Harald Sodemann

List of Publications by Year
in descending order

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78 papers	6,314 citations	61984 43 h-index	74163 75 g-index
111 all docs	111 docs citations	111 times ranked	7251 citing authors

#	Article	IF	Citations
1	Development and Disintegration of Maya Political Systems in Response to Climate Change. Science, 2012, 338, 788-791.	12.6	421
2	Interannual variability of Greenland winter precipitation sources: Lagrangian moisture diagnostic and North Atlantic Oscillation influence. Journal of Geophysical Research, 2008, 113, .	3.3	289
3	What controls deuterium excess in global precipitation?. Climate of the Past, 2014, 10, 771-781.	3.4	260
4	Characteristics, sources, and transport of aerosols measured in spring 2008 during the aerosol, radiation, and cloud processes affecting Arctic Climate (ARCPAC) Project. Atmospheric Chemistry and Physics, 2011, 11, 2423-2453.	4.9	259
5	The Lagrangian particle dispersion model FLEXPART version 10.4. Geoscientific Model Development, 2019, 12, 4955-4997.	3.6	238
6	Source identification of short-lived air pollutants in the Arctic using statistical analysis of measurement data and particle dispersion model output. Atmospheric Chemistry and Physics, 2010, 10, 669-693.	4.9	218
7	Remote sources of water vapor forming precipitation on the Norwegian west coast at 60Â°Nâ€“a tale of hurricanes and an atmospheric river. Journal of Geophysical Research, 2008, 113, .	3.3	201
8	North Atlantic storm track changes during the Last Glacial Maximum recorded by Alpine speleothems. Nature Communications, 2015, 6, 6344.	12.8	183
9	An important contribution to springtime Arctic aerosol from biomass burning in Russia. Geophysical Research Letters, 2010, 37, .	4.0	172
10	Optical properties of Saharan dust aerosol and contribution from the coarse mode as measured during the Fennec 2011 aircraft campaign. Atmospheric Chemistry and Physics, 2013, 13, 303-325.	4.9	172
11	Long-term trends of black carbon and sulphate aerosol in the Arctic: changes in atmospheric transport and source region emissions. Atmospheric Chemistry and Physics, 2010, 10, 9351-9368.	4.9	169
12	Moisture Origin and Meridional Transport in Atmospheric Rivers and Their Association with Multiple Cyclones*. Monthly Weather Review, 2013, 141, 2850-2868.	1.4	164
13	Continuous monitoring of summer surface water vapor isotopic composition above the Greenland Ice Sheet. Atmospheric Chemistry and Physics, 2013, 13, 4815-4828.	4.9	155
14	Asymmetries in the moisture origin of Antarctic precipitation. Geophysical Research Letters, 2009, 36, .	4.0	139
15	Deuterium excess as a proxy for continental moisture recycling and plant transpiration. Atmospheric Chemistry and Physics, 2014, 14, 4029-4054.	4.9	138
16	Diurnal to interannual rainfall Î´18O variations in northern Borneo driven by regional hydrology. Earth and Planetary Science Letters, 2013, 369-370, 108-119.	4.4	134
17	A comparison of the present and last interglacial periods in six Antarctic ice cores. Climate of the Past, 2011, 7, 397-423.	3.4	131
18	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.	2.7	118

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19	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.	3.1	116
20	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
21	Seasonal and interâ€annual variability of the moisture sources for Alpine precipitation during 1995â€“2002. International Journal of Climatology, 2010, 30, 947-961.	3.5	111
22	Abrupt ice-age shifts in southern westerly winds and Antarctic climate forced from the north. Nature, 2018, 563, 681-685.	27.8	108
23	The North Atlantic Waveguide and Downstream Impact Experiment. Bulletin of the American Meteorological Society, 2018, 99, 1607-1637.	3.3	105
24	Impact of atmospheric transport on the evolution of microphysical and optical properties of Saharan dust. Geophysical Research Letters, 2013, 40, 2433-2438.	4.0	101
25	Seasonality of westerly moisture transport in the East Asian summer monsoon and its implications for interpreting precipitation Î´¹⁸O. Journal of Geophysical Research D: Atmospheres, 2015, 120, 5850-5862.	3.3	95
26	A revised picture of the atmospheric moisture residence time. Geophysical Research Letters, 2016, 43, 924-933.	4.0	95
27	The isotopic composition of water vapour and precipitation in Ivittuut, southern Greenland. Atmospheric Chemistry and Physics, 2014, 14, 4419-4439.	4.9	86
28	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.	3.2	81
29	Deglaciation records of ¹⁷O-excess in East Antarctica: reliable reconstruction of oceanic normalized relative humidity from coastal sites. Climate of the Past, 2012, 8, 1-16.	3.4	80
30	Interglacial Hydroclimate in the Tropical West Pacific Through the Late Pleistocene. Science, 2012, 336, 1301-1304.	12.6	79
31	The summer 2012 Greenland heat wave: In situ and remote sensing observations of water vapor isotopic composition during an atmospheric river event. Journal of Geophysical Research D: Atmospheres, 2015, 120, 2970-2989.	3.3	78
32	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.	2.7	76
33	The transport history of two Saharan dust events archived in an Alpine ice core. Atmospheric Chemistry and Physics, 2006, 6, 667-688.	4.9	72
34	Isotope meteorology of cold front passages: A case study combining observations and modeling. Geophysical Research Letters, 2015, 42, 5652-5660.	4.0	70
35	The Role of Extratropical Cyclones and Fronts for Southern Ocean Freshwater Fluxes. Journal of Climate, 2014, 27, 6205-6224.	3.2	69
36	Moisture sources and synoptic to seasonal variability of North Atlantic water vapor isotopic composition. Journal of Geophysical Research D: Atmospheres, 2015, 120, 5757-5774.	3.3	67

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37	A new interpretative framework for below-cloud effects on stable water isotopes in vapour and rain. Atmospheric Chemistry and Physics, 2019, 19, 747-765.	4.9	66
38	Transport of mercury in the Arctic atmosphere: Evidence for a springâ€time net sink and summerâ€time source. Geophysical Research Letters, 2009, 36, .	4.0	62
39	Impact of North Atlantic evaporation hot spots on southern Alpine heavy precipitation events. Quarterly Journal of the Royal Meteorological Society, 2012, 138, 1245-1258.	2.7	59
40	Advances in understanding mineral dust and boundary layer processes over the Sahara from Fennec aircraft observations. Atmospheric Chemistry and Physics, 2015, 15, 8479-8520.	4.9	57
41	How important is intensified evaporation for Mediterranean precipitation extremes?. Journal of Geophysical Research D: Atmospheres, 2014, 119, 5240-5256.	3.3	55
42	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.	4.9	55
43	Source identification and airborne chemical characterisation of aerosol pollution from long-range transport over Greenland during POLARCAT summer campaign 2008. Atmospheric Chemistry and Physics, 2011, 11, 10097-10123.	4.9	52
44	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.	4.9	52
45	In-situ observation of Asian pollution transported into the Arctic lowermost stratosphere. Atmospheric Chemistry and Physics, 2011, 11, 10975-10994.	4.9	49
46	Episodes of cross-polar transport in the Arctic troposphere during July 2008 as seen from models, satellite, and aircraft observations. Atmospheric Chemistry and Physics, 2011, 11, 3631-3651.	4.9	47
47	Relating tropical ocean clouds to moist processes using water vapor isotope measurements. Atmospheric Chemistry and Physics, 2011, 11, 741-752.	4.9	45
48	The role of land and ocean evaporation on the variability of precipitation in the Yangtze River valley. Hydrology and Earth System Sciences, 2019, 23, 2525-2540.	4.9	45
49	The residence time of water vapour in the atmosphere. Nature Reviews Earth & Environment, 2021, 2, 558-569.	29.7	41
50	Synoptic Conditions and Moisture Sources Actuating Extreme Precipitation in Nepal. Journal of Geophysical Research D: Atmospheres, 2017, 122, 12,653.	3.3	35
51	Marine Primary Productivity as a Potential Indirect Source of Selenium and Other Trace Elements in Atmospheric Deposition. Environmental Science & Technology, 2017, 51, 108-118.	10.0	31
52	Physical and chemical properties of pollution aerosol particles transported from North America to Greenland as measured during the POLARCAT summer campaign. Atmospheric Chemistry and Physics, 2011, 11, 10947-10963.	4.9	30
53	Snow accumulation and its moisture origin over Dome Argus, Antarctica. Climate Dynamics, 2013, 40, 731-742.	3.8	30
54	Temperature signals in tree-ring oxygen isotope series from the northern slope of the Himalaya. Earth and Planetary Science Letters, 2019, 506, 455-465.	4.4	30

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55	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.	4.9	28
56	The Impact of Nonequilibrium and Equilibrium Fractionation on Two Different Deuterium Excess Definitions. Journal of Geophysical Research D: Atmospheres, 2017, 122, 12,732.	3.3	27
57	Beyond Turnover Time: Constraining the Lifetime Distribution of Water Vapor from Simple and Complex Approaches. Journals of the Atmospheric Sciences, 2020, 77, 413-433.	1.7	25
58	Planning aircraft measurements within a warm conveyor belt. Weather, 2014, 69, 161-166.	0.7	22
59	The Iceland Greenland Seas Project. Bulletin of the American Meteorological Society, 2019, 100, 1795-1817.	3.3	21
60	Correcting the impact of the isotope composition on the mixing ratio dependency of water vapour isotope measurements with cavity ring-down spectrometers. Atmospheric Measurement Techniques, 2020, 13, 3167-3190.	3.1	21
61	Special characteristics of the temperature structure near the surface. Theoretical and Applied Climatology, 2005, 80, 81-89.	2.8	20
62	Lagrangian dust model simulations for a case of moist convective dust emission and transport in the western Sahara region during Fennec/LADUNEX. Journal of Geophysical Research D: Atmospheres, 2015, 120, 6117-6144.	3.3	20
63	Characterizing the Local and Intense Water Cycle during a Cold Air Outbreak in the Nordic Seas. Monthly Weather Review, 2018, 146, 3567-3588.	1.4	19
64	Linking Subâ€Tropical Evaporation and Extreme Precipitation Over East Antarctica: An Atmospheric River Case Study. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033617.	3.3	17
65	Empirical evaluation of an extended similarity theory for the stably stratified atmospheric surface layer. Quarterly Journal of the Royal Meteorological Society, 2004, 130, 2665-2671.	2.7	12
66	Multiscale characteristics of an extreme precipitation event over Nepal. Quarterly Journal of the Royal Meteorological Society, 2019, 145, 179-196.	2.7	9
67	Abrupt Common Era hydroclimate shifts drive west Greenland ice cap change. Nature Geoscience, 2021, 14, 756-761.	12.9	9
68	High-resolution stable isotope signature of a land-falling atmospheric river in southern Norway. Weather and Climate Dynamics, 2021, 2, 713-737.	3.5	8
69	Structure, Process, and Mechanism. , 2020, , 15-43.		8
70	High-Latitude Dynamics of Atmosphereâ€“Iceâ€“Ocean Interactions. Bulletin of the American Meteorological Society, 2016, 97, ES179-ES182.	3.3	7
71	Assessing the Sampling Quality of a Low-Tech Low-Budget Volume-Based Rainfall Sampler for Stable Isotope Analysis. Frontiers in Earth Science, 2019, 7, .	1.8	7
72	Experimental investigation of the stable water isotope distribution in an Alpine lake environment (L-WAIVE). Atmospheric Chemistry and Physics, 2021, 21, 10911-10937.	4.9	7

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73	2018 International Atmospheric Rivers Conference: Multiâ€disciplinary studies and highâ€impact applications of atmospheric rivers. Atmospheric Science Letters, 2019, 20, e935.	1.9	5
74	Differential absorption lidar for water vapor isotopologues in the 1.98â€‰Âµm spectral region: sensitivity analysis with respect to regional atmospheric variability. Atmospheric Measurement Techniques, 2021, 14, 6675-6693.	3.1	5
75	Lagrangian matches between observations from aircraft, lidar and radar in a warm conveyor belt crossing orography. Atmospheric Chemistry and Physics, 2021, 21, 5477-5498.	4.9	3
76	On the utility of individual tendency output: Revealing interactions between parameterised processes during a marine cold air outbreak. Weather and Forecasting, 2021, , .	1.4	1
77	A Ship-Based Characterization of Coherent Boundary-Layer Structures Over the Lifecycle of a Marine Cold-Air Outbreak. Boundary-Layer Meteorology, 0, , 1.	2.3	1
78	Numerical methods to identify model uncertainty. , 2021, , 309-329.		0