

CURRICULUM VITAE

Christopher J. Cox

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Research Interests

meteorology, snow, sea ice, albedo, surface energy budget, radiation, turbulence, cloud physics, model evaluation, climate, field measurements and instrumentation, uncrewed aerial systems

Education

2013, Ph.D., University of Idaho, Moscow, Environmental Science (Von P. Walden, chair)
2009, M.S., University of Idaho, Moscow, Geography (Von P. Walden, chair)
2009, Certificate, University of Idaho, Moscow, Geographical Information Systems (GIS)
2006, B.A., University of Maine, Orono, Anthropology (Brian S. Robinson, chair)

Appointments

2019-present, Physical Scientist, NOAA Physical Sciences Laboratory
2017-2019, Research Scientist II, CIRES/University of Colorado
2014-2017, Research Scientist I, CIRES/University of Colorado
2013-2014, Postdoctoral Visiting Fellow, CIRES/University of Colorado
2007-2013, Research Assistant, Geography Department, University of Idaho

Fieldwork

More than 1.5 years of fieldwork since 2010, inclusive of, e.g., > 9 months Arctic winter, 1.5 months equatorial Pacific, 8 months at sea, 4 months regular work on sea ice

Peer Reviewed Publications

H-Index: 22; H10-Index: 29. Selected:

Cox, C.J., S.M. Morris, T. Uttal, R. Burgener, E. Hall, M. Kutchenreiter, A. McComiskey, C.N. Long, B.D. Thomas and J. Wendell, The De-Icing Comparison Experiment (2021): A study of broadband radiometric measurement under icing conditions in the Arctic. *Atmospheric Measurement Techniques*, 14, 1205-1224, <https://doi.org/10.5194/amt-14-1205-2021>

Cox, C.J., R. Stone, D. Douglas, D. Stanitski, and M. Gallagher (2019): The Aleutian Low – Beaufort Sea Anticyclone: A climate index correlated with seasonal melt in the Pacific Arctic cryosphere. *Geophysical Research Letters*, 46, GRL59183, <https://doi.org/10.1029/2019GL083306>

Driemel, A. and co-authors (inc. **C.J. Cox**) (2018): Baseline Surface Radiation Network (BSRN): Structure and data description (1992-2017). *Earth System Science Data*, 10, 1491-1501, <https://doi.org/10.5194/essd-10-1491-2018>

Cox, C.J., R.S. Stone, D. Stanitski, D. Douglas, G. Divoky, G. Dutton, C. Sweeney and C. George, (2017): Drivers and environmental responses to the changing annual snow cycle of northern Alaska. *Bulletin of the American Meteorological Society*, 98, 2559-2577, <https://doi.org/10.1175/BAMS-D-16-0201.1>

Miller, N., M. Shupe, **C.J. Cox**, D. Noone, P.O.G. Persson, and K. Steffen, (2017): Surface energy budget responses to radiative forcing at Summit, Greenland. *The Cryosphere*, 11, 497-516, <https://doi.org/10.5194/tc-2016-206>

Berkelhammer, M., D. Noone, H.C. Steen-Larson, M. O'Neill, A. Bailey, **C. Cox**, D. Schneider, K. Steffen, and J.C. White, (2016): Surface-atmosphere decoupling limits accumulation over Greenland. *Science Advances*, 2, e1501704, <https://doi.org/10.1126/sciadv.1501704>

Cox, C.J., V.P. Walden, P.M. Rowe, and M.D. Shupe, (2015): Humidity trends imply increased sensitivity to clouds in a warming Arctic. *Nature Communications*, 6, 1-8, <https://doi.org/10.1038/ncomms10117>

Bennartz, R., M.D. Shupe, D.D. Turner, V.P. Walden, K. Steffen, **C.J. Cox**, M.S. Kulie, N.B. Miller, C. Pettersen, (2013): July 2012 Greenland melt extent enhanced by low-level liquid clouds. *Nature*, 496, 83-86. <https://doi.org/10.1038/nature12002>

Published Data Sets

Data sets with DOI: 39 (since 2015); Selected:

Lanconello, C. et al. (inc **C. Cox**). (2023). Baseline surface radiation data snapshot 2023-03-31. *PANGAEA*, <https://doi.pangaea.de/10.1594/PANGAEA.957398>

Cox, C.J. et al. (2023h). Met City meteorological and surface flux measurements (Level 3, final), Multidisciplinary Drifting Observatory for the Study of Arctic Climate (MOSAiC), central Arctic, October 2019 – September 2020. *Arctic Data Center*, <https://doi.org/10.18739/A2PV6B83F>

Cox, C.J. et al. (2023i) Atmospheric Surface Flux Station #30 measurements (Level 3, final), Multidisciplinary Drifting Observatory for the Study of Arctic Climate (MOSAiC), central Arctic, October 2019 – September 2020. *Arctic Data Center*, <https://doi.org/10.18739/A2FF3M18K>

Cox, C.J. et al. (2023j) Atmospheric Surface Flux Station #40 measurements (Level 3, final), Multidisciplinary Drifting Observatory for the Study of Arctic Climate (MOSAiC), central Arctic, October 2019 – September 2020. *Arctic Data Center*, <https://doi.org/10.18739/A25X25F0P>

Cox, C.J. et al. (2023k) Atmospheric Surface Flux Station #50 measurements (Level 3, final), Multidisciplinary Drifting Observatory for the Study of Arctic Climate (MOSAiC), central Arctic, October 2019 – September 2020. *Arctic Data Center*, <https://doi.org/10.18739/A2XD0R00S>

Smith, C. and Cox, C. (updated daily) PSL Download Climate Timeseries: ALBSA: Aleutian Low - Beaufort Sea Anticyclone. NOAA PSL. <https://psl.noaa.gov/data/timeseries/ALBSA/>

Cox, C. (2020): De-Icing Comparison Experiment (D-ICE) campaign data: Radiometric and icing condition observations from the NOAA Barrow Atmospheric Baseline Observatory, August 2017–July 2018 (NCEI Accession 0209059), NOAA National Centers for Environmental Information. <https://accession.nodc.noaa.gov/0209059>

Cox, C. (2020): De-Icing Comparison Experiment (D-ICE) campaign data: Best-estimate downwelling longwave and shortwave radiometric fluxes from the NOAA Barrow Atmospheric Baseline Observatory, August 2017–July 2018 (NCEI Accession 0209058), NOAA National Centers for Environmental Information. <https://accession.nodc.noaa.gov/0209058>

Awards & Honors

- 2022 NOAA Bronze Medal for Scientific or Engineering Achievement *for extraordinary contributions to the year-long Multidisciplinary drifting Observatory for the Study of Arctic Climate (MOSAiC) polar expedition*
- 2021 NOAA Bronze Medal for Scientific or Engineering Achievement *for the development of a fully-coupled, ocean-ice-atmosphere model that delivers daily, 0-10 day, sea ice forecast guidance to the NWS Alaska Region*
- 2021 Commendation to NOAA MOSAiC Team, Dep. NOAA Admin., Rear Adm Tim Gallaudet
- 2019 Colorado Army National Guard Certificate of Appreciation, BG Laura I. Clellan
- 2019 ESRL Outreach Gold Star Award
- 2013 CIRES Postdoctoral Visiting Fellowship
- 2013 Outstanding Doctoral Research and Creativity Activity Award, Univ. Idaho

Committees, Workshops & Service (examples)

- Cryosphere Team Lead, NOAA/PSL Boundary Layer Observations & Processes Division, (2022-)
- Panelist, UN WMO Ocean Conference Side Event *Polar Regions in a changing climate: ocean solutions through science and services* (June 2022)
- University-National Oceanographic Laboratory System (UNOLS) Arctic Icebreaker Coordination Committee (AICC) (2022-2024)
- United Nations Decade of Ocean Science (UNDOS) Safe Ocean Action Plan Working Group
- United Nations Decade of Ocean Science (UNDOS) Observing Air-Sea Interactions Strategy (OASIS) Ocean Surface Radiation Best Practices (ORBP), Consultation Working Group

Grants (last 3 years)

- PI: NOAA GOMO Arctic Research Program (2023) “(Thermo)dynamic processes and forecasting in the coupled ocean-ice-atmosphere system”
- Co-I: NSF OPP 2021-2024 (2137091) “Collaborative Research: NSFGE0-NERC: Integrated Characterization of Energy, Clouds, Atmospheric state, and Precipitation at Summit: Measurements along Lagrangian Transects” *unfunded federal co-I.