Michael Kh TjernstrÃ¶m

List of Publications by Year
in descending order

121 papers	6,640 citations	50276 46 h-index	76900 74 g-index
145 all docs	145 docs citations	145 times ranked	5657 citing authors

#	Article	IF	Citations
1	Vertical structure of recent Arctic warming. Nature, 2008, 451, 53-56.	27.8	494
2	Stable Atmospheric Boundary Layers and Diurnal Cycles: Challenges for Weather and Climate Models. Bulletin of the American Meteorological Society, 2013, 94, 1691-1706.	3.3	362
3	Can Ice-Nucleating Aerosols Affect Arctic Seasonal Climate?. Bulletin of the American Meteorological Society, 2007, 88, 541-550.	3.3	202
4	The atmospheric role in the Arctic water cycle: A review on processes, past and future changes, and their impacts. Journal of Geophysical Research G: Biogeosciences, 2016, 121, 586-620.	3.0	197
5	Springtime atmospheric energy transport and the control of Arctic summer sea-ice extent. Nature Climate Change, 2013, 3, 744-748.	18.8	179
6	A transitioning Arctic surface energy budget: the impacts of solar zenith angle, surface albedo and cloud radiative forcing. Climate Dynamics, 2011, 37, 1643-1660.	3.8	162
7	Cloud and boundary layer interactions over the Arctic sea ice in late summer. Atmospheric Chemistry and Physics, 2013, 13, 9379-9399.	4.9	155
8	Arctic climate change in 21st century CMIP5 simulations with EC-Earth. Climate Dynamics, 2013, 40, 2719-2743.	3.8	146
9	Advances in understanding and parameterization of small-scale physical processes in the marine Arctic climate system: a review. Atmospheric Chemistry and Physics, 2014, 14, 9403-9450.	4.9	145
10	The Arctic Summer Cloud Ocean Study (ASCOS): overview and experimental design. Atmospheric Chemistry and Physics, 2014, 14, 2823-2869.	4.9	140
11	The vertical structure of the lower Arctic troposphere analysed from observations and the ERAâ€40 reanalysis. Quarterly Journal of the Royal Meteorological Society, 2009, 135, 431-443.	2.7	132
12	â€˜Modelling the Arctic Boundary Layer: An Evaluation of Six Arcmip Regional-Scale Models using Data from the Sheba Projectâ€™. Boundary-Layer Meteorology, 2005, 117, 337-381.	2.3	131
13	Warm winds from the Pacific caused extensive Arctic sea-ice melt in summer 2007. Climate Dynamics, 2011, 36, 2103-2112.	3.8	121
14	Aerosol composition and sources in the central Arctic Ocean during ASCOS. Atmospheric Chemistry and Physics, 2011, 11, 10619-10636.	4.9	120
15	On the Relationship between Thermodynamic Structure and Cloud Top, and Its Climate Significance in the Arctic. Journal of Climate, 2012, 25, 2374-2393.	3.2	118
16	Meteorological conditions in the central Arctic summer during the Arctic Summer Cloud Ocean Study (ASCOS). Atmospheric Chemistry and Physics, 2012, 12, 6863-6889.	4.9	109
17	Warmâ€air advection, air mass transformation and fog causes rapid ice melt. Geophysical Research Letters, 2015, 42, 5594-5602.	4.0	107
18	How Well Do Regional Climate Models Reproduce Radiation and Clouds in the Arctic? An Evaluation of ARCMIP Simulations. Journal of Applied Meteorology and Climatology, 2008, 47, 2405-2422.	1.5	106

#	Article	IF	Citations
19	Role of air-mass transformations in exchange between the Arctic and mid-latitudes. Nature Geoscience, 2018, 11, 805-812.	12.9	105
20	Frequent new particle formation over the high Arctic pack ice by enhanced iodine emissions. Nature Communications, 2020, 11, 4924.	12.8	96
21	Analysis of the turbulence structure of a marine low-level jet. Boundary-Layer Meteorology, 1993, 66, 105-126.	2.3	83
22	On the fog variability over south Asia. Climate Dynamics, 2012, 39, 2993-3005.	3.8	82
23	Can marine micro-organisms influence melting of the Arctic pack ice?. Eos, 2004, 85, 25.	0.1	79
24	The Summer Arctic Boundary Layer during the Arctic Ocean Experiment 2001 (AOE-2001). Boundary-Layer Meteorology, 2005, 117, 5-36.	2.3	77
25	The Arctic summer atmosphere: an evaluation of reanalyses using ASCOS data. Atmospheric Chemistry and Physics, 2014, 14, 2605-2624.	4.9	77
26	Experimental Equipment: A Supplement to The Summertime Arctic Atmosphere: Meteorological Measurements during the Arctic Ocean Experiment 2001. Bulletin of the American Meteorological Society, 2004, 85, ES14-ES18.	3.3	74
27	The Effect of Downwelling Longwave and Shortwave Radiation on Arctic Summer Sea Ice. Journal of Climate, 2016, 29, 1143-1159.	3.2	74
28	Global distribution and seasonal variability of coastal low-level jets derived from ERA-Interim reanalysis. Tellus, Series A: Dynamic Meteorology and Oceanography, 2022, 65, 20412.	1.7	73
29	Highlights of Coastal Waves 1996. Bulletin of the American Meteorological Society, 1998, 79, 1307-1326.	3.3	71
30	The Near-Neutral Marine Atmospheric Boundary Layer with No Surface Shearing Stress: A Case Study. Journals of the Atmospheric Sciences, 1994, 51, 3399-3411.	1.7	69
31	Stratiform Cloudâ€"Inversion Characterization During the Arctic Melt Season. Boundary-Layer Meteorology, 2009, 132, 455-474.	2.3	69
32	On the Scale-dependence of the Gradient Richardson Number in the Residual Layer. Boundary-Layer Meteorology, 2008, 127, 57-72.	2.3	66
33	An evaluation of Arctic cloud and radiation processes during the SHEBA year: simulation results from eight Arctic regional climate models. Climate Dynamics, 2008, 30, 203-223.	3.8	66
34	The Summertime Arctic Atmosphere: Meteorological Measurements during the Arctic Ocean Experiment 2001. Bulletin of the American Meteorological Society, 2004, 85, 1305-1322.	3.3	65
35	Turbulence Length Scales in Stably Stratified Free Shear Flow Analyzed from Slant Aircraft Profiles. Journal of Applied Meteorology and Climatology, 1993, 32, 948-963.	1.7	64
36	Characteristics of water-vapour inversions observed over the Arctic by Atmospheric Infrared Sounder (AIRS) and radiosondes. Atmospheric Chemistry and Physics, 2011, 11, 9813-9823.	4.9	64

#	Article	IF	Citations
37	100 Years of Progress in Boundary Layer Meteorology. Meteorological Monographs, 2019, 59, 9.1-9.85.	5.0	61
38	The Turbulent Structure of the Arctic Summer Boundary Layer During The Arctic Summer Cloudâ€Ocean Study. Journal of Geophysical Research D: Atmospheres, 2017, 122, 9685-9704.	3.3	59
39	Vertical profiling of aerosol particles and trace gases over the central Arctic Ocean during summer. Atmospheric Chemistry and Physics, 2013, 13, 12405-12431.	4.9	58
40	Response of the lower troposphere to moisture intrusions into the Arctic. Geophysical Research Letters, 2017, 44, 2527-2536.	4.0	58
41	Aerosol numberâ€“size distributions during clear and fog periods in the summer high Arctic: 1991, 1996 and 2001. Tellus, Series B: Chemical and Physical Meteorology, 2006, 58, 41-50.	1.6	57
42	The importance of spring atmospheric conditions for predictions of the Arctic summer sea ice extent. Geophysical Research Letters, 2014, 41, 5288-5296.	4.0	56
43	The thermodynamic structure of summer Arctic stratocumulus and the dynamic coupling to the surface. Atmospheric Chemistry and Physics, 2014, 14, 12573-12592.	4.9	55
44	On the potential contribution of open lead particle emissions to the central Arctic aerosol concentration. Atmospheric Chemistry and Physics, 2011, 11, 3093-3105.	4.9	54
45	Shipborne eddy covariance observations of methane fluxes constrain Arctic sea emissions. Science Advances, 2020, 6, eaay7934.	10.3	53
46	Modelling atmospheric structure, cloud and their response to CCN in the central Arctic: ASCOS case studies. Atmospheric Chemistry and Physics, 2012, 12, 3419-3435.	4.9	52
47	Measurements of bubble size spectra within leads in the Arctic summer pack ice. Ocean Science, 2011, 7, 129-139.	3.4	50
48	Analysis of a Radome Air-Motion System on a Twin-Jet Aircraft for Boundary-Layer Research. Journal of Atmospheric and Oceanic Technology, 1991, 8, 19-40.	1.3	49
49	The vertical turbulence structure of the coastal marine atmospheric boundary layer. Journal of Geophysical Research, 1993, 98, 4809-4826.	3.3	48
50	Atmospheric Conditions during the Arctic Clouds in Summer Experiment (ACSE): Contrasting Open Water and Sea Ice Surfaces during Melt and Freeze-Up Seasons. Journal of Climate, 2016, 29, 8721-8744.	3.2	47
51	Simulations of Supercritical Flow around Points and Capes in a Coastal Atmosphere. Journals of the Atmospheric Sciences, 2000, 57, 108-135.	1.7	46
52	Summer Arctic clouds in the <scp>ECMWF</scp> forecast model: an evaluation of cloud parametrization schemes. Quarterly Journal of the Royal Meteorological Society, 2016, 142, 387-400.	2.7	46
53	Direct determination of the airâ€sea CO₂ gas transfer velocity in Arctic sea ice regions. Geophysical Research Letters, 2017, 44, 3770-3778.	4.0	43
54	Near-surface meteorology during the Arctic Summer Cloud Ocean Study (ASCOS): evaluation of reanalyses and global climate models. Atmospheric Chemistry and Physics, 2014, 14, 427-445.	4.9	41

#	Article	IF	Citations
55	Idealized Simulations of Atmospheric Coastal Flow along the Central Coast of California. Journal of Applied Meteorology and Climatology, 1998, 37, 1332-1363.	1.7	39
56	Structure and variability of the Oman coastal low-level jet. Tellus, Series A: Dynamic Meteorology and Oceanography, 2015, 67, 25285.	1.7	39
57	Measurement of wind profiles by motion-stabilised ship-borne Doppler lidar. Atmospheric Measurement Techniques, 2015, 8, 4993-5007.	3.1	39
58	Modelling micro- and macrophysical contributors to the dissipation of an Arctic mixed-phase cloud during the Arctic Summer Cloud Ocean Study (ASCOS). Atmospheric Chemistry and Physics, 2017, 17, 6693-6704.	4.9	39
59	The Effects of Critical Layers on Residual Layer Turbulence. Journals of the Atmospheric Sciences, 2009, 66, 468-480.	1.7	38
60	Mixing, heat fluxes and heat content evolution of the Arctic Ocean mixed layer. Ocean Science, 2011, 7, 335-349.	3.4	38
61	Is There a Diurnal Cycle in the Summer Cloud-Capped Arctic Boundary Layer?. Journals of the Atmospheric Sciences, 2007, 64, 3970-3986.	1.7	36
62	The free troposphere as a potential source of arctic boundary layer aerosol particles. Geophysical Research Letters, 2017, 44, 7053-7060.	4.0	35
63	Arctic Summer Airmass Transformation, Surface Inversions, and the Surface Energy Budget. Journal of Climate, 2019, 32, 769-789.	3.2	35
64	Clouds, warm air, and a climate cooling signal over the summer Arctic. Geophysical Research Letters, 2017, 44, 1095-1103.	4.0	30
65	Lagrangian tracing of Sahelian Sudan moisture sources. Journal of Geophysical Research D: Atmospheres, 2015, 120, 6793-6808.	3.3	29
66	Modeling of the Coastal Boundary Layer and Pollutant Transport in New England. Journal of Applied Meteorology and Climatology, 2006, 45, 137-154.	1.5	28
67	Small-Scale Variability in the Coastal Atmospheric Boundary Layer. Boundary-Layer Meteorology, 1998, 88, 23-46.	2.3	27
68	Summers with low Arctic sea ice linked to persistence of spring atmospheric circulation patterns. Climate Dynamics, 2019, 52, 2497-2512.	3.8	27
69	The Arctic and Antarctic: Two Faces of Climate Change. Eos, 2008, 89, 177-178.	0.1	26
70	A Decade of Spaceborne Observations of the Arctic Atmosphere: Novel Insights from NASAâ€™s AIRS Instrument. Bulletin of the American Meteorological Society, 2016, 97, 2163-2176.	3.3	26
71	The Relation Between Aerosol Vertical Distribution and Temperature Inversions in the Arctic in Winter and Spring. Geophysical Research Letters, 2019, 46, 2836-2845.	4.0	26
72	Confronting Arctic Troposphere, Clouds, and Surface Energy Budget Representations in Regional Climate Models With Observations. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031783.	3.3	26

#	Article	IF	Citations
73	The vertical distribution of thin features over the Arctic analysed from CALIPSO observations: Part I: Optically thin clouds. Tellus, Series B: Chemical and Physical Meteorology, 2022, 63, 77.	1.6	25
74	Estimating the Effects on the Regional Precipitation Climate in a Semiarid Region Caused by an Artificial Lake Using a Mesoscale Model. Journal of Applied Meteorology and Climatology, 1991, 30, 227-250.	1.7	24
75	Thermal mesoscale circulations on the Baltic coast: 1. Numerical case study. Journal of Geophysical Research, 1996, 101, 18979-18997.	3.3	23
76	Modeling the Impact of Marine Stratocumulus on Boundary Layer Structure. Journals of the Atmospheric Sciences, 1995, 52, 863-878.	1.7	22
77	Some tests with a surface energy balance scheme, including a bulk parameterisation for vegetation, in a mesoscale model. Boundary-Layer Meteorology, 1989, 48, 33-68.	2.3	20
78	The Sensitivity Of A Stratocumulus Transition: Model Simulations Of The Astex First Lagrangian. Boundary-Layer Meteorology, 2000, 95, 57-90.	2.3	20
79	Mesoscale Variability in the Summer Arctic Boundary Layer. Boundary-Layer Meteorology, 2009, 130, 383-406.	2.3	20
80	The vertical distribution of thin features over the Arctic analysed from CALIPSO observations: Part II: Aerosols. Tellus, Series B: Chemical and Physical Meteorology, 2022, 63, 86.	1.6	20
81	Observed Dynamics of Coastal Flow at Cape Mendocino during Coastal Waves 1996. Journals of the Atmospheric Sciences, 2001, 58, 953-977.	1.7	19
82	Characterization of the Sahelian-Sudan rainfall based on observations and regional climate models. Atmospheric Research, 2018, 202, 205-218.	4.1	19
83	Central Arctic weather forecasting: Confronting the<scp>ECMWF IFS</scp>with observations from the Arctic Ocean 2018 expedition. Quarterly Journal of the Royal Meteorological Society, 2021, 147, 1278-1299.	2.7	19
84	Properties of Arctic liquid and mixed-phase clouds from shipborne Cloudnet observations during ACSE 2014. Atmospheric Chemistry and Physics, 2020, 20, 14983-15002.	4.9	19
85	Thermal mesoscale circulations on the Baltic coast: 2. Perturbation of surface parameters. Journal of Geophysical Research, 1996, 101, 18999-19012.	3.3	18
86	The sensitivity of supercritical atmospheric boundary-layer flow along a coastal mountain barrier. Tellus, Series A: Dynamic Meteorology and Oceanography, 1999, 51, 880-901.	1.7	18
87	The vertical distribution of atmospheric DMS in the high Arctic summer. Tellus, Series B: Chemical and Physical Meteorology, 2022, 62, 160.	1.6	18
88	The vertical structure of cloud radiative heating over the Indian subcontinent during summer monsoon. Atmospheric Chemistry and Physics, 2015, 15, 11557-11570.	4.9	17
89	Numerical simulations of stratiform boundary-layer clouds on the meso-Î³-scale. Part I: The influence of terrain height differences. Boundary-Layer Meteorology, 1988, 44, 33-72.	2.3	16
90	Largeâ€eddy simulations of an Arctic mixedâ€phase stratiform cloud observed during ISDAC: sensitivity to moisture aloft, surface fluxes and largeâ€scale forcing. Quarterly Journal of the Royal Meteorological Society, 2015, 141, 1177-1190.	2.7	16

#	Article	IF	Citations
91	Meteorological and cloud conditions during the Arctic Ocean 2018 expedition. Atmospheric Chemistry and Physics, 2021, 21, 289-314.	4.9	16
92	Climate impact of deforestation over South Sudan in a regional climate model. International Journal of Climatology, 2013, 33, 2362-2375.	3.5	14
93	Sources of Sahelianâ€Sudan moisture: Insights from a moistureâ€tracing atmospheric model. Journal of Geophysical Research D: Atmospheres, 2016, 121, 7819-7832.	3.3	14
94	The Turbulence Structure of the Stable Atmospheric Boundary Layer Around a Coastal Headland: Aircraft Observations and Modelling Results. Boundary-Layer Meteorology, 2003, 107, 531-559.	2.3	13
95	Variability in the summertime coastal marine atmospheric boundary-layer off California, USA. Quarterly Journal of the Royal Meteorological Society, 2004, 130, 423-448.	2.7	13
96	Turbulence Structure in Decoupled Marine Stratocumulus: A Case Study from the ASTEX Field Experiment. Journals of the Atmospheric Sciences, 1996, 53, 598-619.	1.7	12
97	Observations and simulations of a non-stationary coastal atmospheric boundary layer. Quarterly Journal of the Royal Meteorological Society, 2000, 126, 445-476.	2.7	12
98	Largeâ€eddy simulation of a warmâ€air advection episode in the summer Arctic. Quarterly Journal of the Royal Meteorological Society, 2018, 144, 2449-2462.	2.7	12
99	Eulerian and Lagrangian views of warm and moist air intrusions into summer Arctic. Atmospheric Research, 2021, 256, 105586.	4.1	12
100	Supercritical channel flow in the coastal atmospheric boundary layer: Idealized numerical simulations. Journal of Geophysical Research, 2001, 106, 17811-17829.	3.3	11
101	Modelling coastal low-level wind-jets: does horizontal resolution matter?. Meteorology and Atmospheric Physics, 2016, 128, 263-278.	2.0	10
102	Warm-Air Advection Over Melting Sea-Ice: A Lagrangian Case Study. Boundary-Layer Meteorology, 2021, 179, 99-116.	2.3	10
103	Numerical simulations of stratiform boundary-layer clouds on the meso-Î³-scale. Part II: The influence of a step change in surface roughness and surface temperature. Boundary-Layer Meteorology, 1988, 44, 207-230.	2.3	9
104	Airborne observations of thermal mesoscale circulations in the coastal marine boundary layer. Journal of Geophysical Research, 1991, 96, 20499-20520.	3.3	9
105	The sensitivity of supercritical atmospheric boundary-layer flow along a coastal mountain barrier. Tellus, Series A: Dynamic Meteorology and Oceanography, 1999, 51, 880-901.	1.7	8
106	Diurnal Cycle of Supercritical Along-Coast Flows. Journals of the Atmospheric Sciences, 2002, 59, 2615-2624.	1.7	8
107	The Role of Atmospheric Blocking in Regulating Arctic Warming. Geophysical Research Letters, 2022, 49, .	4.0	8
108	The structure of gradually transforming marine stratocumulus during the ASTEX first Lagrangian experiment. Quarterly Journal of the Royal Meteorological Society, 2003, 129, 1071-1100.	2.7	7

#	Article	IF	Citations
109	How Does Cloud Overlap Affect the Radiative Heating in the Tropical Upper Troposphere/Lower Stratosphere?. Geophysical Research Letters, 2019, 46, 5623-5631.	4.0	6
110	The Swedish Regional Climate Modelling Programme, SWECLIM: a review. Ambio, 2004, 33, 176-82.	5.5	6
111	A Process-Based Climatological Evaluation of AIRS Level 3 Tropospheric Thermodynamics over the High-Latitude Arctic. Journal of Applied Meteorology and Climatology, 2019, 58, 1867-1886.	1.5	5
112	Warm and moist air intrusions into the winter Arctic: a Lagrangian view on the near-surface energy budgets. Atmospheric Chemistry and Physics, 2022, 22, 8037-8057.	4.9	5
113	A Climatological Overview of Arctic Clouds. Springer Polar Sciences, 2020, , 331-360.	0.1	4
114	High Spatial and Temporal Variability of Dry Deposition in a Coastal Region. Environmental Fluid Mechanics, 2005, 5, 357-372.	1.6	3
115	A Method for Determining the Small-Scale Variations of the Surface Turbulent Momentum Flux Seaward of the Coast. Journal of Applied Meteorology and Climatology, 2003, 42, 291-307.	1.7	3
116	An Ensemble of Arctic Simulations of the AOE-2001 Field Experiment. Atmosphere, 2011, 2, 146-170.	2.3	2
117	Vertical structure of cloud radiative heating in the tropics: confronting the EC-Earth v3.3.1/3P model with satellite observations. Geoscientific Model Development, 2021, 14, 4087-4101.	3.6	2
118	Winter thermodynamic vertical structure in the Arctic atmosphere linked to large-scale circulation. Weather and Climate Dynamics, 2021, 2, 1263-1282.	3.5	2
119	Exploring the Dynamics of an Arctic Sea Ice Melt Event Using a Coupled Atmosphereâ€Ocean Singleâ€Column Model (AOSCM). Journal of Advances in Modeling Earth Systems, 2022, 14, .	3.8	2
120	Comparing Estimates of Turbulence Based on Near-Surface Measurements in the Nocturnal Stable Boundary Layer. Boundary-Layer Meteorology, 2011, 138, 43-60.	2.3	1
121	Model simulations of the Arctic atmospheric boundary-layer from the SHEBA year. Ambio, 2004, 33, 221-7.	5.5	0