International Ice Patrol Iceberg Drift Tracks, 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 (comp.). 1995. *International Ice Patrol Iceberg Drift Tracks, Version 1*. [Indicate subset used]. Boulder, Colorado USA. NSIDC: National Snow and Ice Data Center. https://doi.org/10.7265/N52Z13FD. [Date Accessed].

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

FOR CURRENT INFORMATION, VISIT https://nsidc.org/data/G00874

National Snow and Ice Data Center

TABLE OF CONTENTS

1 DETAILED DATA DESCRIPTION

The International Ice Patrol (IIP) tracks, plots, and predicts iceberg positions in the North Atlantic Ocean. The IIP area of responsibility is 40 to 52 degrees North, 39 to 57 degrees West. During several years (1977, 1978, 1980, 1983, and 1989) individual icebergs were tagged with buoys developed by the U.S. Coast Guard Research and Development Center. The motion of the icebergs bearing the USCG buoys were then tracked via satellite. Observation periods range from one week to two years depending on the buoy. The data are stored in the National Oceanographic Data Center format for drifting buoys (format number 156).

Ships transiting between Europe and east coast ports of Canada and the US traverse a great circle route that brings them into the vicinity of icebergs carried south by the cold Labrador Current near the Grand Banks. It was here that the R.M.S. TITANIC sank in 1912, after it struck an iceberg. This disaster resulted in the loss of 1517 lives and led directly to the founding of the IIP in 1914. The mission of the IIP is to monitor iceberg danger near the Grand Banks of Newfoundland and provide the limits of all known ice to the maritime community. The IIP does this by sighting icebergs (primarily through airborne Coast Guard reconnaissance missions), plotting and predicting iceberg drift using a model, and, every 12 hours during the ice season, estimating the "limit of all known ice". This limit, along with a few of the more critical predicted iceberg locations, is broadcast by radio stations and made available on line as an "Ice Bulletin". Twice daily, a radio facsimile chart of the area, depicting the limits of all known ice, is broadcast. The IIP broadcasts its products during the time of year that icebergs threaten shipping. This varies, but usually begins in February and ends in July.

NSIDC archives this data set for the IIP. Other products, including a scientific reports bibliography and iceberg limit climatology, are available on the IIP Web site.

Each file contains the data for an individual buoy deployed and tracked by the U.S. Coast Guard

Note that the deployment time in the data file itself may not match the deployment time contained in the references. The deployment time in the references is the actual time the buoy was deployed by the Coast Guard. The initial time in the data file is the first valid data record after the buoy was deployed on an iceberg. Additionally, the header records for buoys 00050 and 2611 contained an error in the deployment date and location. This error, caused by a software problem at IIP, was corrected at NSIDC to properly reflect the first data record, based on information received from IIP.

Buoy 2575, contained in file 02575.ndc, was initially deployed on iceberg in August of 1980. This iceberg never moved from this initial position. The buoy was retrieved by the U.S. Coast Guard

Cutter Westwind in July of 1981 and the buoy was subsequently redeployed to a new iceberg in August of 1981.

Table 1. Buoy Numbers and Deployment Dates

File	Contains the data for a buoy deployed in:
00160.ndc	February 1977
01567.ndc	February 1977
00050.ndc	January 1978
01344.ndc	January 1978
01568.ndc	January 1978
00066.ndc	February 1978
01372.ndc	February 1978
02575.ndc	August 1980
02576.ndc	August 1980
02577.ndc	August 1980
02578.ndc	August 1980
02579.ndc	August 1980
25800.ndc	August 1980
02611.ndc	March 1983
02618.ndc	March 1983
02625.ndc	March 1983
02612.ndc	March 1989
04500.ndc	March 1989
04504.ndc	June 1989
25809.ndc	June 1989

1.1 Format

Each file is in ASCII text format and contains the following data records in accordance with the NODC data format for drifting buoy data, format number F156. See Sample Data record below.

Table 2. Header Record Content

Header Record	Start	Length
NODC File Number: Always 156	1	3
NODC track number: Blank field	4	6
Record Number: Always 'A' for the header record	10	1
Drogue Number: The drogue or buoy number	11	5

Header Record	Start	Length
Drogue Type: Always ARGOS	16	5
Principal Investigator	21	15
Institution or Agency	36	15
Platform Name: Blank field	51	12
Buoy Number: Always 00000	63	5

Table 3. Launch Summary Record Content

Launch Summary Record	Start	Length
NODC File Number: Always 156	1	3
NODC track number: Blank field	4	6
Record Number: Always 'B' for launch summary	10	1
Drogue Number: The drogue or buoy number	11	5
Launch Position: Deployment position - Latitude: (DDMMSS) Degrees Minutes Seconds	16	6
Latitude Hemisphere: Always 'N'	22	1
Longitude: (DDDMMSS) Degrees Minutes Seconds	23	7
Longitude Hemisphere: Always 'W'	30	1
End position: The last valid data position - Latitude: (DDMMSS) Degrees Minutes Seconds	31	6
Latitude Hemisphere: Always 'N'	37	1
Longitude: (DDDMMSS) Degrees Minutes Seconds	38	7
Longitude Hemisphere: Always 'W'	45	1
Launch Date: YYMMDD (GMT)	46	6
Launch Time: HHMM (GMT)	52	4
End Date: YYMMDD (GMT)	56	6
End Time: HHMM (GMT)	62	4
Drogue Depth: N/A	66	4

Table 4. Date Record Content

Date Record	Start	Length
NODC File Number: Always 156	1	3
NODC track number: Blank field	4	6
Record Number: Always 'C' for data	10	1
Drogue Number: The drogue or buoy number	11	5

Date Record	Start	Length
Observed Position: Deployment position - Latitude: (DDMMSS) Degrees Minutes Seconds	16	6
Latitude Hemisphere: Always 'N' 22 1 - Longitude: (DDDMMSS) Degrees Minutes Seconds	23	7
Longitude Hemisphere: Always 'W'	30	1
Observed Date: YYMMDD (GMT)	31	6
Observed Time: HHMM (GMT)	37	4
Surface Temperature: Always 000	41	3
Sequence Number: Observation number in ascending order	77	4

Table 5. Text Record Content

Text Record	Start	Length
NODC File Number: Always 156	1	3
NODC track number: Blank field	4	6
Record Number: Always 'T'	10	1
Drogue Number: The drogue or buoy number	11	5
Text Record: Comments	16	61

1.2 Parameter or Variable

Iceberg position

1.2.1 Sample Data Record

1.2.1.1 Sample Header Record

```
156     A00066TIROSR. Q. ROBE     USCG R&D CENTER          00000
```

1.2.1.2 Sample Launch Summary Record

```
156     B00066625736N0625100W621347N0650000W78020813527809010800N/A
```

1.2.1.3 Sample Date Record

```
156     C00066625736N0625100W7802081352000                0001
156     C00066630000N0625211W7802090428000                0002
156     C00066625811N0624947W7802090803000                0003
156     C00066625847N0625211W7802091314000                0004
156     C00066625811N0624947W7802100907000                0005
```

1.2.1.4 Sample Text Record

```
156     T00066 THIS BUOY WAS DEPLOYED ON A BERG THAT WAS 300M LONG AND     0496
156     T00066 30-40M HIGH. REF: ROBE, R.Q. AND D.C. MAIER, 1979, LONG-    0497
156     T00066 TERM TRACKING OF ARTIC ICEBERGS REPORT CG-D-36-79. REPORT   0498
156     T00066 CAN BE ACQUIRED USING U.S. NTIS GOVT ACCESSION # ADA072473. 0499
```

2 SOFTWARE AND TOOLS

2.1 Software and Tools

A FORTRAN routine is included with the data. The FORTRAN routine, read_drifter.f, was developed on an SGI running IRIX 4.0.1 and is intended as a template only and should be updated by the user for the appropriate operating system.

3 DATA ACQUISITION AND PROCESSING

3.1 Data Acquisition Methods

Data were acquired by tracking drifting buoys via satellite.

4 REFERENCES AND RELATED PUBLICATIONS

Visit the International Ice Patrol web site for further references and annual reports.

National Oceanographic Data Center Users Guide, 1992 Robe, R.Q. and D.C. Maier, 1979, Long-Term Tracking of Arctic Icebergs, U.S. Coast Guard Report CG-D-36-79. NTIS #: ADA072473

Robe, R.Q., 1982, Iceberg Drift Near Greenland, U.S. Coast Guard Report CG-D-36-82. NTIS # ADA121586

Anderson, I., 1983, Oceanographic Conditions on the Grand Banks during the 1983 International Ice Patrol Season. Report of the International Ice Patrol in the North Atlantic, Appendix B, CG-188-38

Murphy, D.L. and Wright, G.F., 1989, Iceberg Movement Determined by Satellite Tracked Platforms, Report of the International Ice Patrol in the North Atlantic, Appendix C, CG-188-44

4.1 Related Data Collections

International Ice Patrol Iceberg Sightings Database

5 CONTACTS AND ACKNOWLEDGMENTS

Don Murphy
IIP, Groton, CT 06340-6095

Acknowledgments:

This data set is maintained at NSIDC with support from the NOAA National Geophysical Data Center.

6 DOCUMENT INFORMATION

6.1 Publication Date

1995

6.2 Date Last Updated

30 November 2020