

Harald Sodemann

List of Publications by Year in descending order

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Version: 2024-02-01

78
papers

6,314
citations

61945

43
h-index

74108

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. <i>Science</i> , 2012, 338, 788-791. | 6.0 | 421 |
| 2 | Interannual variability of Greenland winter precipitation sources: Lagrangian moisture diagnostic and North Atlantic Oscillation influence. <i>Journal of Geophysical Research</i> , 2008, 113, . | 3.3 | 289 |
| 3 | What controls deuterium excess in global precipitation?. <i>Climate of the Past</i> , 2014, 10, 771-781. | 1.3 | 260 |
| 4 | Characteristics, sources, and transport of aerosols measured in spring 2008 during the aerosol, radiation, and cloud processes affecting Arctic Climate (ARCPAC) Project. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 2423-2453. | 1.9 | 259 |
| 5 | The Lagrangian particle dispersion model FLEXPART version 10.4. <i>Geoscientific Model Development</i> , 2019, 12, 4955-4997. | 1.3 | 238 |
| 6 | Source identification of short-lived air pollutants in the Arctic using statistical analysis of measurement data and particle dispersion model output. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 669-693. | 1.9 | 218 |
| 7 | Remote sources of water vapor forming precipitation on the Norwegian west coast at 60°N—a tale of hurricanes and an atmospheric river. <i>Journal of Geophysical Research</i> , 2008, 113, . | 3.3 | 201 |
| 8 | North Atlantic storm track changes during the Last Glacial Maximum recorded by Alpine speleothems. <i>Nature Communications</i> , 2015, 6, 6344. | 5.8 | 183 |
| 9 | An important contribution to springtime Arctic aerosol from biomass burning in Russia. <i>Geophysical Research Letters</i> , 2010, 37, . | 1.5 | 172 |
| 10 | Optical properties of Saharan dust aerosol and contribution from the coarse mode as measured during the Fennec 2011 aircraft campaign. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 303-325. | 1.9 | 172 |
| 11 | Long-term trends of black carbon and sulphate aerosol in the Arctic: changes in atmospheric transport and source region emissions. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 9351-9368. | 1.9 | 169 |
| 12 | Moisture Origin and Meridional Transport in Atmospheric Rivers and Their Association with Multiple Cyclones*. <i>Monthly Weather Review</i> , 2013, 141, 2850-2868. | 0.5 | 164 |
| 13 | Continuous monitoring of summer surface water vapor isotopic composition above the Greenland Ice Sheet. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 4815-4828. | 1.9 | 155 |
| 14 | Asymmetries in the moisture origin of Antarctic precipitation. <i>Geophysical Research Letters</i> , 2009, 36, . | 1.5 | 139 |
| 15 | Deuterium excess as a proxy for continental moisture recycling and plant transpiration. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 4029-4054. | 1.9 | 138 |
| 16 | Diurnal to interannual rainfall $\delta^{18}O$ variations in northern Borneo driven by regional hydrology. <i>Earth and Planetary Science Letters</i> , 2013, 369-370, 108-119. | 1.8 | 134 |
| 17 | A comparison of the present and last interglacial periods in six Antarctic ice cores. <i>Climate of the Past</i> , 2011, 7, 397-423. | 1.3 | 131 |
| 18 | The role of upper-level dynamics and surface processes for the Pakistan flood of July 2010. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2013, 139, 1780-1797. | 1.0 | 118 |

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|----|--|------|-----------|
| 19 | Measuring variations of $\delta^{18}\text{O}$ and $\delta^2\text{H}$ in atmospheric water vapour using two commercial laser-based spectrometers: an instrument characterisation study. <i>Atmospheric Measurement Techniques</i> , 2012, 5, 1491-1511. | 1.2 | 116 |
| 20 | Interannual variability of Greenland winter precipitation sources: 2. Effects of North Atlantic Oscillation variability on stable isotopes in precipitation. <i>Journal of Geophysical Research</i> , 2008, 113, . | 3.3 | 113 |
| 21 | Seasonal and interannual variability of the moisture sources for Alpine precipitation during 1995–2002. <i>International Journal of Climatology</i> , 2010, 30, 947-961. | 1.5 | 111 |
| 22 | Abrupt ice-age shifts in southern westerly winds and Antarctic climate forced from the north. <i>Nature</i> , 2018, 563, 681-685. | 13.7 | 108 |
| 23 | The North Atlantic Waveguide and Downstream Impact Experiment. <i>Bulletin of the American Meteorological Society</i> , 2018, 99, 1607-1637. | 1.7 | 105 |
| 24 | Impact of atmospheric transport on the evolution of microphysical and optical properties of Saharan dust. <i>Geophysical Research Letters</i> , 2013, 40, 2433-2438. | 1.5 | 101 |
| 25 | Seasonality of westerly moisture transport in the East Asian summer monsoon and its implications for interpreting precipitation $\delta^{18}\text{O}$. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 5850-5862. | 1.2 | 95 |
| 26 | A revised picture of the atmospheric moisture residence time. <i>Geophysical Research Letters</i> , 2016, 43, 924-933. | 1.5 | 95 |
| 27 | The isotopic composition of water vapour and precipitation in Ivittuut, southern Greenland. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 4419-4439. | 1.9 | 86 |
| 28 | A Climatology of Cold Air Outbreaks and Their Impact on Air–Sea Heat Fluxes in the High-Latitude South Pacific. <i>Journal of Climate</i> , 2015, 28, 342-364. | 1.2 | 81 |
| 29 | Deglaciation records of $\delta^{17}\text{O}$ -excess in East Antarctica: reliable reconstruction of oceanic normalized relative humidity from coastal sites. <i>Climate of the Past</i> , 2012, 8, 1-16. | 1.3 | 80 |
| 30 | Interglacial Hydroclimate in the Tropical West Pacific Through the Late Pleistocene. <i>Science</i> , 2012, 336, 1301-1304. | 6.0 | 79 |
| 31 | The summer 2012 Greenland heat wave: In situ and remote sensing observations of water vapor isotopic composition during an atmospheric river event. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 2970-2989. | 1.2 | 78 |
| 32 | Sources of water vapour contributing to the Elbe flood in August 2002—A tagging study in a mesoscale model. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2009, 135, 205-223. | 1.0 | 76 |
| 33 | The transport history of two Saharan dust events archived in an Alpine ice core. <i>Atmospheric Chemistry and Physics</i> , 2006, 6, 667-688. | 1.9 | 72 |
| 34 | Isotope meteorology of cold front passages: A case study combining observations and modeling. <i>Geophysical Research Letters</i> , 2015, 42, 5652-5660. | 1.5 | 70 |
| 35 | The Role of Extratropical Cyclones and Fronts for Southern Ocean Freshwater Fluxes. <i>Journal of Climate</i> , 2014, 27, 6205-6224. | 1.2 | 69 |
| 36 | Moisture sources and synoptic to seasonal variability of North Atlantic water vapor isotopic composition. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 5757-5774. | 1.2 | 67 |

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|----|--|------|-----------|
| 37 | A new interpretative framework for below-cloud effects on stable water isotopes in vapour and rain. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 747-765. | 1.9 | 66 |
| 38 | Transport of mercury in the Arctic atmosphere: Evidence for a spring-time net sink and summer-time source. <i>Geophysical Research Letters</i> , 2009, 36, . | 1.5 | 62 |
| 39 | Impact of North Atlantic evaporation hot spots on southern Alpine heavy precipitation events. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2012, 138, 1245-1258. | 1.0 | 59 |
| 40 | Advances in understanding mineral dust and boundary layer processes over the Sahara from Fennec aircraft observations. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 8479-8520. | 1.9 | 57 |
| 41 | How important is intensified evaporation for Mediterranean precipitation extremes?. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014, 119, 5240-5256. | 1.2 | 55 |
| 42 | Comparison of Eulerian and Lagrangian moisture source diagnostics – the flood event in eastern Europe in May 2010. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 6605-6619. | 1.9 | 55 |
| 43 | Source identification and airborne chemical characterisation of aerosol pollution from long-range transport over Greenland during POLARCAT summer campaign 2008. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 10097-10123. | 1.9 | 52 |
| 44 | The stable isotopic composition of water vapour above Corsica during the HyMeX SOP1 campaign: insight into vertical mixing processes from lower-tropospheric survey flights. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 6125-6151. | 1.9 | 52 |
| 45 | In-situ observation of Asian pollution transported into the Arctic lowermost stratosphere. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 10975-10994. | 1.9 | 49 |
| 46 | Episodes of cross-polar transport in the Arctic troposphere during July 2008 as seen from models, satellite, and aircraft observations. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 3631-3651. | 1.9 | 47 |
| 47 | Relating tropical ocean clouds to moist processes using water vapor isotope measurements. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 741-752. | 1.9 | 45 |
| 48 | The role of land and ocean evaporation on the variability of precipitation in the Yangtze River valley. <i>Hydrology and Earth System Sciences</i> , 2019, 23, 2525-2540. | 1.9 | 45 |
| 49 | The residence time of water vapour in the atmosphere. <i>Nature Reviews Earth & Environment</i> , 2021, 2, 558-569. | 12.2 | 41 |
| 50 | Synoptic Conditions and Moisture Sources Actuating Extreme Precipitation in Nepal. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 12,653. | 1.2 | 35 |
| 51 | Marine Primary Productivity as a Potential Indirect Source of Selenium and Other Trace Elements in Atmospheric Deposition. <i>Environmental Science & Technology</i> , 2017, 51, 108-118. | 4.6 | 31 |
| 52 | Physical and chemical properties of pollution aerosol particles transported from North America to Greenland as measured during the POLARCAT summer campaign. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 10947-10963. | 1.9 | 30 |
| 53 | Snow accumulation and its moisture origin over Dome Argus, Antarctica. <i>Climate Dynamics</i> , 2013, 40, 731-742. | 1.7 | 30 |
| 54 | Temperature signals in tree-ring oxygen isotope series from the northern slope of the Himalaya. <i>Earth and Planetary Science Letters</i> , 2019, 506, 455-465. | 1.8 | 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. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 5811-5835. | 1.9 | 28 |
| 56 | The Impact of Nonequilibrium and Equilibrium Fractionation on Two Different Deuterium Excess Definitions. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 12,732. | 1.2 | 27 |
| 57 | Beyond Turnover Time: Constraining the Lifetime Distribution of Water Vapor from Simple and Complex Approaches. <i>Journals of the Atmospheric Sciences</i> , 2020, 77, 413-433. | 0.6 | 25 |
| 58 | Planning aircraft measurements within a warm conveyor belt. <i>Weather</i> , 2014, 69, 161-166. | 0.6 | 22 |
| 59 | The Iceland Greenland Seas Project. <i>Bulletin of the American Meteorological Society</i> , 2019, 100, 1795-1817. | 1.7 | 21 |
| 60 | Correcting the impact of the isotope composition on the mixing ratio dependency of water vapour isotope measurements with cavity ring-down spectrometers. <i>Atmospheric Measurement Techniques</i> , 2020, 13, 3167-3190. | 1.2 | 21 |
| 61 | Special characteristics of the temperature structure near the surface. <i>Theoretical and Applied Climatology</i> , 2005, 80, 81-89. | 1.3 | 20 |
| 62 | Lagrangian dust model simulations for a case of moist convective dust emission and transport in the western Sahara region during Fennec/LADUNEX. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 6117-6144. | 1.2 | 20 |
| 63 | Characterizing the Local and Intense Water Cycle during a Cold Air Outbreak in the Nordic Seas. <i>Monthly Weather Review</i> , 2018, 146, 3567-3588. | 0.5 | 19 |
| 64 | Linking Subtropical Evaporation and Extreme Precipitation Over East Antarctica: An Atmospheric River Case Study. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2020JD033617. | 1.2 | 17 |
| 65 | Empirical evaluation of an extended similarity theory for the stably stratified atmospheric surface layer. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2004, 130, 2665-2671. | 1.0 | 12 |
| 66 | Multiscale characteristics of an extreme precipitation event over Nepal. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2019, 145, 179-196. | 1.0 | 9 |
| 67 | Abrupt Common Era hydroclimate shifts drive west Greenland ice cap change. <i>Nature Geoscience</i> , 2021, 14, 756-761. | 5.4 | 9 |
| 68 | High-resolution stable isotope signature of a land-falling atmospheric river in southern Norway. <i>Weather and Climate Dynamics</i> , 2021, 2, 713-737. | 1.2 | 8 |
| 69 | Structure, Process, and Mechanism. , 2020, , 15-43. | | 8 |
| 70 | High-Latitude Dynamics of Atmosphere–Ice–Ocean Interactions. <i>Bulletin of the American Meteorological Society</i> , 2016, 97, ES179-ES182. | 1.7 | 7 |
| 71 | Assessing the Sampling Quality of a Low-Tech Low-Budget Volume-Based Rainfall Sampler for Stable Isotope Analysis. <i>Frontiers in Earth Science</i> , 2019, 7, . | 0.8 | 7 |
| 72 | Experimental investigation of the stable water isotope distribution in an Alpine lake environment (L-WAIVE). <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 10911-10937. | 1.9 | 7 |

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|----|---|-----|-----------|
| 73 | 2018 International Atmospheric Rivers Conference: Multi-disciplinary studies and high-impact applications of atmospheric rivers. <i>Atmospheric Science Letters</i> , 2019, 20, e935. | 0.8 | 5 |
| 74 | Differential absorption lidar for water vapor isotopologues in the 1.98-µm spectral region: sensitivity analysis with respect to regional atmospheric variability. <i>Atmospheric Measurement Techniques</i> , 2021, 14, 6675-6693. | 1.2 | 5 |
| 75 | Lagrangian matches between observations from aircraft, lidar and radar in a warm conveyor belt crossing orography. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 5477-5498. | 1.9 | 3 |
| 76 | On the utility of individual tendency output: Revealing interactions between parameterised processes during a marine cold air outbreak. <i>Weather and Forecasting</i> , 2021, , . | 0.5 | 1 |
| 77 | A Ship-Based Characterization of Coherent Boundary-Layer Structures Over the Lifecycle of a Marine Cold-Air Outbreak. <i>Boundary-Layer Meteorology</i> , 0, , 1. | 1.2 | 1 |
| 78 | Numerical methods to identify model uncertainty. , 2021, , 309-329. | | 0 |