society, 2015, 141, 98-108.	1.0	92
51	Largeâ€scale wind and precipitation extremes in the Mediterranean: a climatological analysis for 1979â€“2012. Quarterly Journal of the Royal Meteorological Society, 2015, 141, 2404-2417.	1.0	92
52	Tropopause folds in ERAâ€Interim: Global climatology and relation to extreme weather events. Journal of Geophysical Research D: Atmospheres, 2015, 120, 4860-4877.	1.2	89
53	The Role of Warm Conveyor Belts for the Intensification of Extratropical Cyclones in Northern Hemisphere Winter. Journals of the Atmospheric Sciences, 2016, 73, 3997-4020.	0.6	89
54	A PV Perspective on the Vertical Structure of Mature Midlatitude Cyclones in the Northern Hemisphere. Journals of the Atmospheric Sciences, 2012, 69, 725-740.	0.6	87

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55	Highly resolved observations of trace gases in the lowermost stratosphere and upper troposphere from the Spurt project: an overview. Atmospheric Chemistry and Physics, 2006, 6, 283-301.	1.9	86
56	Forecasted deep stratospheric intrusions over Central Europe: case studies and climatologies. Atmospheric Chemistry and Physics, 2010, 10, 499-524.	1.9	85
57	Role of polar anticyclones and mid-latitude cyclones for Arctic summertime sea-ice melting. Nature Geoscience, 2018, 11, 108-113.	5.4	84
58	Processes determining heat waves across different European climates. Quarterly Journal of the Royal Meteorological Society, 2019, 145, 2973-2989.	1.0	84
59	Stratosphereâ€“Troposphere Exchange and Its Relation to Potential Vorticity Streamers and Cutoffs near the Extratropical Tropopause. Journals of the Atmospheric Sciences, 2007, 64, 1587-1602.	0.6	83
60	The importance of stratosphericâ€“tropospheric transport in affecting surface ozone concentrations in the western and northern tier of the United States. Atmospheric Environment, 2011, 45, 4845-4857.	1.9	83
61	The isotopic composition of precipitation from a winter storm â€“ a case study with the limited-area model COSMO_{iso}. Atmospheric Chemistry and Physics, 2012, 12, 1629-1648.	1.9	83
62	A Climatology of Cold Air Outbreaks and Their Impact on Airâ€“Sea Heat Fluxes in the High-Latitude South Pacific. Journal of Climate, 2015, 28, 342-364.	1.2	81
63	Influence of Upstream Diabatic Heating upon an Alpine Event of Heavy Precipitation. Monthly Weather Review, 2001, 129, 2822-2828.	0.5	80
64	A Global Climatology of Tropical Moisture Exports. Journal of Climate, 2013, 26, 3031-3045.	1.2	78
65	Are Greenhouse Gas Signals of Northern Hemisphere winter extra-tropical cyclone activity dependent on the identification and tracking algorithm?. Meteorologische Zeitschrift, 2013, 22, 61-68.	0.5	77
66	Sources of water vapour contributing to the Elbe flood in August 2002â€”A tagging study in a mesoscale model. Quarterly Journal of the Royal Meteorological Society, 2009, 135, 205-223.	1.0	76
67	Warm Conveyor Belts in Idealized Moist Baroclinic Wave Simulations. Journals of the Atmospheric Sciences, 2013, 70, 627-652.	0.6	75
68	Estimates of background surface ozone concentrations in the United States based on model-derived source apportionment. Atmospheric Environment, 2014, 84, 275-288.	1.9	73
69	Climate impacts of European-scale anthropogenic vegetation changes: A sensitivity study using a regional climate model. Journal of Geophysical Research, 2001, 106, 7817-7835.	3.3	72
70	The transport history of two Saharan dust events archived in an Alpine ice core. Atmospheric Chemistry and Physics, 2006, 6, 667-688.	1.9	72
71	Overview of the Antarctic Circumnavigation Expedition: Study of Preindustrial-like Aerosols and Their Climate Effects (ACE-SPACE). Bulletin of the American Meteorological Society, 2019, 100, 2260-2283.	1.7	71
72	Isotope meteorology of cold front passages: A case study combining observations and modeling. Geophysical Research Letters, 2015, 42, 5652-5660.	1.5	70

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73	The Milan photooxidant plume. Journal of Geophysical Research, 1997, 102, 23375-23388.	3.3	69
74	Growth and Decay of an Extra-Tropical Cyclone's PV-Tower. Meteorology and Atmospheric Physics, 2000, 73, 139-156.	0.9	69
75	The Role of Extratropical Cyclones and Fronts for Southern Ocean Freshwater Fluxes. Journal of Climate, 2014, 27, 6205-6224.	1.2	69
76	The dynamical structure of intense Mediterranean cyclones. Climate Dynamics, 2015, 44, 2411-2427.	1.7	69
77	Tracing troposphere-to-stratosphere transport above a mid-latitude deep convective system. Atmospheric Chemistry and Physics, 2004, 4, 741-756.	1.9	68
78	A new interpretative framework for below-cloud effects on stable water isotopes in vapour and rain. Atmospheric Chemistry and Physics, 2019, 19, 747-765.	1.9	66
79	A novel model to predict the physical state of atmospheric H₂SO₄/NH₃ aerosol particles. Atmospheric Chemistry and Physics, 2003, 3, 909-924.	1.9	63
80	Identification and Climatology of Cutâ€off Lows near the Tropopause. Annals of the New York Academy of Sciences, 2008, 1146, 256-290.	1.8	63
81	A case study on the formation and evolution of ice supersaturation in the vicinity of a warm conveyor belt's outflow region. Atmospheric Chemistry and Physics, 2005, 5, 973-987.	1.9	62
82	Quantifying the importance of stratospheric-tropospheric transport on surface ozone concentrations at high- and low-elevation monitoring sites in the United States. Atmospheric Environment, 2012, 62, 646-656.	1.9	59
83	Impact of North Atlantic evaporation hot spots on southern Alpine heavy precipitation events. Quarterly Journal of the Royal Meteorological Society, 2012, 138, 1245-1258.	1.0	59
84	On the linkage between the Asian summer monsoon and tropopause fold activity over the eastern Mediterranean and the Middle East. Journal of Geophysical Research D: Atmospheres, 2014, 119, 3202-3221.	1.2	59
85	Nitrogen oxides and ozone in the tropopause region of the northern hemisphere: Measurements from commercial aircraft in 1995/1996 and 1997. Journal of Geophysical Research, 2001, 106, 27673-27699.	3.3	58
86	Spatial Forecast Verification Methods Intercomparison Project: Application of the SAL Technique. Weather and Forecasting, 2009, 24, 1472-1484.	0.5	57
87	Forecast, observation and modelling of a deep stratospheric intrusion event over Europe. Atmospheric Chemistry and Physics, 2003, 3, 763-777.	1.9	56
88	Structure and evolution of an isolated semi-geostrophic cyclone. Quarterly Journal of the Royal Meteorological Society, 1993, 119, 57-90.	1.0	55
89	Stratosphere-troposphere exchange: A model and method intercomparison. Journal of Geophysical Research, 2003, 108, .	3.3	55
90	Enhanced ozone over western North America from biomass burning in Eurasia during April 2008 as seen in surface and profile observations. Atmospheric Environment, 2010, 44, 4497-4509.	1.9	55

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91	How important is intensified evaporation for Mediterranean precipitation extremes?. Journal of Geophysical Research D: Atmospheres, 2014, 119, 5240-5256.	1.2	55
92	Comparison of Eulerian and Lagrangian moisture source diagnostics â€“ the flood event in eastern Europe in May 2010. Atmospheric Chemistry and Physics, 2014, 14, 6605-6619.	1.9	55
93	Dehydration potential of ultrathin clouds at the tropical tropopause. Geophysical Research Letters, 2003, 30, .	1.5	54
94	Detailed modeling of mountain wave PSCs. Atmospheric Chemistry and Physics, 2003, 3, 697-712.	1.9	54
95	The stable isotopic composition of water vapour above Corsica during the HyMeX SOP1 campaign: insight into vertical mixingÂprocesses from lower-tropospheric survey flights. Atmospheric Chemistry and Physics, 2017, 17, 6125-6151.	1.9	52
96	A Planetary-Scale to Mesoscale Perspective of the Life Cycles of Extratropical Cyclones: The Bridge between Theory and Observations. , 1999, , 139-185.		52
97	Seasonal cycles and variability of O₃ and H₂O in the UT/LMS during SPURT. Atmospheric Chemistry and Physics, 2006, 6, 109-125.	1.9	48
98	A complex case study of down to the surface intrusions of persistent stratospheric air over the Eastern Mediterranean. Atmospheric Environment, 2006, 40, 4113-4125.	1.9	48
99	An online trajectory module (version 1.0) for the nonhydrostatic numerical weather prediction model COSMO. Geoscientific Model Development, 2013, 6, 1989-2004.	1.3	48
100	Exceptional Air Mass Transport and Dynamical Drivers of an Extreme Wintertime Arctic Warm Event. Geophysical Research Letters, 2017, 44, 12,028.	1.5	48
101	Lagrangian simulations of stable isotopes in water vapor: An evaluation of nonequilibrium fractionation in the Craigâ€Gordon model. Journal of Geophysical Research, 2009, 114, .	3.3	47
102	A trajectoryâ€based classification of ERAâ€Interim ice clouds in the region of the North Atlantic storm track. Geophysical Research Letters, 2016, 43, 6657-6664.	1.5	47
103	Observations of stratosphere-to-troposphere transport events over the eastern Mediterranean using a ground-based lidar system. Journal of Geophysical Research, 2003, 108, .	3.3	46
104	The dichotomous structure of the warm conveyor belt. Quarterly Journal of the Royal Meteorological Society, 2014, 140, 1809-1824.	1.0	45
105	An evaluation of the convectionâ€permitting ensemble COSMOâ€E for three contrasting precipitation events in Switzerland. Quarterly Journal of the Royal Meteorological Society, 2018, 144, 744-764.	1.0	45
106	A composite study on the structure and formation of ozone miniholes and minihighs over central Europe. Geophysical Research Letters, 2005, 32, n/a-n/a.	1.5	44
107	Transport timescales and tracer properties in the extratropical UTLS. Atmospheric Chemistry and Physics, 2010, 10, 7929-7944.	1.9	44
108	Classification of precipitation events with a convective response timescale and their forecasting characteristics. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	44

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109	The Linkage between the Warm and the Cold Conveyor Belts in an Idealized Extratropical Cyclone*. Journals of the Atmospheric Sciences, 2014, 71, 1443-1459.	0.6	44
110	A gridded dataset of hourly precipitation in Germany: Its construction, climatology and application. Meteorologische Zeitschrift, 2008, 17, 719-732.	0.5	43
111	The Effect of Barotropic Shear on Upper-Level Induced Cyclogenesis: Semigeostrophic and Primitive Equation Numerical Simulations. Journals of the Atmospheric Sciences, 1998, 55, 2080-2094.	0.6	42
112	Convective activity in an extratropical cyclone and its warm conveyor belt â€“ a caseâ€study combining observations and a convectionâ€permitting model simulation. Quarterly Journal of the Royal Meteorological Society, 2019, 145, 1406-1426.	1.0	41
113	Largeâ€scale wind and precipitation extremes in the Mediterranean: dynamical aspects of five selected cyclone events. Quarterly Journal of the Royal Meteorological Society, 2016, 142, 3097-3114.	1.0	39
114	Large NAT particle formation by mother clouds: Analysis of SOLVE/THESEO-2000 observations. Geophysical Research Letters, 2002, 29, 52-1.	1.5	38
115	Measurements of nitrogen oxides at the tropopause: Attribution to convection and correlation with lightning. Journal of Geophysical Research, 2000, 105, 3679-3700.	3.3	37
116	Identification of glacial meltwater runoff in a karstic environment and its implication for present and future water availability. Hydrology and Earth System Sciences, 2013, 17, 3261-3277.	1.9	37
117	The influence of the 1997â€“99 El NiÅˆo Southern Oscillation on extratropical baroclinic life cycles over the eastern North Pacific. Quarterly Journal of the Royal Meteorological Society, 2001, 127, 331-342.	1.0	35
118	Assessment of an ensemble of oceanâ€“atmosphere coupled and uncoupled regional climate models to reproduce the climatology of Mediterranean cyclones. Climate Dynamics, 2018, 51, 1023-1040.	1.7	35
119	Ultrathin Tropical Tropopause Clouds (UTTCs): II. Stabilization mechanisms. Atmospheric Chemistry and Physics, 2003, 3, 1093-1100.	1.9	34
120	Northern Hemisphere Rossby Wave Initiation Events on the Extratropical Jetâ€”A Climatological Analysis. Journal of Climate, 2018, 31, 743-760.	1.2	34
121	When during Their Life Cycle Are Extratropical Cyclones Attended by Fronts?. Bulletin of the American Meteorological Society, 2018, 99, 149-165.	1.7	34
122	A Lagrangian analysis of stratospheric ozone variability and long-term trends above Payerne (Switzerland) during 1970â€“2001. Journal of Geophysical Research, 2002, 107, ACL 2-1.	3.3	33
123	The transatlantic dust transport from North Africa to the Americasâ€”Its characteristics and source regions. Journal of Geophysical Research D: Atmospheres, 2015, 120, 11,231.	1.2	33
124	Processes leading to heavy precipitation associated with two Mediterranean cyclones observed during the HyMeX SOP1. Quarterly Journal of the Royal Meteorological Society, 2016, 142, 275-286.	1.0	33
125	Airborne in-situ measurements of vertical, seasonal and latitudinal distributions of carbon dioxide over Europe. Atmospheric Chemistry and Physics, 2008, 8, 6395-6403.	1.9	32
126	Midstratospheric ozone variability over Bern related to planetary wave activity during the winters 1994-1995 to 1998-1999. Journal of Geophysical Research, 2001, 106, 7903-7916.	3.3	31

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127	Verification of precipitation from regional climate simulations and remote-sensing observations with respect to ground-based observations in the upper Danube catchment. Meteorologische Zeitschrift, 2007, 16, 275-293.	0.5	31
128	Multi-model simulations of a convective situation in low-mountain terrain in central Europe. Meteorology and Atmospheric Physics, 2009, 103, 95-103.	0.9	31
129	Life Cycle Study of a Diabatic Rossby Wave as a Precursor to Rapid Cyclogenesis in the North Atlanticâ€"Dynamics and Forecast Performance. Monthly Weather Review, 2011, 139, 1861-1878.	0.5	31
130	The Mineral Dust Cycle in EMAC 2.40: sensitivity to the spectral resolution and the dust emission scheme. Atmospheric Chemistry and Physics, 2012, 12, 1611-1627.	1.9	31
131	A 10-yr Climatology of Diabatic Rossby Waves in the Northern Hemisphere. Monthly Weather Review, 2013, 141, 1139-1154.	0.5	31
132	Marine Primary Productivity as a Potential Indirect Source of Selenium and Other Trace Elements in Atmospheric Deposition. Environmental Science & Technology, 2017, 51, 108-118.	4.6	31
133	On the origin of 129I in rain water near ZÃ¼rich. Radiochimica Acta, 2001, 89, 815-822.	0.5	30
134	Potential vorticity structure of embedded convection in a warm conveyor belt and its relevance for large-scale dynamics. Weather and Climate Dynamics, 2020, 1, 127-153.	1.2	30
135	The general observation period 2007 within the priority program on quantitative precipitation forecasting: Concept and first results. Meteorologische Zeitschrift, 2008, 17, 849-866.	0.5	29
136	Climatology of potential vorticity streamers and associated isentropic transport pathways across PV gradient barriers. Journal of Geophysical Research D: Atmospheres, 2015, 120, 3802-3821.	1.2	29
137	Meridional and vertical variations of the water vapour isotopic composition in the marine boundary layer over the Atlantic and Southern Ocean. Atmospheric Chemistry and Physics, 2020, 20, 5811-5835.	1.9	28
138	Detection, tracking and event localization of jet stream features in 4-D atmospheric data. Geoscientific Model Development, 2012, 5, 457-470.	1.3	27
139	Comparison of Fast In situ Stratospheric Hygrometer (FISH) measurements of water vapor in the upper troposphere and lower stratosphere (UTLS) with ECMWF (re)analysis data. Atmospheric Chemistry and Physics, 2014, 14, 10803-10822.	1.9	27
140	Flow-Dependent Reliability: A Path to More Skillful Ensemble Forecasts. Bulletin of the American Meteorological Society, 2018, 99, 1015-1026.	1.7	27
141	Objective classification of extratropical cyclogenesis. Quarterly Journal of the Royal Meteorological Society, 2017, 143, 1047-1061.	1.0	26
142	Increase in the number of extremely strong fronts over Europe? A study based on ERAâ€Interim reanalysis (1979â€"2014). Geophysical Research Letters, 2017, 44, 553-561.	1.5	26
143	Does the lower stratosphere provide predictability for monthâ€ahead wind electricity generation in Europe?. Quarterly Journal of the Royal Meteorological Society, 2017, 143, 3025-3036.	1.0	25
144	Modification of Potential Vorticity near the Tropopause by Nonconservative Processes in the ECMWF Model. Journals of the Atmospheric Sciences, 2019, 76, 1709-1726.	0.6	25

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145	Microphysical and radiative changes in cirrus clouds by geoengineering the stratosphere. Journal of Geophysical Research D: Atmospheres, 2013, 118, 4533-4548.	1.2	24
146	The Microphysical Building Blocks of Low-Level Potential Vorticity Anomalies in an Idealized Extratropical Cyclone. Journals of the Atmospheric Sciences, 2017, 74, 1403-1416.	0.6	24
147	The influence of the 1997-99 El Nino Southern Oscillation on extratropical baroclinic life cycles over the eastern North Pacific. Quarterly Journal of the Royal Meteorological Society, 2001, 127, 331-342.	1.0	24
148	Airborne lidar observations in the inflow region of a warm conveyor belt. Quarterly Journal of the Royal Meteorological Society, 2011, 137, 1257-1272.	1.0	23
149	THORPEX Research and the Science of Prediction. Bulletin of the American Meteorological Society, 2017, 98, 807-830.	1.7	23
150	The three-dimensional life cycles of potential vorticity cutoffs: a global and selected regional climatologies in ERA-Interim (1979â€“2018). Weather and Climate Dynamics, 2021, 2, 507-534.	1.2	23
151	Planning aircraft measurements within a warm conveyor belt. Weather, 2014, 69, 161-166.	0.6	22
152	Stratosphereâ€“troposphere exchange (STE) in the vicinity of North Atlantic cyclones. Atmospheric Chemistry and Physics, 2015, 15, 10939-10953.	1.9	22
153	A Lagrangian analysis of upper-tropospheric anticyclones associated with heat waves in Europe. Weather and Climate Dynamics, 2020, 1, 191-206.	1.2	22
154	How an uncertain short-wave perturbation on the North Atlantic wave guide affects the forecast of an intense Mediterranean cyclone (Medicane Zorbas). Weather and Climate Dynamics, 2020, 1, 597-615.	1.2	22
155	Highly Active Iceâ€Nucleating Particles at the Summer North Pole. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	1.2	22
156	A bulk parametrization of melting snowflakes with explicit liquid water fraction for the COSMO model. Geoscientific Model Development, 2013, 6, 1925-1939.	1.3	21
157	Synoptic tracer gradients in the upper troposphere over central Canada during the Stratosphere-Troposphere Experiments by Aircraft Measurements 1998 summer campaign. Journal of Geophysical Research, 2002, 107, ACH 5-1.	3.3	20
158	3-D model simulations of dynamical and microphysical interactions in pyroconvective clouds under idealized conditions. Atmospheric Chemistry and Physics, 2014, 14, 7573-7583.	1.9	20
159	Marine versus Continental Sources of Iodine and Selenium in Rainfall at Two European High-Altitude Locations. Environmental Science & Technology, 2019, 53, 1905-1917.	4.6	20
160	A new windstorm proxy from lake sediments: A comparison of geological and meteorological data from western Germany for the period 1965â€“2001. Journal of Geophysical Research, 2009, 114, .	3.3	19
161	On the Co-Occurrence of Warm Conveyor Belt Outflows and PV Streamers*. Journals of the Atmospheric Sciences, 2014, 71, 3668-3673.	0.6	19
162	Lagrangian process attribution of isotopic variations in near-surface water vapour in a 30-year regional climate simulation over Europe. Atmospheric Chemistry and Physics, 2018, 18, 1653-1669.	1.9	19

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163	Stratospheric influence on ECMWF subâ€seasonal forecast skill for energyâ€industryâ€relevant surface weather in European countries. Quarterly Journal of the Royal Meteorological Society, 2020, 146, 3675-3694.	1.0	19
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