



Comprehensive Ocean - Atmosphere Data Set (COADS) LMRF Arctic Subset, Version 1

USER GUIDE

How to Cite These Data

As a condition of using these data, you must include a citation:

Serreze, M., compiler 1997. *Comprehensive Ocean - Atmosphere Data Set (COADS) LMRF Arctic Subset, Version 1*. [Indicate subset used]. Boulder, Colorado USA. NSIDC: National Snow and Ice Data Center. <https://doi.org/10.5067/TLB86RYP2MRY>. [Date Accessed].

FOR QUESTIONS ABOUT THESE DATA, CONTACT NSIDC@NSIDC.ORG

FOR CURRENT INFORMATION, VISIT <https://nsidc.org/data/NSIDC-0057>



National Snow and Ice Data Center

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1 OVERVIEW

In cooperation with the National Oceanic and Atmospheric Administration Climate Diagnostics Center (NOAA/CDC), and the National Center for Atmospheric Research (NCAR), NSIDC is distributing an Arctic subset of surface marine data from the Comprehensive Ocean - Atmosphere Data Set (COADS) in the Long Marine Reports Fixed-Length (LMRF) format.

The original data were obtained from many sources, including merchant vessels, research ships, and moored and drifting buoys. Parameters include the following: atmospheric pressure, surface pressure, air temperature, sea surface temperature, humidity, water vapor, surface winds, cloud information (amount, height and type), and present weather. The scientists assembling COADS have attempted to integrate all available digitized, directly sensed surface-marine data sets that would contribute information of reasonable quality. Most of the early data were gathered by ships-of-opportunity. More recent data also come from fixed research vessels, buoys, and other observing devices. Data archived at NSIDC is for regions North of 65° N for the years 1950-1995.

The COADS LMRF Arctic subset consists of 46 data files (one for each year) which are in LMRF (Long Marine Report Fixed-Length, packed binary format), and has a total volume of approximately 201 MB unix compressed and 632 uncompressed. The data are in the form of individual marine reports with a given latitude and longitude. A UNIX-based Fortran program is distributed with the data files.

The [FTP directory](#) contains the Comprehensive Ocean - Atmosphere Data Set (COADS) LMRF Arctic Subset data, as well as two informational documents and a UNIX Fortran program. The "lmr" document describes the LMR and LMRF data formats, and contains detailed information on parameters and data sources. The "stat_trim" document describes the trimming (quality control) procedures and flags, and information on the calculation of monthly statistics. These documents were compiled by and are distributed by the NOAA Climate Diagnostics Center (CDC) and the National Center for Atmospheric Research (NCAR). COADS is the result of a continuing cooperative project between the National Oceanic and Atmospheric Administration (NOAA) -- specifically its Environmental Research Laboratories (ERL), National Climatic Data Center (NCDC), and Cooperative Institute for Research in Environmental Sciences (CIRES, conducted jointly with the University of Colorado) -- and the National Science Foundation's National Center for Atmospheric Research (NCAR). The NOAA portion of COADS is currently supported by the NOAA Climate and Global Change (C&GC) Program and the NOAA Environmental Services Data and Information Management (ESDIM) Program.

For additional documents and information on COADS see the following page maintained at NOAA: [COADS Home Page](#)

2 REFERENCES AND RELATED PUBLICATIONS

Clark, M. P., M. C. Serreze, and R. G. Barry. 1996. Characteristics of Arctic Ocean Climate based on COADS data, 1980-1993. *Geophysical research Letters* 23(15): 1953-1956.

Hahn, C.J., S.G. Warren, and J. London. 1992. The use of COADS ship observations in cloud climatologies. *Proceedings of the International COADS Workshop, Boulder, Colorado, 13-15 January 1992*. H. F. Diaz, K. Wolter, and S. D. Woodruff, Eds. NOAA Environmental Research Laboratories, Boulder, Colo.: 271-280.

NCDC (National Climatic Data Center). 1968. TDF-11 Reference Manual. NCDC, Asheville, NC.

NCDC (National Climatic Data Center) 1989a. Marine Data Users' Reference: 1854-1969. NCDC, Asheville, N.C.

NCDC (National Climatic Data Center). 1989b. Marine Data Users' Reference: 1970-Current. NCDC, Asheville, N.C.

Petty, G. W. 1995. Frequencies and characteristics of global oceanic precipitation from shipboard present weather reports. *Bull. Amer. Meteor. Soc.* 76: 1593-1616.

Warren, S.G., C.J. Hahn, J. London, R.M. Chervin, and R.L. Jenne. 1988. Global Distribution of Total Cloud Cover and Cloud Type Amounts over the Ocean. NCAR Tech. Note TN-317+STR, Boulder, CO, 42 pp. + 170 maps.

WMO (World Meteorological Organization). 1981a. Commission for Marine Meteorology Abridged Final Report of the Eight Session, Hamburg, 14-25 September 1981, WMO No. 584.

WMO (World Meteorological Organization). 1981b. Manual on Codes, Volume I, International Codes, WMO No. 306, Ed. 1974, Suppl. No. 7.

WMO (World Meteorological Organization). 1988. Manual on Codes, Volume I, International Codes, WMO No. 306.

WMO (World Meteorological Organization). 1993. Commission for Marine Meteorology Abridged Final Report of the Eleventh Session, Lisbon, 19-30 April 1993, WMO No. 792.

3 DOCUMENT INFORMATION

3.1 Document Creation Date

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3.2 Date Last Updated

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