



Norwegian North Polar Expedition 1893-1896: Oceanographic Data, Version 1

USER GUIDE

How to Cite These Data

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

National Snow and Ice Data Center. Compiled by F. Nansen. 2002. *Norwegian North Polar Expedition 1893-1896: Oceanographic Data, Version 1*. [Indicate subset used]. Boulder, Colorado USA. NSIDC: National Snow and Ice Data Center. <https://doi.org/10.7265/N57H1GGG>. [Date Accessed].

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

FOR CURRENT INFORMATION, VISIT <https://nsidc.org/data/G02120>



National Snow and Ice Data Center

TABLE OF CONTENTS

1	OVERVIEW	2
2	DETAILED DATA DESCRIPTION.....	2
2.1	Format	2
2.2	File Size.....	2
2.3	Spatial Coverage.....	2
2.3.1	Spatial Coverage Map	3
2.4	Temporal Coverage and Resolution.....	3
2.5	Parameter or Variable	4
2.5.1	Parameter Description	4
2.5.2	Sample Data Record.....	4
3	DATA ACQUISITION AND PROCESSING.....	4
3.1	Sensor or Instrument Description	4
3.2	Data Source.....	5
4	REFERENCES AND RELATED PUBLICATIONS	5
4.1	Related Data Collections	6
5	CONTACTS AND ACKNOWLEDGMENTS	6
6	DOCUMENT INFORMATION.....	6
6.1	Document Author.....	6
6.2	Publication Date	6
6.3	Date Last Updated.....	6

1 OVERVIEW

Norwegian researcher and explorer Fridtjof Nansen originated the idea of using a ship, beset in ice and drifting, as a research station after pieces of wreckage from the USS Jeannette, crushed in the ice of the Laptev Sea, washed up on the southwest coast of Greenland after three years. To Nansen, this event suggested the existence of a trans-Arctic current. The Fram, designed specifically for the expedition by naval architect Colin Archer, drifted from a starting point in ice north of the New Siberian Islands to Svalbard in what was later named the Transpolar Drift Stream.

2 DETAILED DATA DESCRIPTION

NSIDC staff keyed the data in this data set from the print version of the final values table (pages 243-256) in *The Norwegian North Polar Expedition, 1893-1896, Scientific Results, Volume III*, reprint. The Microsoft Excel file exactly replicates the data in the table from the publication, except the Excel file includes corrections made from Nansen's Errata and Addenda (pages VI-VII).

Meteorological data from the Nansen expedition can be found in the Environmental Working Group (EWG) [Arctic Meteorology and Climate Atlas](#).

2.1 Format

The data are in Microsoft Excel format.

2.2 File Size

72 Kb.

2.3 Spatial Coverage

The Norwegian North Polar Expedition, on board the Fram, drifted from a starting point in ice north of the New Siberian Islands at approximately 78°50' N, 0°00' E to the west coast of Svalbard, at approximately 78°00' N, 20°00' E.

2.3.1 Spatial Coverage Map

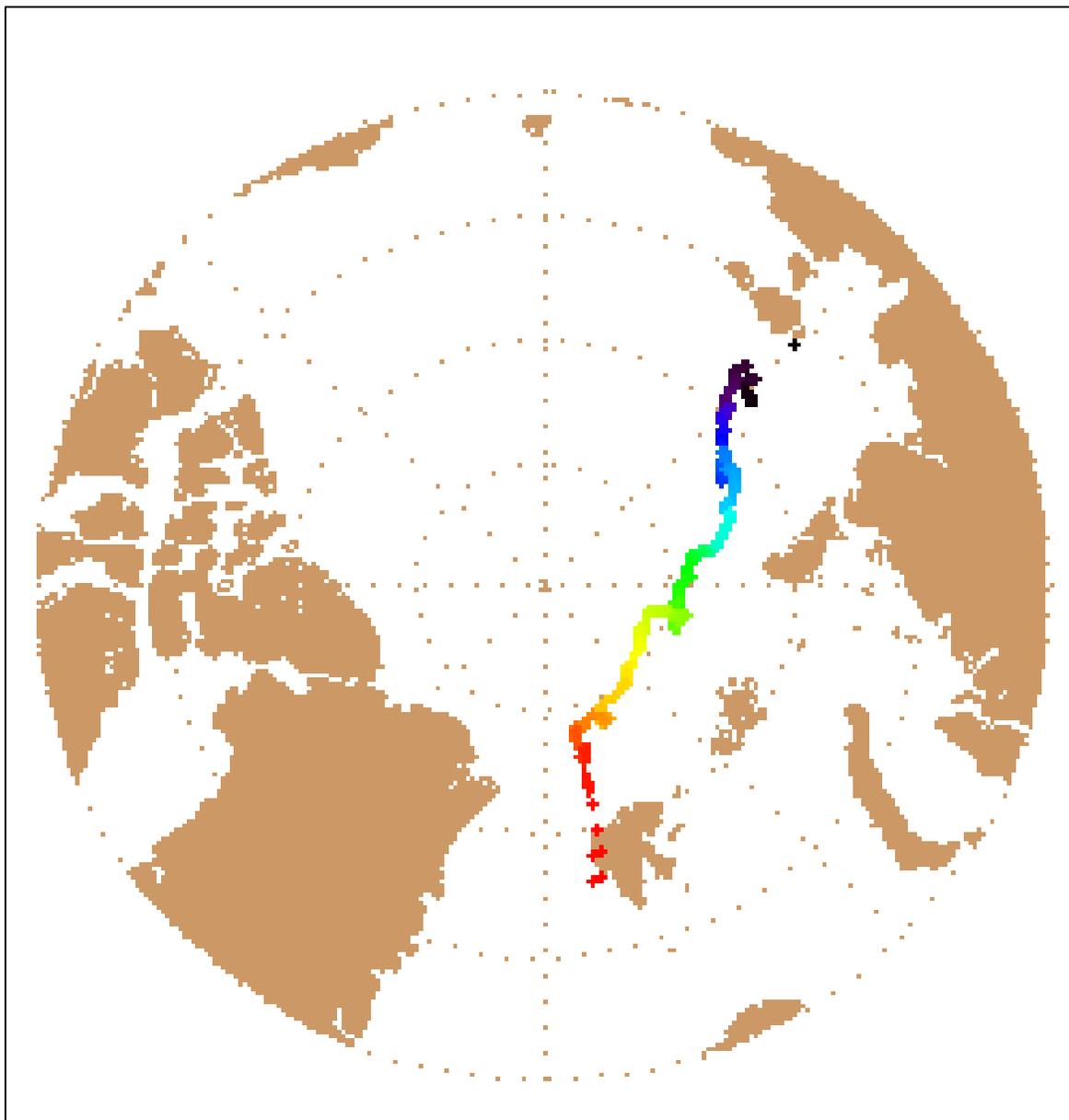


Figure 1. Drift track of the Fram.

2.4 Temporal Coverage and Resolution

The data span ranges from July 1893 to April 1896. Data were collected daily.

2.5 Parameter or Variable

2.5.1 Parameter Description

Variables measured were water temperature, density, salinity, depth, and specific gravity.

2.5.2 Sample Data Record

1	2	3	4	5	6	7	8	9	10
1	1893	July 22	70 43	39 20	0	5.80	1.02593	34.10	1.02678
					20	3.92	1.02664	35.03	1.02772
					40	3.58	1.02664	35.03	1.02775
					60	1.58	1.02662	35.01	1.02789
					80	1.01	1.02661	34.99	1.02792
					100	0.65	1.02661	34.99	1.02795
					150	-0.61	1.02752		
					200	-1.14	1.02674	35.16	1.02817

Column Titles Key:

Column 1: Distinguishing Number

Column 2: Year

Column 3: Month and Day

Column 4: Latitude Degrees (N) and Minutes

Column 5: Longitude Degrees (E) and Minutes

Column 6: Depth (meters)

Column 7: Temperature (°C)

Column 8: Specific Gravity (ratio)

Column 9: Salinity (0/00)

Column 10: Density

3 DATA ACQUISITION AND PROCESSING

3.1 Sensor or Instrument Description

Temperature - Various types of thermometers were used to measure temperatures in water samples collected with Petterson's insulated water bottles with non-conducting water jackets.

Specific gravity and salinity - floating hydrometers of constant weight and Tornoe's Apparatus were used to measure specific gravity and salinity in water samples collected with Petterson's insulated water bottles with non-conducting water jackets, Ekman's insulated water bottle, and Blessing's

water bottle. Please refer to The Norwegian North Polar Expedition, 1893-1896, Scientific Results, Volume III, reprint (see the References and Related Publications section of this document) for more specific information on instruments and sampling procedures.

3.2 Data Source

Density and specific gravity values were calculated.

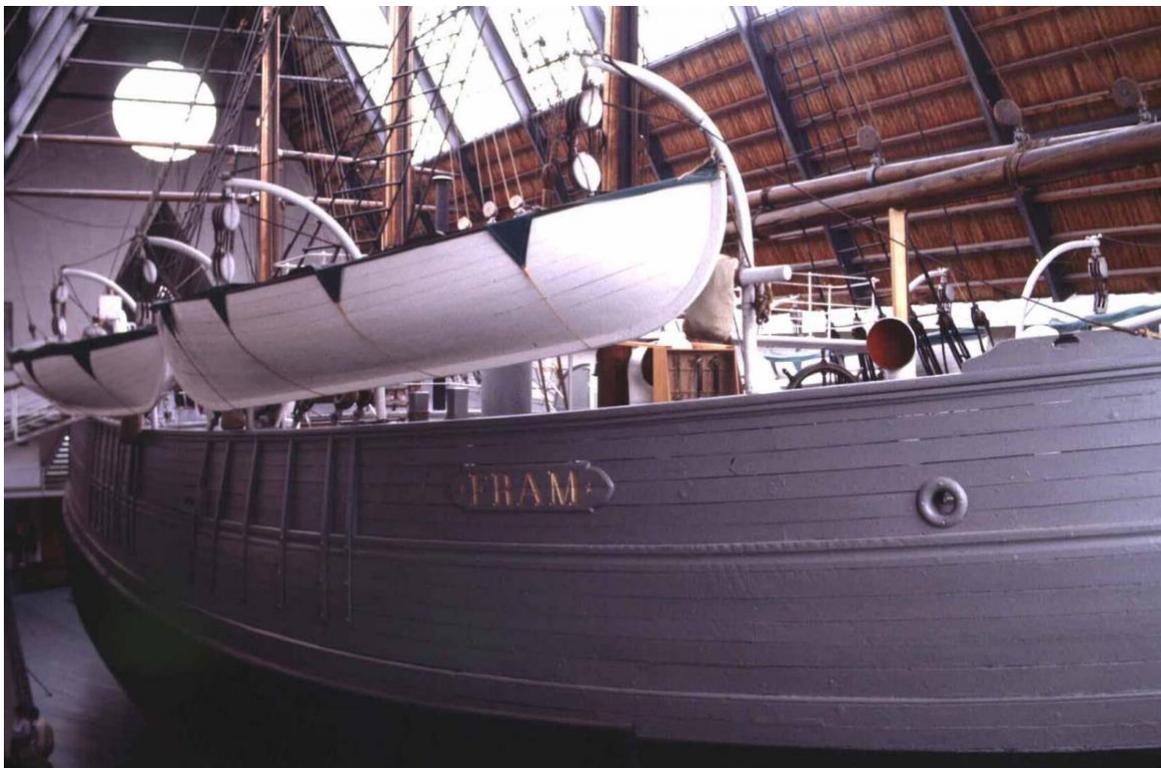


Figure 2. The Fram. Photo by James S. Aber, Dept. Earth Science, Emporia State University. Copyright James S. Aber.

4 REFERENCES AND RELATED PUBLICATIONS

Environmental Working Group. Edited by F. Fetterer and V. F. Radionov. 2000. Environmental Working Group Arctic Meteorology and Climate Atlas, Version 1. Boulder, Colorado USA. NSIDC: National Snow and Ice Data Center. doi: <https://doi.org/10.7265/N5MS3QNJ>.

Fridtjof, Nansen, ed. 1902. The Norwegian North Polar Expedition, 1893-1896, Scientific Results, Volume III. Christiania: Jacob Dybwad; London, New York, Bombay: Longmans, Green, and Co.; Leipzig: F.A. Brockhaus.

Fridtjof, Nansen, ed. 1902. The Norwegian North Polar Expedition, 1893-1896, Volumes I-VI. Christiania: Jacob Dybwad; London, New York, Bombay: Longmans, Green, and Co.; Leipzig: F.A. Brockhaus.

Fridtjof, Nansen, ed. 1969. The Norwegian North Polar Expedition, 1893-1896, Scientific Results, Volume III. New York, NY: Greenwood Press. Reprint.

4.1 Related Data Collections

- [Environmental Working Group Arctic Meteorology and Climate Atlas](#).
- [International Comprehensive Ocean-Atmosphere Data Set \(ICOADS\)](#) (accessed 21 August 2019)

When *Norwegian North Polar Expedition 1893-1896: Oceanographic Data* (G02120) was published at NSIDC in 2002, ICOADS did not include data from the *Fram*. As of 2019, data from both the first North Polar Expedition and a later 1898 expedition can be found in [ICOADS](#).

5 CONTACTS AND ACKNOWLEDGMENTS

Fridtjof Nansen, 1861-1930

Explorer, Oceanographer, Ambassador to Norway, (1906-1908), 1922 Nobel Peace Prize recipient

6 DOCUMENT INFORMATION

6.1 Document Author

NSIDC Technical Writers

6.2 Publication Date

1 October 2002

6.3 Date Last Updated

2002