AD-A156 818 LONG TERM STATISTICAL MEASUREMENTS OF ENVIRONMENTAL ACOUSTICS PARAMETERS I..(U) POLAR RESEARCH LAB INC CARPINTERIA CA B M BUCK ET AL. 13 DEC 84 PRL-TR-53 1/7

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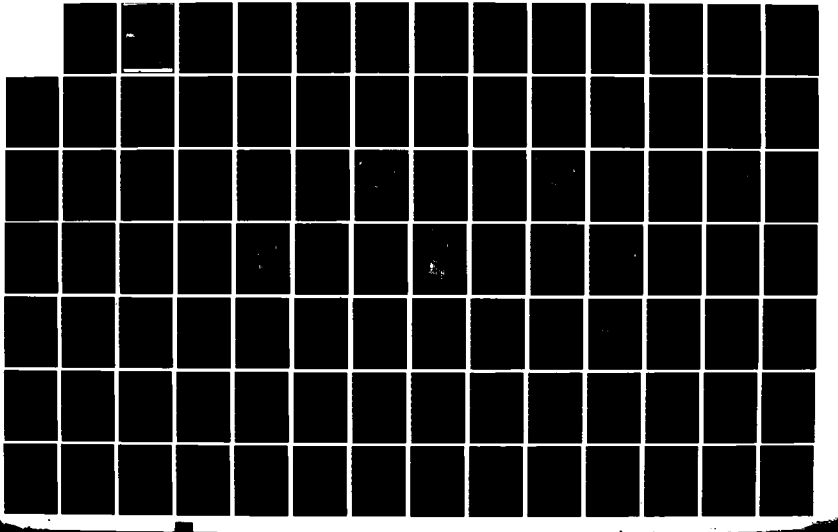

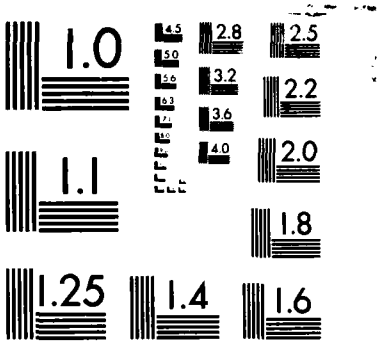

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AD-A156 818

Long Term Statistical Measurements of Environmental Acoustics Parameters in the Arctic

AEAS Report No. 1 - Ambient Noise Levels in the West Greenland Sea

B.M. Buck and D.W. Jaecks

PRL

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PRL

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This work was sponsored by:

ASW Environmental Acoustics Support Office
NORDA, under contract N00014-84-C-0394 with
Office of Naval Research, Arctic Sciences

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PRL TR 53
13 December 1984

UNCLASSIFIED

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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER PRL TR-53	2. GOVT ACCESSION NO. AD-A156 815	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Long Term Statistical Measurements of Environmental Acoustics Parameters in the Arctic AEAS Report No. 1 - Ambient Noise Levels in the West Greenland Sea		5. TYPE OF REPORT & PERIOD COVERED Technical Report 6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) B. M. Buck and D. W. Jaecks		8. CONTRACT OR GRANT NUMBER(s) N00014-84-C-0394
9. PERFORMING ORGANIZATION NAME AND ADDRESS Polar Research Laboratory, Inc. 6309 Carpinteria Avenue Carpinteria, CA 93013		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS SCIENTIFIC OFFICER Program Mgr., Arctic Sciences (Code 425AR) ONR, 800 N. Quincy Street Arlington, VA 22217		12. REPORT DATE 13 December 1984 13. NUMBER OF PAGES 658
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) ASW Environmental Acoustics Support Office NORDA NSTL Station, MS 39529		15. SECURITY CLASS. (of this report) UNCLASSIFIED 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release; distribution unlimited.

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

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18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Arctic
Ambient Noise
Underwater Acoustics
Data Buoys
Greenland Sea

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

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Block 20:

This is one of a series of technical reports on arctic environmental acoustics data collected between 1970 and the present by Polar Research Laboratory, Inc. for various navy agencies. Propagation loss data were taken using manned ice camps and aircraft and ambient noise levels were measured using arctic data buoys that operated through the NIMBUS 6 and NOAA series satellites. The present report ~~of the series (AEAS Report No. 1)~~ addresses one of a total of six arctic geographic areas - the West Greenland Sea, and presents ambient noise levels taken every three hours at the synoptic weather times from nine data buoys that drifted through the area. These data buoys collect a very large amount of independent measurements that are impractical to present in raw form. Therefore, a "first-level" statistical analysis was performed to allow reporting and distribution. These data, along with other regularly available meteorological, oceanographic and ice data, should enable higher order analyses and modeling for both prediction and understanding the mechanisms of arctic background noise. The data buoys, while limited in some respects, offer the only present means of long-term, wide-area investigations of arctic ambient noise on a true statistical basis.

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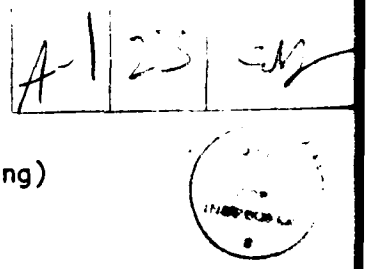
6. " " " 2888 (SYNARGOS Data Buoy)
7. " " " 2889 (" " ")
8. " " " 2891 (" " ")
9. " " " 0662 (NIMBUS 6 RAMS Data Buoy)



General Background

This is intended as one of a series of "Data Reports" on Arctic environmental acoustics drawn from a base collected by Polar Research Laboratory, Inc. over the years 1970 to the present under contracts with the Office of Naval Research (Undersea, Acoustics, Sensor Technology and Arctic Branches), the Arctic Submarine Laboratory NOSC and the Naval Electronics Systems Command, Code 612. Sponsorship of this analysis and reporting effort is from the ASW Environmental Acoustics Support office of the Naval Oceanographic Research and Development Activity through contract N00014-84-C-0394 with the Office of Naval Research, Arctic Branch. The data, to be presented in several volumns and distributed as completed, will cover propagation loss measurements primarily from underwater shots but also including some CW experiments from manned ice camps, and ambient noise measurements made from Arctic data buoys using the NIMBUS 6 and NOAA series satellites. The data are to be presented in a form of "first-level" statistical analysis. That is, in its primary form suitable for distribution to those interested in Arctic acoustics, in much the same way oceanographic data is distributed after a typical cruise. It is intended that higher level analyses can be made from these reports and other available data by those wishing to do so. Some of the data have already received such treatment and were reported in various journals and technical reports (see, for example, references 1 through 7).

Data Collection Instrumentation

For the collection of both propagation loss and ambient noise data, single omni hydrophones at various depths under the ice were used. These units were acceleration-cancelling phones mounted from cable

suspensiions designed to minimize "flutter" and "bounce" self-noise. In some cases these suspensions were link chain to a 11 kg (25 pound) weight, and others used a Kevlar "hair faired" electromechanical cable, also to a 11 kg weight. All phones were made neutrally buoyant and decoupled from the suspension to further decrease flutter effects. They were covered with "hairs" of polypropalene to minimize flow-generated noise and to attain neutral buoyancy. All were calibrated at either TRANSDEC/NOSC, Underwater Sound Reference Detachment/ONR, or at PRL using secondary standards from the former labs. Considerable pains were taken in the field to assure that the systems were not contaminated from nearby ice camps or icebreakers. This was accomplished by operating from small, remote, "quieted" ice camps, where all equipment was designed to be battery-operated. The data buoys, of course, were completely uncontaminated by the presence of manned activities.

Several experiments were conducted to measure the effectiveness of the hydrophone suspension system in eliminating, or at least minimizing, self noise caused by the shear current (primarily from wind-driven ice movement). One technique used for this was reported in reference 8. It was concluded from these experiments that the measurements at 10 Hz and above were affected very little by self noise. However, measurements below 10 Hz were affected somewhat, and therefore should be viewed with caution. An analysis is underway at this time to determine the degree of this contamination below 10 Hz. This is being done by performing statistical correlations between measured ice speed (the prime producer of shear current, especially in the Central Arctic) of the self-navigating ambient noise data buoys and 3.2 and 5 Hz noise level measurements, and between the latter and tabulated seismic activity in the Arctic area. Various experiments have indicated the possibility that seismic activity leaking into the Arctic Basin via T-phase can affect the noise spectrum below 10 Hz.

Explosives used in the propagation work at short ranges were: standard Signal, Underwater Sound (SUS) 0.8 kg (1.8 pound) charges Mk 61 (18 and 244 meters - 60 and 800 feet); Mk 82 (18 and 91 meters - 60 and 300

feet); and specially modified Mk 61s for detonation at 61 m (200 ft), 122 m (400 ft) and 183 m (600 ft) - dropped through ice holes at manned ice camps and from low-flying aircraft into open leads. For the longer ranges, these charges were augmented with block charges of TNT, where the SUS were used to detonate the larger charges. Ranges were measured by various means of navigation including fixes from Transit satellite receptions and bubble sextant sun lines from the ice and Omega receivers aboard the aircraft. In many cases the bubble pulse interval of the explosive was monitored using low-sensitivity phones in the vicinity of the charges, in order to determine effective TNT yield for source energy calculations. However, in other cases this was not feasible.

The ambient noise data buoys were first employed in the Beaufort Sea in the spring of 1975 and used the NIMBUS 6 satellite, with its Random Access Measurement System (RAMS) for navigation and retrieving noise level, atmospheric pressure and air temperature data. The data handling limitations of that satellite system constrained the measurements to four 1/3rd octave bands (3.2, 10, 32 and 1000 Hz for some buoys and 10, 32, 100 and 1000 Hz for others). The levels at those frequencies were sampled at each of the eight, 3-hourly synoptic weather times (0000, 0300, 0600....Z) each day. Those data buoys, called "SYNRAMS" for Synoptic RAMS, were used primarily in the western Central Arctic and are described in reference 9. When the TIROS ARGOS (NOAA series) satellite became available, the activity had shifted to the Eurasian Basin of the Central Arctic and were used there. ARGOS enabled more precise navigation (200-300 m circular probable error) and more data throughput. The SYNARGOS data buoy, described in detail in reference 10, saw its first use in 1980 and makes measurements of ambient noise level in eleven 1/3rd octave bands spaced between 5 and 1000 Hz in some cases, and 5 to 300 Hz in others. All bands are sampled at the weather synoptic times every three hours, the same as SYNRAMS buoys. Each filter output is averaged with a constant bandwidth averaging time product of 32 Hz seconds. The data are rough-processed by Service ARGOS and sent to PRL in the form of digital tape recordings every two weeks.

At PRL the hydrophone calibrations, preamp gain, bandwidth corrections and other system gains are applied to derive the spectrum levels of ambient noise at each 1/3rd octave filter center frequency.

The buoys are batteried to live for a full year, however, because of the continuous movement of the ice out of the basin and the deployment locations used, the average lifetime attained in the Eastern Central Arctic is on the order of ten months. Each buoy collects a large amount of sampled data - for example, 2,640 independent 1/3rd octave measurements each month, or about 26,400 measurements during a typical 10 month lifespan. Some of the SYNRAMS data buoys in the Beaufort Sea were active for over a year, one attaining a two year productive life. Although no array is involved, and the measurements are straightforward omni, 1/3rd octave levels, the buoys enable measurements uncontaminated by artifacts in areas and in seasons that are impractical of collection by any other means at the present time. They provide large data bases that allow true statistical portrayal of the background noise, and get around the constraints of spring-only manned ice camps in the Central Arctic. At present there are ongoing developments to extend the Arctic data buoy to study directional qualities of the noise background, signal and noise coherency, propagation loss (using an expendable projector) and the effects of hydrophone depth on both signal and noise. While they will add significantly to the knowledge of the acoustic noise background, they will not supplant or detract from the value of the 1/3rd octave omni buoys that are the subject of this series of reports.

With one exception, all of the SYNRAMS and SYNARGOS data buoys employed a hydrophone at 30.5 m (100 feet) below sea level, or about 27.4 m (90 feet) below the bottomside of the ice. One SYNARGOS buoy had phones at four depths: 9 m (30 ft), 30.5 m (100 ft), 61 m (200 ft), and 91 m (300 ft) below sea level. In the data to be presented, the various buoys are identified by their "ARGOS identification number" (I.D.).

Reporting Areas

Propagation data will be reported in a future report of this series where the specific propagation paths are described. For ambient noise, however, the measurements will be given in separate reports by geographic areas of the Arctic and its adjacent seas. Figure 1 gives the areas for this and the future ambient noise reports. Figure 1 does not mean to imply that the data buoys evenly covered each of the areas - only that the buoys were in a specified area. These areas are: (1) the North Barents Sea; (2) the West Greenland Sea; (3) the East Central Arctic Ocean (i.e., the Eurasian Basin demarked by the Lomonosov Ridge on one side and the 1000 m curve on the other); (4) the West Central Arctic; (5) the Kara Sea; and (6) the Chukchi Sea. This preliminary area selection was somewhat, but not entirely, arbitary. For example, areas (3) and (4) are probably not statistical different, but the measurements were separated by several years and used different type buoys. Area (1) and most of (2) are shallow, and close to the ice edge, but area (2) is one of very rapid ice movement. Areas (5) and (6) are shallow and widely separated from the other areas. As "second-level" analyses are done on the presently reported data and new data sets collected, it will probably result in a different arrangement of areas. For the present, however, the areas of Figure 1 will suffice as a means of separating the data into reasonable-sized reports.

Data Presentation Format

The data will, insofar as practical, be presented in a standard format for each area and each data buoy. In the Central Arctic, the analysis periods are monthly. In other areas, where the ice movement is rapid, shorter periods are used. For each data buoy the following presentations are given:

a.) A tabulation of data buoy positions for its life in a particular reporting area, and the time/date of the fix.

b.) A plot of noise level vs frequency for three selected percentiles: 5, 50, and 95. These percentile levels are the percentages of the time the noise is less than the value plotted. This is the general way Wenz portrayed open ocean noise level statistics, and we adopted it long ago as a way of comparing Arctic and open ocean noise. The dashed straight line in this figure is Knudsen's "Sea State Zero" value extrapolated below 100 Hz, and is used as a fiducial for easily comparing Arctic data sets. Wenz's curves at low frequencies were shipping dependent and their inclusion tended to obscure the Arctic data. Knudsen's single line did not.

c.) At the bottom left of the 5/50/95 %tile curves is a geopositional plot of the buoy's track for the reporting period. The small square is the starting location.

d.) A time-history of the levels at each frequency. This is a useful curve in first-level analysis in that it shows clearly where the data reached the limits of the measurement system. Truncations at the lower end indicate the noise reached the preamp self noise limit; while those at the top would be indicative of saturation. Within a 6-10 dB range of the bottom, levels were corrected to take out the self noise. Readings closer to the measured self noise limit of an individual buoy were not considered correctable, and were culled - hence the "holidays" in some of the curves. These time histories are also valuable in noting distinct

R

MONTH: AUGUST 83 BUOY: 1762

OUTPUT IN FILE ARNA1762

DISPLACEMENT (N. MI.): 152.872 NORTH:-152.161 EAST: -14.734
DIRECTION (TRUE): 185.549

THE NUMBER OF DATA SAMPLES IS 232

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	73.7	6.9	58.9	64.8	66.8	69.3	72.2	76.9	81.3	85.4	100.2	230
10.0	76.7	6.7	63.2	67.3	68.2	72.3	76.5	80.3	84.4	87.1	99.9	230
12.0	76.2	5.9	61.1	67.7	68.6	71.8	76.0	79.8	83.9	84.9	95.3	230
15.0	73.3	5.1	61.1	66.3	67.2	70.1	72.3	76.2	80.1	82.2	92.9	230
20.0	75.0	4.4	64.8	68.3	69.2	72.1	74.3	77.5	80.4	82.1	90.2	230
25.0	73.6	4.5	64.4	67.8	67.8	70.6	73.3	75.8	79.3	82.6	87.8	230
31.5	72.6	4.7	59.0	65.8	67.1	69.3	72.5	75.4	79.8	81.4	87.4	230
40.0	71.9	4.8	58.5	65.0	66.5	68.3	71.8	75.3	78.5	80.3	84.5	230
50.0	68.5	4.8	56.3	61.5	63.0	64.8	67.6	71.8	75.0	77.9	82.3	230
100.0	61.1	5.9	50.7	52.7	53.5	56.7	60.3	65.5	69.8	71.6	79.0	230
320.0	53.5	3.1	44.5	50.2	51.2	52.0	52.7	54.1	58.0	60.7	65.5	230

STOP
R

DATA BY MONTHS

BUOY ID 1762

SEPTEMBER 1983

DAY	GMT	POSITION				
264	201	79.496	N	11.691	W
264	744	79.504	N	11.677	W
264	1429	79.520	N	11.791	W
264	1935	79.524	N	11.812	W
265	147	79.530	N	11.941	W
265	733	79.528	N	12.014	W
265	1417	79.535	N	12.006	W
265	1922	79.535	N	12.141	W
266	125	79.542	N	12.124	W
266	721	79.542	N	12.124	W
266	1405	79.542	N	12.124	W
266	1959	79.527	N	12.488	W
267	201	79.535	N	12.441	W
267	753	79.546	N	12.394	W
267	1352	79.551	N	12.272	W
267	1937	79.558	N	12.247	W
268	149	79.512	N	12.362	W
268	731	79.516	N	12.393	W
268	1400	79.441	N	12.678	W
268	1915	79.382	N	13.100	W
269	201	79.365	N	13.141	W

BUOY ID 1762

SEPTEMBER 1983

DAY	GMT	POSITION			
244	141	80.150	N	8.636	W
244	747	80.150	N	8.636	W
244	1431	80.118	N	8.298	W
244	1835	80.097	N	8.047	W
245	129	80.071	N	7.902	W
245	725	80.071	N	7.903	W
245	1409	80.045	N	7.674	W
245	2001	79.998	N	7.476	W
246	156	79.986	N	7.459	W
246	801	79.986	N	7.459	W
246	1348	79.836	N	7.483	W
246	1954	79.786	N	7.519	W
247	133	79.717	N	7.630	W
247	752	79.717	N	7.630	W
247	1432	79.669	N	7.348	W
247	2001	79.617	N	7.051	W
248	112	79.558	N	6.950	W
248	801	79.546	N	6.920	W
248	1432	79.480	N	6.868	W
248	1946	79.368	N	7.168	W
249	039	79.186	N	7.759	W
249	1423	79.140	N	7.991	W
249	1924	79.103	N	8.266	W
250	200	79.103	N	8.266	W
250	715	79.017	N	8.448	W
250	1401	78.973	N	8.762	W
250	1902	78.928	N	9.065	W
251	157	78.928	N	9.160	W
251	703	78.928	N	9.160	W
251	1346	78.939	N	9.373	W
251	1850	78.942	N	9.517	W
252	142	78.948	N	9.472	W
252	650	78.947	N	9.571	W
252	1334	78.951	N	9.557	W
252	2000	78.962	N	9.431	W
253	132	78.961	N	9.327	W
253	753	78.942	N	9.364	W
253	1432	78.957	N	9.284	W
253	2001	78.947	N	9.433	W
254	119	78.951	N	9.425	W
254	801	78.964	N	9.375	W
254	1416	78.975	N	9.593	W
254	1956	79.014	N	9.612	W
255	201	79.019	N	9.712	W
255	754	79.019	N	9.712	W
255	1432	79.063	N	9.731	W
255	1944	79.094	N	9.701	W
256	140	79.098	N	9.719	W
256	743	79.139	N	9.854	W
256	1426	79.149	N	9.875	W
256	2001	79.156	N	10.089	W
257	118	79.153	N	10.122	W
257	801	79.170	N	10.215	W
257	1413	79.198	N	10.195	W
257	1952	79.210	N	10.199	W
258	201	79.208	N	10.197	W
258	745	79.238	N	10.465	W
258	1429	79.270	N	10.677	W
258	1928	79.296	N	10.640	W
259	016	79.296	N	10.640	W
259	200	79.301	N	10.625	W
259	723	79.316	N	10.733	W
259	1408	79.361	N	10.668	W
259	1908	79.389	N	10.556	W
260	155	79.407	N	10.611	W
260	702	79.408	N	10.617	W
260	1346	79.441	N	10.645	W
260	1846	79.462	N	10.549	W
261	132	79.451	N	10.546	W
261	641	79.451	N	10.547	W
261	1324	79.465	N	10.546	W
261	2001	79.474	N	10.609	W
262	122	79.450	N	10.675	W
262	801	79.417	N	11.232	W
262	1432	79.417	N	11.232	W
262	1959	79.431	N	11.387	W
263	109	79.432	N	11.381	W
263	758	79.432	N	11.381	W
263	1432	79.457	N	11.600	W
263	1947	79.496	N	11.691	W

BUOY ID 1762

AUGUST 1983

DAY	GMT	POSITION			
235	150	80.928	N	7.374	W
235	742	80.925	N	7.353	W
235	1341	80.848	N	7.349	W
235	1925	80.812	N	7.482	W
236	201	80.762	N	7.462	W
236	720	80.761	N	7.454	W
236	1401	80.703	N	7.588	W
236	1904	80.695	N	7.587	W
237	150	80.673	N	7.604	W
237	801	80.679	N	7.869	W
237	1314	80.649	N	7.620	W
237	2001	80.666	N	8.012	W
238	128	80.668	N	7.993	W
238	801	80.668	N	7.993	W
238	1431	80.610	N	8.003	W
238	2001	80.617	N	8.603	W
239	106	80.618	N	8.624	W
239	756	80.591	N	8.306	W

DAY	GMT	POSITION			
239	1432	80.611	N	8.902	W
239	1939	80.574	N	9.233	W
240	047	80.587	N	9.188	W
240	737	80.587	N	9.188	W
240	1417	80.548	N	9.508	W
240	1924	80.565	N	9.339	W
241	201	80.529	N	9.278	W
241	725	80.529	N	9.278	W
241	1407	80.480	N	9.367	W
241	1914	80.439	N	9.148	W
242	201	80.449	N	9.019	W
242	712	80.385	N	9.065	W
242	1356	80.385	N	9.065	W
242	1901	80.284	N	8.963	W
243	154	80.265	N	9.070	W
243	800	80.264	N	9.053	W
243	1312	80.264	N	9.053	W
243	1953	80.189	N	8.862	W

BUOY ID 1762

AUGUST 1983

DAY	GMT	POSITION			
213	200	82.725	N	7.212	W
213	801	82.711	N	7.232	W
213	1358	82.683	N	7.084	W
213	1955	82.684	N	7.195	W
214	146	82.685	N	7.175	W
214	752	82.688	N	7.143	W
214	1337	82.697	N	7.025	W
214	1943	82.692	N	6.868	W
215	123	82.685	N	6.728	W
215	801	82.684	N	6.728	W
215	1315	82.668	N	6.519	W
215	1957	82.667	N	6.507	W
216	101	82.670	N	6.428	W
216	749	82.669	N	6.413	W
216	1401	82.658	N	6.393	W
216	1935	82.651	N	6.413	W
217	201	82.641	N	6.399	W
217	729	82.638	N	6.439	W
217	1400	82.621	N	6.424	W
217	1912	82.591	N	6.399	W
219	144	82.592	N	6.337	W
219	651	82.596	N	6.343	W
219	1335	82.598	N	6.267	W
219	2001	82.600	N	6.384	W
220	130	82.600	N	6.527	W
220	757	82.601	N	6.546	W
220	1323	82.584	N	6.584	W
220	2001	82.576	N	6.633	W
221	118	82.571	N	6.658	W
221	801	82.555	N	6.741	W
221	1311	82.555	N	6.741	W
221	1804	82.503	N	6.900	W
222	105	82.498	N	6.924	W
222	755	82.417	N	6.997	W
222	1945	82.366	N	7.042	W
223	152	82.322	N	7.214	W
223	740	82.243	N	7.482	W
223	1343	82.322	N	7.214	W
223	1933	82.202	N	7.541	W
224	129	82.167	N	7.698	W
224	731	82.136	N	7.724	W
224	1321	82.136	N	7.724	W
224	2001	82.073	N	7.838	W
225	201	82.041	N	7.907	W
225	756	82.042	N	7.907	W
225	1401	81.955	N	7.963	W
225	1942	81.903	N	8.039	W
226	200	81.863	N	8.158	W
226	734	81.859	N	8.162	W
226	1350	81.793	N	8.328	W
226	1920	81.790	N	8.335	W
227	024	81.760	N	8.388	W
228	144	81.630	N	8.535	W
228	651	81.630	N	8.535	W
228	1335	81.575	N	8.517	W
228	2001	81.536	N	8.472	W
229	122	81.511	N	8.484	W
229	801	81.511	N	8.483	W
229	1314	81.452	N	8.334	W
229	2000	81.429	N	8.302	W
230	109	81.430	N	8.284	W
230	757	81.430	N	8.284	W
230	1301	81.385	N	8.084	W
230	1948	81.348	N	7.901	W
231	056	81.322	N	7.807	W
231	746	81.321	N	7.806	W
231	1401	81.302	N	7.738	W
231	1936	81.267	N	7.510	W
232	158	81.246	N	7.521	W
232	734	81.245	N	7.507	W
232	1349	81.235	N	7.430	W
232	1923	81.193	N	7.343	W
233	136	81.159	N	7.324	W
233	720	81.159	N	7.324	W
233	1401	81.159	N	7.324	W
233	2001	81.105	N	7.288	W
234	201	81.070	N	7.250	W
234	801	81.066	N	7.267	W
234	1353	81.059	N	7.294	W
234	1948	80.986	N	7.329	W

APPENDIX 1

Date Buoy I.D. 1762

Life in Reporting Area 2 (West Greenland Sea)

1 Aug 1983 - 26 Sept 1983

Type: SYNARGOS (5 - 320 Hz)

(8) "A two-hydrophone method of eliminating the effects of nonacoustic noise interference in measurements of infrasonic ambient noise levels", Beaumont M. Buck and Charles R. Greene, Journal of the Acoustical Society of America, 68 (5), pp. 1306-1308, November 1980

(9) "The SYNRAMS ice station", S. P. Burke and B. M. Buck; OCEAN 75 IEEE and MTS Conference Proceedings, 22-25 September 1975 (AREA Technical Report No. 001, PRL TR004, 1 January 1976)

(10) "The SYNARGOS ambient noise measurement buoy", Samuel P. Burke, Beaumont M. Buck and Charles A. Luther. Proc. of the IEEE/MTS Ocean '82 Conference, Washington, D.C., 1982

(11) "Map of the Arctic Regions," Am. Geographic Soc. (undated)

(12) "Arctic Ocean ice deformation chart using sonar data recorded from nuclear submarines," L.A. LeSchack, Proc. 7th Int'nl Conf. on Port & Ocean Eng. Under Arctic Conditions (POAC 83), Helsinki, Finland 5-9 Apr. 83.

(13) "Ice depth and roughness measurements in the Greenland-Svalbard Strait," B.M. Buck (report in preparation)

REFERENCES

(1) "Measurements of underwater explosive energy source levels for yields 0.0012 to 126 pounds", B. M. Buck and A. W. Magnuson, AC Electronics-DRL Report TR73-02, April 1971

(2) "Arctic Ocean background noise caused by ridging of sea ice", R. S. Pritchard, JASA Vol 75, No. 2, Feb 84, pp 419-427

(3) "Under-ice acoustic noise spectra and correlations at high frequencies", C. R. Greene, PRL TR21, 24 August 1979

(4) "Influence of atmospheric pressure gradient on under-ice ambient noise", Charles R. Greene and Beaumont M. Buck, presented at the 98th meeting of the Acoustical Society of America, Salt Lake City, 26-30 November, 1979. Abstract in the Journal of Acoustical Society of America, Supplement 1, Vol. 66, Fall 1979, p. S25

(5) "Beaufort ambient noise, sources and spectra", B. M. Buck, Workshop on the interaction between man-made noise and vibration and Arctic marine wildlife, San Diego, 24-29 February 1980

(6) "Preliminary underice propagation models based on synoptic ice roughness", Beaumont M. Buck, Arctic research in environmental acoustics, AREA 9, PRL TR30, 28 May 1981

(7) "Arctic underice acoustic (surveillance) technology (URSA), computer program for the prediction of transmission loss under winter ice conditions and all-season ambient noise levels in the Central Arctic", B. M. Buck and K. A. Rosser, URSA 19, PRL TR38, 20 Jan. 1982

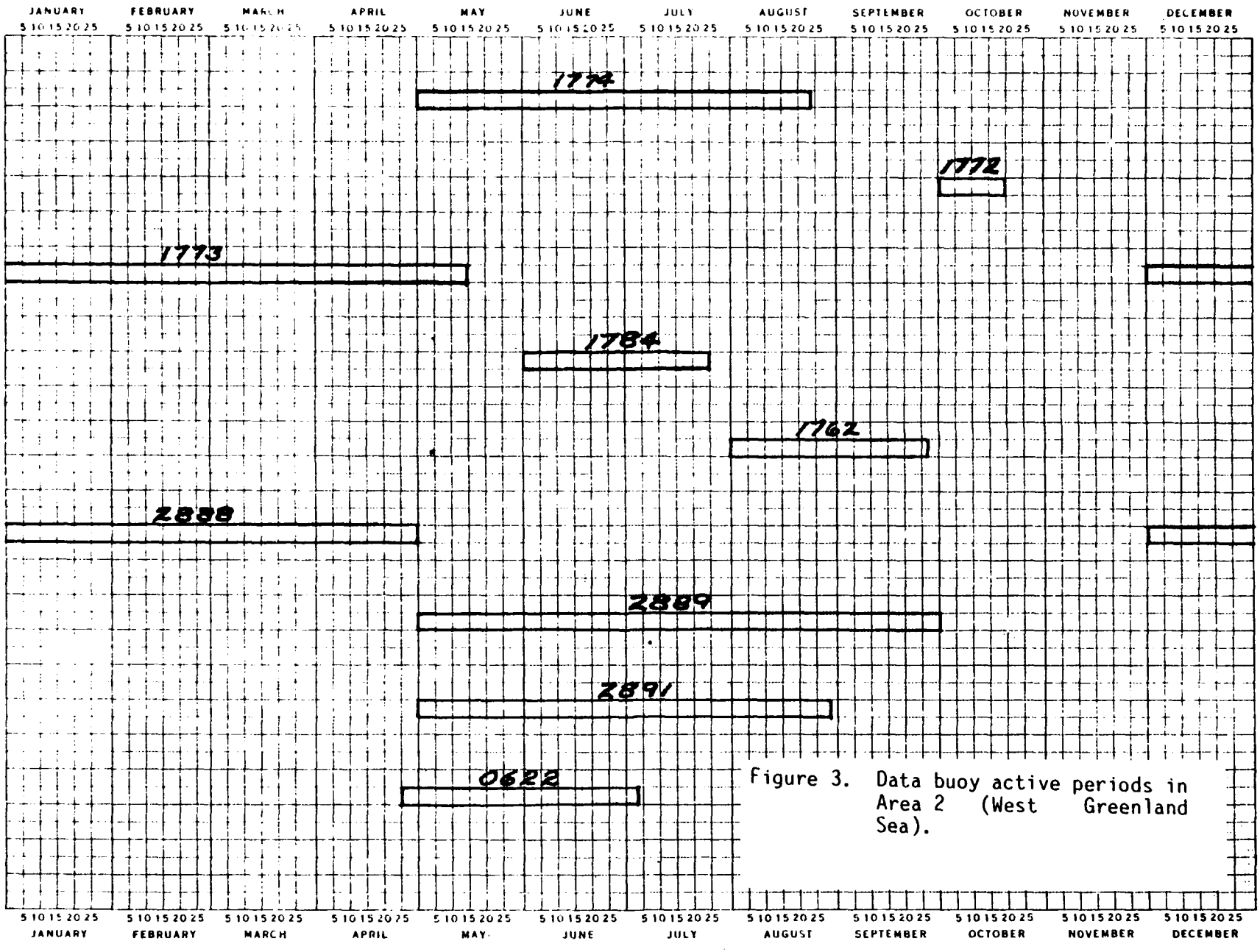


Figure 3. Data buoy active periods in Area 2 (West Greenland Sea).

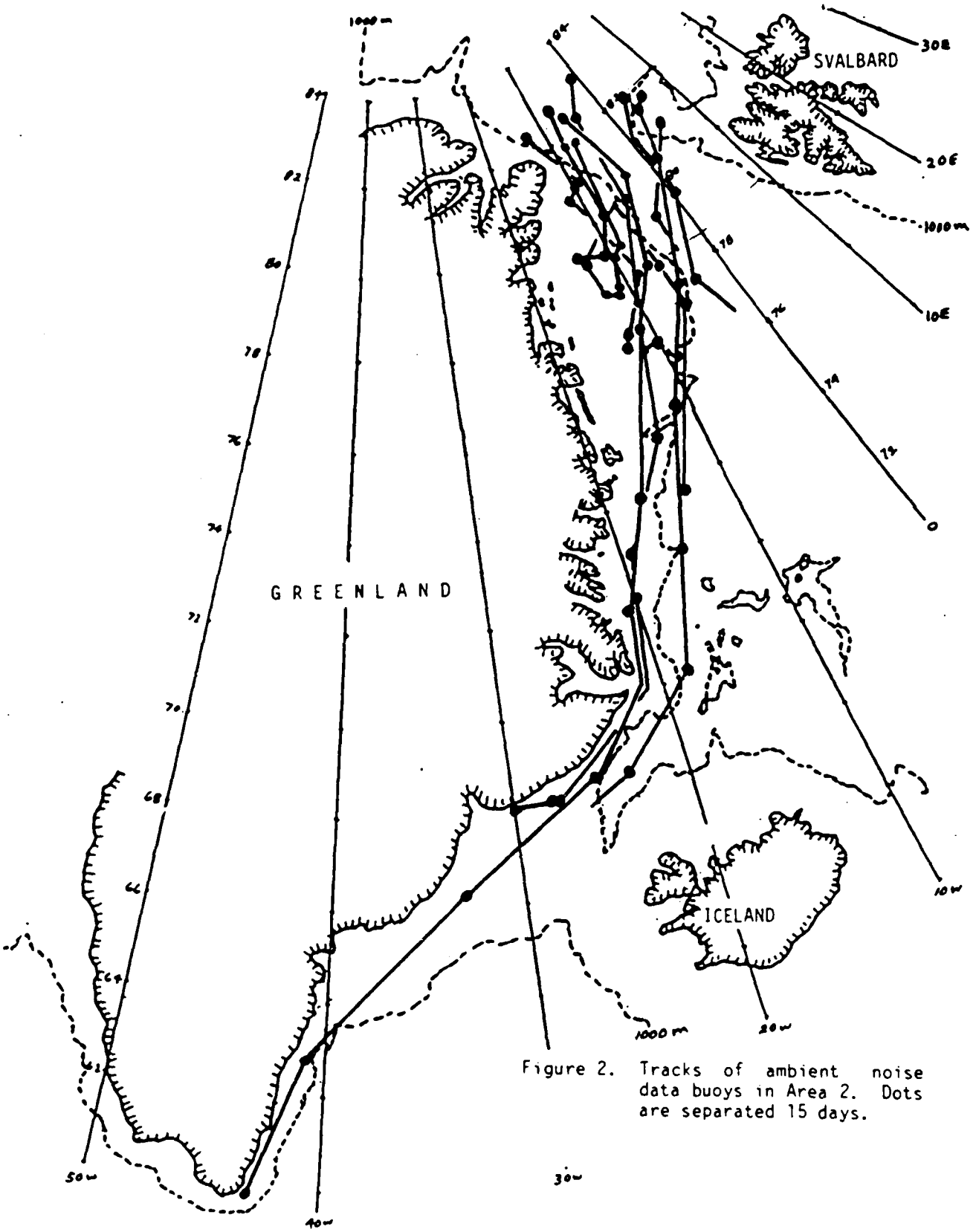


Figure 2. Tracks of ambient noise data buoys in Area 2. Dots are separated 15 days.

One data buoy, I.D. 1774, also had in its instrumentation suite a prototype ARGOS 10-element thermistor string that measured water column temperature in 20 m increments between 20 and 200 m with a pressure sensor at 200 m. These data were translated to sound velocity using Wilson's equations and an assumed salinity of 34 parts/thousand.

Another of the buoys in Area (2), I.D. 1784, was the multi-level SYNARGOS that had phones at 9m (30 ft), 30.5 m (100 ft), 61 m (200 ft), and 91 m (300 ft).

Figure 2 shows the tracks of the buoys in Area (2) to give an estimation of their concentration. Figure 3 is a chart showing the times of the year the various buoys were in Area (2). In most cases the buoys drifted into Area (2) from their initial deployed positions in Area (3). Note that the coverage by months is reasonably spread over the seasons, but with a somewhat larger concentration in early summer (June-July). Figures 2 and 3 should be taken into account when drawing generalizations for the area.

The body of the data is separated into sections for the individual data buoys and the figures in those sections are not numbered.

periodicities in the levels. Note particularly those of about 12 hours, which are attributed to either the "inertial period" associated with the Coriolis Force, or tidal influences. Later second-level analyses should determine this often-observed effect.

e.) A tabulation is given of the statistical values for the reporting period, including: the 5,10,25,50,75,90,95 percentiles; the maximum, minimum, average, and number of samples at each frequency; the buoy's displacement distance (in n.mi.) and direction (true) for the reporting period and the north/east/south/west components of the displacement

f.) For those data periods where the data buoy is located in the marginal zone, an ice situation chart (provided by the Naval Polar Oceanography Center, Suitland) is included, along with the buoy's position, and its distance to the nearest ice edge, the weekly distance moved and the average speed over the ground (kts).

The Present Report

This first report of the series is for ambient noise in the West Greenland Sea (Area 2). It consists of data from eight SYNARGOS data buoys and one special buoy called "ANRAMS" that used NIMBUS 6, and was installed in 1977 during the ONR East Arctic Program's pilot experiment. This latter buoy's results has already been reported (reference 13), but was included here for completeness, and follows a somewhat different reporting format, for ease of inclusion.

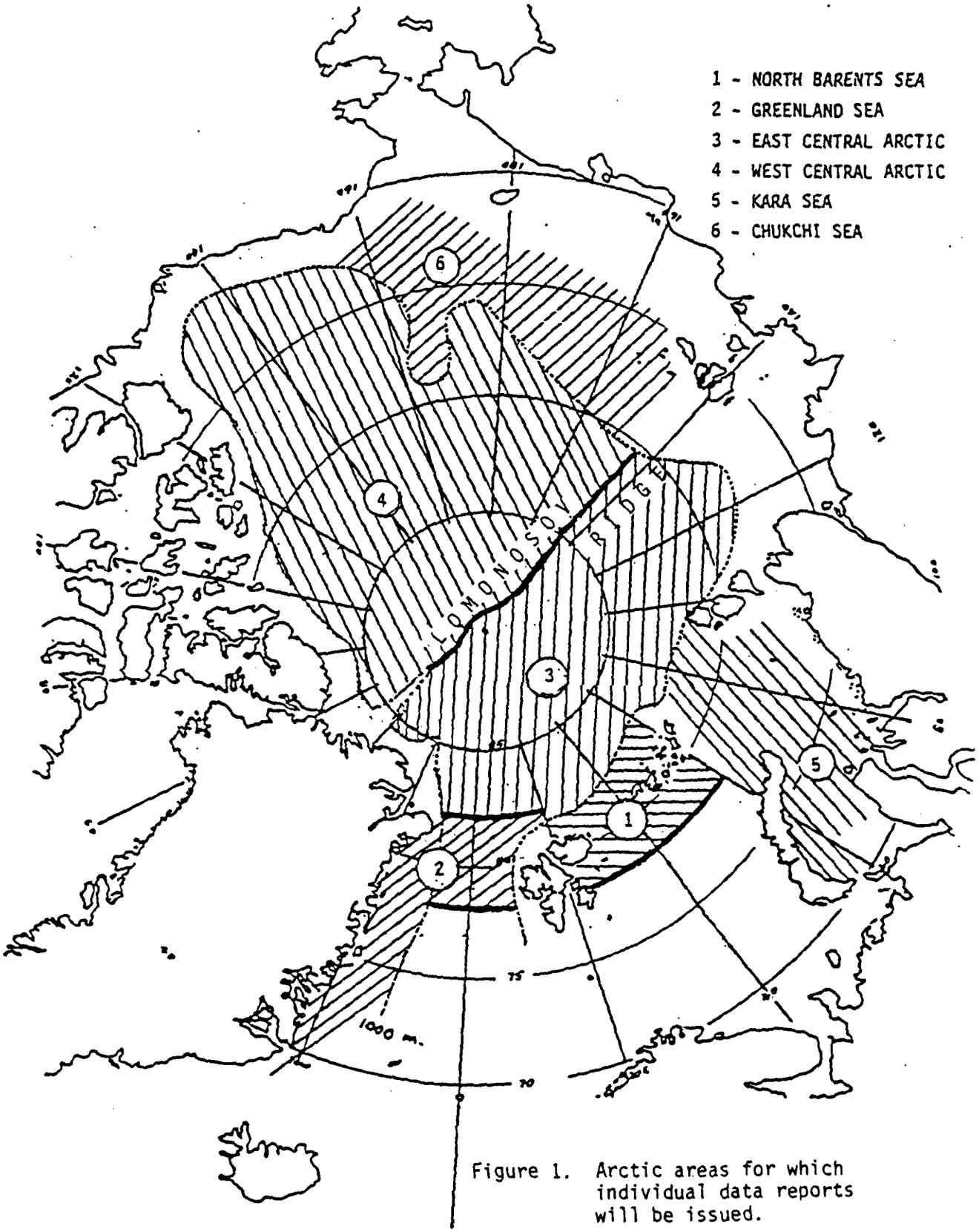
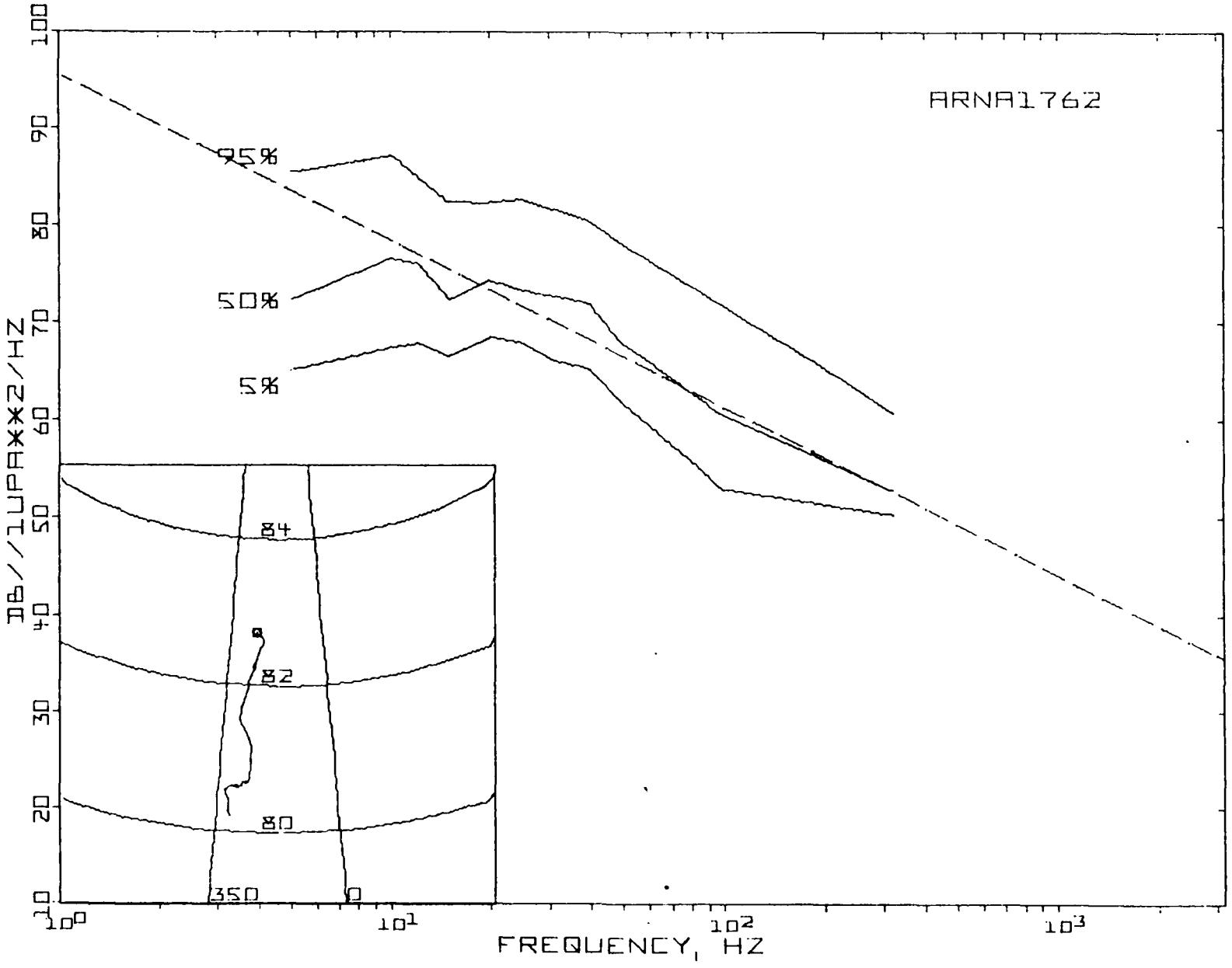


Figure 1. Arctic areas for which individual data reports will be issued.

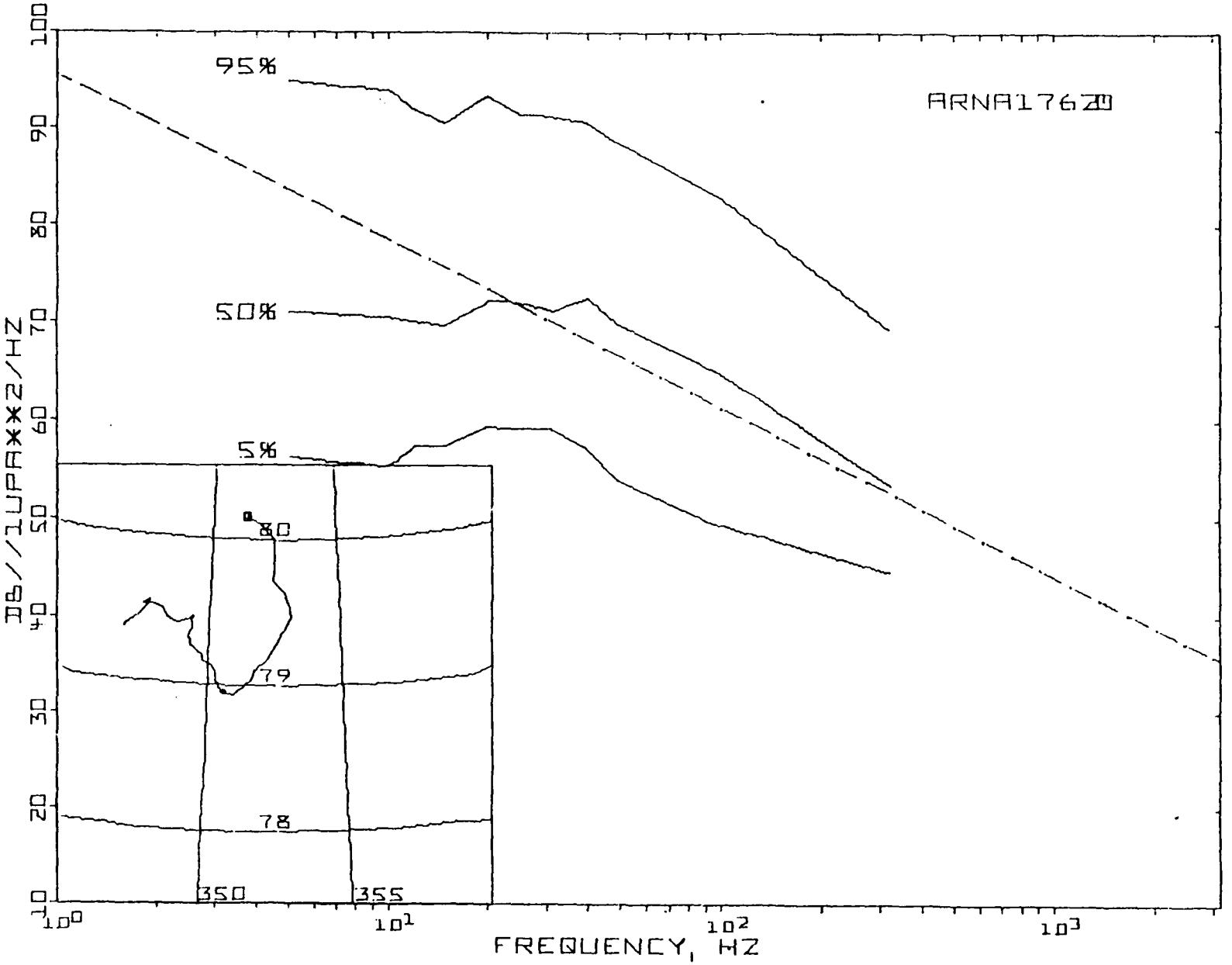


BUOY 1762 AUGUST, 1983

```
GTOD:SPECGRAM3
10/20/83   09:26:40
GIVE MONTH (UP TO 9 CHARACTERS):
SEPT 83
BUOY NUMBER: 1762


MONTH: SEPT 83        BUOY:  1762

OUTPUT IN FILE ARNA1762

DISPLACEMENT (N. MI.):  67.382  NORTH: -47.099  EAST: -48.187
DIRECTION (TRUE): 225.679

THE NUMBER OF DATA SAMPLES IS 202
```

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	72.8	10.5	54.6	56.0	58.9	66.8	70.9	77.6	88.9	94.9	102.9	184
10.0	71.4	10.3	51.7	55.1	59.4	63.8	70.4	76.5	85.4	93.9	101.9	184
12.0	71.7	9.4	52.3	57.2	61.1	65.4	70.0	76.7	84.9	91.8	98.7	184
15.0	71.0	9.4	52.3	57.2	60.3	64.1	69.5	76.8	84.4	90.4	95.4	184
20.0	73.5	9.7	55.7	59.3	61.8	65.9	72.1	79.3	87.3	93.3	95.6	184
25.0	73.4	9.2	55.9	59.0	61.9	66.9	72.0	79.3	86.9	91.3	92.9	184
31.5	73.0	9.5	54.8	59.0	60.3	66.5	71.1	79.8	86.4	91.2	92.4	184
40.0	73.0	9.7	53.1	57.1	59.8	66.5	72.5	79.8	86.4	90.6	92.4	184
50.0	70.1	9.7	49.0	53.6	56.8	63.0	69.6	76.8	82.9	88.3	90.8	184
100.0	64.3	9.3	46.2	49.1	52.7	57.8	64.7	69.8	75.8	82.8	85.7	184
320.0	54.4	6.4	43.7	44.5	46.3	51.2	53.4	57.2	62.3	69.2	72.1	184

```
STOP
```



BUOY 1762 SEPT 1983

DATA BY WEEKS

MONTH: 10-16 AUG 83 BUOY: 1762

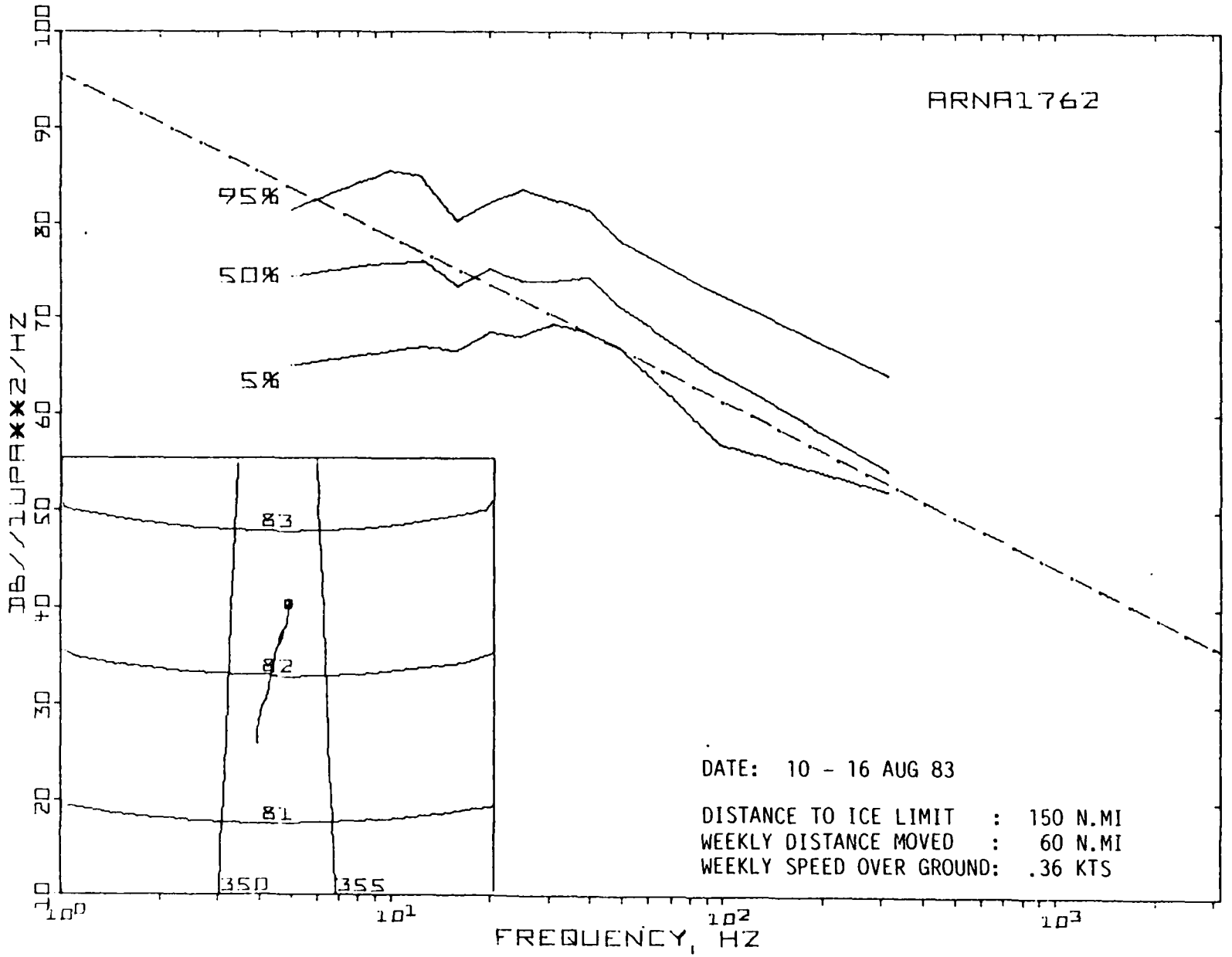
OUTPUT IN FILE ARNA1762

DISPLACEMENT (N. MI.): 60.640 NORTH: -59.220 EAST: -13.045
DIRECTION (TRUE): 192.442

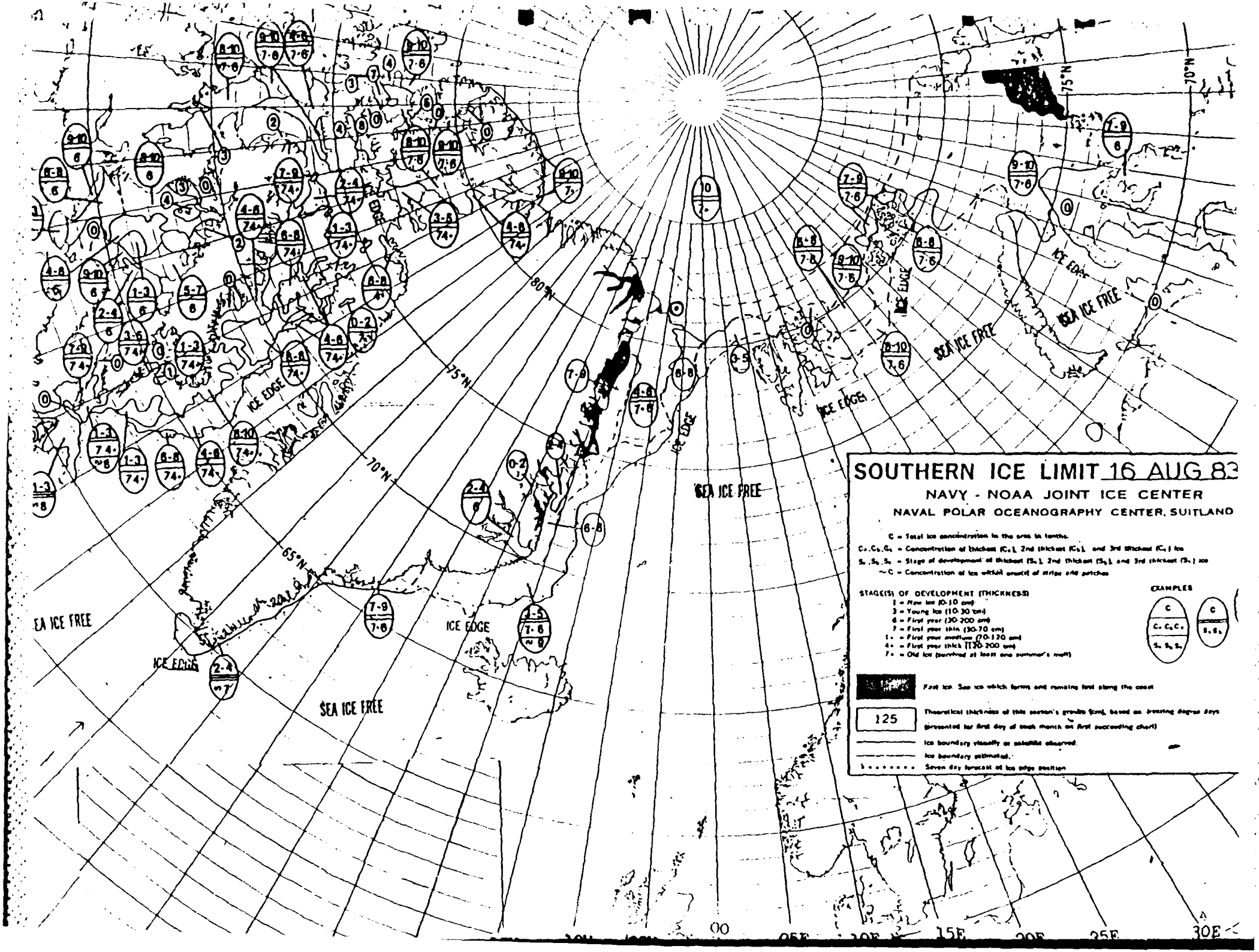
THE NUMBER OF DATA SAMPLES IS 48

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	74.1	5.4	64.1	64.8	66.2	70.1	74.4	78.2	80.4	81.3	85.4	48
10.0	75.0	5.9	66.3	66.3	67.3	69.1	75.8	78.3	83.2	85.4	87.1	48
12.5	75.4	5.2	65.8	66.8	68.6	70.6	76.0	78.9	82.0	84.9	85.8	48
16.0	73.4	4.0	65.3	66.3	68.1	70.1	73.2	76.2	77.3	80.1	83.4	48
20.0	75.5	3.9	67.3	68.3	71.5	72.7	75.2	77.5	80.4	82.1	85.4	48
25.0	75.2	4.3	67.8	67.8	70.6	72.7	73.8	77.4	81.8	83.4	87.8	48
31.5	74.6	3.8	68.3	69.3	71.1	71.8	73.8	75.4	80.4	82.3	87.4	48
40.0	74.8	3.8	68.3	68.3	71.1	71.8	74.3	77.1	79.8	81.4	81.4	48
50.0	71.8	3.3	65.8	66.7	68.3	69.6	70.8	72.7	76.8	77.9	81.7	48
100.0	64.8	4.3	56.7	56.7	59.5	62.2	63.8	67.0	70.7	72.3	74.8	48
315.0	55.5	3.7	51.2	52.0	52.0	53.4	54.1	55.2	61.3	64.0	65.5	48

STOP



BUOY 1762 10-16 AUG 83


SOUTHERN ICE LIMIT 16 AUG 83
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths.
C_1, C_2, C_3 = Concentration of thickest (C_1), 2nd thickest (C_2), and 3rd thickest (C_3) ice
S_1, S_2, S_3 = Stage of development of thickest (S_1), 2nd thickest (S_2), and 3rd thickest (S_3) ice
~C = Concentration of ice within areas of ridges and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
4 = First year (30-200 cm)
7 = First year thin (30-70 cm)
5 = First year medium (70-120 cm)
6 = First year thick (120-200 cm)
7+ = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast
125
Theoretical thickness of this section's gradient (cm), based on freezing degree days presented for first day of each month on first succeeding chart)
Ice boundary visually or satellite observed.
Ice boundary estimated.
Seven day forecast of ice edge position
ICE EDGE
SEA ICE FREE
80°N
75°N
70°N
65°N
00
05E
10E
15E
20E
25E
30E

MONTH: 17-23 AUG 83 BUOY: 1762

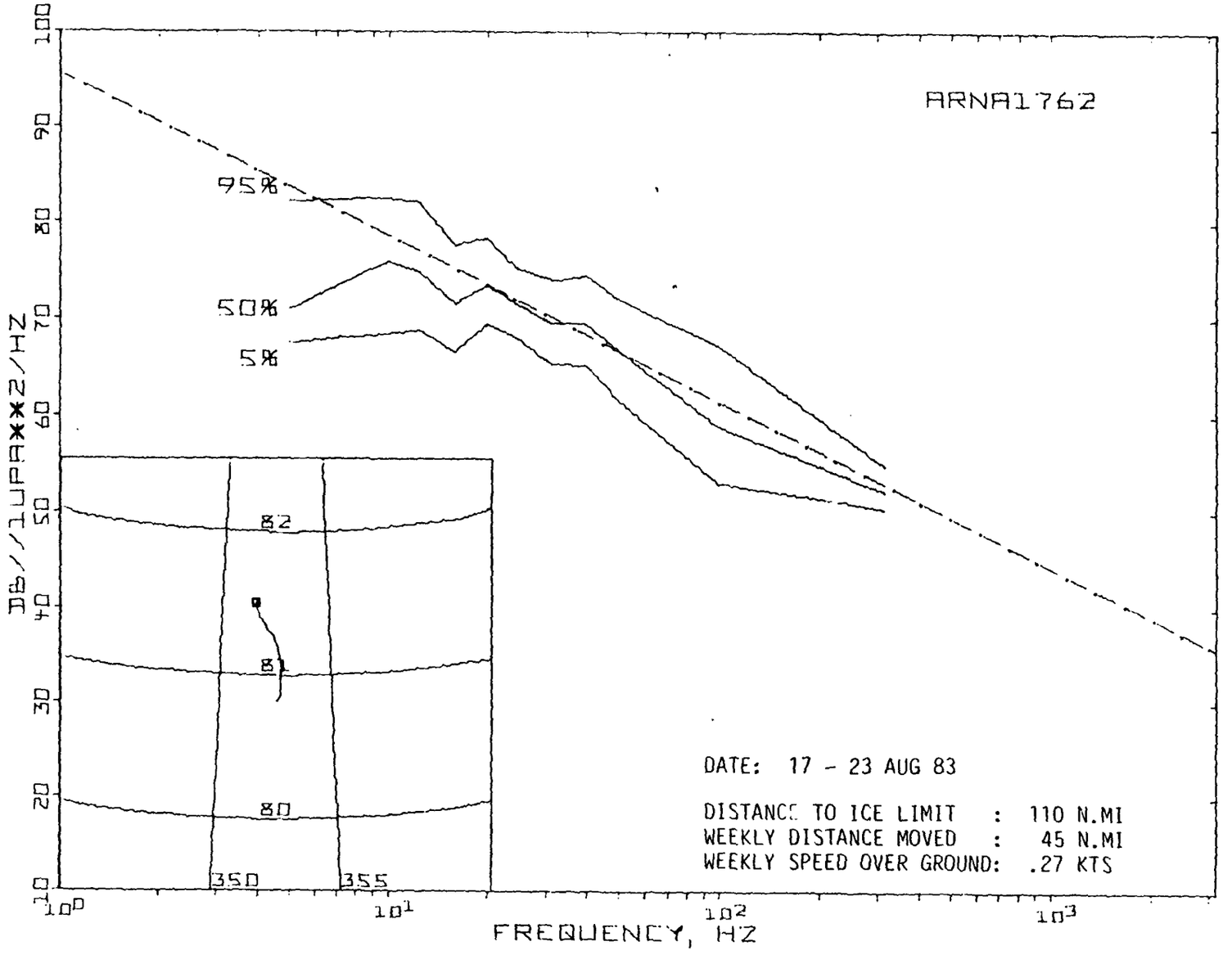
OUTPUT IN FILE ARNA1762

DISPLACEMENT (N. MI.): 45.923 NORTH: -44.940 EAST: 9.446
DIRECTION (TRUE): 168.144

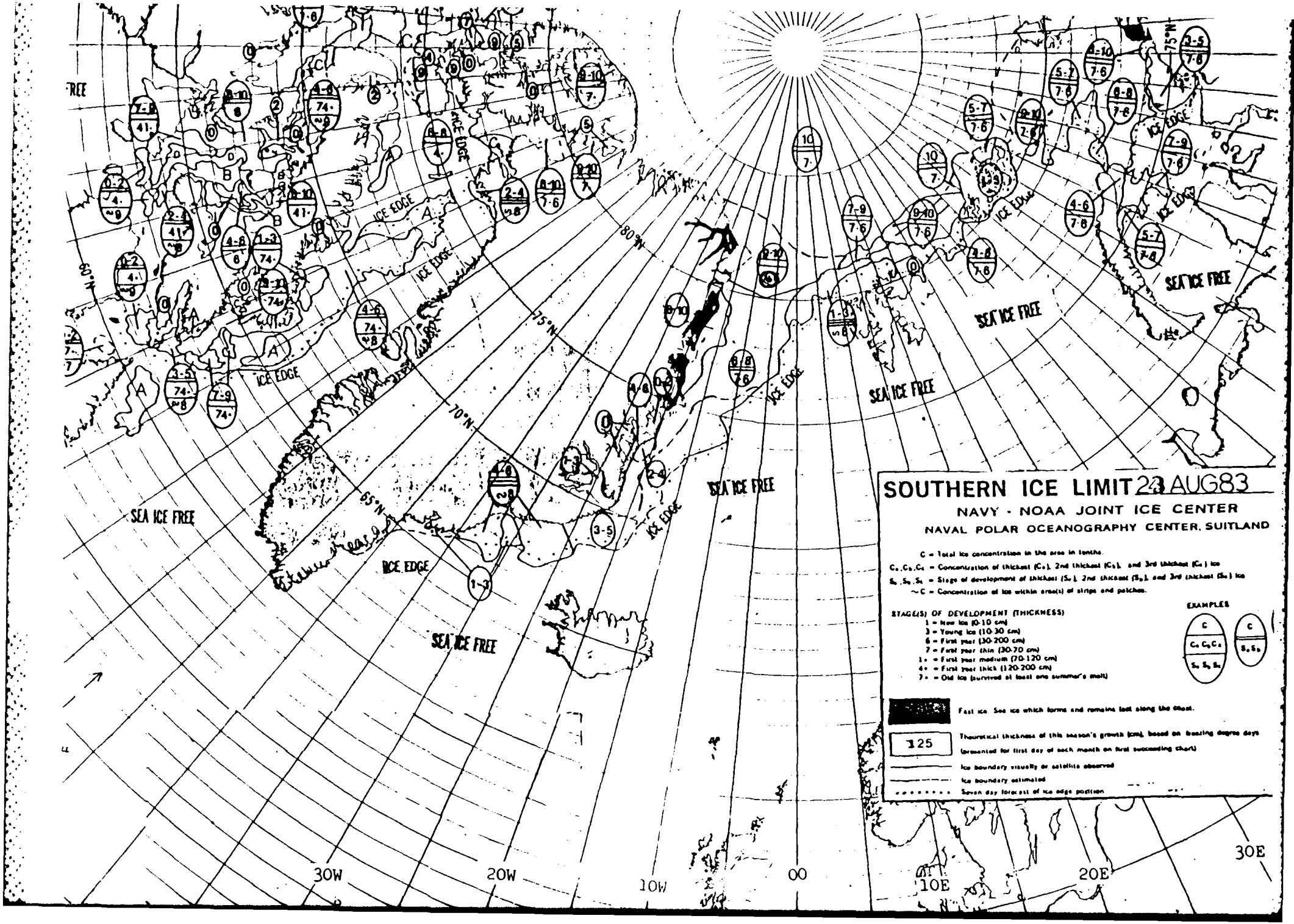
THE NUMBER OF DATA SAMPLES IS 56.

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	72.1	4.6	65.5	67.3	67.3	68.4	70.9	74.4	76.9	82.1	88.2	56
10.0	75.8	4.7	64.5	68.2	69.1	72.3	75.8	79.4	81.1	82.5	84.4	56
12.5	75.1	4.1	66.8	68.6	70.0	71.8	74.6	77.8	80.6	82.0	83.9	56
16.0	71.7	3.5	65.3	66.3	67.2	69.5	71.3	73.2	75.5	77.3	84.4	56
20.0	73.4	2.8	69.2	69.2	69.2	71.5	73.3	75.2	77.5	78.2	80.4	56
25.0	71.4	2.5	67.8	67.8	67.8	69.7	71.3	73.3	73.8	74.9	77.4	56
31.5	69.7	2.7	63.3	65.1	66.5	68.3	69.3	71.8	73.2	73.8	76.3	56
40.0	69.8	3.2	65.0	65.0	65.8	67.7	69.3	71.1	73.7	74.3	79.2	56
50.0	66.6	3.6	58.8	61.5	63.0	64.2	66.7	69.0	70.8	71.8	79.6	56
100.0	59.4	4.9	52.7	52.7	53.5	55.6	58.7	61.6	65.5	67.0	73.0	56
315.0	52.3	1.9	50.2	50.2	50.2	51.2	52.0	52.7	53.4	54.7	62.3	56

STOP



BUOY 1762 17-23 AUG 83


SOUTHERN ICE LIMIT 23 AUG83
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
C_t, C_2, C_3 = Concentration of thickest (C_t), 2nd thickest (C_2), and 3rd thickest (C_3) ice
S_t, S_2, S_3 = Stage of development of thickest (S_t), 2nd thickest (S_2), and 3rd thickest (S_3) ice
~C = Concentration of ice within area(s) of strips and patches.
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
2 = Young ice (10-30 cm)
4 = First year (30-200 cm)
7 = First year thin (30-70 cm)
1. = First year medium (70-120 cm)
4. = First year thick (120-200 cm)
7. = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. See ice which forms and remains fast along the coast.
125
Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart)
Ice boundary visually or satellite observed
Ice boundary estimated
Seven day forecast of ice edge position
ICE EDGE
SEA ICE FREE
80°N
75°N
70°N
65°N
30W
20W
10W
00
10E
20E
30E

MONTH: 24-30 AUG 83 BUOY: 1762

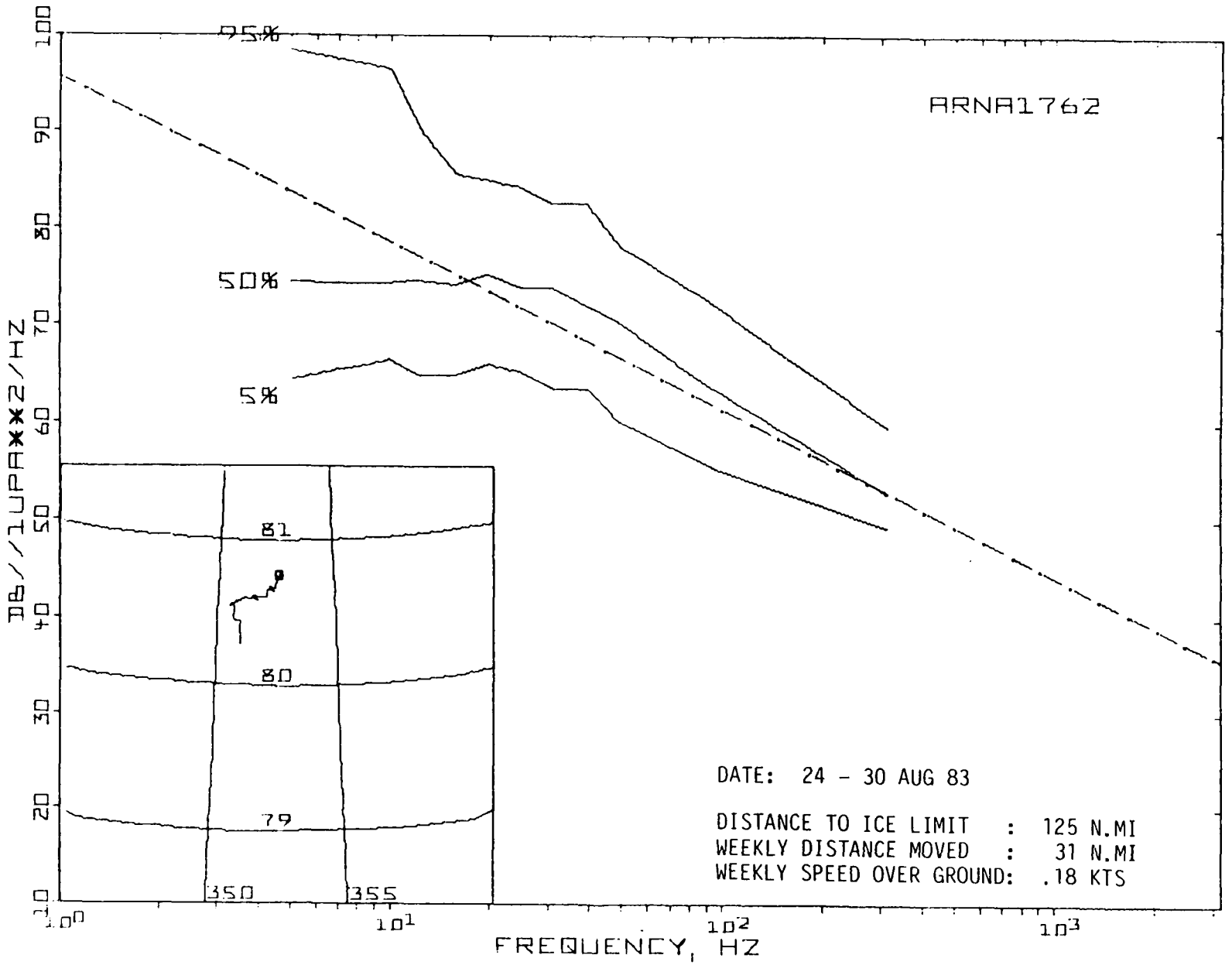
OUTPUT IN FILE ARNA1762

DISPLACEMENT (N. MI.): 33.770 NORTH: -29.820 EAST: -15.848
DIRECTION (TRUE): 208.012

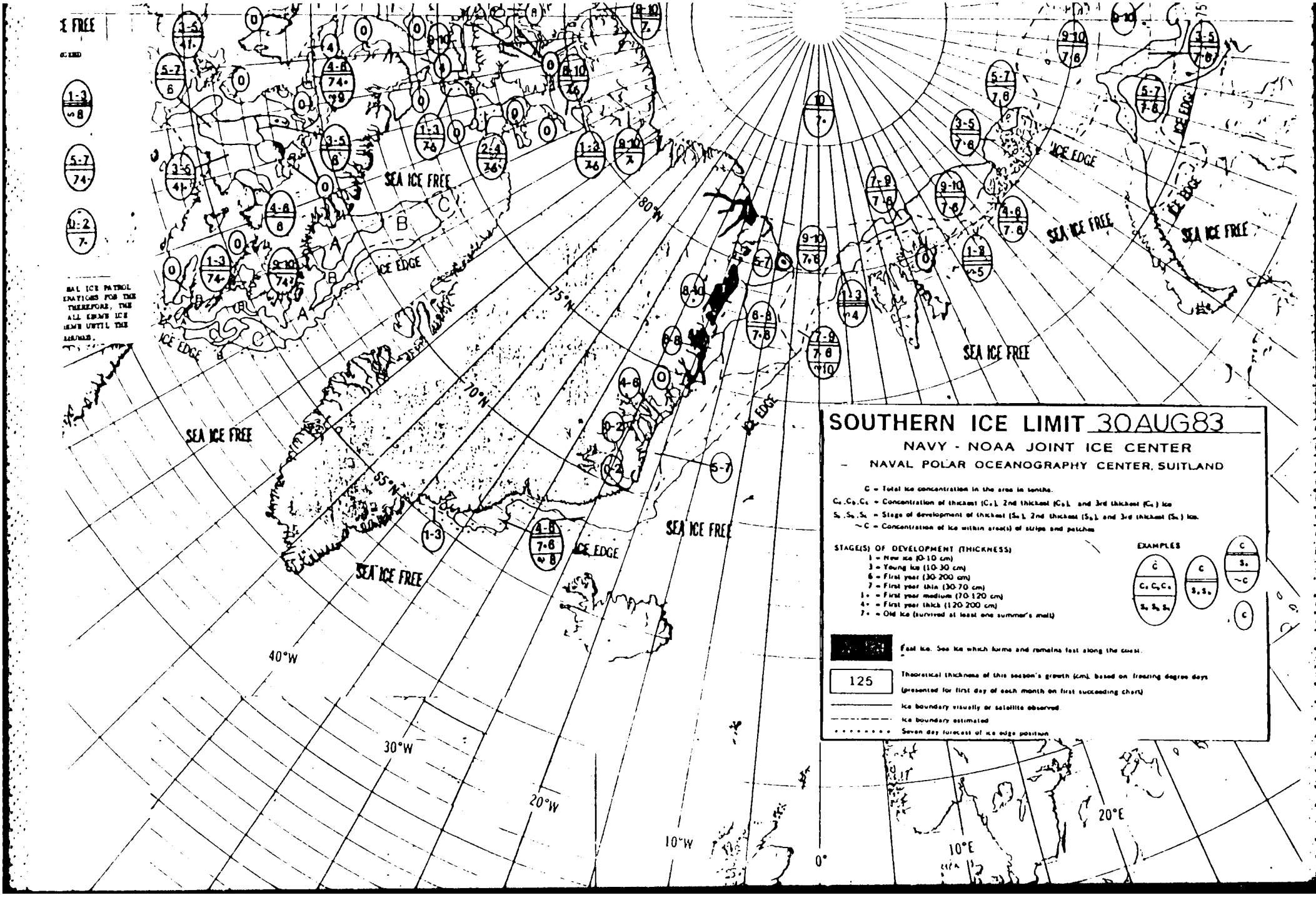
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	76.4	9.7	58.9	64.1	66.8	70.1	74.4	80.4	88.2	98.5	100.2	56
10.0	76.4	8.7	63.2	66.3	67.3	70.5	74.2	81.1	85.4	96.4	99.9	56
12.5	75.9	7.9	61.1	64.6	66.8	70.6	74.6	80.6	87.4	89.9	95.3	56
16.0	75.0	7.1	61.1	64.7	65.3	70.1	74.1	80.1	84.4	85.3	92.9	56
20.0	75.4	5.9	64.8	65.9	67.3	70.1	75.2	78.8	82.1	84.8	90.2	56
25.0	74.1	5.8	64.4	65.1	66.0	69.7	73.8	77.4	82.6	84.1	86.9	56
31.5	73.2	5.9	59.0	63.3	66.5	69.3	73.8	77.1	81.4	82.3	83.9	56
40.0	72.3	5.9	58.5	63.3	67.1	67.7	71.8	76.2	80.3	82.3	84.5	56
50.0	69.5	5.8	56.8	59.8	61.5	64.8	70.2	73.6	76.8	77.9	82.3	56
100.0	63.5	6.2	52.2	54.9	55.6	58.7	62.8	67.6	71.6	71.6	79.0	56
315.0	53.8	3.3	44.5	49.2	51.2	52.0	52.7	55.2	58.0	59.5	61.3	56

STOP



BUOY 1762 24-30 AUG 83


SEA ICE FREE
ICE EDGE
80°W
75°N
70°N
55°N
40°W
30°W
20°W
10°W
0°
10°E
20°E
SOUTHERN ICE LIMIT 30AUG83
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths.
Ca, Cb, Cc = Concentration of thickest (Ca), 2nd thickest (Cb), and 3rd thickest (Cc) ice
Sa, Sb, Sc = Stage of development of thickest (Sa), 2nd thickest (Sb), and 3rd thickest (Sc) ice.
~C = Concentration of ice within area(s) of strips and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
4 = First year (30-200 cm)
7 = First year thin (30-70 cm)
1• = First year medium (70-120 cm)
4• = First year thick (120-200 cm)
7• = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. See ice which forms and remains fast along the coast.
125
Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart)
Ice boundary visually or satellite observed
Ice boundary estimated
Seven day forecast of ice edge position

MONTH: 31 AUG-6 SEP 8 BUOY: 1762

OUTPUT IN FILE ARNA1762

DISPLACEMENT (N. MI.): 70.250 NORTH: -69.720 EAST: 8.609
DIRECTION (TRUE): 172.977

THE NUMBER OF DATA SAMPLES IS 54

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	79.2	10.6	65.5	66.2	66.8	70.9	75.3	86.4	95.6	95.6	102.9	54
10.0	78.1	10.0	65.1	65.7	66.3	70.5	76.5	82.5	94.6	95.2	101.9	54
12.5	77.4	8.8	64.0	66.8	66.8	71.2	75.3	81.4	92.6	93.4	98.7	54
16.0	75.8	9.0	63.5	64.1	65.3	68.1	73.2	80.9	92.1	92.9	95.4	54
20.0	78.0	9.0	65.5	66.7	67.3	70.1	76.1	83.5	94.1	94.1	95.6	54
25.0	77.6	8.1	66.6	67.2	67.8	70.6	75.8	83.4	91.9	91.9	92.9	54
31.5	76.7	8.5	65.1	65.8	66.5	69.3	76.3	81.4	90.6	91.8	92.4	54
40.0	76.9	8.7	64.2	65.0	65.8	70.2	75.3	82.3	91.2	91.8	92.4	54
50.0	73.5	9.0	59.8	60.7	61.5	65.8	73.6	78.8	87.7	88.9	89.9	54
100.0	68.2	8.7	53.5	56.2	56.7	61.6	68.2	73.0	81.9	83.6	85.0	54
315.0	58.0	6.2	51.2	51.2	52.0	52.7	56.3	61.3	69.2	70.1	72.1	54

STOP

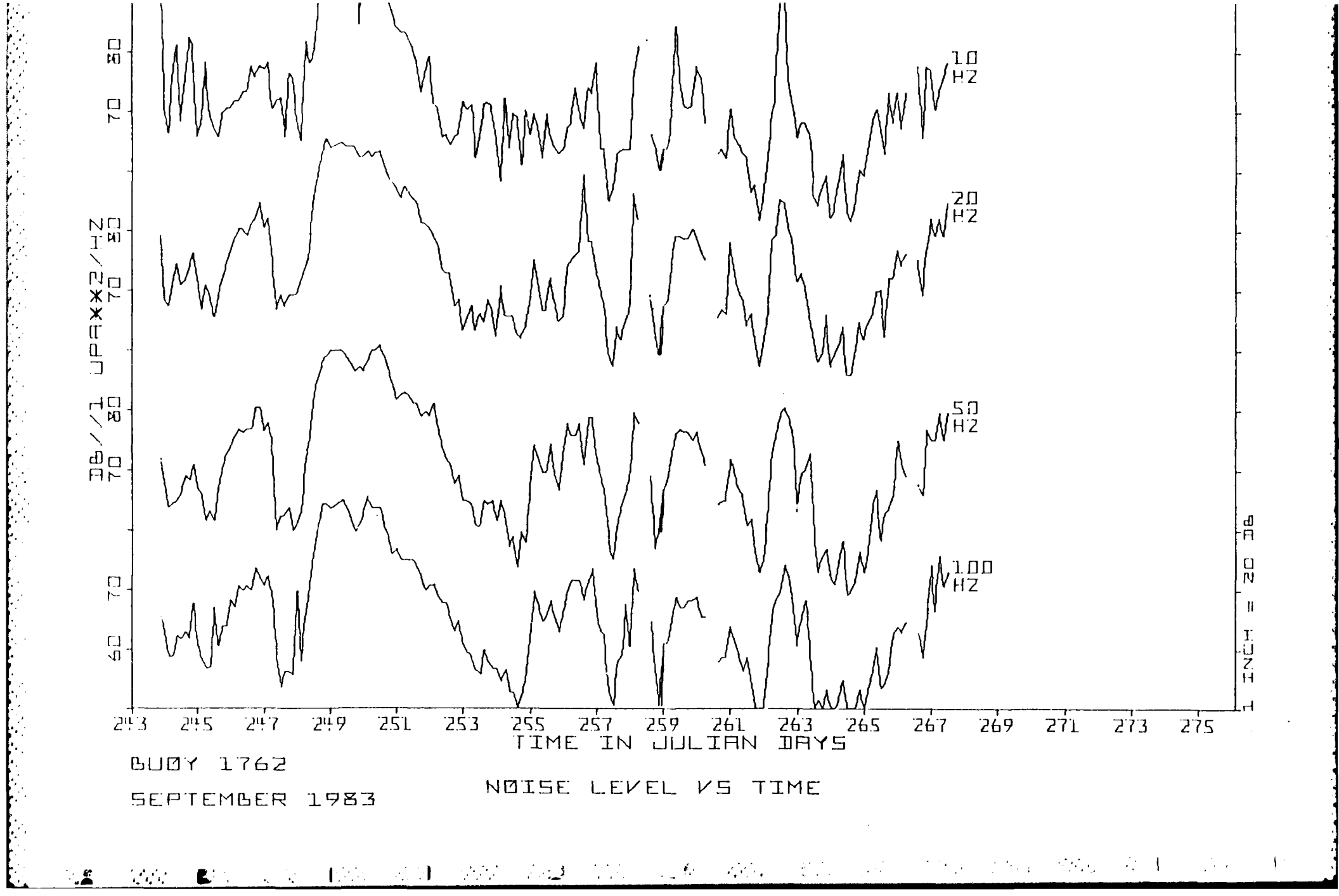
APPENDIX 2

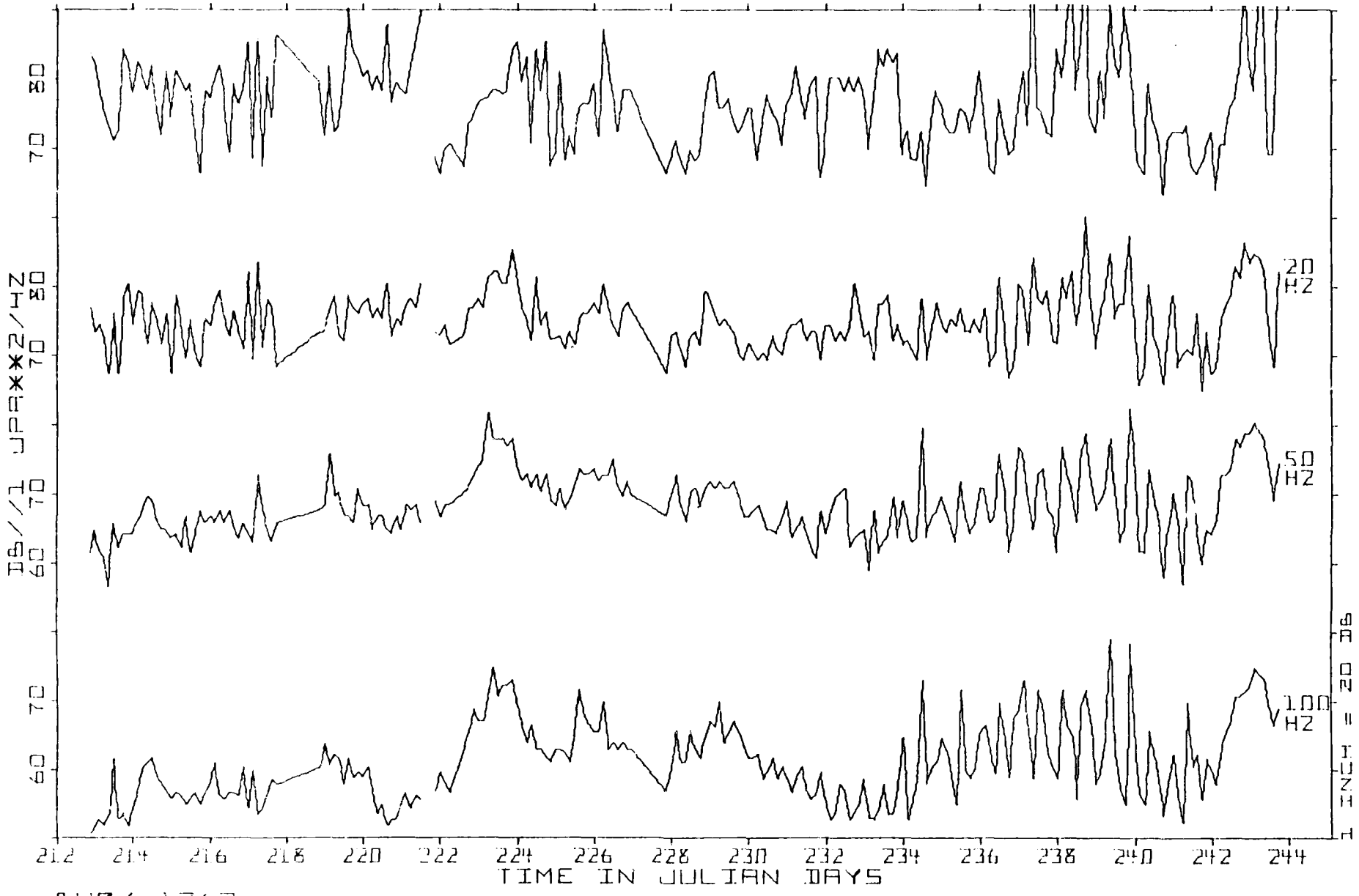
Date Buoy I.D. 1772

Life in Reporting Area 2 (West Greenland Sea)

1 Oct 1981 - 19 Oct 1981

Type: SYNARGOS (5 - 1000 Hz)

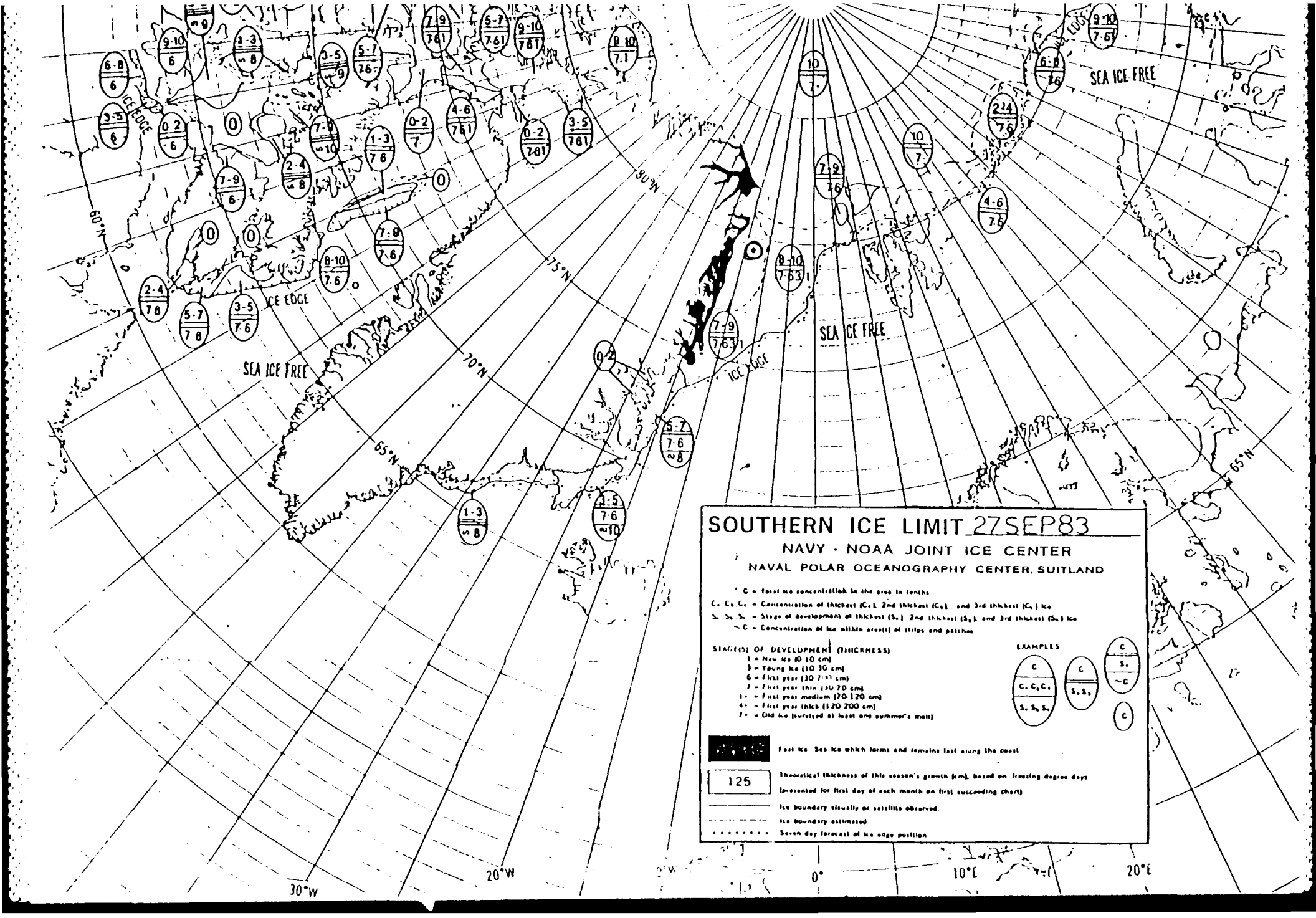

10 HZ
20 HZ
50 HZ
100 HZ
DB//1 UPA**2/HZ
60 70 80
70 80
70 80
70 80
1 INCH = 20 DB
243 245 247 249 251 253 255 257 259 261 263 265 267 269 271 273 275
TIME IN JULIAN DAYS
BUOY 1762
SEPTEMBER 1983
NOISE LEVEL VS TIME

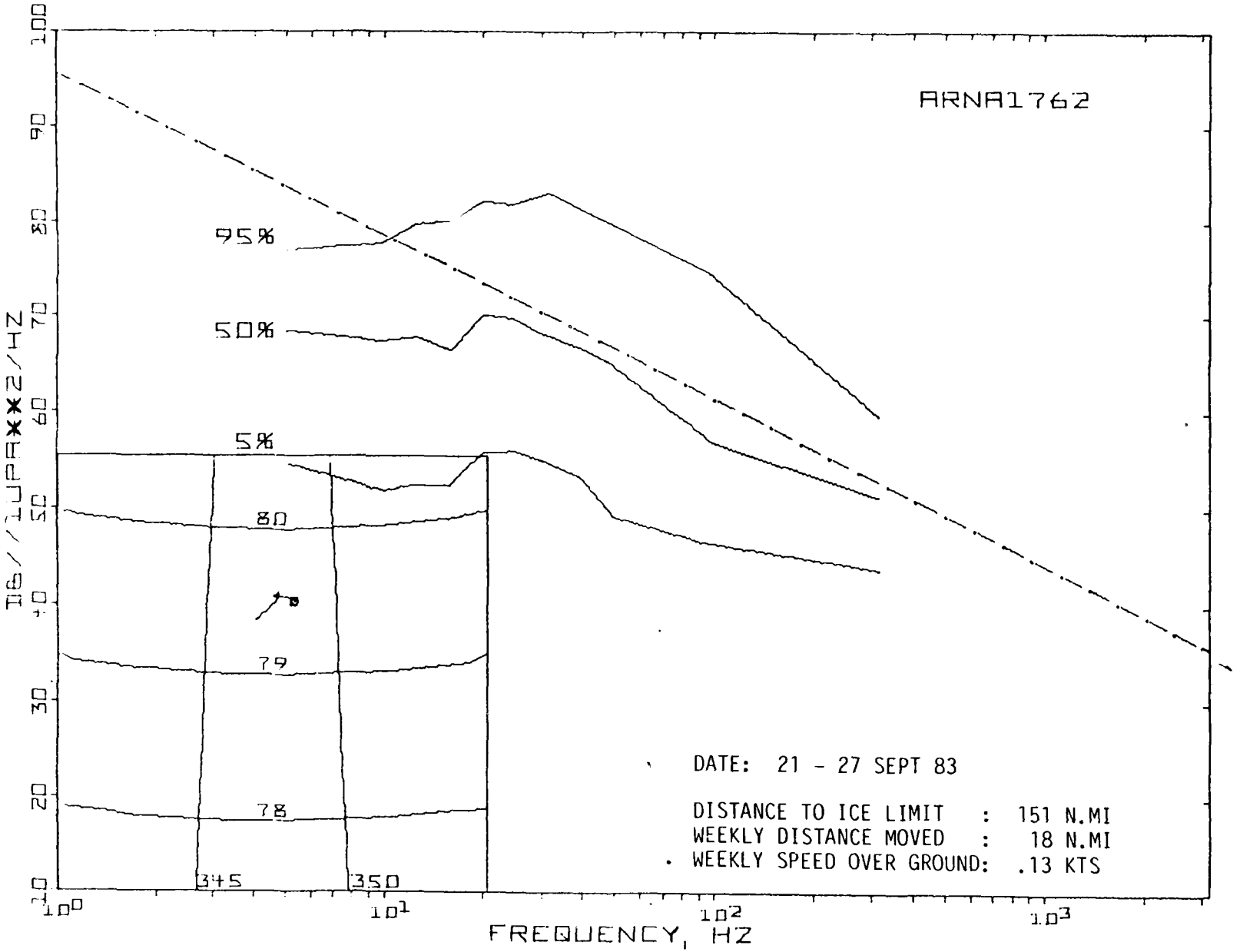


BUOY 1762

AUGUST 1983

NOISE LEVEL VS TIME


SEA ICE FREE
ICE EDGE
SEA ICE FREE
ICE EDGE
SEA ICE FREE
ICE EDGE
80°N
75°N
70°N
65°N
60°N
30°W
20°W
0°
10°E
20°E
SOUTHERN ICE LIMIT 27SEP83
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
C_1 C_2 C_3 = Concentration of thickest (C_1), 2nd thickest (C_2), and 3rd thickest (C_3) ice
S_1 S_2 S_3 = Stage of development of thickest (S_1), 2nd thickest (S_2), and 3rd thickest (S_3) ice
~C = Concentration of ice within area(s) of strips and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
6 = First year (30-[illegible] cm)
7 = First year thin (30-70 cm)
1+ = First year medium (70-120 cm)
4+ = First year thick (120-200 cm)
7+ = Old ice (survived at least one summer's melt)
EXAMPLES
Fast Ice. Sea ice which forms and remains fast along the coast
125
Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart)
Ice boundary visually or satellite observed
Ice boundary estimated
Seven day forecast of ice edge position



BUOY 1762 21-27 SEP 83

MONTH: 21-27 SEP 83 BUOY: 1762

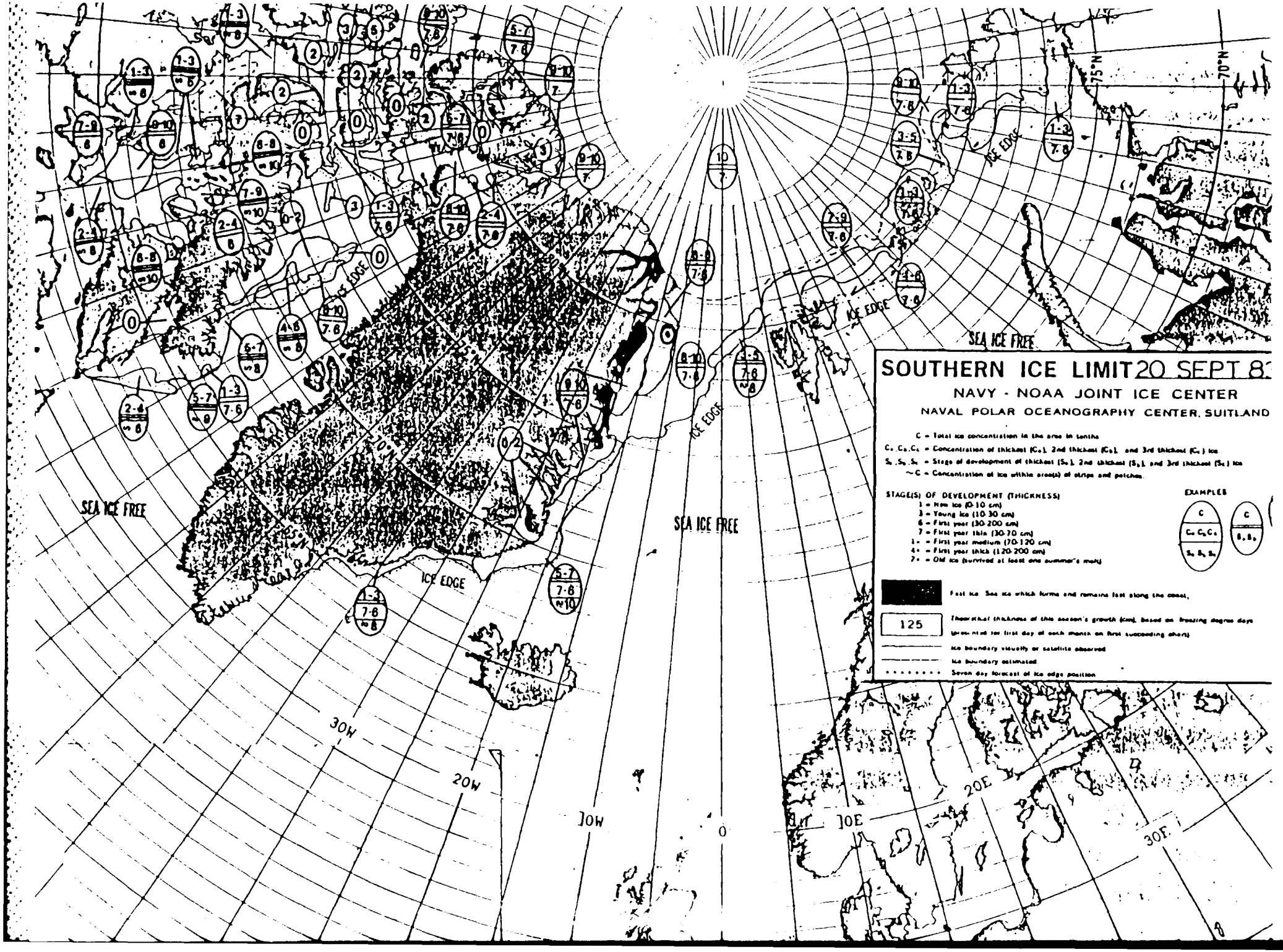
OUTPUT IN FILE ARNA1762

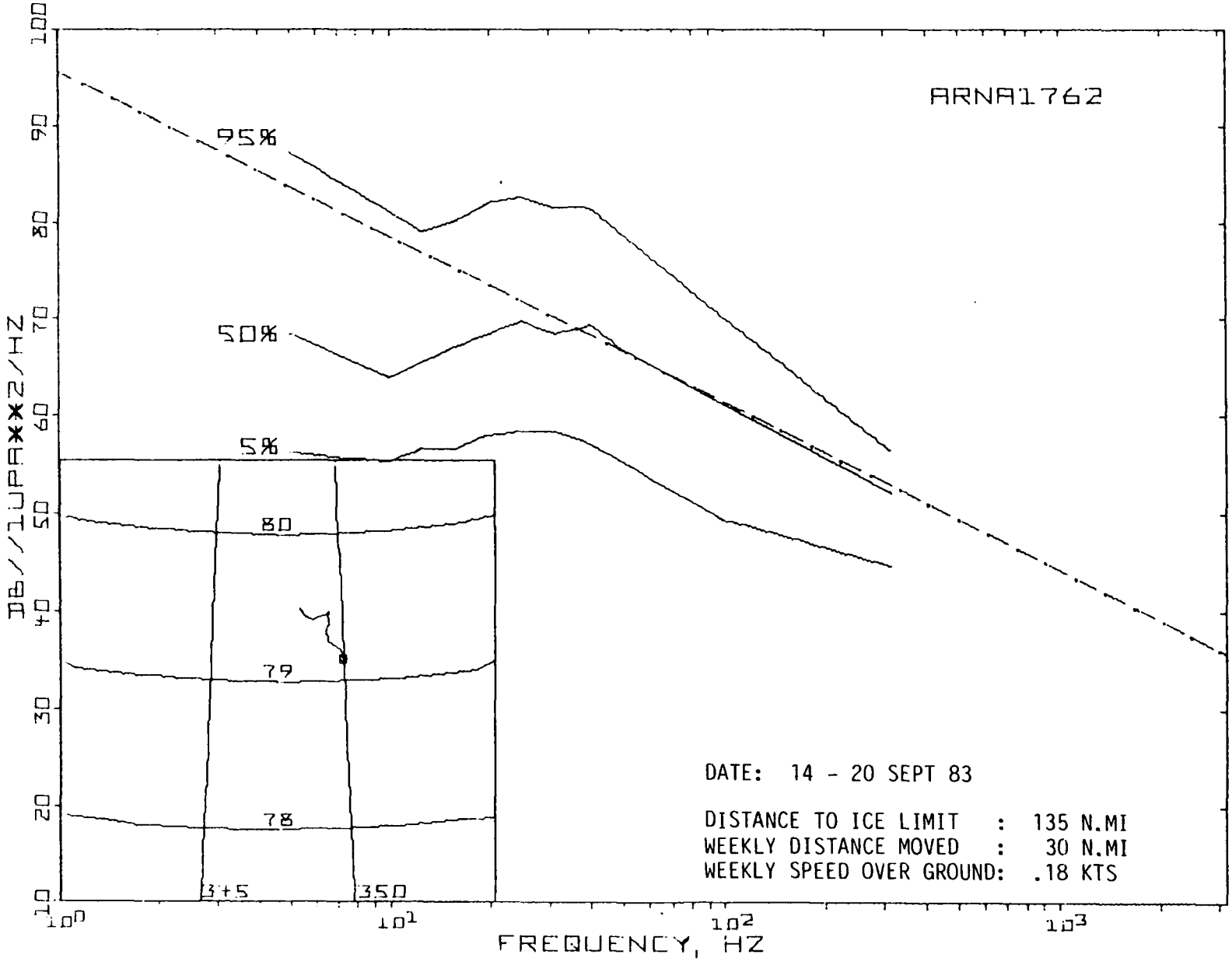
DISPLACEMENT (N. MI.): 17.808 NORTH: -7.860 EAST: -15.980
DIRECTION (TRUE): 243.839

THE NUMBER OF DATA SAMPLES IS 41

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	66.7	8.1	54.6	54.6	55.4	56.7	68.4	74.4	75.3	76.9	77.6	27
10.0	66.3	8.6	51.7	51.7	53.3	59.4	67.3	73.3	77.2	77.8	78.3	27
12.5	67.3	9.1	52.3	52.3	53.3	59.4	67.7	72.8	77.8	79.8	82.0	27
16.0	67.3	9.0	52.3	52.3	55.1	60.3	66.3	76.2	77.3	80.1	82.8	27
20.0	69.4	8.7	55.7	55.7	57.3	61.8	70.1	76.1	79.3	82.1	84.8	27
25.0	68.7	8.6	55.9	55.9	57.6	60.9	69.7	75.8	79.9	81.8	81.8	27
31.5	68.0	9.4	54.8	54.8	55.9	59.7	67.7	75.4	79.8	83.1	83.9	27
40.0	66.9	9.5	53.1	53.1	55.3	58.5	66.5	75.3	79.2	81.4	81.4	27
50.0	63.8	9.9	49.0	49.0	50.8	55.0	64.8	70.8	75.0	79.6	79.6	27
100.0	58.5	9.0	46.2	46.2	47.0	51.3	56.7	63.8	70.7	74.2	75.8	27
315.0	51.5	5.4	43.7	43.7	44.5	46.0	51.2	55.2	58.8	59.5	60.1	27

STOP


SOUTHERN ICE LIMIT 20 SEPT 8
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
Ca, Cb, Cc = Concentration of thickest (Ca), 2nd thickest (Cb), and 3rd thickest (Cc) ice
Sa, Sb, Sc = Stage of development of thickest (Sa), 2nd thickest (Sb), and 3rd thickest (Sc) ice
~C = Concentration of ice within area(s) of stripe and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
6 = First year (30-200 cm)
7 = First year thin (30-70 cm)
1- = First year medium (70-120 cm)
4- = First year thick (120-200 cm)
7+ = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast.
125
Theoretical thickness of this season's growth (cm), based on freezing degree days (accumulated for first day of each month on first succeeding chart)
Ice boundary visually or satellite observed
Ice boundary estimated
Seven day forecast of ice edge position
SEA ICE FREE
ICE EDGE
75°N
70°N
60°N
30W
20W
10W
0
10E
20E
30E



BUOY 1762 14-20 SEP 83

MONTH: 14-20 SEP 83 BUOY: 1762

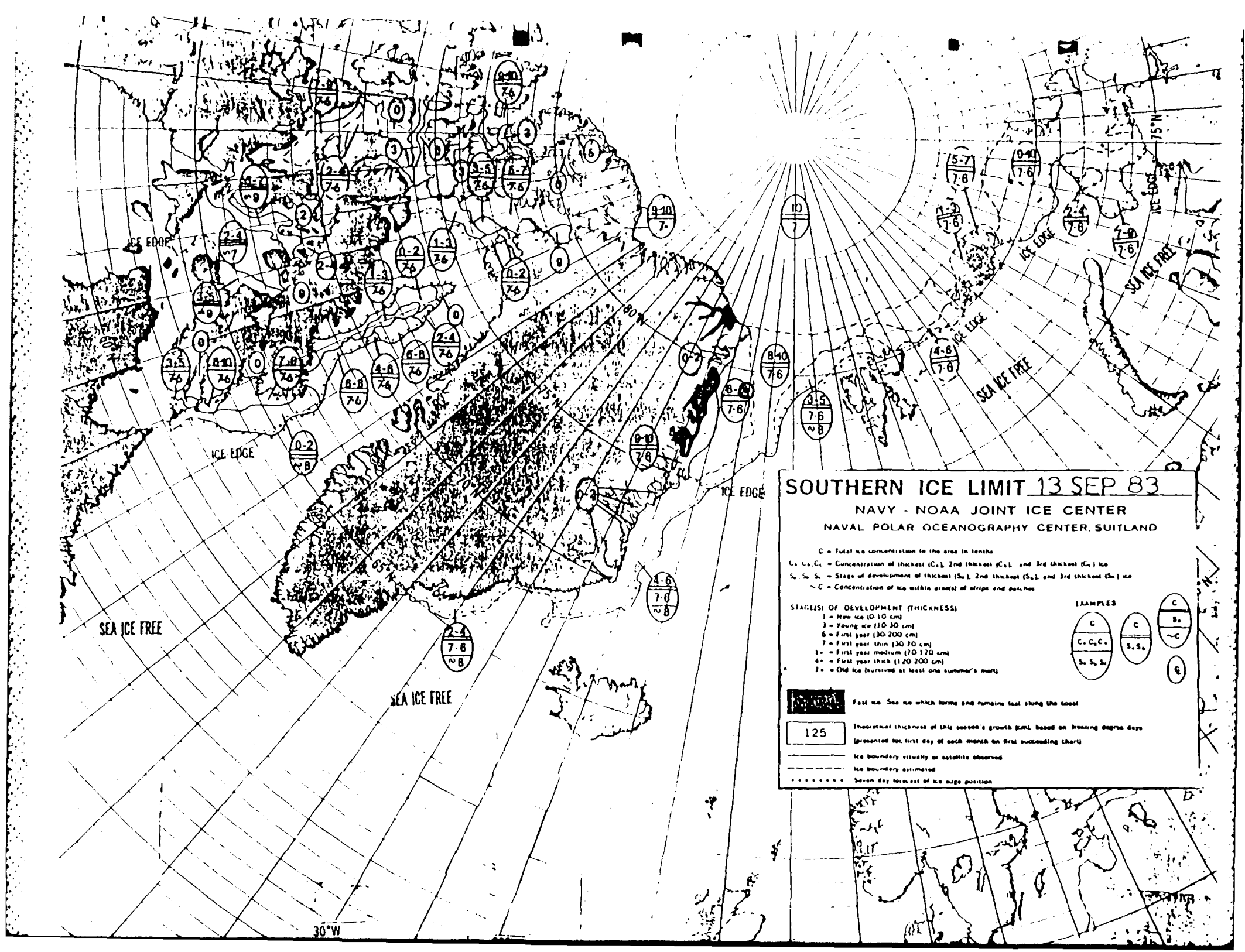
OUTPUT IN FILE ARNA1762

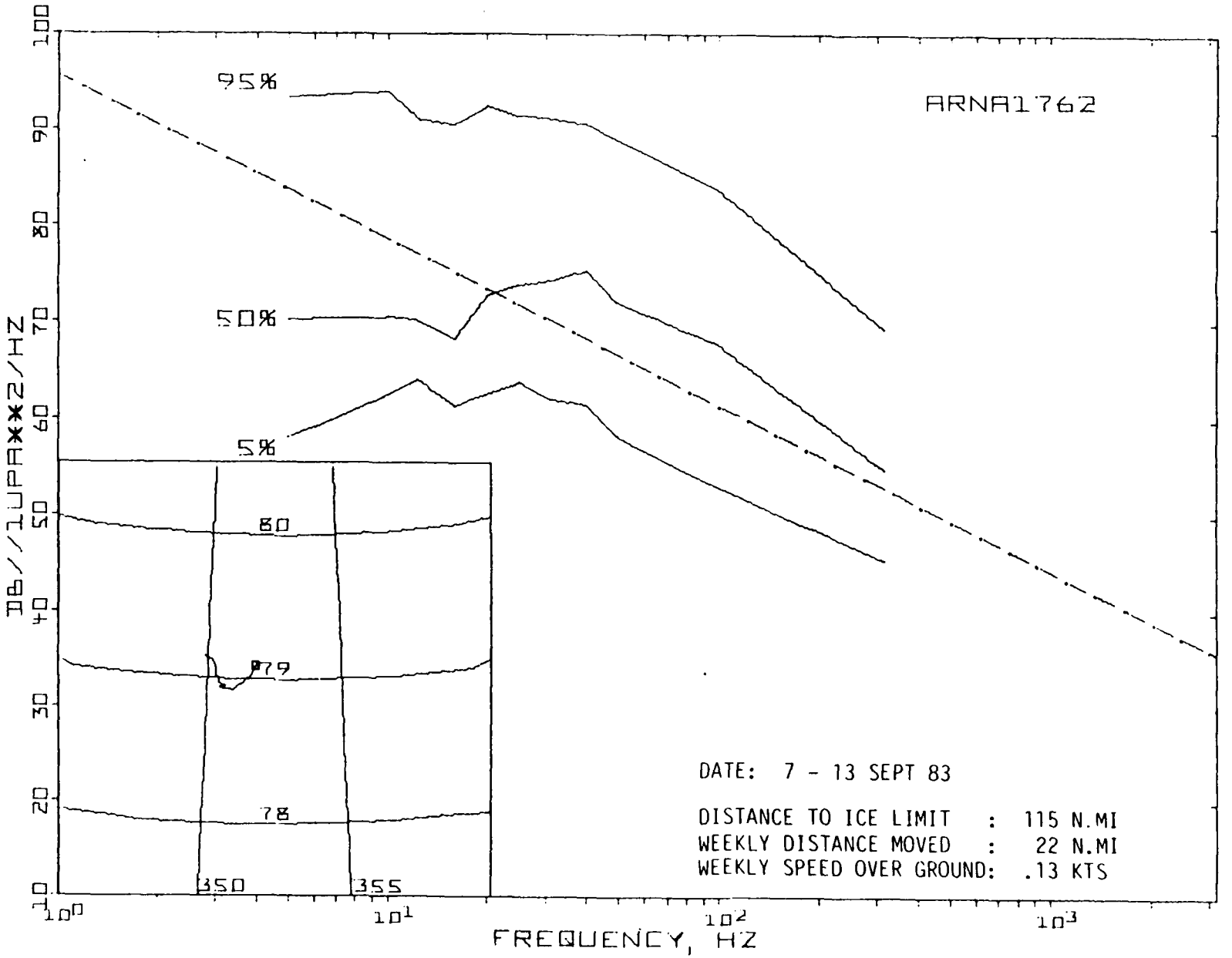
DISPLACEMENT (N. MI.): 26.999 NORTH: 20.580 EAST: -17.475
DIRECTION (TRUE): 319.640

THE NUMBER OF DATA SAMPLES IS 58

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	70.1	8.7	55.4	56.0	57.9	66.2	68.4	75.3	80.4	87.3	94.2	54
10.0	66.6	8.5	51.7	55.1	55.8	62.2	63.8	71.1	77.8	81.1	91.4	54
12.5	67.8	7.4	54.2	56.5	57.2	63.3	65.4	73.7	77.3	78.9	87.4	54
16.0	68.0	7.5	54.2	56.5	57.2	62.5	67.2	74.1	78.4	80.1	84.4	54
20.0	70.1	8.1	57.3	58.0	59.3	64.0	68.3	78.2	80.4	82.1	86.4	54
25.0	70.2	7.8	56.8	58.4	59.7	64.4	69.7	77.4	79.9	82.6	85.9	54
31.5	70.0	7.9	55.9	58.4	59.0	63.3	68.3	77.1	80.4	81.4	83.9	54
40.0	70.2	8.2	54.3	57.1	57.8	62.3	69.3	76.2	80.3	81.4	84.5	54
50.0	67.5	7.8	52.7	55.0	55.7	61.5	66.7	73.6	76.8	78.8	80.4	54
100.0	61.1	7.2	47.8	49.1	49.7	56.2	61.0	67.0	68.8	69.8	74.2	54
315.0	51.3	3.8	43.7	44.5	45.3	47.8	52.0	54.1	55.2	56.3	57.2	54

STOP


SOUTHERN ICE LIMIT 13 SEP 83
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
C_1 C_2 C_3 = Concentration of thickest (C_1), 2nd thickest (C_2), and 3rd thickest (C_3) ice
S_1 S_2 S_3 = Stage of development of thickest (S_1), 2nd thickest (S_2), and 3rd thickest (S_3) ice
~C = Concentration of ice within area(s) of strips and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
6 = First year (30-200 cm)
7 = First year thin (30-70 cm)
1. = First year medium (70-120 cm)
4. = First year thick (120-200 cm)
7. = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast
125
Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart)
Ice boundary visually or satellite observed
Ice boundary estimated
Seven day forecast of ice edge position
ICE EDGE
SEA ICE FREE
80°N
75°N
30°W



BUOY 1762 7-13 SEP 83

MONTH: 7-13 SEP 83 BUOY: 1762

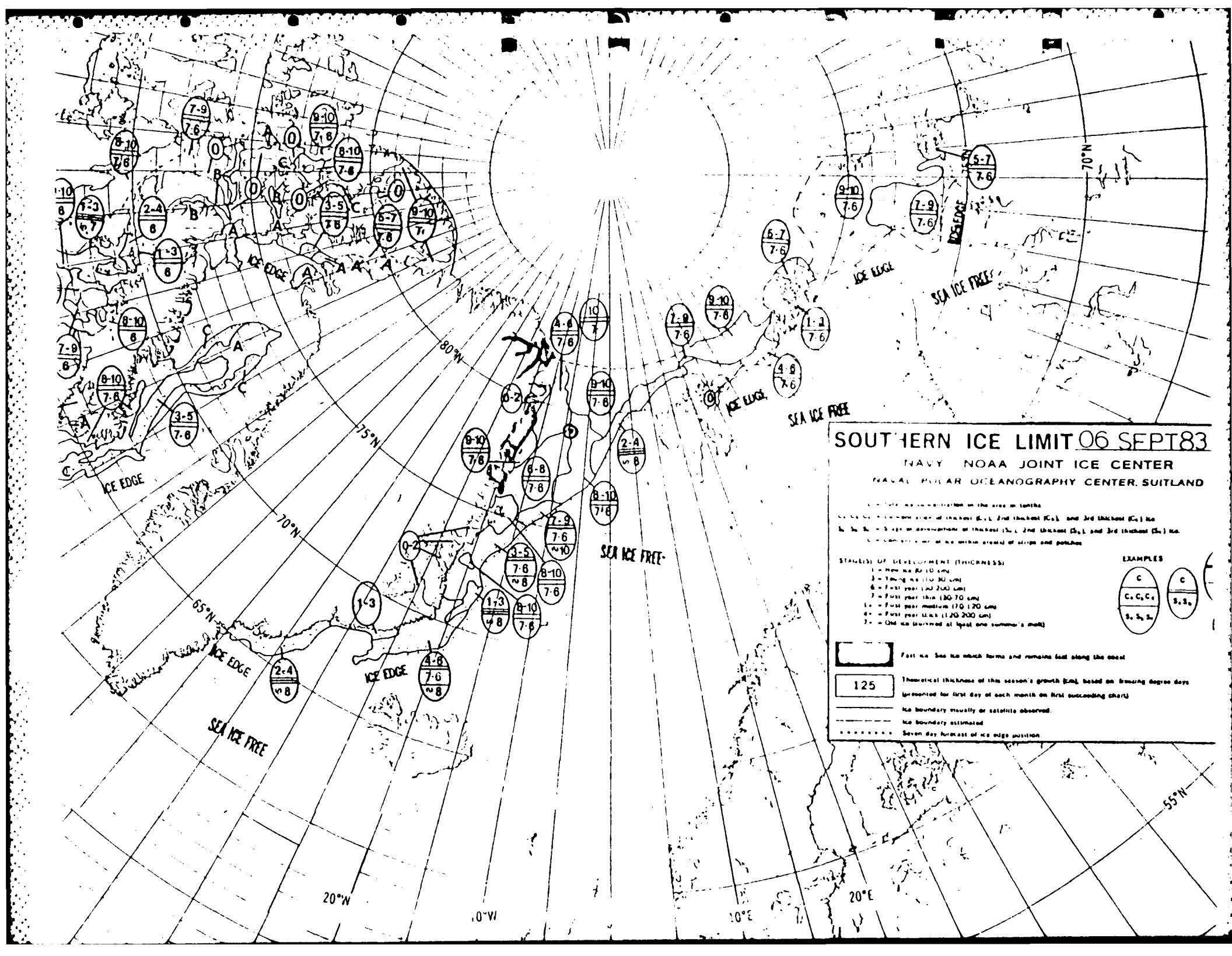
OUTPUT IN FILE ARNA1762

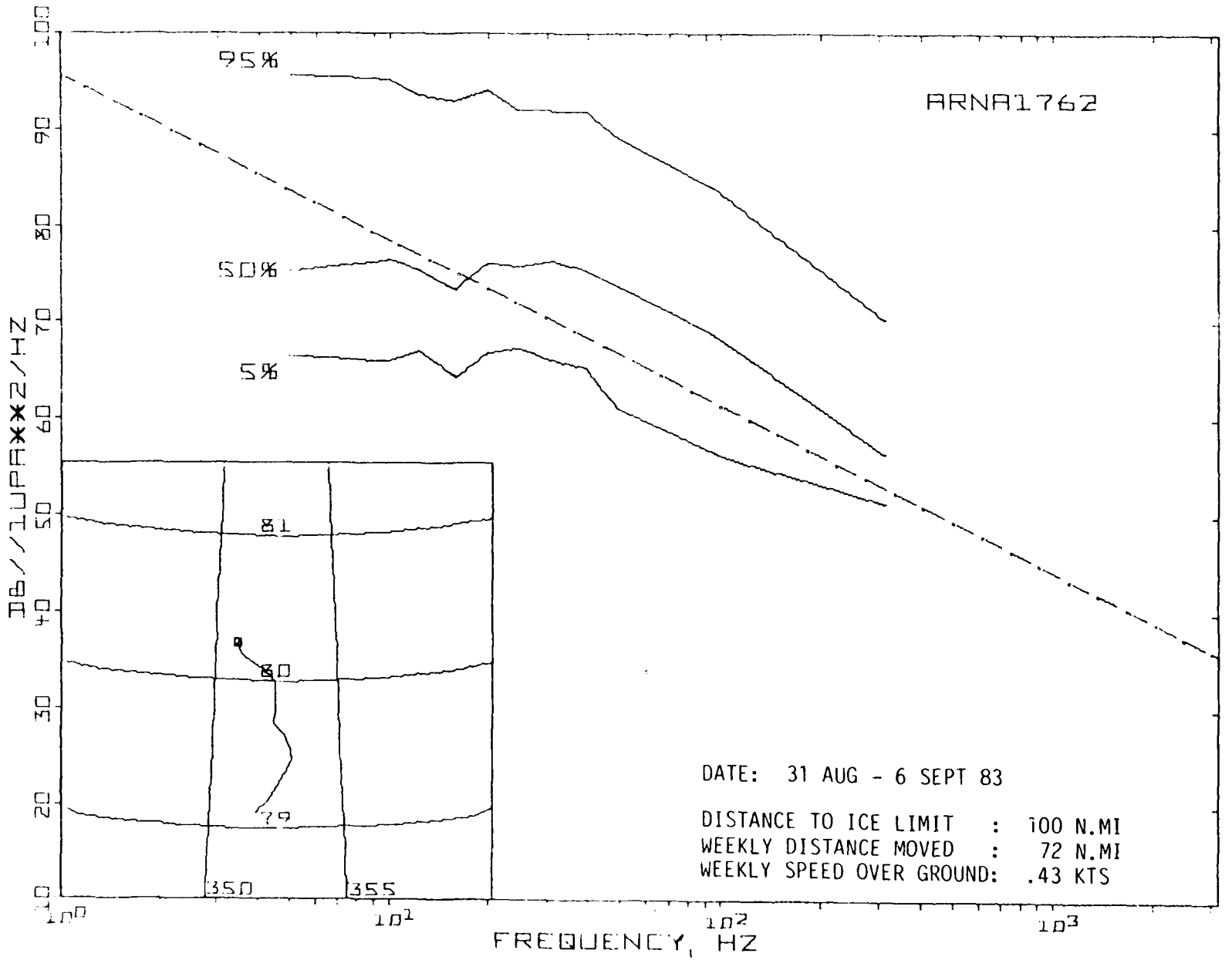
DISPLACEMENT (N. MI.): 21.289 NORTH: 3.000 EAST: -21.076
DIRECTION (TRUE): 278.069

THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	73.6	10.9	55.4	57.9	61.4	66.8	70.1	78.2	88.9	93.4	102.3	56
10.0	73.2	9.8	58.3	62.2	63.8	65.7	70.4	78.3	89.2	93.9	100.6	56
12.5	73.2	9.2	59.4	64.0	64.6	66.8	70.0	79.8	88.7	90.9	95.9	56
16.0	71.9	9.9	58.3	61.2	62.5	64.1	68.1	78.4	86.9	90.4	92.9	56
20.0	75.2	10.1	61.8	62.6	64.0	65.9	72.7	84.8	89.6	92.4	93.3	56
25.0	75.5	9.4	60.0	63.7	65.7	67.2	73.8	82.6	90.7	91.3	92.9	56
31.5	75.3	9.8	59.0	61.9	63.3	66.5	74.3	82.3	89.1	91.2	92.4	56
40.0	75.6	9.7	57.1	61.4	63.1	67.4	75.3	82.3	89.1	90.6	92.4	56
50.0	73.2	9.6	53.6	57.9	60.4	64.8	71.8	81.0	86.4	88.9	90.8	56
100.0	67.3	9.2	47.8	52.7	55.1	59.1	67.6	73.6	79.0	83.6	85.7	56
315.0	55.9	6.9	44.5	45.3	46.0	52.0	54.7	59.5	68.3	69.2	71.5	56

STOP


SOUTHERN ICE LIMIT 06 SEPT83
NAVY NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
EXAMPLES
125
ICE EDGE
SEA ICE FREE
80°W
75°N
70°N
65°N
55°N
20°W
20°E



BUOY 1762 31 AUG-6 SEP 83

BUOY ID 1772

OCTOBER 1981

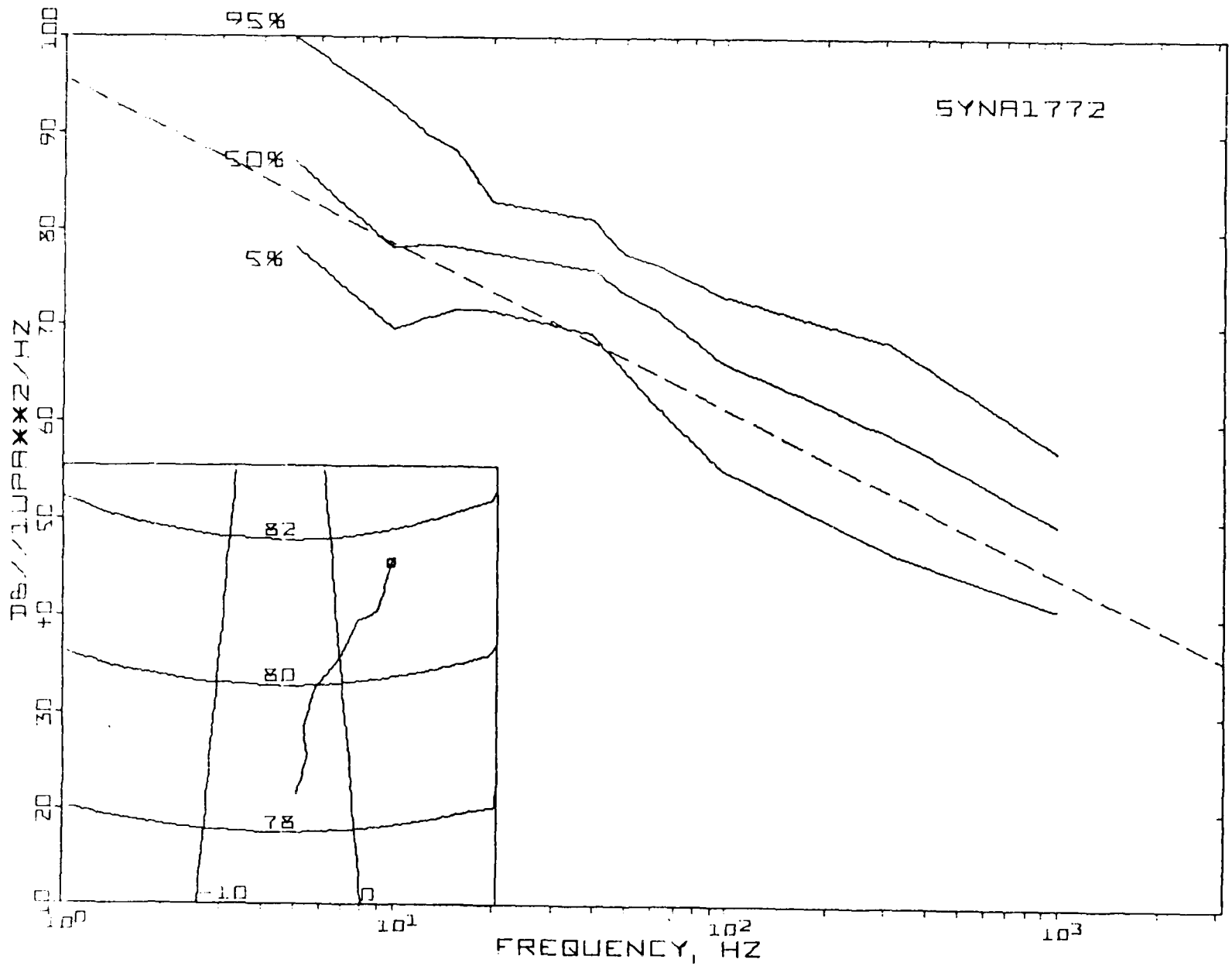
DAY	GMT	POSITION			
274	1657	81.717	N	5.018	E
275	1657	81.547	N	5.529	E
276	1645	81.448	N	5.246	E
277	1657	81.197	N	4.424	E
278	1643	81.013	N	3.876	E
279	1620	80.937	N	3.544	E
280	1559	80.891	N	3.335	E
281	1547	80.855	N	2.691	E
282	1651	80.839	N	1.673	E
283	1657	80.661	N	0.933	E
284	1655	80.383	N	0.014	E
285	1643	80.143	N	1.094	W
286	1657	79.948	N	2.264	W
287	1637	79.948	N	2.264	W
288	1614	79.422	N	3.188	W
289	1556	79.195	N	3.067	W
290	1657	79.052	N	2.948	W
291	1645	78.865	N	3.313	W
292	1657	78.511	N	3.841	W

DATA BY MONTHS

```
05/18/82   15:31:49
GIVE MONTH (UP TO 9 CHARACTERS):
OCT 1981
BUOY NUMBER: 1772

MONTH: OCT 1981       BUOY:  1772

OUTPUT IN FILE SYNA1772

DISPLACEMENT (N. MI.): 211.957  NORTH: *-192.3  EAST: -91.409
DIRECTION (TRUE): 209.795

THE NUMBER OF DATA SAMPLES IS 152
```

FREQUENCY		STD				MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX
5.0	88.5	7.1	73.3	78.3	79.4	83.2	87.1	92.3	98.3	100.6	109.5
10.0	79.7	7.6	67.0	69.5	70.8	73.9	78.0	85.1	90.1	92.8	99.6
12.5	79.1	6.2	69.9	70.6	71.2	74.3	78.4	82.6	88.7	89.9	97.5
15.6	78.5	4.9	69.9	71.5	72.9	74.0	78.2	81.1	84.9	88.0	92.1
20.0	77.5	3.7	68.2	71.4	72.7	74.3	77.4	80.3	82.0	82.8	90.1
40.0	75.7	3.6	67.4	69.0	70.4	73.5	75.7	78.6	80.3	81.1	82.4
50.0	72.8	3.8	62.0	65.2	66.2	71.2	73.2	76.1	77.3	77.3	79.2
63.0	70.7	4.5	56.1	61.3	63.6	68.2	71.4	74.2	75.6	76.3	79.4
100.0	65.8	5.2	49.6	54.8	58.9	63.1	65.9	69.7	70.9	72.8	76.9
320.0	58.0	5.9	42.4	46.5	49.3	54.5	58.6	61.3	65.6	68.1	70.0
1000.0	48.9	5.0	38.1	40.9	41.6	45.1	49.6	51.1	55.0	57.2	64.1

```
STOP
```



BUOY 1772 OCT 1-20 1981

DATA BY WEEKS

MONTH: 30 SEP-6 OCT 81 BUOY: 1772

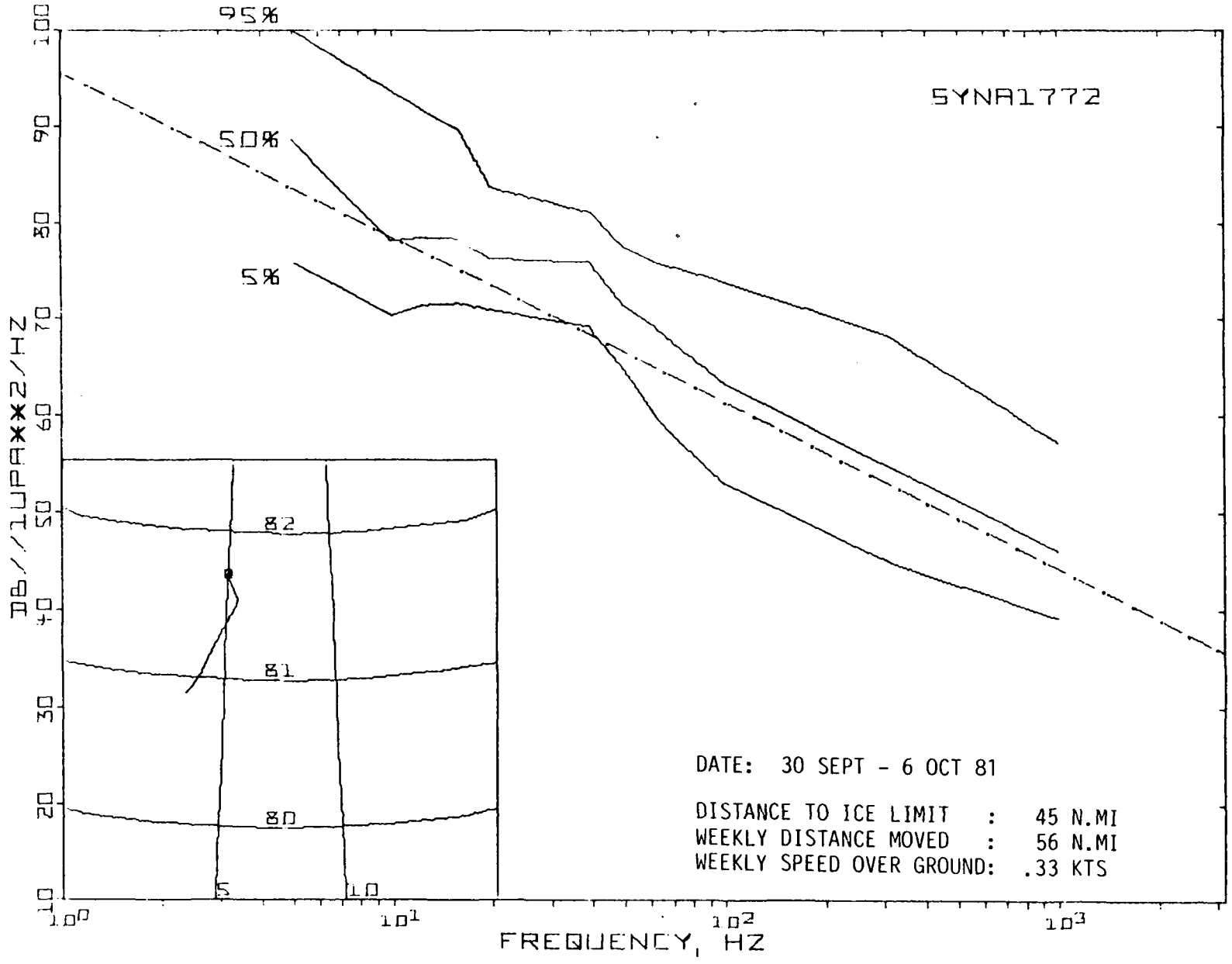
OUTPUT IN FILE SYNA1772

DISPLACEMENT (N. MI.): 55.868 NORTH: -51.720 EAST: -21.126
DIRECTION (TRUE): 202.240

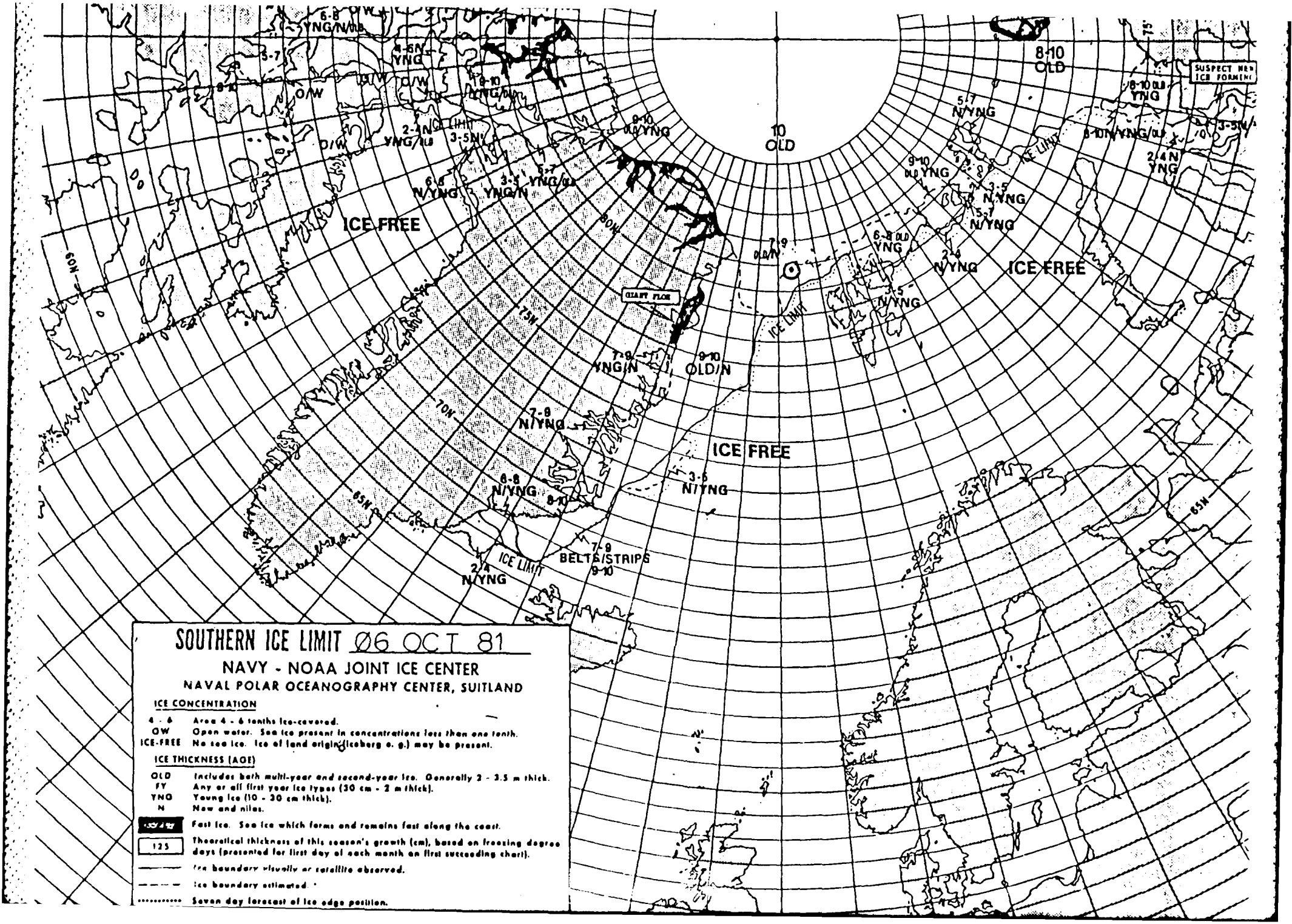
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	89.6	8.8	73.3	75.8	80.3	82.5	88.6	96.4	101.3	104.4	109.5	56
10.0	80.8	7.8	69.5	70.2	71.4	75.5	78.0	86.0	91.1	93.6	99.6	56
12.5	80.1	6.8	69.9	71.2	72.4	74.3	78.4	85.5	89.3	91.5	97.5	56
16.0	79.1	5.6	69.9	71.5	72.9	75.1	78.2	82.0	88.0	89.6	92.1	56
20.0	77.3	4.5	68.2	70.7	72.1	74.3	76.0	80.3	82.8	83.5	90.1	56
40.0	74.8	3.8	69.0	69.0	69.0	71.5	75.7	77.6	79.5	81.1	82.4	56
50.0	71.0	4.3	62.0	64.6	65.2	67.1	71.2	74.0	76.1	77.3	79.2	56
63.0	68.2	5.3	56.1	59.4	61.3	63.6	68.9	72.5	75.0	75.6	77.5	56
100.0	63.0	6.2	49.6	52.8	53.9	58.9	63.1	66.8	70.9	73.7	76.4	56
315.0	55.4	7.1	42.4	44.7	46.5	49.3	54.5	59.6	65.6	68.1	70.0	56
1000.0	47.3	6.1	38.1	39.1	40.9	41.6	46.0	50.1	56.1	57.2	60.4	56

STOP



BUOY 1772 30 SEP-6 OCT 81



SOUTHERN ICE LIMIT 06 OCT 81

NAVY - NOAA JOINT ICE CENTER

NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

ICE CONCENTRATION

4 - 6	Area 4 - 6 tenths ice-covered.
OW	Open water. Sea ice present in concentrations less than one tenth.
ICE-FREE	No sea ice. Ice of land origin (iceberg e. g.) may be present.

ICE THICKNESS (AGE)

OLD	Includes both multi-year and second-year ice. Generally 2 - 3.5 m thick.
FY	Any or all first year ice types (30 cm - 2 m thick).
YNG	Young ice (10 - 30 cm thick).
N	New and nilas.
	Fast ice. Sea ice which forms and remains fast along the coast.
125	Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
———	Ice boundary visually or satellite observed.
– – – –	Ice boundary estimated.
.....	Seven day forecast of ice edge position.

MONTH: 7-13 OCT 81 BUOY: 1772

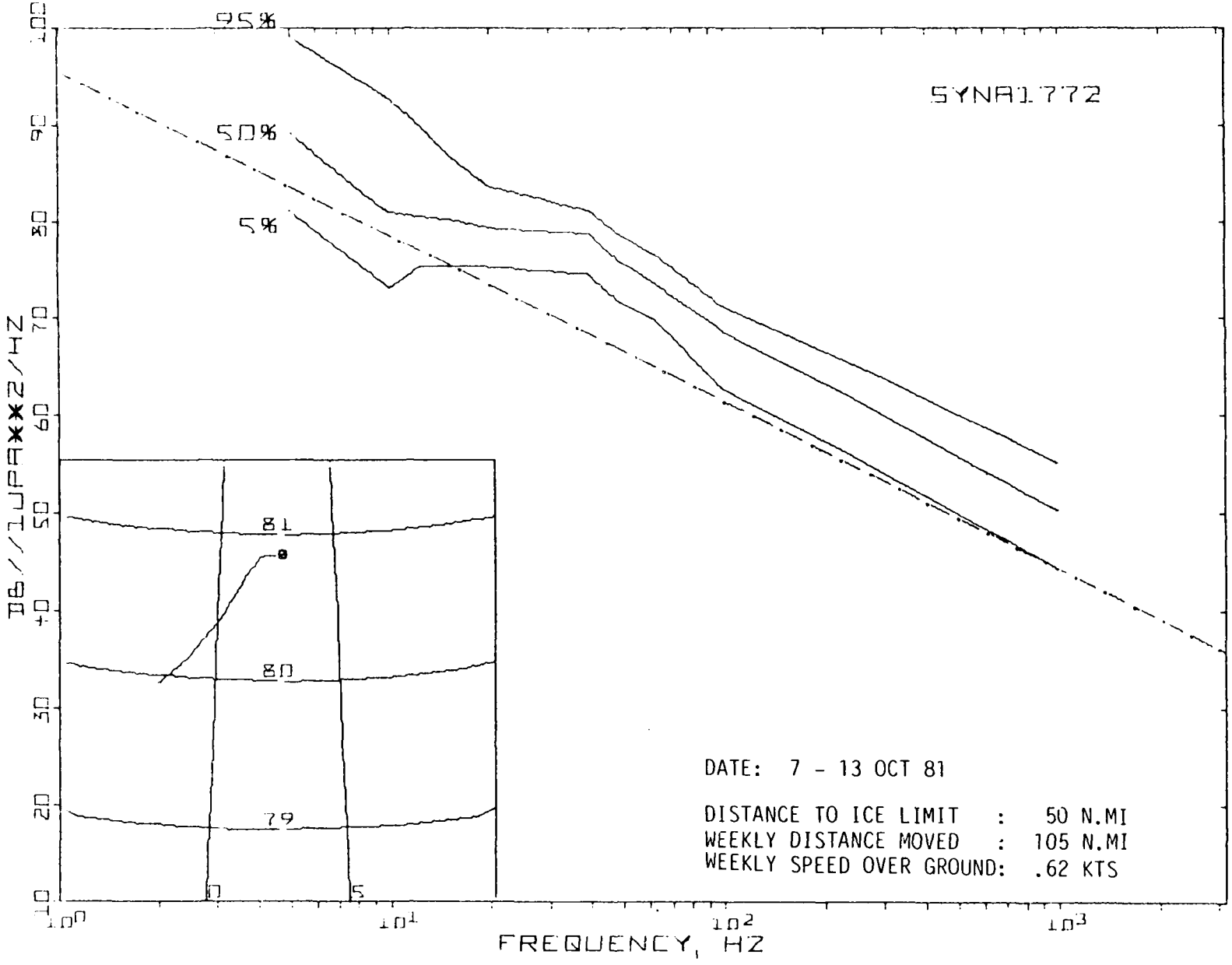
OUTPUT IN FILE SYNA1772

DISPLACEMENT (N. MI.): 105.140 NORTH: -85.980 EAST: -60.514
DIRECTION (TRUE): 215.162

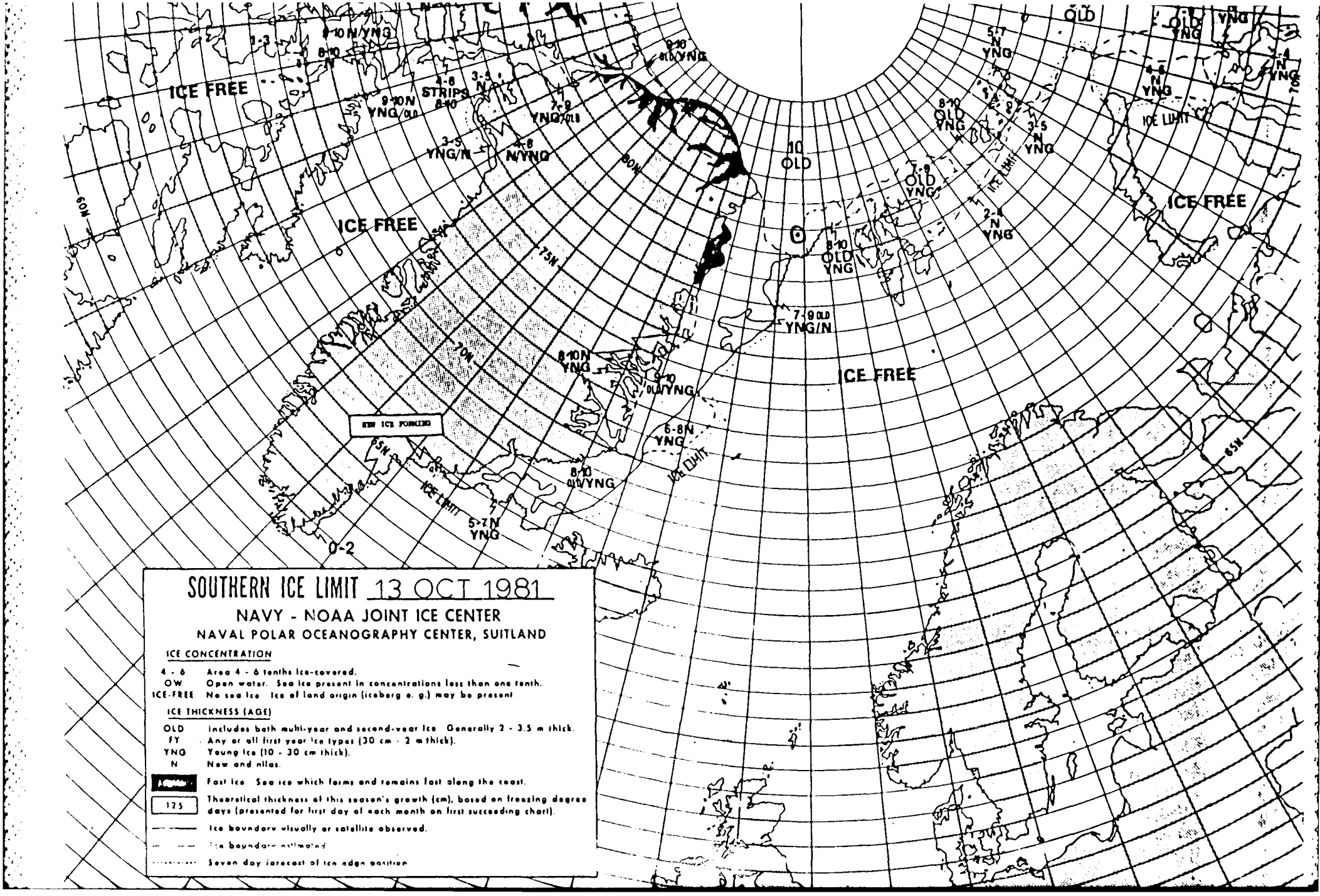
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	90.1	5.6	78.3	81.1	83.2	85.4	89.2	93.9	98.3	99.2	101.3	56
10.0	82.2	6.3	72.0	73.0	76.2	76.9	80.8	86.8	90.1	92.8	98.9	56
12.5	81.4	4.7	73.4	75.2	75.9	77.9	80.4	84.5	87.2	89.9	95.3	56
16.0	80.4	3.5	73.5	75.1	76.0	78.2	80.1	82.8	84.9	86.1	88.0	56
20.0	79.3	2.6	73.2	75.2	76.8	77.4	79.3	81.2	82.0	83.5	87.2	56
40.0	77.9	2.3	74.3	74.3	74.3	75.7	78.6	79.5	80.3	81.1	82.4	56
50.0	75.0	2.3	70.7	71.2	71.2	73.2	75.4	76.7	77.3	78.3	79.2	56
63.0	73.0	2.3	67.3	69.6	70.3	70.9	73.4	75.0	75.6	76.3	76.9	56
100.0	67.7	2.6	61.6	62.4	64.3	65.9	68.4	69.7	70.9	70.9	71.9	56
315.0	59.4	3.0	53.6	53.6	54.5	58.6	59.6	61.3	62.1	63.4	65.6	56
1000.0	50.1	3.2	43.5	44.1	46.0	48.3	50.1	51.1	54.3	55.0	58.1	56

STOP



BUOY 1772 7-13 OCT 81



SOUTHERN ICE LIMIT 13 OCT 1981

NAVY - NOAA JOINT ICE CENTER

NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

ICE CONCENTRATION

4 - 6	Area 4 - 6 tenths ice-covered.
OW	Open water. Sea ice present in concentrations less than one tenth.
ICE-FREE	No sea ice. Ice of land origin (iceberg e. g.) may be present.

ICE THICKNESS (AGE)

OLD	Includes both multi-year and second-year ice. Generally 2 - 3.5 m thick.
FY	Any or all first year ice types (30 cm - 2 m thick).
YNG	Young ice (10 - 30 cm thick).
N	New and nilas.
	Fast ice. Sea ice which forms and remains fast along the coast.
125	Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
	Ice boundary visually or satellite observed.
	Ice boundary estimated.
	Seven day forecast of ice edge position.

MONTH: 14-20 OCT 81 BUOY: 1772

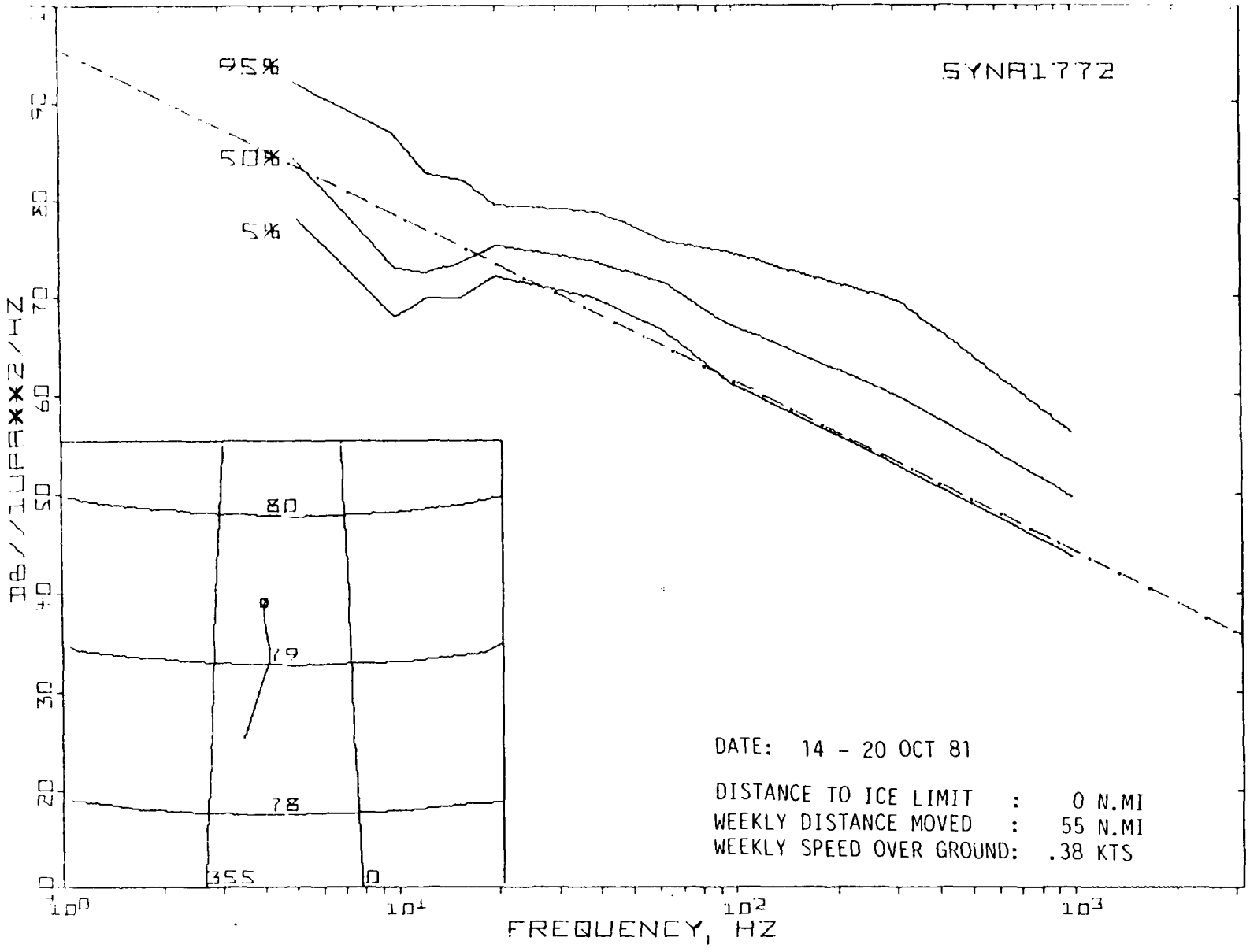
OUTPUT IN FILE SYNA1772

DISPLACEMENT (N. MI.): 55.184 NORTH: -54.660 EAST: -7.591
DIRECTION (TRUE): 187.925

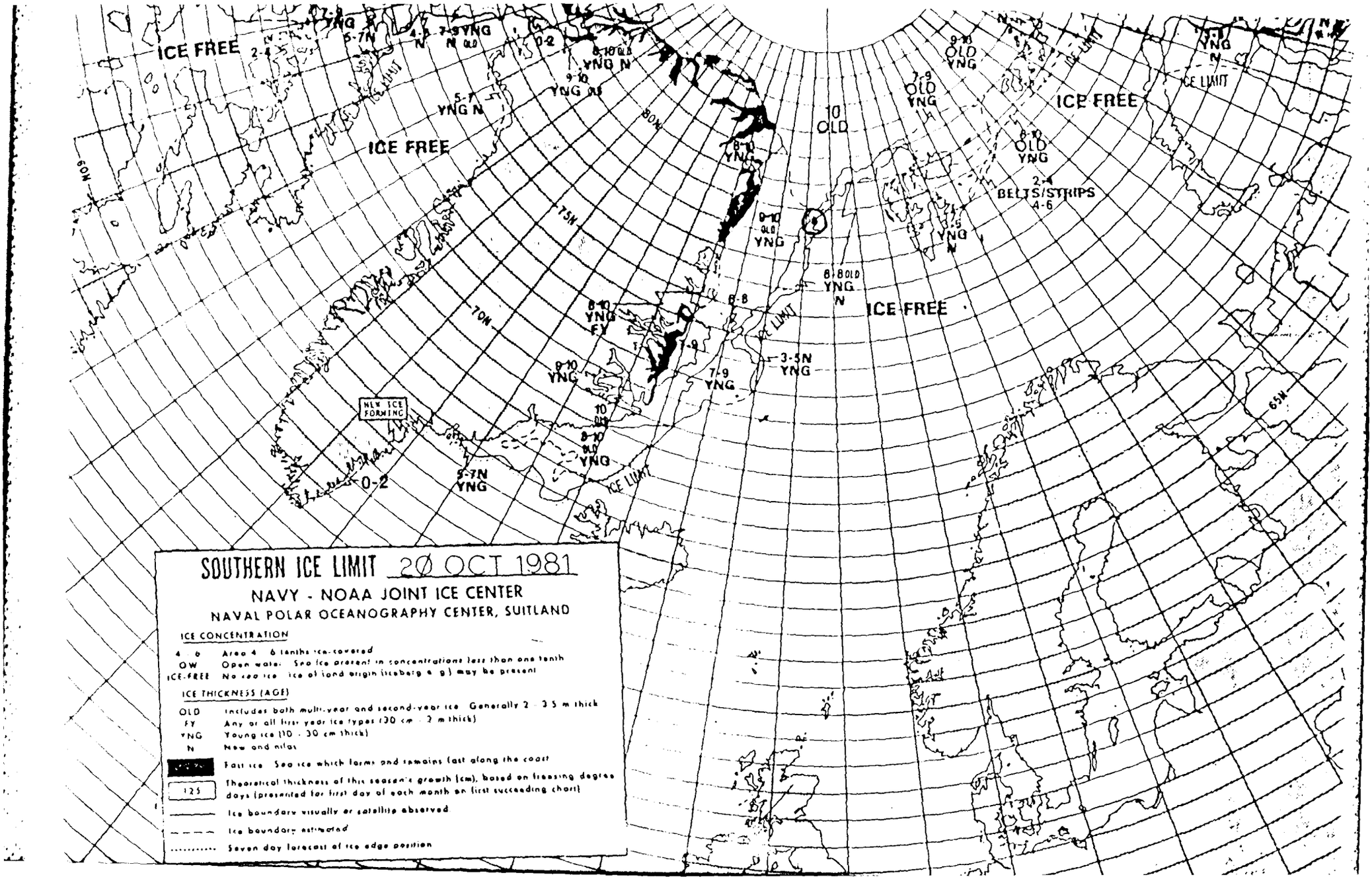
THE NUMBER OF DATA SAMPLES IS 38

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	84.8	4.6	77.8	78.3	78.3	81.1	84.4	87.1	90.4	92.3	95.8	38
10.0	74.9	6.8	67.0	67.9	67.9	70.8	73.0	76.2	81.6	86.8	99.6	38
12.5	74.5	4.4	69.9	69.9	70.6	71.2	72.4	76.6	80.4	82.6	89.3	38
16.0	74.9	3.7	69.9	69.9	71.5	72.2	73.5	77.6	78.9	82.0	84.3	38
20.0	75.5	2.4	71.4	72.1	72.7	73.2	75.2	76.8	79.3	79.3	81.2	38
40.0	74.0	3.0	67.4	69.7	70.4	71.5	73.5	76.4	77.6	78.6	81.1	38
50.0	72.6	2.8	68.0	68.0	68.7	70.7	72.3	74.8	76.1	77.3	78.3	38
63.0	71.4	3.2	66.4	66.4	67.3	68.9	71.4	73.4	75.0	75.6	79.4	38
100.0	67.5	4.3	58.9	60.8	61.6	64.3	66.8	70.9	72.8	74.4	76.9	38
315.0	60.2	5.4	52.0	52.5	52.5	56.1	59.6	64.0	68.1	69.4	70.0	38
1000.0	49.7	4.8	41.6	43.5	44.1	46.0	49.6	53.6	55.0	56.1	64.1	38

STOP



BUOY 1772 14-20 OCT 81


ICE FREE
ICE FREE
ICE FREE
ICE FREE
ICE LIMIT
ICE LIMIT
ICE LIMIT
ICE LIMIT
NEW ICE FORMING
BELTS/STRIPS
4-6
60N
70N
75N
80N
65N
10 OLD
8-10 OLD YNG
9-10 OLD YNG
7-9 OLD YNG
8-10 YNG
9-10 YNG
7-9 YNG
3-5N YNG
5-7N YNG
0-2
8-8 OLD YNG N
SOUTHERN ICE LIMIT 20 OCT 1981
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
ICE CONCENTRATION
4 - 6 Area 4 - 6 tenths ice-covered
OW Open water - Sea ice present in concentrations less than one tenth
ICE-FREE No sea ice - ice of land origin (icebergs e g) may be present
ICE THICKNESS (AGE)
OLD Includes both multi-year and second-year ice Generally 2 - 3 5 m thick
FY Any or all first year ice types (30 cm - 2 m thick)
YNG Young ice (10 - 30 cm thick)
N New and nilas
Fast ice - Sea ice which forms and remains fast along the coast
125 Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart)
Ice boundary visually or satellite observed
Ice boundary estimated
Seven day forecast of ice edge position

MONTH: DEC 1981 BUOY: 1773

OUTPUT IN FILE ARNA1773

DISPLACEMENT (N. MI.): 213.688 NORTH: *-213.7 EAST: --13.064
DIRECTION (TRUE): 184.139

THE NUMBER OF DATA SAMPLES IS 242

FREQUENCY		STD					MEDIAN				
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX
5.0	80.4	6.9	64.9	69.9	71.8	75.3	80.8	84.7	89.0	90.7	102.8
10.0	80.4	5.6	68.4	71.9	74.4	76.9	79.7	82.9	87.8	91.7	99.8
12.5	82.1	5.6	70.9	74.4	75.7	78.8	81.1	84.9	89.0	93.8	101.0
15.6	83.2	5.7	69.7	75.7	77.1	80.0	82.5	86.0	89.8	95.2	102.5
20.0	83.3	5.6	71.1	75.7	77.1	80.0	82.5	86.0	89.8	95.8	101.9
40.0	81.8	5.2	69.9	74.1	77.0	77.9	81.4	84.7	88.0	93.4	95.0
50.0	80.2	5.4	66.8	70.9	74.4	76.9	79.7	83.0	86.5	91.7	94.4
63.0	78.0	5.3	64.7	70.1	72.6	74.9	76.7	80.9	83.8	89.8	91.5
100.0	71.6	5.4	58.9	63.9	64.9	68.1	71.8	74.1	77.8	81.9	88.0
320.0	60.9	4.9	52.8	54.3	55.3	57.5	59.3	64.2	67.3	71.4	74.2

DATA BY MONTHS

BUOY ID 1773

MAY 1982

DAY	GMT	POSITION
121	736	60.013 N 44.153 W
121	1305	60.013 N 44.153 W
121	1937	59.967 N 44.007 W
122	733	59.903 N 44.115 W
122	1745	59.889 N 44.137 W
122	1915	59.889 N 44.137 W
123	012	59.889 N 44.137 W
123	721	59.886 N 44.180 W
123	1346	59.887 N 44.172 W
123	1851	59.887 N 44.172 W
124	709	59.881 N 44.146 W
124	1341	59.881 N 44.146 W
124	1843	59.855 N 44.248 W
125	658	59.855 N 44.248 W
125	1327	59.855 N 44.248 W
125	1942	59.855 N 44.248 W
126	645	59.855 N 44.248 W
126	1315	59.877 N 44.194 W
126	1919	59.881 N 44.197 W
127	633	59.881 N 44.194 W
127	1302	59.869 N 44.221 W
127	1854	59.869 N 44.221 W
127	2355	59.877 N 44.182 W
128	622	59.877 N 44.182 W

DAY	GMT	POSITION
128	1342	59.885 N 44.171 W
128	1835	59.901 N 44.154 W
129	748	59.903 N 44.156 W
129	1318	59.903 N 44.156 W
129	1948	59.903 N 44.154 W
130	736	59.917 N 44.159 W
130	1254	59.917 N 44.159 W
130	1928	59.917 N 44.159 W
131	725	59.929 N 44.153 W
131	1732	59.932 N 44.151 W
131	1905	59.932 N 44.151 W
132	711	59.952 N 44.151 W
132	1347	59.953 N 44.153 W
132	1840	59.950 N 44.153 W
133	700	59.950 N 44.153 W
133	1335	59.950 N 44.153 W
133	1817	59.950 N 44.153 W
134	651	59.950 N 44.153 W
134	1322	59.950 N 44.153 W
134	1933	59.950 N 44.153 W
135	639	59.950 N 44.153 W
135	1310	59.950 N 44.153 W
135	1910	59.950 N 44.153 W

BUOY ID 1773

APRIL 1982

DAY	GMT	POSITION
91	102	62.774 N 40.892 W
91	657	62.625 N 41.198 W
91	1333	62.625 N 41.198 W
91	1941	62.560 N 41.185 W
92	040	62.560 N 41.185 W
92	736	62.560 N 41.185 W
92	1320	62.191 N 41.388 W
92	1917	62.037 N 41.473 W
93	017	62.037 N 41.473 W
93	633	61.870 N 41.541 W
93	1309	61.793 N 41.620 W
93	1948	61.786 N 41.621 W
93	2354	61.621 N 41.693 W
94	622	61.621 N 41.693 W
94	1337	61.477 N 41.695 W
94	1939	61.365 N 41.758 W
95	109	61.030 N 41.920 W
95	748	60.993 N 41.948 W
95	1315	60.918 N 42.033 W
95	1947	60.874 N 42.179 W
96	045	60.874 N 42.179 W
96	739	60.874 N 42.179 W
96	1252	60.609 N 42.569 W
96	1924	60.612 N 42.566 W
97	023	60.612 N 42.566 W
97	727	60.425 N 42.557 W
97	1229	60.285 N 42.594 W
97	1904	60.285 N 42.594 W
98	000	60.285 N 42.594 W
98	716	60.217 N 42.626 W
98	1348	60.190 N 42.669 W
98	1852	60.164 N 42.700 W
99	704	60.098 N 42.804 W
99	1338	60.055 N 42.914 W
99	1948	60.028 N 42.971 W
100	050	60.028 N 42.971 W
100	652	60.028 N 42.971 W
100	1325	59.746 N 43.715 W
100	1930	59.741 N 43.776 W
101	028	59.741 N 43.776 W
101	640	59.741 N 43.776 W
101	1314	59.773 N 44.548 W
101	1907	59.831 N 44.602 W
102	005	59.835 N 44.492 W
102	628	59.835 N 44.492 W
102	1348	59.884 N 44.499 W
102	1944	59.900 N 44.470 W
103	748	59.900 N 44.470 W
103	1328	59.908 N 44.472 W
103	1930	59.907 N 44.462 W
104	057	59.909 N 44.419 W
104	745	59.917 N 44.404 W
104	1305	59.930 N 44.359 W
104	1935	59.979 N 44.286 W
105	031	59.979 N 44.286 W
105	733	60.035 N 44.165 W
105	1242	60.042 N 44.192 W
105	1909	60.042 N 44.192 W
106	012	60.042 N 44.192 W
106	721	60.063 N 44.204 W
106	1348	60.062 N 44.227 W
106	1856	60.054 N 44.196 W
107	709	60.035 N 44.187 W
107	1344	60.033 N 44.166 W
107	1845	60.036 N 44.166 W
108	656	60.036 N 44.166 W
108	1332	60.039 N 44.172 W
108	1943	60.040 N 44.178 W
109	645	60.040 N 44.178 W
109	1320	60.026 N 44.171 W
109	1920	60.024 N 44.174 W
110	016	60.024 N 44.174 W
110	633	60.024 N 44.174 W
110	1308	59.981 N 44.000 W
110	1854	59.972 N 44.020 W
111	621	59.972 N 44.020 W
111	1338	59.973 N 44.013 W
111	1830	59.947 N 44.032 W
112	748	59.945 N 44.029 W
112	1238	59.945 N 44.029 W

BUOY ID 1773

MARCH 1982

DAY	GMT	POSITION						DAY	GMT	POSITION					
80	1224	65.246	N	37.832	W			85	1946	63.837	N	39.286	W		
80	1906	65.262	N	37.822	W			86	118	63.902	N	39.111	W		
80	2358	65.262	N	37.822	W			86	748	63.902	N	39.111	W		
81	714	65.146	N	38.144	W			86	1324	63.834	N	39.176	W		
81	1348	65.077	N	38.277	W			86	1948	63.837	N	39.286	W		
81	1853	65.031	N	38.363	W			87	056	63.834	N	39.336	W		
82	113	65.031	N	38.363	W			87	744	63.838	N	39.365	W		
82	702	64.873	N	38.590	W			87	1301	63.788	N	39.649	W		
82	1334	64.868	N	38.596	W			87	1934	63.788	N	39.649	W		
82	1947	64.733	N	38.606	W			88	034	63.788	N	39.649	W		
83	051	64.733	N	38.606	W			88	731	63.673	N	39.907	W		
83	748	64.733	N	38.606	W			88	1238	63.605	N	39.937	W		
83	1327	64.516	N	38.495	W			88	1911	63.395	N	40.144	W		
83	1928	64.465	N	38.491	W			89	011	63.395	N	40.144	W		
84	027	64.465	N	38.491	W			89	720	63.194	N	40.331	W		
84	721	64.465	N	38.491	W			89	1348	63.109	N	40.401	W		
84	1314	64.237	N	38.650	W			89	1858	63.017	N	40.426	W		
84	1904	64.205	N	38.747	W			90	709	62.885	N	40.525	W		
85	004	64.205	N	38.747	W			90	1344	62.826	N	40.696	W		
85	627	64.205	N	38.747	W			90	1847	62.774	N	40.892	W		
85	1346	64.034	N	39.019	W		

BUOY ID 1773

MARCH 1982

DAY	GMT	POSITION				DAY	GMT	POSITION			
60	108	68.421	N	25.196	W	70	054	66.761	N	31.661	W
60	748	68.423	N	25.266	W	70	748	66.760	N	31.658	W
60	1327	68.317	N	25.452	W	70	1256	66.673	N	31.772	W
60	1941	68.270	N	25.571	W	70	1931	66.605	N	31.910	W
61	104	68.087	N	25.786	W	71	031	66.605	N	31.910	W
61	747	68.033	N	25.878	W	71	726	66.600	N	31.968	W
61	1304	68.038	N	25.875	W	71	1233	66.603	N	32.164	W
61	1941	68.038	N	25.875	W	71	1912	66.632	N	32.297	W
62	040	67.932	N	26.182	W	72	008	66.632	N	32.297	W
62	737	67.920	N	26.290	W	72	719	66.635	N	32.424	W
62	1242	67.902	N	26.393	W	72	1348	66.628	N	32.610	W
62	1917	67.902	N	26.393	W	72	1859	66.521	N	32.923	W
63	017	67.872	N	26.524	W	73	707	66.521	N	32.923	W
63	719	67.846	N	26.607	W	73	1345	66.424	N	33.258	W
63	1347	67.856	N	26.617	W	73	1948	66.321	N	33.614	W
63	1903	67.856	N	26.617	W	74	144	66.321	N	33.614	W
63	2354	67.856	N	26.617	W	74	656	66.289	N	33.677	W
64	712	67.683	N	27.364	W	74	1333	66.285	N	33.692	W
64	1348	67.636	N	27.522	W	74	1938	66.284	N	33.694	W
64	1853	67.647	N	27.520	W	75	128	66.284	N	33.694	W
65	148	67.536	N	27.696	W	75	733	66.178	N	33.947	W
65	701	67.498	N	27.682	W	75	1322	66.163	N	33.987	W
65	1339	67.461	N	27.686	W	75	1914	66.140	N	34.116	W
65	1941	67.480	N	27.698	W	76	014	66.140	N	34.116	W
66	138	67.480	N	27.698	W	76	707	66.140	N	34.116	W
66	649	67.303	N	28.405	W	76	1348	66.063	N	34.432	W
66	1327	67.313	N	28.376	W	76	1947	66.067	N	34.438	W
66	1924	67.303	N	28.405	W	77	748	66.067	N	34.438	W
67	123	67.303	N	28.405	W	77	1333	65.919	N	34.983	W
67	721	67.233	N	28.908	W	77	1940	65.910	N	35.013	W
67	1315	67.161	N	29.431	W	78	107	65.779	N	35.199	W
67	1901	67.153	N	29.492	W	78	748	65.763	N	35.250	W
68	001	67.153	N	29.492	W	78	1310	65.708	N	35.404	W
68	654	67.153	N	29.492	W	78	1945	65.625	N	35.649	W
68	1341	67.083	N	30.497	W	79	044	65.625	N	35.649	W
68	1946	67.080	N	30.521	W	79	740	65.519	N	35.989	W
69	117	67.080	N	30.522	W	79	1247	65.429	N	36.448	W
69	748	67.080	N	30.522	W	79	1921	65.379	N	36.685	W
69	1319	66.924	N	31.349	W	80	021	65.379	N	36.685	W
69	1948	66.924	N	31.351	W	80	726	65.285	N	37.085	W

BUOY ID 1773

FEBRUARY 1982

DAY	GMT	POSITION
51	1947	70.968 N 21.124 W
52	114	70.946 N 21.088 W
52	748	70.927 N 21.042 W
52	1312	70.883 N 21.113 W
52	1948	70.883 N 21.113 W
53	051	70.767 N 21.145 W
53	748	70.704 N 21.174 W
53	1250	70.703 N 21.165 W
53	1924	70.617 N 21.252 W
54	035	70.523 N 21.301 W
54	728	70.520 N 21.298 W
54	1228	70.429 N 21.356 W
54	1911	70.446 N 21.381 W
55	023	70.337 N 21.392 W
55	717	70.342 N 21.376 W
55	1348	70.306 N 21.344 W
55	1859	70.185 N 21.404 W

DAY	GMT	POSITION
56	148	70.185 N 21.404 W
56	705	69.998 N 21.635 W
56	1345	69.913 N 21.680 W
56	1948	69.904 N 21.710 W
57	057	69.665 N 21.931 W
57	748	69.536 N 22.167 W
57	1333	69.536 N 22.168 W
57	1934	69.536 N 22.168 W
58	133	69.536 N 22.168 W
58	731	69.153 N 22.968 W
58	1321	68.951 N 23.635 W
58	1911	68.953 N 23.634 W
59	120	68.787 N 24.248 W
59	707	68.787 N 24.248 W
59	1348	68.627 N 24.846 W
59	1847	68.612 N 24.861 W

BUOY ID 1773

FEBRUARY 1982

DAY	GMT	POSITION
32	137	73.982 N 17.113 W
32	734	73.933 N 17.167 W
32	1325	73.874 N 17.311 W
32	1915	73.772 N 17.416 W
33	125	73.772 N 17.416 W
33	710	73.561 N 17.677 W
33	1348	73.473 N 17.846 W
33	1852	73.473 N 17.846 W
34	134	73.473 N 17.846 W
34	748	73.243 N 18.223 W
34	1330	73.243 N 18.223 W
34	1947	73.195 N 18.290 W
35	110	73.144 N 18.380 W
35	748	73.144 N 18.380 W
35	1308	73.110 N 18.483 W
35	1940	73.054 N 18.667 W
36	047	72.984 N 19.023 W
36	741	73.017 N 18.815 W
36	1245	72.997 N 18.910 W
36	1923	72.953 N 19.252 W
37	034	72.943 N 19.197 W
37	726	72.941 N 19.264 W
37	1348	72.907 N 19.331 W
37	1912	72.907 N 19.331 W
38	140	72.870 N 19.458 W
38	715	72.870 N 19.458 W
38	1348	72.812 N 19.630 W
38	1859	72.811 N 19.610 W
39	148	72.745 N 19.642 W
39	703	72.748 N 19.669 W
39	1344	72.631 N 19.876 W
39	1948	72.612 N 19.908 W
40	143	72.483 N 20.097 W
40	747	72.483 N 20.097 W
40	1332	72.485 N 20.098 W
40	1929	72.376 N 20.202 W
41	131	72.376 N 20.202 W
41	725	72.263 N 20.238 W
41	1320	72.254 N 20.259 W
41	1906	72.234 N 20.262 W
42	148	72.220 N 20.223 W
42	659	72.207 N 20.282 W
42	1341	72.193 N 20.282 W
42	1947	72.156 N 20.465 W
43	125	72.066 N 20.488 W
43	748	72.069 N 20.482 W
43	1322	72.066 N 20.488 W
43	1948	72.035 N 20.551 W
44	102	72.006 N 20.544 W
44	748	72.006 N 20.543 W
44	1259	71.986 N 20.585 W
44	1937	71.986 N 20.585 W
45	043	71.869 N 20.718 W
45	733	71.869 N 20.716 W
45	1236	71.848 N 20.753 W
45	1917	71.848 N 20.753 W
46	029	71.756 N 20.785 W
46	717	71.730 N 20.828 W
46	1348	71.725 N 20.851 W
46	1906	71.687 N 20.877 W
47	017	71.687 N 20.877 W
47	131	71.643 N 20.912 W
47	710	71.631 N 20.902 W
47	1348	71.593 N 20.938 W
47	1853	71.553 N 20.968 W
48	148	71.493 N 20.976 W
48	658	71.468 N 20.984 W
48	1338	71.464 N 20.994 W
48	1943	71.430 N 21.018 W
49	139	71.404 N 21.037 W
49	739	71.396 N 21.046 W
49	1326	71.368 N 21.066 W
49	1920	71.368 N 21.066 W
50	126	71.368 N 21.066 W
50	714	71.311 N 21.084 W
50	1348	71.283 N 21.121 W
50	1857	71.284 N 21.092 W
51	139	71.284 N 21.092 W
51	651	71.089 N 21.082 W
51	1336	71.037 N 21.097 W

BUOY ID 1773

JANUARY 1982

DAY	GMT	POSITION
21	134	75.832 N 13.557 W
21	712	75.803 N 13.581 W
21	1348	75.782 N 13.611 W
21	1859	75.722 N 13.751 W
22	148	75.589 N 13.880 W
22	700	75.580 N 13.876 W
22	1336	75.540 N 13.900 W
22	1948	75.471 N 14.066 W
23	141	75.438 N 13.993 W
23	743	75.397 N 14.057 W
23	1330	75.331 N 14.246 W
23	1918	75.097 N 14.672 W
24	631	75.195 N 14.501 W
24	1312	75.159 N 14.559 W
24	1821	75.130 N 14.592 W
25	145	75.097 N 14.672 W
25	656	75.097 N 14.672 W
25	1339	75.049 N 14.779 W
25	1948	74.998 N 14.893 W
26	119	74.891 N 15.201 W
26	748	74.891 N 15.201 W
26	1316	74.891 N 15.201 W
26	1948	74.821 N 15.398 W
27	055	74.796 N 15.447 W
27	748	74.797 N 15.426 W
27	1253	74.761 N 15.521 W
27	1931	74.742 N 15.553 W
28	040	74.659 N 15.743 W
28	731	74.609 N 15.868 W
28	1230	74.526 N 16.099 W
28	1917	74.470 N 16.259 W
29	148	74.400 N 16.424 W
29	719	74.277 N 16.850 W
29	1346	74.277 N 16.850 W
29	1904	74.277 N 16.850 W
30	126	74.217 N 16.842 W
30	708	74.213 N 16.869 W
30	1348	74.186 N 16.934 W
30	1852	74.172 N 16.940 W
31	148	74.102 N 17.014 W
31	748	74.068 N 17.061 W
31	1337	74.069 N 17.068 W
31	1938	74.039 N 17.101 W

BUOY ID 1773

JANUARY 1982

DAY	GMT	POSITION			
1	102	78.621	N	7.458	W
1	748	78.620	N	7.475	W
1	1254	78.603	N	7.552	W
1	1933	78.559	N	7.655	W
2	043	78.534	N	7.808	W
2	732	78.512	N	7.864	W
2	1231	78.511	N	7.862	W
2	1921	78.503	N	8.043	W
3	148	78.481	N	8.164	W
3	720	78.481	N	8.164	W
3	1348	78.462	N	8.224	W
3	1909	78.430	N	8.291	W
4	133	78.421	N	8.286	W
4	708	78.421	N	8.286	W
4	1348	78.404	N	8.284	W
4	1857	78.404	N	8.325	W
5	148	78.379	N	8.321	W
5	748	78.379	N	8.321	W
5	1340	78.375	N	8.313	W
5	1943	78.357	N	8.314	W
6	139	78.355	N	8.268	W
6	736	78.308	N	8.343	W
6	1328	78.280	N	8.385	W
6	1919	78.251	N	8.515	W
7	126	78.251	N	8.515	W
7	712	78.194	N	8.576	W
7	1348	78.184	N	8.613	W
7	1856	78.180	N	8.600	W
8	140	78.184	N	8.662	W
8	648	78.145	N	8.605	W
8	1332	78.134	N	8.591	W
3	1948	78.105	N	8.658	W
9	117	78.082	N	8.619	W
9	748	78.030	N	8.708	W
9	1309	78.029	N	8.704	W
9	1948	77.939	N	8.951	W
10	053	77.907	N	9.014	W
10	744	77.882	N	9.028	W
10	1246	77.883	N	9.031	W
10	1928	77.847	N	9.088	W
11	040	77.821	N	9.122	W
11	727	77.791	N	9.175	W
11	1229	77.791	N	9.175	W
11	1916	77.734	N	9.279	W
12	148	77.706	N	9.314	W
12	716	77.688	N	9.451	W
12	1348	77.688	N	9.451	W
12	1904	77.691	N	9.622	W
13	148	77.717	N	9.676	W
13	704	77.712	N	9.676	W
13	1347	77.748	N	9.973	W
13	1948	77.760	N	10.476	W
14	147	77.740	N	10.625	W
14	747	77.600	N	11.013	W
14	1335	77.541	N	11.170	W
14	1934	77.530	N	11.147	W
15	133	77.469	N	11.234	W
15	728	77.370	N	11.254	W
15	1324	77.337	N	11.331	W
15	1910	77.312	N	11.381	W
16	148	77.297	N	11.369	W
16	704	77.220	N	11.506	W
16	1347	77.180	N	11.688	W
16	1847	77.101	N	11.856	W
17	132	77.106	N	11.860	W
17	747	77.106	N	11.860	W
17	1324	76.800	N	12.526	W
17	1947	76.633	N	12.695	W
18	107	76.507	N	12.812	W
18	748	76.435	N	12.917	W
18	1301	76.435	N	12.917	W
18	1940	76.331	N	13.125	W
19	046	76.250	N	13.174	W
19	735	76.250	N	13.174	W
19	1238	76.250	N	13.172	W
19	1911	76.048	N	13.453	W
20	034	75.990	N	13.480	W
20	712	75.953	N	13.476	W
20	1348	75.914	N	13.519	W
20	1910	75.832	N	13.557	W

BUOY ID 1773

DECEMBER 1981

DAY	GMT	POSITION			
355	1850	79.377	N	5.769	W
356	133	79.367	N	5.759	W
356	748	79.375	N	5.555	W
356	1326	79.362	N	5.462	W
356	1948	79.360	N	5.394	W
357	110	79.340	N	5.321	W
357	748	79.340	N	5.321	W
357	1303	79.334	N	5.253	W
357	1938	79.305	N	5.264	W
358	048	79.305	N	5.264	W
358	736	79.311	N	5.182	W
358	1239	79.268	N	5.339	W
358	1926	79.233	N	5.466	W
359	035	79.206	N	5.563	W
359	724	79.190	N	5.692	W
359	1348	79.190	N	5.692	W
359	1914	79.160	N	5.735	W
360	142	79.119	N	5.880	W
360	713	79.090	N	5.943	W
360	1348	79.090	N	5.943	W
360	1902	79.047	N	5.980	W
361	148	79.034	N	5.970	W
361	701	79.034	N	5.970	W
361	1345	79.003	N	6.083	W
361	1948	78.988	N	6.176	W
362	147	78.943	N	6.576	W
362	745	78.887	N	6.852	W
362	1333	78.864	N	6.921	W
362	1928	78.834	N	7.134	W
363	031	78.780	N	7.224	W
363	721	78.834	N	7.134	W
363	1321	78.769	N	7.285	W
363	1904	78.743	N	7.345	W
364	148	78.743	N	7.345	W
364	657	78.699	N	7.340	W
364	1341	78.704	N	7.416	W
364	1948	78.685	N	7.373	W
365	126	78.681	N	7.401	W
365	748	78.669	N	7.377	W
365	1317	78.665	N	7.382	W
365	1948	78.665	N	7.382	W

BUOY ID 1773

DECEMBER 1981

DAY	GMT	POSITION			
335	1945	82.227	N	6.077	W
336	143	82.236	N	6.117	W
336	745	82.236	N	6.117	W
336	1335	82.221	N	6.128	W
336	1930	82.188	N	6.150	W
337	132	82.159	N	6.063	W
337	722	82.159	N	6.063	W
337	1323	82.106	N	6.012	W
337	1905	82.075	N	5.780	W
338	148	82.071	N	5.849	W
338	658	82.067	N	5.866	W
338	1342	82.055	N	5.777	W
338	1947	82.037	N	5.650	W
339	128	82.021	N	5.498	W
339	748	82.024	N	5.516	W
339	1318	81.985	N	5.414	W
339	1948	81.955	N	5.377	W
340	105	81.947	N	5.372	W
340	748	81.947	N	5.372	W
340	1256	81.877	N	5.244	W
340	1936	81.792	N	5.134	W
341	041	81.737	N	4.925	W
341	738	81.737	N	4.925	W
341	1236	81.692	N	4.810	W
341	1924	81.622	N	4.638	W
342	032	81.575	N	4.466	W
342	721	81.575	N	4.466	W
342	1348	81.509	N	4.214	W
342	1912	81.503	N	4.160	W
343	136	81.379	N	4.098	W
343	709	81.379	N	4.098	W
343	1348	81.379	N	4.098	W
343	1900	81.219	N	3.979	W
344	147	81.203	N	3.954	W
344	748	81.205	N	4.005	W
344	1342	81.205	N	4.005	W
344	1945	81.063	N	3.904	W
345	140	81.036	N	3.972	W
345	738	81.000	N	3.919	W
345	1330	80.966	N	3.809	W

DAY	GMT	POSITION			
345	1922	80.944	N	3.898	W
346	129	80.944	N	3.898	W
346	714	80.896	N	3.752	W
346	1348	80.842	N	3.751	W
346	1858	80.796	N	3.879	W
347	144	80.747	N	3.800	W
347	650	80.748	N	3.816	W
347	1334	80.699	N	3.808	W
347	1948	80.665	N	3.853	W
348	120	80.664	N	3.819	W
348	748	80.664	N	3.819	W
348	1311	80.597	N	3.837	W
348	1948	80.501	N	3.871	W
349	056	80.457	N	3.833	W
349	746	80.457	N	3.833	W
349	1247	80.364	N	3.917	W
349	1931	80.299	N	4.008	W
350	041	80.156	N	4.126	W
350	729	80.156	N	4.126	W
350	1230	80.097	N	4.237	W
350	1919	80.000	N	4.272	W
351	148	79.937	N	4.358	W
351	716	79.937	N	4.358	W
351	1348	79.937	N	4.358	W
351	1906	79.816	N	4.353	W
352	148	79.765	N	4.391	W
352	705	79.765	N	4.391	W
352	1348	79.714	N	4.360	W
352	1948	79.660	N	4.391	W
353	148	79.612	N	4.417	W
353	748	79.602	N	4.431	W
353	1337	79.544	N	4.458	W
353	1935	79.506	N	4.436	W
354	137	79.506	N	4.436	W
354	728	79.458	N	4.481	W
354	1326	79.400	N	4.556	W
354	1912	79.375	N	4.720	W
355	124	79.373	N	5.806	W
355	626	79.347	N	5.759	W
355	1348	79.370	N	5.669	W

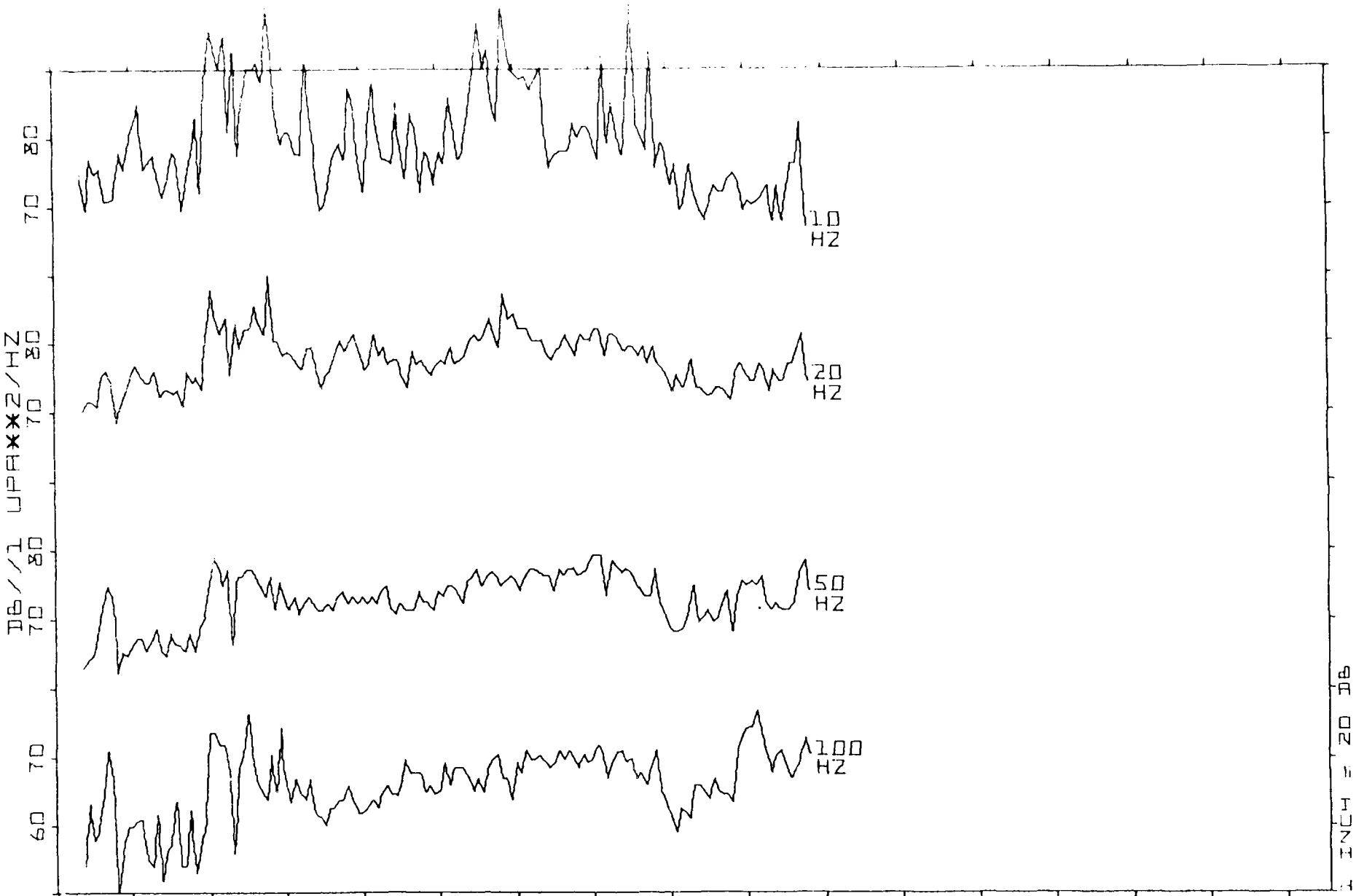
APPENDIX 3

Date Buoy I.D. 1773

Life in Reporting Area 2 (West Greenland Sea)

1 Dec 1981 - 15 May 1982

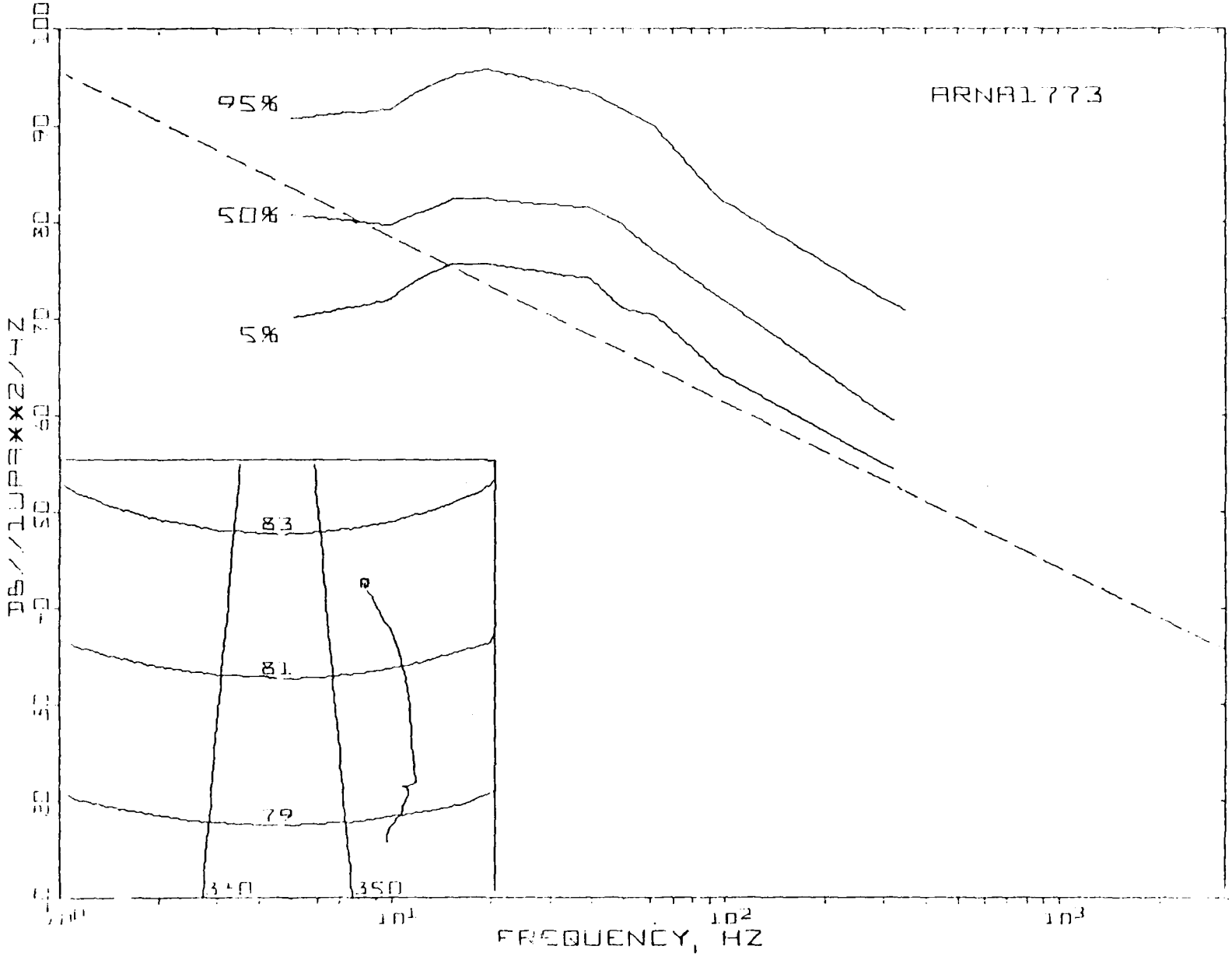
Type: SYNARGOS (5 - 320 Hz)



BUOY 1772

OCT 1981

NOISE LEVEL VS TIME



BUOY 1773 DECEMBER, 1981

MONTH: JANUARY 1982 BUOY: 1773

OUTPUT IN FILE ARNA1773

DISPLACEMENT (N. MI.): 305.628 NORTH: *-274.9 EAST: *-136.9
DIRECTION (TRUE): 211.213

THE NUMBER OF DATA SAMPLES IS 246

FREQUENCY		STD					MEDIAN				
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX
5.0	84.5	12.0	63.0	66.6	69.3	75.3	81.9	92.8	101.9	107.0	114.8
10.0	80.8	9.8	59.9	64.9	69.1	74.4	80.4	86.5	93.8	97.7	109.8
12.5	81.6	8.3	65.9	68.4	70.9	75.7	81.1	86.5	91.7	94.4	106.5
15.6	81.0	7.7	63.6	68.8	72.3	74.8	80.9	86.0	91.0	94.5	104.0
20.0	80.1	7.1	63.6	68.8	71.7	74.8	80.0	84.4	89.2	92.0	99.8
40.0	76.6	6.0	62.1	66.7	69.9	72.7	75.9	80.1	84.7	86.8	92.8
50.0	74.7	6.3	58.9	63.7	66.8	70.3	74.4	78.9	83.0	84.9	90.9
63.0	72.5	6.7	56.9	62.2	64.7	67.5	71.7	77.8	81.6	83.8	87.6
100.0	67.3	7.2	49.9	56.0	57.8	61.9	66.6	72.7	76.9	78.7	84.7
320.0	59.0	6.4	43.6	51.5	52.2	53.3	57.5	63.6	68.9	70.8	75.6

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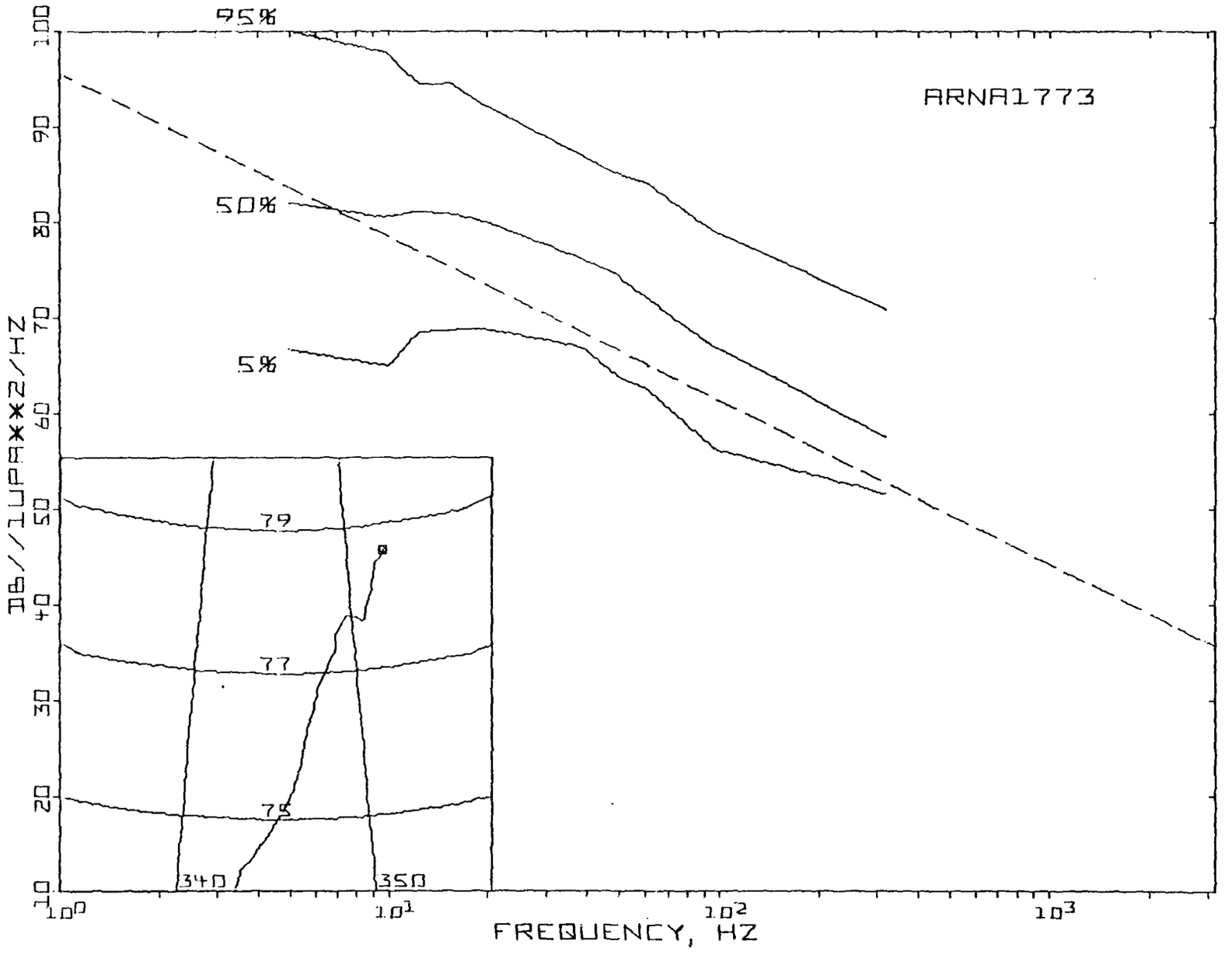


BUOY 1773 JANUARY 1982

MONTH: FEB 1982 BUOY: 1773

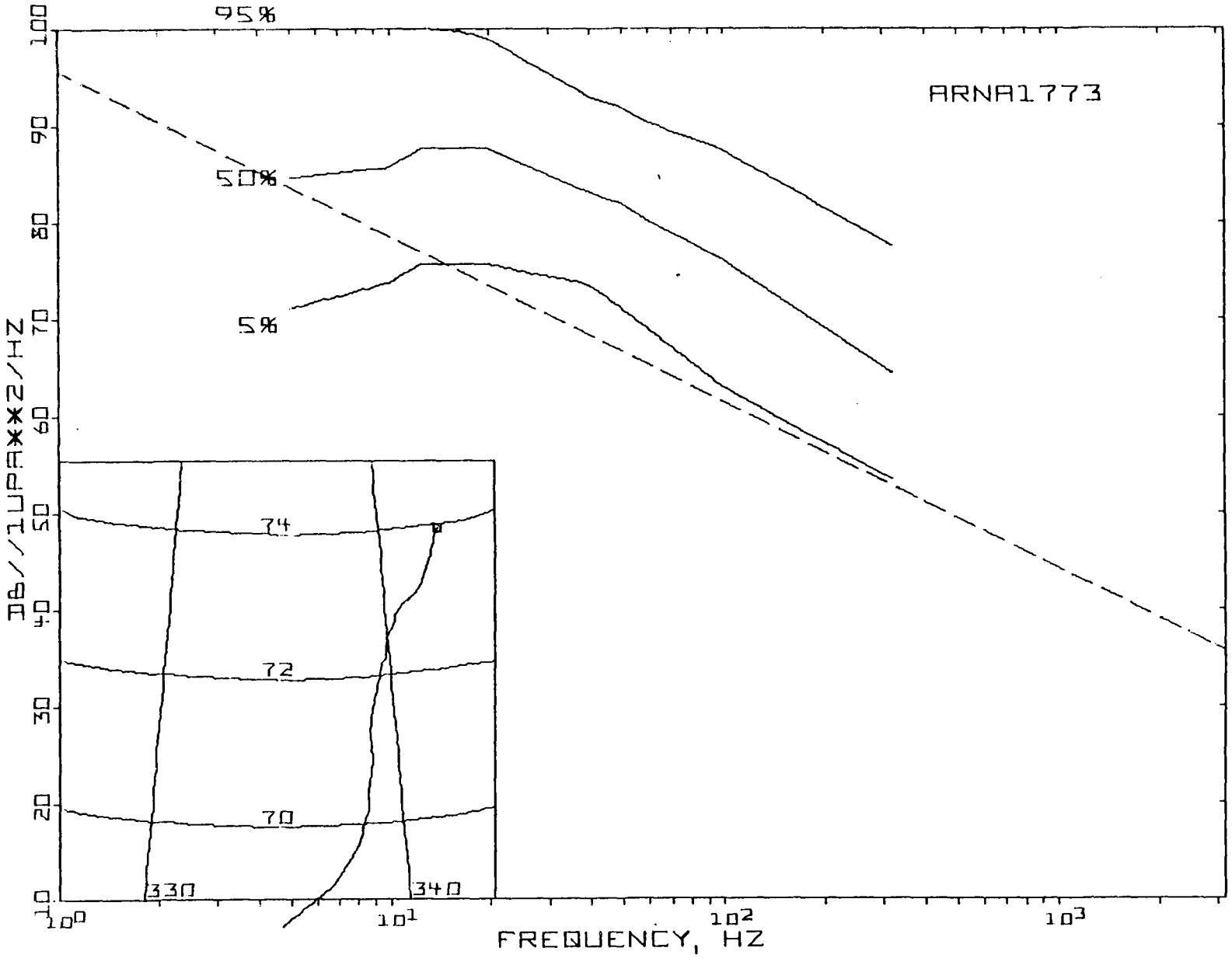
OUTPUT IN FILE ARNA1773

DISPLACEMENT (N. MI.): 353.779 NORTH: *-322.2 EAST: *-149.2
DIRECTION (TRUE): 208.549

THE NUMBER OF DATA SAMPLES IS 224

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	88.1	12.0	63.3	70.9	74.7	79.4	84.7	95.9	108.0	110.2	114.8
10.0	87.5	9.1	62.4	73.7	76.3	80.4	85.7	96.0	99.8	101.0	107.0
12.5	88.5	8.1	65.7	75.7	77.9	82.4	87.8	96.0	98.5	101.0	106.5
15.6	89.0	7.5	67.7	75.7	78.9	83.8	87.7	95.2	98.9	99.8	105.0
20.0	88.2	7.1	69.8	75.7	78.9	83.1	87.7	94.5	97.0	98.9	103.0
40.0	83.4	6.3	62.0	73.4	75.9	78.7	83.0	88.0	91.5	92.8	95.0
50.0	82.0	6.5	59.7	70.9	73.7	76.9	81.8	87.2	90.0	91.7	95.0
63.0	79.9	6.8	60.9	68.2	70.7	74.9	79.5	85.5	88.8	89.8	93.0
100.0	75.8	7.7	57.8	62.7	65.8	69.9	75.9	81.9	85.5	87.4	93.4
320.0	64.5	7.8	51.4	53.3	55.3	58.2	64.2	70.2	74.9	77.4	85.4

R



BUOY 1773 FEBRUARY 1982

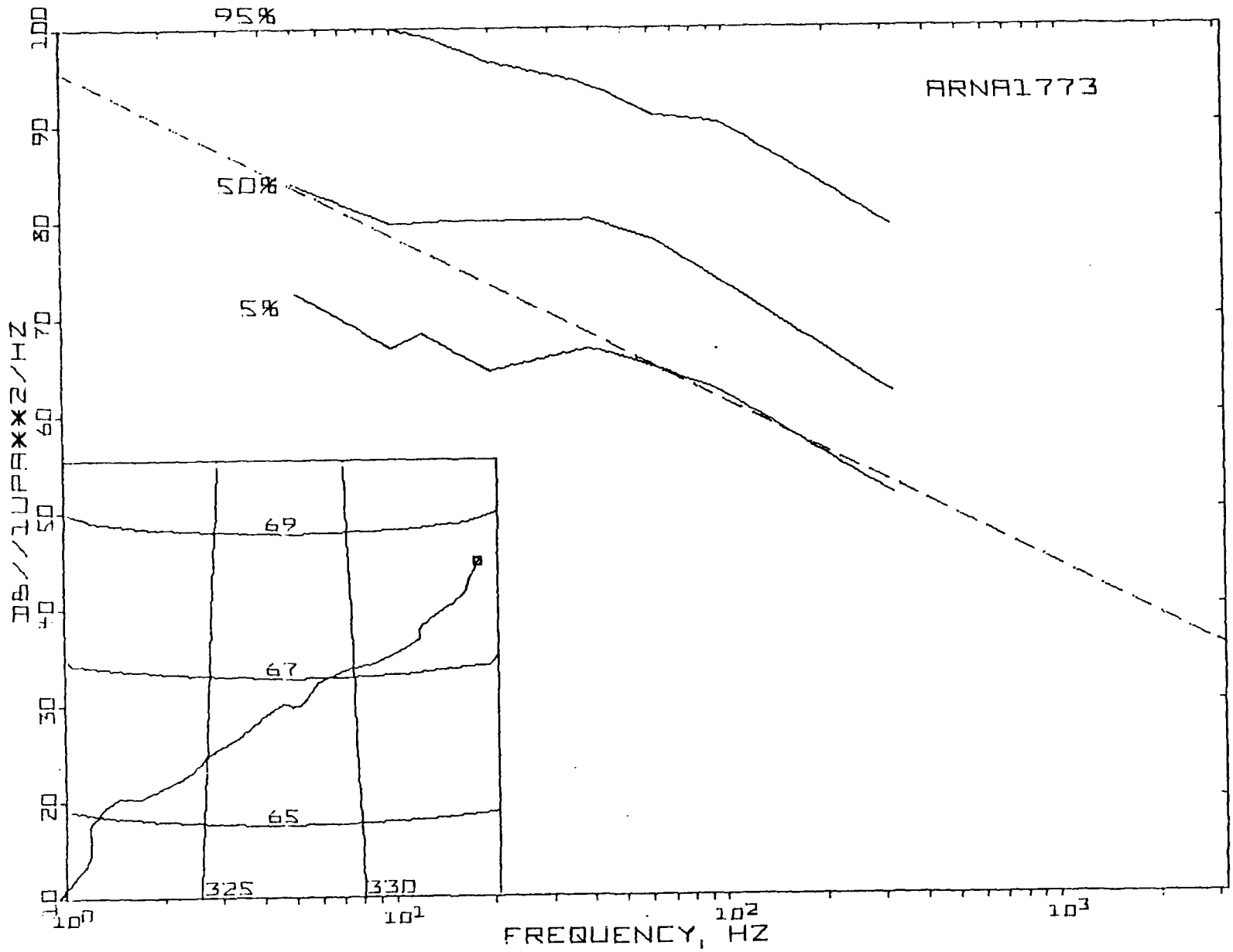
MONTH: MARCH 82 BUOY: 1773

OUTPUT IN FILE ARNA1773

DISPLACEMENT (N. MI.): 512.641 NORTH: *-338.8 EAST: *-389.3
DIRECTION (TRUE): 236.310

THE NUMBER OF DATA SAMPLES IS 238

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	87.7	11.6	65.8	72.7	74.7	79.4	83.9	94.0	108.0	109.5	114.8
10.0	81.2	11.1	63.1	66.8	68.4	70.9	79.7	88.4	98.5	102.0	108.0
12.5	81.3	10.2	66.8	68.4	69.1	71.9	79.7	88.4	95.0	99.2	107.0
15.6	81.2	10.3	51.6	66.3	68.8	72.3	80.0	89.2	94.5	98.0	105.0
20.0	80.6	10.0	58.4	64.4	66.9	72.9	80.0	88.5	92.9	96.4	102.5
40.0	79.4	8.0	61.4	66.7	68.1	73.4	80.1	85.5	89.9	94.0	101.0
50.0	78.6	7.7	61.6	65.9	68.4	72.8	78.9	84.0	89.0	92.5	94.4
63.0	77.2	8.3	27.4	64.7	67.5	71.7	77.8	82.8	87.6	90.7	92.3
100.0	73.9	8.2	55.9	62.1	63.9	67.4	73.4	80.1	83.9	89.9	93.4
320.0	63.0	8.5	47.3	51.5	53.3	56.1	62.1	68.9	75.6	79.3	84.5



BUOY 1773 MARCH 1982

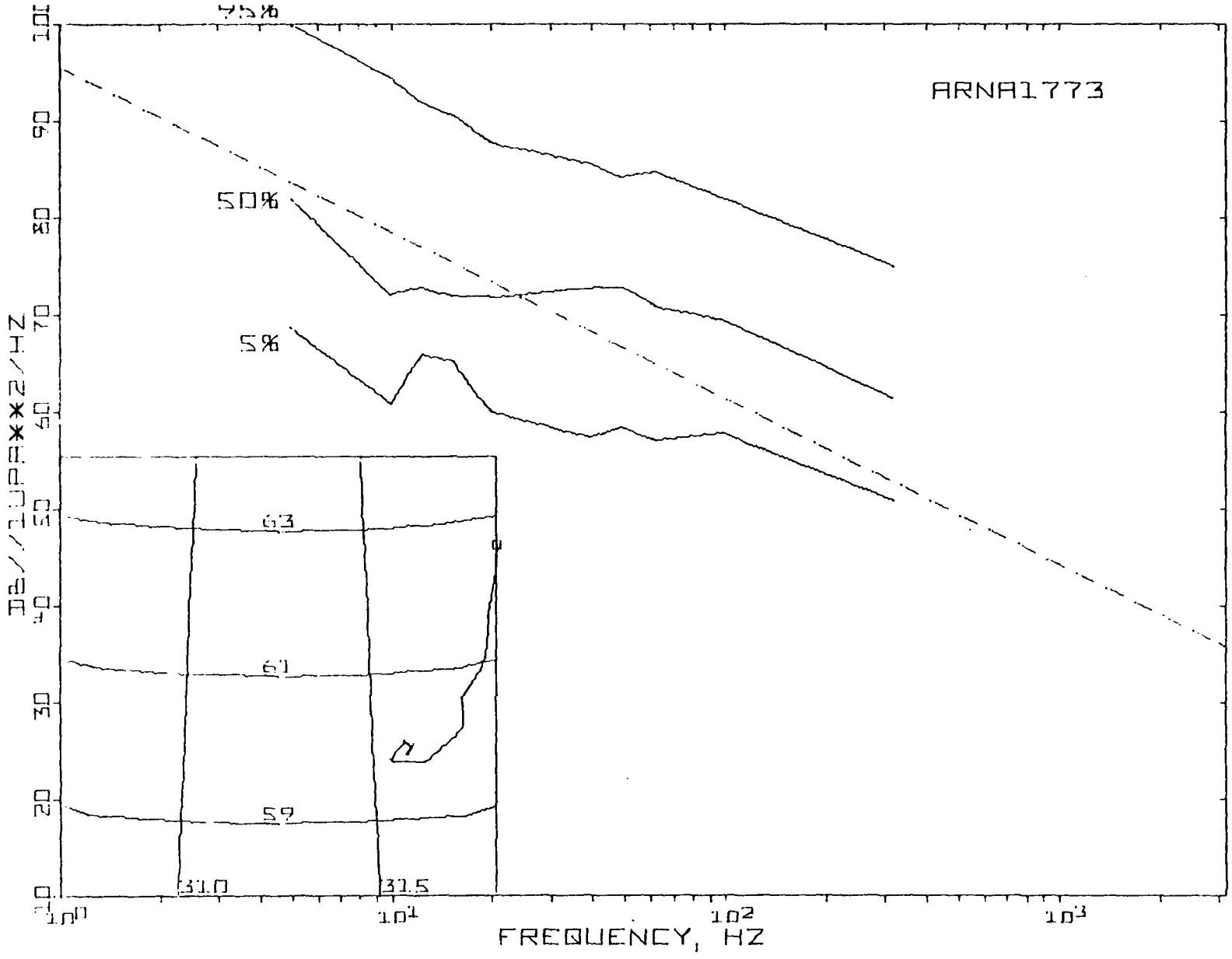
MONTH: APR 82 BUOY: 1773

OUTPUT IN FILE ARNA1773

DISPLACEMENT (N. MI.): 189.992 NORTH: *-165.6 EAST: -93.687
DIRECTION (TRUE): 210.918

THE NUMBER OF DATA SAMPLES IS 212

FREQUENCY		STD					MEDIAN				
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX
5.0	83.0	9.8	63.9	68.7	69.9	76.9	81.9	88.0	97.5	101.0	112.0
10.0	74.1	10.1	56.3	60.8	63.1	66.8	71.9	77.9	89.0	94.4	108.0
12.5	74.9	8.5	64.9	65.9	66.8	68.4	72.8	78.8	87.1	91.7	104.5
15.6	73.9	8.2	61.7	65.1	65.7	67.7	71.7	78.9	86.0	90.4	100.5
20.0	72.2	9.2	56.8	60.0	60.9	64.4	71.7	78.9	84.0	87.7	98.0
40.0	72.4	8.5	51.8	57.3	60.6	66.7	72.7	78.7	82.0	85.5	94.0
50.0	72.3	8.2	51.9	58.3	60.8	66.8	72.8	78.0	81.8	84.0	93.8
63.0	71.2	8.4	49.4	56.9	60.6	65.7	70.7	76.7	81.6	84.7	92.3
100.0	69.0	7.7	48.1	57.8	59.8	63.9	69.3	74.1	77.8	81.9	92.2
320.0	61.8	7.0	41.3	50.8	52.8	56.8	61.3	65.4	70.2	74.9	83.4



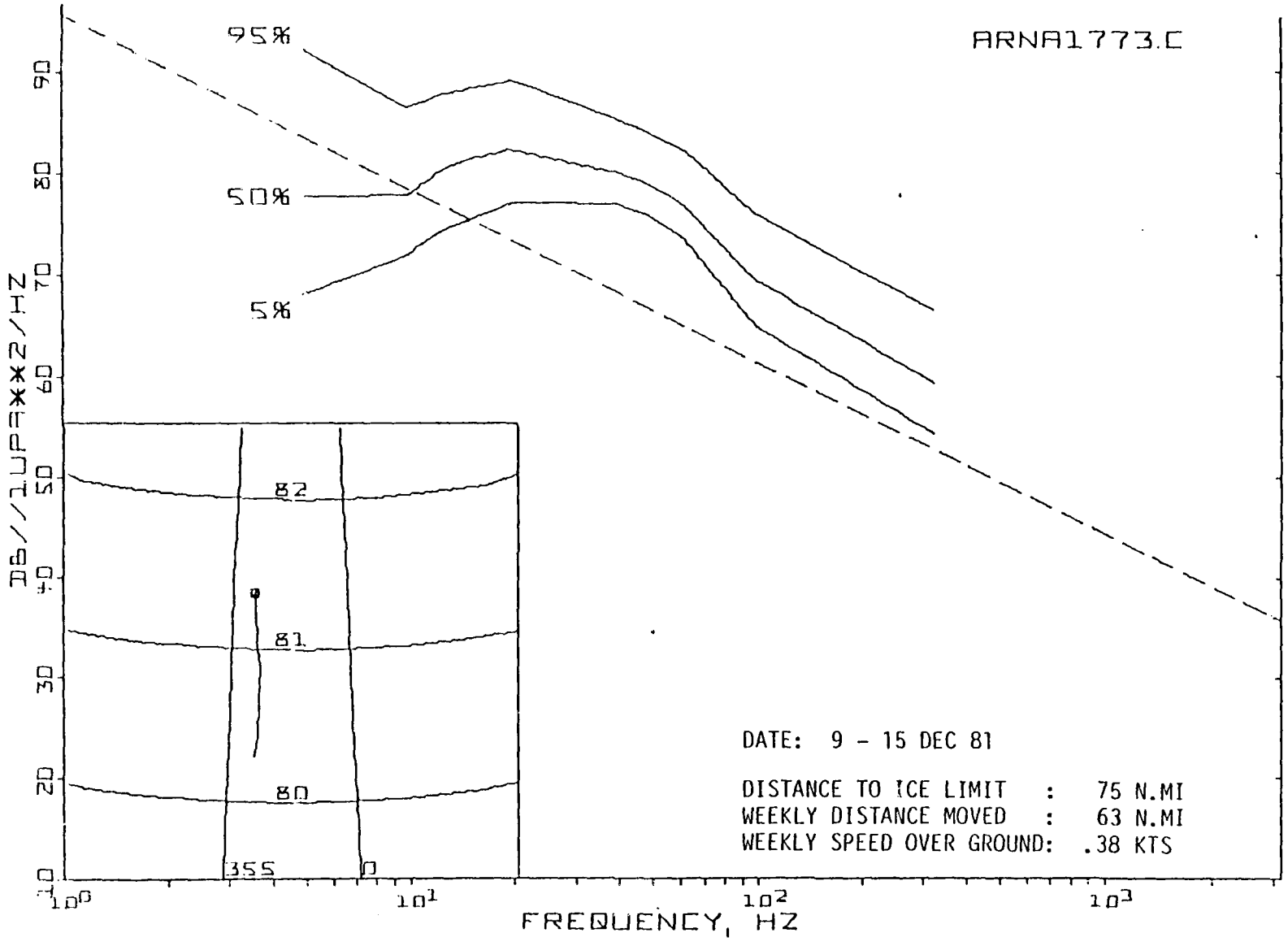
BUOY 1773 APRIL 1982

DATA BY WEEKS

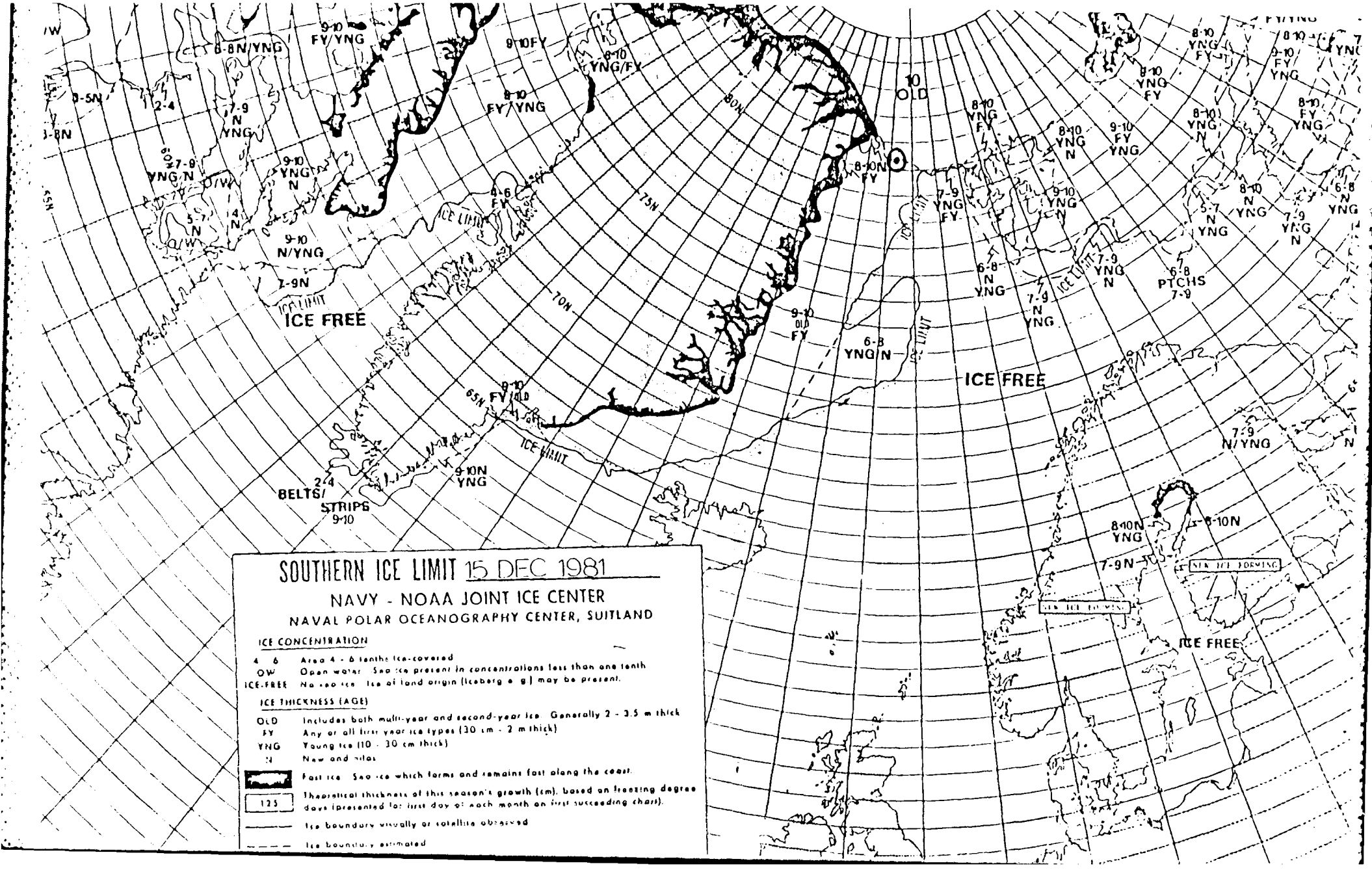
JULIAN DAYS: 343 TO 349 Dec 9-15, 81

OUTPUT IN FILE ARNA1773.C
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN				
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX
5.0	78.8	7.4	66.6	68.1	68.7	72.7	77.8	81.9	87.4	92.2	96.7
10.0	78.8	4.7	69.7	71.9	73.7	75.1	77.9	82.4	84.9	86.5	89.0
12.5	80.9	4.5	72.8	74.4	75.7	76.9	80.4	84.9	87.1	87.8	88.4
15.6	82.2	4.4	74.8	75.7	75.7	78.9	81.7	86.0	87.7	88.5	92.9
20.0	82.5	3.9	76.4	77.1	77.8	78.9	82.5	85.0	88.5	89.2	91.0
40.0	81.1	2.9	74.8	77.0	77.9	78.7	80.1	83.0	84.7	85.5	86.8
50.0	79.7	2.9	74.4	75.8	76.4	76.9	78.9	83.0	84.0	84.0	84.9
63.0	77.4	2.7	72.6	73.5	74.2	75.6	76.7	78.7	80.9	82.2	82.8
100.0	69.8	3.6	63.9	64.9	64.9	67.4	69.3	71.8	74.1	75.9	78.7
320.0	60.1	4.0	53.3	54.3	55.3	56.8	59.3	63.6	64.8	66.4	68.9



BUOY 1773 DEC 9-15, 81


SOUTHERN ICE LIMIT 15 DEC 1981
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
ICE CONCENTRATION
4 6 Area 4 - 6 tenths ice-covered
OW Open water Sea ice present in concentrations less than one tenth
ICE-FREE No sea ice Ice of land origin (iceberg e g) may be present.
ICE THICKNESS (AGE)
OLD Includes both multi-year and second-year ice Generally 2 - 3.5 m thick
FY Any or all first year ice types (30 cm - 2 m thick)
YNG Young ice (10 - 30 cm thick)
N New and nilas
Fast ice Sea ice which forms and remains fast along the coast.
125 Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
Ice boundary visually or satellite observed
Ice boundary estimated
ICE FREE
ICE LIMIT
9-10 FY/YNG
8-8N/YNG
9-10FY
8-10 YNG/FY
8-10 FY/YNG
8-10 YNG FY
9-10 FY YNG
8-10 YNG N
9-10 FY YNG
8-10 YNG N
8-10 FY YNG
6-8 N YNG
7-9 YNG N
9-10 N/YNG
7-9N
4-6 FY
9-10 OLD FY
6-8 YNG N
7-9 YNG FY
7-9 N YNG
6-8 PTCHS 7-9
7-9 N/YNG
9-10 OLD
9-10N YNG
2-4 BELTS/ STRIPS 9-10
8-10N FY
8-10N YNG
7-9N
NEW ICE FORMING
80N
75N
70N
65N

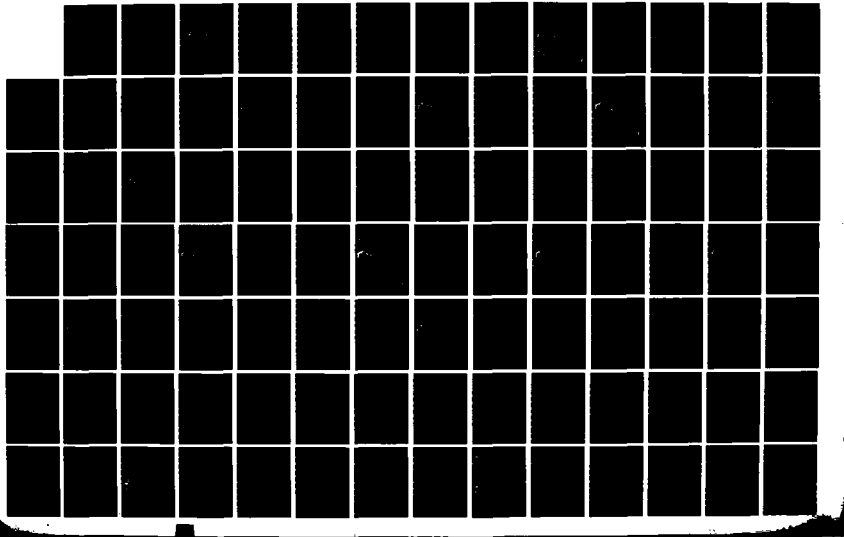
JULIAN DAYS: 350 TO 356 Dec 16-22, 81

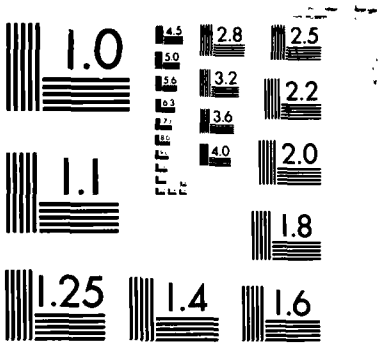
OUTPUT IN FILE ARNA1773.D
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	84.3	7.1	71.8	72.7	74.7	79.4	83.9	88.0	90.7	98.2	102.8
10.0	83.9	6.9	75.1	75.7	76.9	77.9	81.8	88.4	94.4	96.0	99.8
12.5	85.8	7.1	76.9	77.9	77.9	80.4	82.9	90.9	96.9	97.7	101.0
15.6	86.8	7.4	77.8	78.9	80.0	80.9	85.0	94.5	97.0	100.5	102.5
20.0	86.9	7.2	78.9	78.9	80.0	80.9	84.4	91.0	98.0	100.5	101.9
40.0	85.0	6.1	77.9	77.9	78.7	79.5	83.9	91.5	94.0	95.0	95.0
50.0	83.8	6.2	76.9	76.9	76.9	78.0	82.4	90.9	93.2	93.8	94.4
63.0	81.9	5.8	74.9	75.6	75.6	76.7	80.3	87.6	90.7	91.5	91.5
100.0	75.7	6.0	66.6	68.7	69.9	71.8	73.4	77.8	85.5	86.8	88.0
320.0	63.3	4.9	55.3	57.5	58.8	59.3	61.3	66.4	71.4	72.4	73.3

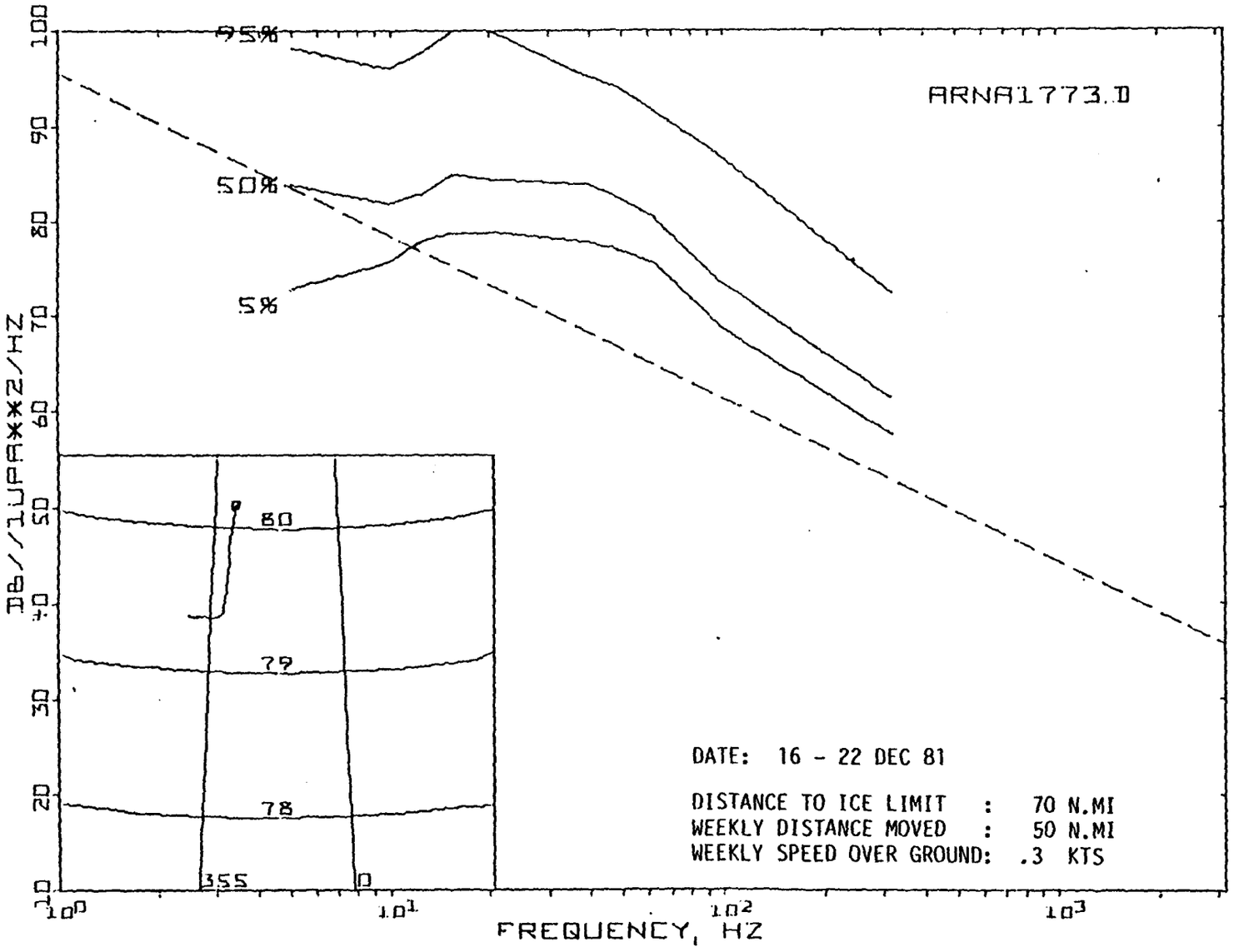
AD-A156 818 LONG TERM STATISTICAL MEASUREMENTS OF ENVIRONMENTAL ACOUSTICS PARAMETERS I..(U) POLAR RESEARCH LAB INC CARPINTERIA CA B M BUCK ET AL. 13 DEC 84 PRL-TR-53 2/7

UNCLASSIFIED N00014-84-C-0394 F/G 20/1 NL

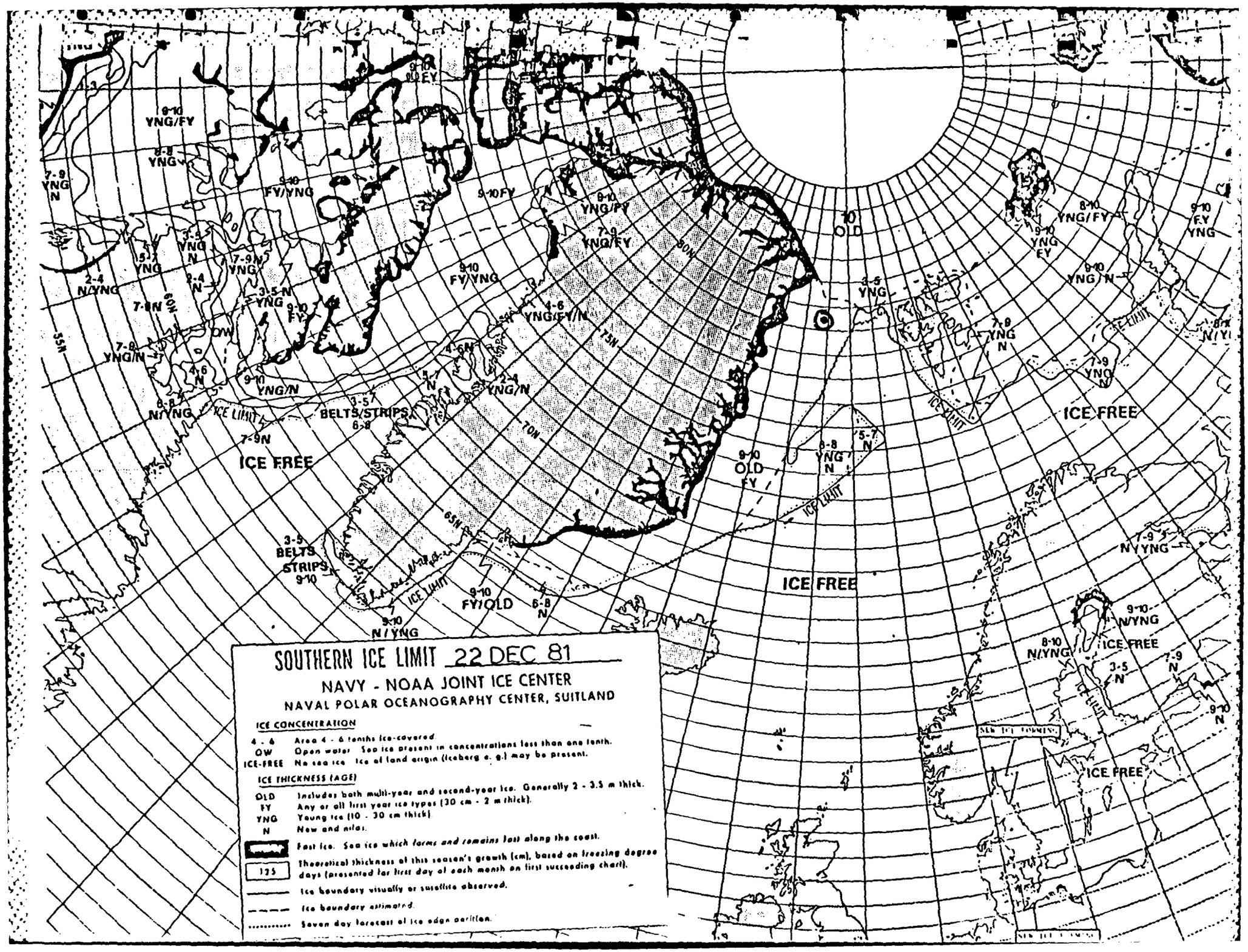




MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A



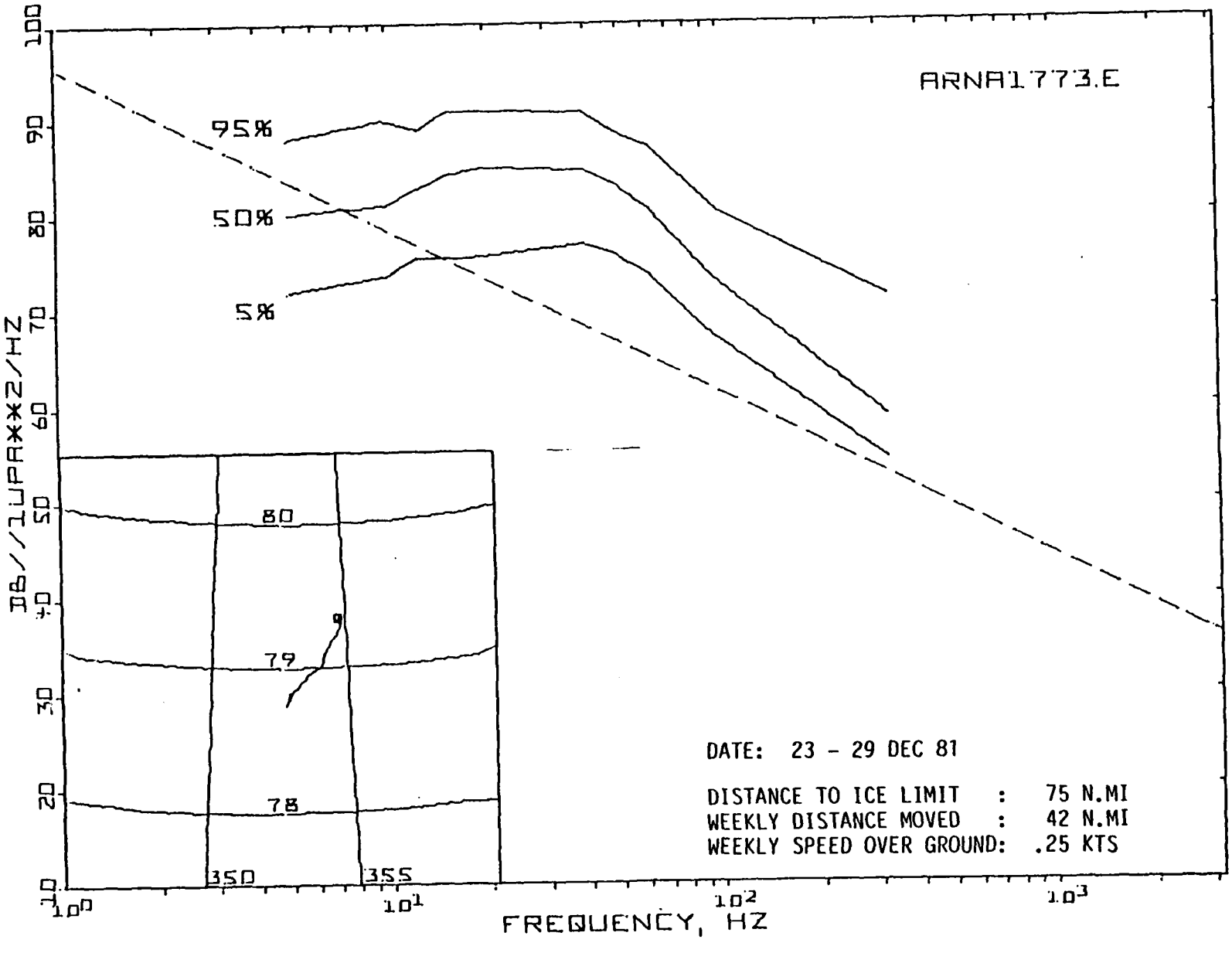
BUOY 1773 DEC 16-22, 81


SOUTHERN ICE LIMIT 22 DEC 81
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
ICE CONCENTRATION
4 - 6 Area 4 - 6 tenths ice-covered
OW Open water Sea ice present in concentrations less than one tenth.
ICE-FREE No sea ice Ice of land origin (iceberg e. g.) may be present.
ICE THICKNESS (AGE)
OLD Includes both multi-year and second-year ice. Generally 2 - 3.5 m thick.
FY Any or all first year ice types (30 cm - 2 m thick).
YNG Young ice (10 - 30 cm thick).
N New and nilas.
Fast ice. Sea ice which forms and remains fast along the coast.
135 Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
Ice boundary visually or satellite observed.
Ice boundary estimated.
Seven day forecast of ice edge position.
ICE FREE
ICE LIMIT
BELTS/STRIPS
9-10 OLD FY
9-10 FY/OLD
9-10 N/YNG
8-10 N/YNG
9-10 YNG/FY
8-8 YNG
7-9 YNG/N
9-10 FY/YNG
9-10 FY
9-10 YNG/FY
7-9 YNG/FY
4-6 YNG/FY/N
9-10 YNG/N
2-4 N/YNG
3-5 YNG
7-9 YNG
3-5 N YNG
4-6 N
5-7 N
8-8 N/YNG
7-9 N
3-5 BELTS STRIPS 9-10
9-10 YNG/FY
9-10 FY YNG
9-10 YNG FY
9-10 YNG/N
7-9 N/YYNG
9-10 N/YNG
3-5 N
9-10 N
55N
60N
65N
70N
75N
80N

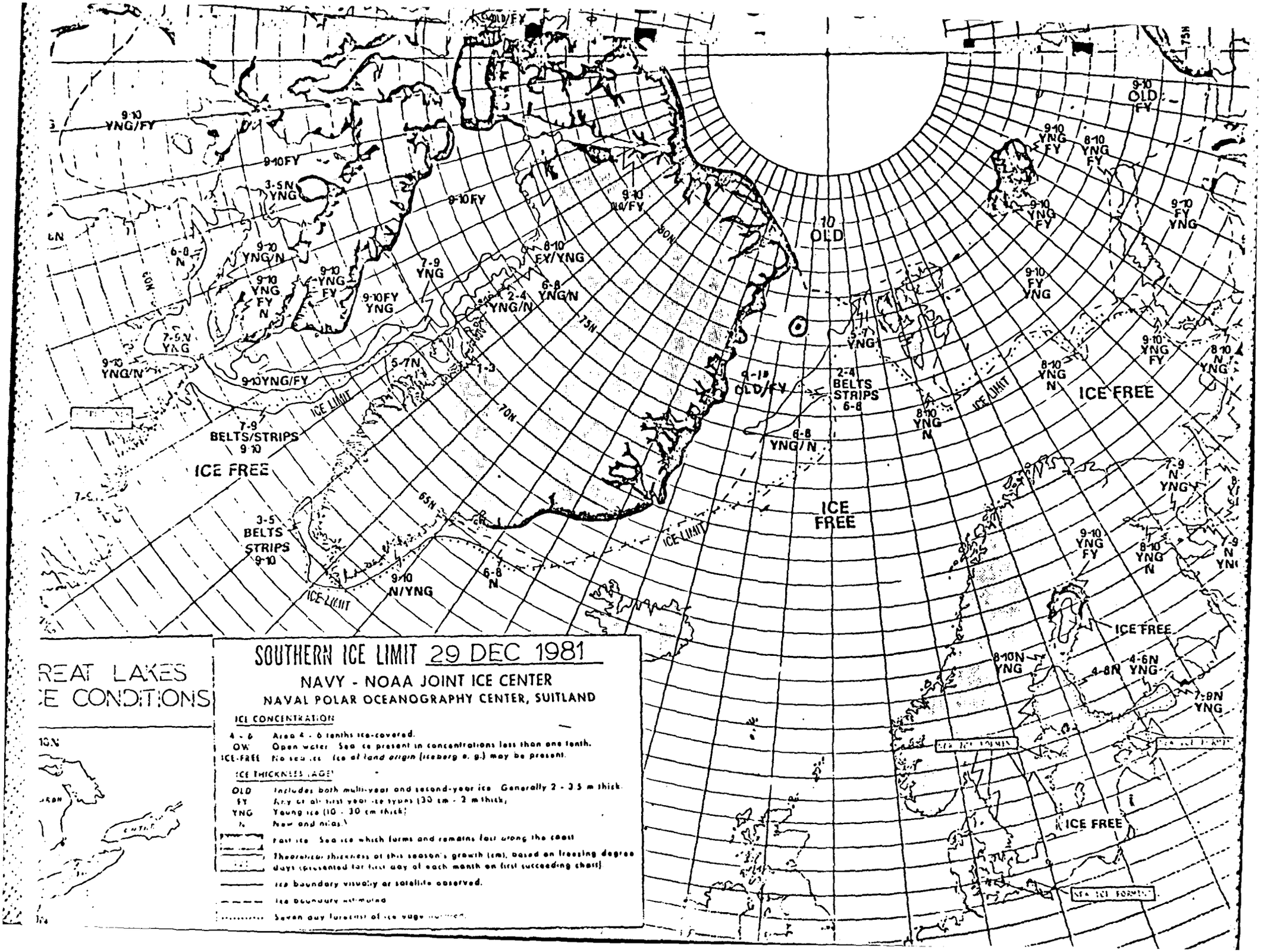
JULIAN DAYS: 357 TO 363 Dec 23-29, 81

OUTPUT IN FILE ARNA1773.E
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	80.0	5.4	69.9	71.8	72.7	75.9	80.1	83.9	85.5	88.0	96.7
10.0	80.9	4.7	68.4	73.7	75.1	77.9	81.1	82.9	84.9	90.0	93.8
12.5	82.6	4.3	70.9	75.7	77.9	79.7	82.9	84.9	87.1	89.0	92.5
15.6	83.9	4.3	72.9	75.7	78.4	80.9	84.4	86.0	88.5	91.0	94.5
20.0	84.2	4.6	72.9	75.7	77.8	80.9	85.0	86.9	89.2	91.0	95.2
40.0	84.1	4.3	75.4	77.0	77.9	80.8	84.7	86.8	89.0	90.7	92.8
50.0	82.6	4.1	73.7	75.8	76.9	79.7	83.0	84.9	87.2	88.4	91.7
63.0	80.1	4.2	70.7	73.5	74.2	76.7	80.3	82.8	84.7	87.0	88.8
100.0	73.0	3.8	64.9	66.6	67.4	69.9	72.7	75.3	76.9	80.1	81.9
320.0	60.9	5.5	52.8	54.3	55.3	56.8	58.8	64.8	68.9	71.4	74.2



BUOY 1773 DEC 23-29, 81



SOUTHERN ICE LIMIT 29 DEC 1981

NAVY - NOAA JOINT ICE CENTER

NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

GREAT LAKES ICE CONDITIONS

ICE CONCENTRATION

4 - 6	Area 4 - 6 tenths ice-covered.
OW	Open water. Sea ice present in concentrations less than one tenth.
ICE-FREE	No sea ice. Ice of *land origin (iceberg e. g.)* may be present.

ICE THICKNESS (AGE)

OLD	Includes both multi-year and second-year ice. Generally 2 - 3.5 m thick.
FY	Any or all first year ice types (30 cm - 2 m thick).
YNG	Young ice (10 - 30 cm thick).
N	New and nilas.

Fast ice. Sea ice which forms and remains fast along the coast.

Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).

Ice boundary visually or satellite observed.

Ice boundary estimated.

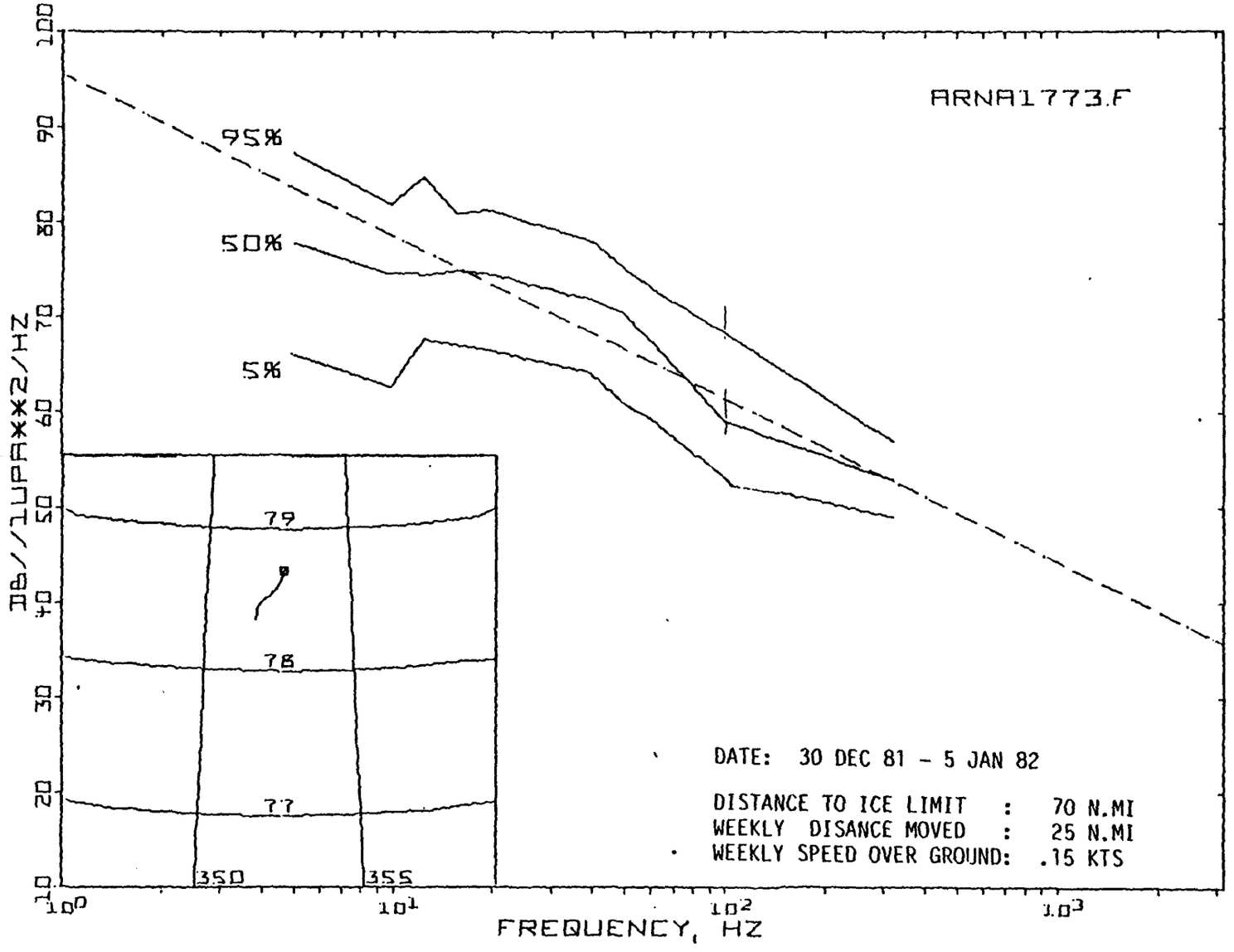
Seven day forecast of ice edge movement.

JULIAN DAYS: 364 TO 370 Dec 30 - Jan 5

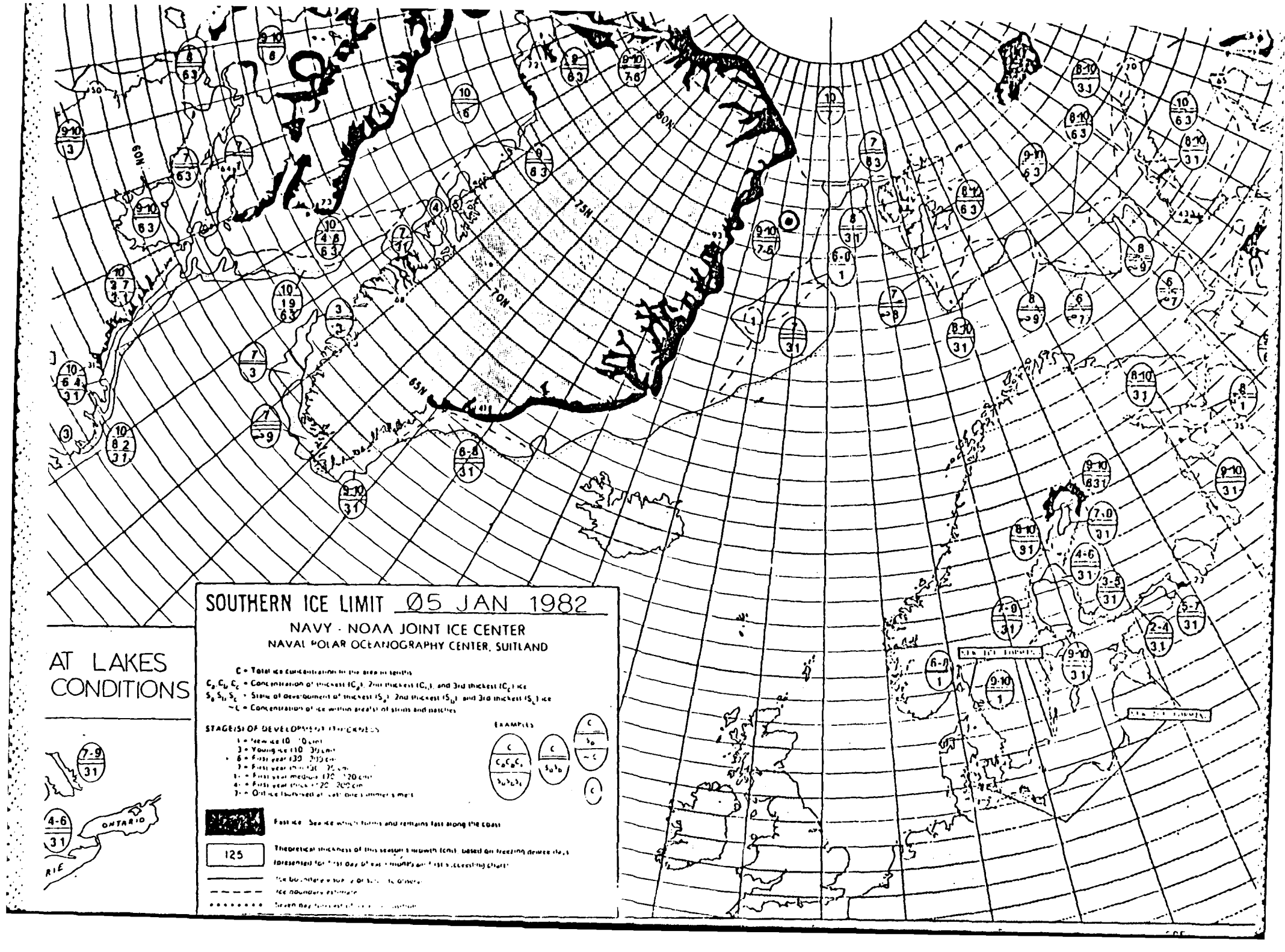
OUTPUT IN FILE ARNA1773.F
THE NUMBER OF DATA SAMPLES IS 56

Dec 30 - Jan 5
1981-82

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	77.1	6.8	63.9	65.8	66.6	71.8	77.8	81.9	84.2	87.4	90.7
10.0	73.7	5.8	59.9	62.4	66.8	70.3	74.4	77.7	79.7	81.8	89.0
12.5	75.8	5.5	65.9	67.6	68.4	70.9	74.4	78.8	83.8	84.9	87.1
15.6	74.9	4.4	65.7	66.9	68.8	72.9	74.8	77.8	78.9	80.9	85.0
20.0	74.7	4.6	65.7	66.3	68.8	72.3	74.5	77.1	80.0	81.2	86.9
40.0	71.8	4.2	62.7	63.9	65.8	69.9	71.8	74.8	77.0	77.9	82.0
50.0	69.5	4.3	58.9	60.8	63.7	66.8	70.3	70.9	74.4	75.1	81.1
63.0	66.7	3.8	57.5	58.7	61.4	64.7	66.6	68.2	70.7	72.6	75.6
100.0	60.1	4.4	49.9	52.8	54.6	57.3	58.9	62.1	64.9	68.1	73.4
320.0	53.2	3.1	44.2	48.9	51.5	52.2	52.8	53.3	55.3	56.8	66.4



BUOY 1773 DEC 30-JAN 5

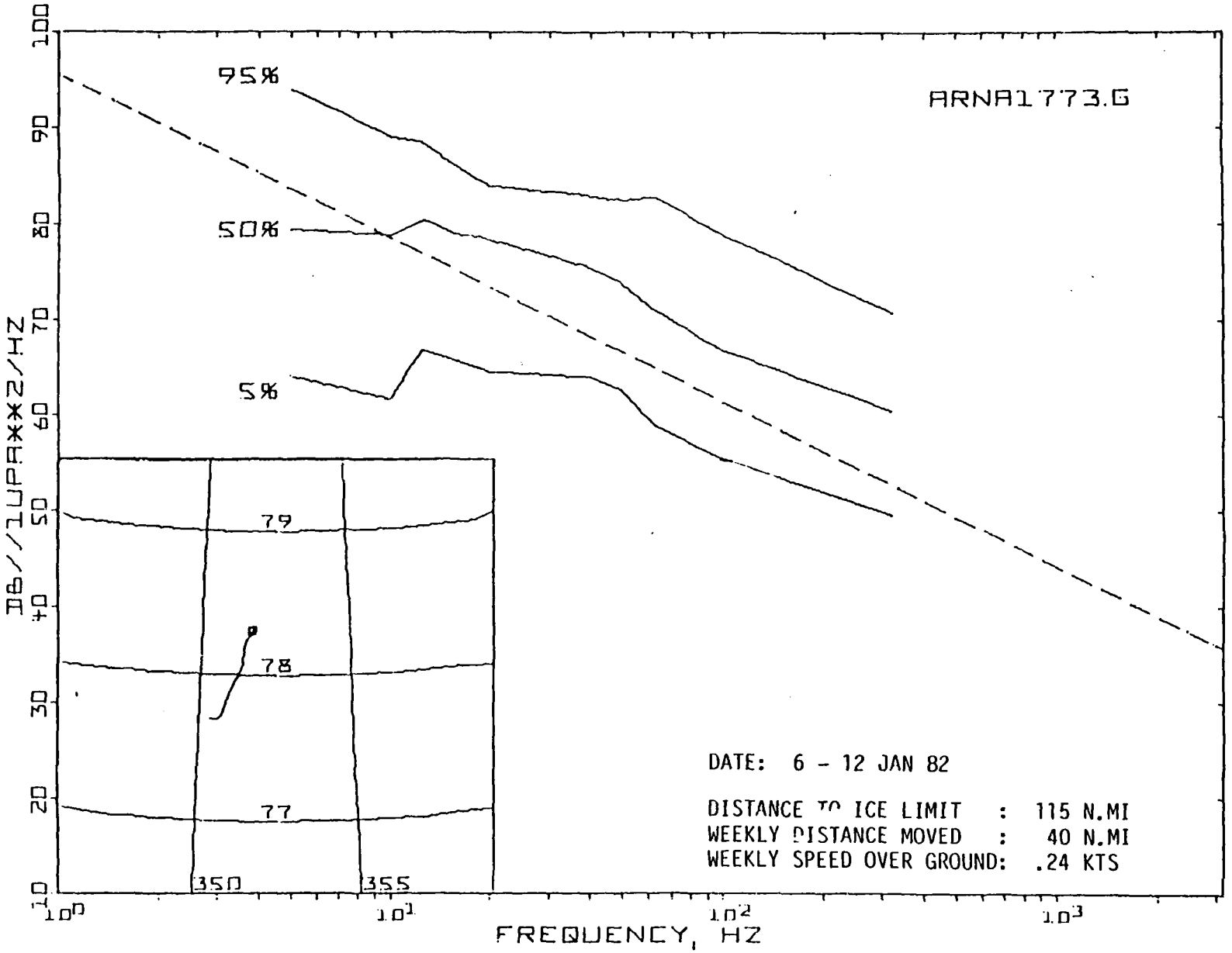

SOUTHERN ICE LIMIT 05 JAN 1982
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
AT LAKES CONDITIONS
ONTARIO
80N
75N
70N
65N

1773

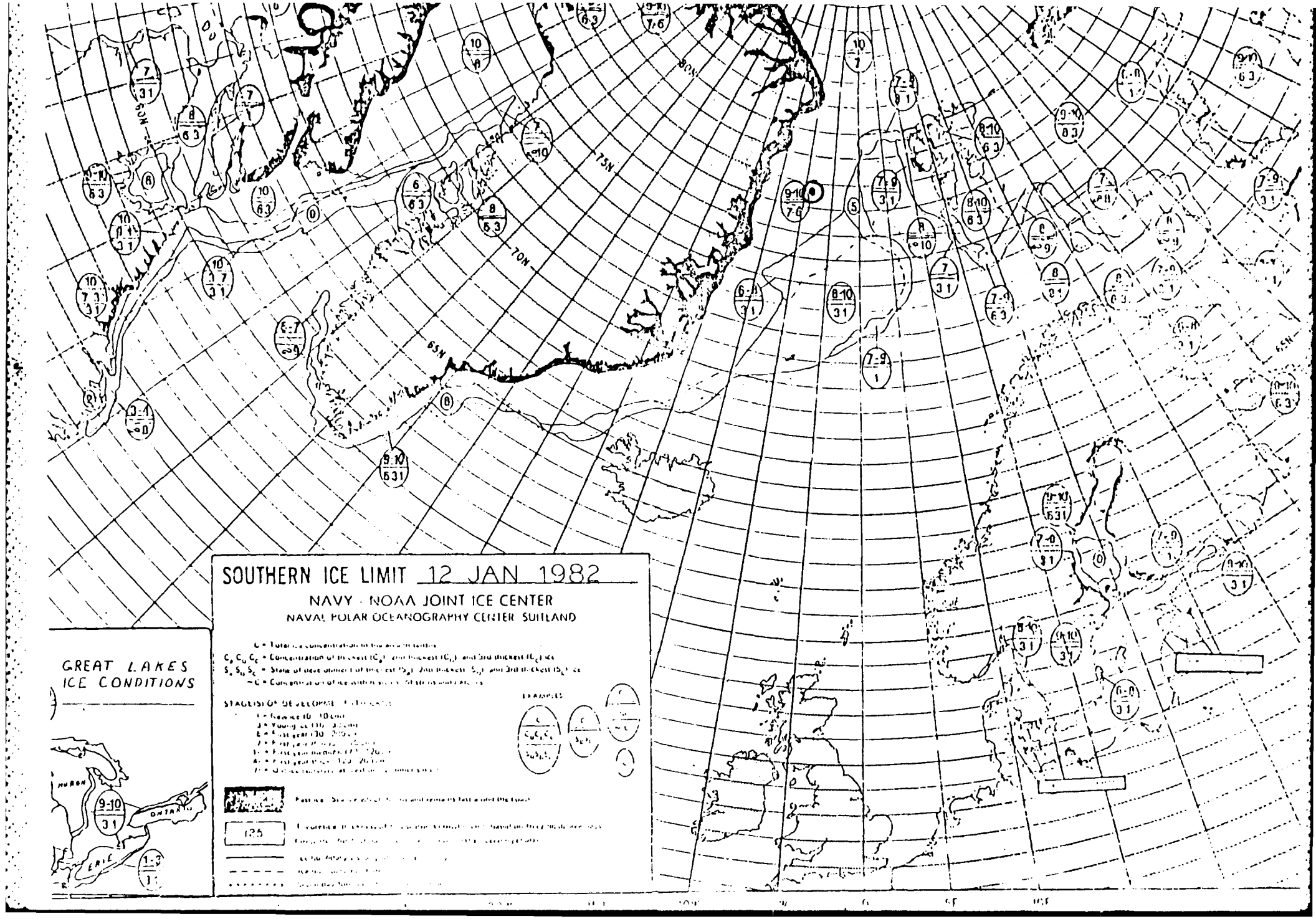
JULIAN DAYS: 371 TO 377 Jan 6-12, 82

OUTPUT IN FILE ARNA1773.G
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	79.3	9.2	63.0	63.9	65.8	71.8	79.4	84.7	89.0	94.0	101.9
10.0	77.2	8.3	60.8	61.6	64.9	70.3	78.8	82.4	86.5	89.0	96.9
12.5	78.4	7.1	65.9	66.8	68.4	71.9	80.4	82.9	84.9	88.4	94.4
15.6	77.6	6.6	63.6	65.7	68.8	72.3	78.9	82.5	84.4	86.0	91.0
20.0	76.9	6.1	63.6	64.4	68.8	72.9	78.4	80.9	82.5	83.8	91.0
40.0	74.7	5.4	62.1	63.9	67.4	71.8	75.4	77.9	82.0	83.0	86.2
50.0	73.1	6.2	58.9	62.4	64.9	68.4	73.7	78.0	81.1	82.4	83.0
63.0	71.7	7.3	56.9	58.7	63.5	65.7	70.7	76.7	81.6	82.8	85.5
100.0	67.6	7.5	53.8	55.3	57.8	61.9	66.6	71.8	77.8	78.7	84.7
320.0	59.6	6.9	43.6	49.6	52.2	53.3	60.4	64.8	68.9	70.8	75.6



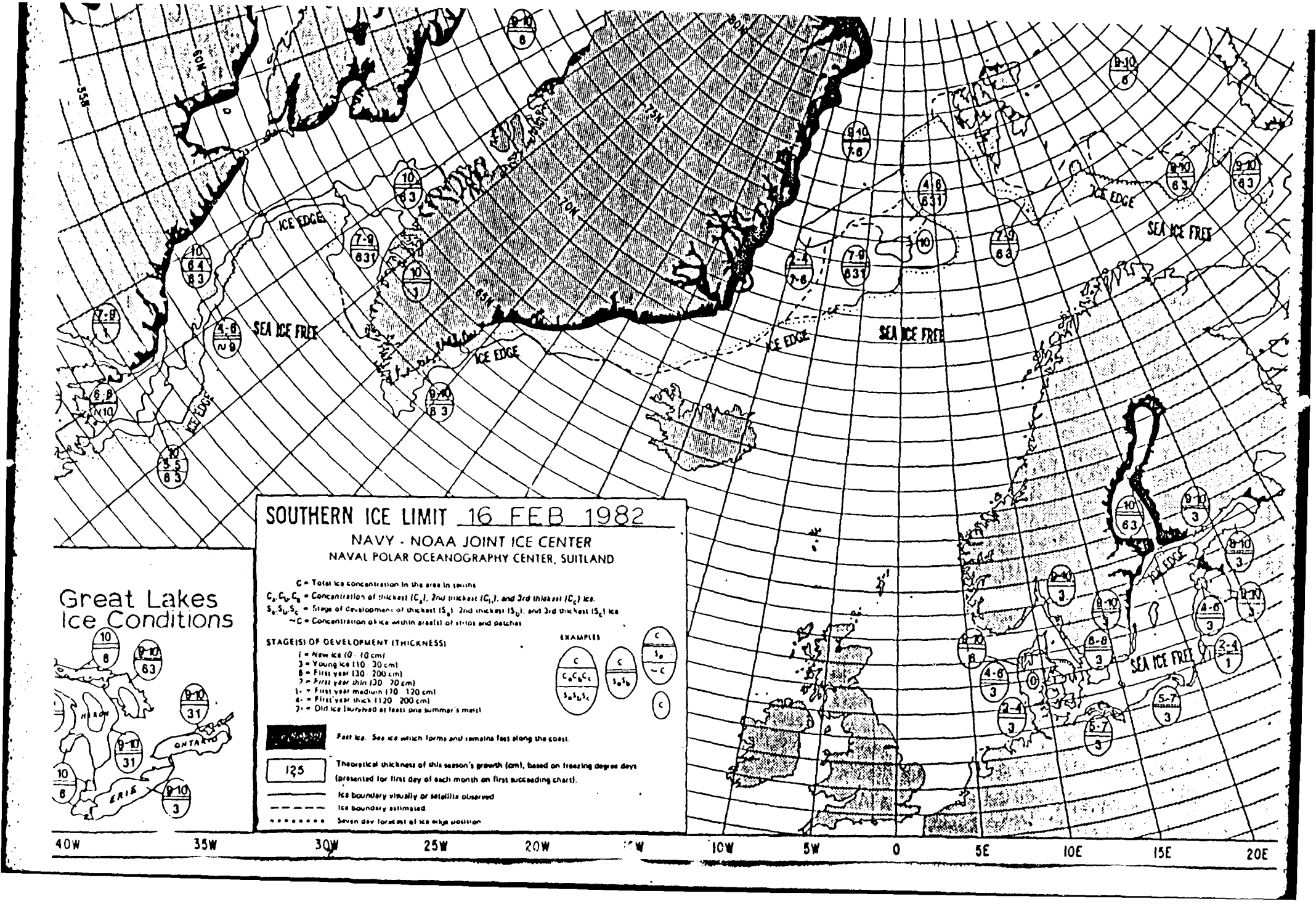
BUOY 1773 JAN 6-12, 82

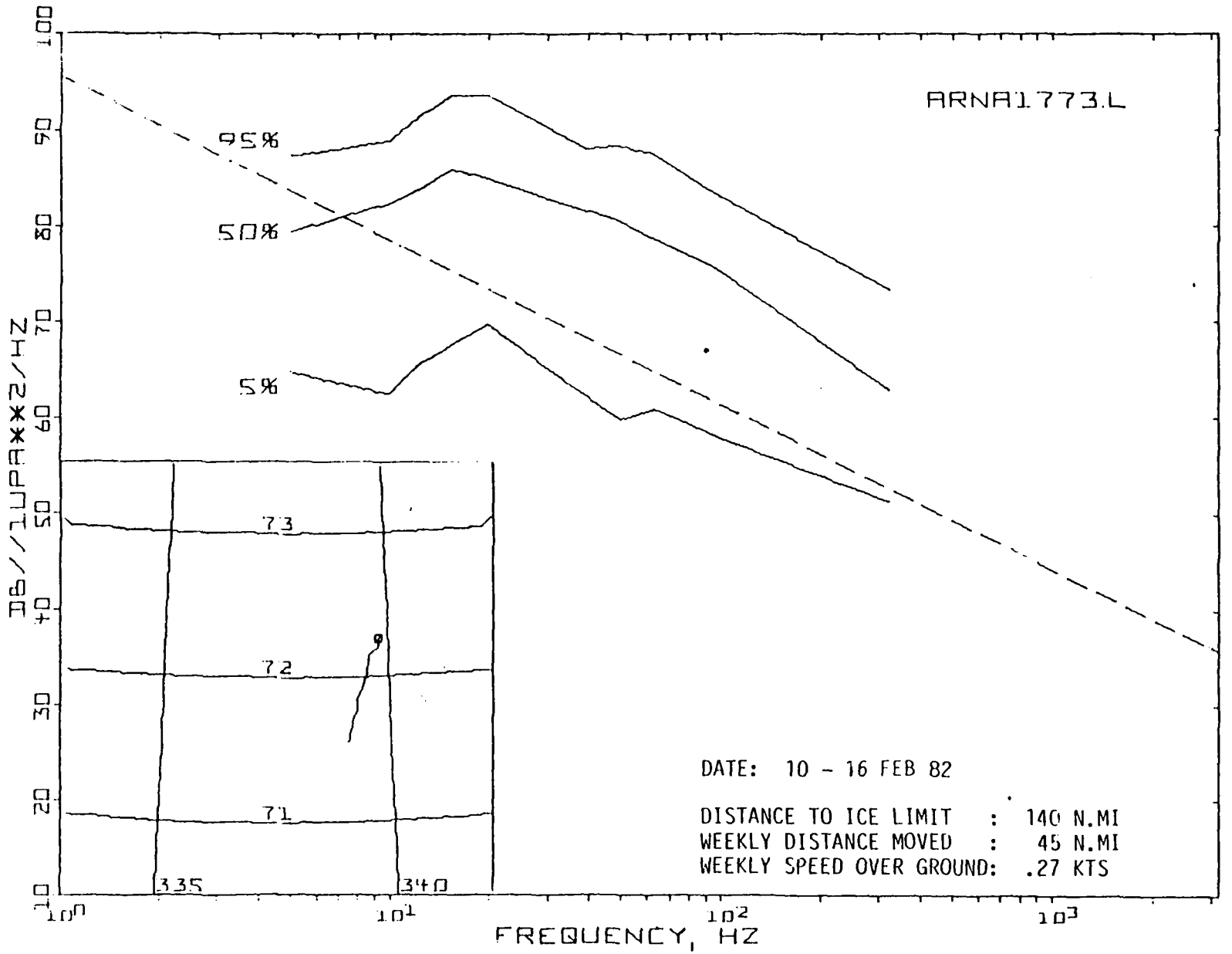

SOUTHERN ICE LIMIT 12 JAN 1982
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
GREAT LAKES ICE CONDITIONS
HURON
ONTARIO
ERIE
80N
75N
70N
65N

JULIAN DAYS: 378 TO 384 Jan 13-19, 82

OUTPUT IN FILE ARNA1773.H
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	97.0	11.3	69.3	79.4	80.8	89.0	98.2	104.9	113.1	114.0	114.8
10.0	91.1	9.3	73.7	75.7	78.8	85.7	89.0	96.0	105.9	107.0	109.8
12.5	89.5	8.4	74.4	75.7	78.8	84.0	89.0	94.4	102.9	104.5	106.5
15.6	88.6	7.1	74.8	77.1	80.0	83.1	87.7	92.0	98.9	101.2	104.0
20.0	86.3	6.3	73.9	77.8	78.9	80.9	85.0	89.2	94.5	98.9	99.8
40.0	82.5	4.9	74.8	75.9	77.0	78.7	80.8	86.2	89.0	91.5	92.8
50.0	80.8	4.7	72.8	74.4	75.1	76.9	79.7	84.0	87.2	88.4	90.9
63.0	78.3	5.0	69.5	70.7	71.7	74.2	77.8	81.6	85.5	87.0	87.6
100.0	73.1	5.3	62.1	63.9	64.9	69.3	74.1	76.9	80.1	80.8	81.9
320.0	64.3	5.9	54.3	55.3	56.1	58.2	65.4	68.9	70.8	73.3	74.9


SOUTHERN ICE LIMIT 16 FEB 1982
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice
~C = Concentration of ice within area(s) of strips and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
3 = First year (30 - 200 cm)
4 = First year thin (30 - 70 cm)
5 = First year medium (70 - 120 cm)
6 = First year thick (120 - 200 cm)
7 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. See ice which forms and remains fast along the coast.
135
Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
Ice boundary visually or satellite observed
Ice boundary estimated
Seven day forecast of ice edge position
Great Lakes Ice Conditions
HURON
ONTARIO
ERIE
ICE EDGE
SEA ICE FREE
40W
35W
30W
25W
20W
15W
10W
5W
0
5E
10E
15E
20E

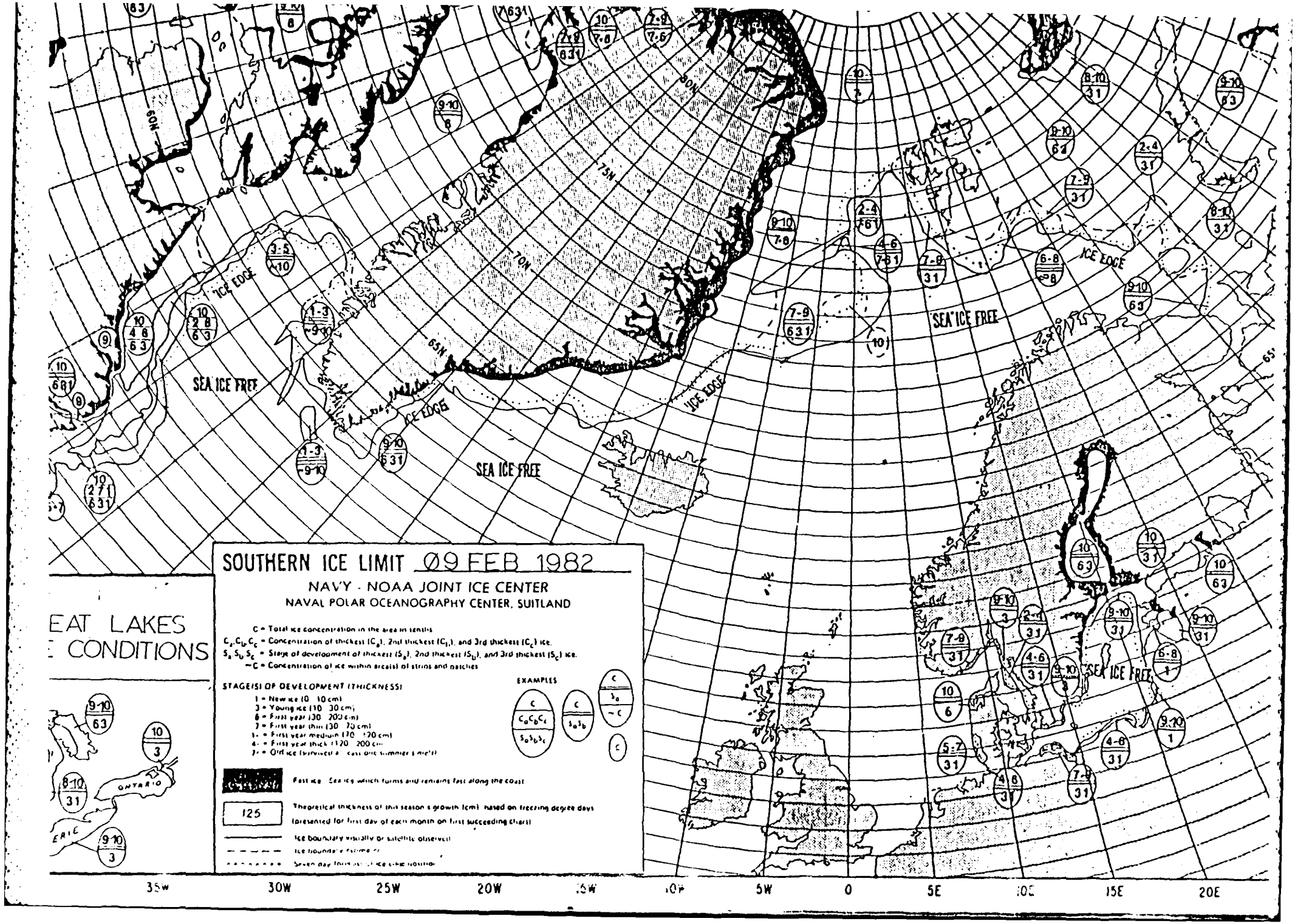


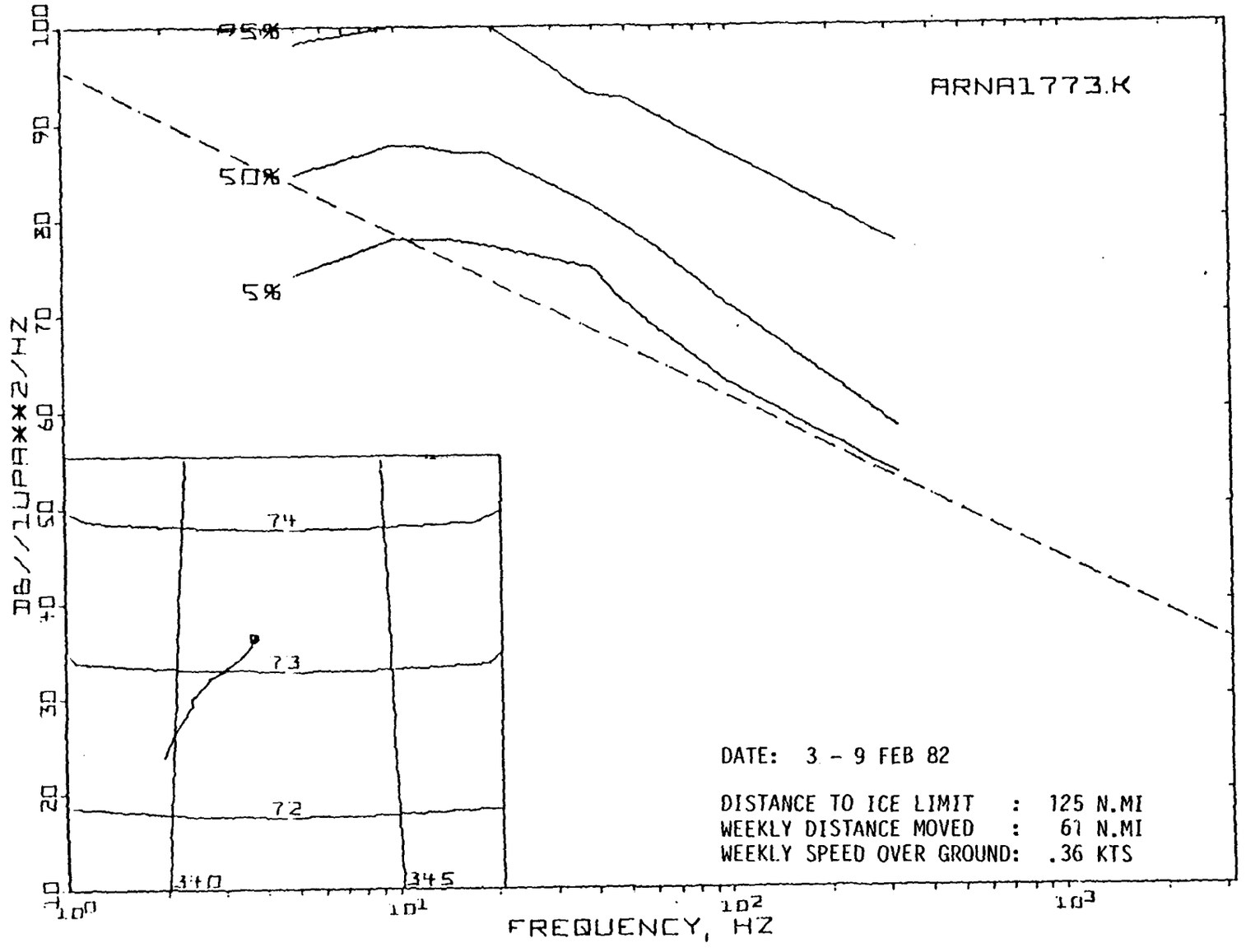
BUOY 1773 FEB 10-16, 82

JULIAN DAYS: 406 TO 412 Feb 10-16, 82

OUTPUT IN FILE ARNA1773.L
THE NUMBER OF DATA SAMPLES IS 58

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	76.1	21.8	-34.4	64.7	73.4	75.9	79.4	83.0	85.5	87.4	98.2
10.0	78.3	21.8	-33.4	62.4	76.9	78.8	82.4	84.9	87.1	89.0	95.0
12.5	80.7	22.2	-33.4	65.7	79.7	82.4	84.0	87.1	90.0	91.7	93.8
15.6	82.1	23.2	-37.4	67.7	82.5	83.8	86.0	88.5	91.0	93.7	95.2
20.0	81.6	23.1	-37.4	69.8	80.9	83.1	85.0	87.7	91.0	93.7	94.5
40.0	77.9	22.9	-40.4	62.0	77.0	80.1	81.4	85.5	86.8	88.0	89.0
50.0	76.8	22.6	-39.4	59.7	76.4	78.0	80.5	84.0	85.7	88.4	89.0
63.0	75.5	22.5	-39.6	60.9	74.2	76.2	78.7	82.2	85.5	87.6	91.5
100.0	71.9	20.8	-34.4	57.8	69.9	71.8	75.3	77.8	81.9	83.0	89.9
320.0	61.0	18.6	-32.9	51.4	58.2	60.4	62.9	67.3	70.8	73.3	78.4


SOUTHERN ICE LIMIT 09 FEB 1982
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
$C_a C_b C_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_a S_b S_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
–C = Concentration of ice within area(s) of strips and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0–10 cm)
3 = Young ice (10–30 cm)
6 = First year (30–200 cm)
7 = First year thin (30–70 cm)
8 = First year medium (70–120 cm)
9 = First year thick (120–200 cm)
7 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice – Sea ice which forms and remains fast along the coast
125 – Theoretical thickness of this season's growth (cm) based on freezing degree days (presented for first day of each month on first succeeding chart)
Ice boundary visually or satellite observed
Ice boundary estimated
Seven day forecast of ice edge position
SEA ICE FREE
ICE EDGE
60N
65N
70N
75N
80N
35W
30W
25W
20W
15W
10W
5W
0
5E
10E
15E
20E
EAT LAKES
CONDITIONS
ONTARIO
ERIE

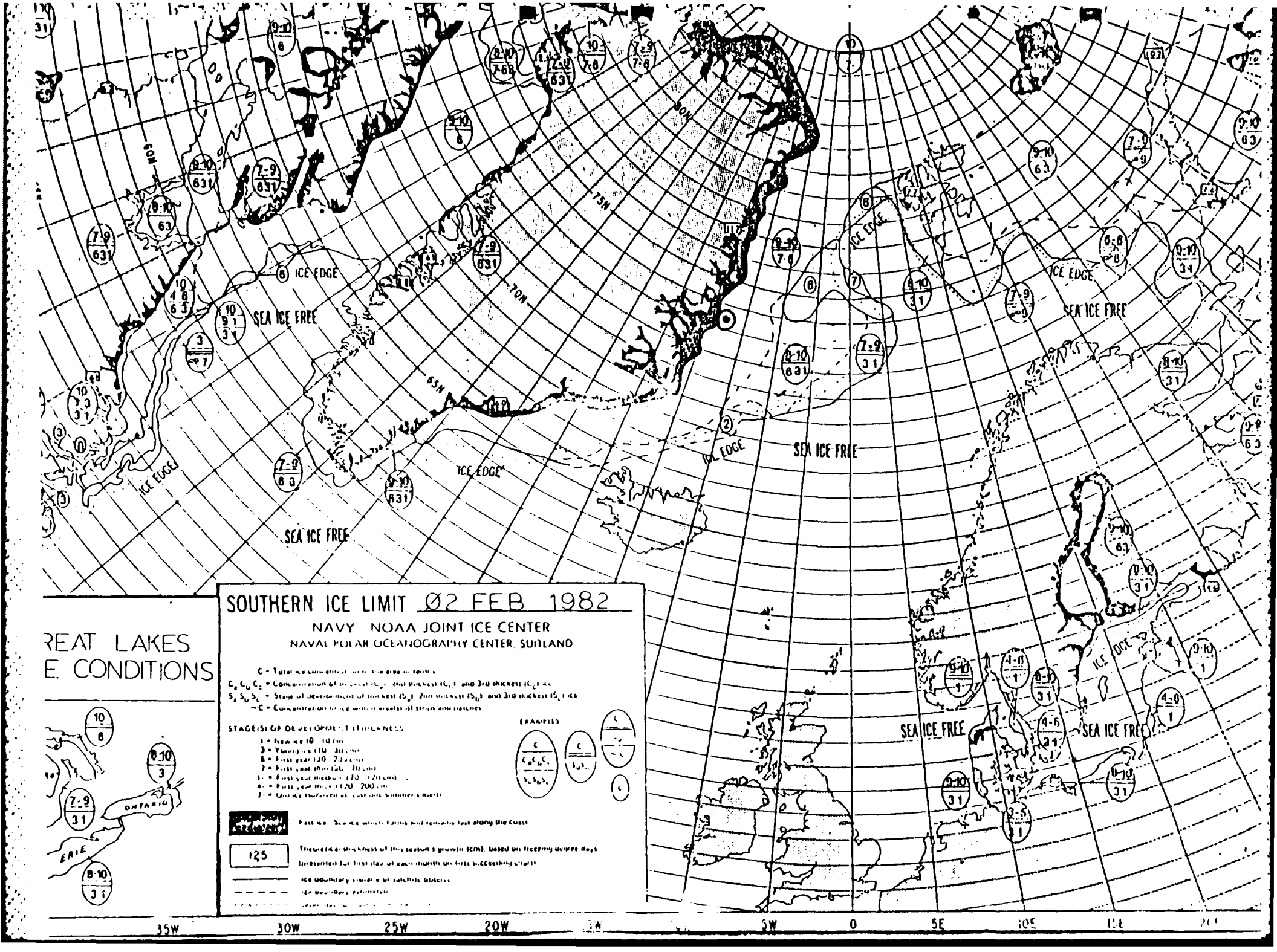


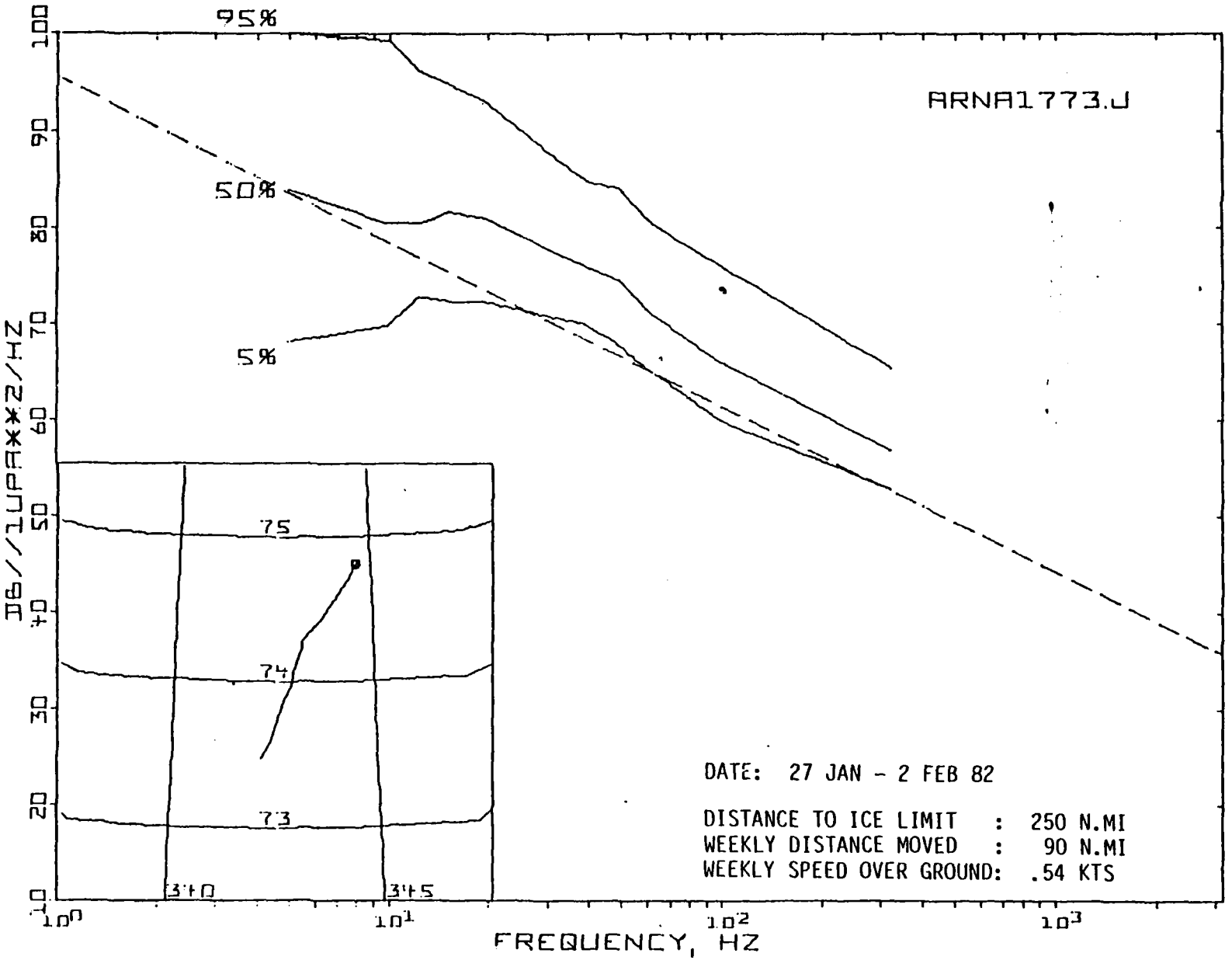
BUOY 1773 FEB 3-9, 82

JULIAN DAYS: 399 TO 405 Feb 3-9, 82

OUTPUT IN FILE ARNA1773.K
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	86.1	8.0	72.7	74.1	75.3	79.4	84.7	91.5	95.9	98.2	102.8
10.0	89.3	8.1	75.7	77.9	78.8	81.8	87.8	96.0	98.5	100.4	107.0
12.5	90.1	8.3	76.3	77.9	78.8	82.9	87.8	96.9	99.8	103.8	106.5
15.6	89.9	8.1	77.1	77.8	78.9	83.1	86.9	97.0	98.9	101.2	105.0
20.0	88.7	7.7	75.7	77.1	78.9	82.5	86.9	95.2	98.0	100.5	103.0
40.0	83.2	6.7	74.1	74.8	75.9	77.0	81.4	89.9	92.2	92.8	95.0
50.0	81.3	7.2	70.9	70.9	72.8	75.8	78.9	88.4	90.9	92.5	95.0
63.0	78.7	7.5	66.6	68.2	70.1	72.6	76.7	85.5	87.6	90.7	93.0
100.0	74.0	8.7	62.1	62.7	63.9	67.4	70.9	81.9	84.7	86.8	93.4
320.0	62.5	8.9	52.2	53.3	54.3	55.3	58.2	68.9	74.2	77.4	85.4


SOUTHERN ICE LIMIT Ø2 FEB 1982
NAVY NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
GREAT LAKES
ICE CONDITIONS
ONTARIO
ERIE
ICE EDGE
SEA ICE FREE
60N
70N
65N
35W
30W
25W
20W
0
5E

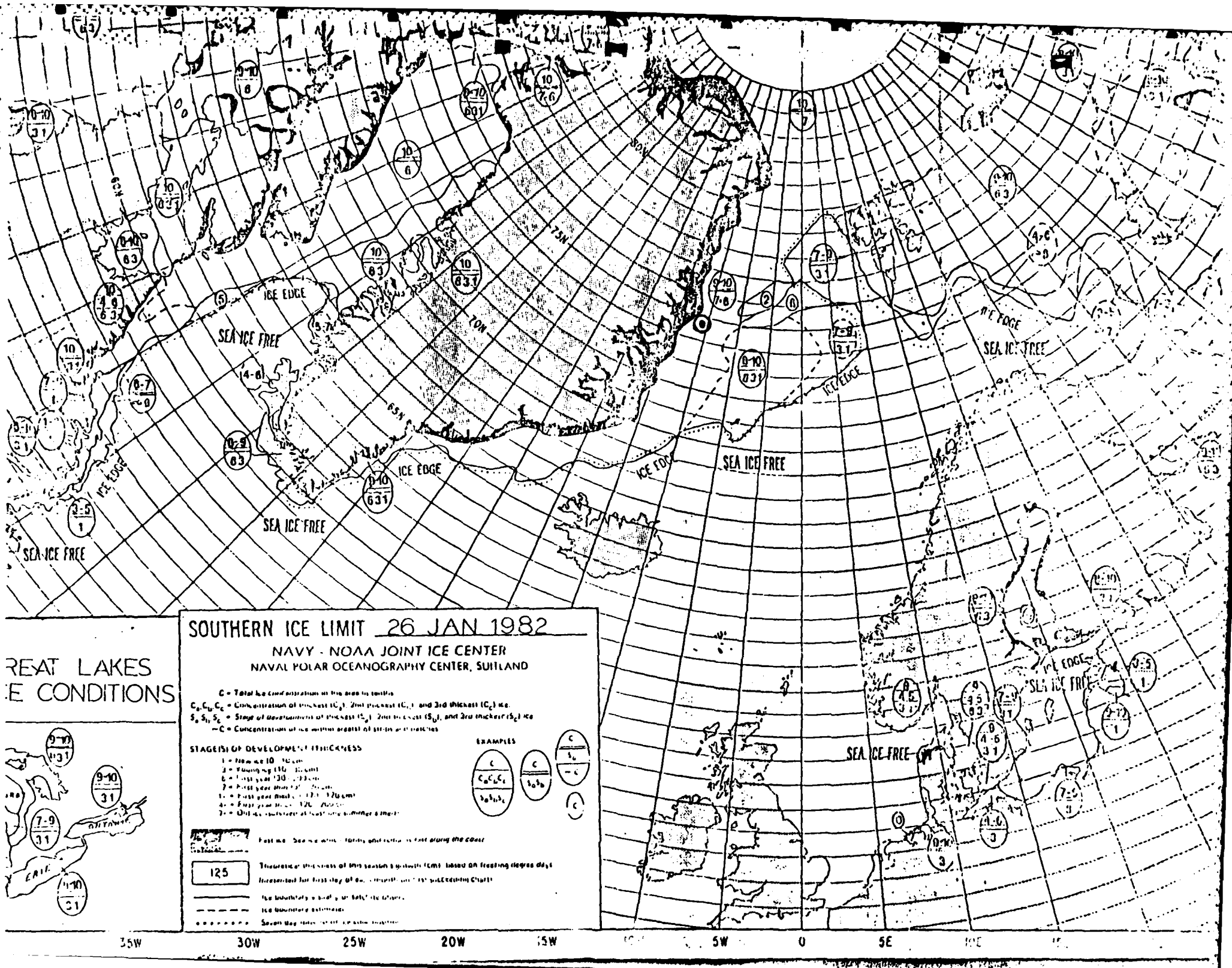


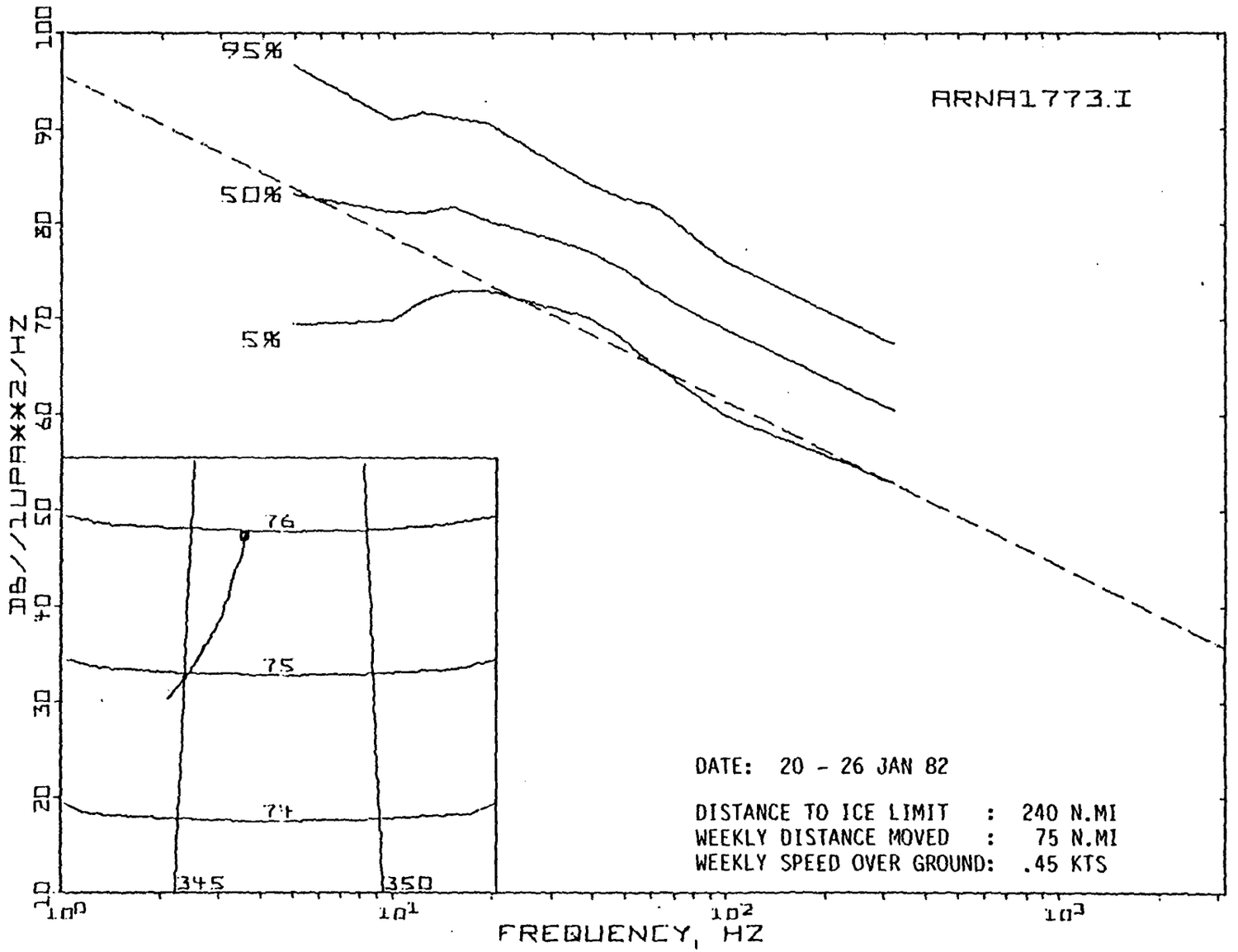
BUOY 1773 JAN 27-FEB 2

JULIAN DAYS: 392 TO 398 Jan 27 - Feb 2 82

UTPUT IN FILE ARNA1773.J
HE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	86.6	12.5	66.6	68.1	70.9	76.9	83.9	94.0	107.0	108.8	109.5
10.0	82.3	9.1	66.8	69.7	71.9	75.1	80.4	87.8	96.0	99.2	100.4
12.5	82.6	7.4	71.9	72.8	73.7	76.3	80.4	88.4	93.2	96.0	96.0
15.6	82.3	6.9	71.7	72.3	73.9	75.7	81.7	86.0	92.9	94.5	96.4
20.0	81.5	7.0	71.1	72.3	72.3	74.8	80.9	86.0	92.0	92.9	95.8
40.0	76.6	5.3	68.7	69.9	69.9	71.8	75.9	81.4	83.9	84.7	86.2
50.0	74.7	5.3	66.8	67.7	68.4	69.7	74.4	78.9	81.8	84.0	84.0
63.0	72.1	5.3	63.5	64.7	65.7	67.5	70.7	76.7	79.5	80.3	81.6
100.0	66.9	5.4	59.8	59.8	60.6	61.4	65.8	71.8	74.1	75.9	76.9
320.0	58.0	4.1	52.8	52.8	53.3	54.3	56.8	60.4	62.9	65.4	69.6


SOUTHERN ICE LIMIT 26 JAN 1982
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
GREAT LAKES
ICE CONDITIONS
STAGE(S) OF DEVELOPMENT (THICKNESS)
EXAMPLES
ICE EDGE
SEA ICE FREE
35W
30W
25W
20W
15W
5W
0
5E

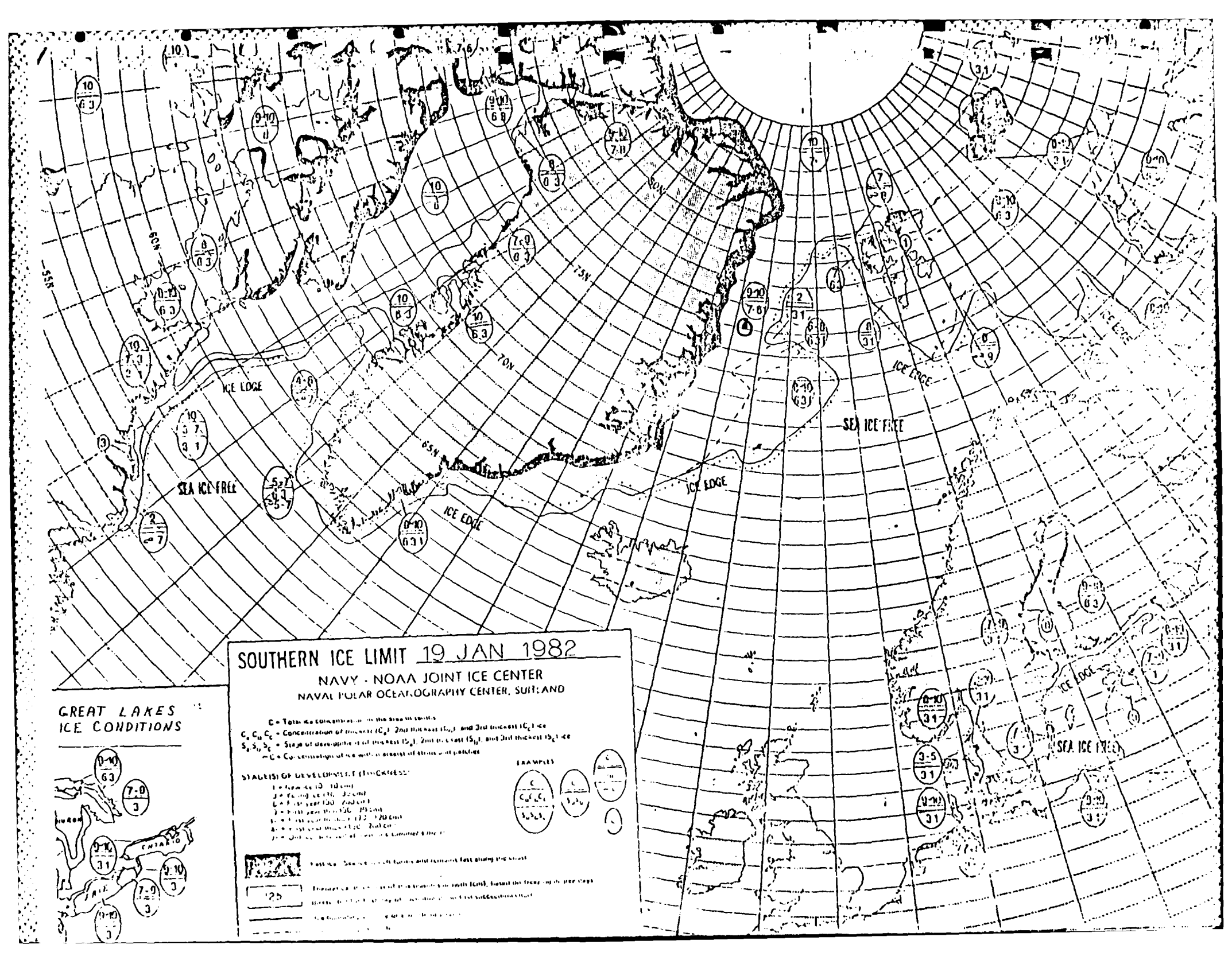


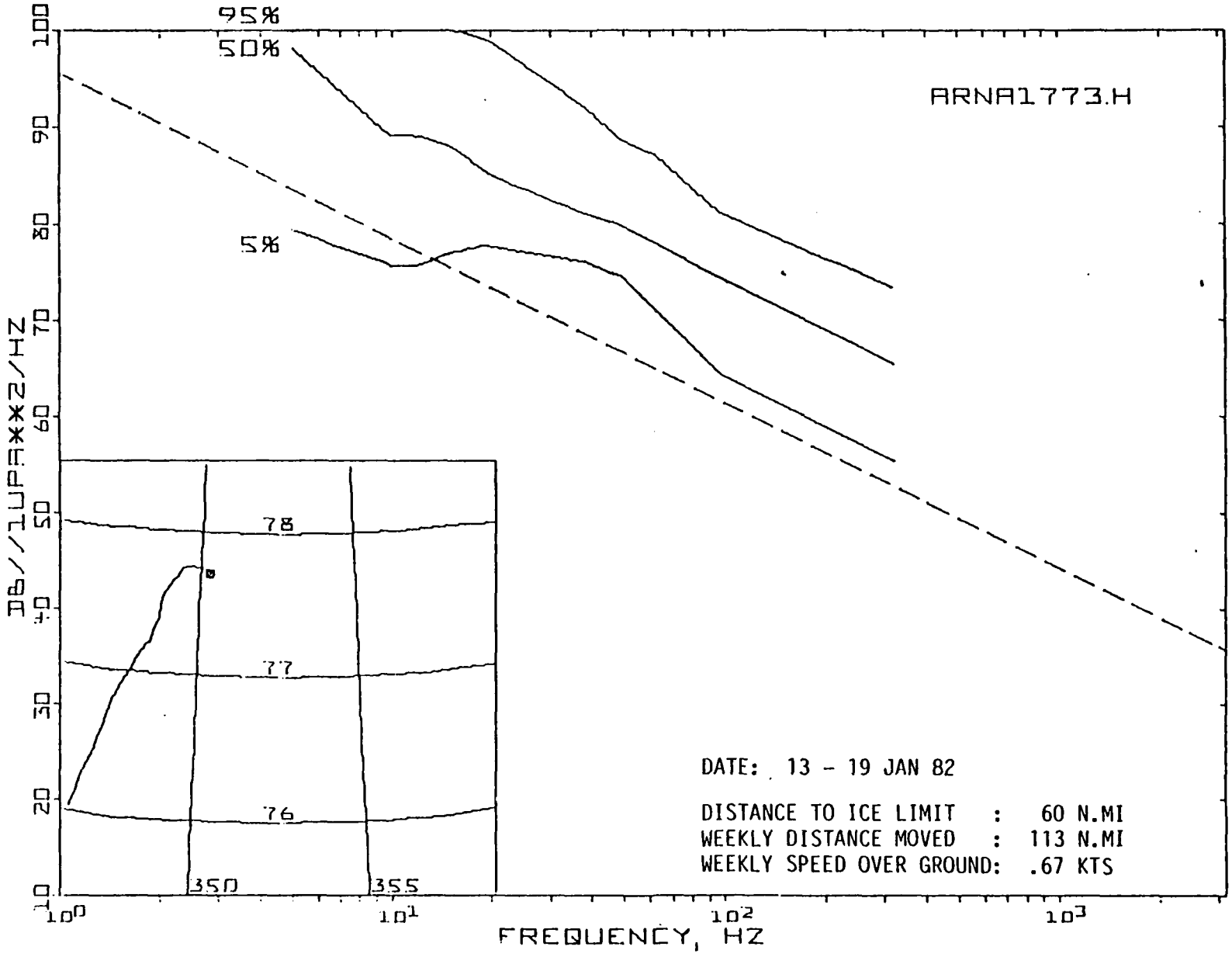
BUOY 1773 JAN 20-26, 82

JULIAN DAYS: 385 TO 391 Jan 20-26, 82

OUTPUT IN FILE ARNA1773.I
THE NUMBER OF DATA SAMPLES IS 54

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	84.0	9.0	66.6	69.3	70.9	78.7	83.0	92.2	95.0	96.7	109.5
10.0	80.7	6.4	69.1	69.7	69.7	76.3	81.1	84.9	87.8	90.9	94.4
12.5	81.4	6.1	69.7	71.9	72.8	77.9	81.1	86.5	90.9	91.7	93.2
15.6	81.7	5.8	69.7	72.9	73.9	78.4	81.7	85.0	90.4	91.0	93.7
20.0	81.0	5.5	69.7	72.9	72.9	77.1	80.0	84.4	89.2	90.4	92.9
40.0	77.0	4.5	69.9	69.9	70.9	73.4	77.0	79.5	83.9	83.9	86.8
50.0	74.9	4.4	65.9	67.7	69.7	71.9	75.1	78.9	82.4	82.4	83.0
63.0	73.2	5.3	61.4	64.7	65.7	70.7	72.6	76.7	80.3	81.6	86.3
100.0	68.6	5.6	55.3	59.8	61.4	64.9	68.7	72.7	75.9	75.9	83.0
320.0	59.6	5.0	52.2	52.8	53.3	54.3	60.4	63.6	66.4	67.3	70.2


SOUTHERN ICE LIMIT 19 JAN 1982
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
GREAT LAKES ICE CONDITIONS
ICE EDGE
SEA ICE FREE
90W
75W
70W
65W
55S

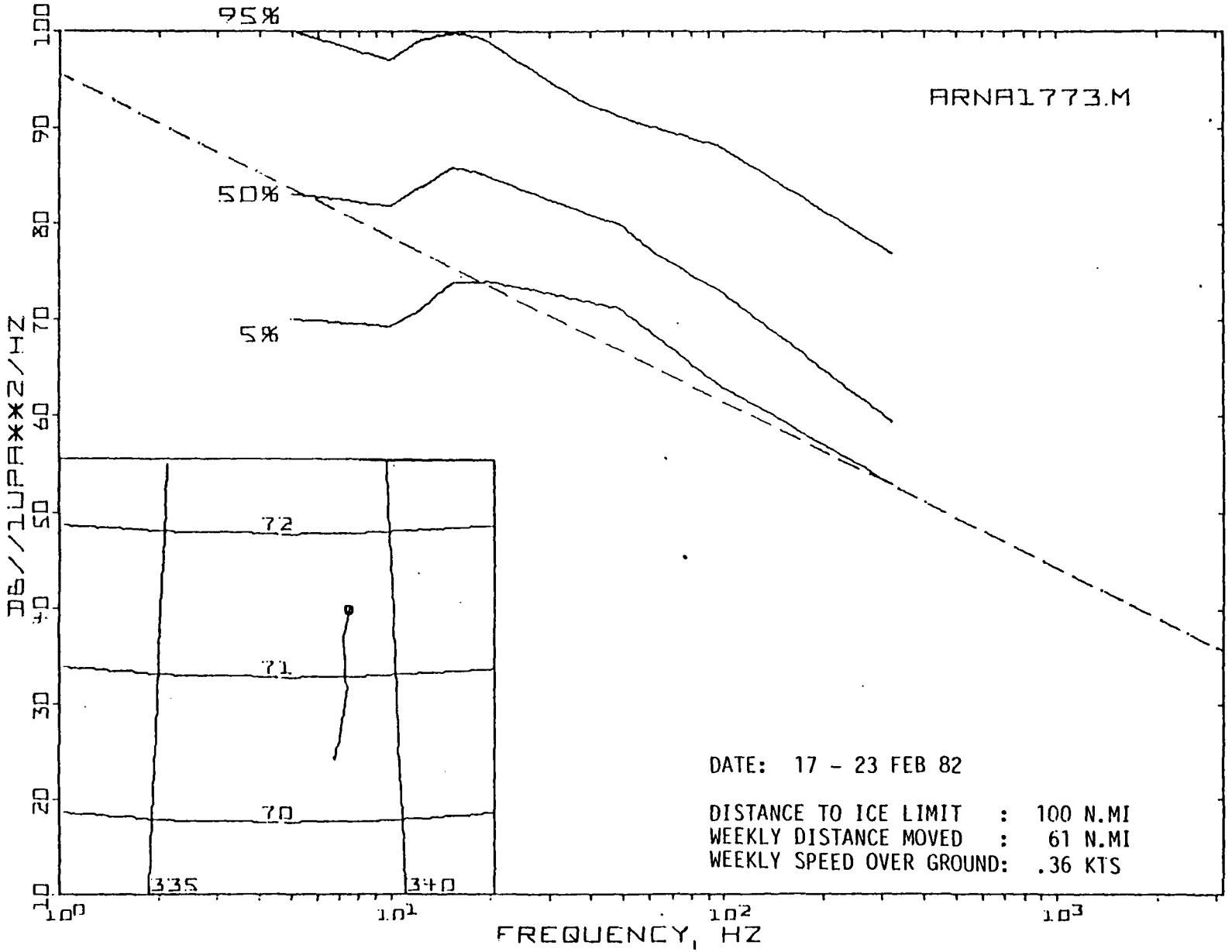


BUOY 1773 JAN 13-19, 82

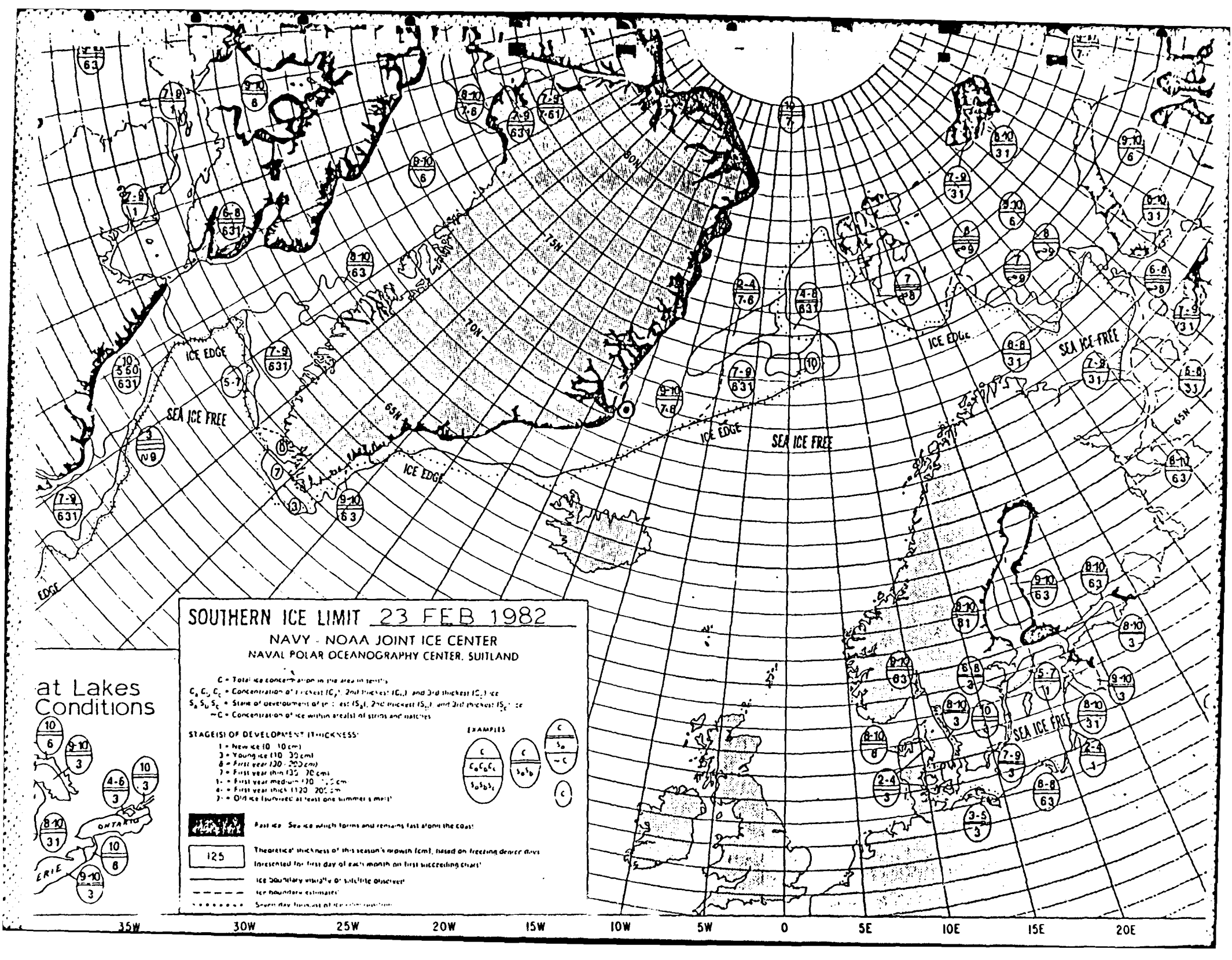
JULIAN DAYS: 413 TO 419 Feb 17-23, 82

OUTPUT IN FILE ARNA1773.M
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	84.5	9.5	63.3	69.9	70.9	79.4	83.0	89.9	95.0	101.0	107.0
10.0	83.4	8.1	67.6	69.1	73.7	76.9	81.8	89.0	94.4	96.9	99.8
12.5	85.2	8.2	67.6	70.9	75.7	77.9	84.0	90.9	96.9	99.2	102.0
15.6	86.7	7.9	71.1	73.9	76.4	80.9	86.0	92.9	97.0	99.8	103.0
20.0	86.6	7.7	71.7	73.9	76.4	80.0	85.0	93.7	96.4	98.9	101.2
40.0	81.9	6.9	68.1	71.8	73.4	75.9	80.8	88.0	91.5	92.2	94.0
50.0	80.7	6.8	67.7	70.9	71.9	75.8	79.7	87.2	90.0	90.9	93.2
63.0	78.4	7.3	64.7	68.2	69.5	73.5	76.7	85.5	88.2	89.8	92.3
100.0	74.7	8.8	57.8	62.7	63.9	68.7	72.7	80.8	86.8	88.0	92.2
320.0	62.8	8.4	52.8	52.8	53.3	56.1	59.3	70.8	74.9	76.8	80.2



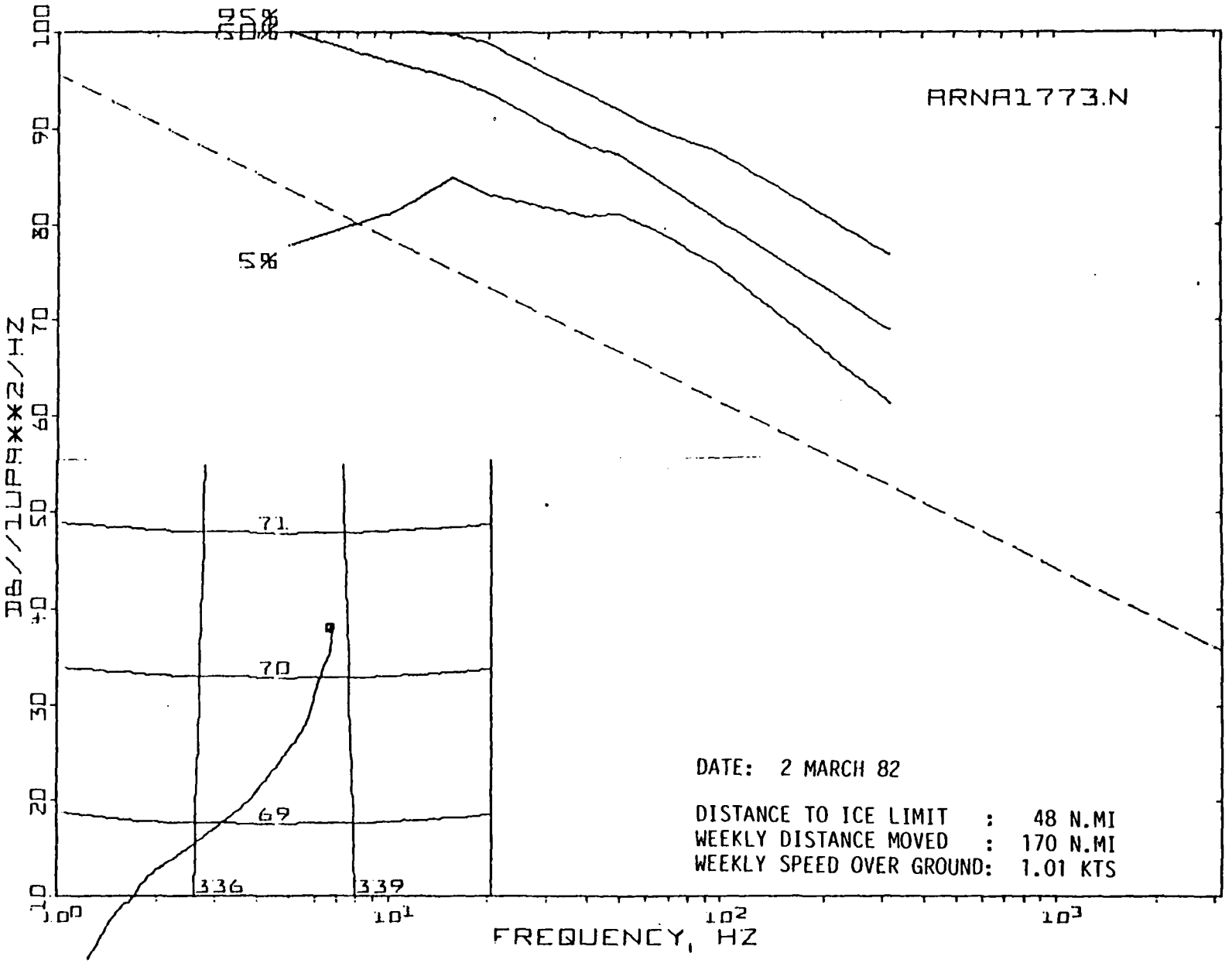
BUOY 1773 FEB 17-23, 82


SOUTHERN ICE LIMIT 23 FEB 1982
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
at Lakes Conditions
ONTARIO
ERIE
ICE EDGE
SEA ICE FREE
80N
75N
70N
65N
EDGE
35W
30W
25W
20W
15W
10W
5W
0
5E
10E
15E
20E

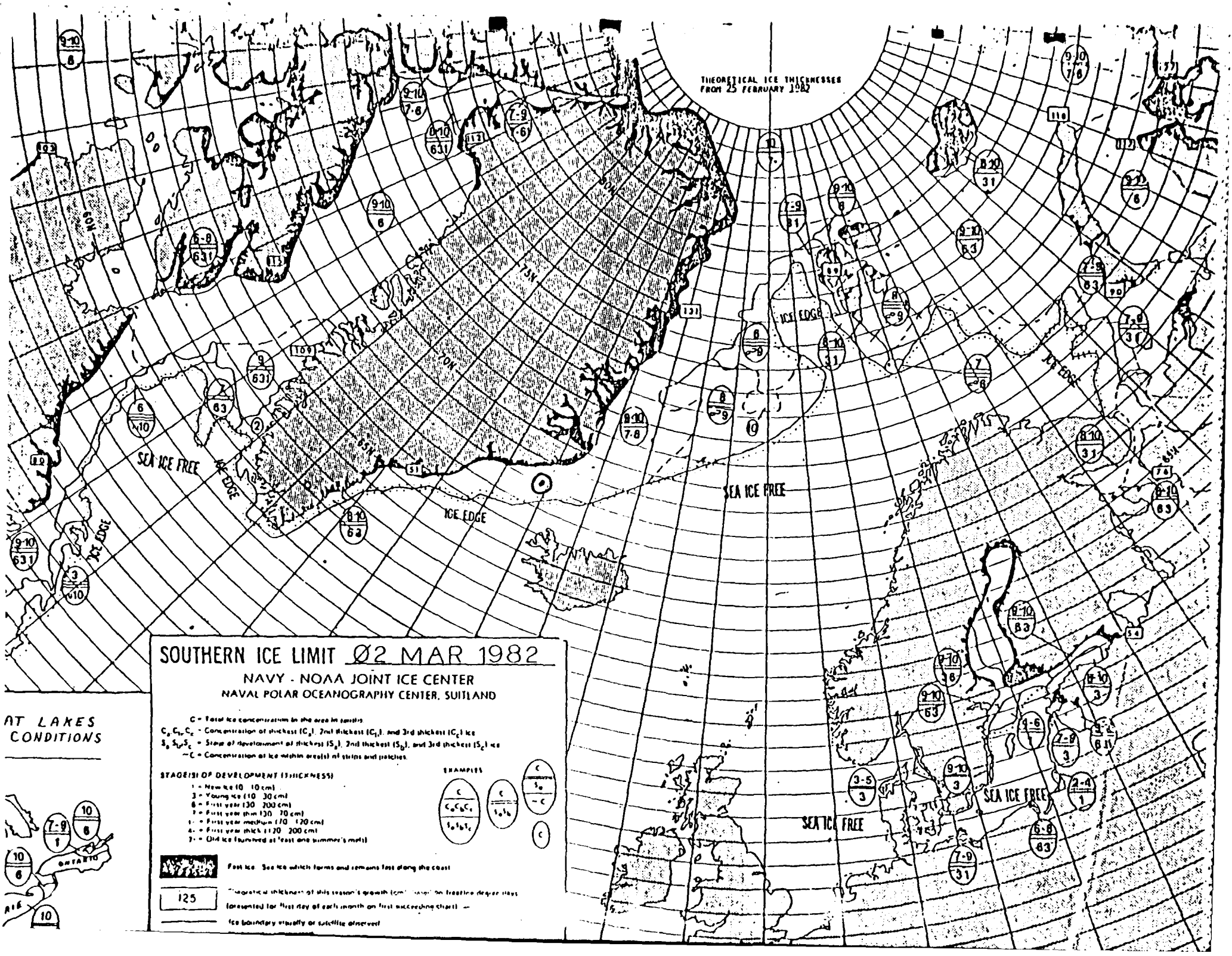
JULIAN DAYS: 420 TO 426 Feb 24 - Mar 2, 82

OUTPUT IN FILE ARNA1773.N
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	98.7	12.3	72.7	77.8	81.4	86.1	103.5	108.8	110.9	112.0	114.8
10.0	94.2	7.5	77.9	81.1	82.9	86.5	96.9	100.4	102.0	102.9	105.2
12.5	93.9	5.7	81.8	82.9	85.7	89.0	96.0	97.7	101.0	101.0	102.0
15.6	93.8	4.9	83.1	85.0	86.0	89.8	95.2	97.0	98.9	99.8	101.9
20.0	92.3	4.8	82.5	83.1	85.0	89.2	93.7	95.2	97.0	98.9	101.2
40.0	87.9	3.7	80.1	80.8	82.0	85.5	88.0	90.7	92.2	93.4	95.0
50.0	86.6	3.5	78.9	81.1	81.8	84.0	87.2	89.0	90.9	91.7	93.8
63.0	85.0	3.4	78.7	79.5	80.3	82.2	84.7	87.6	88.8	89.8	92.3
100.0	81.1	4.0	74.7	75.3	75.9	77.8	80.1	83.9	86.1	87.4	90.7
320.0	69.6	5.4	59.3	61.3	62.1	66.4	68.9	72.4	76.2	76.8	83.4



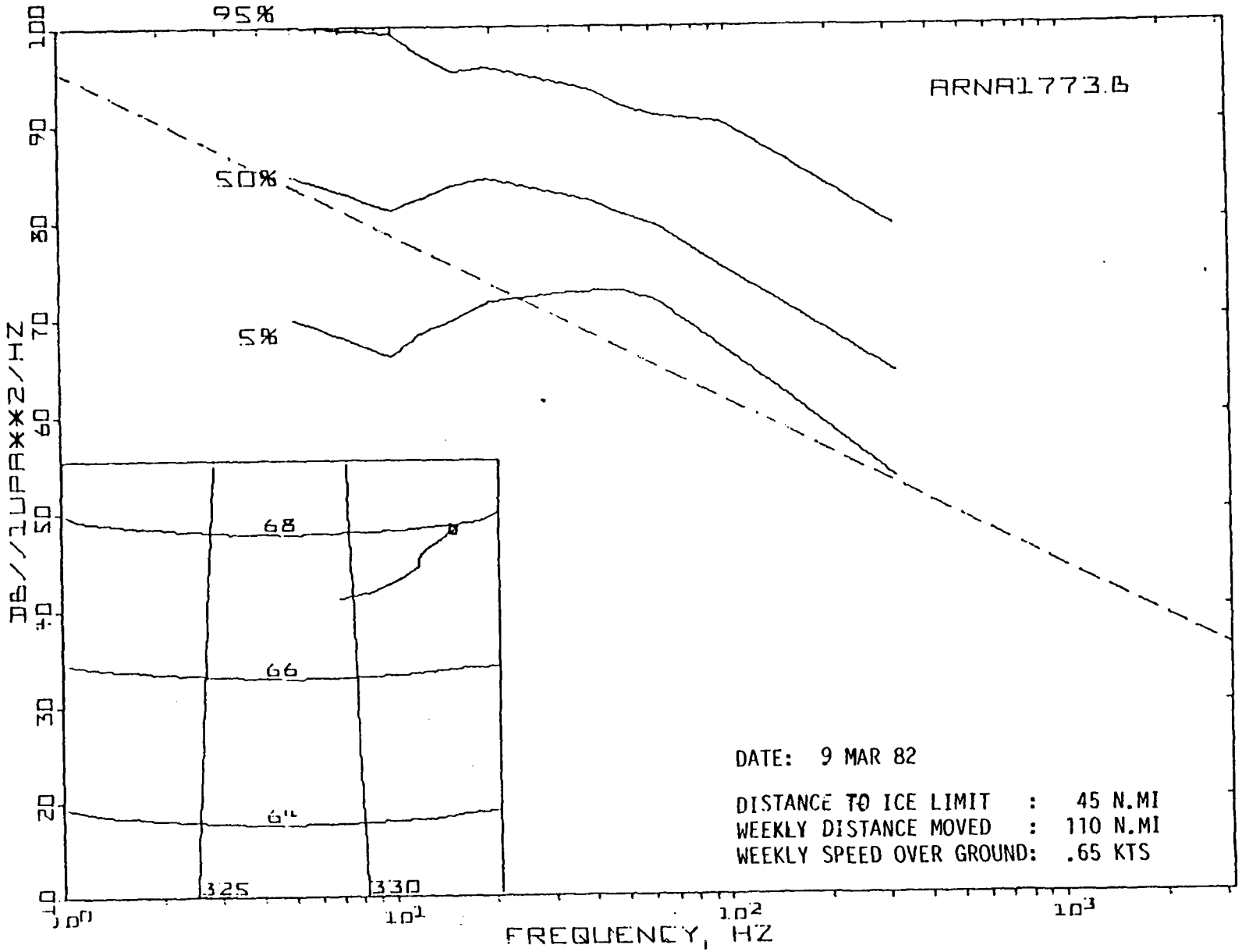
BUOY 1773 FEB 24–MAR 2


THEORETICAL ICE THICKNESSES
FROM 25 FEBRUARY 1982
SEA ICE FREE
ICE EDGE
SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
ICE EDGE
ICE EDGE
SEA ICE FREE
ICE EDGE
SEA ICE FREE
SEA ICE FREE
SEA ICE FRE

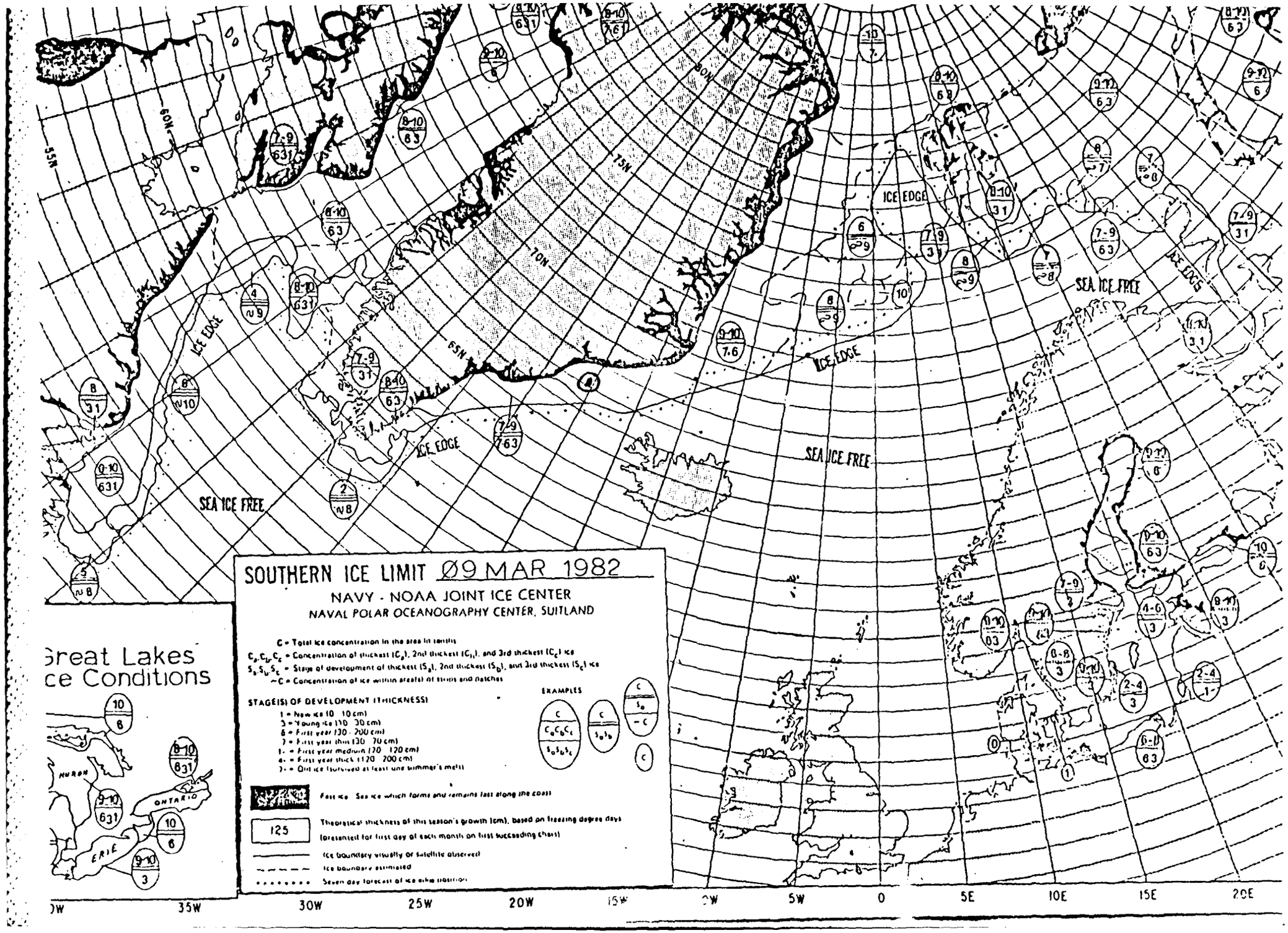
JULIAN DAYS: 427 TO 433 Mar 3-9, 82

OUTPUT IN FILE ARNA1773.0
THE NUMBER OF DATA SAMPLES IS 54

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	88.7	13.5	65.8	70.9	72.7	77.8	84.7	100.0	108.0	109.5	113.1
10.0	83.1	11.3	63.1	65.9	69.1	72.8	81.1	93.2	98.5	99.2	106.5
12.5	83.7	9.6	67.6	68.4	70.9	75.1	82.4	93.8	96.0	96.9	101.0
15.6	83.7	9.4	51.6	69.7	71.7	76.4	83.8	91.0	94.5	95.2	99.8
20.0	84.0	7.4	68.5	71.7	72.9	78.4	84.4	89.8	92.9	95.8	97.0
40.0	82.6	7.0	62.0	72.7	74.8	77.9	82.0	87.4	91.5	93.4	101.0
50.0	81.3	6.5	63.0	72.8	72.8	76.9	80.5	85.7	90.9	91.7	93.2
63.0	80.3	6.6	60.9	71.7	72.6	75.6	79.5	84.7	89.8	90.7	91.5
100.0	76.7	7.5	55.9	66.6	69.3	70.9	74.7	81.9	89.0	89.9	92.2
320.0	64.7	8.7	47.3	53.3	54.3	56.1	64.2	69.6	78.4	79.3	84.5



BUOY 1773 MAR 3-9 82

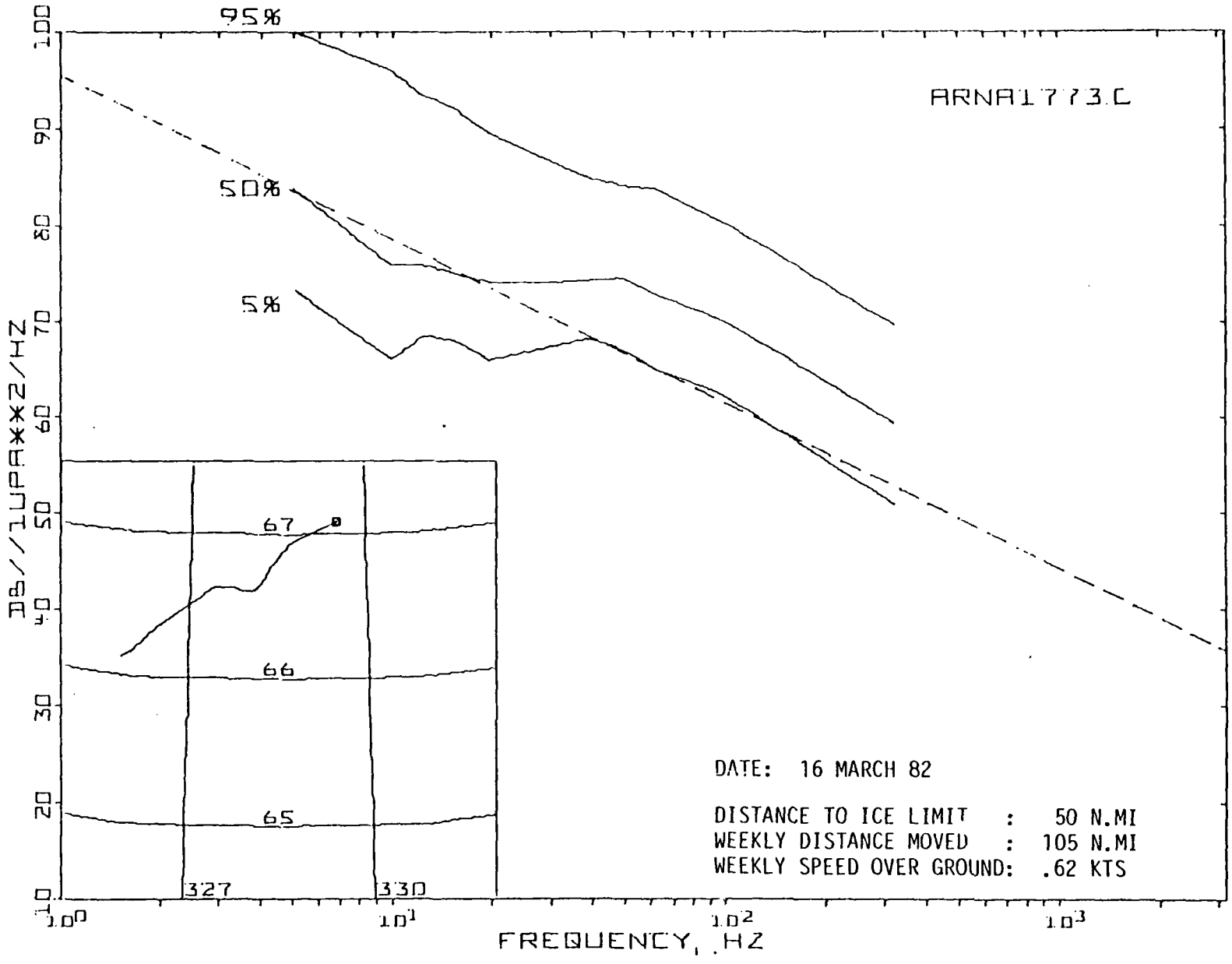

SOUTHERN ICE LIMIT 09 MAR 1982
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
$C_a C_b C_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice
$S_a S_b S_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice
–C = Concentration of ice within areas of leads and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
8 = First year medium (70 - 120 cm)
9 = First year thick (120 - 200 cm)
10 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice - Sea ice which forms and remains fast along the coast
125 Theoretical thickness of this season's growth (cm), based on freezing degree days (forecasted for first day of each month on first succeeding chart)
Ice boundary visually or satellite observed
Ice boundary estimated
Seven day forecast of ice edge position
ICE EDGE
SEA ICE FREE
Great Lakes
Ice Conditions
HURON
ONTARIO
ERIE
55N
60N
65N
70N
75N
80N
85W
35W
30W
25W
20W
15W
10W
5W
0
5E
10E
15E
20E

JULIAN DAYS: 69 TO 75 Mar 10-16, 82

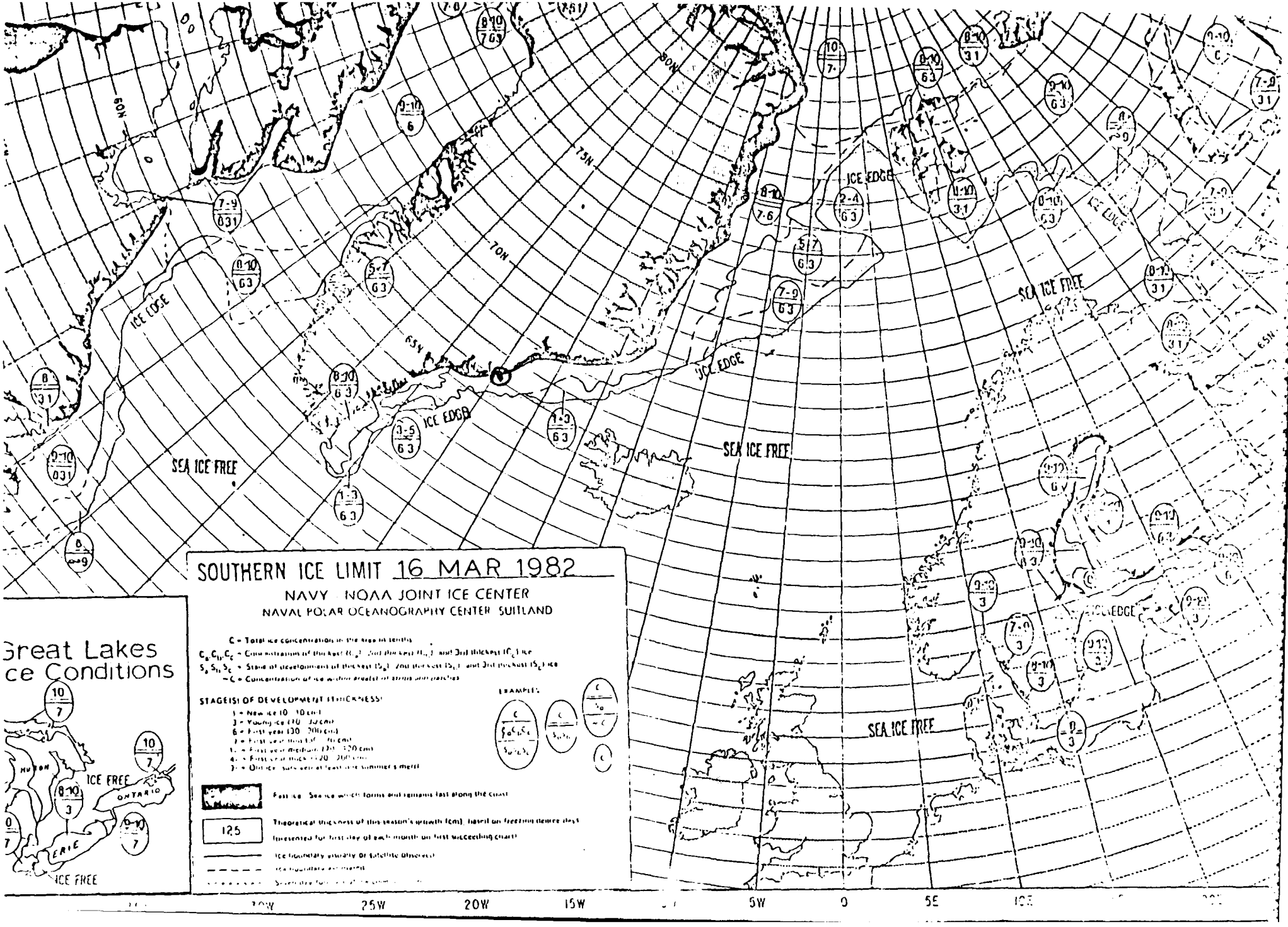
OUTPUT IN FILE ARNA1773.C
THE NUMBER OF DATA SAMPLES IS 53

1773

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	86.6	10.7	69.3	73.4	74.7	77.8	83.9	94.0	103.5	103.0	103.8
10.0	77.0	9.4	63.7	65.9	66.8	70.3	75.7	82.4	92.5	96.0	98.5
12.5	77.2	8.1	67.6	68.4	69.1	70.3	75.7	79.7	93.2	93.2	95.0
15.6	77.1	7.8	66.3	67.9	68.8	71.1	74.8	80.9	91.0	92.0	93.7
20.0	76.7	7.6	63.6	65.7	66.9	71.7	73.9	81.7	87.7	89.2	96.4
40.0	76.4	6.0	66.7	68.1	69.3	71.8	74.1	80.8	83.9	84.7	92.8
50.0	75.8	5.9	64.9	66.8	69.1	70.9	74.4	80.5	83.0	84.0	93.2
63.0	74.4	6.1	64.7	64.7	67.5	69.5	72.6	79.5	81.6	83.8	91.5
100.0	70.6	6.3	59.8	62.1	63.3	65.8	69.9	75.3	77.8	80.1	92.2
320.0	60.1	7.0	50.8	50.8	51.5	54.3	59.3	64.8	68.1	69.6	84.5



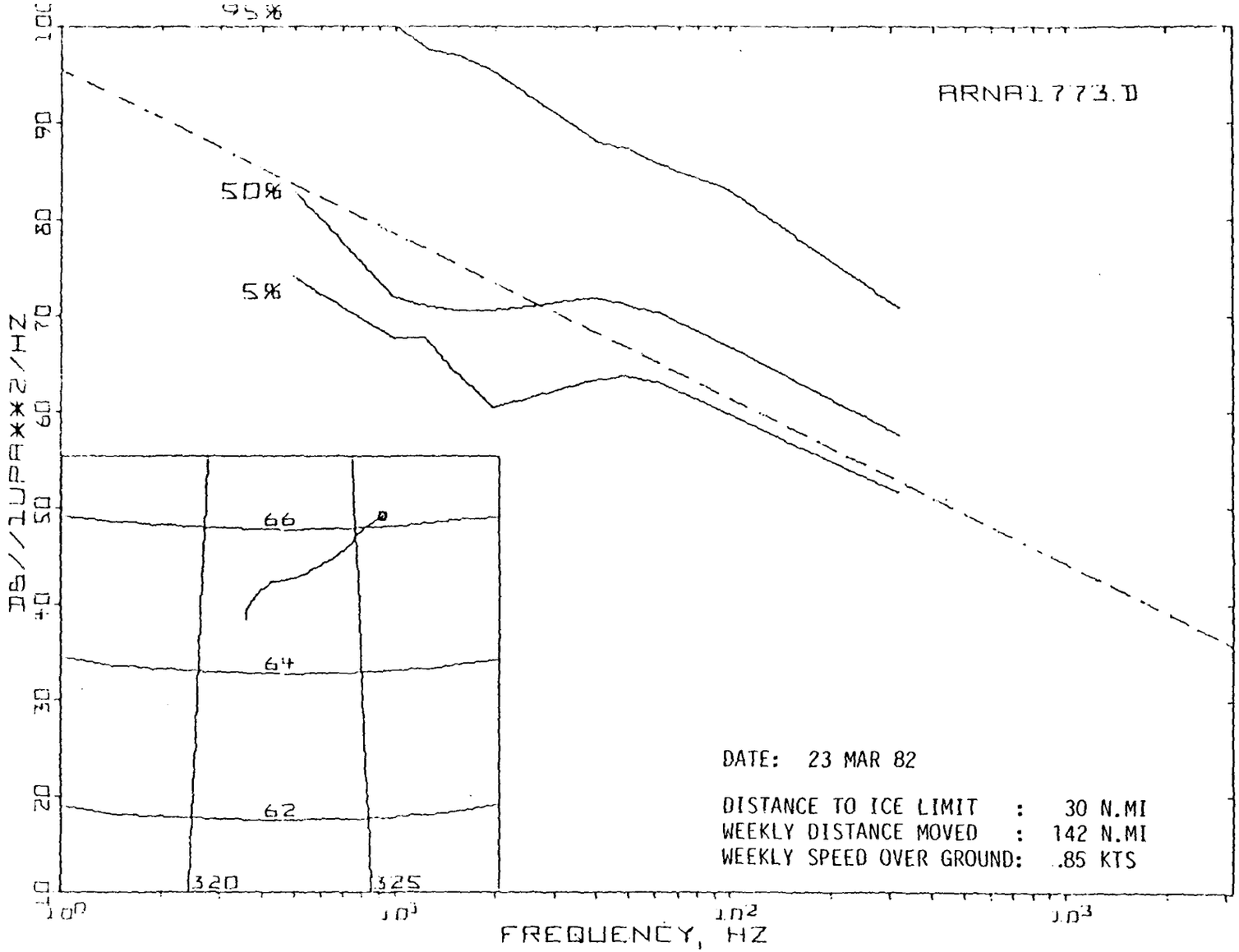
BUOY 1773 MAR 10-16 82


SOUTHERN ICE LIMIT 16 MAR 1982
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
Great Lakes
ce Conditions
ICE FREE
HURON
ONTARIO
ERIE
ICE FREE
ICE EDGE
SEA ICE FREE
80N
75N
70N
65N
60N
25W
20W
15W
5W
0
5E

JULIAN DAYS: 76 TO 82 Mar 17-23, 82 1773

OUTPUT IN FILE ARNA1773.0
THE NUMBER OF DATA SAMPLES IS 52

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	87.5	12.7	72.7	74.1	74.7	77.8	83.0	91.5	109.5	110.2	114.8
10.0	78.6	12.7	64.9	67.6	68.4	69.1	71.9	87.8	102.0	102.0	108.0
12.5	77.7	11.6	66.8	67.6	67.6	69.1	70.9	87.8	96.0	97.7	104.5
15.6	76.4	11.8	62.8	63.6	64.4	66.9	70.4	86.0	94.5	97.0	104.0
20.0	74.7	11.9	58.4	60.3	61.9	65.7	70.4	84.4	92.0	95.2	101.2
40.0	74.4	8.7	61.4	63.3	64.9	67.4	71.8	81.4	87.4	88.0	94.0
50.0	73.8	8.4	61.6	63.7	64.3	66.8	70.9	81.1	85.7	87.2	93.2
63.0	72.9	7.9	62.2	62.9	62.9	66.6	70.1	79.5	84.7	85.5	88.8
100.0	69.8	7.8	58.9	59.8	61.4	63.9	66.6	76.9	81.9	83.0	84.7
320.0	58.9	6.8	50.1	51.5	51.5	53.3	57.5	62.9	70.2	70.8	77.4

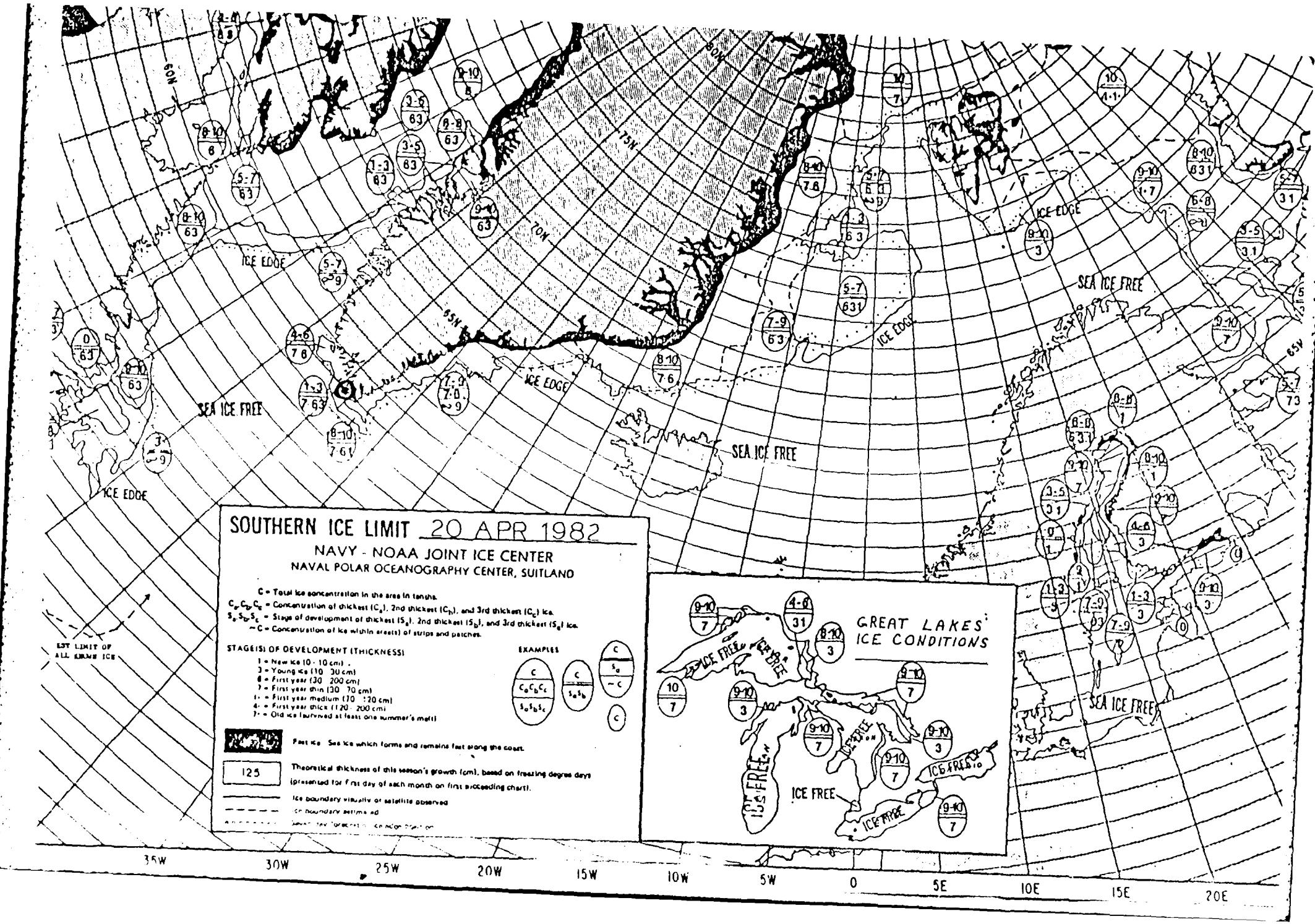


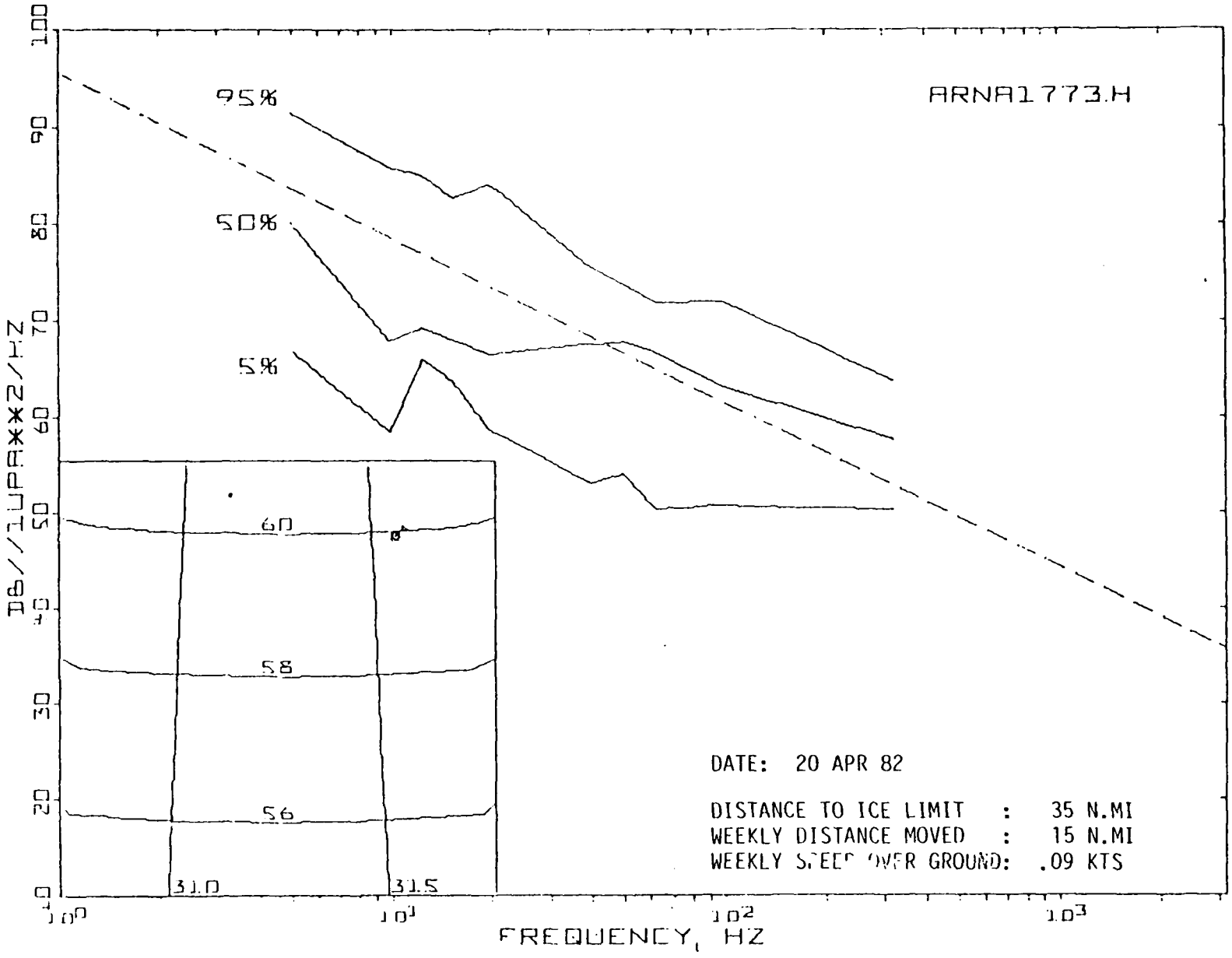
BUOY 1773 MAR 17-23 82

JULIAN DAYS: 111 TO 117 Apr 21-27, 82

OUTPUT IN FILE ARNA1773.I
THE NUMBER OF DATA SAMPLES IS 43

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	87.8	9.3	70.9	70.9	76.9	81.4	87.4	92.8	98.8	100.0	112.0
10.0	81.3	9.8	63.1	67.6	69.1	75.1	77.9	87.1	94.4	96.9	108.0
12.5	80.4	8.9	66.8	69.7	70.3	74.4	78.8	85.7	93.8	96.9	104.5
15.6	79.8	8.5	66.9	67.9	69.7	72.9	78.9	84.4	92.9	95.8	100.5
20.0	78.2	9.1	62.8	66.3	67.9	70.4	76.4	81.7	92.0	98.0	98.0
40.0	76.3	8.0	63.3	63.3	65.8	70.9	75.9	82.0	86.8	90.7	94.0
50.0	75.6	8.0	60.8	61.6	63.7	69.1	76.4	81.1	84.0	90.9	93.8
63.0	74.7	8.1	57.5	60.6	64.1	69.5	74.2	80.3	83.8	88.2	92.3
100.0	73.2	7.4	57.8	58.9	63.9	68.1	74.1	76.9	80.8	83.9	92.2
320.0	65.6	6.5	52.2	53.3	56.8	61.3	64.8	68.9	71.4	74.9	83.4


SOUTHERN ICE LIMIT 20 APR 1982
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths.
$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
– C = Concentration of ice within area(s) of strips and patches.
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm).
2 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
8 = First year medium (70 - 120 cm)
9 = First year thick (120 - 200 cm)
1- = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice - Sea ice which forms and remains fast along the coast.
125 Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
Ice boundary visually or satellite observed
Ice boundary estimated
EST LIMIT OF ALL KNOWN ICE
GREAT LAKES ICE CONDITIONS
ICE FREE
ICE EDGE
SEA ICE FREE
60N
65N
70N
75N
35W
30W
25W
20W
15W
10W
5W
0
5E
10E
15E
20E

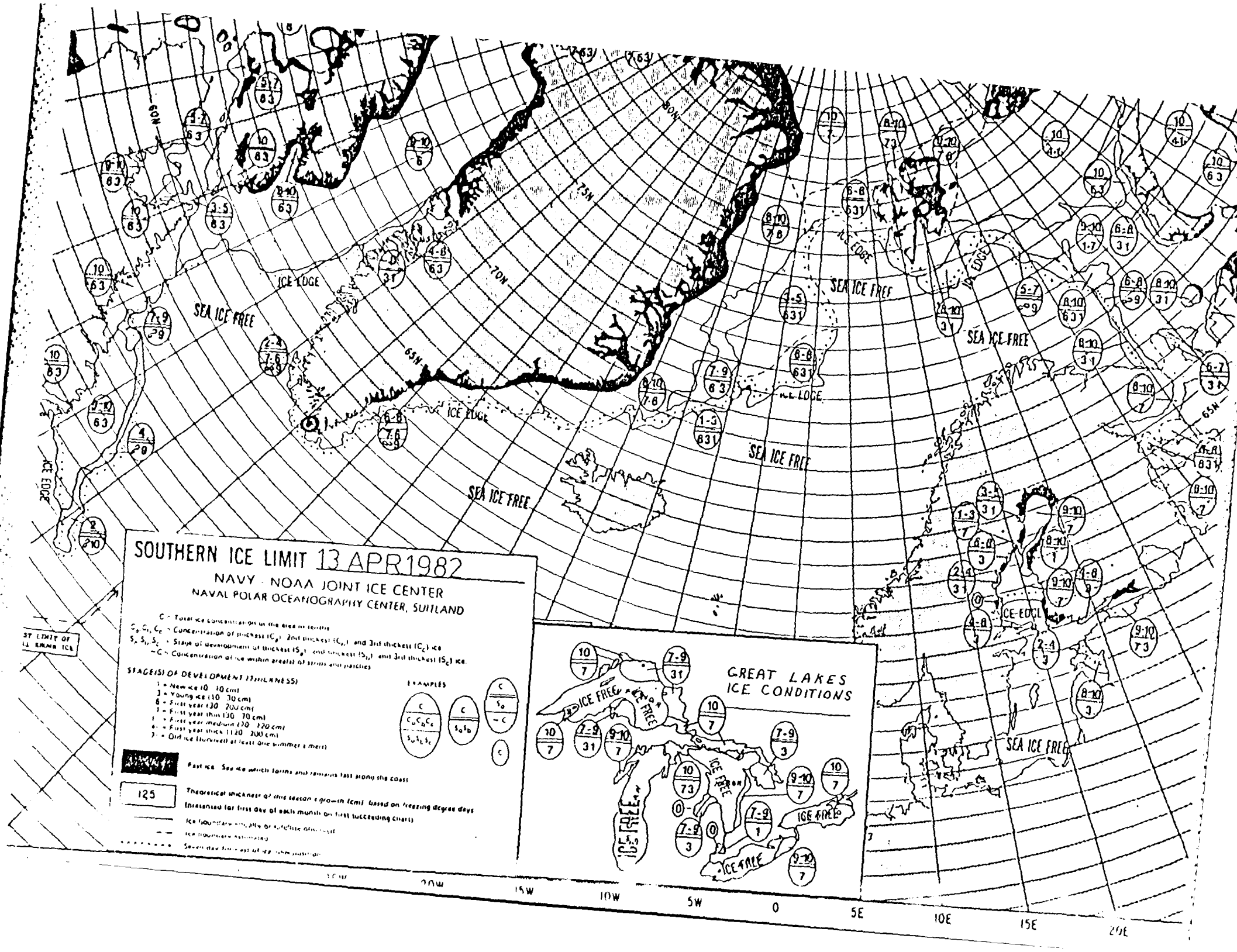


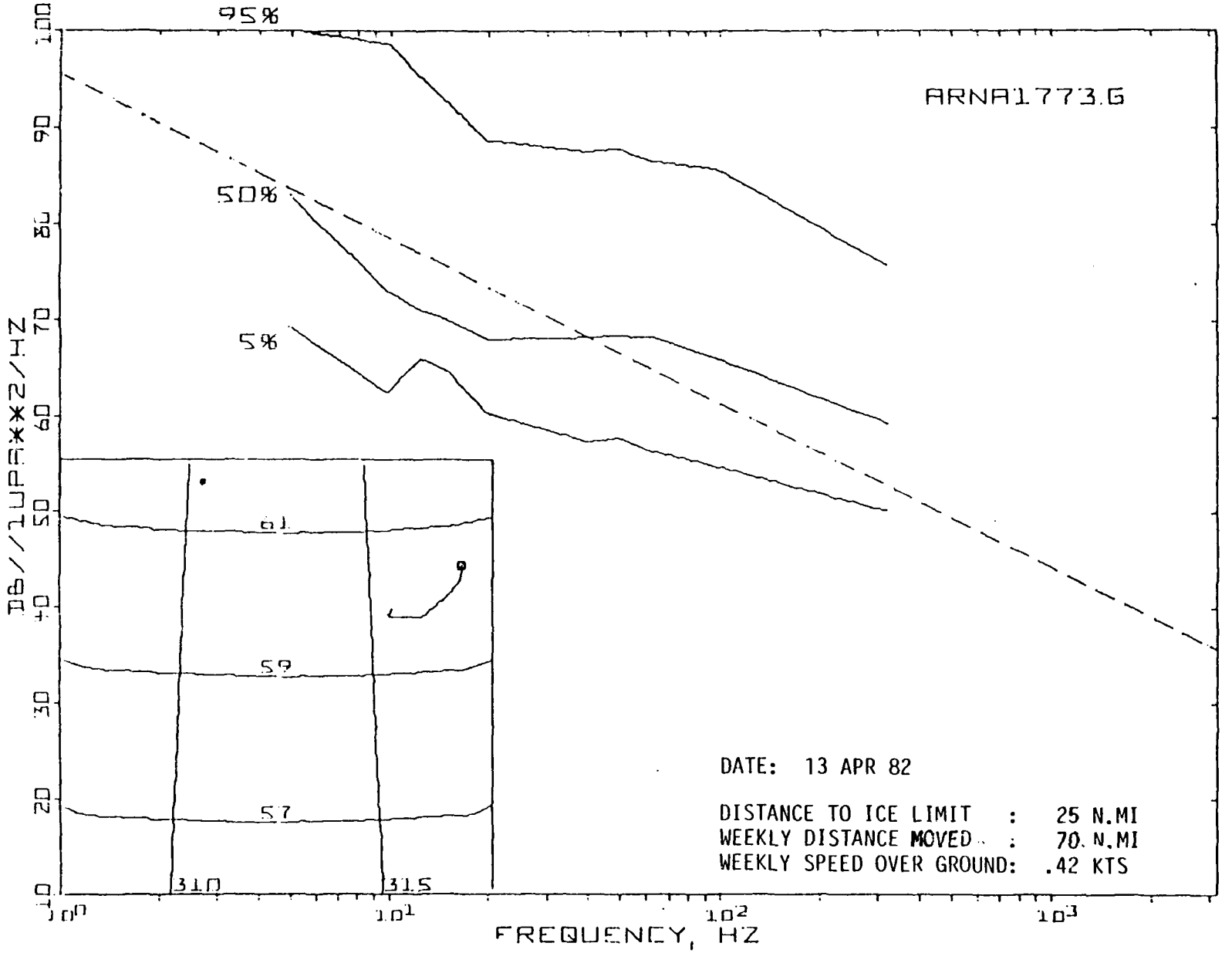
BUOY 1773 APR 14-20 82

JULIAN DAYS: 104 TO 110 Apr 14-20, 82

OUTPUT IN FILE ARNA1773.H
THE NUMBER OF DATA SAMPLES IS 47

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	79.2	8.3	63.9	66.8	68.1	73.4	80.1	83.0	87.4	91.5	106.0
10.0	69.0	8.3	56.3	58.3	60.8	62.4	67.6	72.8	79.7	85.7	91.7
12.5	71.8	6.5	64.9	65.9	65.9	66.8	69.1	74.4	82.0	84.9	87.1
15.6	69.8	5.0	61.7	63.6	65.7	66.3	67.9	71.1	77.0	82.5	82.5
20.0	68.3	7.8	56.8	58.4	59.7	61.9	66.3	71.7	80.9	84.0	84.0
40.0	65.8	6.9	51.8	52.9	53.8	60.6	67.4	70.9	73.4	75.4	78.7
50.0	65.7	6.2	51.9	53.9	55.6	59.9	67.7	70.9	70.9	73.7	75.8
63.0	64.2	6.2	49.4	50.1	54.6	60.6	66.6	68.9	70.1	71.7	73.5
100.0	63.1	6.1	48.1	50.7	54.6	58.9	63.0	67.4	70.9	71.8	74.7
320.0	56.7	5.0	41.3	50.1	50.8	52.8	57.5	60.4	62.9	63.6	66.4


SOUTHERN ICE LIMIT 13 APR1982
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
GREAT LAKES ICE CONDITIONS
ICE EDGE
SEA ICE FREE
80N
75N
70N
65N
60W
50W
40W
30W
20W
15W
10W
5W
0
5E
10E
15E
20E

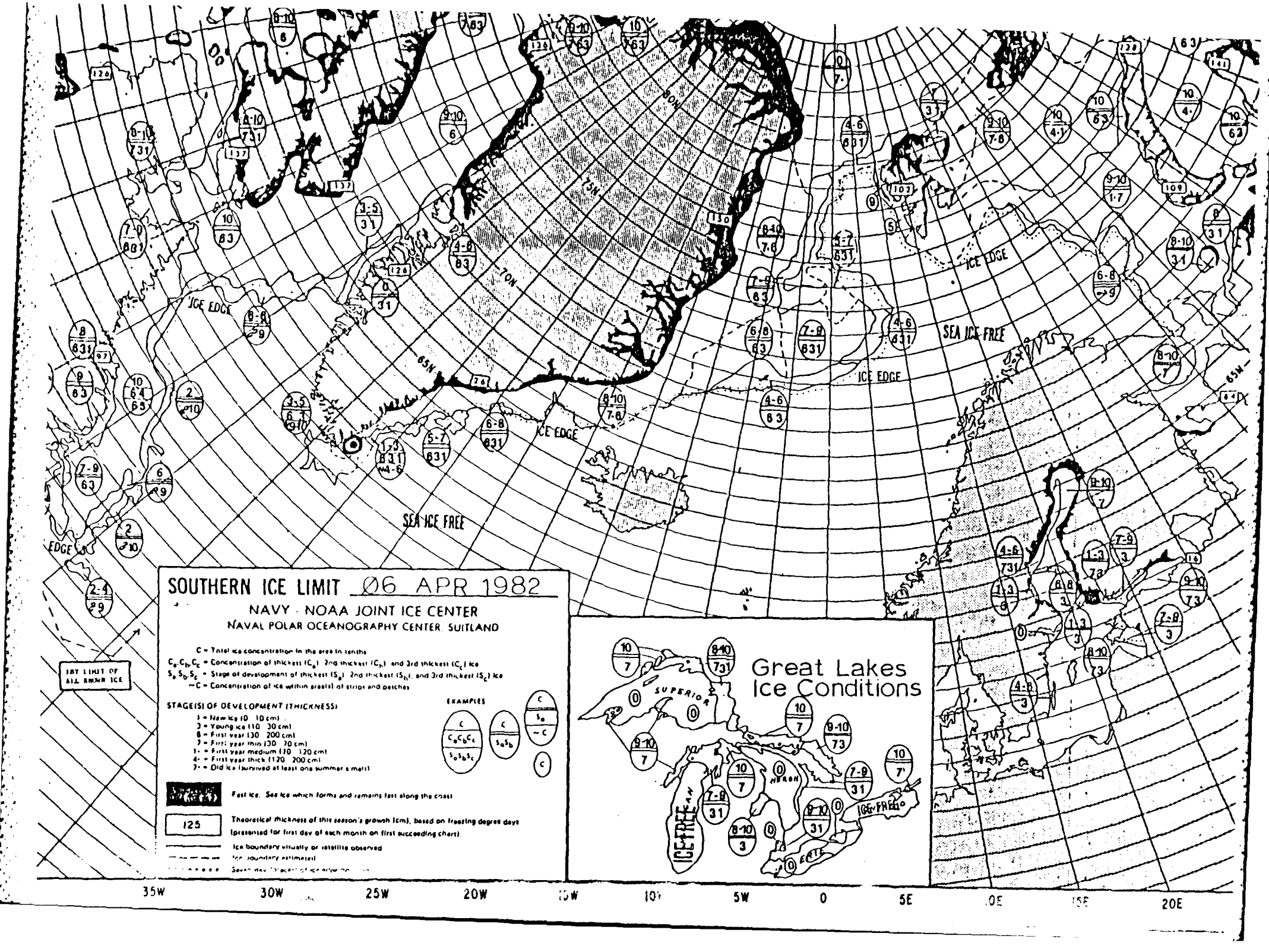


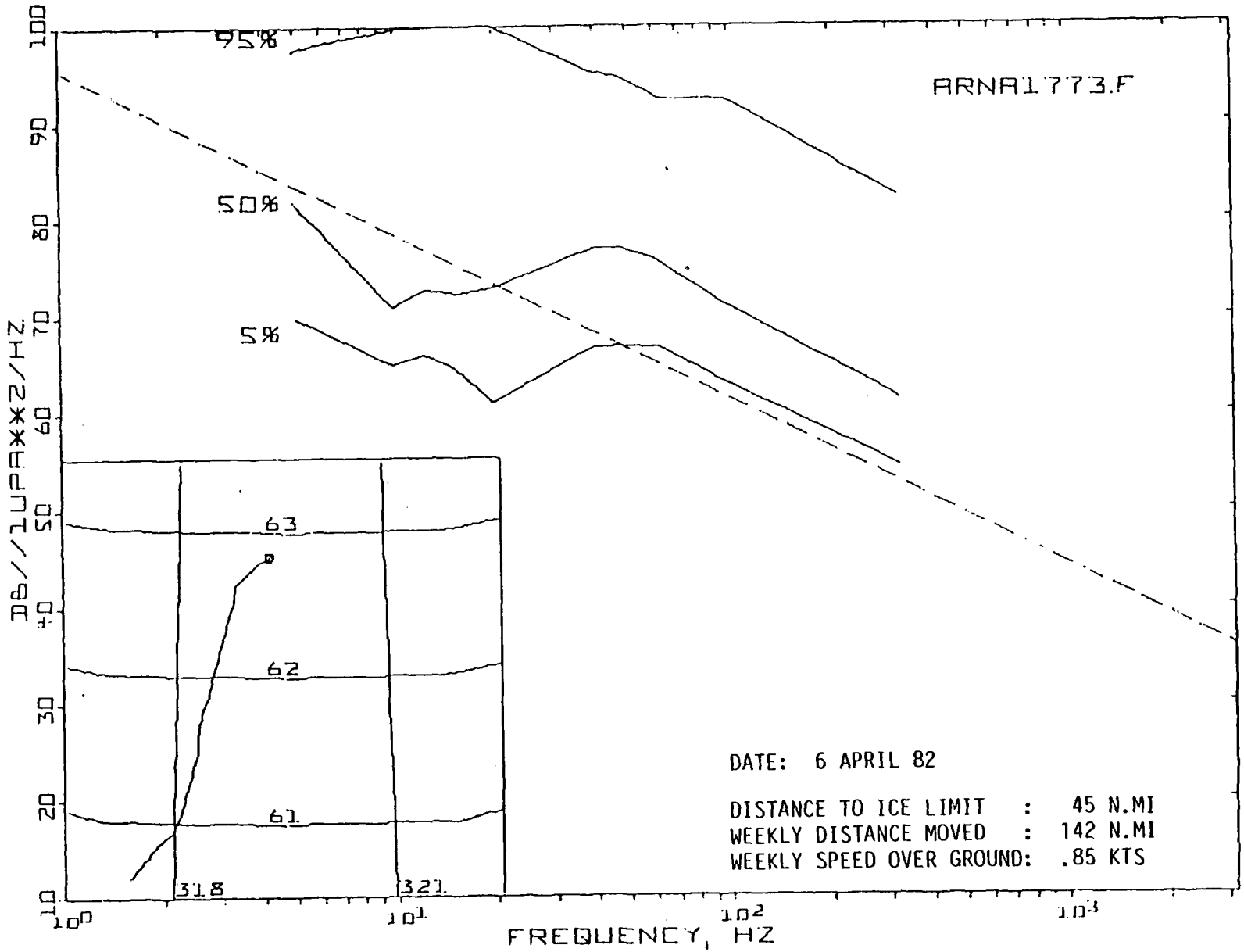
BUOY 1773 APR 7-13 82

JULIAN DAYS: 97 TO 103 Apr 7-13, 82

OUTPUT IN FILE ARNA1773.G
THE NUMBER OF DATA SAMPLES IS 52

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	86.5	12.3	66.6	69.3	69.9	77.8	83.0	96.7	104.9	108.0	110.2
10.0	76.6	12.2	58.8	62.4	63.1	65.9	72.8	84.9	96.0	98.5	99.2
12.5	76.5	10.6	65.9	65.9	66.8	67.6	70.9	84.0	92.5	95.0	101.0
15.6	74.8	10.4	63.6	64.4	65.1	65.7	69.7	84.4	90.4	92.0	99.8
20.0	71.9	10.8	59.1	60.3	60.9	62.8	67.9	80.0	87.7	88.5	98.0
40.0	70.8	9.6	55.4	57.3	57.9	64.9	68.1	77.9	83.0	87.4	94.0
50.0	70.8	9.2	54.8	57.7	58.9	64.9	68.4	75.8	83.0	87.3	92.5
63.0	70.2	9.4	53.7	56.2	58.1	64.1	68.2	74.9	82.8	86.3	91.5
100.0	68.6	8.8	54.6	54.6	58.9	61.4	65.8	74.1	81.9	85.5	89.9
320.0	61.2	7.3	49.2	50.1	50.8	56.1	59.3	64.8	71.4	75.6	78.4


SOUTHERN ICE LIMIT 06 APR 1982
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
$C_a C_b C_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice
$S_a S_b S_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice
–C = Concentration of ice within area(s) of strips and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
3 = First year (30 - 200 cm)
4 = First year thin (30 - 70 cm)
5 = First year medium (70 - 120 cm)
6 = First year thick (120 - 200 cm)
7 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. See ice which forms and remains fast along the coast
125
Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
Ice boundary visually or satellite observed
Ice boundary estimated
Seven-day forecast of ice edge
ICE EDGE
SEA ICE FREE
Great Lakes Ice Conditions
SUPERIOR
MICHIGAN
HURON
ERIE
ONTARIO
ICE-FREE
ICE-FREE
90N
75N
65N
35W
30W
25W
20W
15W
10W
5W
0
5E
10E
15E
20E

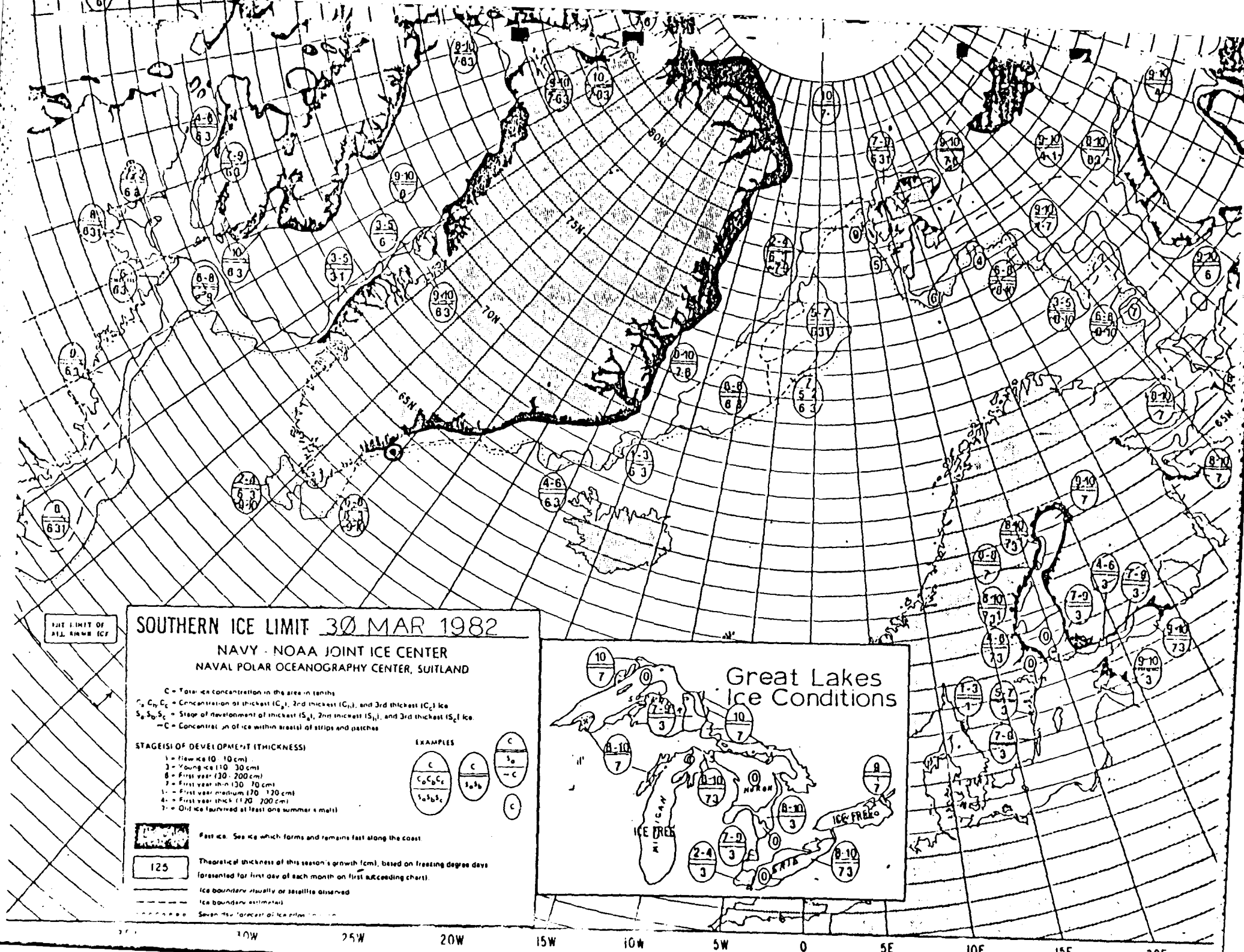


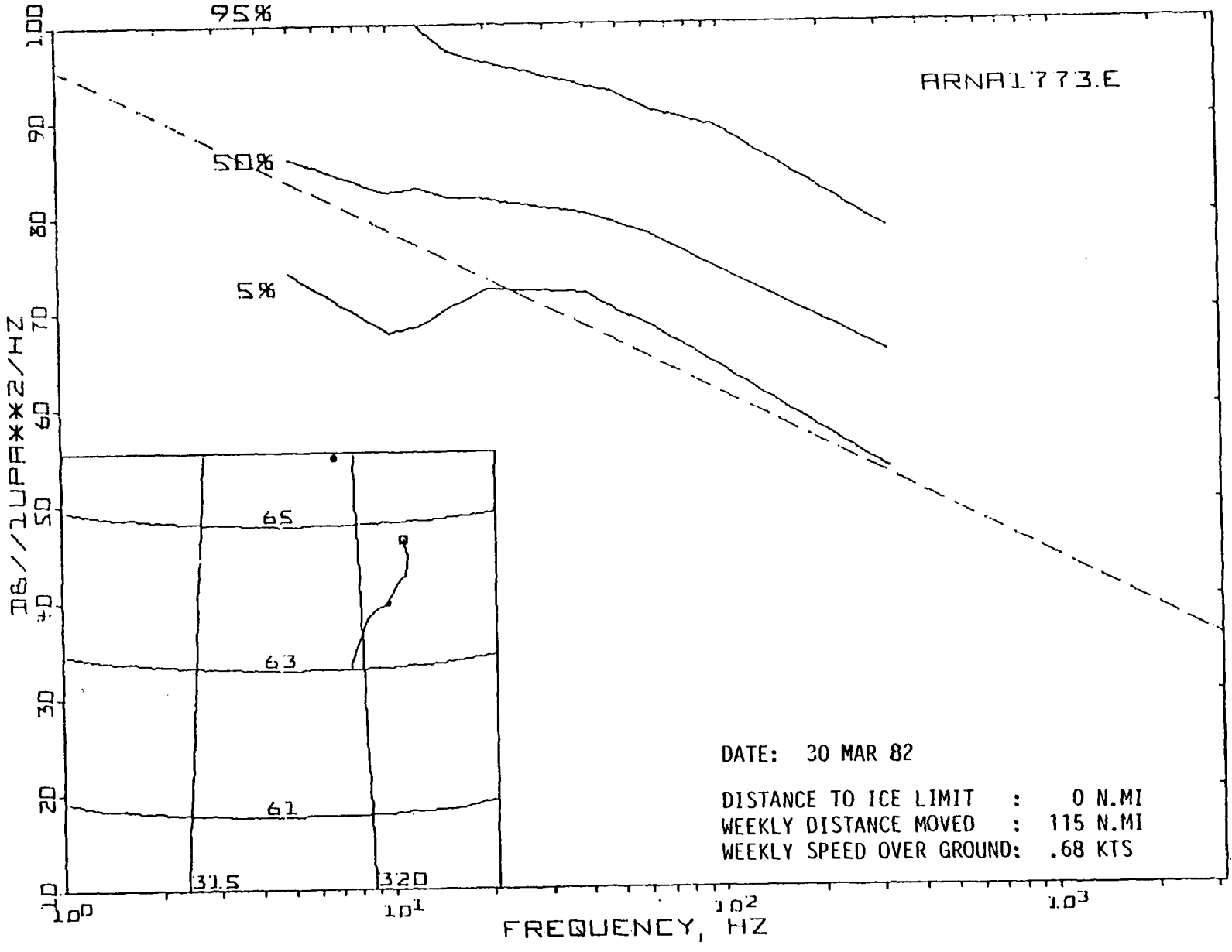
BUOY 1773 MR 31-AP 6 82

JULIAN DAYS: 90 TO 96 Mar 31 - Apr 6, 82

OUTPUT IN FILE ARNA1773.F
THE NUMBER OF DATA SAMPLES IS 55

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	82.5	7.6	69.3	69.9	72.7	76.9	81.9	86.1	92.2	97.5	100.0
10.0	74.0	9.8	60.8	64.9	64.9	68.4	70.9	75.1	82.9	99.8	103.8
12.5	75.2	9.9	64.9	65.9	66.8	68.4	72.8	76.3	87.8	101.0	104.5
15.6	75.1	10.5	63.6	64.4	65.1	67.9	72.3	77.8	81.7	101.9	105.0
20.0	73.9	11.2	58.4	60.9	62.8	65.7	72.9	77.8	80.9	101.2	102.5
40.0	77.8	7.3	65.8	66.7	69.9	72.7	77.0	80.1	83.0	95.0	95.9
50.0	77.7	6.7	64.9	66.8	70.3	74.4	76.9	78.9	83.0	94.4	94.4
63.0	76.3	6.6	64.7	66.6	69.5	72.6	75.6	77.8	82.8	92.3	92.3
100.0	72.1	7.9	61.4	62.7	64.9	66.6	70.9	73.4	81.4	92.2	92.8
320.0	63.7	7.9	52.2	54.3	56.1	58.8	61.3	65.4	73.3	82.3	84.5


SOUTHERN ICE LIMIT 30 MAR 1982
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
C_a C_b C_c = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice
S_a S_b S_c = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice
–C = Concentration of ice within area(s) of strips and patches
STAGES OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
3 = First year (30 - 200 cm)
4 = First year thin (30 - 70 cm)
5 = First year medium (70 - 120 cm)
6 = First year thick (120 - 200 cm)
7 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast.
125
Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
Ice boundary visually or satellite observed
Ice boundary estimated
Great Lakes Ice Conditions
ICE FREE
ICE FREE
80W
75W
70W
65W
25W
20W
15W
10W
5W
0
5E
10E
15E
20E

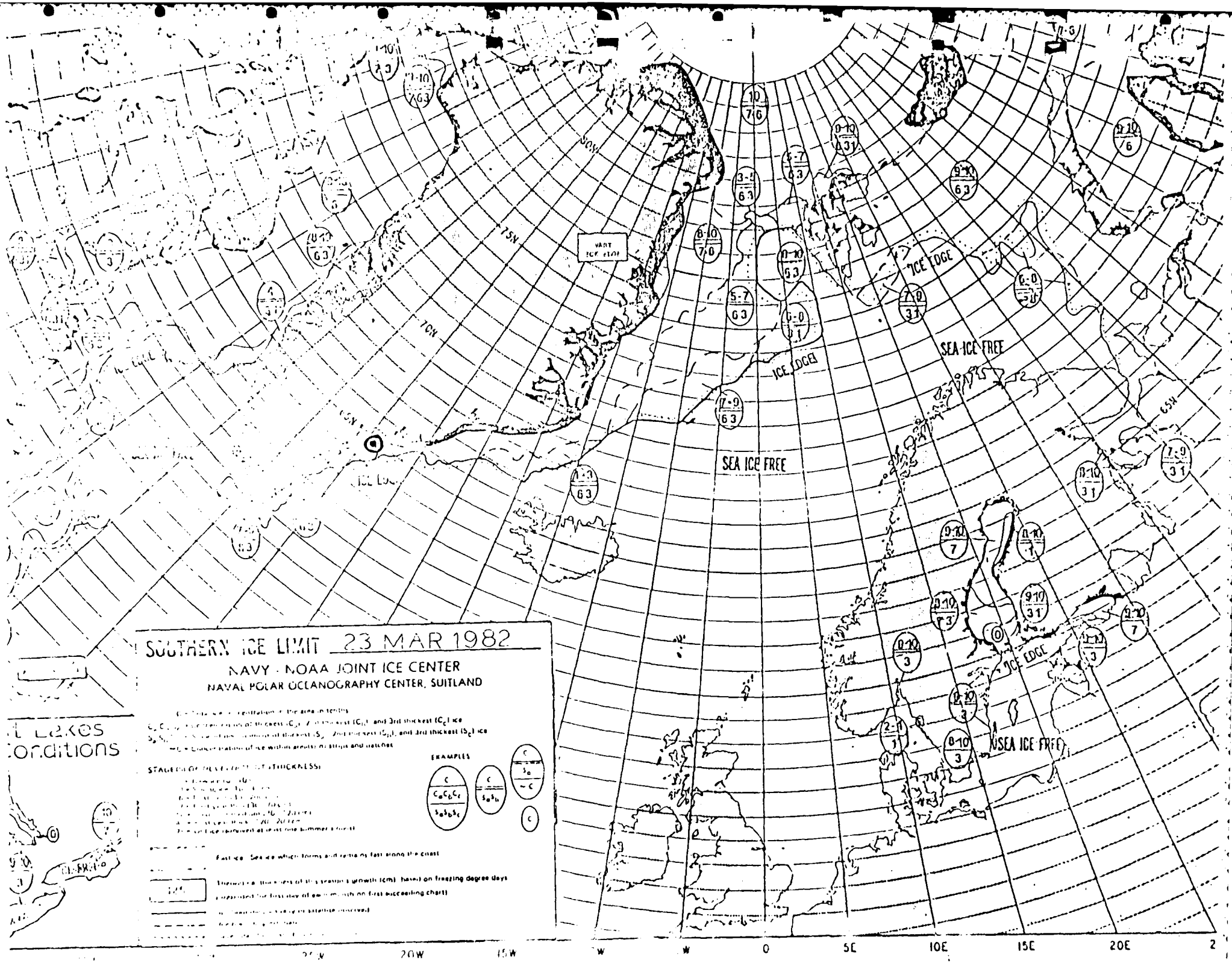


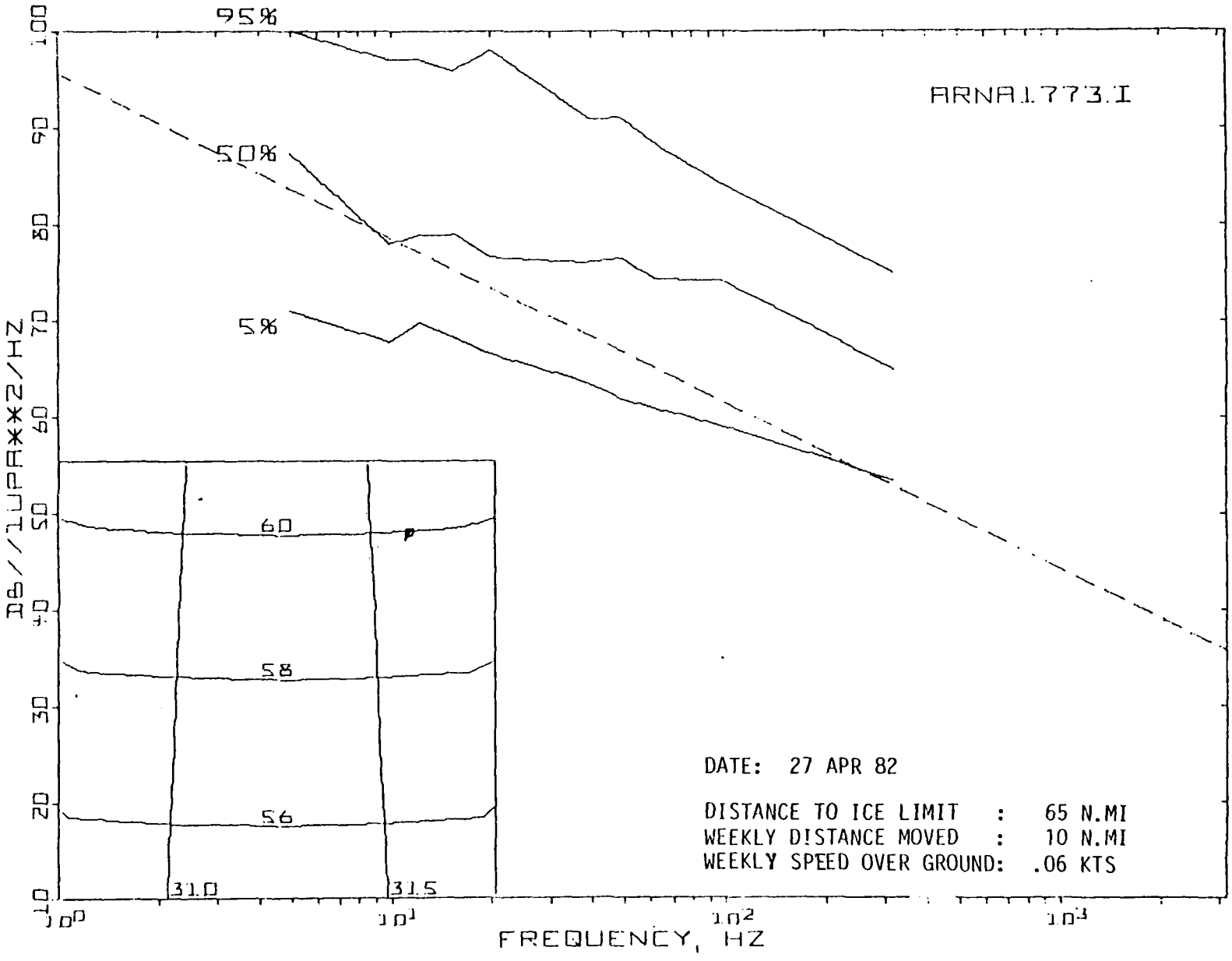
BUOY 1773 MAR 24-30 82

JULIAN DAYS: 83 TO 89 Mar 24-30, 82 NB

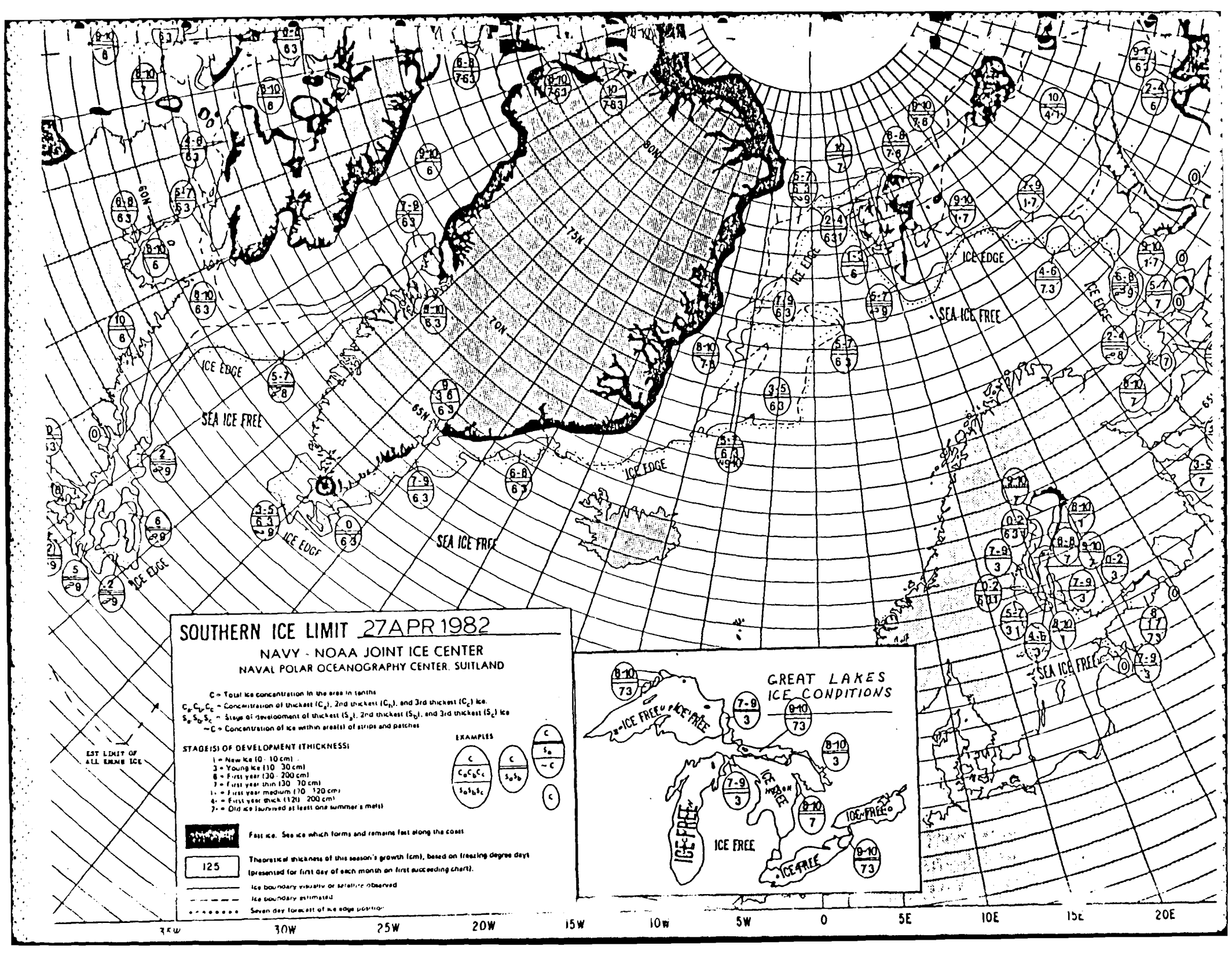
OUTPUT IN FILE ARNA1773.E
THE NUMBER OF DATA SAMPLES IS 55

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	88.9	10.7	69.9	74.1	77.8	81.9	86.1	94.0	106.0	108.0	113.1
10.0	83.1	10.4	64.9	67.6	70.3	75.1	82.4	88.4	96.0	101.0	106.5
12.5	82.7	9.6	67.6	68.4	70.9	74.4	82.9	87.1	95.0	100.4	107.0
15.6	83.1	8.9	68.8	70.4	72.9	75.7	81.7	87.7	94.5	97.0	105.0
20.0	82.7	8.3	66.9	72.3	73.9	75.7	81.7	87.7	92.9	95.8	102.5
40.0	81.1	6.9	68.1	71.8	73.4	75.9	80.1	86.8	88.0	93.4	95.9
50.0	80.2	6.9	68.4	69.7	71.9	75.1	78.9	84.9	89.0	92.5	94.4
63.0	78.2	9.8	27.4	68.2	70.1	72.6	77.8	83.8	88.2	90.7	92.3
100.0	75.3	7.9	62.7	63.9	65.8	68.7	74.1	80.8	84.7	89.0	93.4
320.0	65.6	8.6	51.5	53.3	54.3	57.5	65.4	71.4	75.6	78.4	84.5


SEA ICE FREE
ICE EDGE
SEA ICE FREE
ICE EDGE
SEA ICE FREE
ICE EDGE
SEA ICE FREE
SOUTHERN ICE LIMIT 23 MAR 1982
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast
20W
15W
0
5E
10E
15E
20E



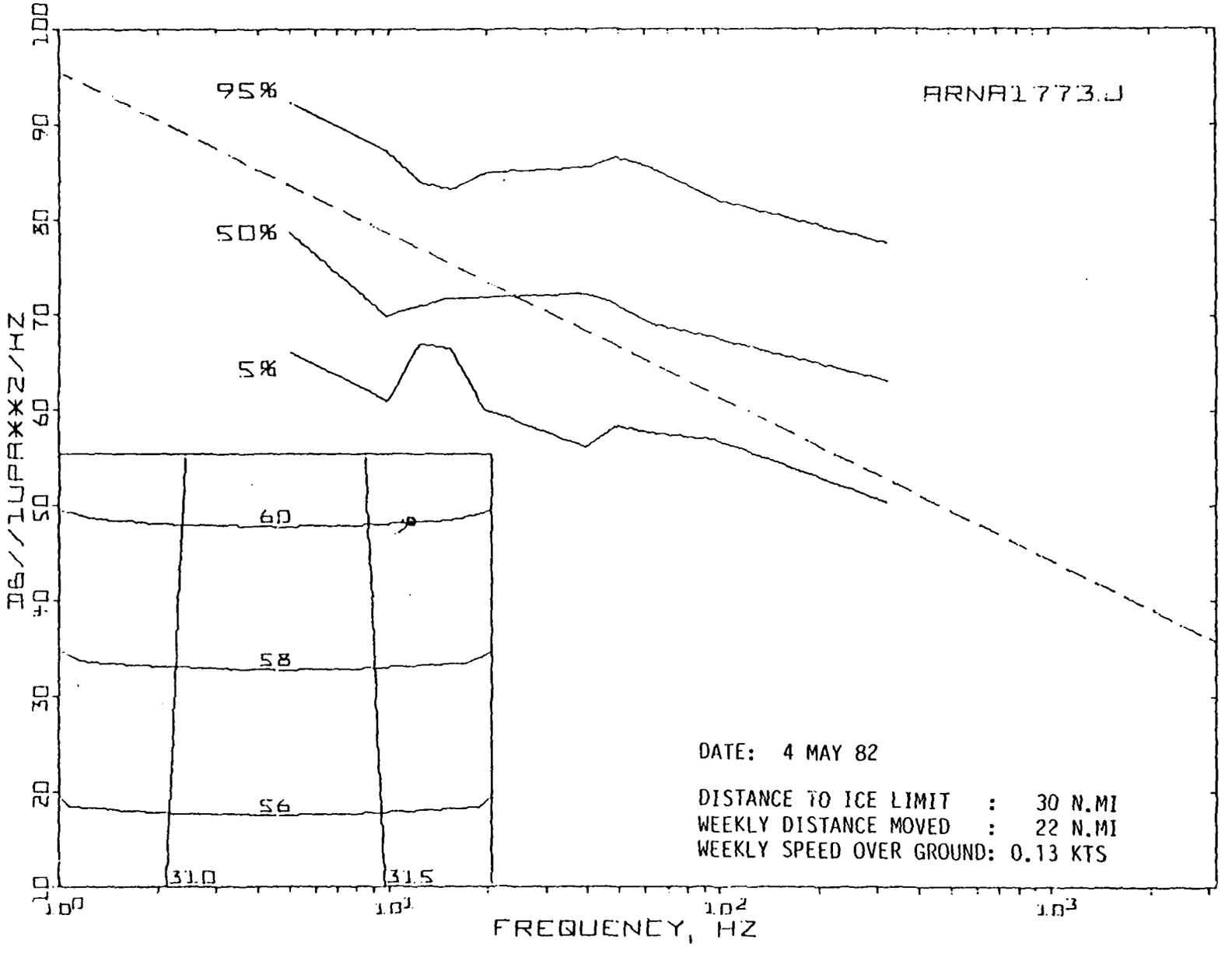
BUOY 1773 APR 21-27 82


SOUTHERN ICE LIMIT 27APR1982
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice
~C = Concentration of ice within area(s) of strips and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
8 = First year medium (70 - 120 cm)
9 = First year thick (120 - 200 cm)
7 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. See ice which forms and remains fast along the coast.
125
Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
Ice boundary visually or satellite observed
Ice boundary estimated
Seven day forecast of ice edge position
EST LIMIT OF ALL YEAR ICE
GREAT LAKES ICE CONDITIONS
ICE FREE
ICE EDGE
SEA ICE FREE
60N
70N
75N
80N
65N
30W
25W
20W
15W
10W
5W
0
5E
10E
15E
20E

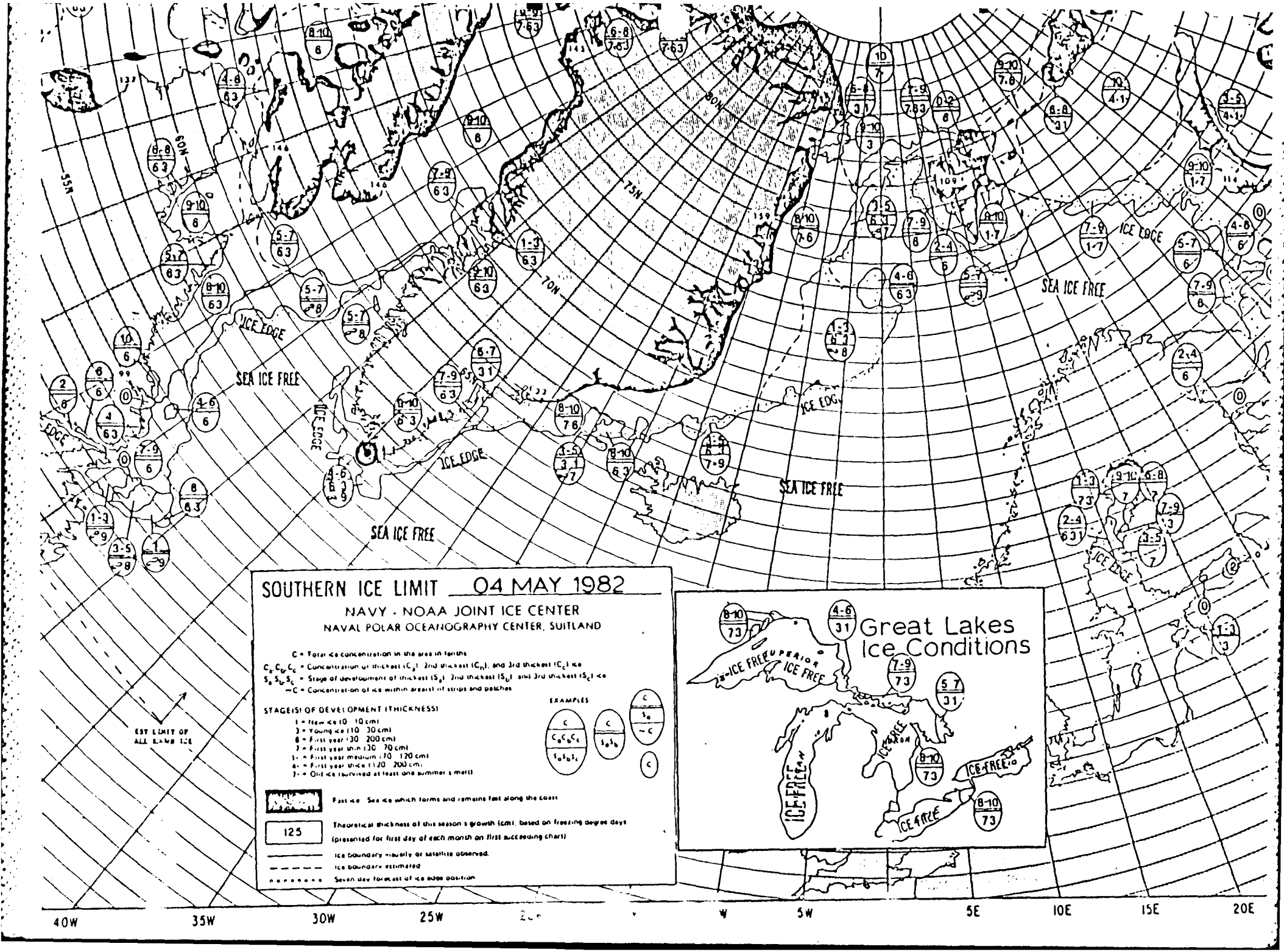
JULIAN DAYS: 118 TO 124 Apr 28 - May 4, 82

OUTPUT IN FILE ARNA1773.J
THE NUMBER OF DATA SAMPLES IS 47

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	78.6	7.6	65.8	65.8	69.9	73.4	78.7	81.9	88.0	92.2	101.9
10.0	72.0	8.2	59.9	60.8	63.7	66.8	69.7	75.1	84.0	87.1	93.8
12.5	72.9	5.6	66.8	66.8	67.6	68.4	70.9	75.7	79.8	84.0	90.0
15.6	72.5	5.0	66.3	66.3	66.9	67.9	71.7	74.8	78.4	83.1	86.9
20.0	71.4	7.3	59.1	59.7	62.8	65.7	71.7	76.4	80.9	85.0	85.0
40.0	71.4	8.2	55.9	56.1	62.1	63.9	72.2	75.9	81.4	85.5	90.7
50.0	71.2	8.5	55.8	58.3	59.9	64.9	70.9	75.8	82.4	86.5	90.9
63.0	70.2	8.9	55.6	57.5	58.7	64.1	68.9	76.2	83.8	85.5	88.8
100.0	68.3	8.5	50.9	56.7	57.3	61.4	67.4	74.7	80.8	81.9	88.0
320.0	63.1	7.9	50.1	50.2	53.3	56.8	62.9	67.3	72.4	77.4	83.4



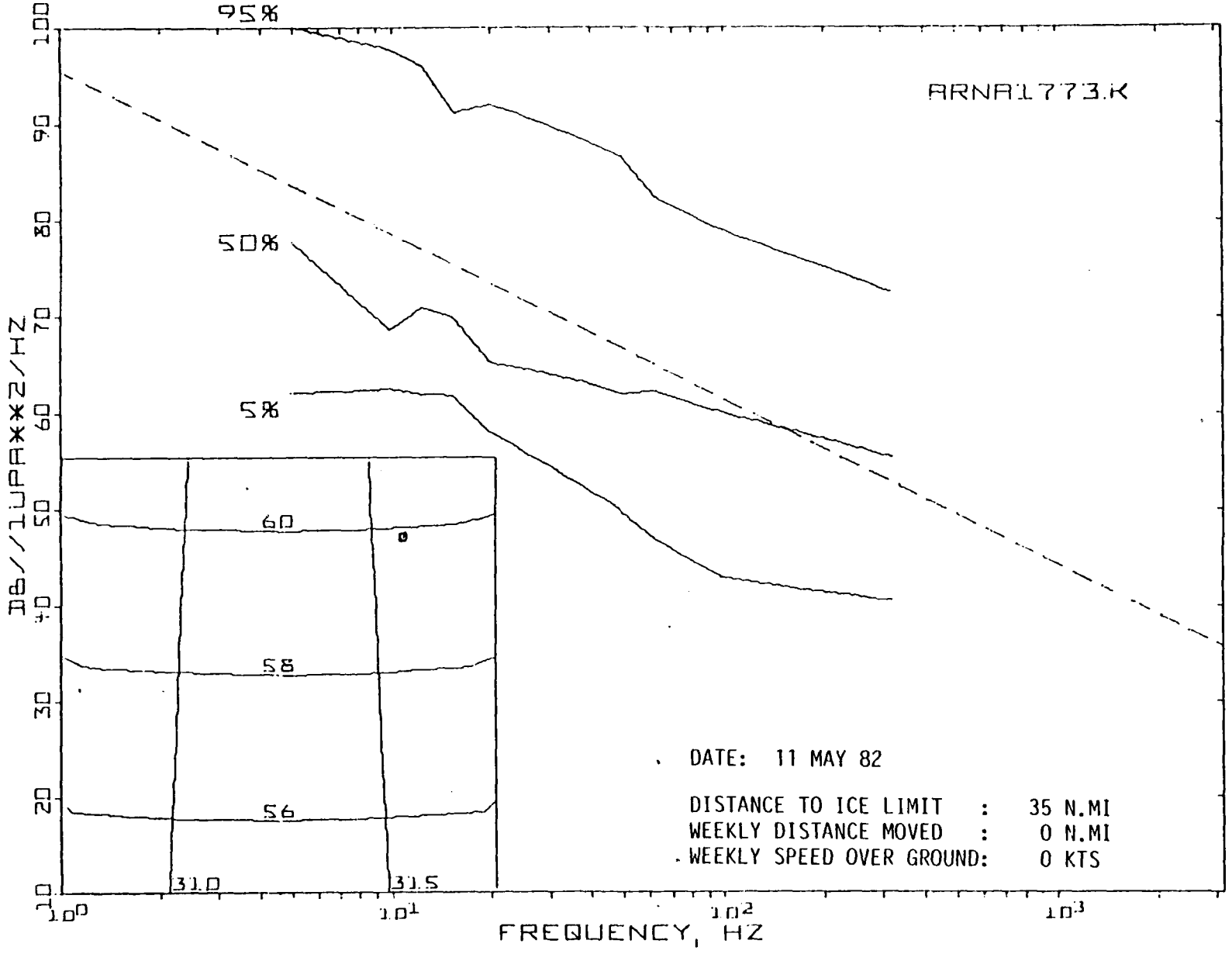
BUOY 1773 AP 28-MY 4 82


SOUTHERN ICE LIMIT 04 MAY 1982
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
$C_a C_b C_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice
$S_a S_b S_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice
~C = Concentration of ice within areas of strips and patches
STAGES OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
3 = First year (30 - 200 cm)
4 = First year thin (30 - 70 cm)
5 = First year medium (70 - 120 cm)
6 = First year thick (120 - 200 cm)
7 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice - Sea ice which forms and remains fast along the coast
125 Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart)
Ice boundary visually or satellite observed.
Ice boundary estimated
Seven day forecast of ice edge position
EST LIMIT OF ALL RAMB ICE
SEA ICE FREE
ICE EDGE
Great Lakes Ice Conditions
ICE FREE
SUPERIOR
40W
35W
30W
25W
5W
5E
10E
15E
20E

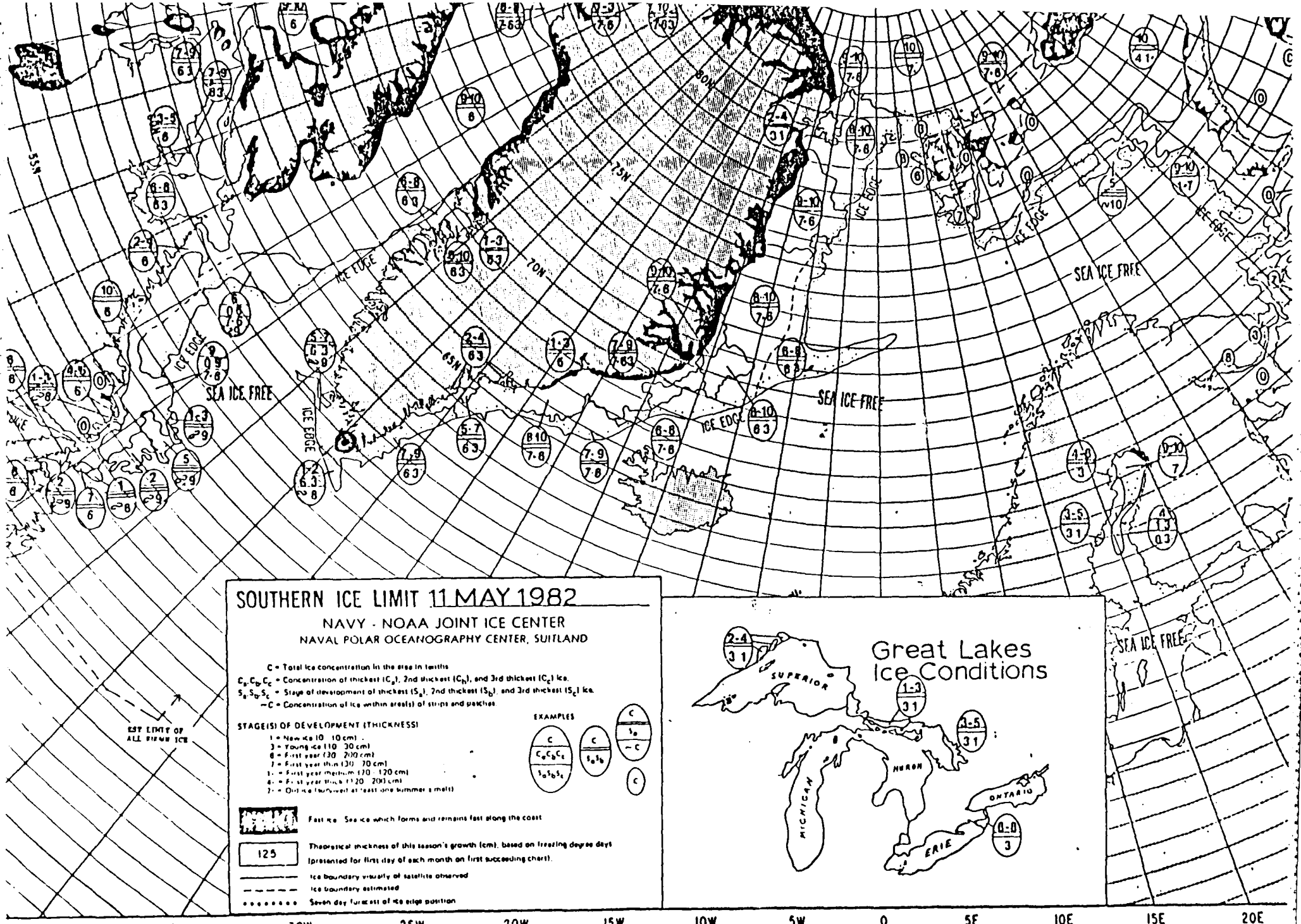
JULIAN DAYS: 125 TO 131 May 5-11, 82

OUTPUT IN FILE ARNA1773.K
THE NUMBER OF DATA SAMPLES IS 38

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	78.8	12.8	61.4	61.9	63.9	68.7	77.8	86.0	97.5	102.8	106.0
10.0	74.0	11.8	60.8	62.4	62.9	64.9	68.4	81.8	90.0	97.7	101.0
12.5	75.2	11.2	61.1	61.8	62.9	66.5	70.9	84.0	90.0	96.0	101.0
15.6	73.6	10.2	60.9	61.7	62.5	66.9	69.7	78.9	88.5	91.0	98.9
20.0	70.7	11.5	57.8	57.8	58.4	60.9	65.1	78.0	87.7	92.0	98.9
40.0	66.0	12.0	51.8	51.8	53.4	55.9	63.0	74.8	83.9	88.0	94.0
50.0	64.5	11.7	49.7	49.7	50.9	55.6	61.8	74.4	81.1	86.5	89.0
63.0	62.9	11.1	45.7	46.6	50.1	53.7	62.2	69.5	78.7	82.2	84.7
100.0	60.6	10.7	42.1	42.7	47.4	53.8	59.8	69.9	75.3	78.7	80.1
320.0	55.8	10.6	40.4	40.4	42.1	48.1	55.3	64.8	70.2	72.4	81.6



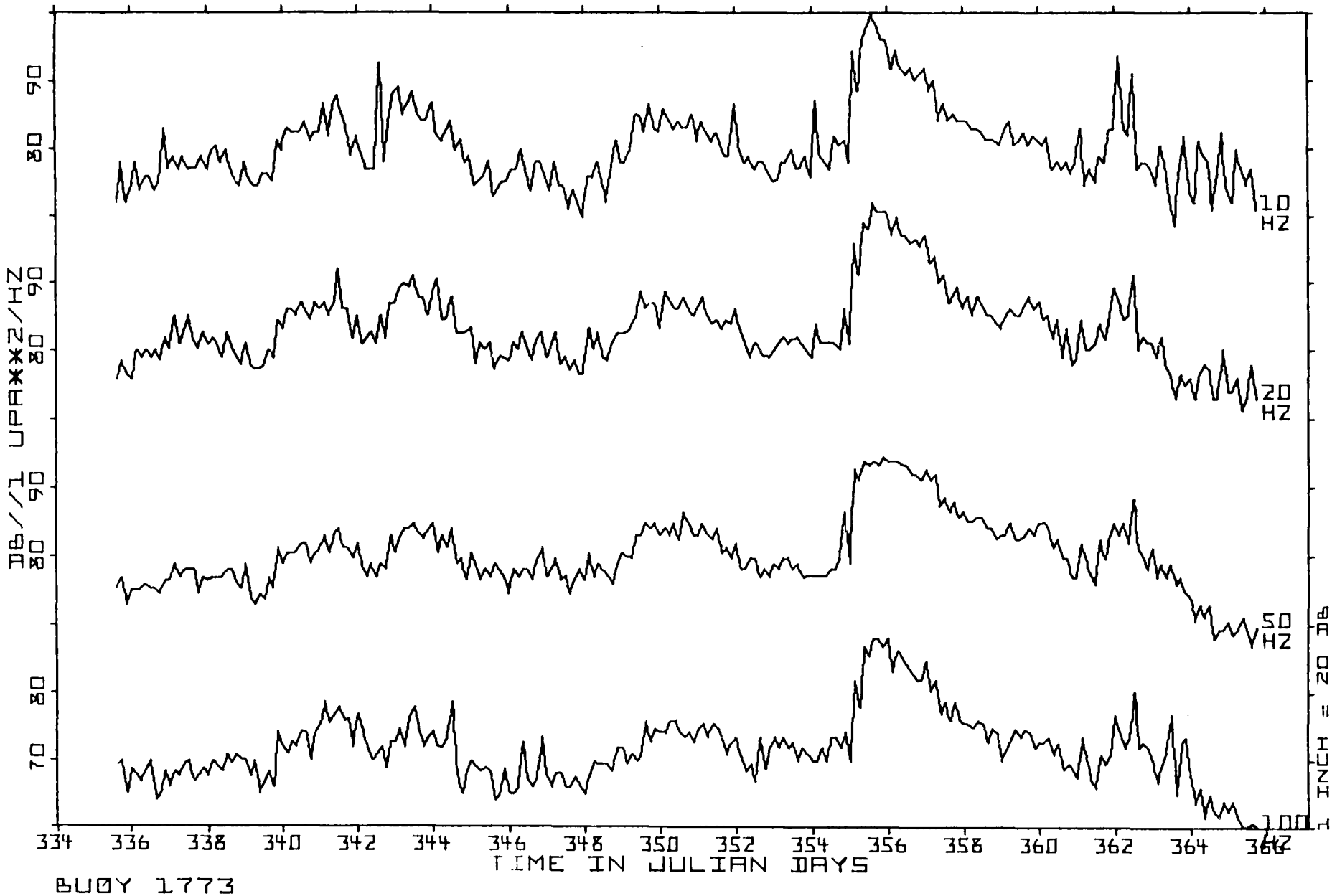
BUOY 1773 MAY 5-11 82


SOUTHERN ICE LIMIT 11 MAY 1982
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
$C_a C_b C_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_a S_b S_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
—C = Concentration of ice within area(s) of strips and patches.
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
5 = First year medium (70 - 120 cm)
6 = First year thick (120 - 200 cm)
8 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast.
Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
Ice boundary visually or satellite observed
Ice boundary estimated
Seven day forecast of ice edge position
EST LIMIT OF ALL FIRM ICE
ICE EDGE
SEA ICE FREE
Great Lakes Ice Conditions
SUPERIOR
MICHIGAN
HURON
ERIE
ONTARIO
70N
65N
60N
55N
75N
80W
70W
75W
20W
15W
10W
5W
0
5E
10E
15E
20E

JULIAN DAYS: 132 TO 138

OUTPUT IN FILE ARNA1773.L
THE NUMBER OF DATA SAMPLES IS 20

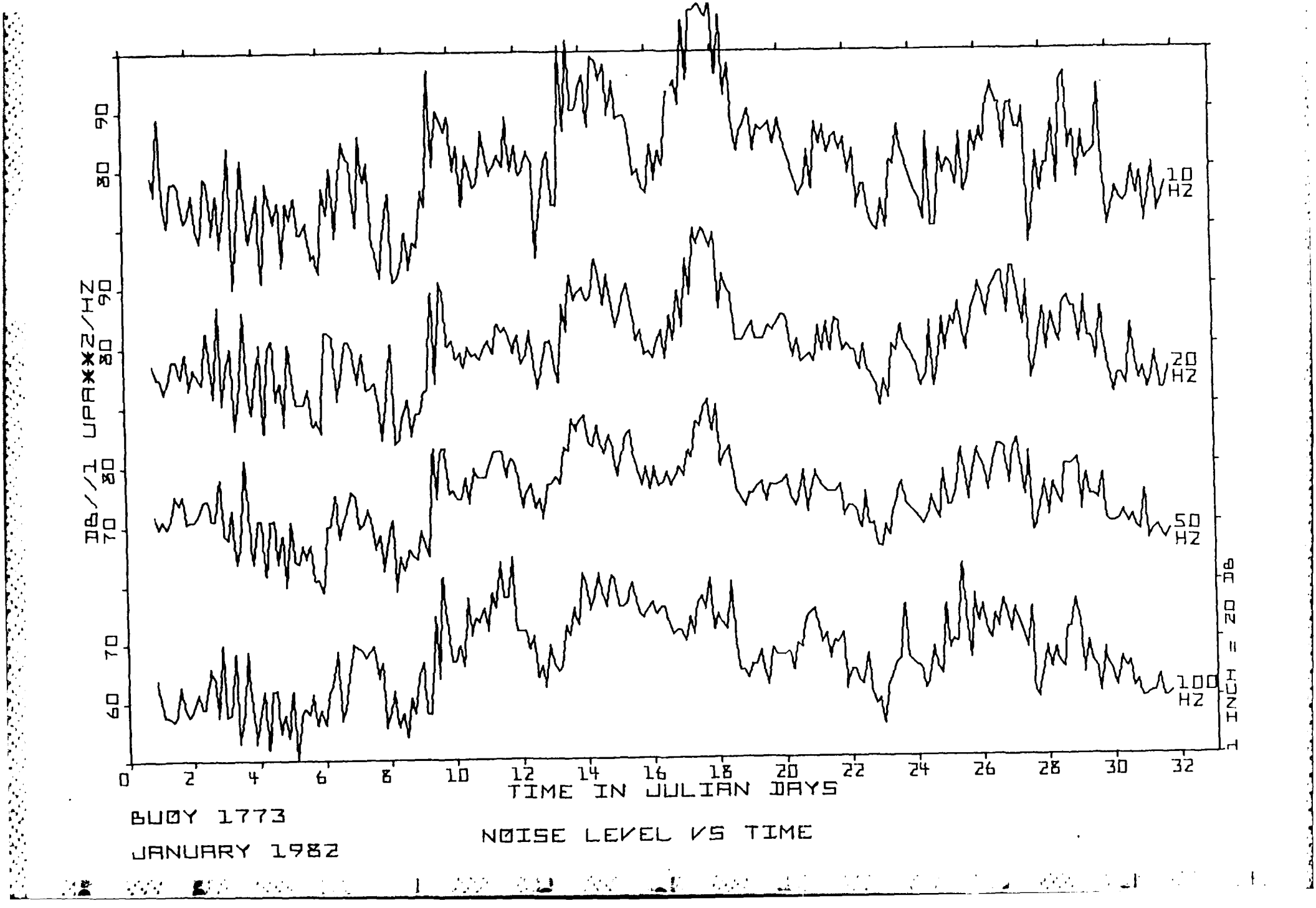
FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	76.4	7.2	63.9	63.9	65.5	69.9	75.3	81.4	86.0	87.0	87.0
10.0	67.0	6.6	58.8	58.8	58.8	61.6	64.9	70.9	75.0	78.8	79.8
12.5	69.6	6.8	64.9	64.9	64.9	65.9	65.9	70.0	84.5	84.5	85.2
15.6	68.5	5.6	62.8	62.8	63.6	64.4	65.1	72.0	78.0	78.0	78.9
20.0	67.3	6.7	57.6	57.6	57.6	61.9	65.1	71.7	76.4	77.0	78.9
40.0	59.8	7.2	53.8	53.8	53.8	54.6	54.6	63.3	71.5	72.2	72.2
50.0	58.7	6.5	51.9	51.9	52.8	54.8	55.6	58.3	70.0	70.9	70.9
63.0	56.0	5.6	47.5	47.5	51.7	52.6	53.7	55.6	65.5	65.5	65.7
100.0	54.9	5.8	43.9	43.9	48.1	51.8	52.8	61.4	63.0	63.9	64.9
320.0	50.2	4.3	40.4	40.4	42.9	49.6	50.8	52.2	52.8	53.3	60.4

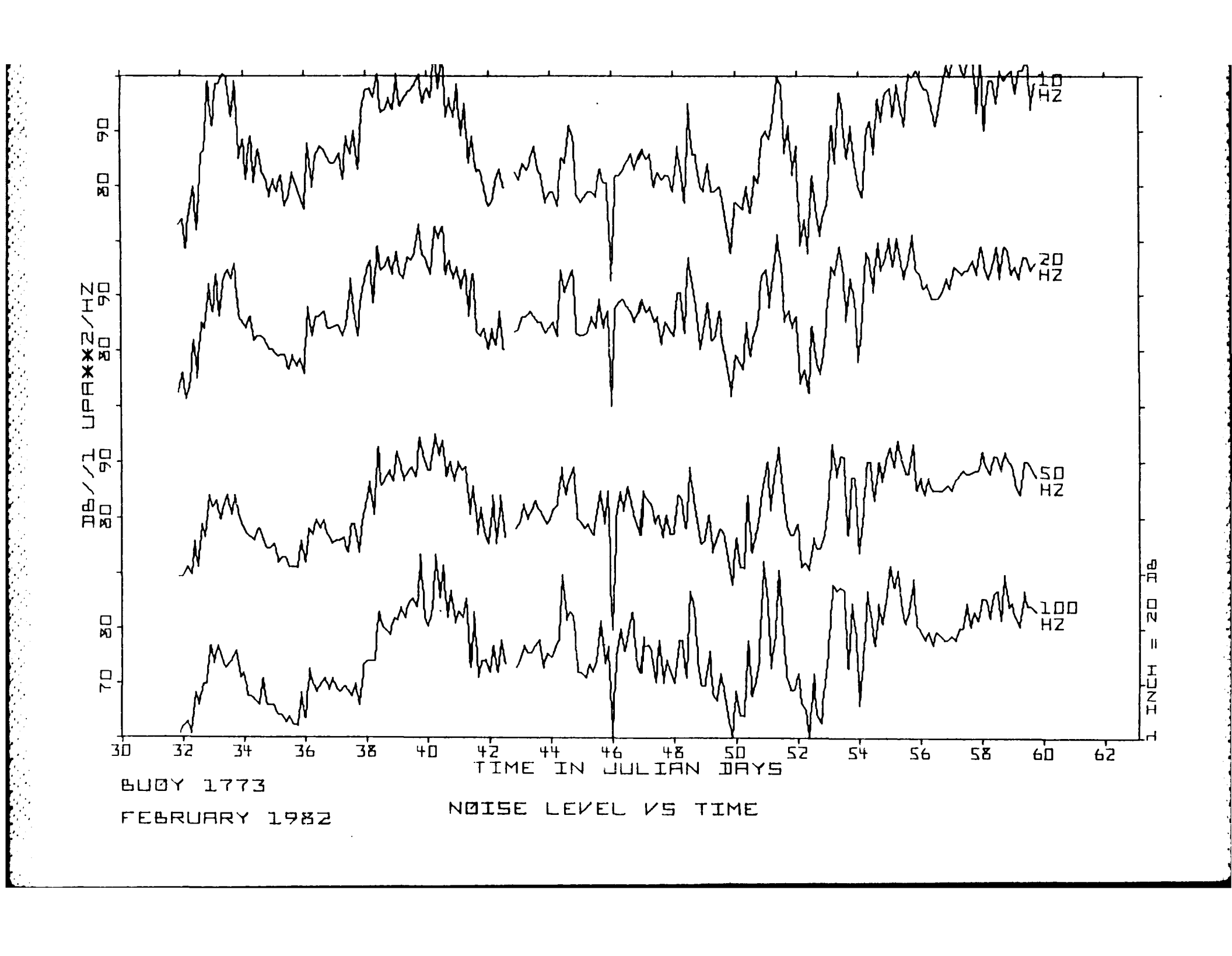


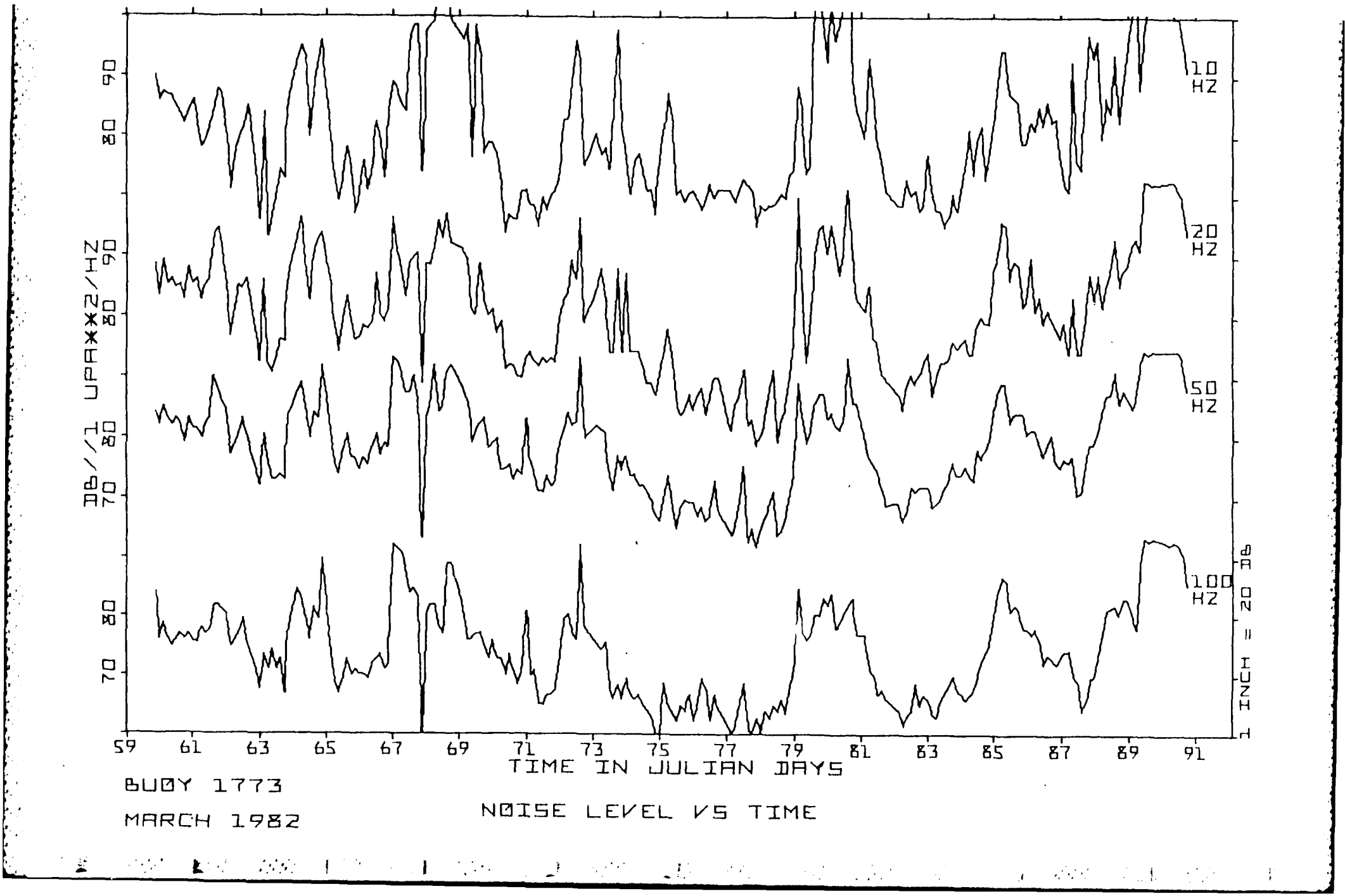
BUOY 1773

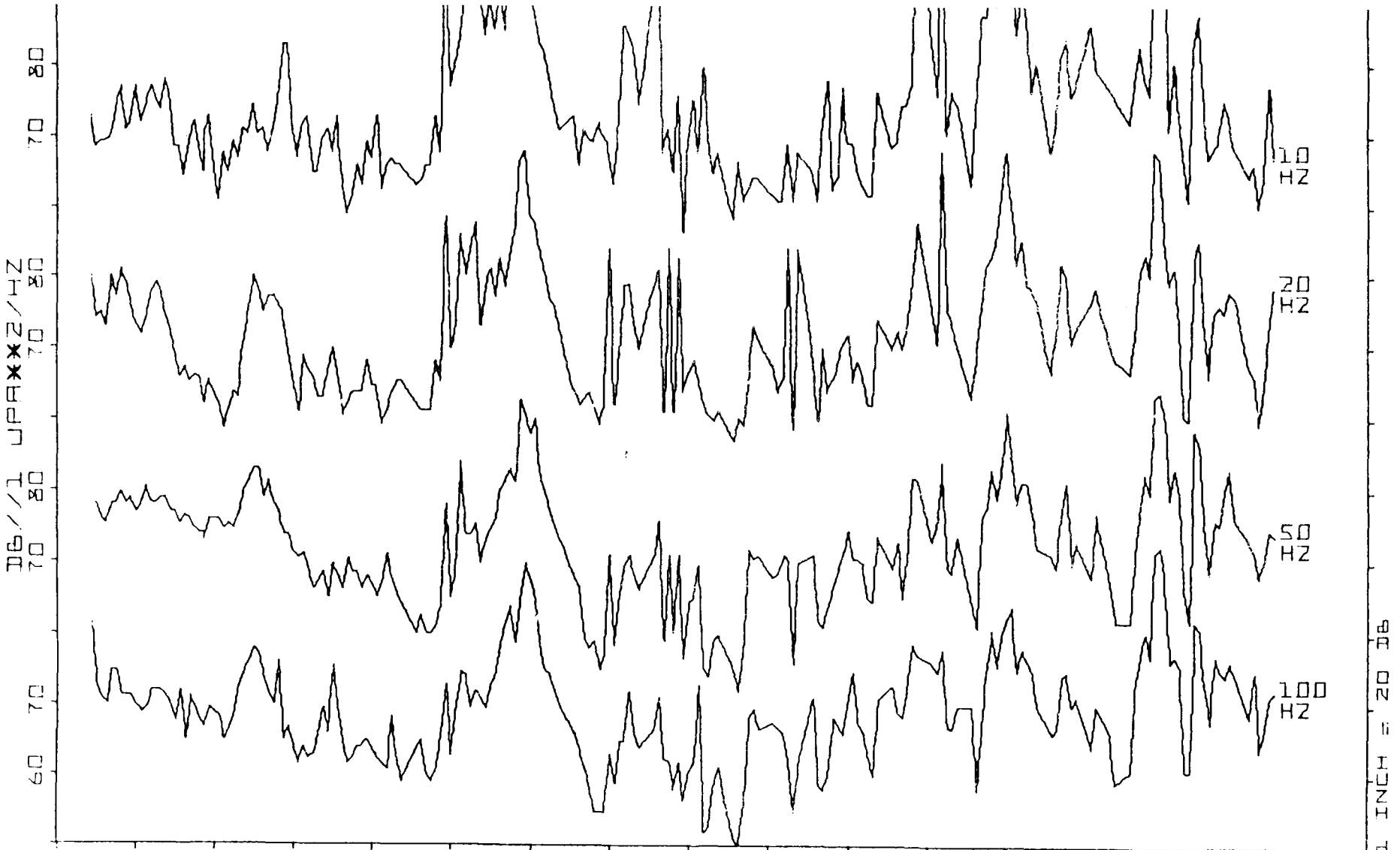
DECEMBER 1981

NOISE LEVEL VS TIME


DB//1 UPA**2/HZ
90
80
90
80
80
70
70
60
10 HZ
20 HZ
50 HZ
100 HZ
1 INCH = 20 DB
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
TIME IN JULIAN DAYS
BUOY 1773
JANUARY 1982
NOISE LEVEL VS TIME


10 HZ
20 HZ
50 HZ
100 HZ
DB//1 UPA**2/HZ
90
80
90
80
90
80
80
70
30
32
34
36
38
40
42
44
46
48
50
52
54
56
58
60
62
TIME IN JULIAN DAYS
1 INCH = 20 DB
BUOY 1773
FEBRUARY 1982
NOISE LEVEL VS TIME


DB//1 UPA**2/HZ
90
80
90
80
80
70
80
70
10 HZ
20 HZ
50 HZ
100 HZ
1 INCH = 20 DB
59
61
63
65
67
69
71
73
75
77
79
81
83
85
87
89
91
TIME IN JULIAN DAYS
BUOY 1773
MARCH 1982
NOISE LEVEL VS TIME

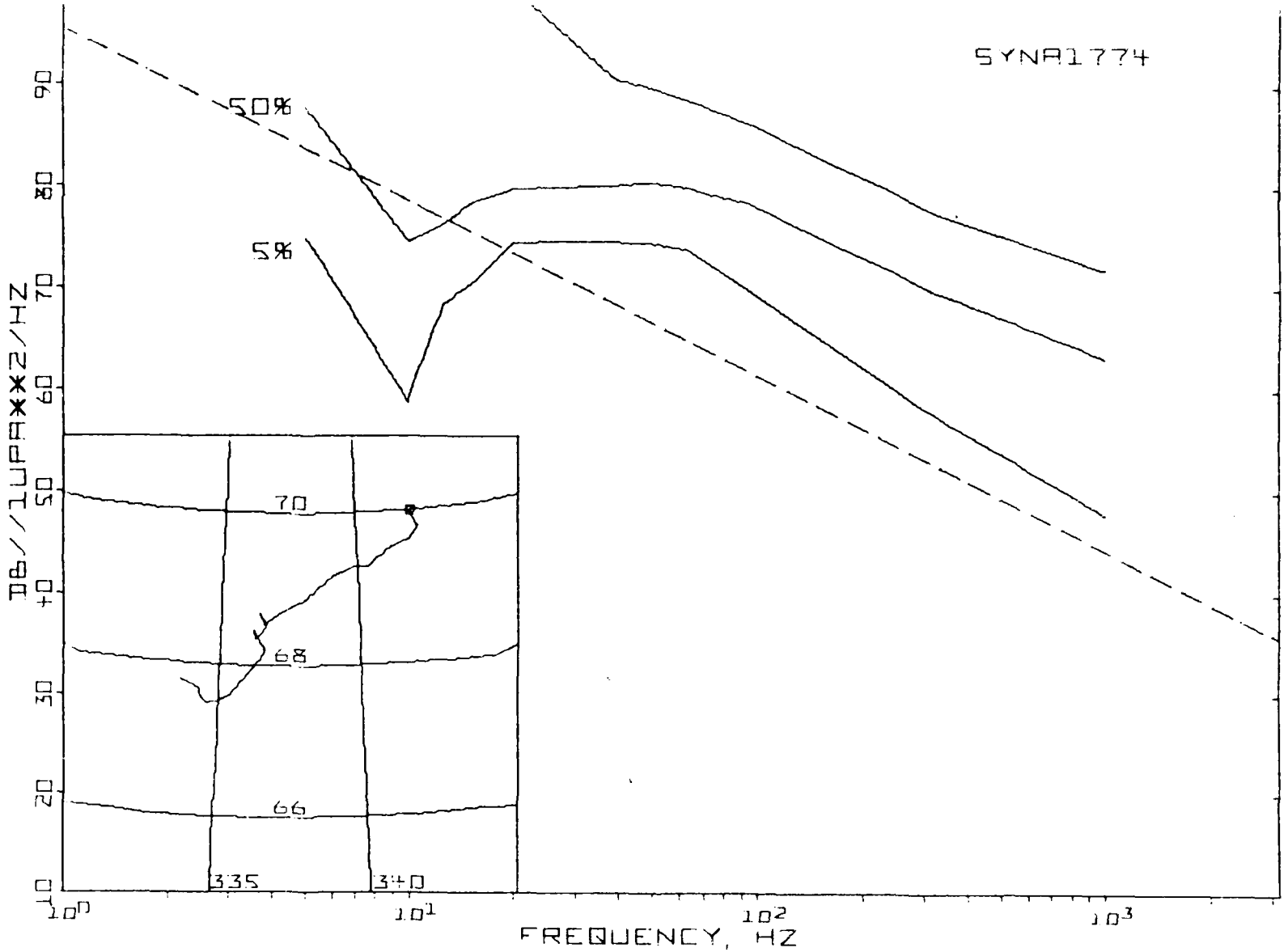


BUOY 1773

APRIL 1982

NOISE LEVEL VS TIME

DATA BY WEEKS



BUOY 1774 AUGUST

MONTH: AUGUST 1981 BUOY: 1774

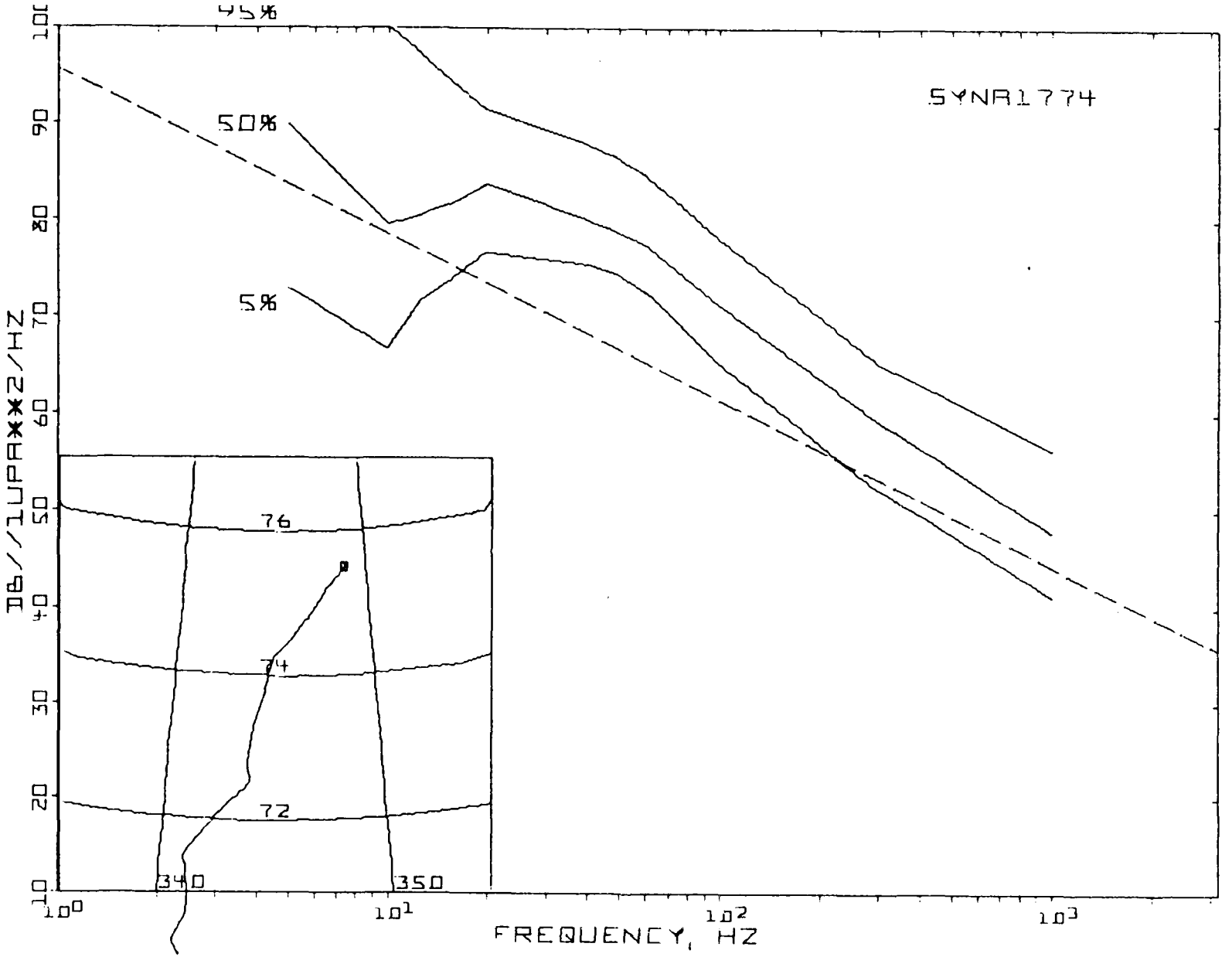
OUTPUT IN FILE SYNA1774

DISPLACEMENT (N. MI.): 219.716 NORTH:-136.620 EAST:-172.076
DIRECTION (TRUE): 231.579

THE NUMBER OF DATA SAMPLES IS 184

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	90.8	12.5	70.8	75.0	76.8	80.3	87.7	99.1	112.4	114.9	116.5	184
10.0	78.4	14.9	53.3	58.6	61.5	67.5	74.4	85.6	106.1	108.1	110.6	184
12.5	80.0	11.5	67.3	68.3	69.2	71.5	76.1	84.2	102.2	106.2	108.9	184
16.0	81.5	9.8	67.9	70.7	71.6	75.1	78.5	86.6	99.8	104.0	106.8	184
20.0	82.5	7.6	72.4	74.4	75.0	76.6	79.8	87.1	95.6	99.7	102.5	184
40.0	81.3	4.9	71.4	74.6	75.9	77.5	80.0	84.4	89.5	90.4	93.3	184
50.0	81.1	4.6	72.6	74.4	75.8	77.6	80.4	83.7	87.9	89.7	93.9	184
63.0	80.1	4.4	72.0	73.8	74.5	76.5	79.8	83.1	86.6	88.5	91.0	184
100.0	77.4	5.1	66.9	69.2	70.4	72.9	78.0	81.2	83.0	85.8	91.8	184
315.0	68.6	6.3	55.7	57.5	59.5	62.4	69.6	73.8	76.6	77.5	81.6	184
1000.0	60.8	8.0	45.8	47.7	48.3	52.5	63.1	67.4	69.9	71.8	73.4	184

STOP
R
RENAME SYNP (P,T,A)1774.<,18>
R



BUOY 1774 JULY 81

MONTH: JULY 1981 BUOY: 1774

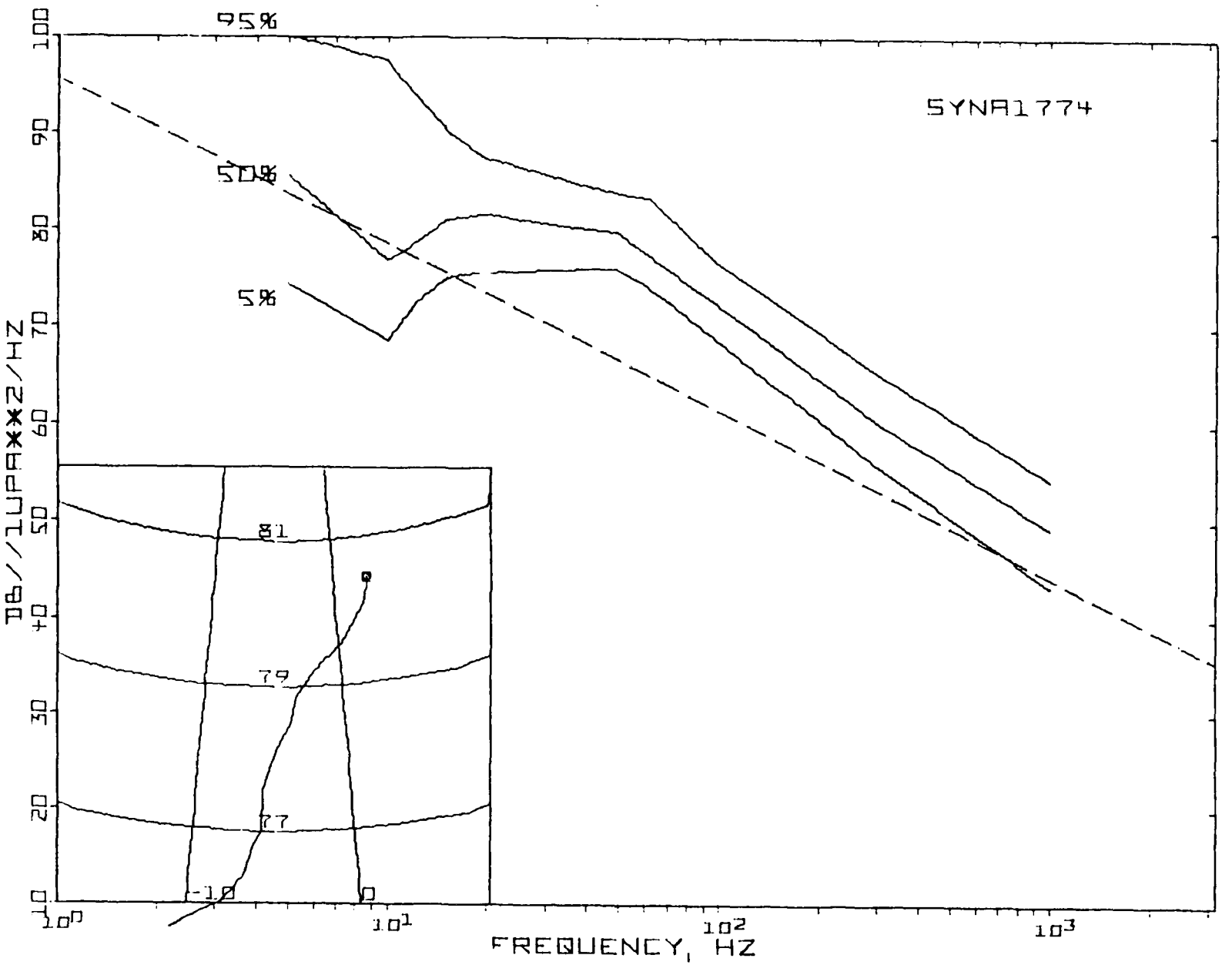
OUTPUT IN FILE SYNA1774

DISPLACEMENT (N. MI.): 350.352 NORTH:-323.881 EAST:-133.595
DIRECTION (TRUE): 202.436

THE NUMBER OF DATA SAMPLES IS 248

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	90.8	12.1	64.8	72.7	75.6	80.3	89.9	101.9	106.4	108.9	114.0	248
10.0	81.9	10.7	62.4	66.5	68.4	73.5	79.5	90.0	96.6	100.8	106.1	248
12.5	82.0	8.2	69.2	71.5	72.7	75.2	80.3	88.1	93.3	97.4	104.4	248
16.0	82.6	6.1	70.7	73.9	75.7	78.5	81.7	85.9	90.5	93.8	102.6	248
20.0	83.5	4.5	73.8	76.6	78.4	80.5	83.6	85.8	88.7	91.2	98.5	248
40.0	80.7	3.9	72.3	75.3	76.4	78.4	80.0	83.5	86.7	87.9	91.2	248
50.0	79.5	3.7	71.6	74.4	75.8	77.1	78.7	81.8	84.7	86.4	91.6	248
63.0	77.6	3.6	69.8	72.0	72.9	75.2	77.0	79.8	83.1	84.1	86.6	248
100.0	71.2	3.7	62.5	65.0	66.9	68.5	71.0	73.8	75.8	78.0	81.9	248
315.0	58.5	4.0	49.7	51.5	53.5	55.7	58.6	61.1	63.6	64.6	69.0	248
1000.0	48.0	4.7	39.0	41.1	42.3	44.2	47.7	51.1	54.3	56.3	60.3	248

STOP
R
RENAME SYN(P,T,A)1774.<,17>
R



SYNY 1774 JUNE

MONTH: JUNE 1981 BUOY: 1774

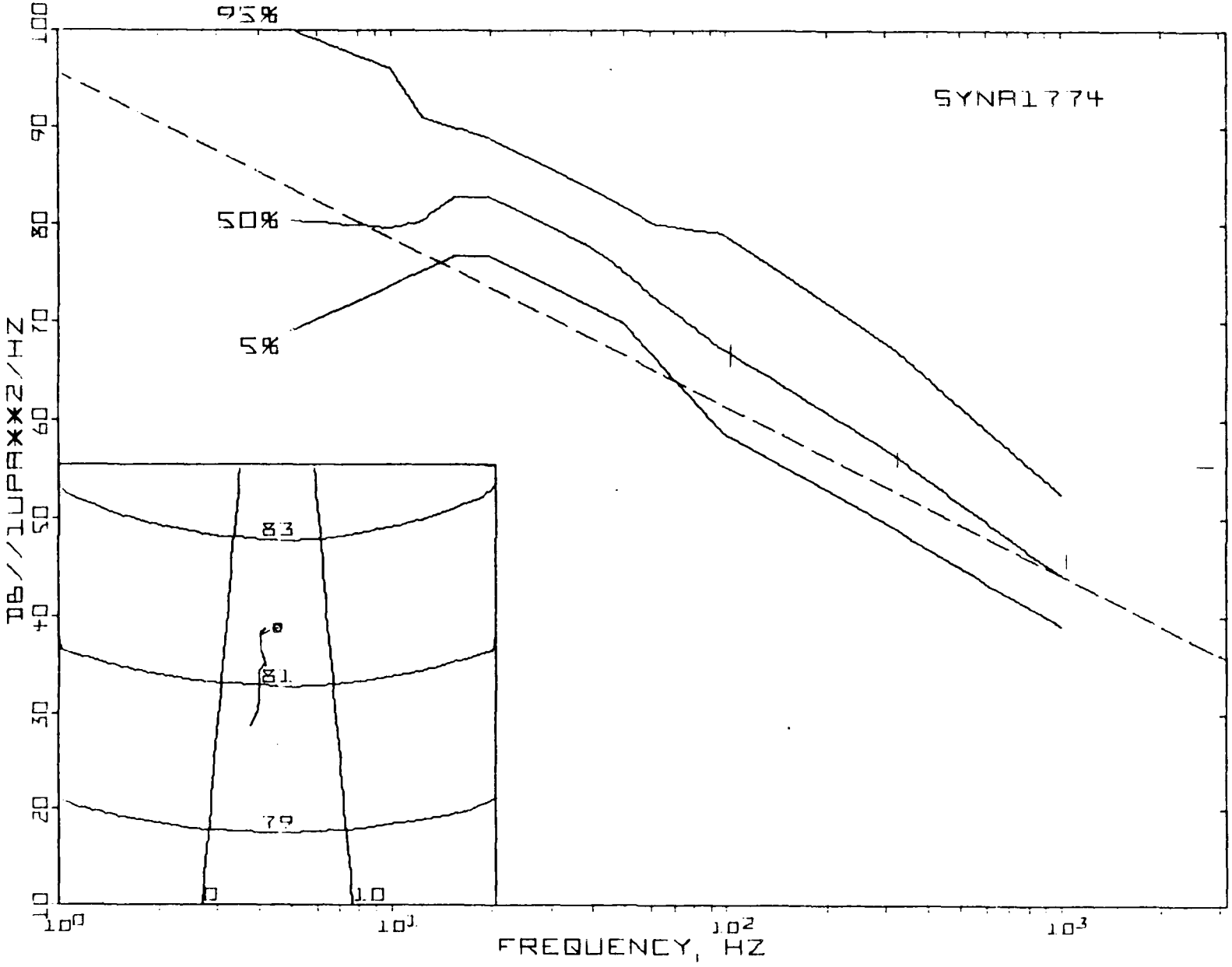
OUTPUT IN FILE SYNA1774

DISPLACEMENT (N. MI.): 336.071 NORTH:-290.880 EAST:-168.322
DIRECTION (TRUE): 210.079

THE NUMBER OF DATA SAMPLES IS 232

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	89.0	11.0	68.3	74.3	76.2	80.3	85.6	100.9	105.1	106.4	110.4	232
10.0	80.2	9.6	63.2	68.4	70.7	73.5	76.7	88.1	95.4	97.6	102.6	232
12.5	80.7	6.7	69.2	72.7	73.3	76.1	78.7	84.8	91.4	93.3	100.9	232
16.0	81.6	4.7	70.7	75.1	75.7	78.5	81.2	83.7	88.8	89.7	98.0	232
20.0	82.0	3.4	73.8	75.6	77.5	79.8	81.6	84.4	85.8	87.1	92.5	232
40.0	80.0	2.6	73.9	75.9	76.4	78.4	80.0	81.3	83.5	84.4	87.9	232
50.0	79.6	2.8	72.6	75.8	75.8	77.6	79.6	81.2	83.7	83.7	89.7	232
63.0	78.1	2.9	72.9	73.8	74.5	75.9	77.0	79.8	81.9	83.1	87.3	232
100.0	72.4	2.7	65.0	68.5	69.2	70.4	72.0	73.8	75.8	76.4	80.5	232
315.0	59.6	3.2	53.5	55.0	55.0	57.0	59.5	61.8	63.6	64.6	69.6	232
1000.0	49.2	3.8	42.3	43.3	44.2	45.8	49.3	52.5	54.3	54.3	57.1	232

STOP
R
RENAME SYN(P,T,A)1774.<,16>
R



BUOY 1774 MAY

MONTH: MAY 1981 BUOY: 1774

OUTPUT IN FILE SYNA1774

DISPLACEMENT (N. MI.): 85.450 NORTH: -82.379 EAST: -22.701
DIRECTION (TRUE): 195.427

THE NUMBER OF DATA SAMPLES IS 247

FREQUENCY		STD					MEDIAN				
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	84.0	11.9	58.7	69.0	70.8	74.3	81.0	94.3	101.9	104.4	109.7	247
10.0	81.4	6.7	71.3	73.5	74.4	76.7	79.5	84.5	90.6	96.0	106.8	247
12.5	82.0	4.9	72.7	75.2	76.8	79.3	80.3	84.8	88.9	90.8	99.3	247
16.0	82.8	4.0	74.5	76.7	78.5	79.9	82.8	85.3	87.8	89.7	96.5	247
20.0	82.6	3.5	73.8	76.6	78.4	80.5	82.7	84.4	87.7	88.7	91.2	247
40.0	77.3	3.6	67.2	71.4	72.3	75.3	77.5	79.2	81.9	83.5	86.0	247
50.0	75.3	3.7	65.6	69.7	71.0	72.6	75.1	77.6	80.4	81.8	84.7	247
63.0	72.3	4.3	61.7	66.0	66.9	69.2	72.0	74.5	78.1	79.8	83.1	247
100.0	67.3	6.0	53.9	58.4	58.9	63.2	66.9	71.0	75.2	78.9	86.6	247
315.0	56.7	5.6	43.0	49.0	49.7	51.5	56.4	60.3	64.6	67.1	76.6	247
1000.0	44.8	4.6	36.3	39.0	39.8	41.1	44.2	48.3	50.2	52.5	64.6	247

STOP
R
RENAME SYN(P,T,A)1774.<,15>
R

DATA BY MONTHS

BUOY ID 1774

JULY 1981

DAY	GMT	POSITION
182	1630	75.490 N 11.312 W
183	1607	75.369 N 11.802 W
184	1545	75.202 N 12.364 W
185	1703	74.983 N 12.881 W
186	1656	74.720 N 13.609 W
187	1645	74.501 N 14.261 W
188	1634	74.382 N 14.708 W
189	1703	74.227 N 15.233 W
190	1648	74.106 N 15.360 W
191	1625	73.877 N 15.548 W
192	1602	73.578 N 15.776 W
193	1537	73.306 N 16.119 W
194	1703	73.079 N 16.232 W
195	1655	72.791 N 16.328 W
196	1644	72.527 N 16.100 W
197	1632	72.357 N 16.611 W

DAY	GMT	POSITION
198	1702	72.254 N 17.056 W
199	1642	72.164 N 17.275 W
200	1621	72.052 N 17.656 W
201	1558	71.818 N 18.234 W
202	1703	71.539 N 18.885 W
203	1703	71.425 N 19.038 W
204	1654	71.338 N 18.821 W
205	1642	71.143 N 18.866 W
206	1631	71.014 N 18.689 W
207	1701	70.812 N 18.689 W
208	1633	70.598 N 18.785 W
209	1616	70.457 N 19.078 W
210	1553	70.393 N 19.092 W
211	1703	70.280 N 19.217 W
212	1702	70.092 N 18.840 W

BUOY ID 1774

AUGUST 1981

DAY	GMT	POSITION
213	1653	70.061 N 18.310 W
214	1641	69.977 N 17.969 W
215	1629	69.768 N 17.760 W
216	1656	69.593 N 18.111 W
217	1634	69.494 N 18.938 W
218	1611	69.364 N 19.395 W
219	1544	69.259 N 19.760 W
220	1703	69.270 N 20.314 W
221	1703	69.144 N 21.095 W
222	1651	68.860 N 22.025 W
223	1640	68.538 N 23.487 W
224	1703	68.670 N 23.645 W

DAY	GMT	POSITION
225	1651	68.532 N 23.315 W
226	1629	68.336 N 23.756 W
227	1606	68.447 N 23.826 W
228	1542	68.195 N 23.400 W
229	1703	67.905 N 23.945 W
230	1701	67.567 N 24.625 W
231	1649	67.493 N 25.046 W
232	1638	67.473 N 25.341 W
233	1703	67.552 N 25.608 W
234	1646	67.675 N 25.641 W
235	1445	67.784 N 26.278 W

BUOY ID 1774

MAY 1981

DAY	GMT	POSITION			
121	1614	81.818	N	5.163	E
122	1551	81.802	N	5.017	E
123	1702	81.802	N	5.017	E
124	1645	81.791	N	4.275	E
125	1623	81.765	N	3.957	E
126	1601	81.741	N	3.698	E
127	1536	81.718	N	3.465	E
128	1655	81.690	N	3.307	E
129	1633	81.721	N	3.440	E
130	1610	81.806	N	3.871	E
131	1546	81.804	N	3.787	E
132	1702	81.744	N	3.278	E
133	1642	81.679	N	3.334	E
134	1614	81.629	N	3.334	E
135	1556	81.614	N	3.564	E
136	1702	81.614	N	3.564	E

DAY	GMT	POSITION			
137	1652	81.542	N	3.363	E
138	1627	81.343	N	3.909	E
139	1600	81.343	N	3.909	E
140	1542	81.271	N	3.954	E
141	1658	81.325	N	3.727	E
142	1638	81.202	N	3.275	E
143	1614	81.101	N	3.371	E
144	1552	81.101	N	3.371	E
145	1702	81.101	N	3.371	E
146	1648	80.857	N	3.392	E
147	1624	80.803	N	3.383	E
148	1601	80.803	N	3.383	E
149	1540	80.803	N	3.383	E
150	1657	80.513	N	2.973	E
151	1635	80.445	N	2.711	E

BUOY ID 1774

JUNE 1981

DAY	GMT	POSITION			
152	1612	80.445	N	2.711	E
153	1549	80.445	N	2.711	E
154	1703	80.119	N	2.379	E
155	1644	80.008	N	1.800	E
156	1621	80.008	N	1.800	E
157	1558	80.008	N	1.800	E
158	1535	79.603	N	0.184	E
159	1652	79.460	N	0.452	W
160	1629	79.379	N	1.010	W
161	1607	79.278	N	1.738	W
162	1545	79.122	N	2.448	W
163	1702	78.825	N	3.469	W
164	1634	78.491	N	3.752	W
165	1617	78.139	N	4.720	W
166	1554	77.840	N	5.286	W

DAY	GMT	POSITION			
167	1703	77.533	N	5.674	W
168	1649	77.196	N	5.652	W
169	1626	76.966	N	5.755	W
170	1603	76.819	N	6.138	W
171	1540	76.680	N	6.386	W
172	1656	76.530	N	6.504	W
173	1635	76.385	N	6.722	W
174	1612	76.147	N	7.423	W
175	1549	75.980	N	8.095	W
176	1703	75.980	N	8.095	W
177	1657	75.980	N	8.095	W
178	1646	75.807	N	9.566	W
179	1634	75.763	N	9.855	W
181	1653	75.597	N	10.789	W

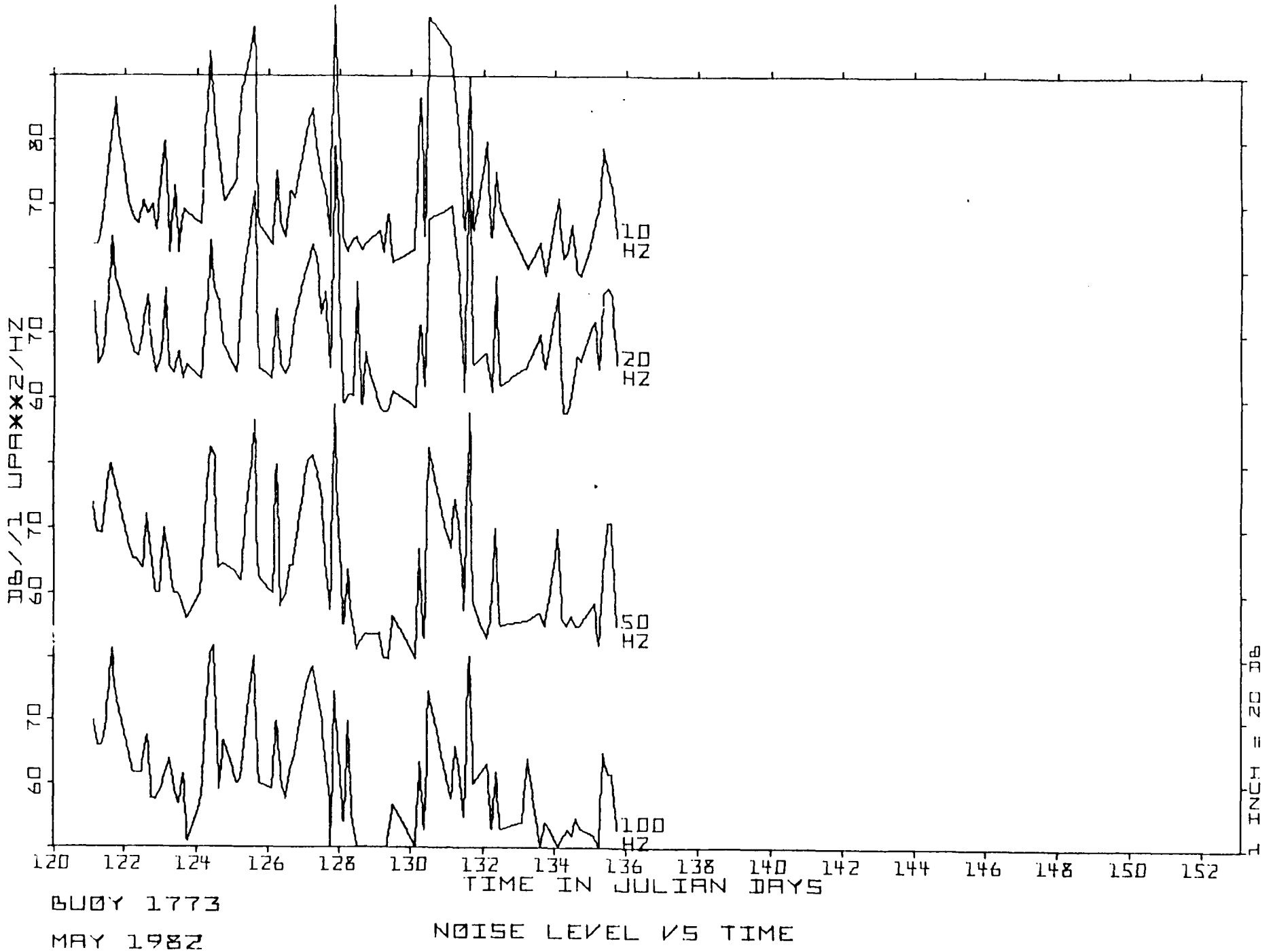
APPENDIX 4

Date Buoy I.D. 1774

Life in Reporting Area 2 (West Greenland Sea)

1 May 1981 - 23 Aug 1981

Type: SYNARGOS and Thermistor String (5 - 1000 Hz)



BUOY 1773

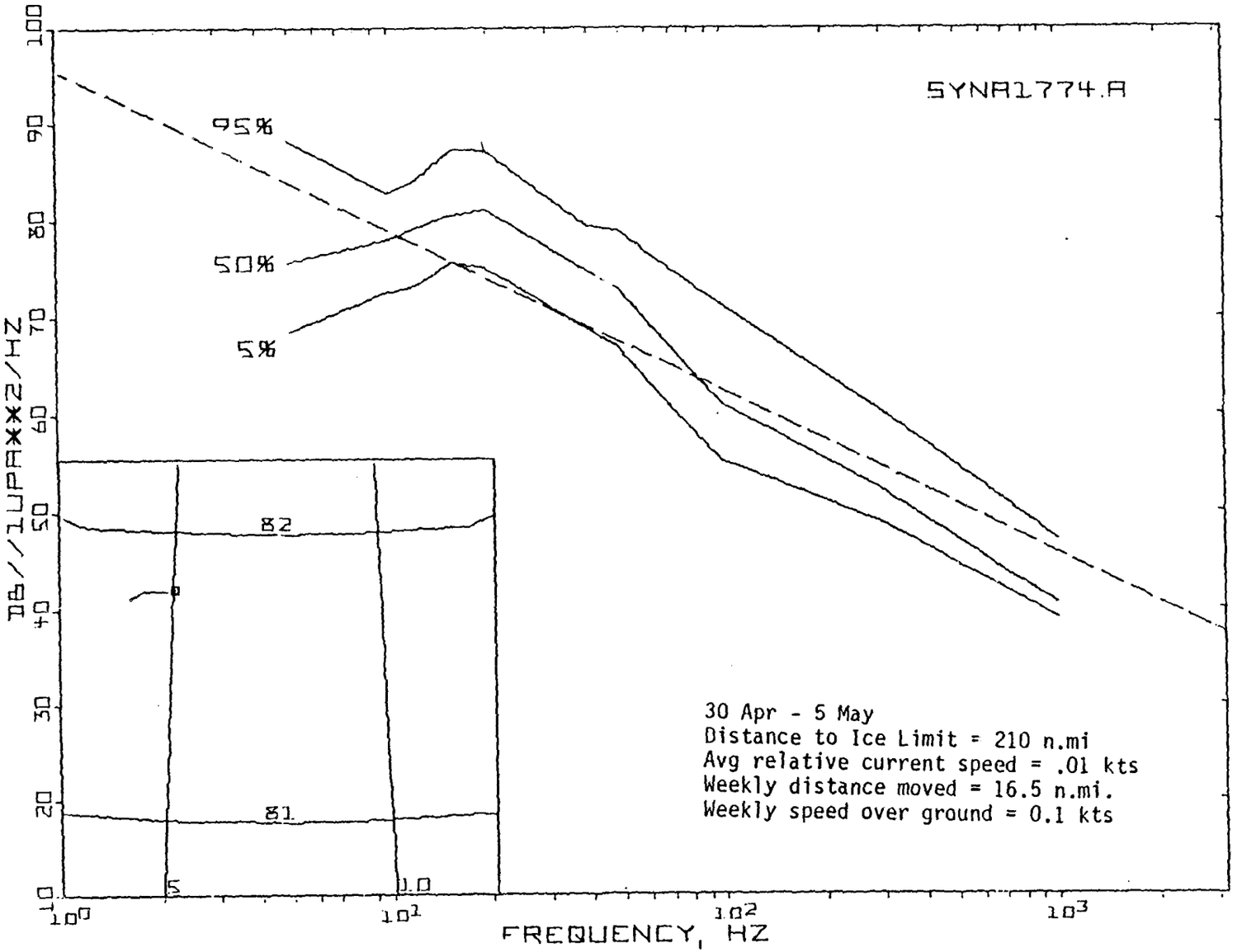
MAY 1982

NOISE LEVEL VS TIME

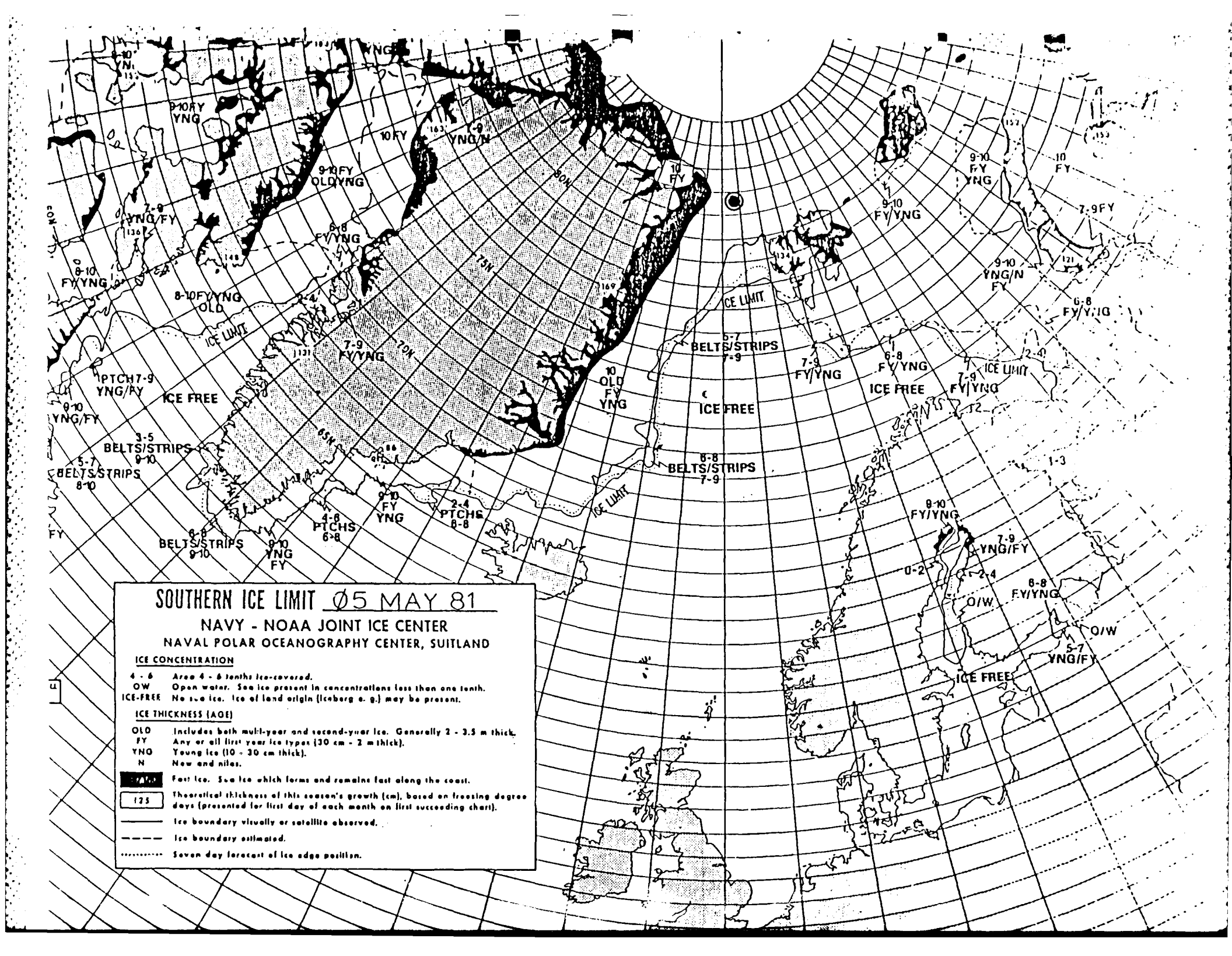
JULIAN DAYS: 120 TO 125 Apr 30 - May 5, 81

OUTPUT IN FILE SYNA1774.A
THE NUMBER OF DATA SAMPLES IS 42

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	76.4	6.0	58.7	68.3	70.2	72.7	75.6	78.7	84.8	88.3	90.8
10.0	77.9	3.3	72.5	72.5	72.5	75.3	77.9	79.5	82.7	82.7	88.1
12.5	79.3	3.3	72.7	73.3	74.3	77.5	79.3	82.1	83.5	84.2	86.4
15.6	81.3	3.8	74.5	75.7	76.7	78.5	80.6	83.7	85.3	87.2	93.2
20.0	81.0	3.8	73.8	75.0	75.6	78.4	81.1	83.6	85.2	87.1	91.2
40.0	74.5	3.4	67.2	68.6	69.8	71.4	74.6	77.5	78.4	79.2	80.6
50.0	73.0	4.0	65.6	66.6	67.5	70.4	72.6	75.8	77.1	78.7	83.7
63.0	68.7	3.7	61.7	62.5	63.2	66.0	68.5	71.0	72.9	75.9	75.9
100.0	62.8	5.2	53.9	54.9	57.1	58.4	60.9	66.9	69.8	71.0	73.8
320.0	53.1	3.7	47.4	48.3	49.0	50.4	51.5	55.7	57.5	59.5	62.4
1000.0	41.6	2.7	39.0	39.0	39.0	39.8	40.5	43.3	46.5	47.1	47.7



BUOY 177+ APR 30-MAY 5

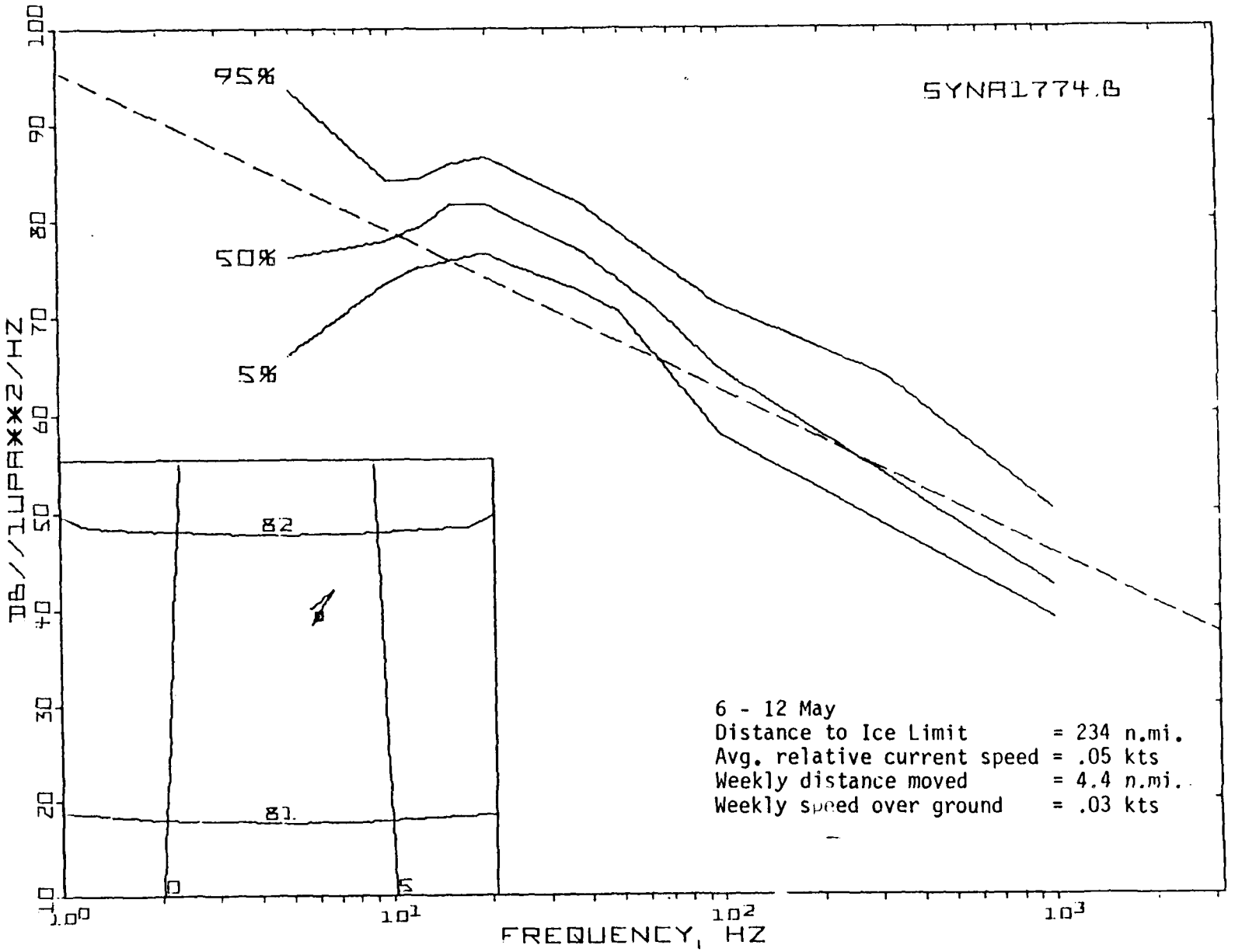

SOUTHERN ICE LIMIT Ø5 MAY 81
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
ICE CONCENTRATION
4 - 6 Area 4 - 6 tenths ice-covered.
OW Open water. Sea ice present in concentrations less than one tenth.
ICE-FREE No sea ice. Ice of land origin (iceberg e. g.) may be present.
ICE THICKNESS (AGE)
OLD Includes both multi-year and second-year ice. Generally 2 - 3.5 m thick.
FY Any or all first year ice types (30 cm - 2 m thick).
YNG Young ice (10 - 30 cm thick).
N New and nilas.
Fast ice. Sea ice which forms and remains fast along the coast.
125 Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
Ice boundary visually or satellite observed.
Ice boundary estimated.
Seven day forecast of ice edge position.
ICE FREE
ICE LIMIT
80N
75N
70N
65N
10 FY
9-10 FY YNG
9-10 FY/YNG
7-9 FY/YNG
6-8 FY/YNG
8-10 FY/YNG
7-9 YNG/FY
9-10 YNG/FY
5-7 BELTS/STRIPS 7-9
8-8 BELTS/STRIPS 7-9
3-5 BELTS/STRIPS 9-10
5-7 BELTS/STRIPS 8-10
6-8 BELTS/STRIPS 9-10
9-10 FY YNG
2-4 PTCHS 8-8
4-8 PTCHS 6-8
9-10 YNG FY
10 OLD FY YNG
PTCH 7-9 YNG/FY
8-10 FY/YNG OLD
9-10 YNG/N FY
7-9 FY
1-3
0-2
2-4
O/W
5-7 YNG/FY

JULIAN DAYS: 124 TO 132 May 6-12, 81

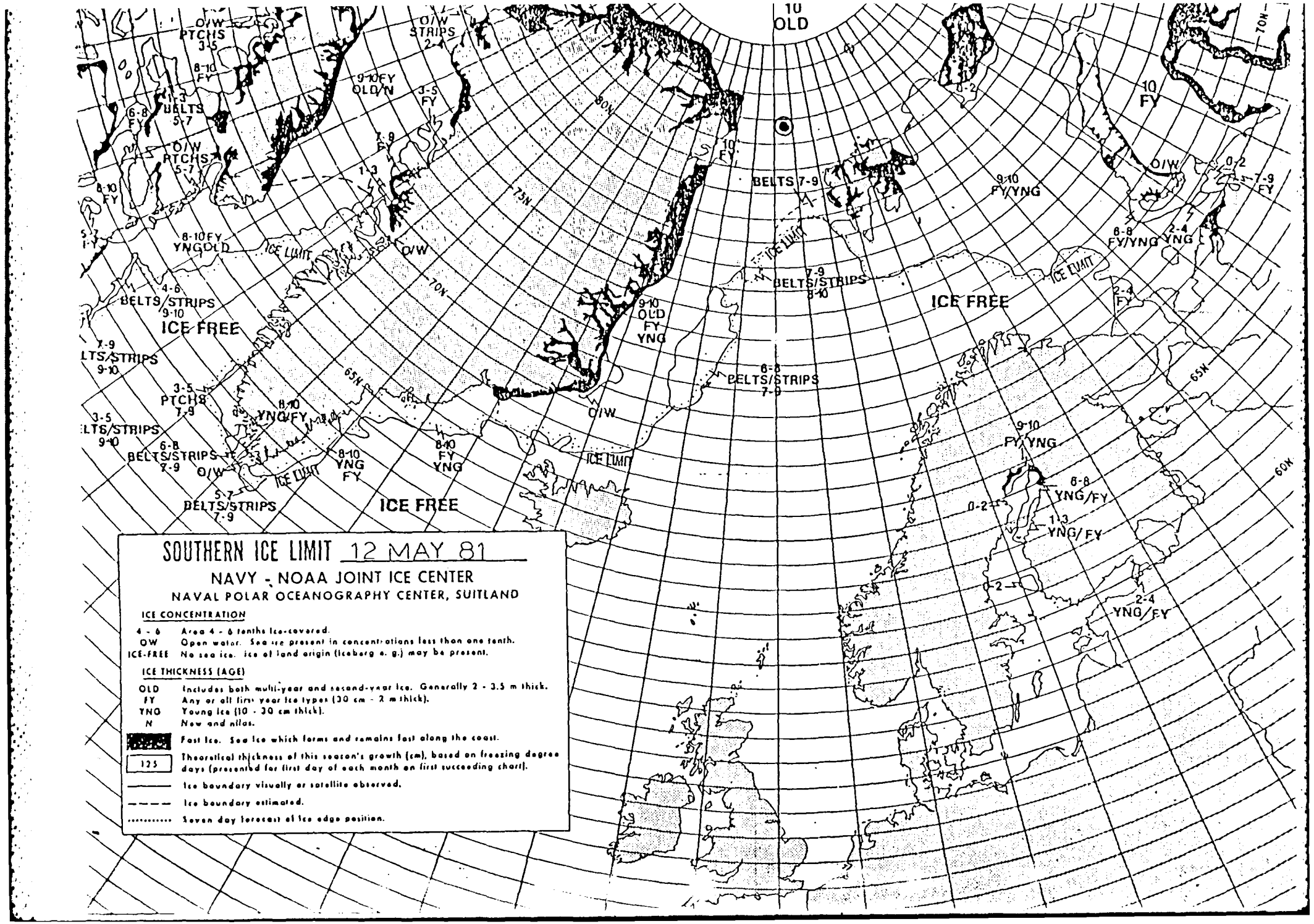
OUTPUT IN FILE SYNA1774.B
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	78.4	8.5	64.8	65.8	69.0	71.8	76.2	82.8	91.6	93.7	99.1
10.0	78.7	3.6	71.9	73.5	74.4	76.7	77.9	82.0	82.7	84.0	90.6
12.5	80.1	2.5	73.3	75.2	77.5	78.7	79.3	81.2	82.8	84.2	87.3
15.6	81.6	2.7	75.1	75.7	78.5	79.9	81.7	82.8	84.5	85.9	87.8
20.0	82.0	2.8	76.6	76.6	78.4	80.5	81.6	83.6	85.2	86.5	88.7
40.0	76.6	2.9	70.4	72.3	73.2	74.6	76.4	78.4	80.0	81.3	86.0
50.0	74.4	2.5	68.4	70.4	71.6	72.6	73.5	76.5	77.1	78.7	78.7
63.0	70.8	3.2	65.0	66.0	66.9	68.5	71.0	72.9	73.8	75.9	82.5
100.0	64.6	4.7	56.4	57.8	58.4	60.9	64.4	67.7	69.8	71.0	78.9
320.0	53.7	10.5	-14.7	48.3	49.0	51.0	53.5	57.5	60.3	63.6	69.6
1000.0	43.4	3.7	39.0	39.0	39.0	40.5	42.3	45.8	49.3	50.2	53.8

corrected



BUOY 1774 MAY 6 - 12



SOUTHERN ICE LIMIT 12 MAY 81

NAVY - NOAA JOINT ICE CENTER

NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

ICE CONCENTRATION

4 - 6	Area 4 - 6 tenths ice-covered.
OW	Open water. Sea ice present in concentrations less than one tenth.
ICE-FREE	No sea ice. Ice of land origin (iceberg e. g.) may be present.

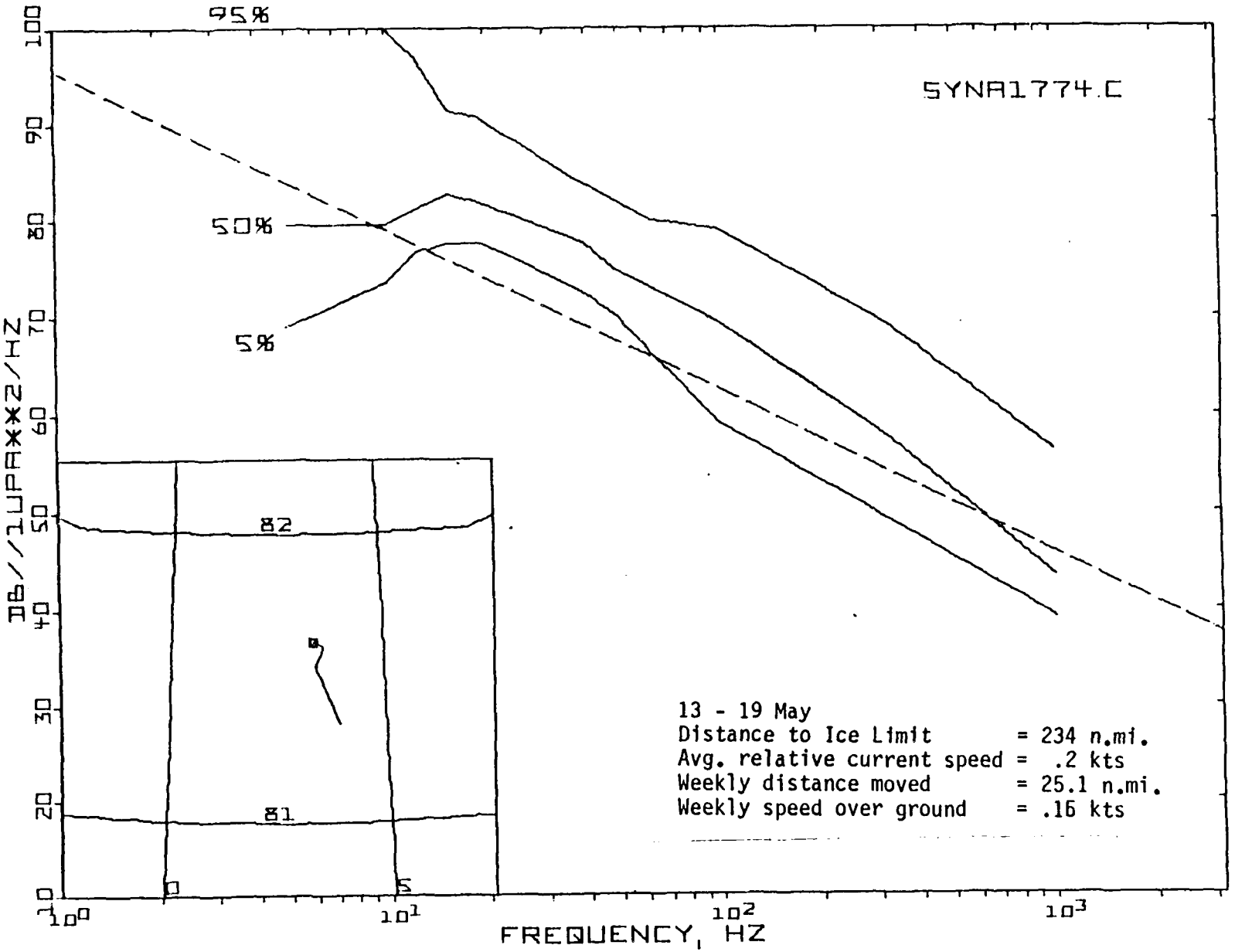
ICE THICKNESS (AGE)

OLD	Includes both multi-year and second-year ice. Generally 2 - 3.5 m thick.
FY	Any or all first year ice types (30 cm - 2 m thick).
YNG	Young ice (10 - 30 cm thick).
N	New and nilas.
	Fast ice. Sea ice which forms and remains fast along the coast.
125	Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
———	Ice boundary visually or satellite observed.
– – – –	Ice boundary estimated.
.....	Seven day forecast of ice edge position.

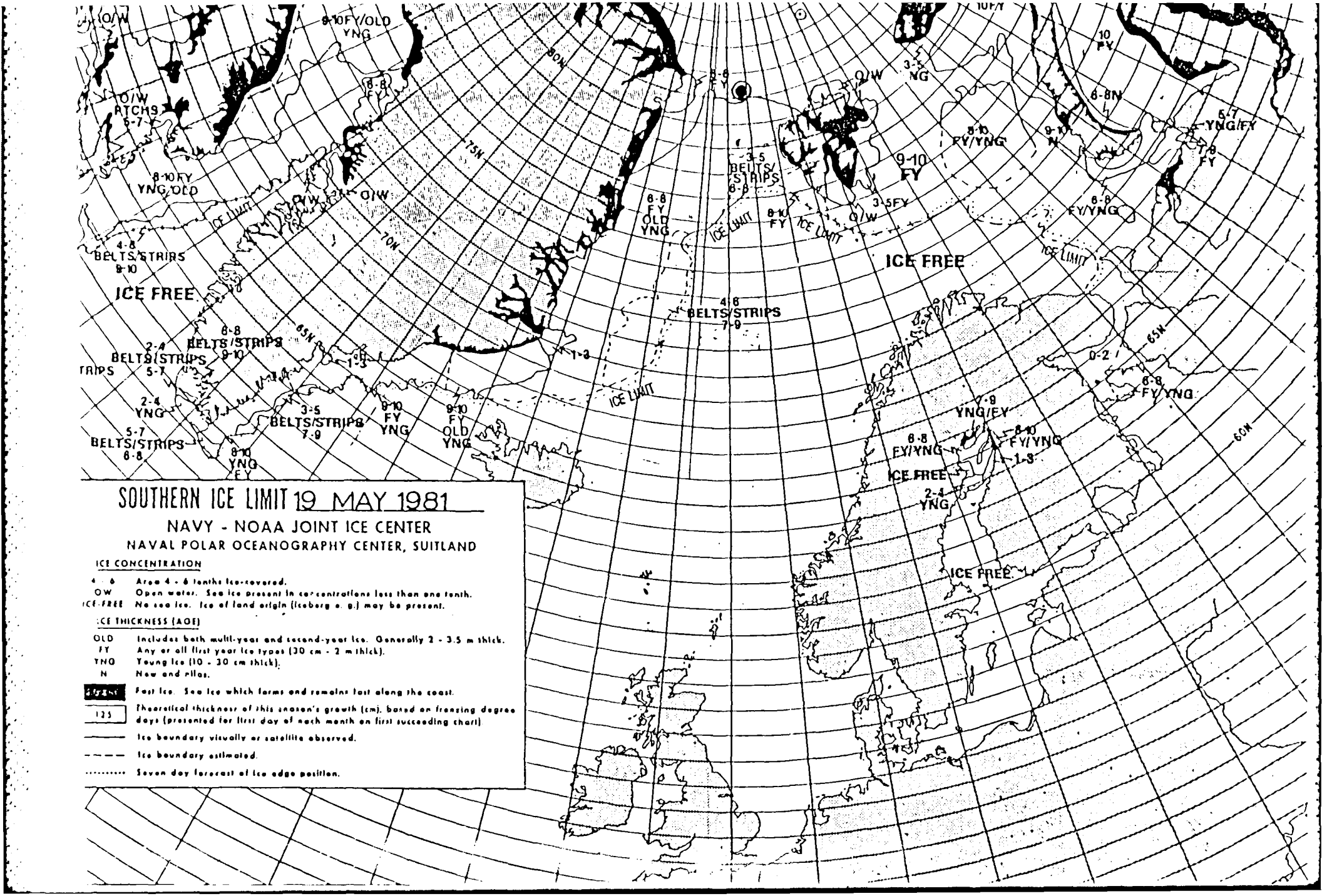
JULIAN DAYS: 133 TO 139 May 13-19, 81

OUTPUT IN FILE SYNA1774.C
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	83.3	13.2	66.7	69.0	69.6	72.7	79.6	93.1	103.7	106.9	109.7
10.0	82.5	7.8	71.3	73.5	75.3	76.7	79.5	86.5	93.3	100.1	102.0
12.5	83.5	5.8	75.2	76.8	77.5	79.3	81.2	85.3	91.4	96.8	99.3
15.6	83.8	4.7	75.7	77.6	78.5	79.9	82.8	85.9	88.8	91.3	96.5
20.0	83.2	4.0	76.6	77.5	79.1	80.5	81.6	85.8	89.6	90.4	91.2
40.0	77.6	3.6	71.4	72.3	73.2	75.3	77.5	80.0	82.5	83.5	84.0
50.0	75.4	4.0	69.1	69.8	71.0	71.6	74.4	77.6	80.4	81.8	84.7
63.0	73.0	4.4	66.0	66.0	67.8	69.2	72.9	75.2	79.0	79.8	82.5
100.0	69.0	5.9	58.4	58.9	60.9	63.8	69.2	72.0	78.0	78.9	80.5
320.0	58.3	6.4	48.3	49.0	50.4	52.5	57.5	62.4	67.1	69.0	76.6
1000.0	45.7	5.8	39.0	39.0	39.8	40.5	43.3	48.3	53.2	54.3	64.4



BUOY 1774 MAY 13 - 19



SOUTHERN ICE LIMIT 19 MAY 1981

NAVY - NOAA JOINT ICE CENTER

NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

ICE CONCENTRATION

4 - 6	Area 4 - 6 tenths ice-covered.
OW	Open water. Sea ice present in concentrations less than one tenth.
ICE-FREE	No sea ice. Ice of land origin (iceberg e. g.) may be present.

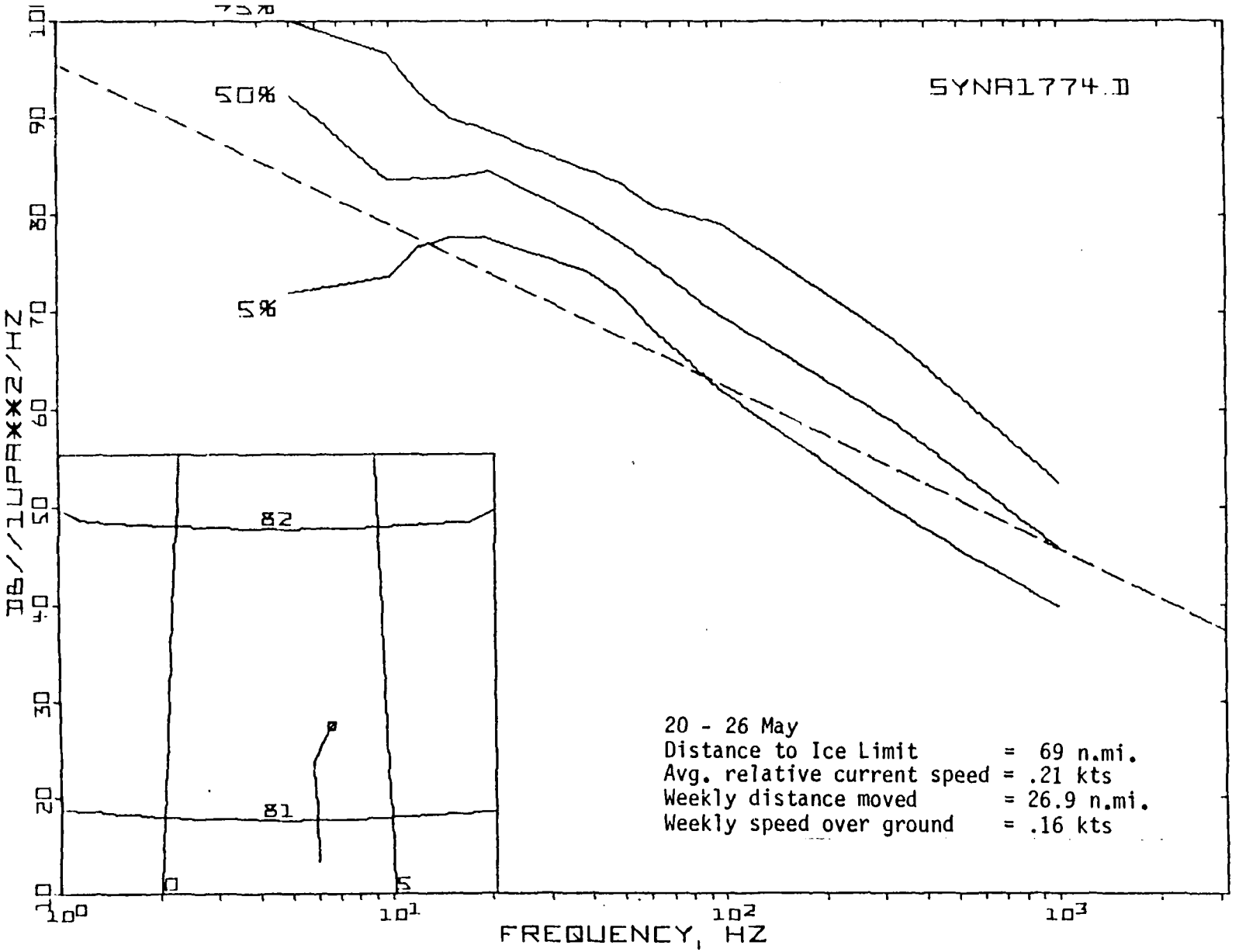
ICE THICKNESS (AOE)

OLD	Includes both multi-year and second-year ice. Generally 2 - 3.5 m thick.
FY	Any or all first year ice types (30 cm - 2 m thick).
YNG	Young ice (10 - 30 cm thick).
N	New and nilas.
[illegible]	Fast ice. Sea ice which forms and remains fast along the coast.
125	Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart)
———	Ice boundary visually or satellite observed.
– – – –	Ice boundary estimated.
.....	Seven day forecast of ice edge position.

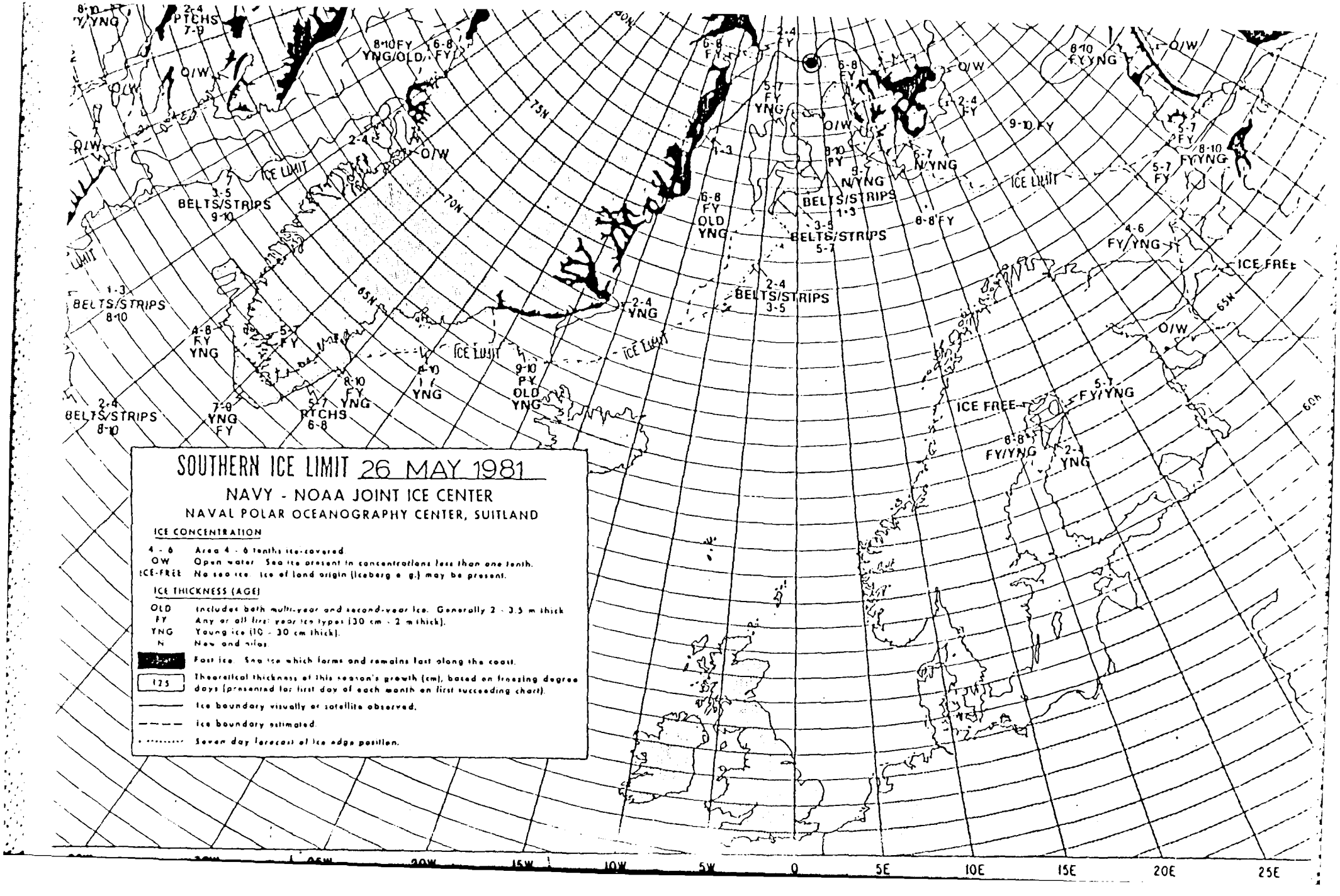
JULIAN DAYS: 140 TO 146 May 20-26, 81

OUTPUT TO FILE SYNA1774.D
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	90.4	11.6	68.3	71.3	75.0	78.7	92.4	100.9	104.4	105.1	106.9
10.0	84.5	7.9	71.3	73.5	75.3	77.9	83.4	90.0	96.0	96.6	106.8
12.5	84.4	5.3	75.2	76.8	78.1	80.3	83.5	88.1	90.2	92.4	98.4
15.6	84.6	3.8	77.6	77.6	79.9	81.7	83.7	87.8	88.8	89.7	92.6
20.0	84.1	3.2	76.6	77.5	80.5	81.6	84.4	86.5	87.7	88.7	90.4
40.0	79.0	3.1	71.4	73.9	75.3	76.4	79.2	81.3	82.5	84.4	86.0
50.0	77.0	3.5	69.8	71.6	71.6	74.4	77.1	78.7	81.8	83.1	83.7
63.0	74.4	4.0	66.0	67.8	69.2	72.0	74.5	77.0	79.0	80.6	83.1
100.0	70.0	5.2	58.4	61.7	63.8	66.9	69.2	72.9	77.0	78.9	81.2
320.0	58.7	5.4	49.0	49.7	50.4	55.0	58.6	61.8	65.5	67.1	70.4
1000.0	46.5	4.1	39.8	39.8	41.7	43.3	45.8	49.3	51.1	52.5	61.4



BUOY 1774 MAY 20 - 26

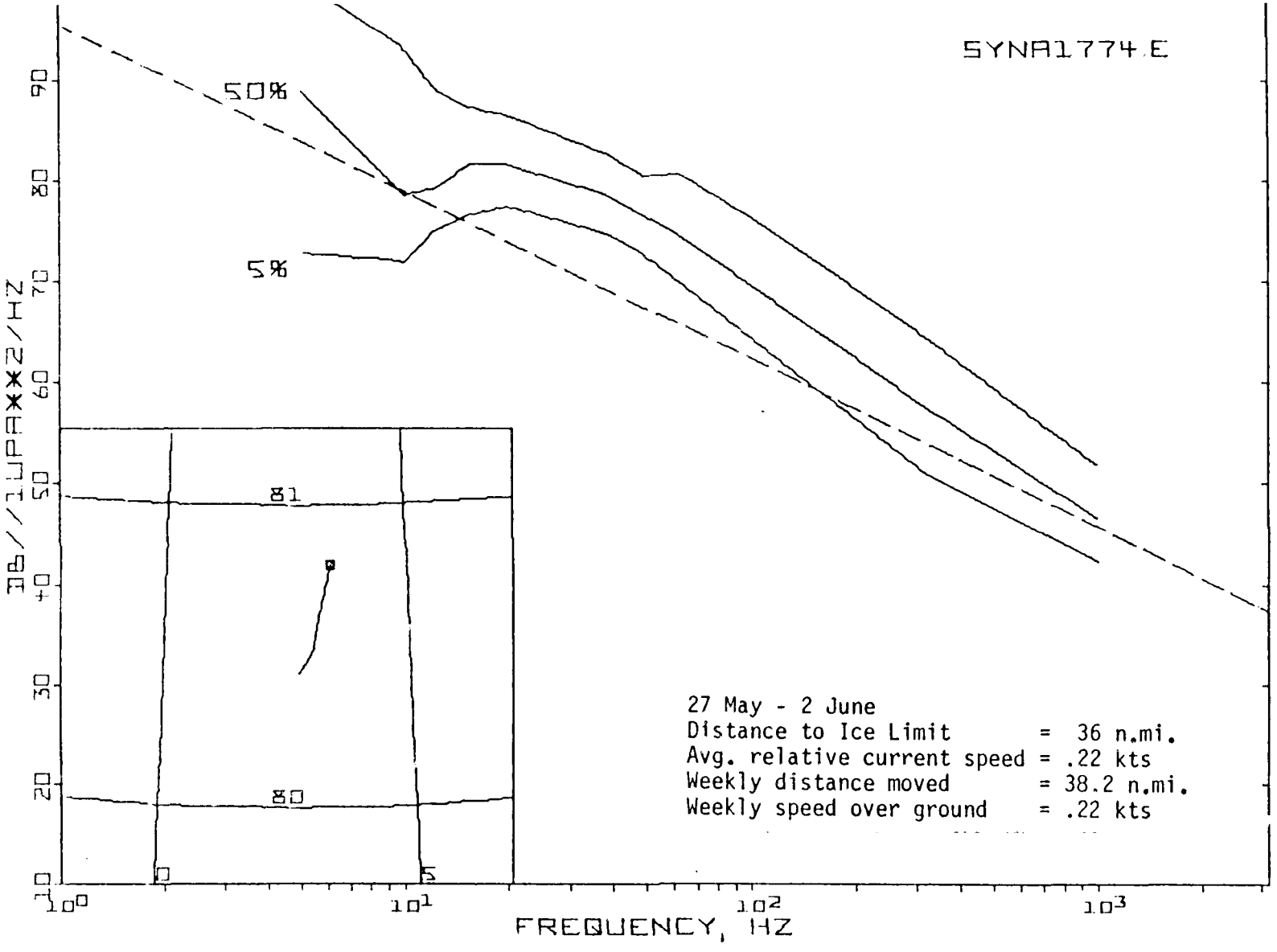

SOUTHERN ICE LIMIT 26 MAY 1981
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
ICE CONCENTRATION
4 - 6 Area 4 - 6 tenths ice-covered.
OW Open water. Sea ice present in concentrations less than one tenth.
ICE-FREE No sea ice. Ice of land origin (iceberg e. g.) may be present.
ICE THICKNESS (AGE)
OLD Includes both multi-year and second-year ice. Generally 2 - 3.5 m thick.
FY Any or all first year ice types (30 cm - 2 m thick).
YNG Young ice (10 - 30 cm thick).
N New and nilas.
Fast ice. Sea ice which forms and remains fast along the coast.
125 Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
Ice boundary visually or satellite observed.
Ice boundary estimated.
Seven day forecast of ice edge position.
ICE LIMIT
ICE FREE
O/W
75N
70N
65N
60N
8-10 FY/YNG
6-8 FY
5-7 FY
2-4 FY
9-10 FY
6-8 FY OLD YNG
8-10 FY YNG/OLD
5-7 FY YNG
8-10 FY OLD YNG
4-6 FY/YNG
6-8 FY/YNG
5-7 FY/YNG
2-4 YNG
4-8 FY YNG
7-9 YNG FY
5-7 PTCHS 6-8
2-4 PTCHS 7-9
8-10 Y/YNG
3-5 BELTS/STRIPS 9-10
1-3 BELTS/STRIPS 8-10
2-4 BELTS/STRIPS 8-10
1-3 BELTS/STRIPS
3-5 BELTS/STRIPS 5-7
2-4 BELTS/STRIPS 3-5
8-10 FY N/YNG
6-7 N/YNG
9-7 N/YNG
8-8 FY
1-3
2-4
5W
0
5E
10E
15E
20E
25E

JULIAN DAYS: 147 TO 153 May 27 - June 2, 81

OUTPUT IN FILE SYNA1774.E
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	89.0	9.8	68.3	72.7	75.0	81.0	88.9	96.8	101.9	102.8	103.7
10.0	80.8	6.3	70.7	71.9	73.5	76.7	78.5	85.6	89.4	93.3	95.4
12.5	81.0	4.1	75.2	75.2	76.8	78.1	79.3	84.2	86.4	88.9	90.8
15.6	81.7	3.2	75.7	76.7	77.6	79.2	81.7	83.7	85.9	87.2	89.7
20.0	81.9	2.7	76.6	77.5	79.1	79.8	81.6	83.6	85.2	86.5	88.7
40.0	78.5	2.8	71.2	74.6	75.8	76.4	78.4	80.0	81.9	82.5	86.0
50.0	76.7	2.7	69.7	72.6	73.5	75.1	76.5	77.6	80.4	80.4	83.1
63.0	74.9	3.1	68.5	69.8	71.0	72.9	74.5	76.5	79.0	80.6	81.9
100.0	69.9	4.6	61.9	64.4	65.0	66.0	69.8	72.0	75.2	76.4	86.6
320.0	57.8	4.1	43.0	51.0	53.5	55.0	57.5	60.3	62.4	64.6	67.1
1000.0	47.0	3.1	36.3	42.3	43.3	45.1	46.5	49.3	50.2	51.8	54.3

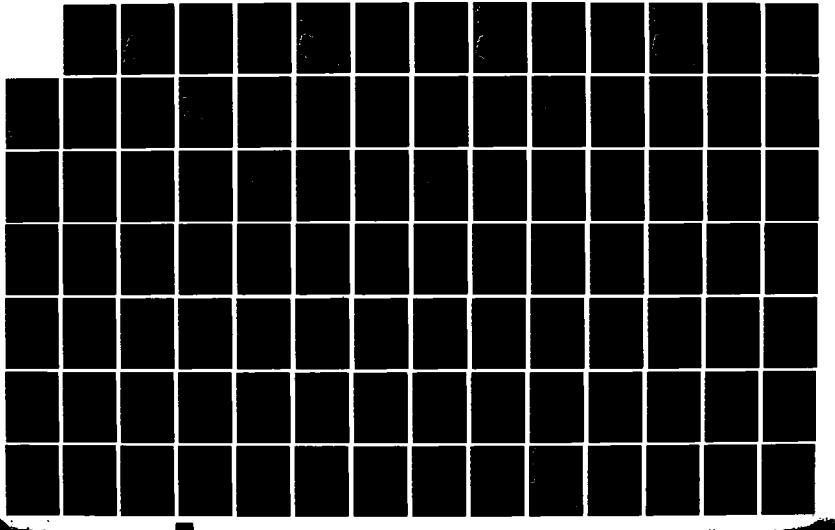
JULIAN DAYS: 154 TO 160

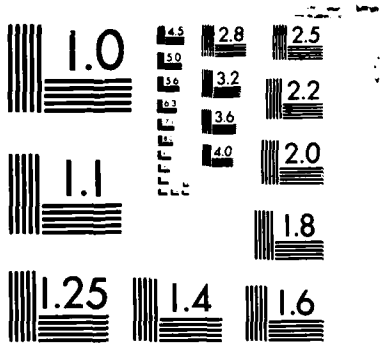


BUOY 1774 MAY 27-JUN 2

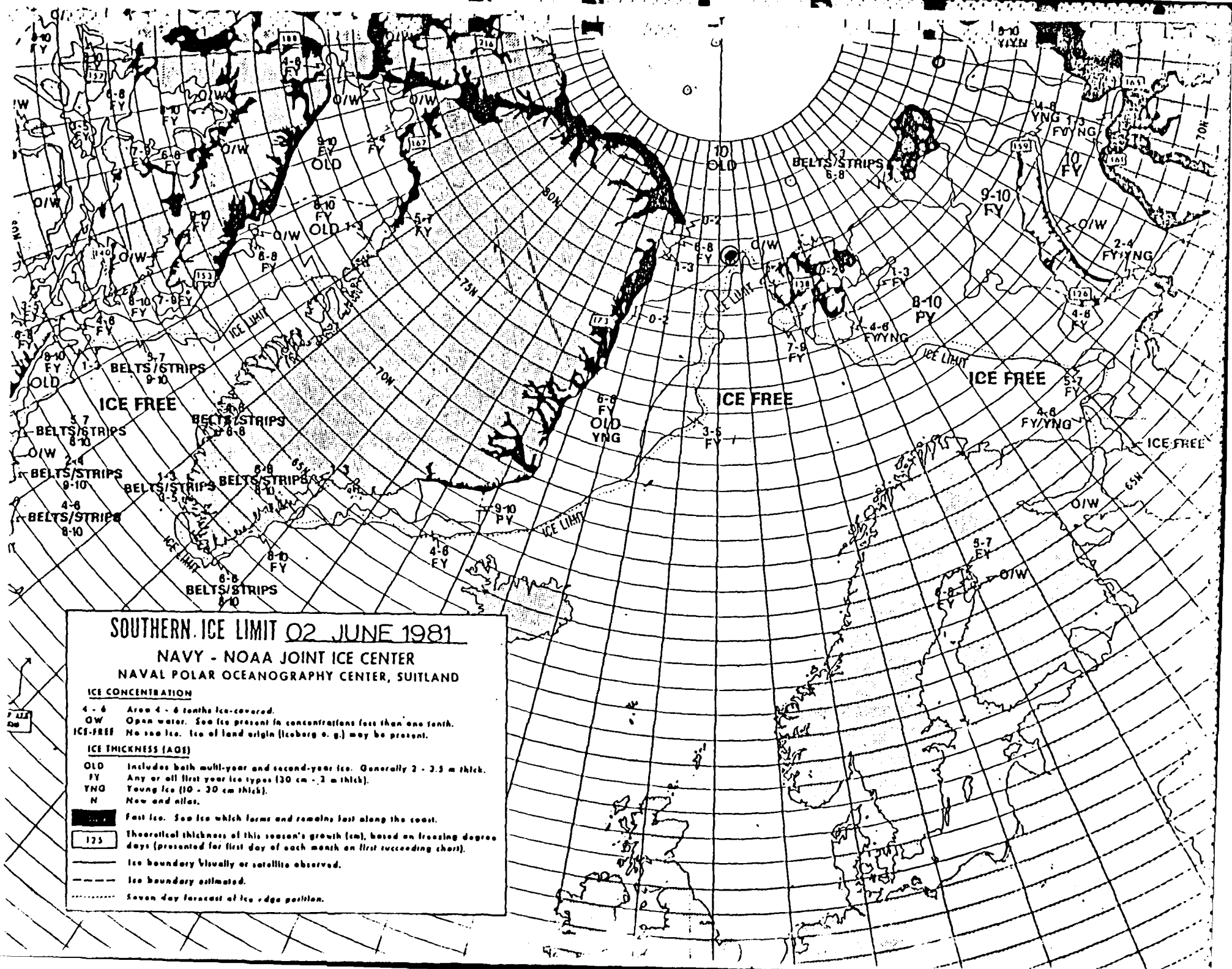
AD-A156 818 LONG TERM STATISTICAL MEASUREMENTS OF ENVIRONMENTAL ACOUSTICS PARAMETERS I..(U) POLAR RESEARCH LAB INC CARPINTERIA CA B M BUCK ET AL. 13 DEC 84 PRL-TR-53 3/7

UNCLASSIFIED N00014-84-C-0394 F/G 20/1 NL





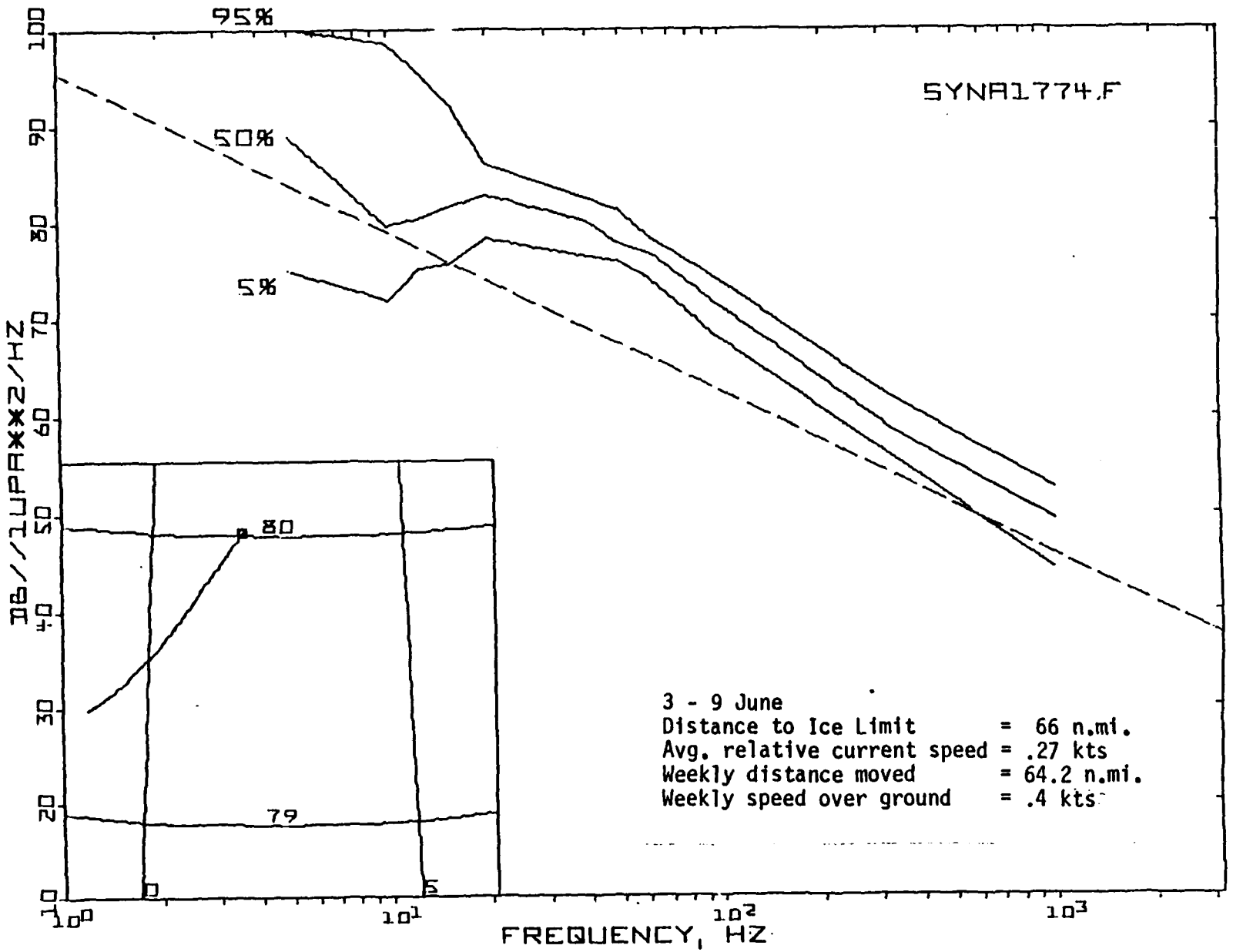
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A


SOUTHERN ICE LIMIT 02 JUNE 1981
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
ICE CONCENTRATION
4 - 6 Area 4 - 6 tenths ice-covered.
OW Open water. See ice present in concentrations less than one tenth.
ICE-FREE No sea ice. Ice of land origin (iceberg e. g.) may be present.
ICE THICKNESS (AGE)
OLD Includes both multi-year and second-year ice. Generally 2 - 3.5 m thick.
FY Any or all first year ice types (30 cm - 2 m thick).
YNG Young ice (10 - 30 cm thick).
N New and nilas.
Fast ice. Sea ice which forms and remains fast along the coast.
125 Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
Ice boundary visually or satellite observed.
Ice boundary estimated.
Seven day forecast of ice edge position.
ICE FREE
ICE LIMIT
BELTS/STRIPS
O/W
OLD
FY
YNG
80N
75N
70N
65N

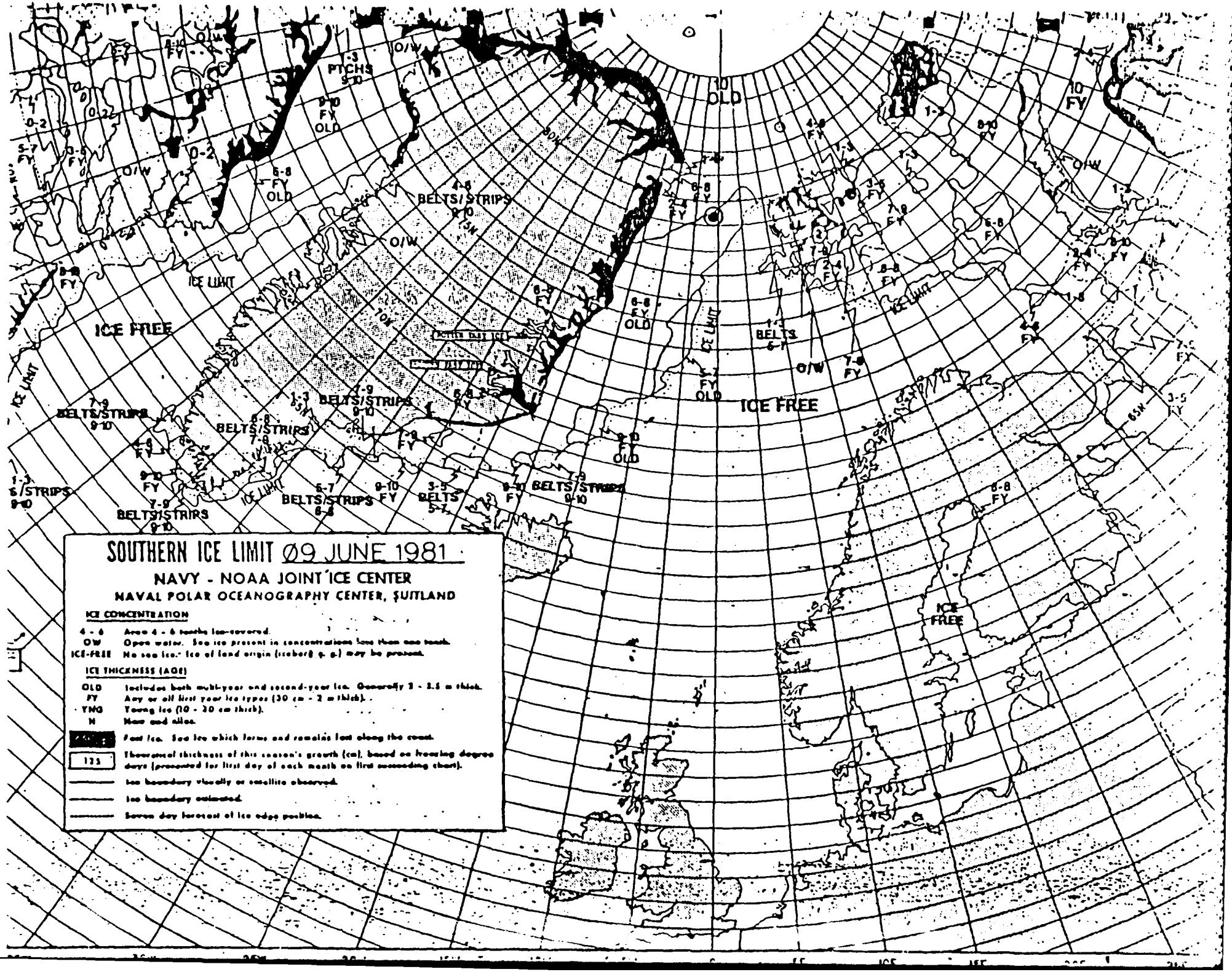
JULIAN DAYS: 154 TO 160 June 3-9, 81

OUTPUT IN FILE SYNA1774.F
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	90.9	10.8	70.2	75.0	79.6	81.7	88.9	100.9	105.1	106.9	108.9
10.0	82.4	9.2	69.2	71.9	72.5	74.4	79.5	89.4	94.8	98.5	101.4
12.5	82.1	6.3	71.5	75.2	75.2	77.5	80.3	84.8	90.8	95.6	97.4
15.6	82.5	4.1	75.7	75.7	78.5	79.9	81.7	84.5	87.2	92.0	93.8
20.0	82.6	2.7	75.6	78.4	79.1	80.5	82.7	84.4	85.8	85.8	91.2
40.0	80.0	2.1	76.4	76.4	77.5	78.4	80.0	81.3	81.9	82.5	87.3
50.0	78.4	1.8	75.1	75.8	76.5	77.1	77.6	79.6	80.4	81.2	83.7
63.0	76.3	1.6	72.9	73.8	73.8	75.2	76.5	77.0	78.1	78.1	79.8
100.0	71.0	1.9	66.9	67.7	68.5	69.8	71.0	72.0	72.9	73.8	75.2
320.0	59.0	2.0	55.0	55.7	56.4	57.5	58.6	60.3	61.1	61.8	64.6
1000.0	49.1	2.8	44.2	44.2	45.1	47.1	49.3	51.1	52.5	52.5	54.3



BUOY 1774 JUN 3 - 9


SOUTHERN ICE LIMIT 09 JUNE 1981
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
ICE CONCENTRATION
4 - 6 Areas 4 - 6 tenths ice-covered.
OW Open water. Sea ice present in concentrations less than one tenth.
ICE-FREE No sea ice. Ice of land origin (icebergs e. g.) may be present.
ICE THICKNESS (AGE)
OLD Includes both multi-year and second-year ice. Generally 3 - 3.5 m thick.
FY Any or all first year ice types (30 cm - 2 m thick).
YNG Young ice (10 - 30 cm thick).
N New and nilas.
Fast ice. Sea ice which forms and remains fast along the coast.
Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
Ice boundary visually or satellite observed.
Ice boundary estimated.
Seven day forecast of ice edge position.
ICE FREE
ICE LIMIT
O/W
BELTS/STRIPS
PTCHS
FY
OLD
YNG
NORTH BAY ICE

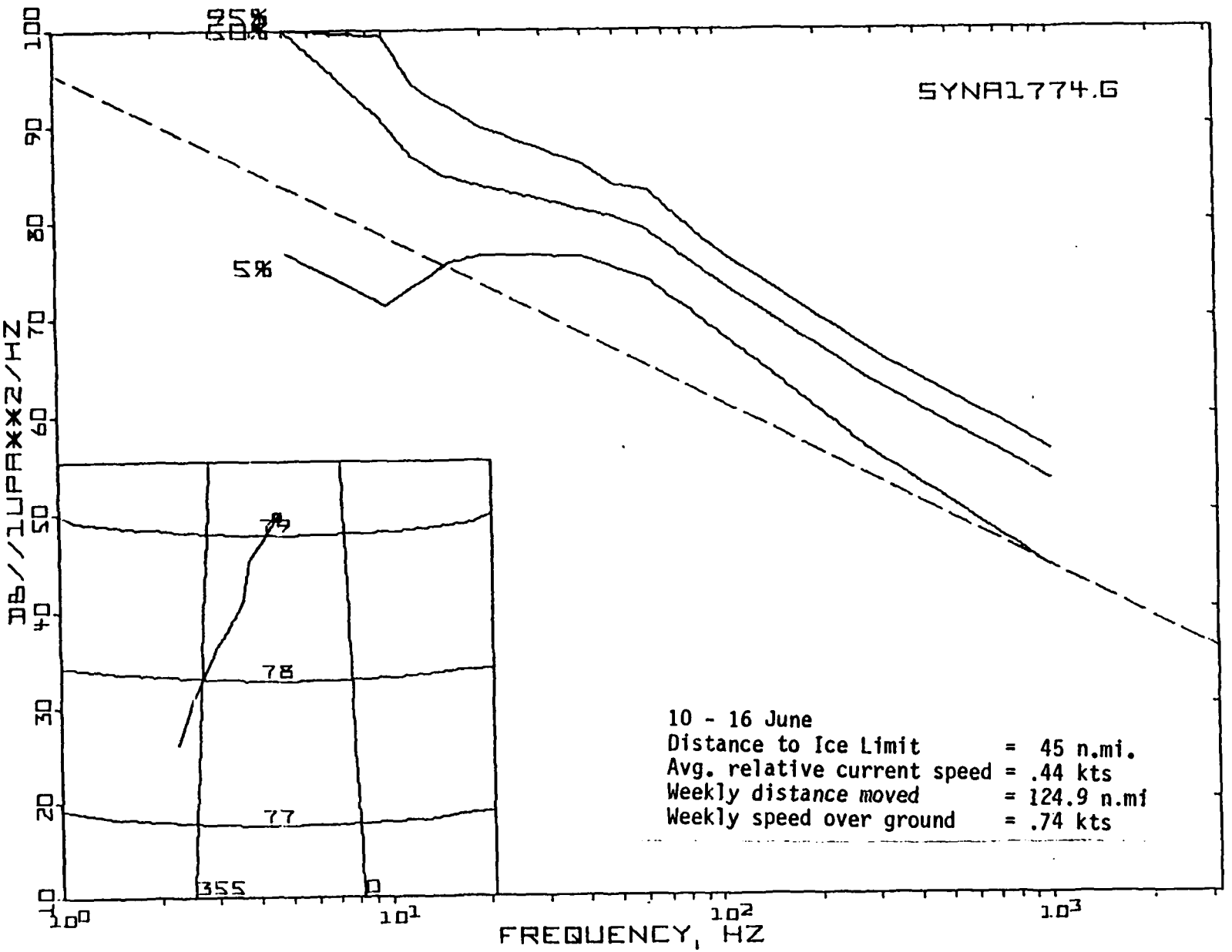
JULIAN DAYS: 161 TO 167 June 10-16, 81

OUTPUT IN FILE SYNA1774.0

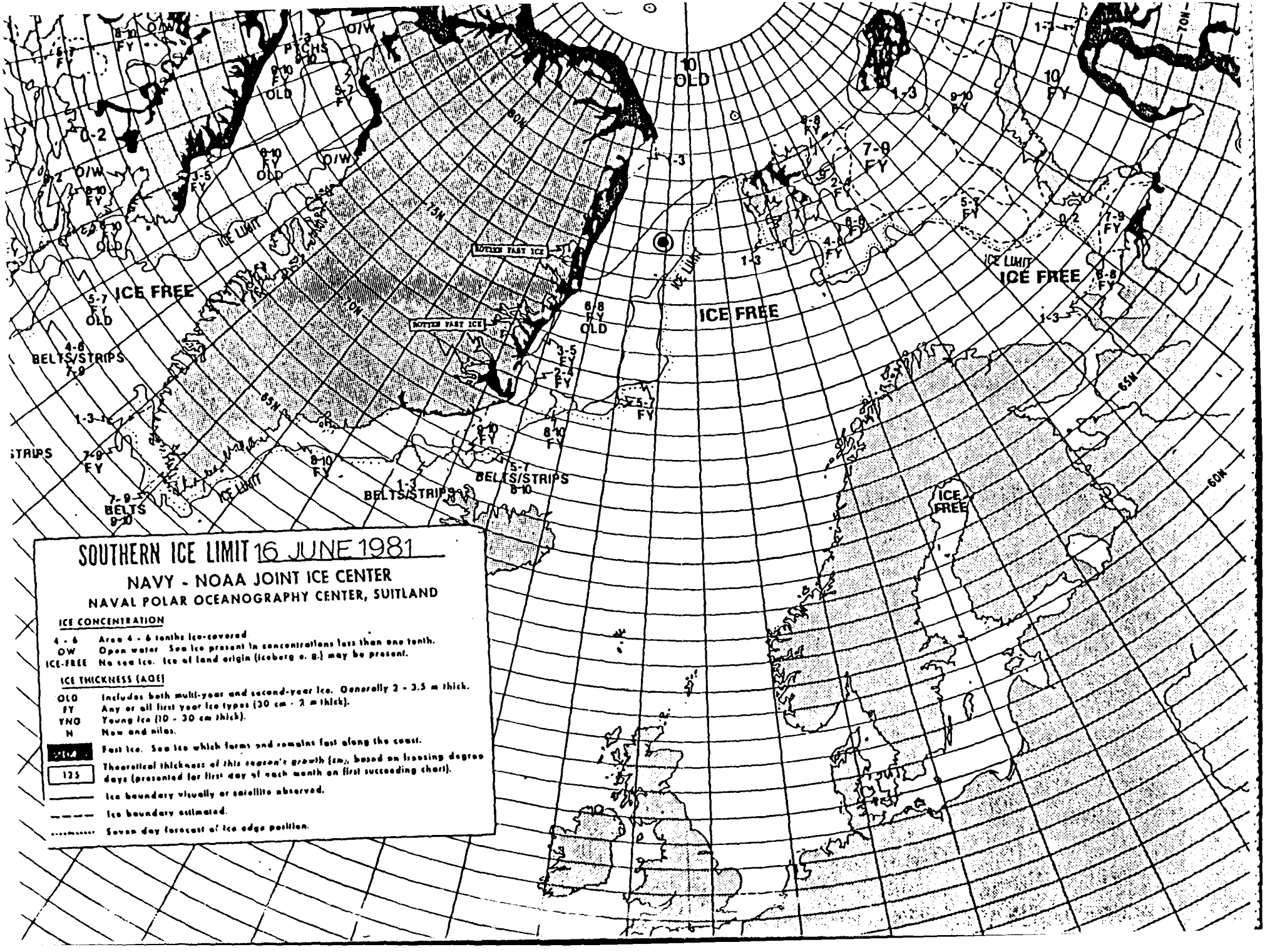
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	97.0	10.0	72.7	76.8	78.7	91.6	100.9	104.4	105.8	106.4	110.4
10.0	87.2	9.7	67.5	71.3	72.5	79.5	90.6	94.8	97.6	99.3	102.6
12.5	85.5	7.2	72.7	73.3	76.1	79.3	86.4	91.4	93.3	94.1	100.9
15.6	84.6	5.2	75.7	75.7	76.7	80.6	84.5	88.8	89.7	92.0	98.0
20.0	83.8	3.9	75.6	76.6	78.4	81.6	83.6	86.5	87.7	89.6	92.5
40.0	81.2	2.7	75.9	76.4	77.5	79.2	81.3	82.5	85.2	86.0	87.3
50.0	80.3	2.7	74.4	75.1	76.5	78.7	80.4	82.5	83.7	83.7	84.7
63.0	78.8	3.0	73.8	73.8	73.8	76.5	79.0	80.6	82.5	83.1	85.0
100.0	73.6	2.8	66.9	68.5	69.2	72.0	73.8	75.8	76.4	77.0	80.5
320.0	61.9	3.4	54.3	55.0	57.0	59.5	62.4	63.6	65.5	65.5	69.6
1000.0	51.9	3.8	43.3	44.2	45.1	48.3	53.2	54.3	55.3	56.3	57.1

JULIAN DAYS: 168 TO 174



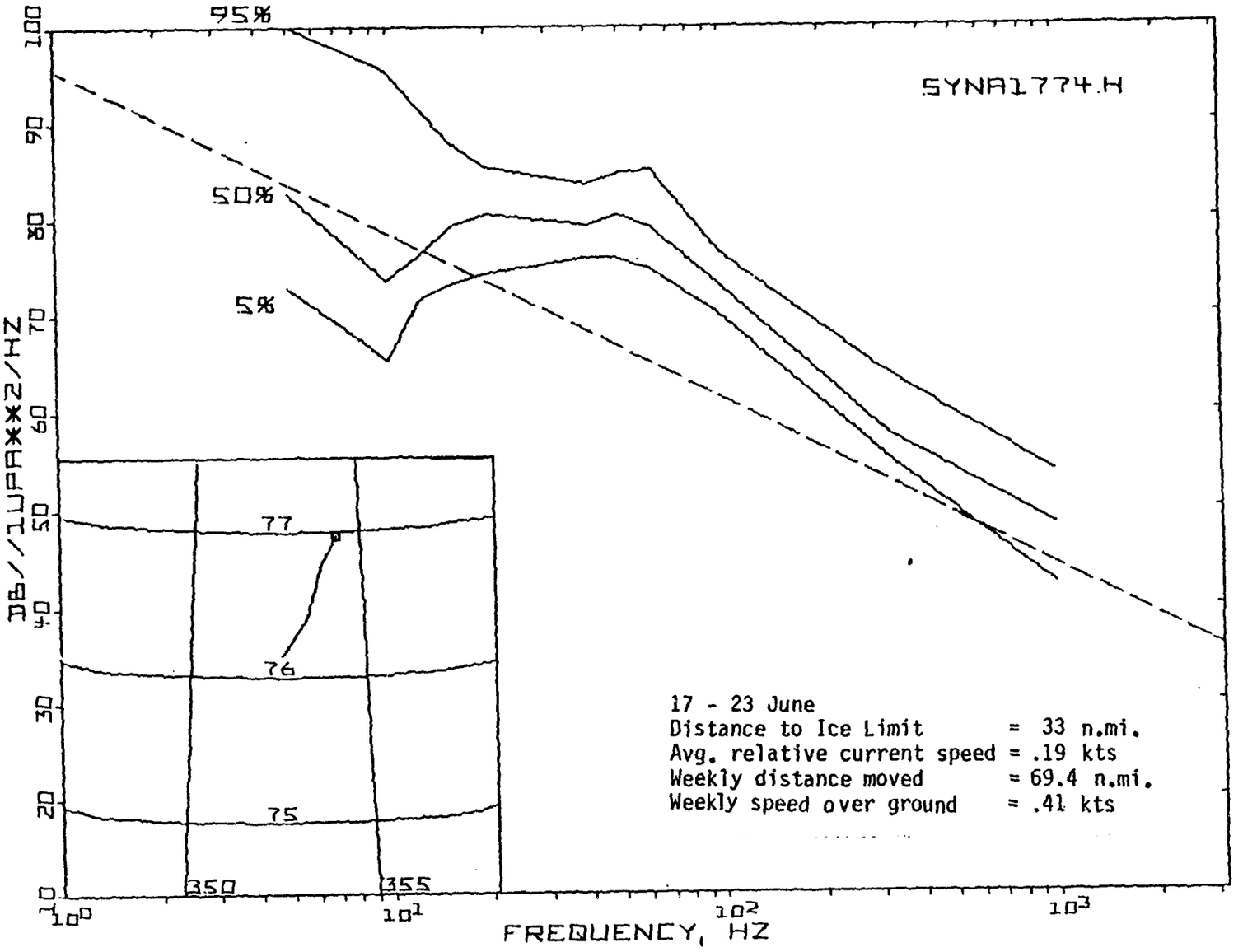
BUOY 1774 JUN 10 - 16


SOUTHERN ICE LIMIT 16 JUNE 1981
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
ICE CONCENTRATION
4 - 6 Area 4 - 6 tenths ice-covered
OW Open water See ice present in concentrations less than one tenth.
ICE-FREE No sea ice. Ice of land origin (iceberg e. g.) may be present.
ICE THICKNESS (AGE)
OLD Includes both multi-year and second-year ice. Generally 2 - 3.5 m thick.
FY Any or all first year ice types (30 cm - 2 m thick).
YNG Young ice (10 - 30 cm thick).
N New and nilas.
Fast ice. Sea ice which forms and remains fast along the coast.
Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
Ice boundary visually or satellite observed.
Ice boundary estimated.
Seven day forecast of ice edge position.
ICE FREE
ICE LIMIT
BOTTEN FAST ICE
PTCHS
BELTS/STRIPS
75N
70N
65N
60N

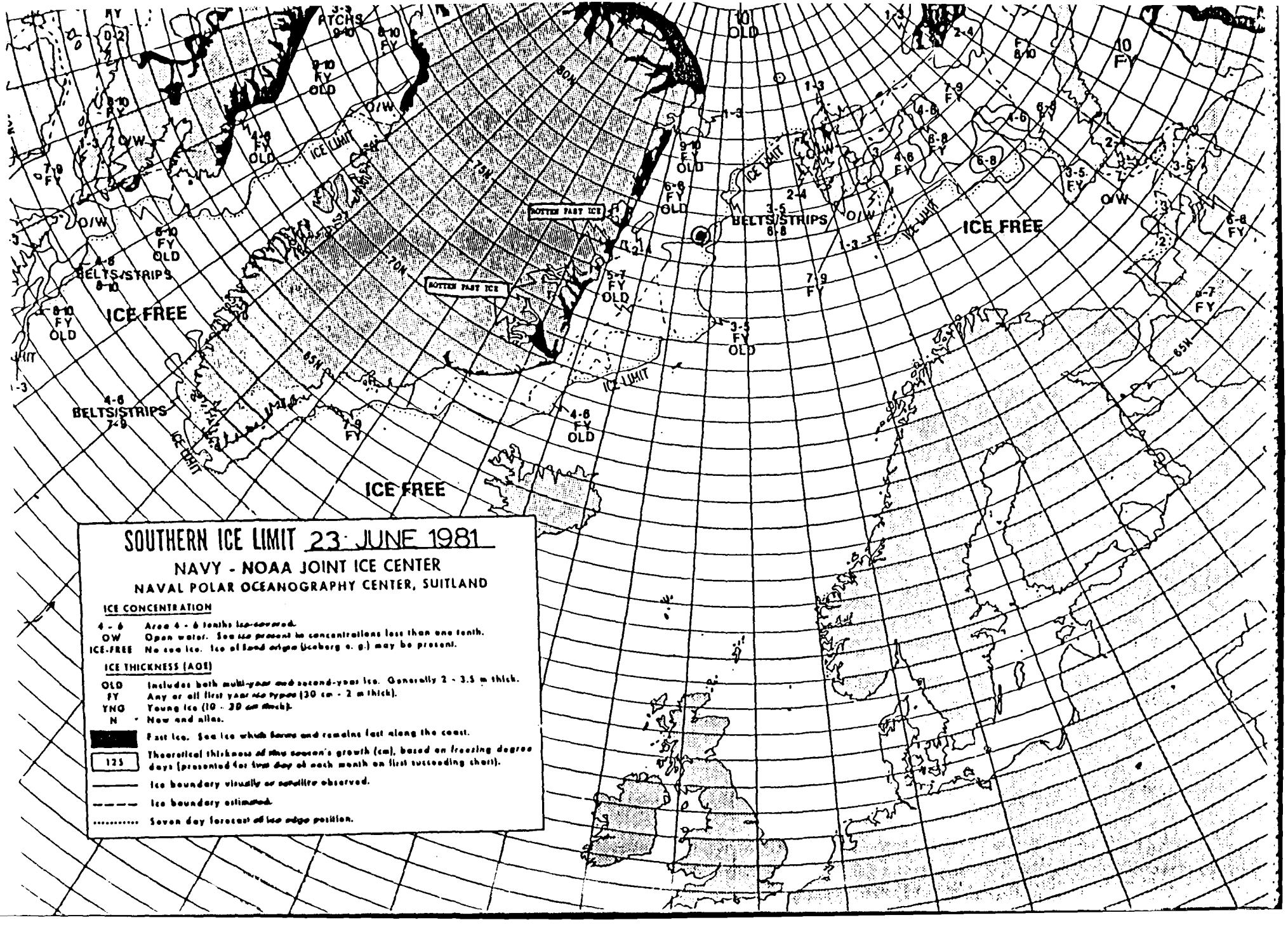
JULIAN DAYS: 168 TO 174 June 17-23, 81

OUTPUT IN FILE SYNA1774.H
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	84.7	9.8	68.3	72.7	75.0	77.8	82.8	85.6	100.9	105.1	106.4
10.0	75.6	8.6	63.2	65.3	66.5	70.7	73.5	76.0	88.7	95.4	98.5
12.5	77.7	5.8	69.2	71.5	72.7	74.3	76.1	79.3	84.2	91.4	96.2
15.6	79.5	4.3	70.7	73.2	74.5	76.7	79.2	81.7	83.7	87.8	91.3
20.0	80.4	3.2	73.8	74.4	75.6	78.4	80.5	82.7	85.2	85.2	87.7
40.0	79.9	2.7	74.6	75.9	76.4	78.4	79.2	81.9	82.5	83.5	87.9
50.0	80.4	2.7	75.8	75.8	76.5	78.7	80.4	82.5	83.7	84.7	85.6
63.0	79.1	3.2	74.5	74.5	75.2	76.5	79.0	81.2	83.1	85.0	87.3
100.0	72.9	2.3	69.2	69.8	69.8	71.0	72.9	73.8	75.8	76.4	80.5
320.0	58.6	3.0	53.5	55.0	55.0	56.4	57.5	60.3	62.4	63.6	66.3
1000.0	48.0	3.6	42.3	42.3	43.3	44.2	48.3	50.2	53.2	53.8	54.3



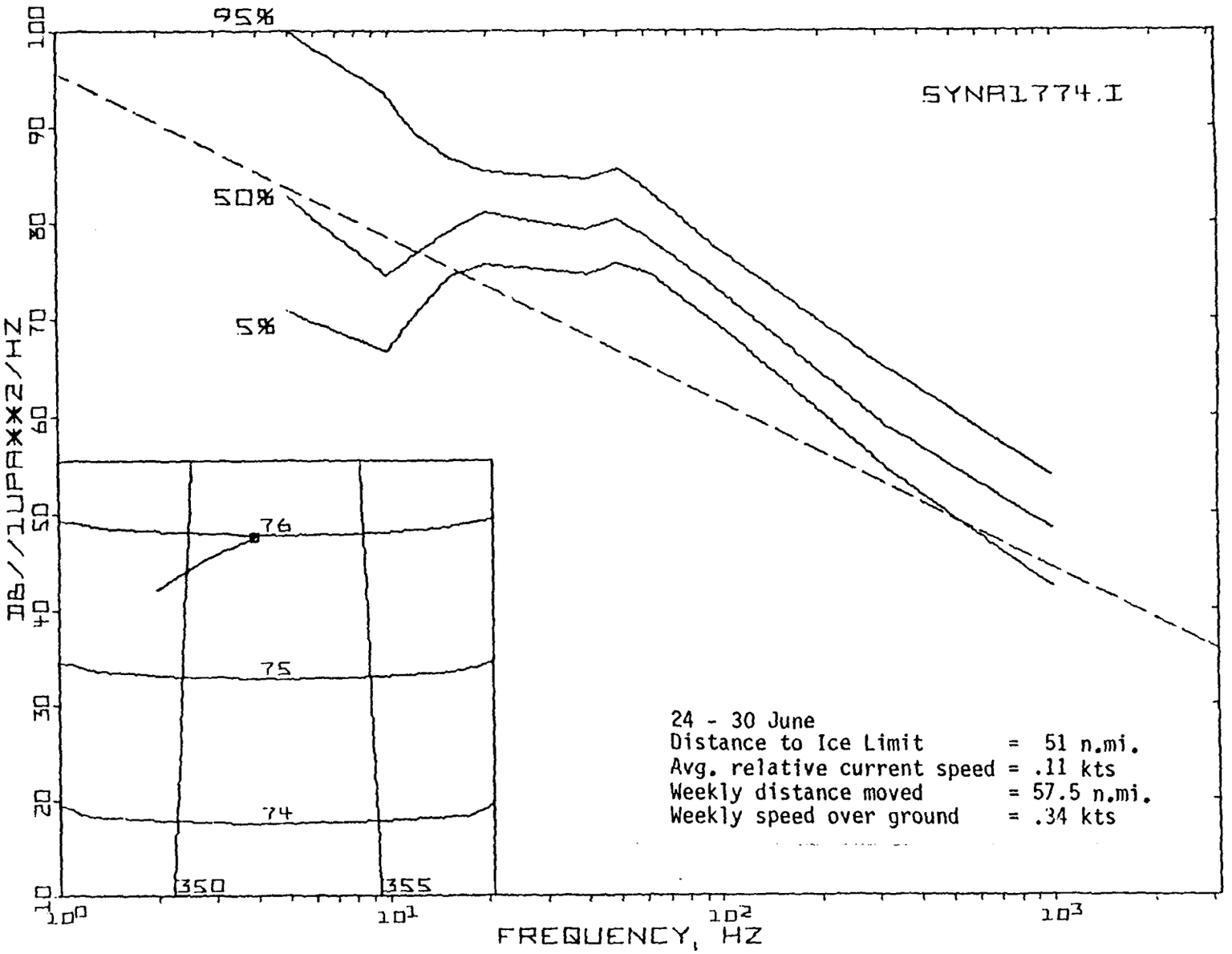
BUOY 1774 JUN 17 - 23


SOUTHERN ICE LIMIT 23 JUNE 1981
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
ICE CONCENTRATION
4 - 6 Area 4 - 6 tenths ice-covered.
OW Open water. See ice present in concentrations less than one tenth.
ICE-FREE No sea ice. Ice of land origin (iceberg e. g.) may be present.
ICE THICKNESS (AGE)
OLD Includes both multi-year and second-year ice. Generally 2 - 3.5 m thick.
FY Any or all first year ice types (30 cm - 2 m thick).
YNG Young ice (10 - 30 cm thick).
N New and nilas.
Fast ice. See ice which forms and remains fast along the coast.
125 Theoretical thickness of the season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
Ice boundary visually or satellite observed.
Ice boundary estimated.
Seven day forecast of ice edge position.
ICE FREE
BELTS/STRIPS
ROTTEN FAST ICE
ICE LIMIT
O/W
80N
75N
70N
65N

JULIAN DAYS: 175 TO 181 June 24-30, 81

OUTPUT IN FILE SYNA1774.I
THE NUMBER OF DATA SAMPLES IS 48

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	84.3	9.1	69.0	70.8	74.3	76.8	82.8	87.0	98.4	103.7	106.9
10.0	76.1	6.8	64.7	66.5	70.0	72.5	74.4	77.9	84.5	93.3	99.3
12.5	77.7	4.5	70.0	70.8	73.3	75.2	76.8	79.3	80.3	88.9	93.3
15.6	79.6	3.3	72.5	74.5	75.7	77.6	79.2	81.7	83.7	86.6	88.8
20.0	81.4	2.9	75.0	75.6	77.5	79.1	81.1	83.6	84.4	85.2	87.7
40.0	79.6	2.6	73.9	74.6	75.9	77.5	79.2	81.3	82.5	84.4	85.2
50.0	80.4	3.2	74.4	75.8	77.1	77.6	80.4	83.1	83.7	85.6	89.7
63.0	79.1	2.8	72.9	74.5	75.9	77.0	78.1	81.2	82.5	83.1	86.6
100.0	73.0	2.6	68.5	69.2	69.8	71.0	72.9	75.2	76.4	77.0	79.8
320.0	59.2	3.4	53.5	54.3	55.0	56.4	58.6	61.8	63.6	64.6	65.5
1000.0	47.3	3.9	42.3	42.3	42.3	44.2	48.3	51.1	52.5	53.8	54.3

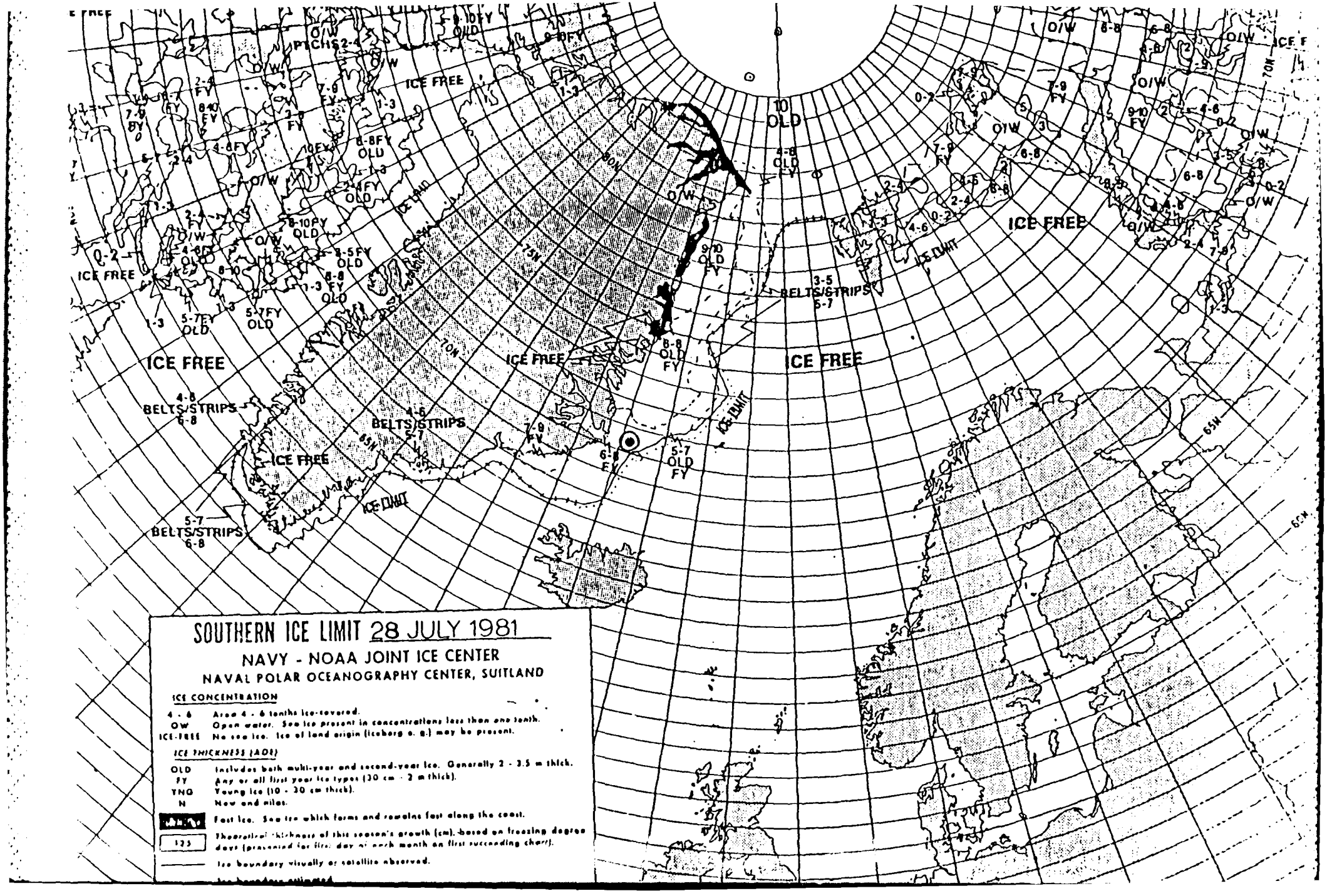


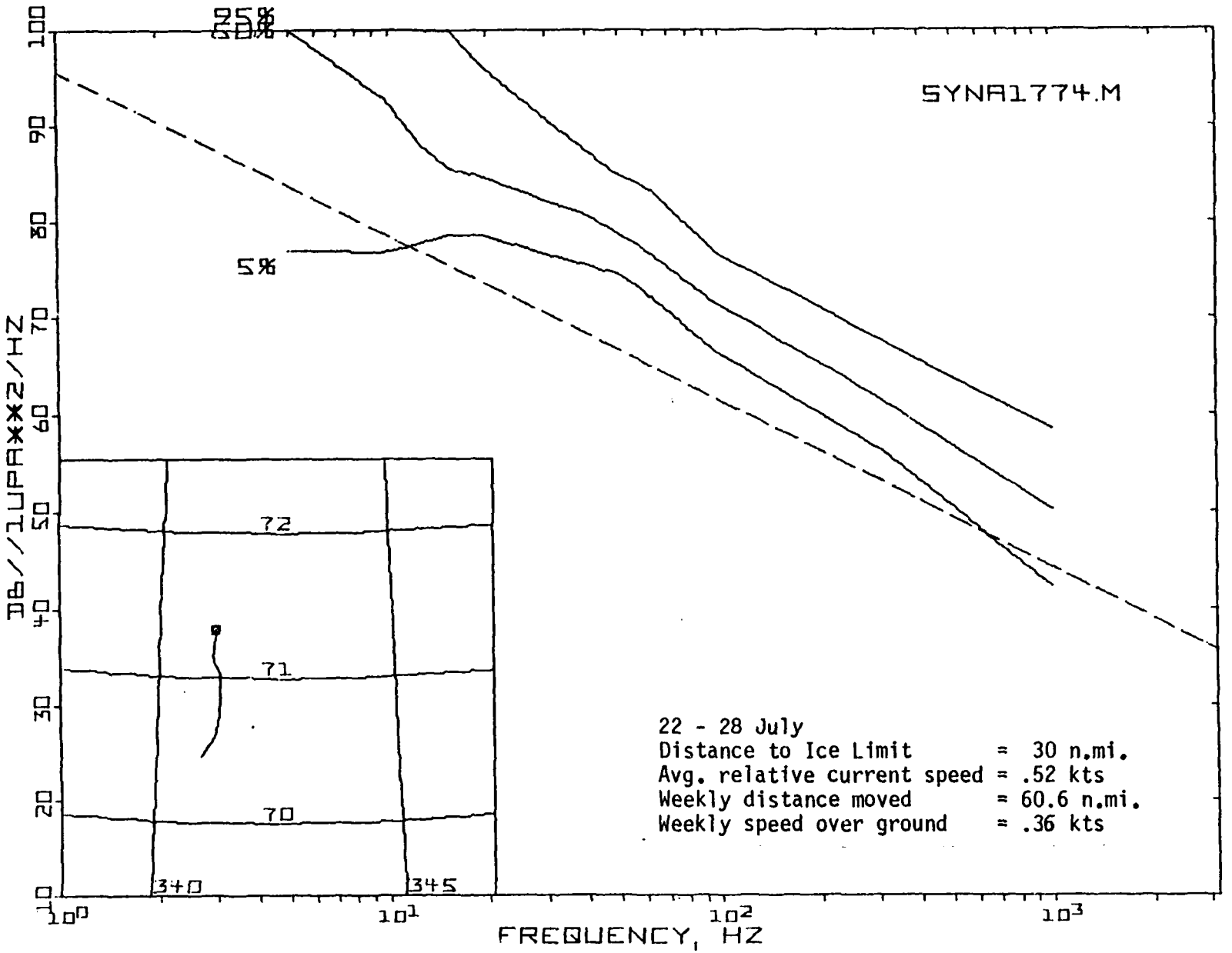
BUOY 1774 JUN 24 – 30

JULIAN DAYS: 210 TO 216 July 29 - Aug 4, 81

OUTPUT IN FILE SYNA1774.N
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	86.6	10.7	70.8	71.[illegible]	73.6	76.8	86.4	93.1	100.9	103.7	111.1
10.0	73.7	10.9	58.8	54.4	58.6	65.3	75.3	79.5	87.3	90.0	100.8
12.5	76.0	6.4	67.3	67.3	68.3	71.5	75.2	79.3	84.2	86.4	98.4
15.6	77.9	5.0	67.9	69.7	70.7	75.1	77.6	81.2	82.8	85.3	93.2
20.0	80.2	3.4	72.4	74.4	76.6	78.4	79.1	81.6	83.6	85.2	89.6
40.0	78.1	3.2	72.3	73.2	74.6	76.4	77.5	80.0	81.9	82.5	88.5
50.0	77.6	2.2	72.6	74.4	75.1	76.5	77.6	78.7	81.2	81.2	82.5
63.0	76.0	2.2	71.0	72.0	72.9	74.5	75.9	77.0	79.0	79.8	81.2
100.0	71.5	2.4	66.9	67.7	69.2	69.8	71.0	72.0	74.5	75.8	78.9
320.0	60.3	2.4	55.7	57.0	57.0	58.6	60.3	62.4	63.0	63.6	65.5
1000.0	50.3	2.9	45.1	46.5	46.5	48.3	50.2	51.8	54.3	54.3	57.8


ICE FREE
O/W
10 OLD
4-8 OLD FY
9-10 OLD FY
8-8 OLD FY
5-7 OLD FY
6-8 FY
7-9 FY
3-5 BELTS/STRIPS 5-7
4-6 BELTS/STRIPS 6-8
5-7 BELTS/STRIPS 6-8
ICE LIMIT
80N
75N
70N
65N
60N
SOUTHERN ICE LIMIT 28 JULY 1981
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
ICE CONCENTRATION
4 - 6 Area 4 - 6 tenths ice-covered.
OW Open water. See ice present in concentrations less than one tenth.
ICE-FREE No sea ice. Ice of land origin (iceberg e. g.) may be present.
ICE THICKNESS (AGE)
OLD Includes both multi-year and second-year ice. Generally 2 - 3.5 m thick.
FY Any or all first year ice types (30 cm - 2 m thick).
YNG Young ice (10 - 30 cm thick).
N New and nilas.
Fast ice. Sea ice which forms and remains fast along the coast.
Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
Ice boundary visually or satellite observed.

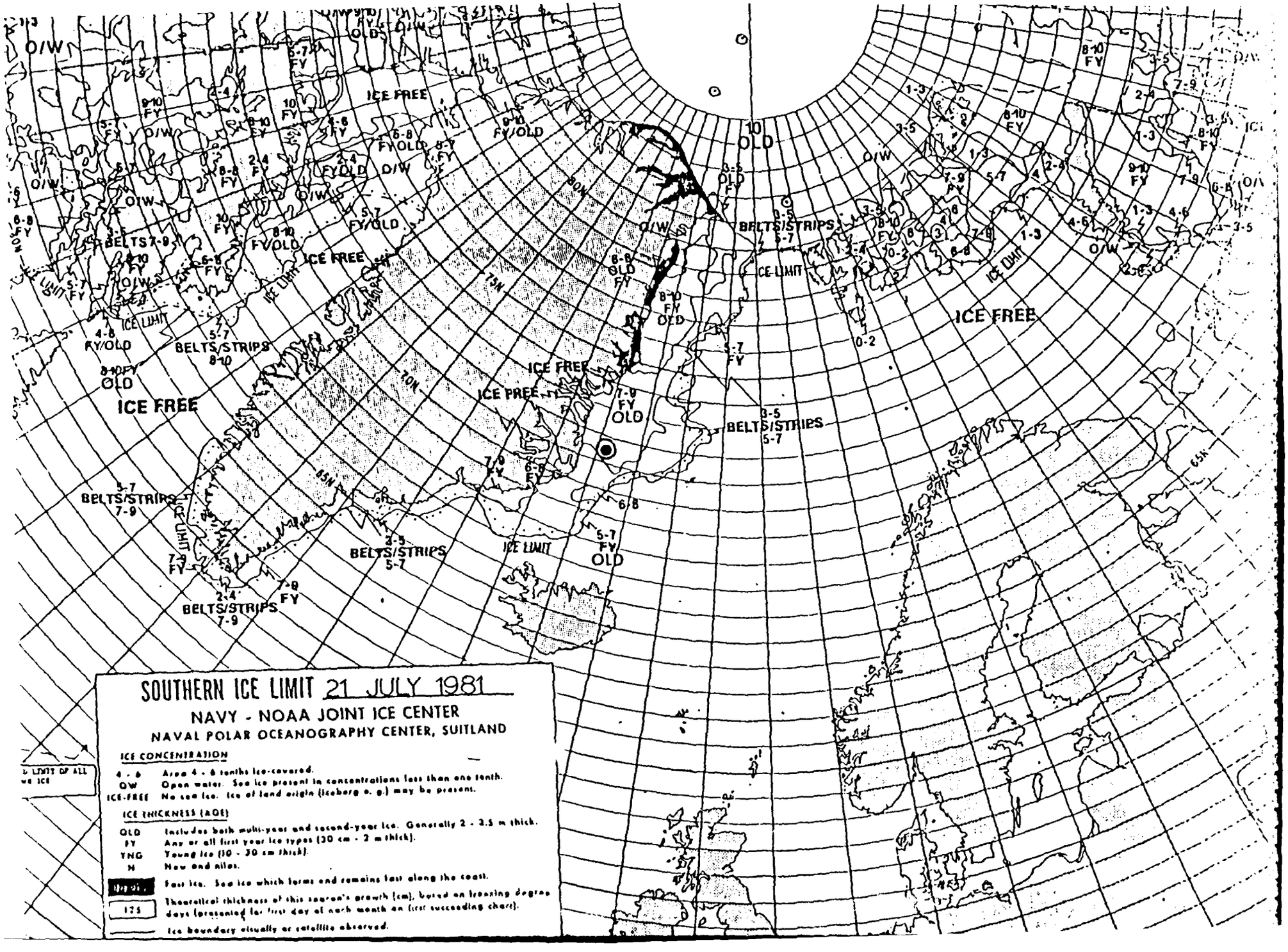


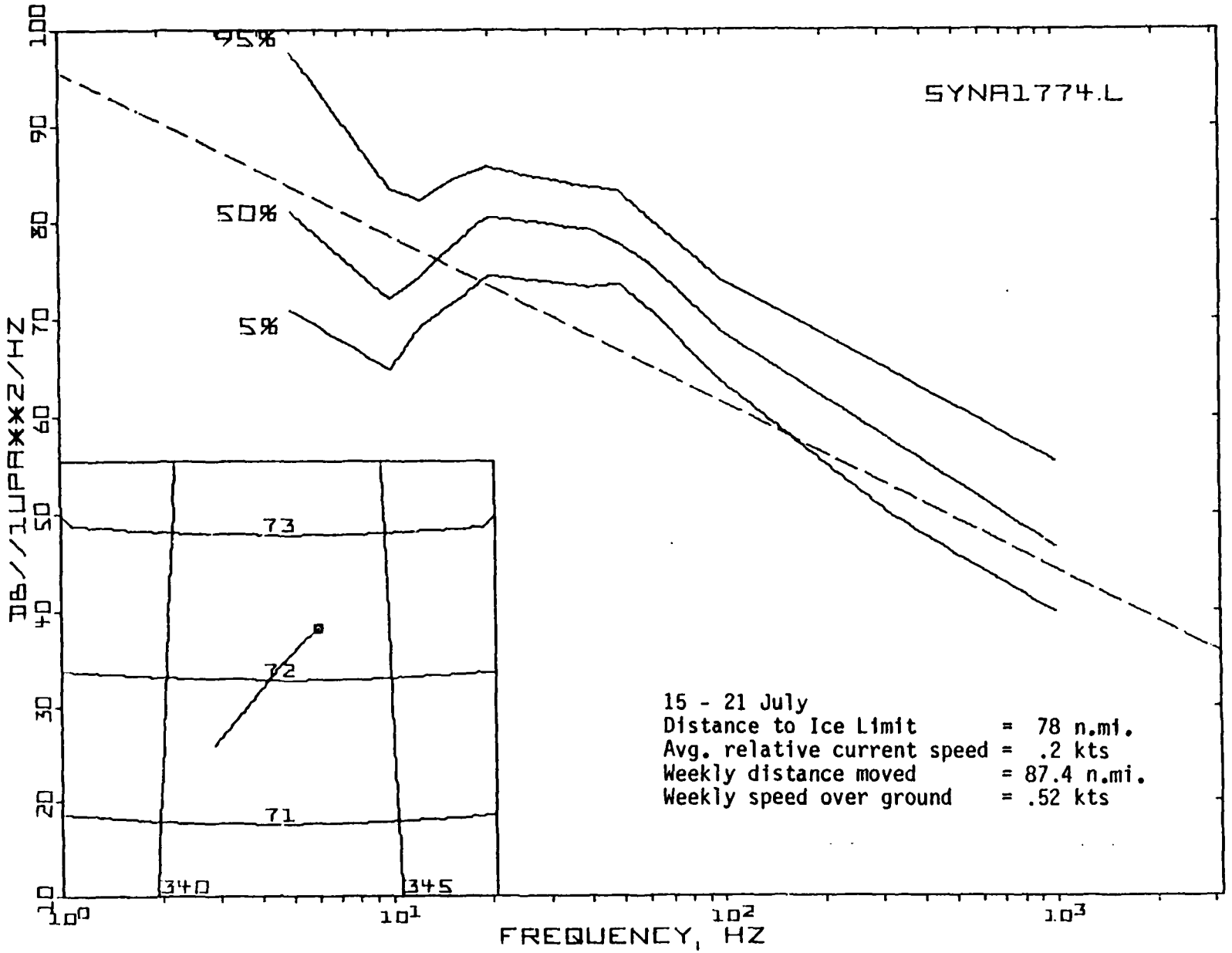
BUOY 1774 JUL 22 - 28

JULIAN DAYS: 203 TO 209 July 22-28, 81

OUTPUT IN FILE SYNA1774.M
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	99.5	11.4	72.7	76.8	79.6	93.7	102.8	106.9	111.1	112.9	114.0
10.0	90.9	9.5	71.3	76.7	77.9	81.3	92.5	97.6	102.6	104.5	106.1
12.5	88.6	8.2	75.2	77.5	79.3	82.1	88.1	94.1	101.6	103.4	104.4
15.6	87.0	6.8	75.7	78.5	79.2	81.7	85.3	90.5	98.0	99.8	102.6
20.0	85.4	4.9	77.5	78.4	79.8	81.6	84.4	87.7	92.5	95.6	98.5
40.0	81.1	3.9	73.9	75.3	76.4	77.5	80.6	83.5	86.7	87.3	88.5
50.0	79.2	3.5	72.6	74.4	75.1	76.5	78.7	82.5	83.7	84.7	85.6
63.0	77.3	3.4	71.0	72.0	72.9	74.5	76.5	79.8	82.5	83.1	84.1
100.0	71.4	3.7	62.5	66.0	66.9	68.5	71.0	73.8	75.8	76.4	79.8
320.0	61.0	3.7	51.0	55.7	56.4	57.5	61.1	63.6	65.5	67.1	69.0
1000.0	51.1	4.9	39.0	42.3	45.8	47.7	50.2	54.3	57.1	58.5	60.3


SOUTHERN ICE LIMIT 21 JULY 1981
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
ICE CONCENTRATION
4 - 6 Area 4 - 6 tenths ice-covered.
OW Open water. See ice present in concentrations less than one tenth.
ICE-FREE No sea ice. Ice of land origin (iceberg e. g.) may be present.
ICE THICKNESS (AGE)
OLD Includes both multi-year and second-year ice. Generally 2 - 3.5 m thick.
FY Any or all first year ice types (30 cm - 2 m thick).
YNG Young ice (10 - 30 cm thick).
N New and nilas.
Fast ice. Sea ice which forms and remains fast along the coast.
Theoretical thickness of this season's growth (cm), based on freezing degree days forecasted for first day of each month on (last succeeding chart).
Ice boundary visually or satellite observed.
ICE FREE
ICE LIMIT
BELTS/STRIPS
FY/OLD
O/W
70N
65N

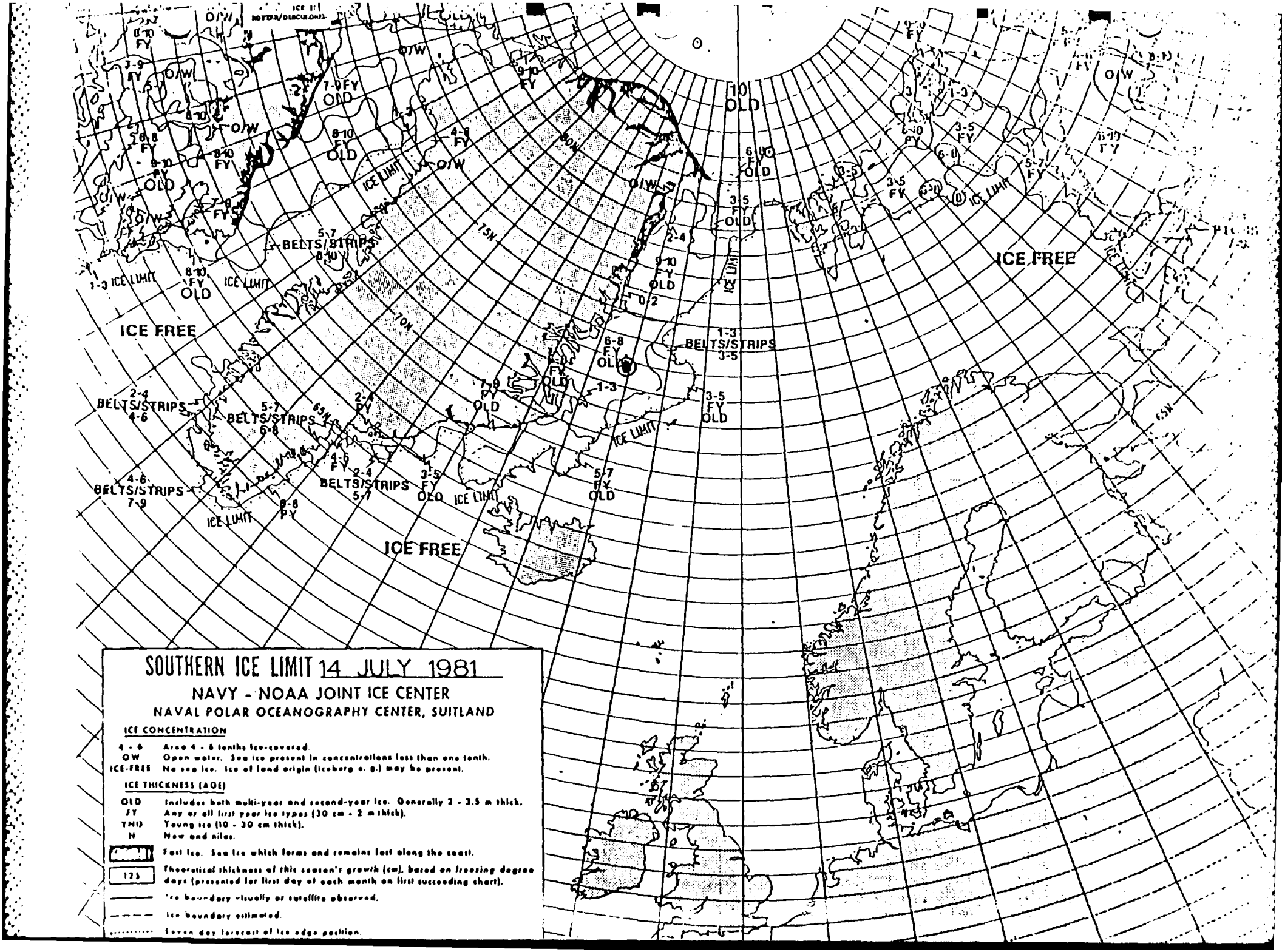


BUOY 1774 JUL 15 - 21

JULIAN DAYS: 196 TO 202 July 15-21, 81

OUTPUT IN FILE SYNA1774.1.
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	82.5	8.7	64.8	70.8	72.7	75.6	81.0	87.0	96.8	97.6	104.4
10.0	73.1	6.5	62.4	64.7	65.9	68.4	71.9	76.7	81.3	83.4	96.6
12.5	75.1	4.5	69.2	69.2	69.2	71.5	74.3	78.1	80.3	82.1	91.4
15.6	77.9	4.3	70.7	71.6	72.5	74.5	77.6	81.2	82.8	84.5	88.8
20.0	80.7	3.8	73.8	74.4	75.6	77.5	80.5	83.6	85.2	85.8	89.6
40.0	79.1	3.2	72.3	73.2	74.6	76.4	79.2	81.3	82.5	83.5	86.7
50.0	77.8	3.0	72.6	73.5	74.4	75.8	77.6	79.6	81.2	83.1	87.2
63.0	75.4	2.7	69.8	70.4	72.0	72.9	75.2	77.0	79.0	79.8	80.6
100.0	68.7	3.3	62.5	63.2	64.4	65.0	68.5	71.0	72.9	73.8	76.4
320.0	57.4	4.7	49.7	49.7	51.5	52.5	57.5	61.1	63.6	64.6	66.3
1000.0	46.9	4.9	39.8	39.8	40.5	42.3	46.5	50.2	54.3	55.3	57.8



SOUTHERN ICE LIMIT 14 JULY 1981

NAVY - NOAA JOINT ICE CENTER

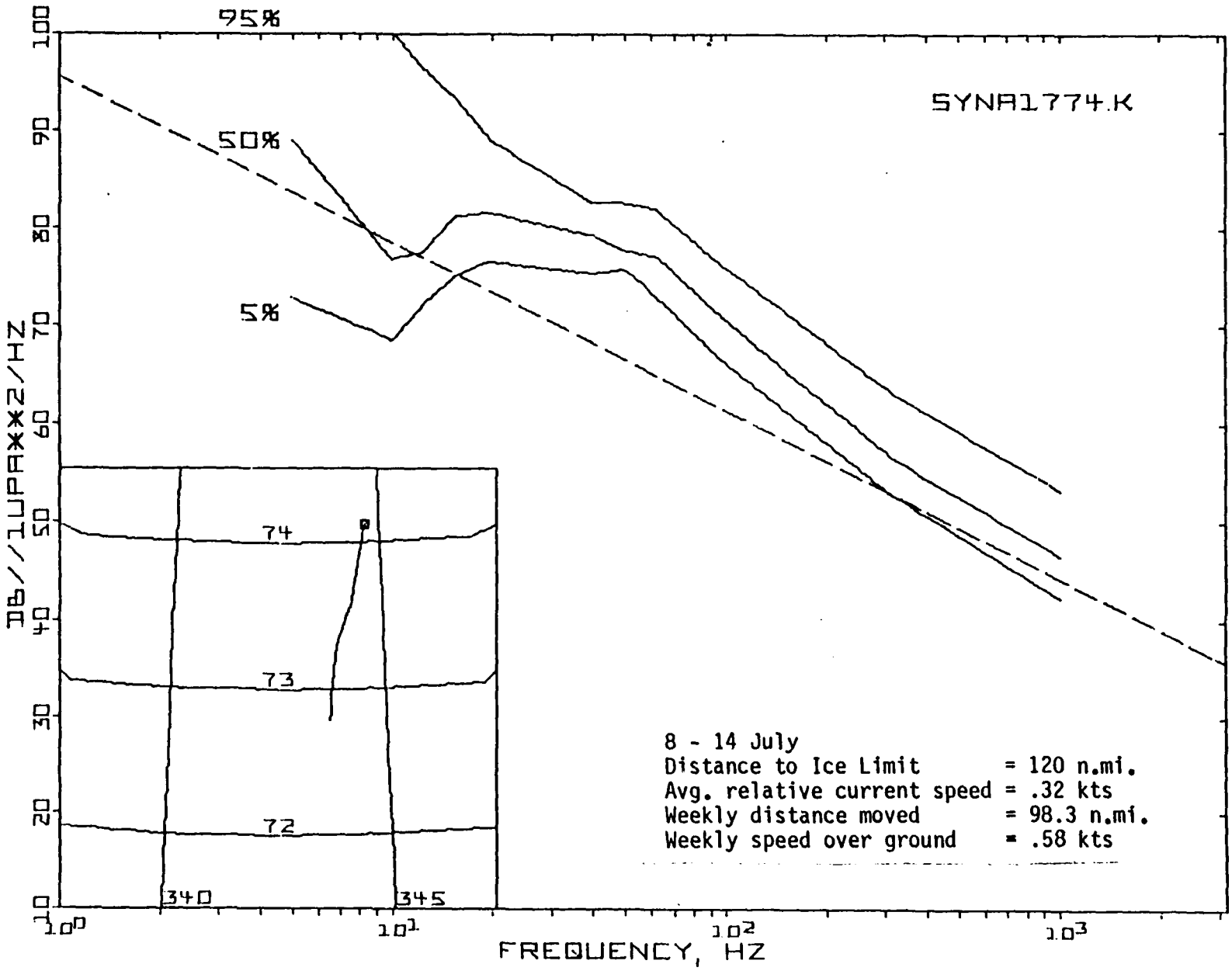
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

ICE CONCENTRATION

4 - 6	Area 4 - 6 tenths ice-covered.
OW	Open water. See ice present in concentrations less than one tenth.
ICE-FREE	No sea ice. Ice of land origin (iceberg e. g.) may be present.

ICE THICKNESS (AGE)

OLD	Includes both multi-year and second-year ice. Generally 2 - 3.5 m thick.
FY	Any or all first year ice types (30 cm - 2 m thick).
YNG	Young ice (10 - 30 cm thick).
N	New and nilas.
	Fast ice. Sea ice which forms and remains fast along the coast.
123	Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
———	Ice boundary visually or satellite observed.
– – – –	Ice boundary estimated.
.....	Seven day forecast of ice edge position.

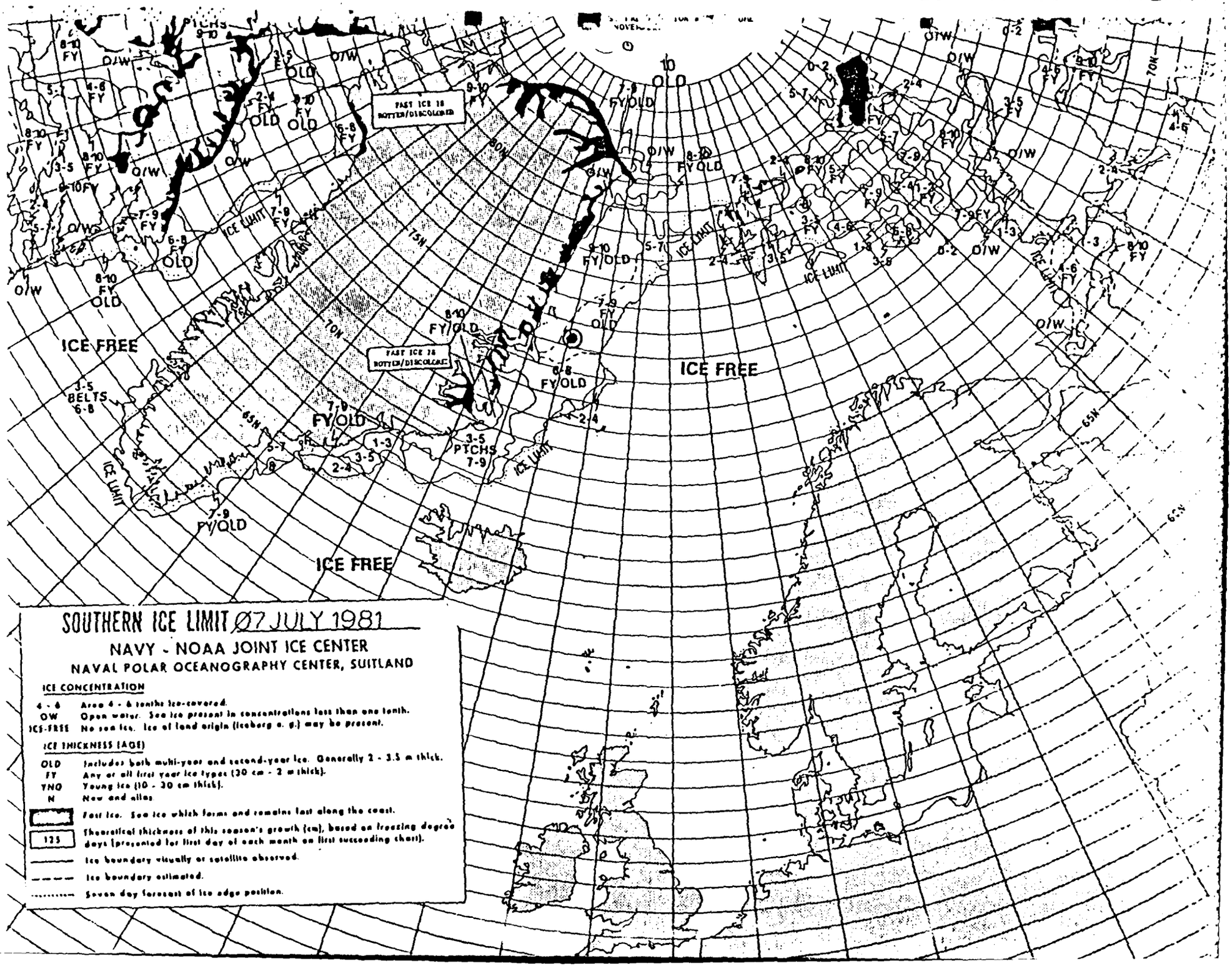


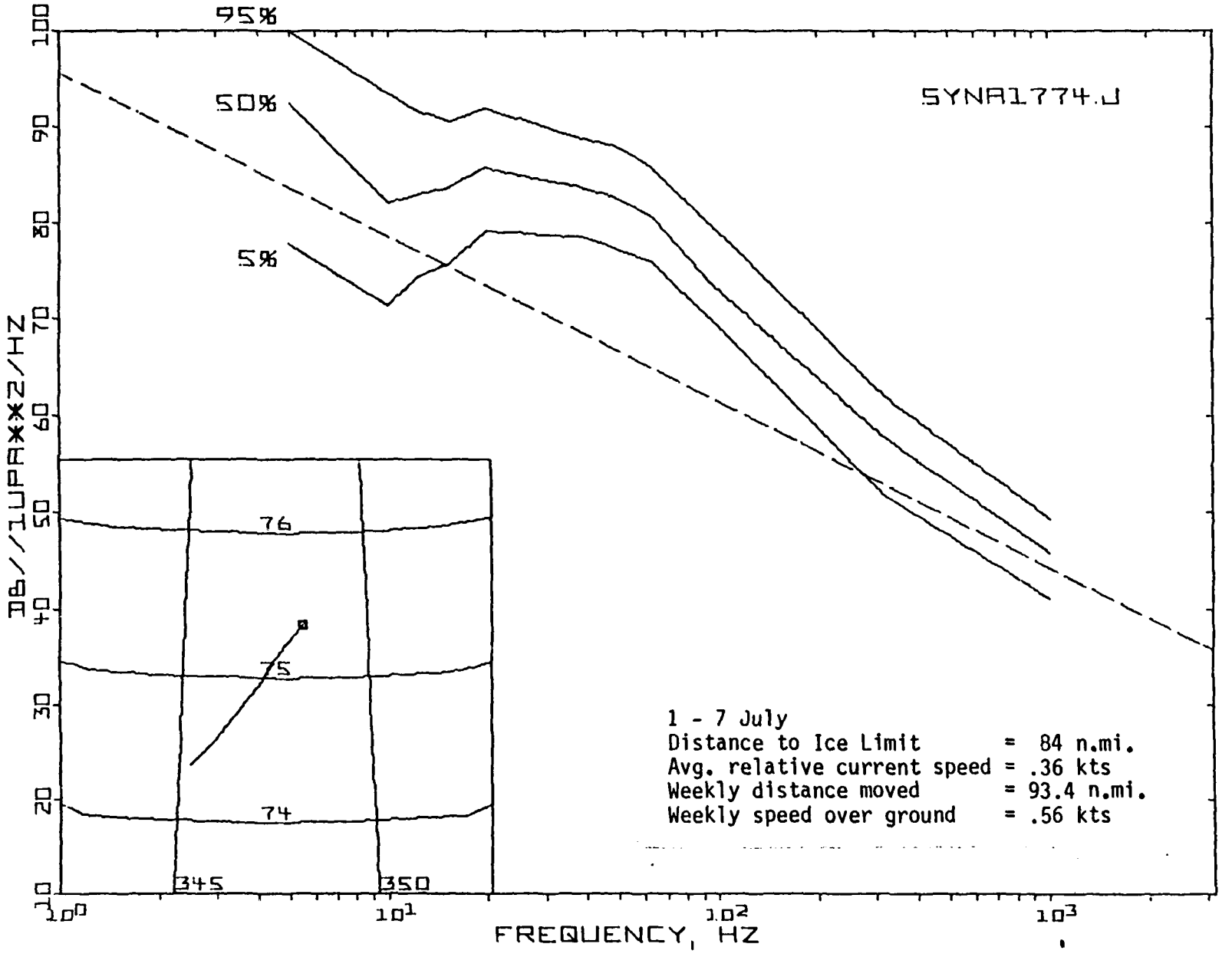
BUOY 1774 JUL 8 – 14

JULIAN DAYS: 189 TO 195 July 8-14, 81

OUTPUT IN FILE SYNA1774.K
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	90.5	12.1	67.5	72.7	76.2	78.7	88.9	102.8	105.8	106.9	107.9
10.0	81.8	11.5	66.5	68.4	69.2	72.5	76.7	94.1	96.6	100.8	102.6
12.5	81.7	8.5	71.5	72.1	73.3	74.3	77.5	90.2	93.3	96.2	99.3
15.6	82.3	5.7	74.5	75.1	75.7	77.6	81.2	85.3	89.7	93.2	95.7
20.0	82.4	3.7	75.6	76.6	78.4	79.8	81.6	85.2	87.1	88.7	93.7
40.0	79.2	2.5	73.9	75.3	75.9	77.5	79.2	80.6	81.9	82.5	86.0
50.0	78.4	2.6	71.6	75.8	75.8	77.1	77.6	79.6	81.2	82.5	89.7
63.0	77.0	2.7	72.9	72.9	73.8	74.5	77.0	78.1	80.6	81.9	85.0
100.0	70.6	3.1	65.0	66.0	66.9	69.2	70.4	72.0	73.8	75.8	81.9
320.0	57.4	3.3	50.4	52.5	53.5	54.3	56.4	59.5	61.1	63.0	65.5
1000.0	46.9	3.8	41.1	42.3	42.3	44.2	46.3	48.3	51.8	53.2	60.3


SOUTHERN ICE LIMIT 07 JULY 1981
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
ICE CONCENTRATION
4 - 6 Area 4 - 6 tenths ice-covered.
OW Open water. See ice present in concentrations less than one tenth.
ICE-FREE No sea ice. Ice of land origin (iceberg e. g.) may be present.
ICE THICKNESS (AGE)
OLD Includes both multi-year and second-year ice. Generally 2 - 3.5 m thick.
FY Any or all first year ice types (30 cm - 2 m thick).
YNG Young ice (10 - 30 cm thick).
N New and nilas.
Fast ice. See ice which forms and remains fast along the coast.
125 Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
Ice boundary visually or satellite observed.
Ice boundary estimated.
Seven day forecast of ice edge position.
ICE FREE
FAST ICE IS ROTTEN/DISCOLORED
ICE LIMIT
O/W
FY/OLD
PTCHS
BELTS
65N
70N
75N
80N



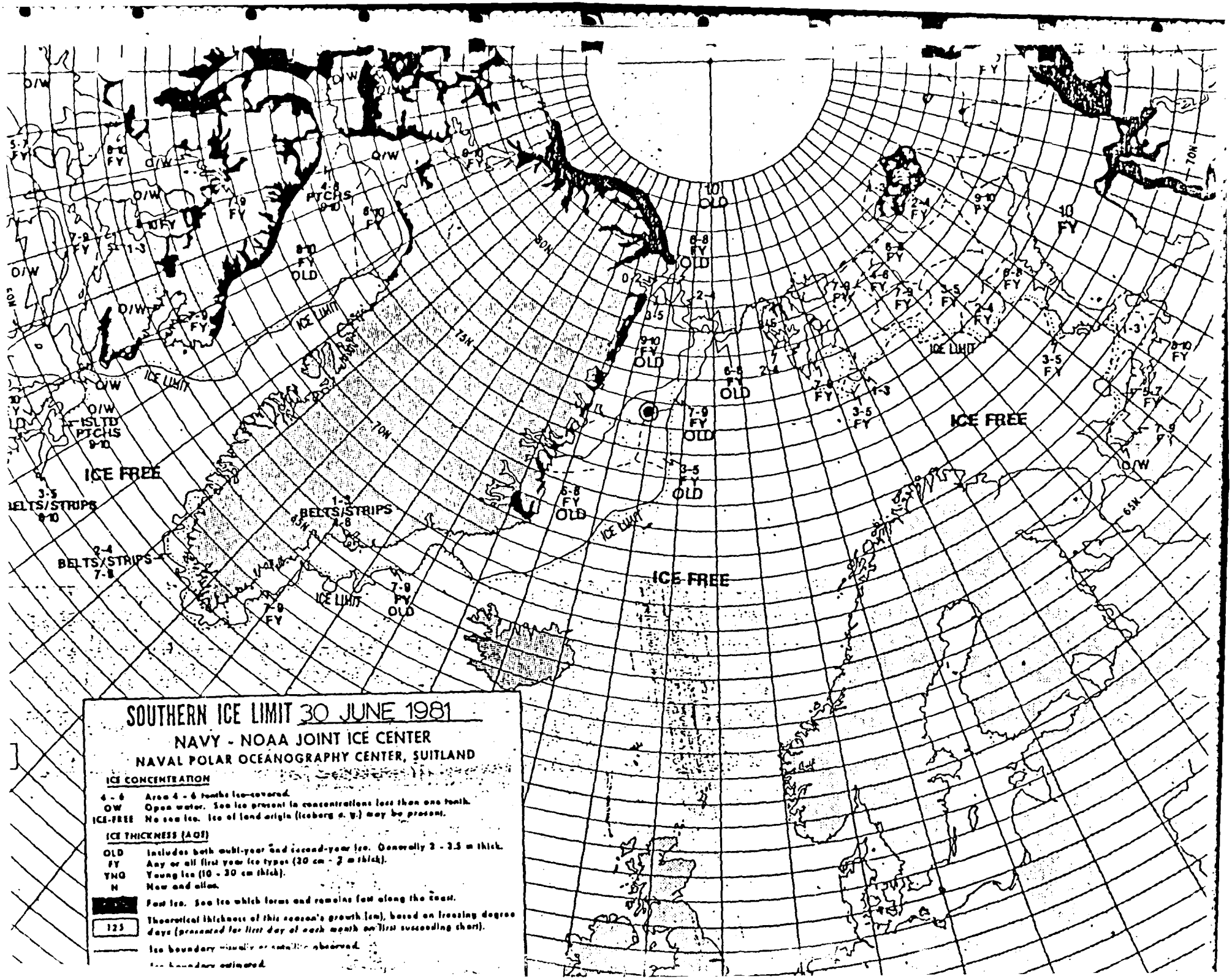
BUOY 1774 JUL 1 - 7

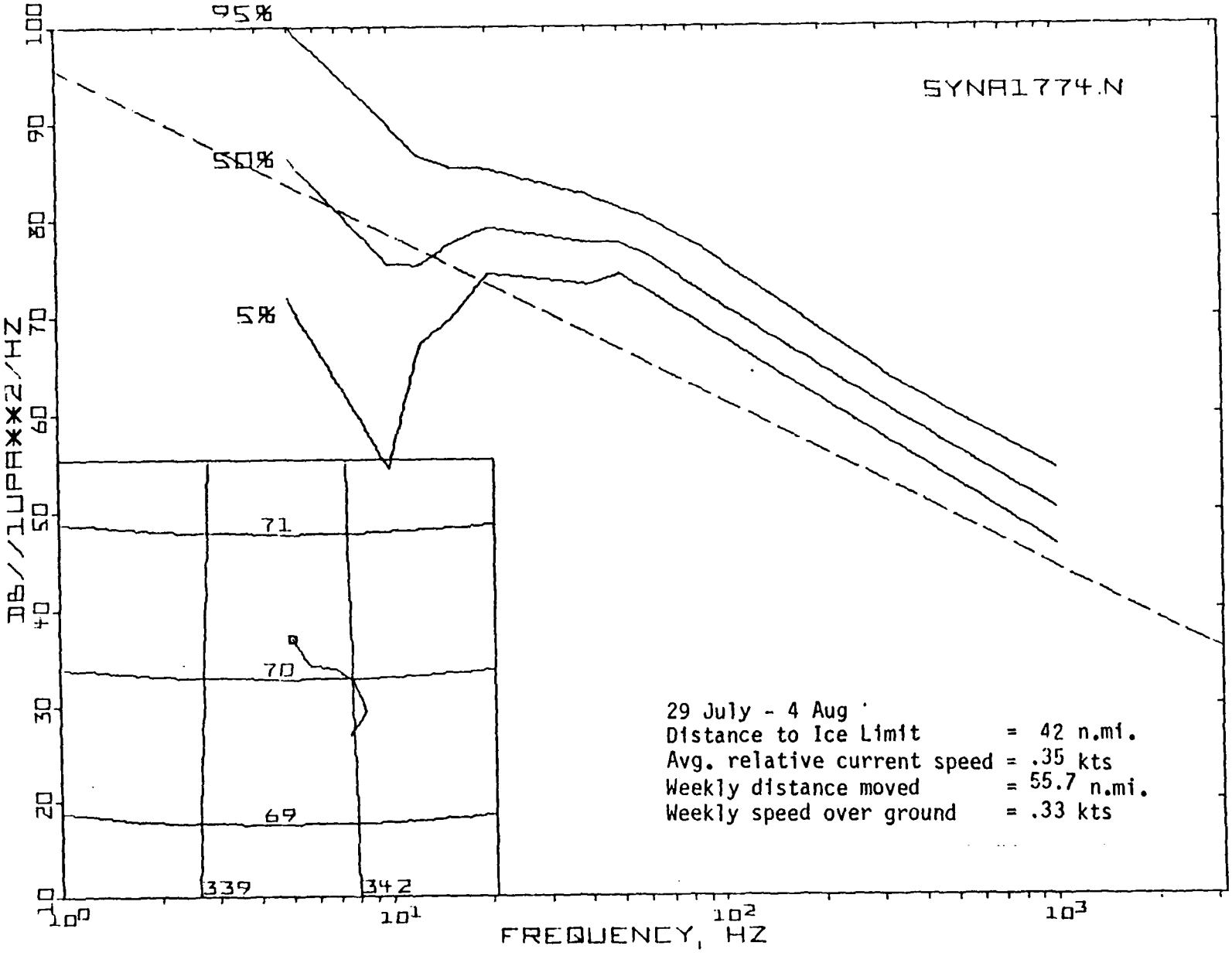
JULIAN DAYS: 182 TO 188 July 1-7, 81

(UTPUT IN FILE SYNA1774.J

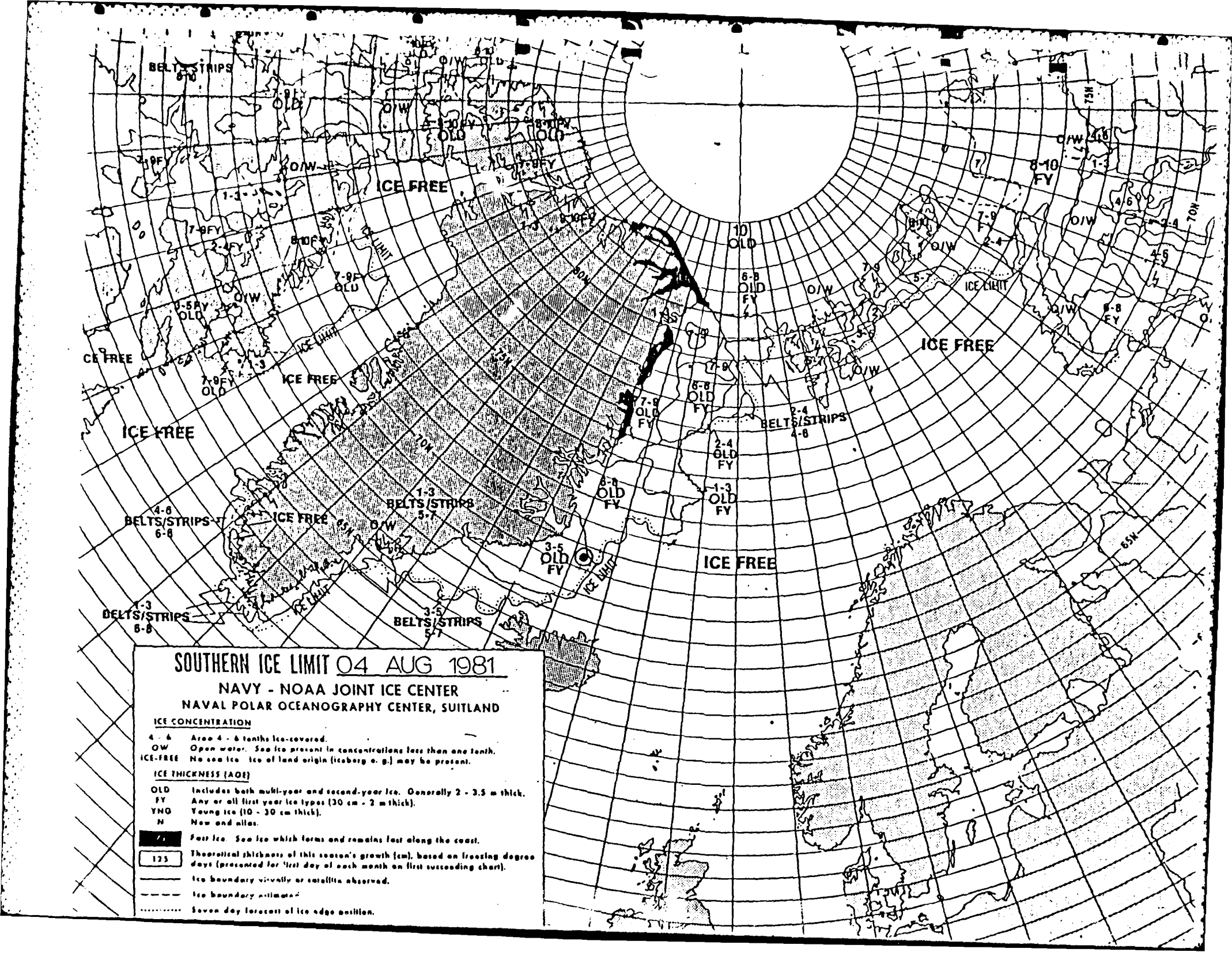
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	91.0	9.8	68.3	77.8	78.7	81.0	92.4	99.7	102.8	105.1	106.9
10.0	82.9	7.4	68.4	71.3	73.5	77.3	82.0	88.1	91.6	93.3	102.6
12.5	83.3	5.5	72.1	74.3	76.1	79.3	82.8	87.3	89.5	91.4	99.3
15.6	88.9	4.5	74.5	75.7	78.5	80.6	83.7	87.2	88.8	90.5	95.7
20.0	85.7	4.1	78.4	79.1	79.8	82.7	85.8	88.7	90.4	91.9	93.7
40.0	83.9	3.8	77.5	78.4	78.4	80.4	83.5	87.3	88.5	88.5	91.2
50.0	83.0	3.7	75.8	77.1	78.7	79.6	82.5	85.6	87.2	87.9	91.6
63.0	81.0	3.4	75.2	75.9	77.0	78.1	80.6	84.1	85.8	85.8	86.6
100.0	73.7	3.2	67.7	69.2	69.8	71.0	72.9	75.8	78.0	78.9	79.8
320.0	57.4	3.2	50.4	51.5	53.5	55.0	57.5	60.3	61.1	61.8	63.0
1000.0	45.7	2.9	39.8	41.1	41.7	43.3	45.8	48.3	49.3	49.3	51.1


SOUTHERN ICE LIMIT 30 JUNE 1981
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
ICE CONCENTRATION
4 - 6 Area 4 - 6 tenths ice-covered.
OW Open water. See ice present in concentrations less than one tenth.
ICE-FREE No sea ice. Ice of land origin (iceberg e. g.) may be present.
ICE THICKNESS (AGE)
OLD Includes both multi-year and second-year ice. Generally 2 - 3.5 m thick.
FY Any or all first year ice types (30 cm - 2 m thick).
YNG Young ice (10 - 30 cm thick).
N New and nilas.
Fast ice. See ice which forms and remains fast along the coast.
125 Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
Ice boundary visually or satellite observed.
Ice boundary estimated.
ICE FREE
ICE LIMIT
O/W
9-10 FY OLD
6-8 FY OLD
7-9 FY OLD
3-5 FY OLD
1-3 BELTS/STRIPS 7-8
2-4 BELTS/STRIPS 7-8
3-5 BELTS/STRIPS 9-10
4-8 PTCHS 9-10
ISLTD PTCHS 9-10
70N
73N
63N



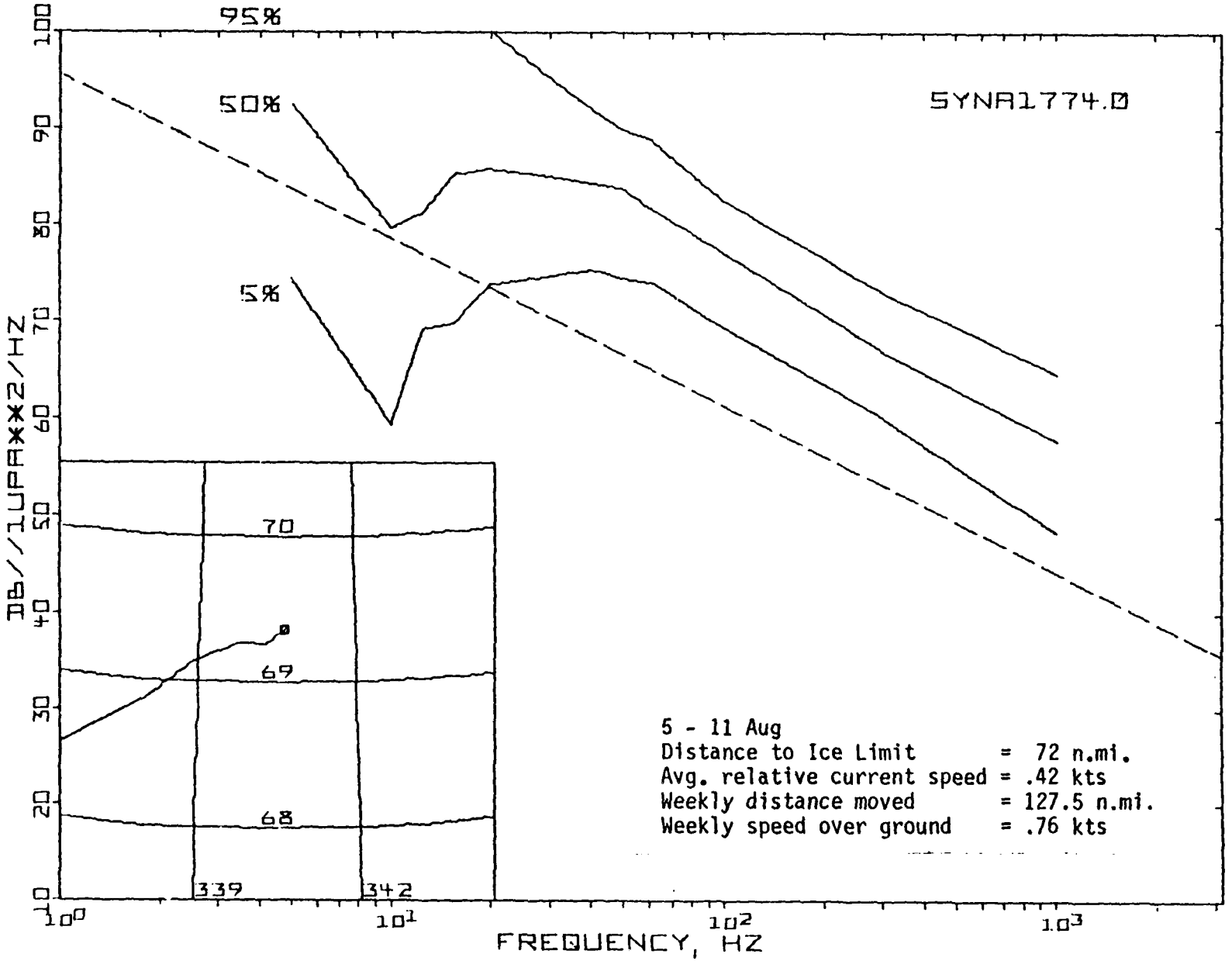
BUOY 1774 [illegible] 23-AUG +


ICE FREE
ICE LIMIT
O/W
BELTS/STRIPS
OLD
FY
SOUTHERN ICE LIMIT 04 AUG 1981
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
ICE CONCENTRATION
4 - 6 Area 4 - 6 tenths ice-covered.
OW Open water. See ice present in concentrations less than one tenth.
ICE-FREE No sea ice. Ice of land origin (iceberg e. g.) may be present.
ICE THICKNESS (AOE)
OLD Includes both multi-year and second-year ice. Generally 2 - 3.5 m thick.
FY Any or all first year ice types (30 cm - 2 m thick).
YNG Young ice (10 - 30 cm thick).
N New and nilas.
Fast ice. Sea ice which forms and remains fast along the coast.
125 Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
Ice boundary visually or satellite observed.
Ice boundary estimated.
Seven day forecast of ice edge position.

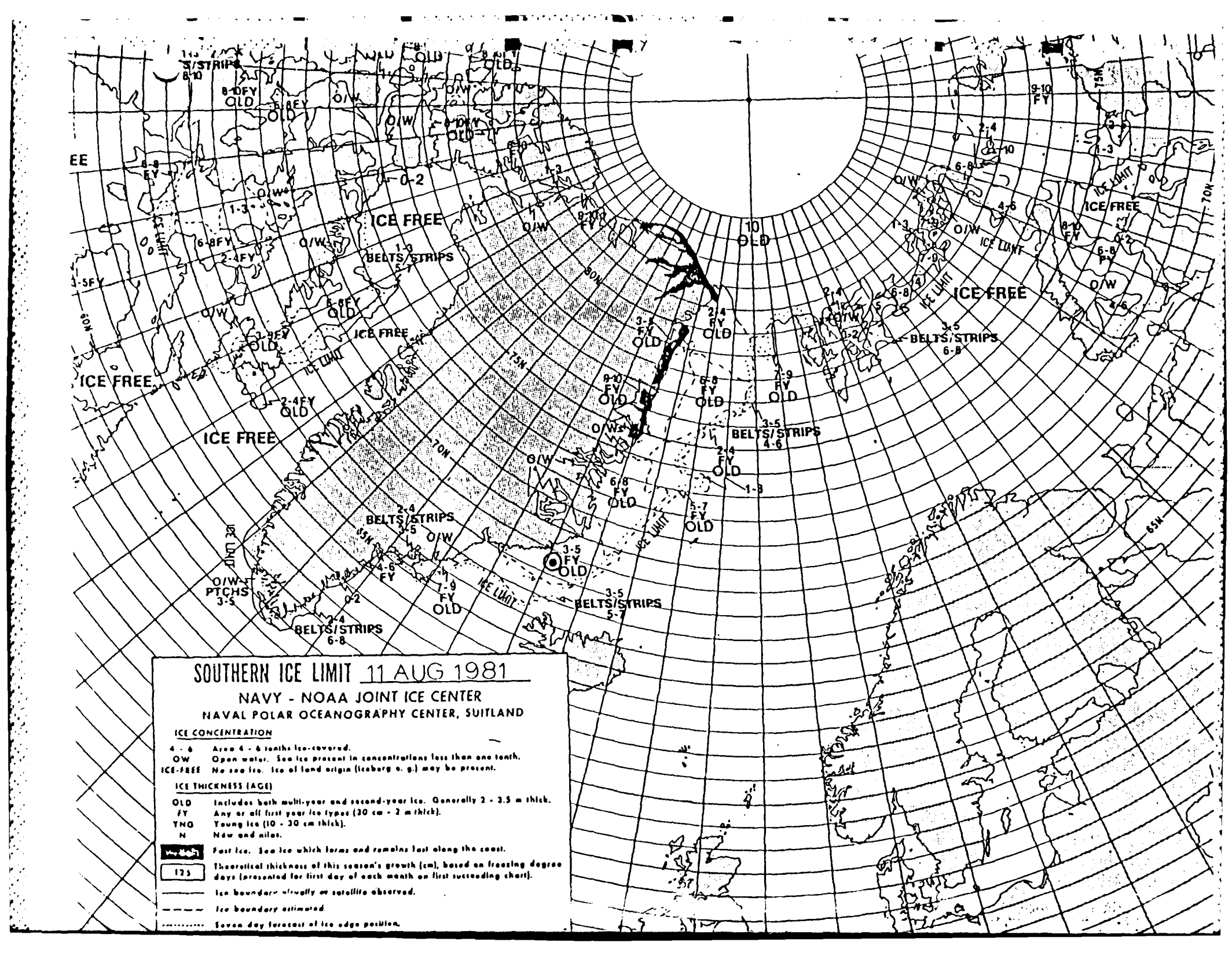
JULIAN DAYS: 217 TO 223 Aug 5-11, 81

OUTPUT IN FILE SYNA1774.0
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	94.3	14.5	72.7	74.3	76.8	81.0	92.4	112.4	114.9	114.9	116.5
10.0	88.0	17.7	56.4	59.3	61.5	67.5	79.5	102.6	108.6	109.6	110.6
12.5	84.9	14.0	68.3	69.2	69.2	73.3	81.2	98.4	106.2	106.9	108.9
15.6	86.1	11.9	69.7	69.7	70.7	75.7	85.3	96.5	104.0	105.3	106.8
20.0	86.0	9.5	72.4	73.8	74.4	76.6	85.8	93.1	99.7	101.6	101.6
40.0	83.7	5.5	74.6	75.3	76.4	78.4	84.4	87.9	89.5	92.0	93.3
50.0	82.6	5.4	73.5	74.4	75.1	77.1	83.7	87.2	88.5	89.7	92.4
63.0	81.3	4.8	72.0	73.8	75.2	77.0	81.2	85.0	87.3	88.5	89.1
100.0	76.1	4.6	68.5	69.2	69.8	71.0	77.0	80.5	81.9	82.5	83.0
320.0	65.8	4.4	58.6	59.5	60.3	61.8	66.8	69.6	71.5	72.4	73.1
1000.0	57.0	5.3	47.7	48.3	51.1	51.8	57.8	61.4	63.1	64.6	66.4



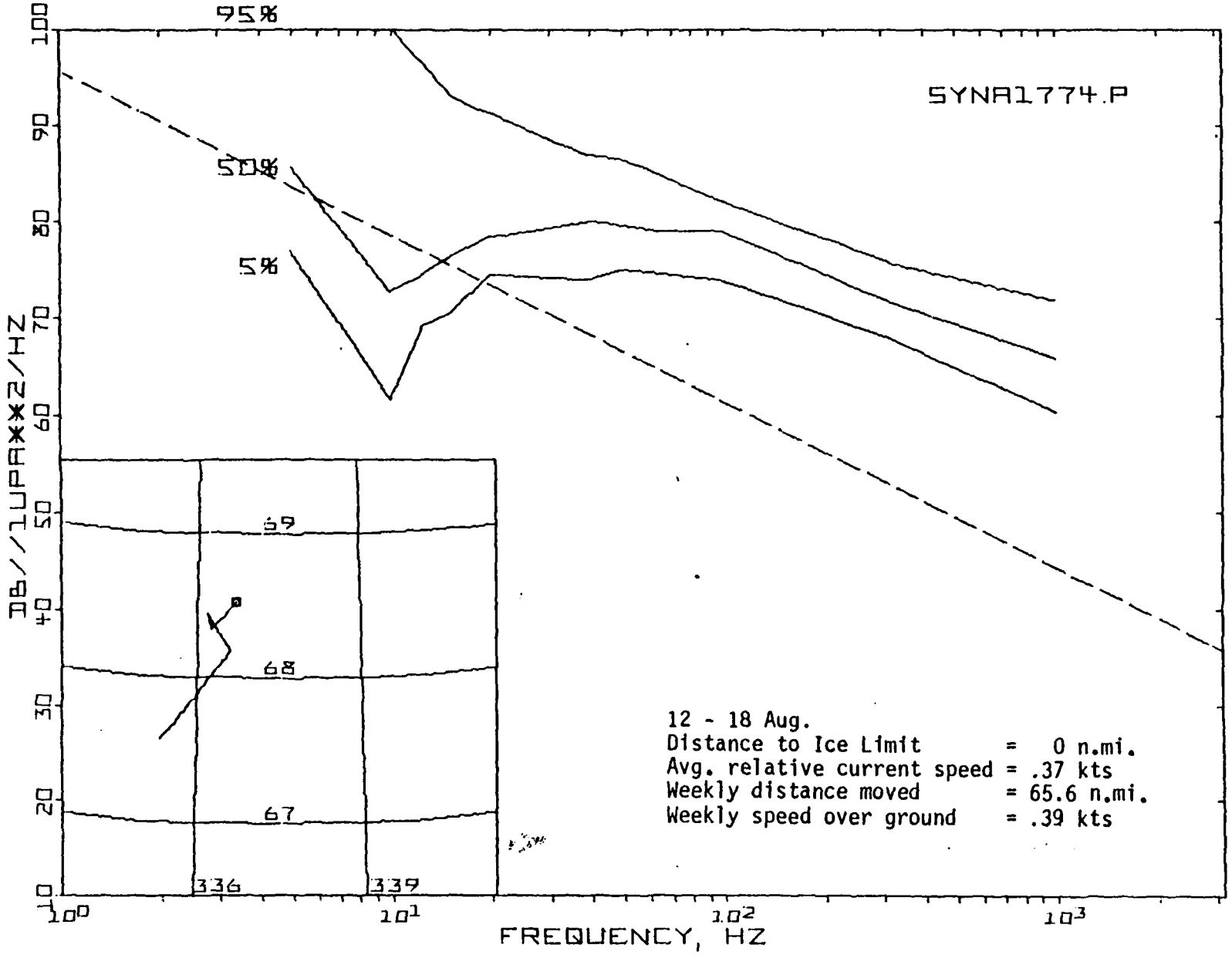
BUOY 1774 AUG 5 - 1


ICE FREE
ICE LIMIT
O/W
BELTS/STRIPS
PTCHS
OLD
FY
80N
75N
70N
65N
SOUTHERN ICE LIMIT 11 AUG 1981
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
ICE CONCENTRATION
4 - 6 Area 4 - 6 tenths ice-covered.
OW Open water. See ice present in concentrations less than one tenth.
ICE-FREE No sea ice. Ice of land origin (iceberg e. g.) may be present.
ICE THICKNESS (AGE)
OLD Includes both multi-year and second-year ice. Generally 2 - 3.5 m thick.
FY Any or all first year ice types (30 cm - 2 m thick).
YNG Young ice (10 - 30 cm thick).
N New and nilas.
Fast ice. Sea ice which forms and remains fast along the coast.
123 Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
Ice boundary visually or satellite observed.
Ice boundary estimated.
Seven day forecast of ice edge position.

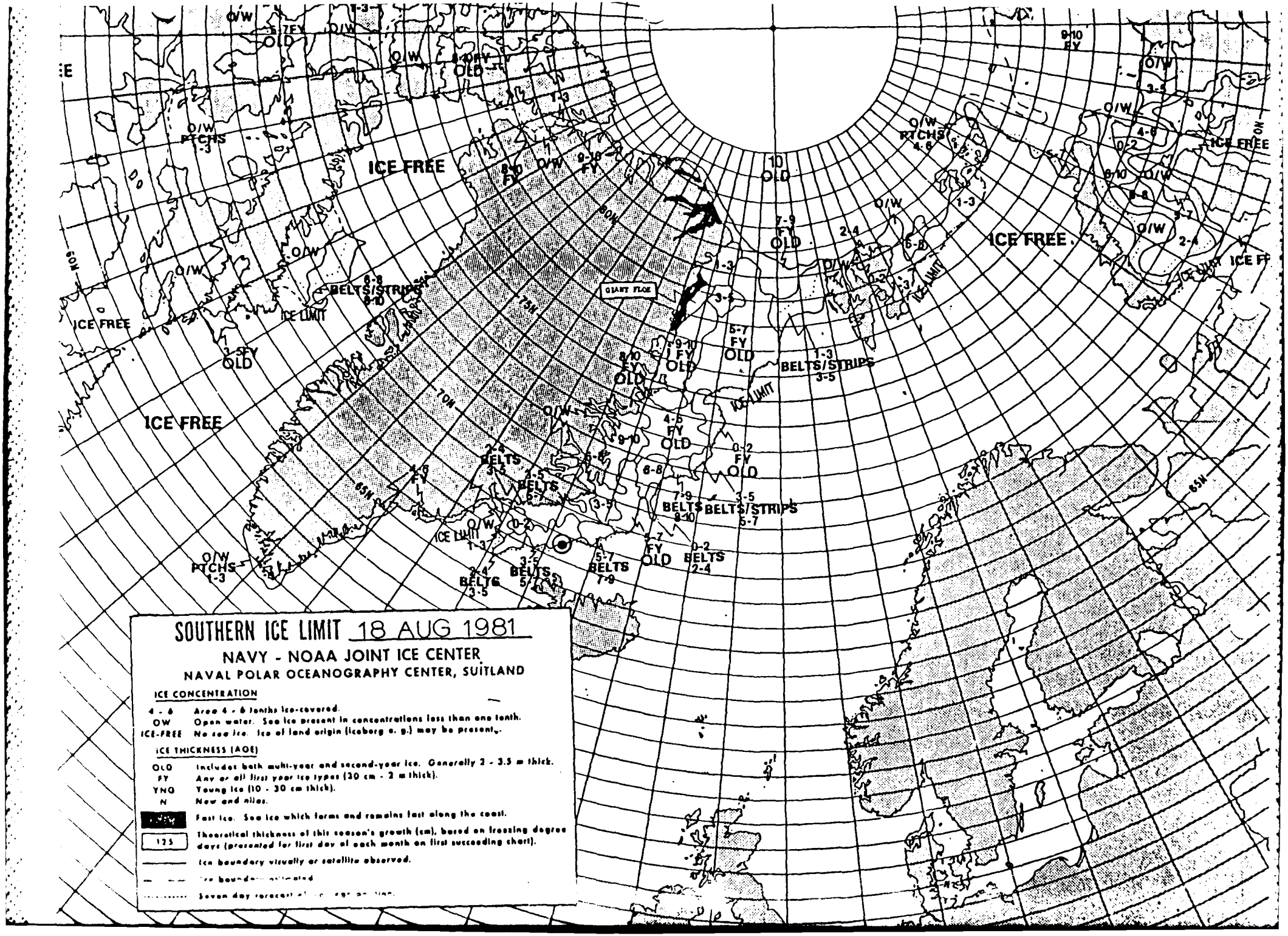
JULIAN DAYS: 224 TO 230 Aug 12-18, 81

OUTPUT IN FILE SYNA1774.P
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN				
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX
5.0	90.1	11.7	75.6	76.8	78.7	80.3	85.6	96.8	108.9	111.1	116.5
10.0	77.0	12.6	60.4	61.5	65.3	66.5	72.5	84.5	96.6	100.1	108.6
12.5	78.2	9.3	68.3	69.2	69.2	71.5	74.3	82.1	93.3	96.2	106.9
15.6	79.3	7.5	70.7	70.7	71.6	73.9	76.7	81.7	90.5	92.6	104.0
20.0	80.3	5.7	73.1	74.4	75.0	76.6	78.4	81.6	87.7	91.2	102.5
40.0	80.1	3.9	71.4	73.9	75.3	77.5	80.0	82.5	85.2	86.7	90.4
50.0	80.2	3.4	73.5	75.1	75.8	77.6	79.6	81.8	83.7	86.4	89.7
63.0	79.3	3.3	72.0	74.5	75.2	77.0	79.0	81.2	84.1	85.0	87.3
100.0	78.4	3.0	73.8	73.8	74.5	75.8	78.9	80.5	81.2	81.9	87.2
320.0	71.6	2.7	67.1	67.8	67.8	69.6	71.5	73.8	75.0	75.6	78.4
1000.0	65.8	3.4	52.5	60.3	62.3	63.9	65.8	67.4	69.1	71.8	73.4



BUOY 1774 AUG 12 - 18

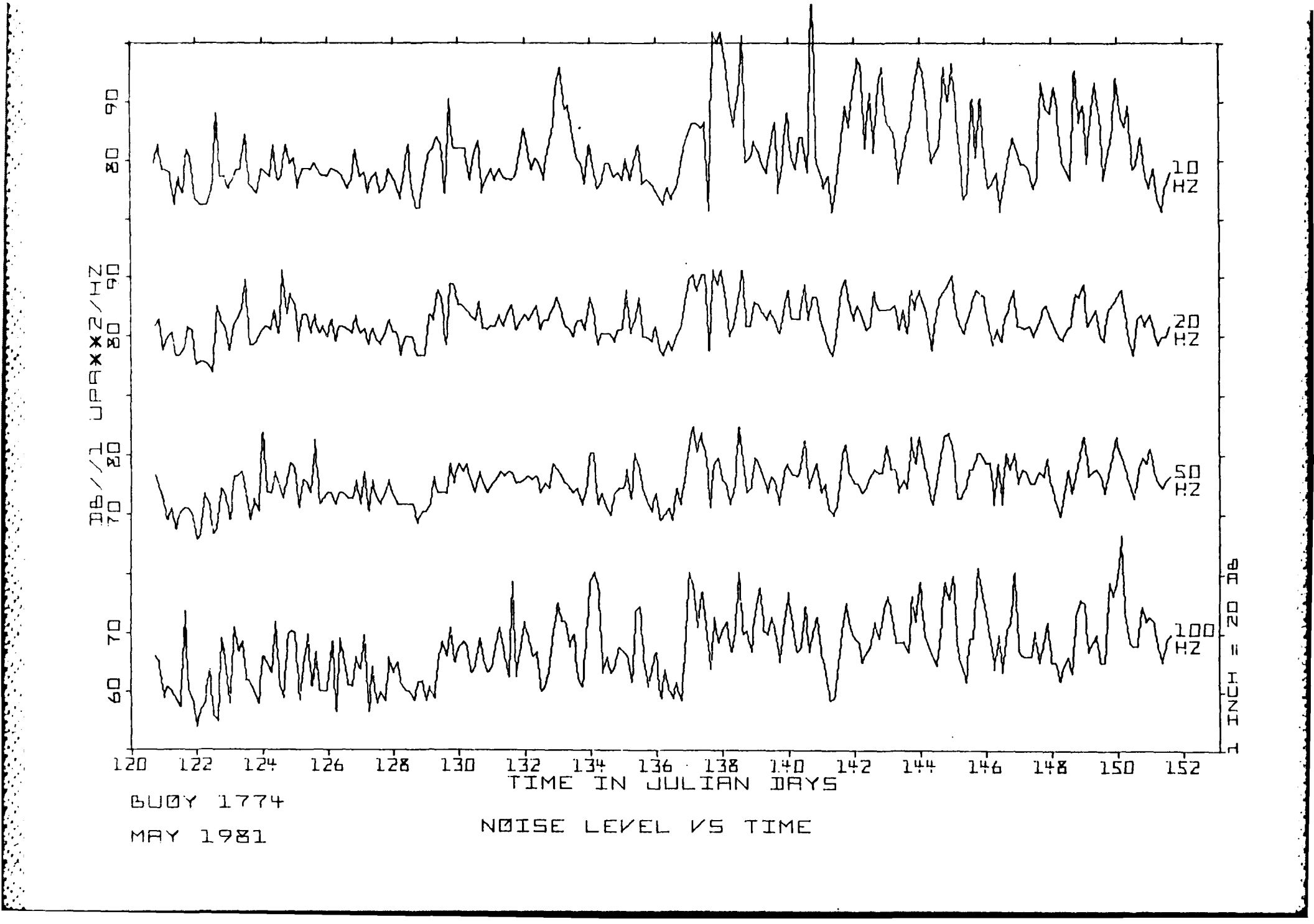

ICE FREE
O/W
1-3
OLD
FY
9-10 FY
7-9 FY OLD
5-7 FY OLD
4-6 FY OLD
0-2 FY OLD
BELTS/STRIPS 3-5
BELTS 3-5
BELTS 5-7
BELTS 7-9
BELTS 2-4
O/W PTCHS 1-3
O/W PTCHS 4-6
ICE LIMIT
GIANT FLOE
80W
70W
65N
SOUTHERN ICE LIMIT 18 AUG 1981
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
ICE CONCENTRATION
4 - 6 Area 4 - 6 tenths ice-covered.
OW Open water. Sea ice present in concentrations less than one tenth.
ICE-FREE No sea ice. Ice of land origin (iceberg e. g.) may be present.
ICE THICKNESS (AOE)
OLD Includes both multi-year and second-year ice. Generally 2 - 3.5 m thick.
FY Any or all first year ice types (30 cm - 2 m thick).
YNG Young ice (10 - 30 cm thick).
N New and nilas.
Fast ice. Sea ice which forms and remains fast along the coast.
125 Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
Ice boundary visually or satellite observed.
Ice boundary estimated
Seven day forecast

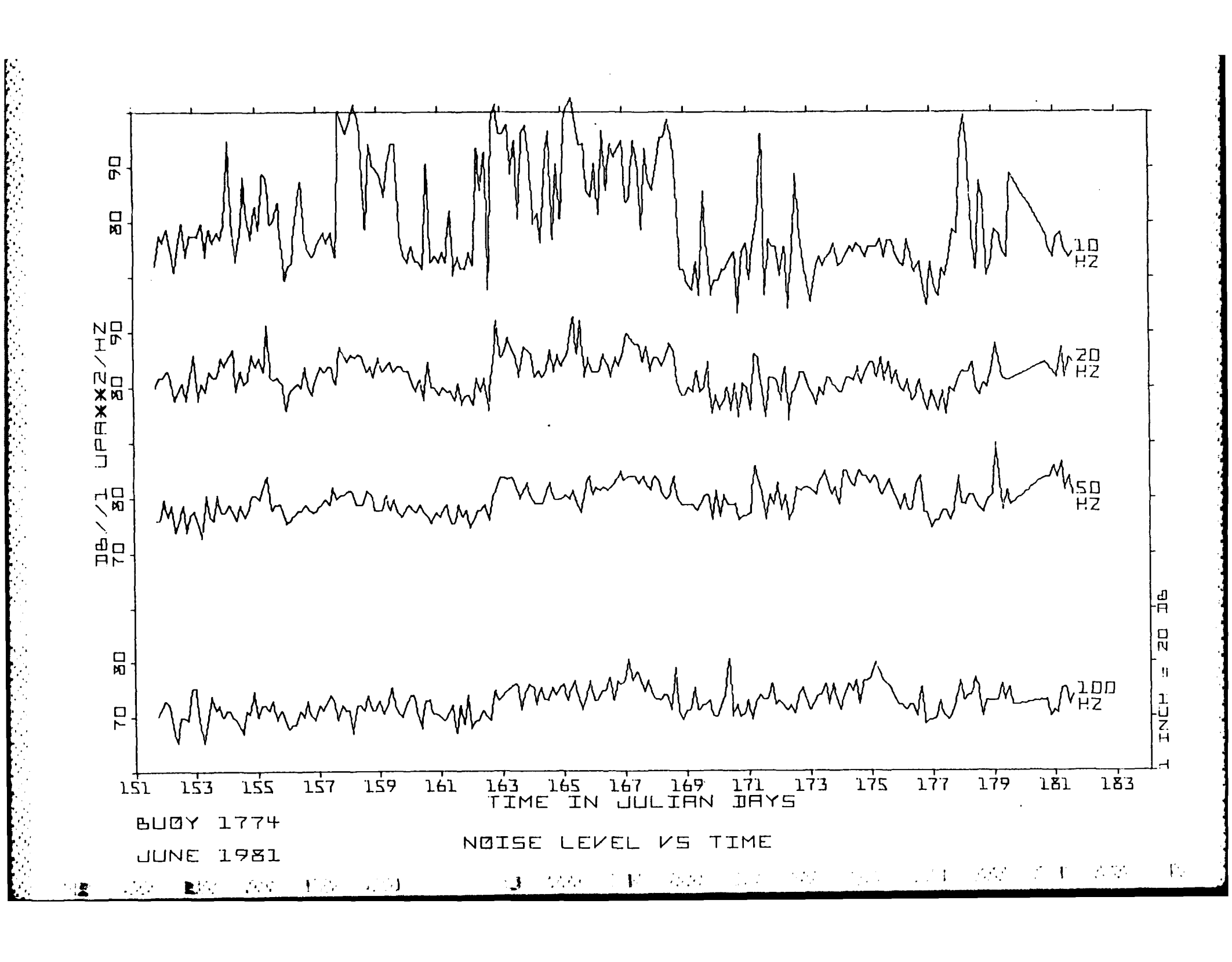
JULIAN DAYS: 231 TO 237 (not plotted)

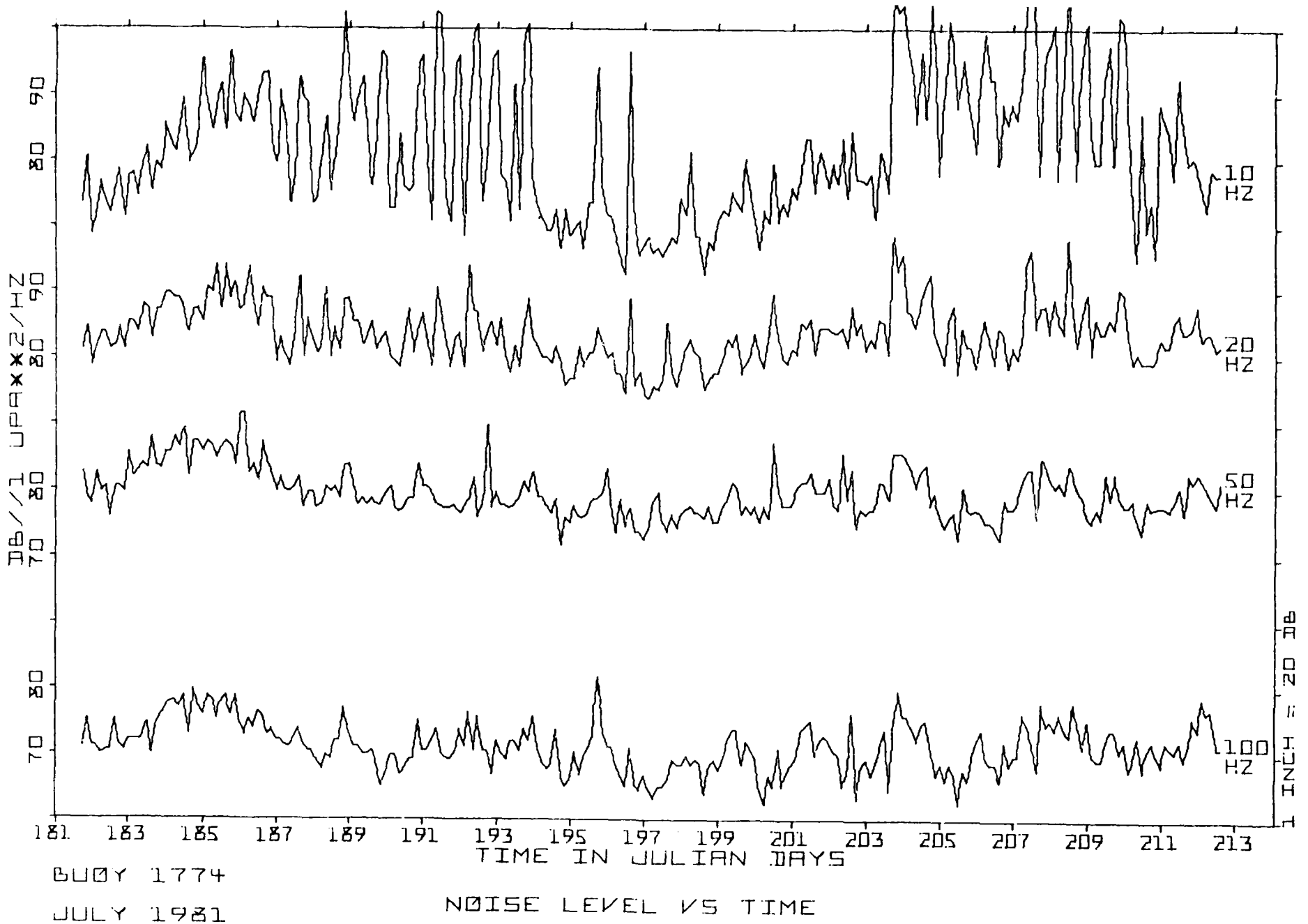
OUTPUT IN FILE SYNA1774.0
THE NUMBER OF DATA SAMPLES IS 38

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	93.3	10.6	78.7	79.6	82.3	83.9	91.6	100.9	110.4	111.8	112.9
10.0	81.6	13.4	65.9	66.5	69.2	71.3	75.3	91.6	104.5	106.1	108.6
12.5	81.5	11.3	70.0	70.0	70.8	73.3	76.8	84.2	101.6	105.3	107.6
15.6	82.7	9.5	72.5	74.5	75.1	76.7	79.2	84.5	99.8	103.3	104.7
20.0	84.1	7.7	73.1	75.0	75.6	79.1	81.6	89.6	95.6	97.9	102.5
40.0	83.1	4.0	76.4	77.5	78.4	80.0	82.5	85.2	89.5	90.4	92.0
50.0	83.8	4.0	76.5	78.7	79.6	81.2	83.1	84.7	89.7	90.7	93.9
63.0	83.2	3.5	77.0	79.0	79.8	81.2	81.9	85.0	89.1	90.1	91.0
100.0	83.2	2.9	77.0	78.9	78.9	81.9	83.0	85.0	85.8	87.2	91.8
320.0	75.8	2.2	70.6	72.4	73.1	74.4	75.6	77.5	77.5	79.1	81.6
1000.0	69.2	2.3	63.9	65.8	66.4	67.4	69.1	70.6	72.4	73.4	73.4

R


DB//1 UPA**2/HZ
60
70
80
90
80
90
70
80
10 HZ
20 HZ
50 HZ
100 HZ
1 INCH = 20 DB
120 122 124 126 128 130 132 134 136 138 140 142 144 146 148 150 152
TIME IN JULIAN DAYS
BUOY 1774
MAY 1981
NOISE LEVEL VS TIME

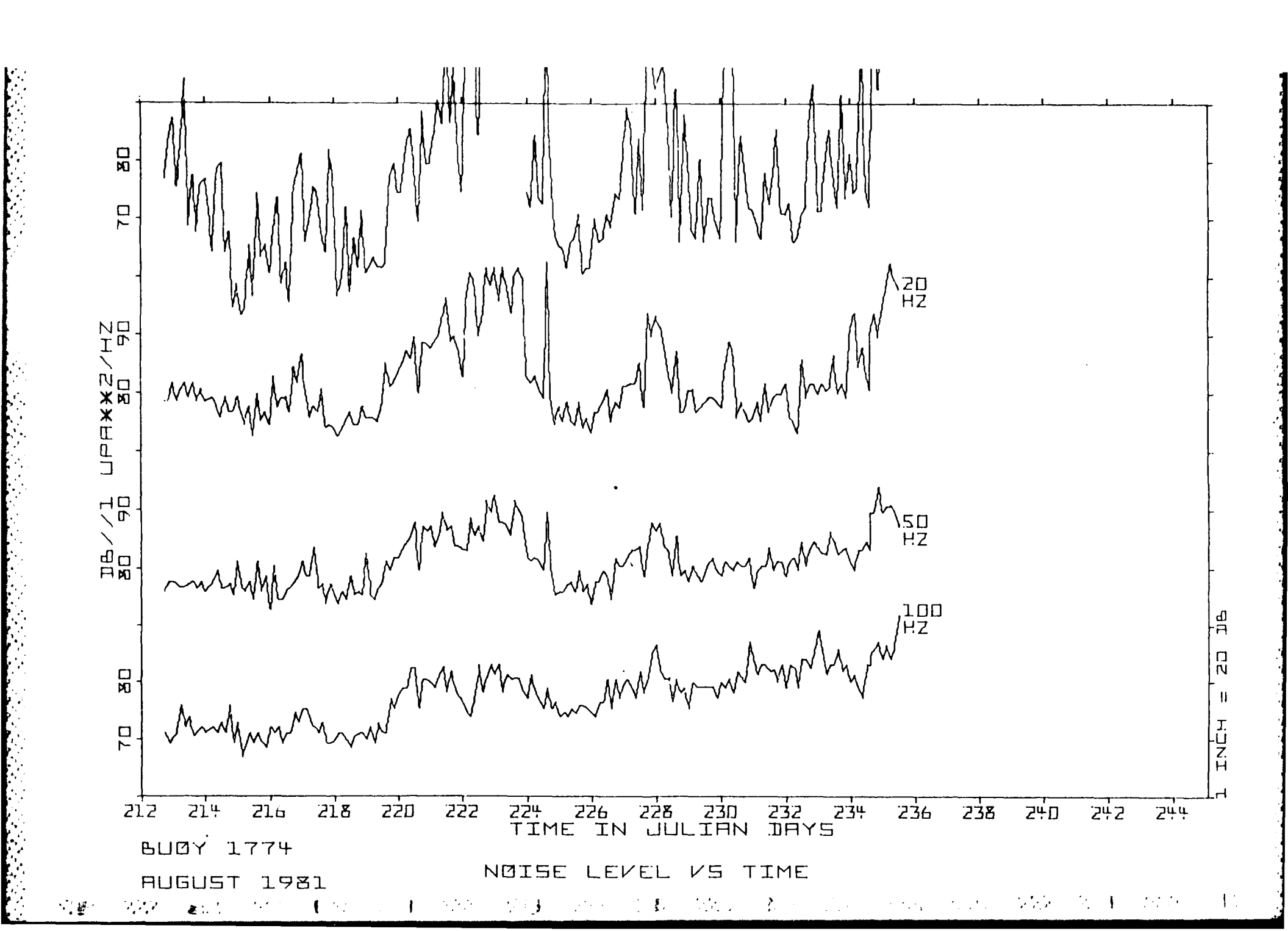

DB//1 UPA**2/HZ
90
80
70
80
90
80
70
80
10 HZ
20 HZ
50 HZ
100 HZ
1 INCH = 20 DB
151 153 155 157 159 161 163 165 167 169 171 173 175 177 179 181 183
TIME IN JULIAN DAYS
BUOY 1774
JUNE 1981
NOISE LEVEL VS TIME



BUOY 1774

JULY 1981

NOISE LEVEL VS TIME

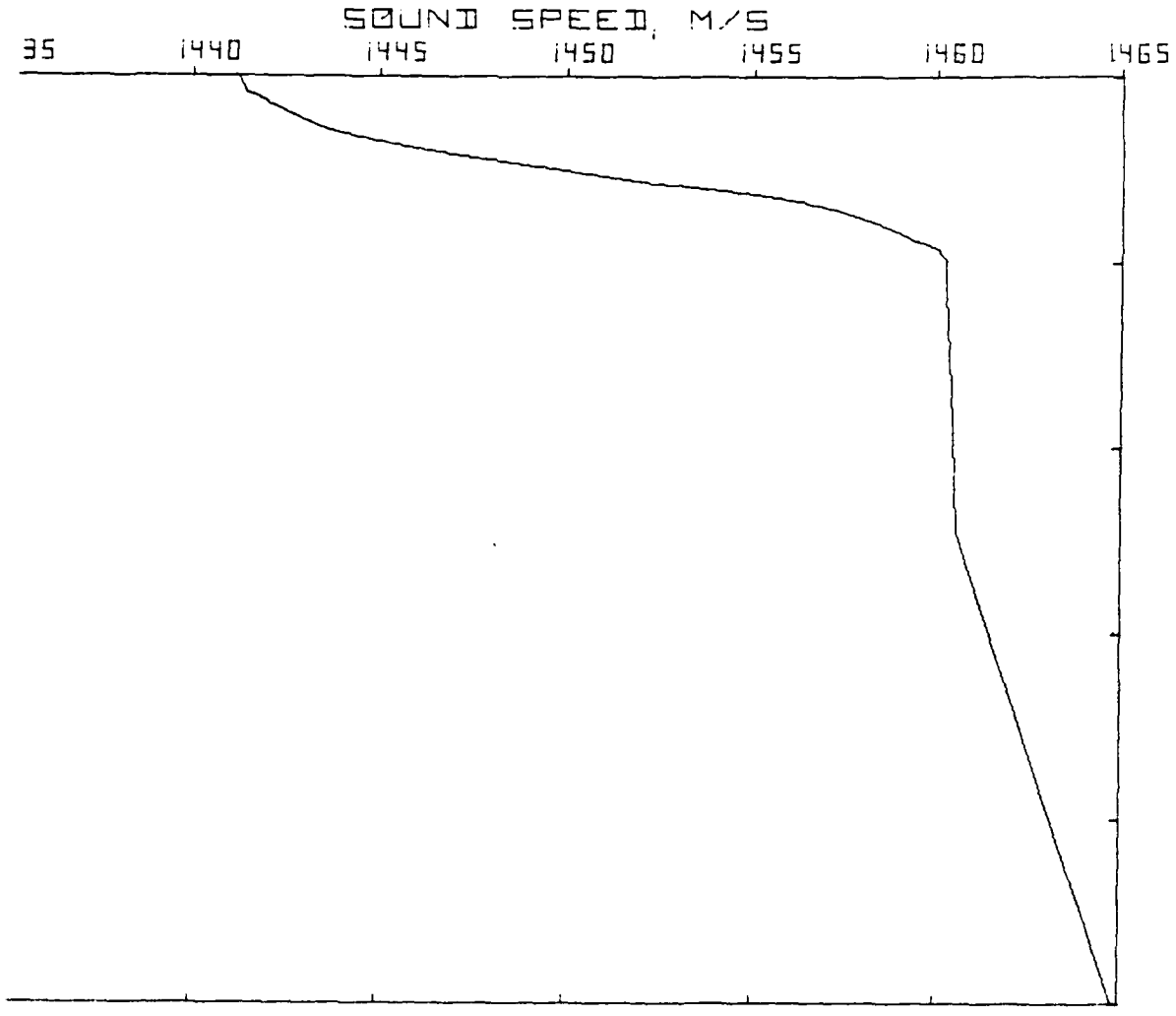

DB//1 UPA**2/HZ
70 80
80 90
80 90
70 80
20 HZ
50 HZ
100 HZ
1 INCH = 20 DB
212 214 216 218 220 222 224 226 228 230 232 234 236 238 240 242 244
TIME IN JULIAN DAYS
BUOY 1774
AUGUST 1981
NOISE LEVEL VS TIME

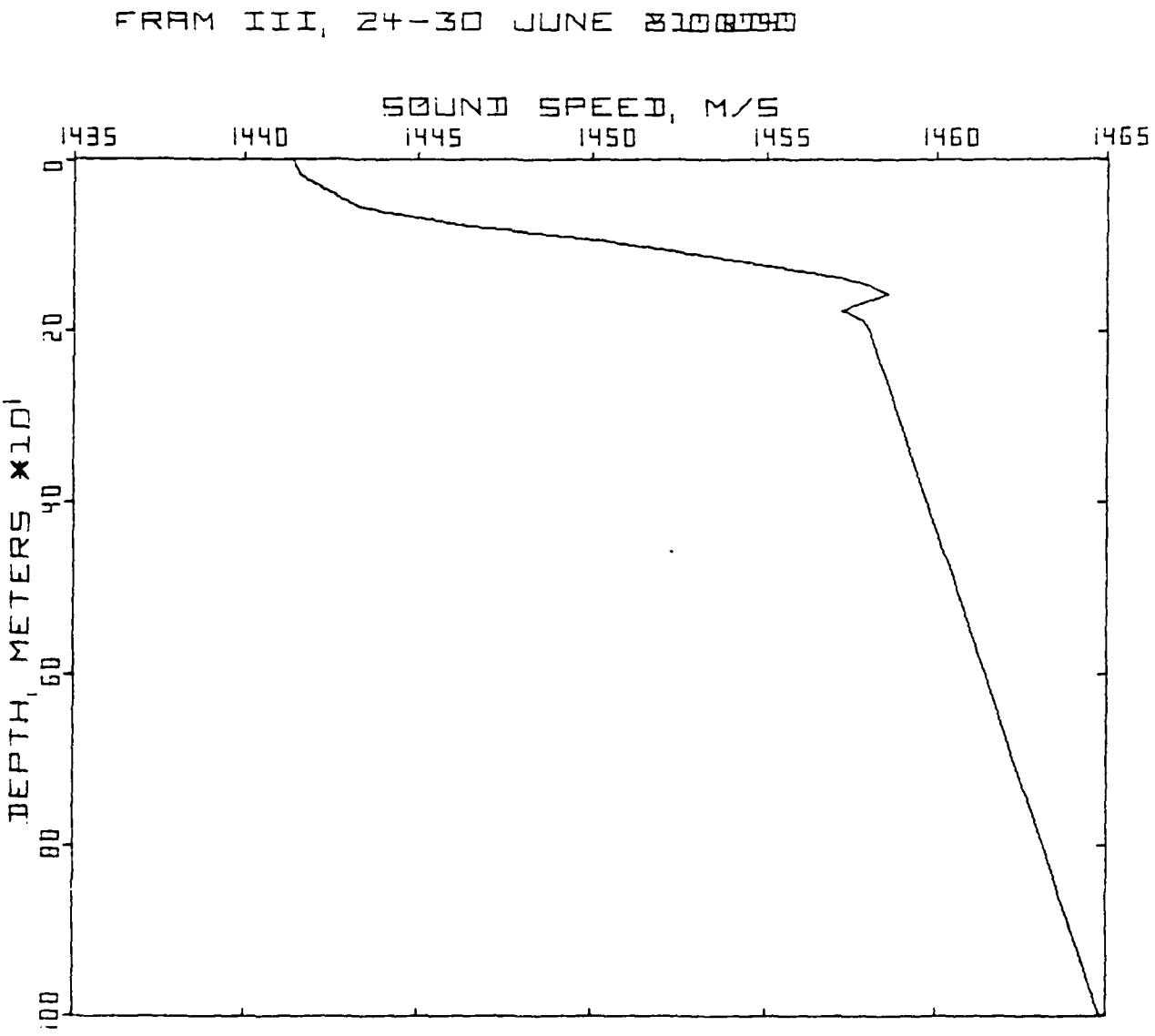
SOUND VELOCITY PROFIES

Taken by Data Buoy I.D. 1774

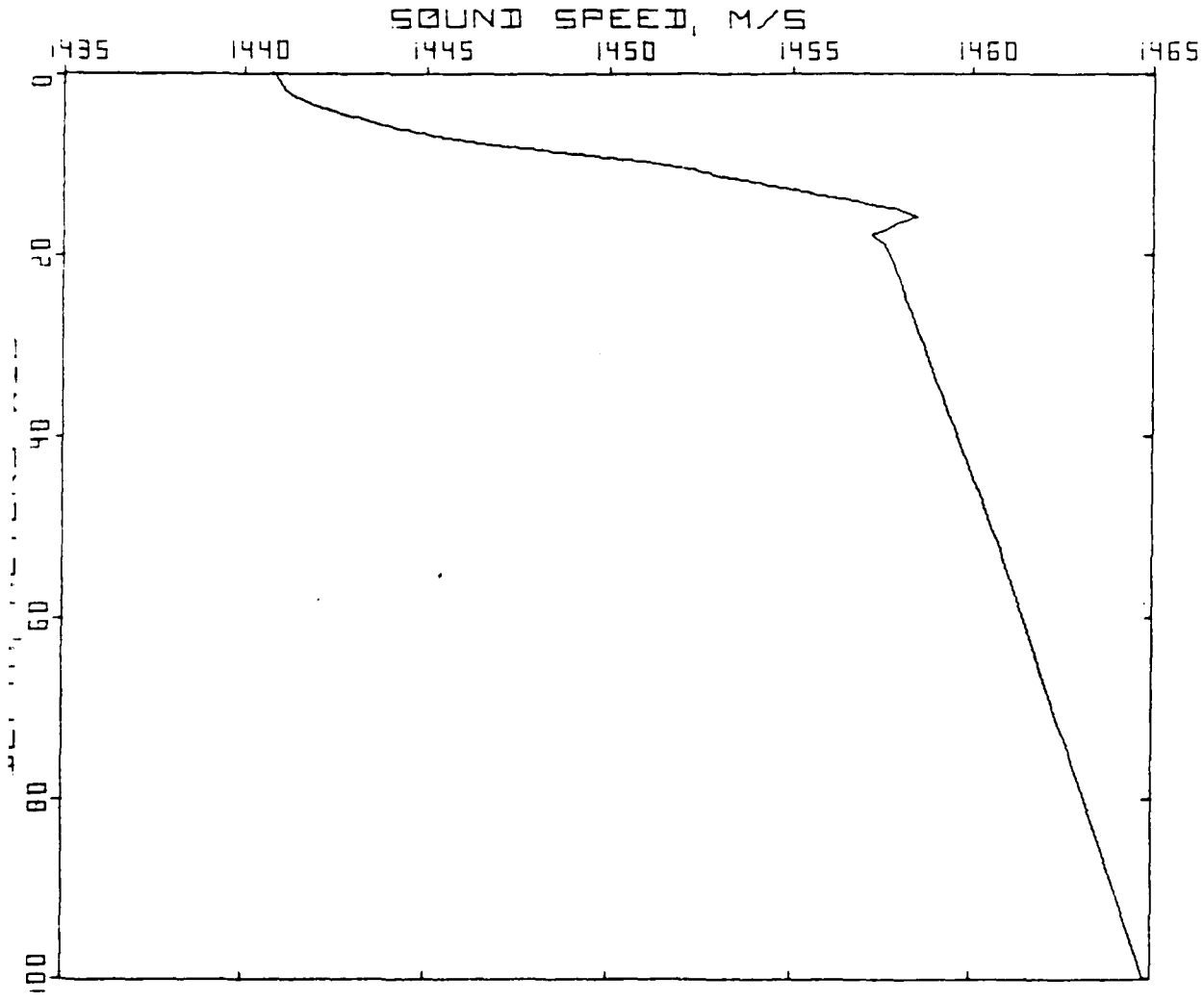
(SVP's derived from weekly averages of temperature string and assuming 34 parts/thousand salinity.)

FRAM III, 01-07 JULY 81

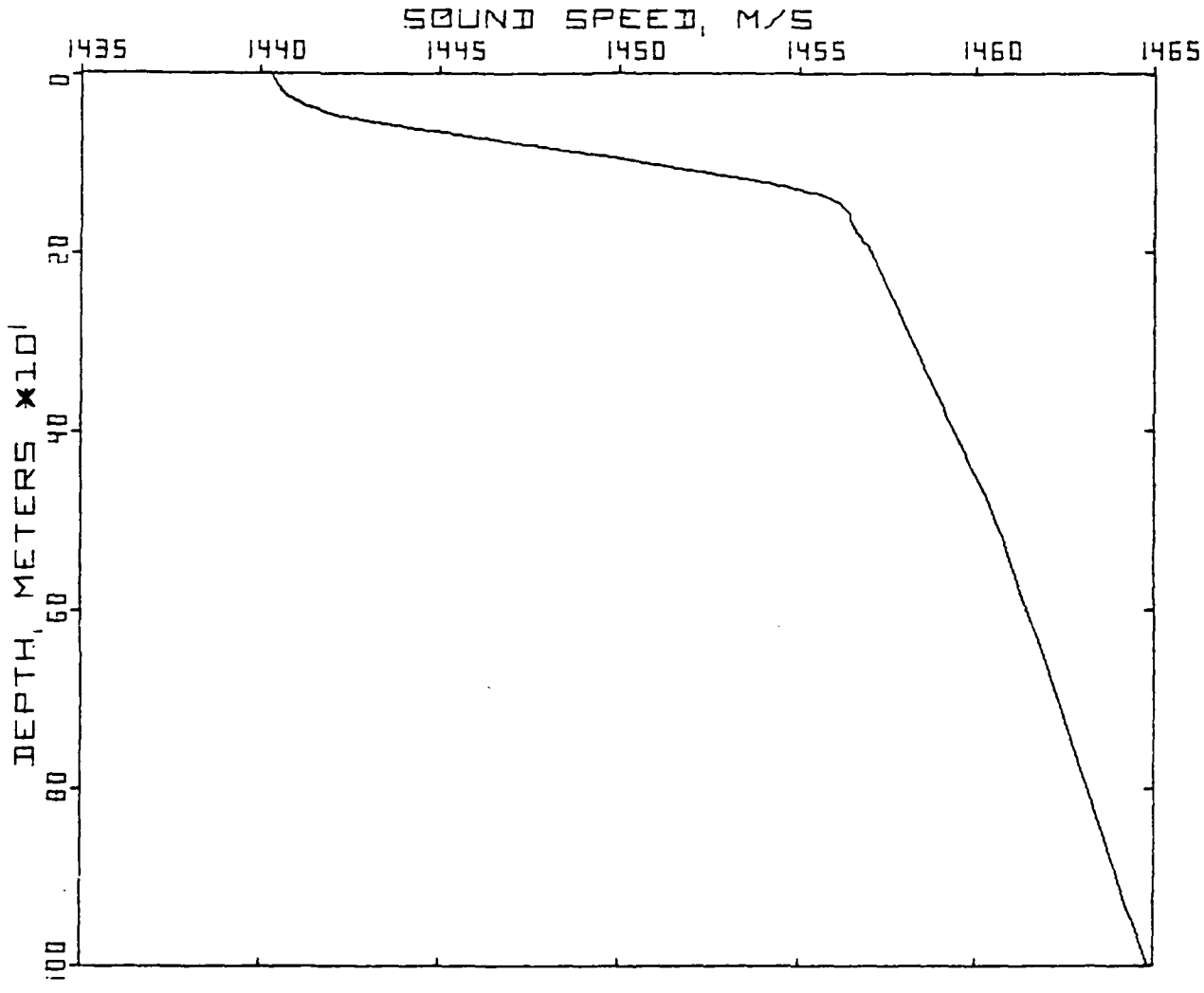



FRAM III, 24-30 JUNE
SOUND SPEED, M/S
1435
1440
1445
1450
1455
1460
1465
DEPTH, METERS *10
0
20
40
60
80
100

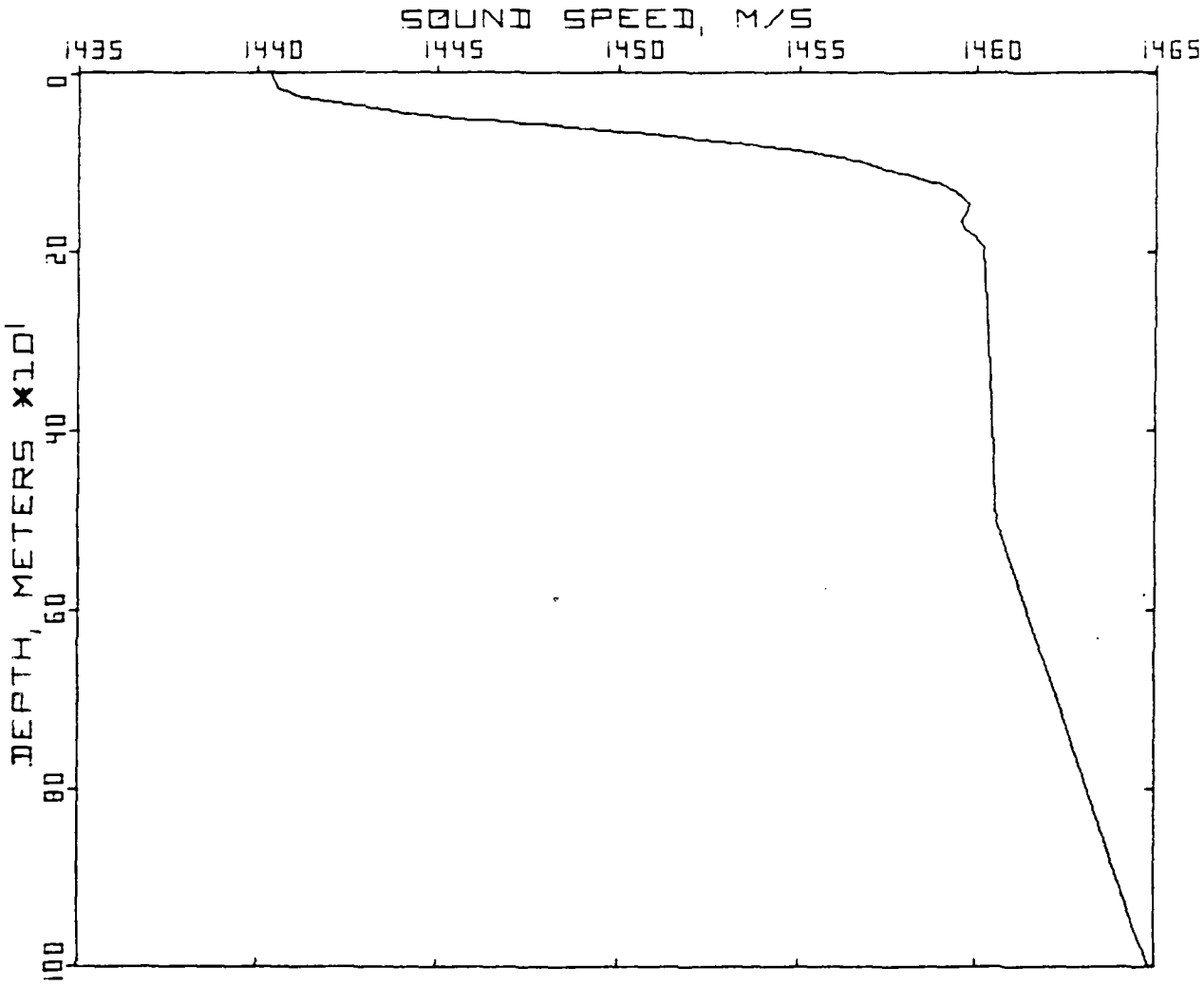
FRAM III, 17-23 JUNE 81



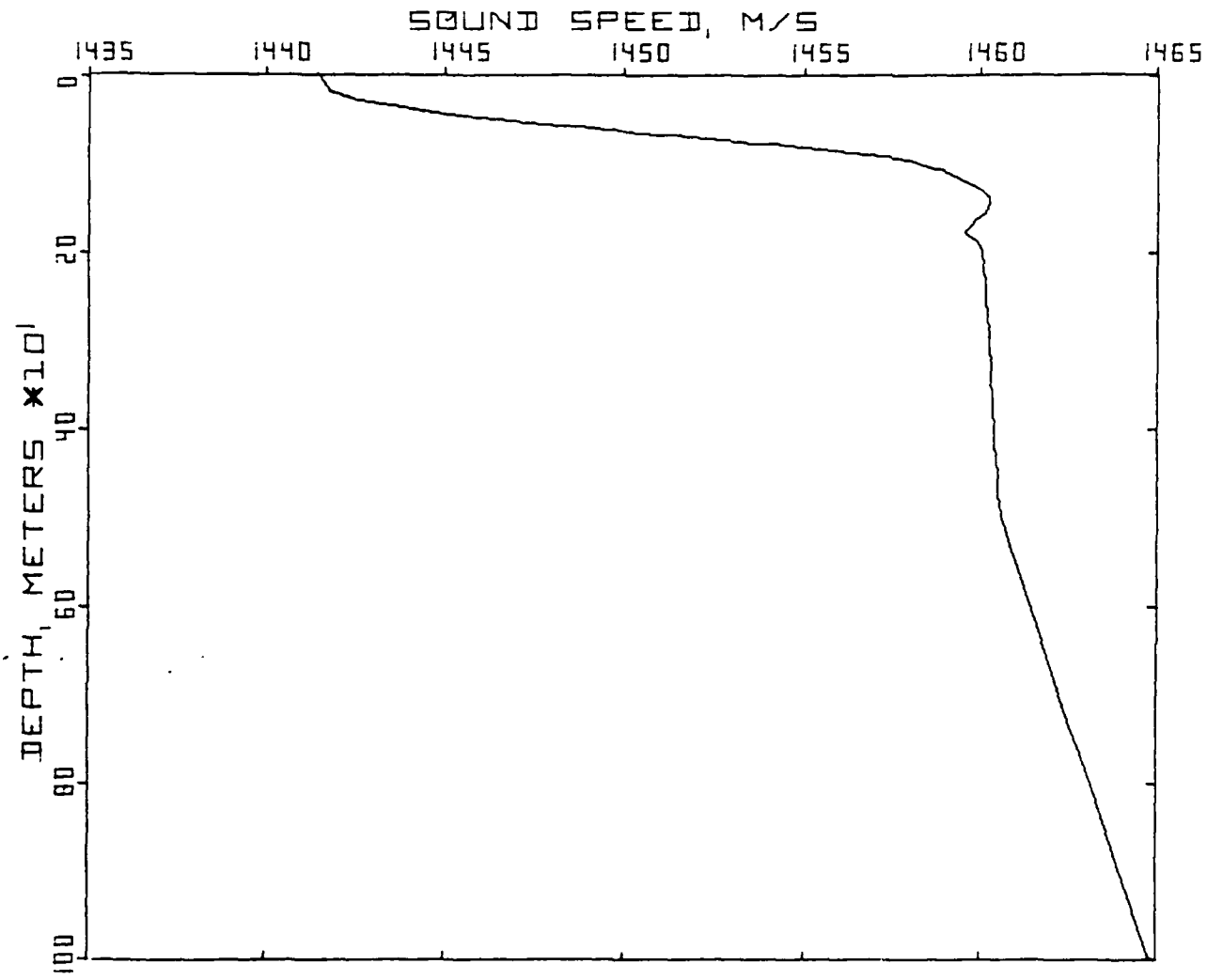
FRAM III, 10-16 JUNE 81



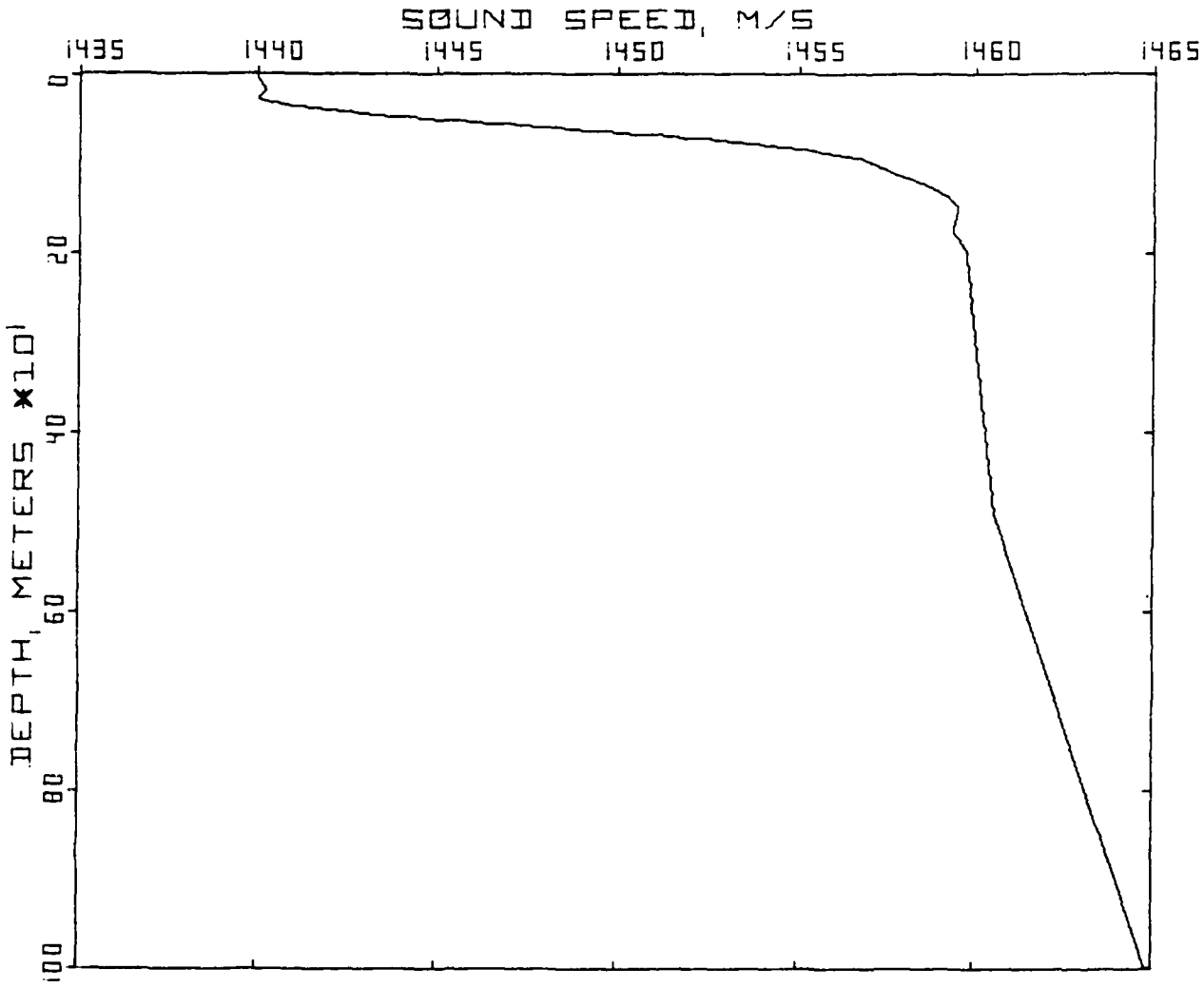
FRAM III, 03-09 JUNE 81



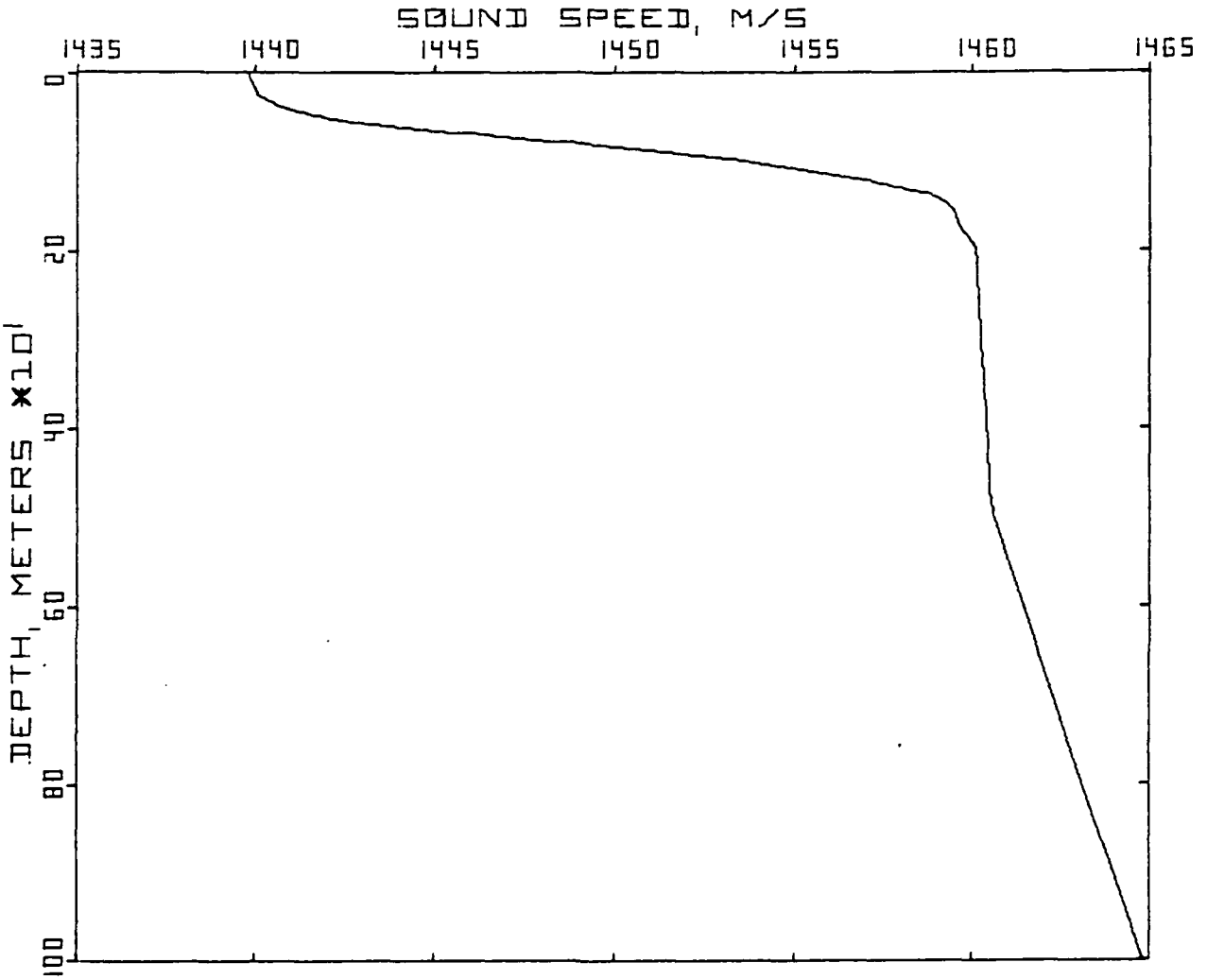
FRAM III, 27-02 JUNE 81



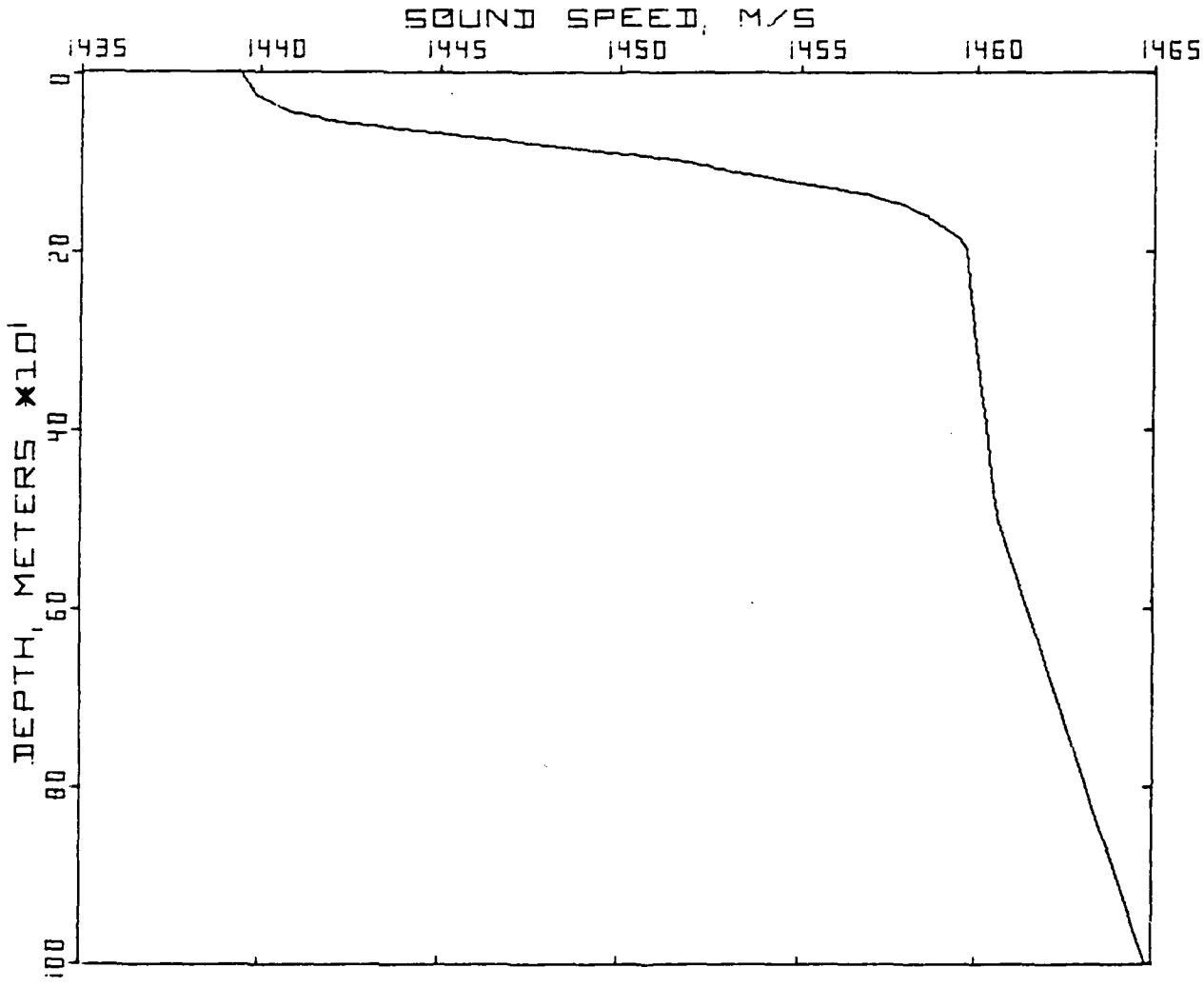
FRAM III, 20-26 MAY 81



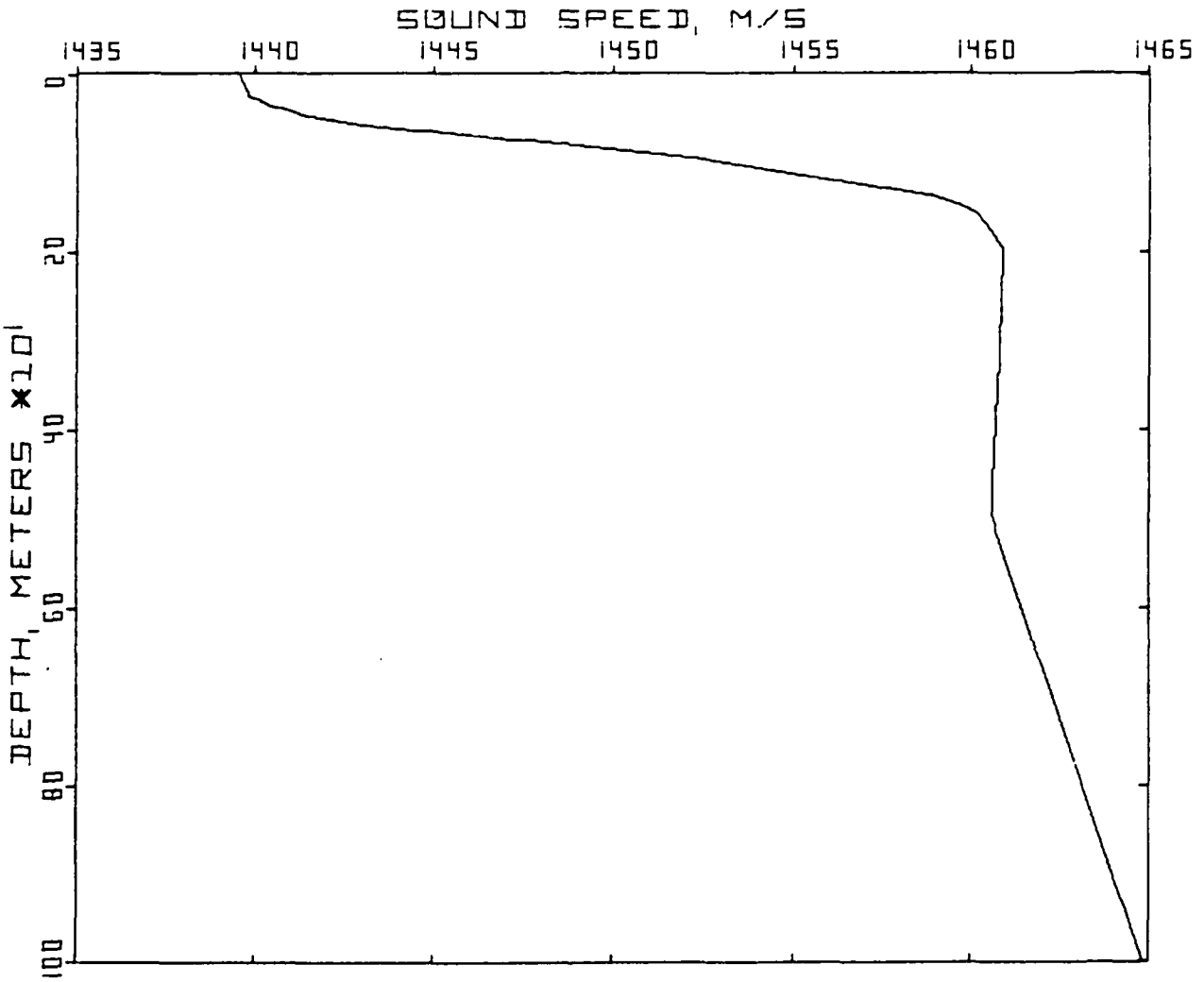
FRAM III, 13-19 MAY 81



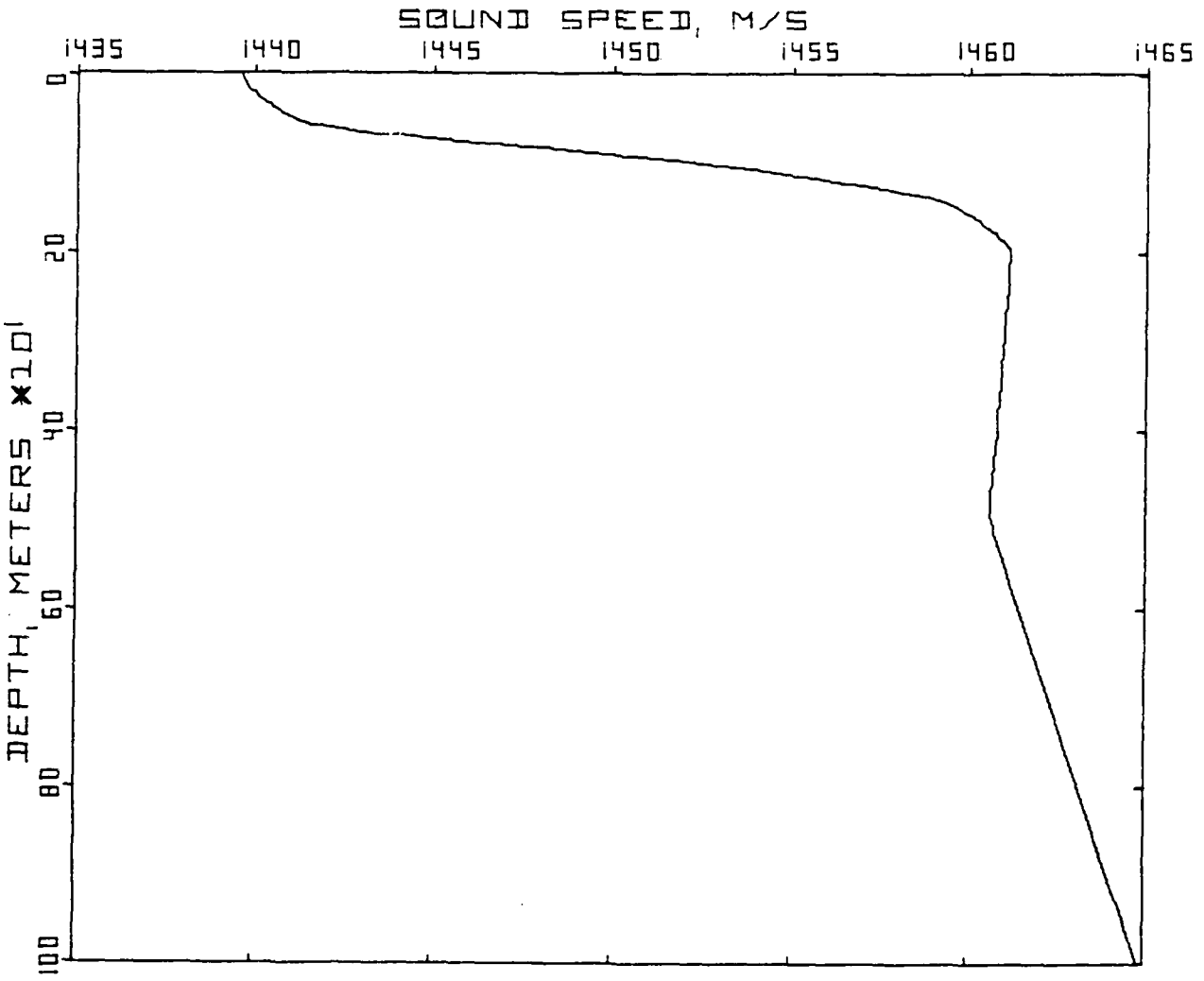
FRAM III, 06-12 MAY 81



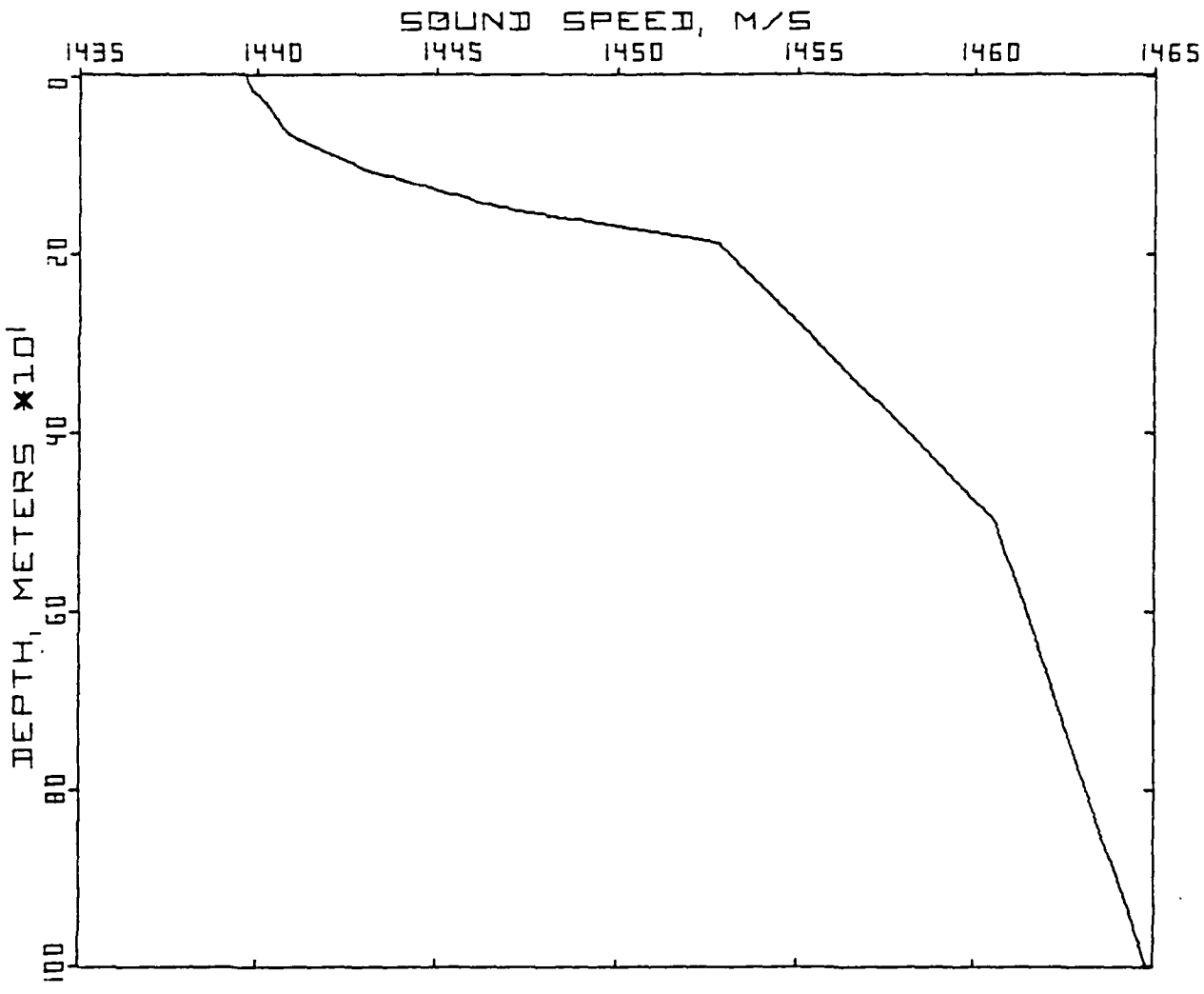
FRAM III, 29-05 MAY 81



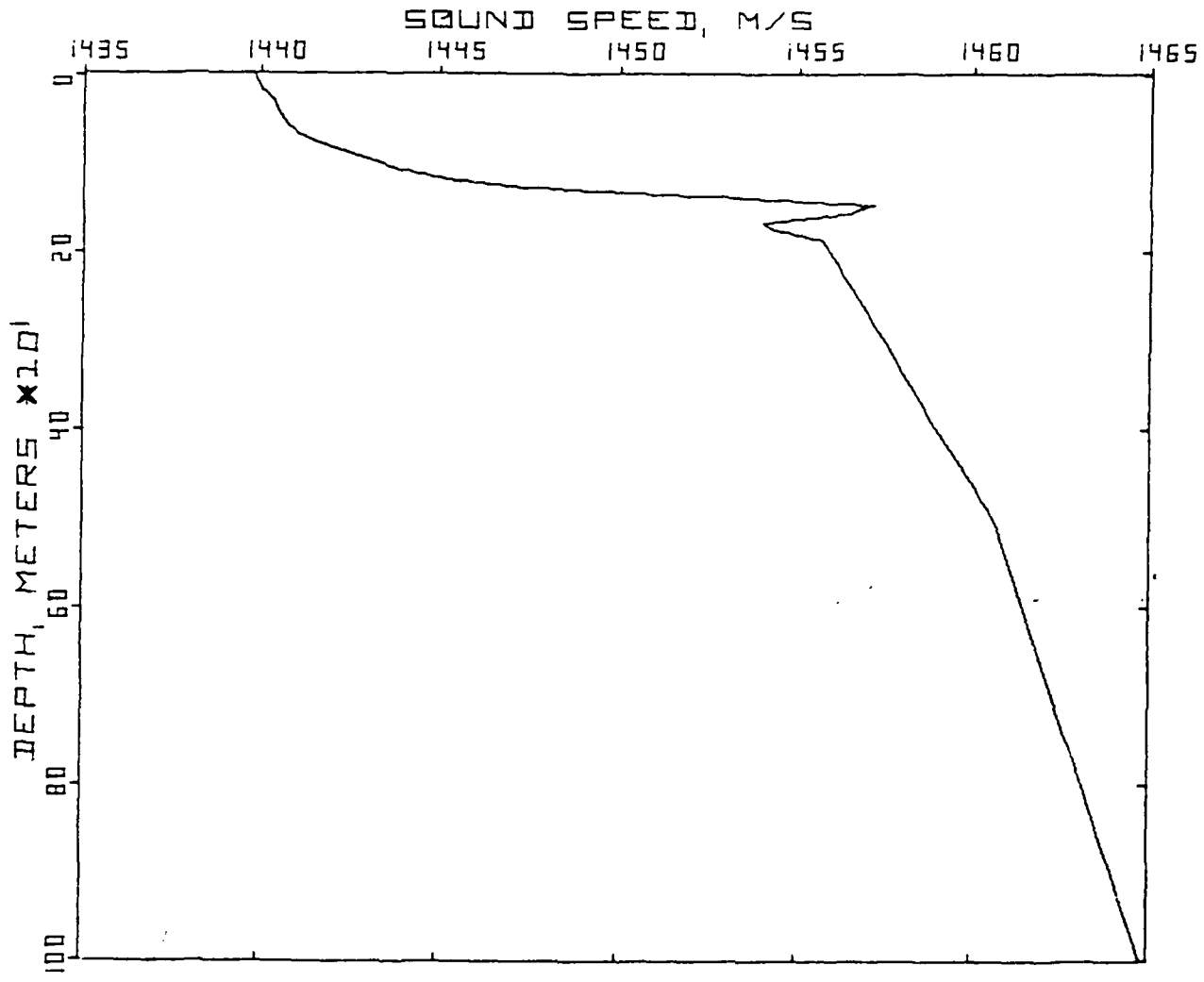
FRAM III, 22-28 APR 81

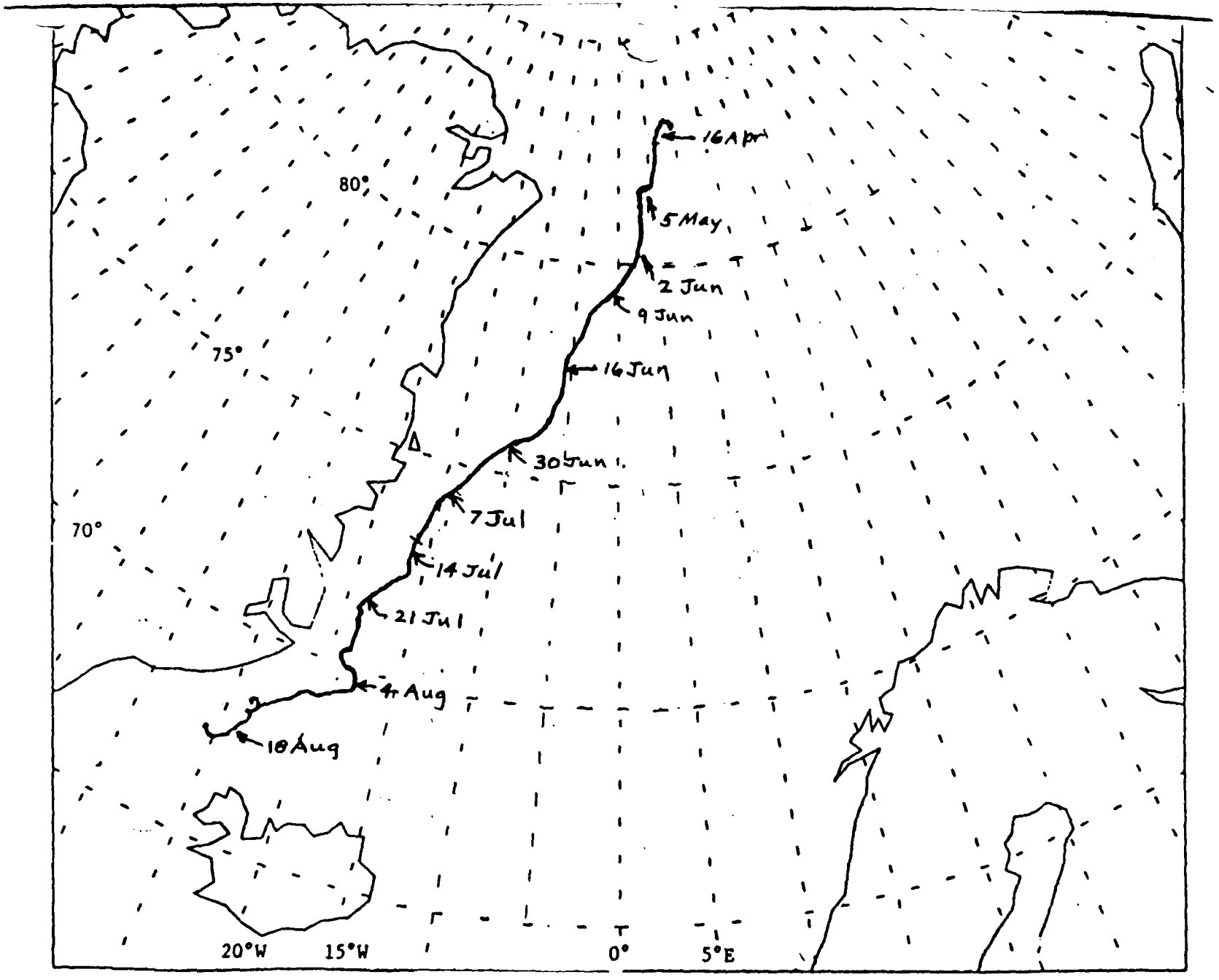


FRAM III, 15-21 APR 81



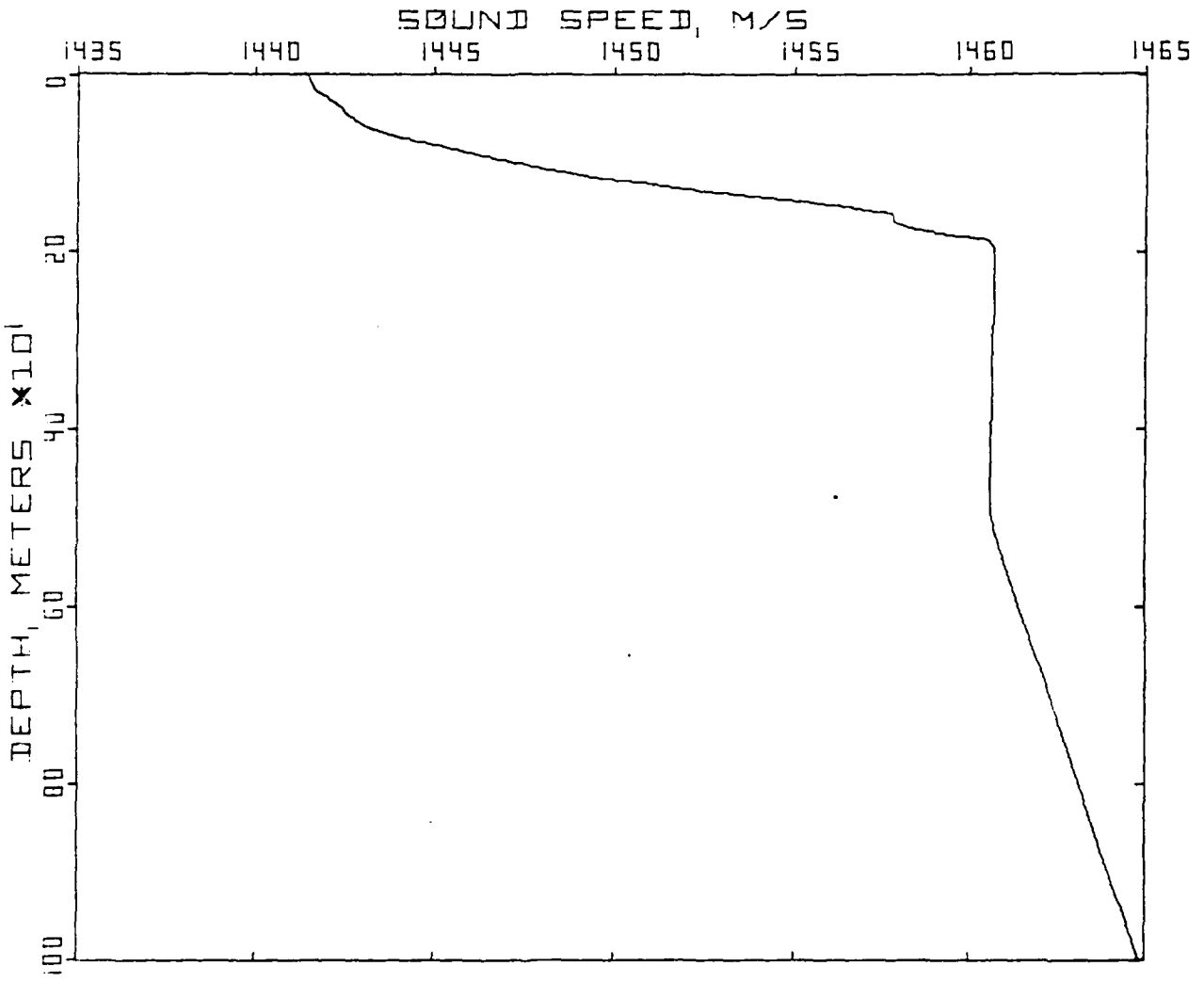
FRAM III, 8-14 APR 81



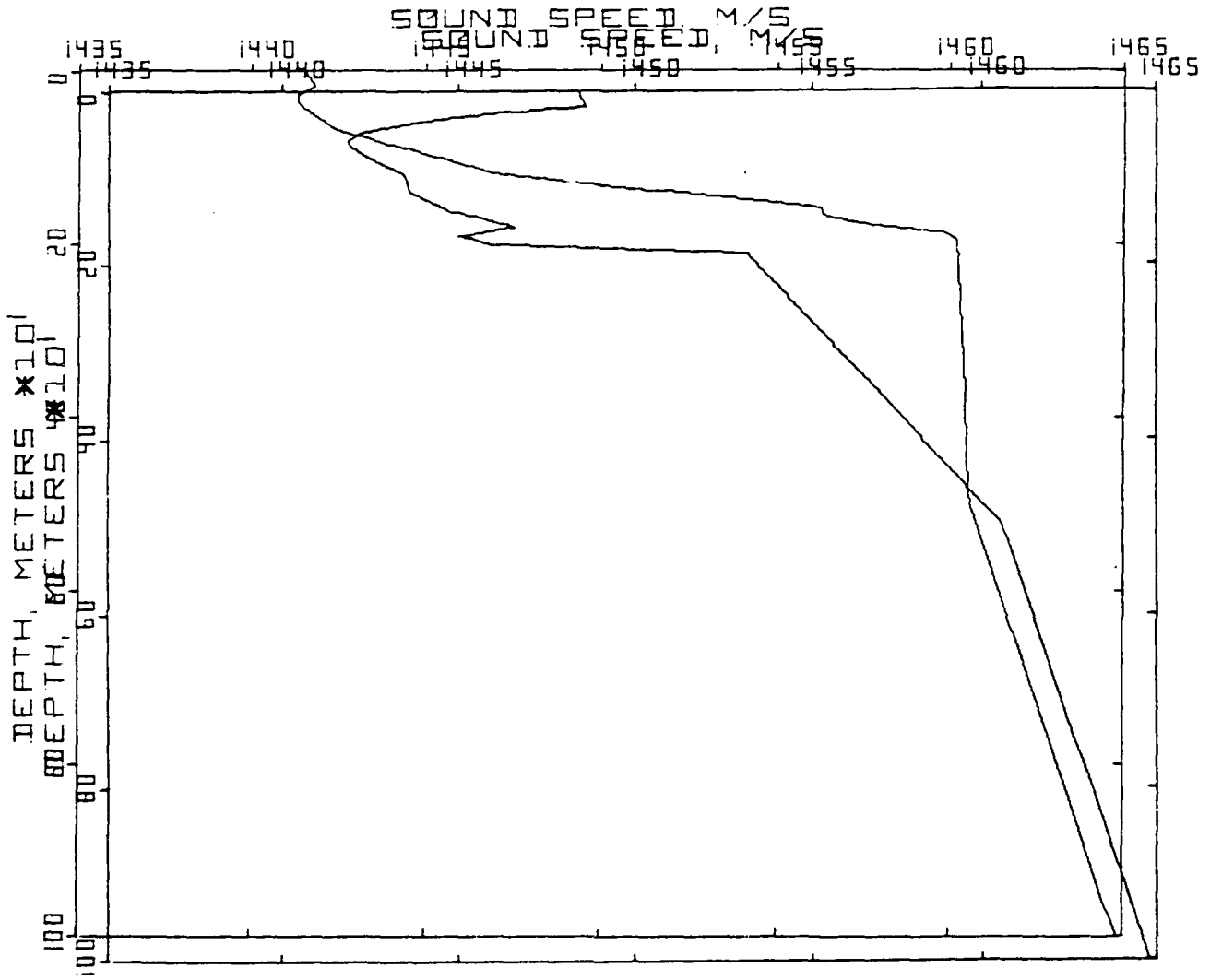


Track showing locations of
Data Buoy I.D. 1774.

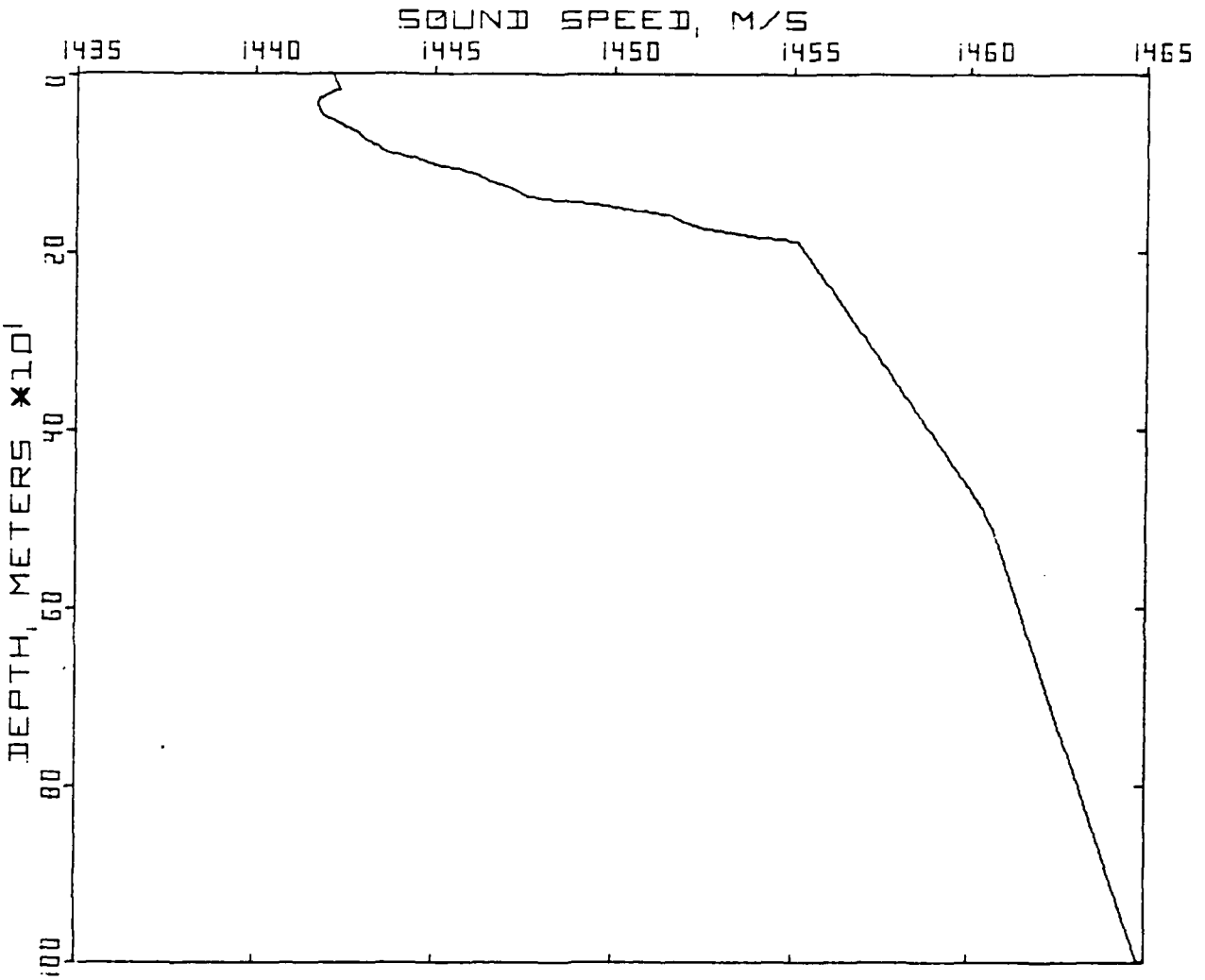
FRAM III, 08-14 JULY 81



FRAM III, 19-22 AUGUST 81



FRAM III, 22-28 JULY 81



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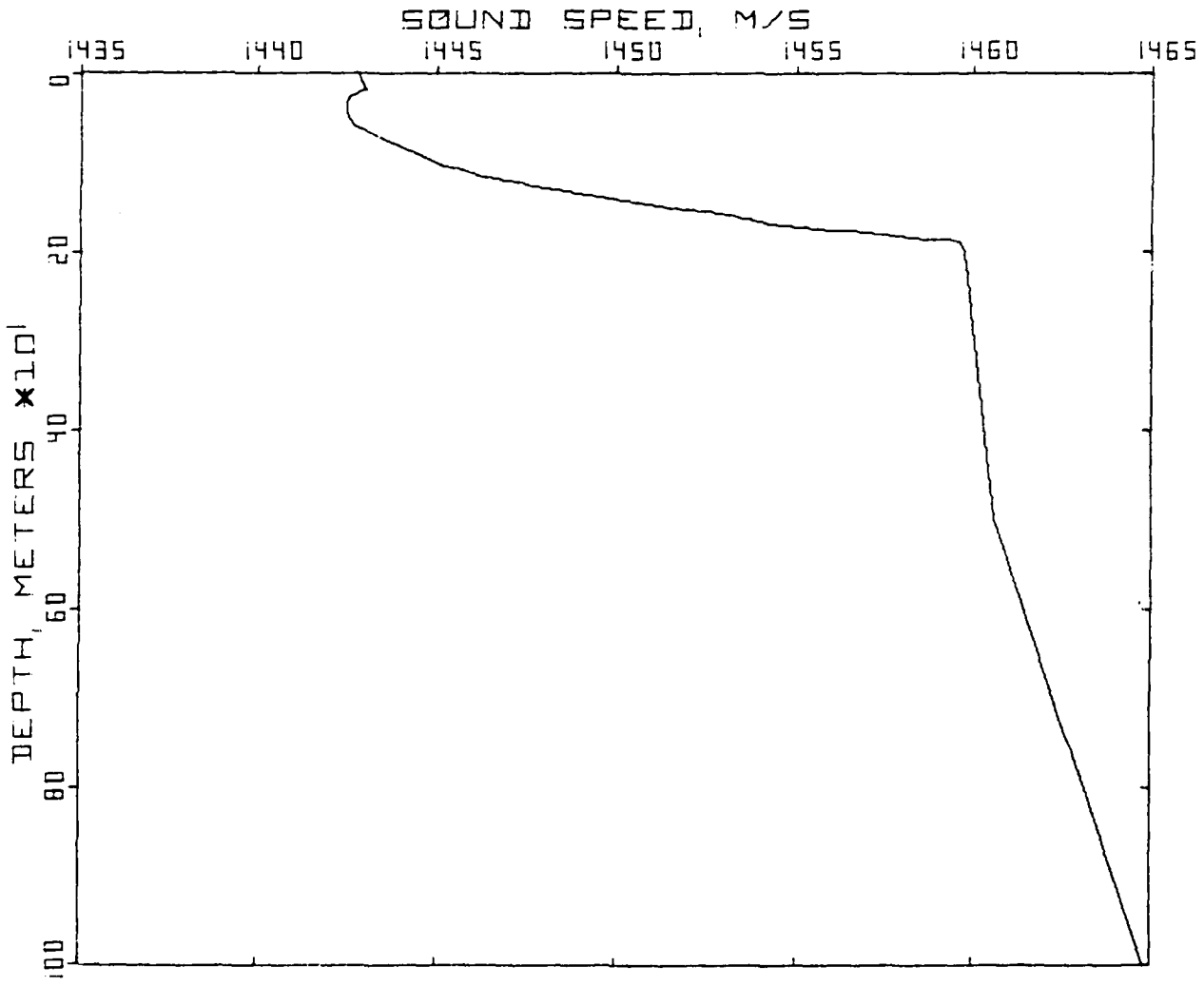
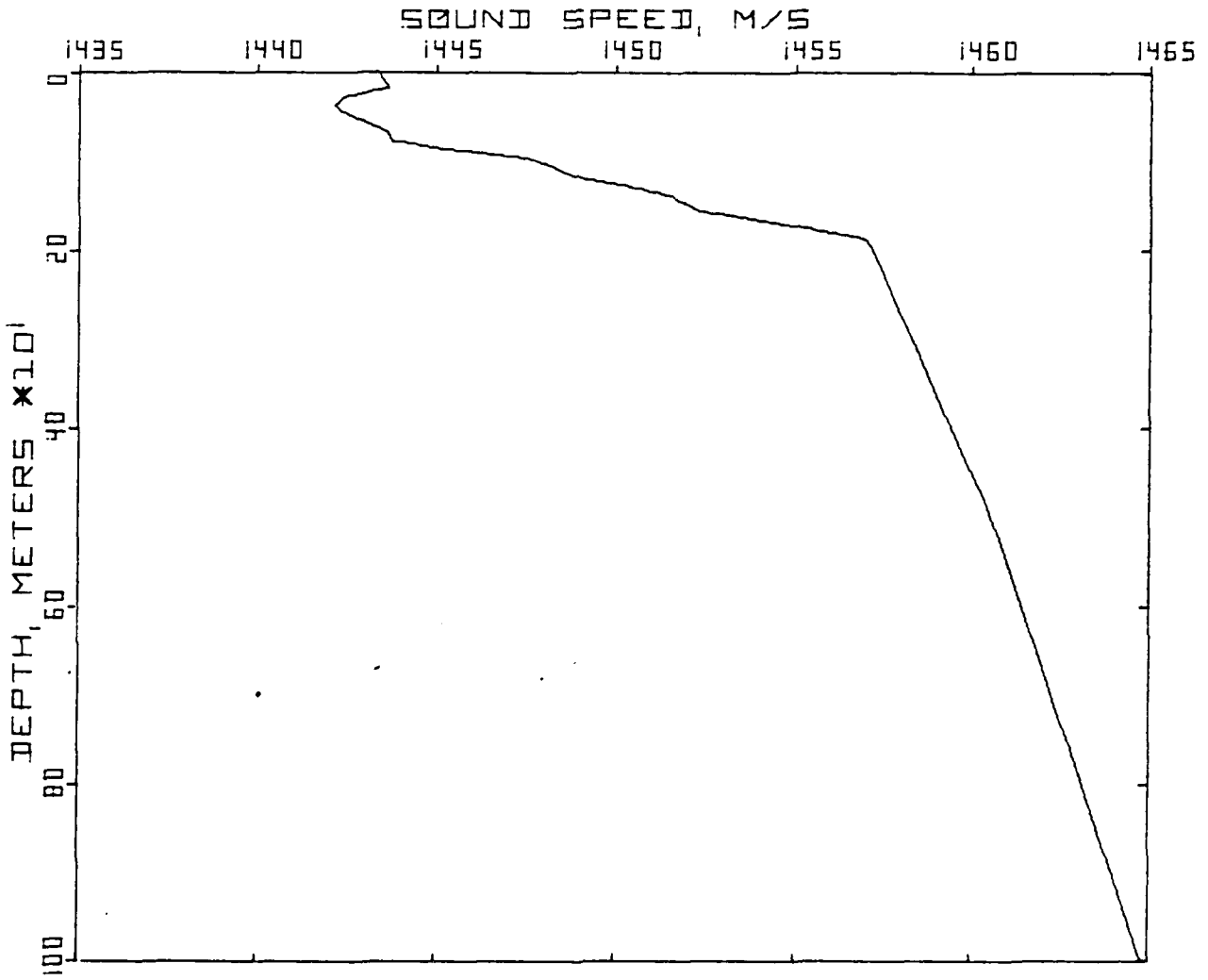
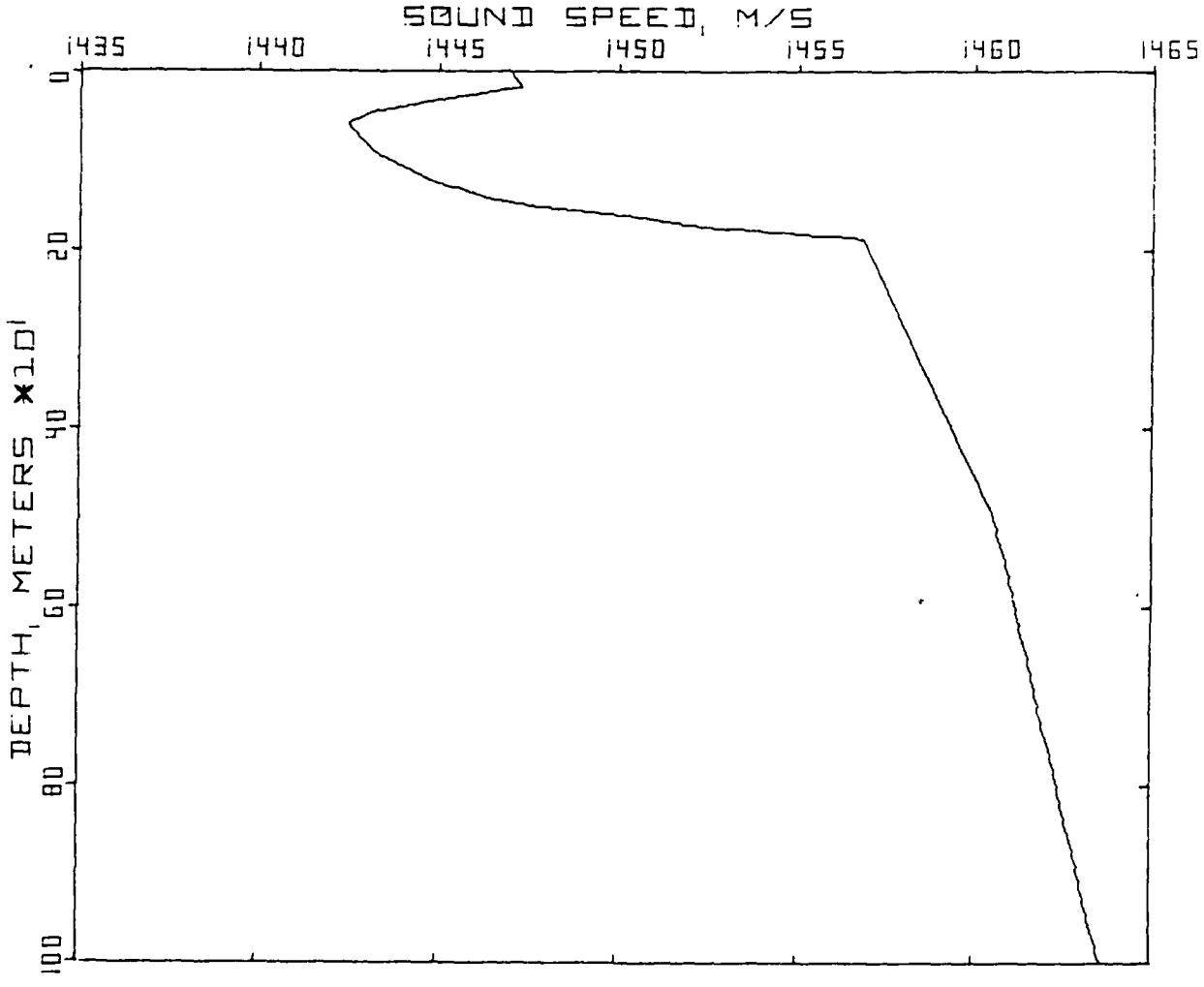


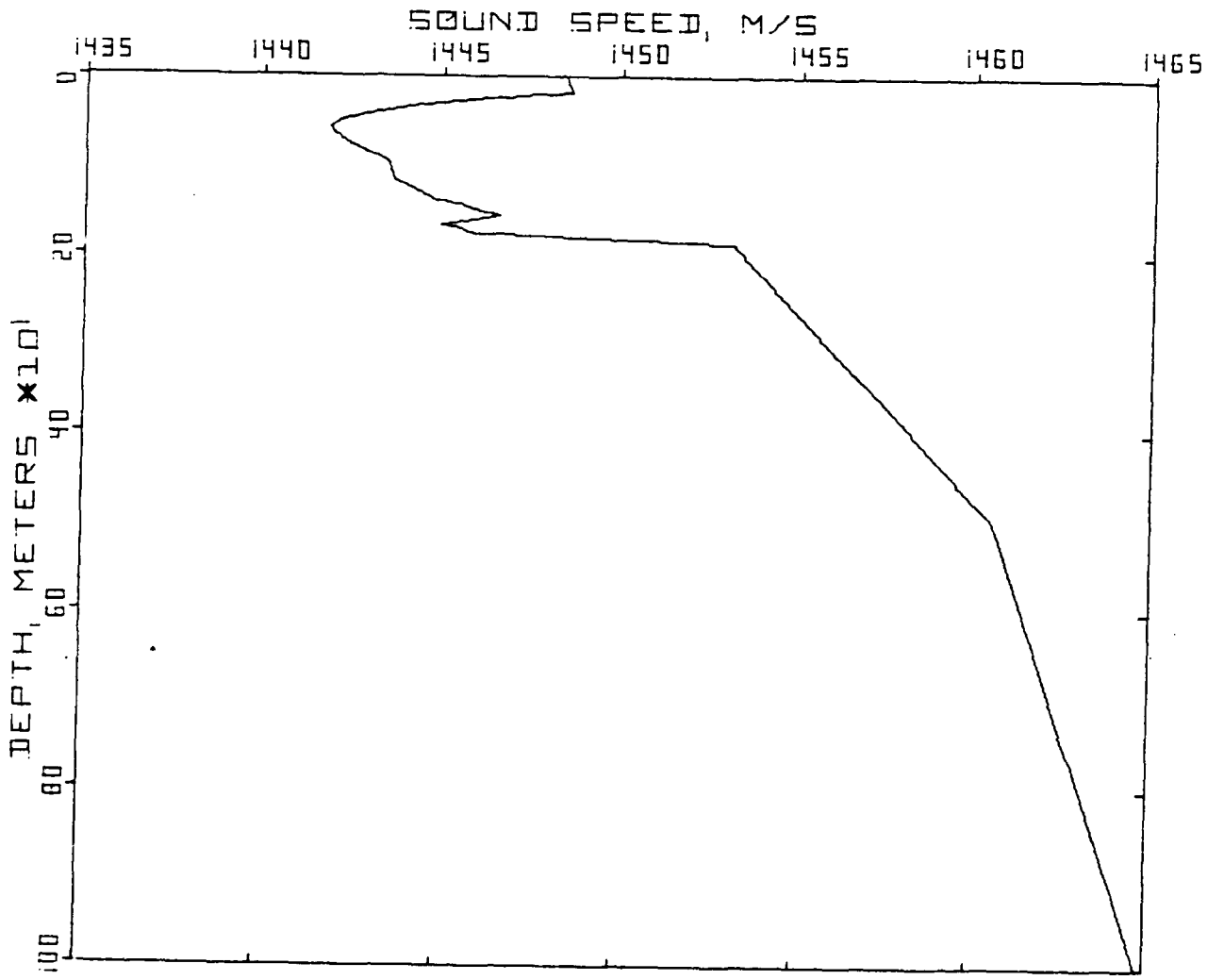
FRAM III, 05-11 AUGUST 81



FRAM III, 12-18 AUGUST 81



FRAM III, 19-22 AUGUST 81



APPENDIX 5

Date Buoy I.D. 1784

Life in Reporting Area 2 (West Greenland Sea)

1 June 1982 - 24 July 1982

Type: 4-Level SYNARGOS (5 - 1000 Hz)

BUOY ID 1784

JUNE 1982

DAY	GMT	POSITION			
152	036	81.857	N	3.588	E
152	1305	81.840	N	3.500	E
153	012	81.812	N	3.364	E
153	1206	81.808	N	3.335	E
154	049	81.751	N	3.050	E
154	1238	81.742	N	3.032	E
155	037	81.698	N	3.036	E
155	1229	81.698	N	3.030	E
156	025	81.657	N	2.876	E
156	1215	81.659	N	2.881	E
157	013	81.609	N	2.749	E
157	1206	81.605	N	2.771	E
158	006	81.559	N	2.526	E
158	1324	81.535	N	2.340	E
159	113	81.480	N	2.019	E
159	1301	81.478	N	2.050	E
160	051	81.435	N	1.910	E
160	1237	81.433	N	1.922	E
161	025	81.375	N	1.637	E
161	1214	81.362	N	1.686	E
162	007	81.316	N	1.509	E
162	1245	81.301	N	1.383	E
163	043	81.262	N	1.146	E
163	1232	81.257	N	1.157	E
164	031	81.205	N	0.919	E
164	1220	81.200	N	0.888	E
165	019	81.149	N	0.672	E
165	1209	81.144	N	0.646	E
166	008	81.072	N	0.474	E
164	1206	81.061	N	0.432	E

DAY	GMT	POSITION			
167	126	80.969	N	0.410	E
167	1314	80.955	N	0.390	E
168	103	80.831	N	0.334	E
168	1250	80.802	N	0.357	E
169	039	80.668	N	0.300	E
169	1226	80.648	N	0.227	E
170	015	80.558	N	0.063	E
170	1206	80.539	N	0.066	E
171	049	80.459	N	0.177	W
171	1238	80.447	N	0.198	W
172	038	80.345	N	0.421	W
172	1225	80.342	N	0.423	W
173	024	80.251	N	0.383	W
173	1213	80.246	N	0.357	W
174	011	80.149	N	0.311	W
174	1205	80.145	N	0.264	W
175	005	80.067	N	0.274	W
175	1326	80.069	N	0.238	W
176	115	79.982	N	0.326	W
176	1302	79.942	N	0.273	W
177	051	79.901	N	0.084	W
177	1238	79.895	N	0.009	W
178	027	79.808	N	0.030	E
178	1215	79.791	N	0.011	W
179	005	79.700	N	0.124	W
179	1205	79.640	N	0.321	W
180	041	79.616	N	0.269	W
180	1231	79.614	N	0.281	W
181	029	79.588	N	0.015	W
181	1218	79.574	N	0.021	E

BUOY ID 1784

JULY 1982

DAY	GMT	POSITION			
182	017	79.530	N	0.478	E
182	1207	79.509	N	0.501	E
183	005	79.418	N	0.500	E
183	1205	79.402	N	0.469	E
184	005	79.369	N	0.561	E
184	1315	79.338	N	0.713	E
185	104	79.307	N	0.633	E
185	1252	79.261	N	0.696	E
186	040	79.203	N	0.721	E
186	1228	79.150	N	0.596	E
187	017	79.103	N	0.441	E
187	1205	79.071	N	0.252	E
188	047	79.022	N	0.000	W
188	1238	79.014	N	0.039	W
189	035	78.916	N	0.723	W
189	1223	78.893	N	1.247	W
190	023	78.920	N	1.837	W
190	1212	78.937	N	1.960	W
191	011	78.932	N	2.361	W
191	1205	78.923	N	2.422	W
192	005	78.868	N	2.521	W
192	1328	78.612	N	2.662	W
193	117	78.479	N	2.713	W
193	1305	78.352	N	3.423	W
194	053	78.249	N	3.941	W
194	1242	78.094	N	3.994	W
195	029	77.946	N	4.087	W
195	1218	77.802	N	3.885	W
196	005	77.657	N	3.810	W
196	1207	77.489	N	3.611	W
197	043	77.422	N	3.194	W
197	1229	77.413	N	3.105	W
198	029	77.331	N	2.737	W
198	1217	77.295	N	2.680	W
199	017	77.080	N	2.771	W
199	1205	77.050	N	2.781	W
200	006	76.978	N	2.694	W
200	1205	76.956	N	2.600	W
201	131	76.931	N	2.460	W
201	1317	76.904	N	2.300	W
202	107	76.860	N	2.074	W
202	1254	76.807	N	1.835	W
203	043	76.735	N	1.583	W
203	1230	76.691	N	1.543	W
204	018	76.660	N	1.518	W
204	1207	76.604	N	1.556	W
205	047	76.529	N	1.896	W

DATA BY MONTHS

JUNE 1982 BUOY: 1784

IN FILE SYNA1784

EMENT (N. MI.): 141.261 NORTH:-136.979 EAST: -34.518
ON (TRUE): 194.163

BER OF DATA SAMPLES IS 240

= 30FT

ENCY	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
.0	78.5	7.2	60.6	68.0	69.9	73.3	78.4	82.5	88.6	92.1	101.6	240
.0	68.4	7.6	56.8	59.3	60.4	62.1	66.4	73.3	78.4	82.3	93.7	240
.5	70.3	5.1	58.6	66.6	66.6	66.6	68.3	72.6	77.0	81.1	93.2	240
.6	69.3	5.1	59.5	64.2	64.2	63.7	67.5	71.7	77.0	79.5	88.3	240
.0	66.6	5.2	59.8	61.0	62.0	62.9	65.2	68.9	73.0	76.5	89.9	239
.0	64.8	4.1	57.1	59.6	60.3	62.1	64.0	66.3	69.1	72.3	82.1	240
.0	65.6	4.1	57.4	60.2	61.0	63.1	65.3	67.8	70.3	73.1	81.2	240
.0	64.9	4.4	54.3	58.1	60.0.	61.6	65.1	67.6	70.1	72.0	78.9	240
.0	61.5	4.7	49.7	53.4	55.5	57.7	62.1	64.6	67.5	68.7	76.6	240
.0	50.9	3.7	35.7	46.5	47.2	48.6	50.7	53.2	55.2	56.8	64.5	240
.0	37.8	5.6	25.9	28.2	30.8	34.3	38.4	40.9	44.4	46.9	60.9	240

MBER OF DATA SAMPLES IS 240

= 100FT

JENCY	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	82.9	9.0	60.1	71.2	73.1	76.5	81.6	89.3	96.0	98.8	103.8	240
0.0	74.6	6.1	64.8	67.1	68.3	69.9	73.1	78.4	83.7	86.9	94.0	240
2.5	74.8	3.7	68.6	70.5	71.3	72.1	74.0	75.6	80.6	83.4	90.2	240
3.6	74.8	2.8	70.1	70.7	71.7	72.6	74.2	76.7	78.6	80.2	86.3	240
0.0	75.5	2.7	70.7	71.9	71.9	73.8	75.4	77.3	78.9	80.7	83.9	240
0.0	73.1	3.0	66.7	69.0	70.2	70.9	72.7	74.6	76.2	77.6	89.0	240
0.0	71.7	3.7	64.3	66.5	66.8	69.3	71.6	74.4	76.2	77.6	84.9	240
3.0	69.6	4.2	60.9	63.1	64.4	66.3	69.7	72.9	74.8	76.4	81.7	240
0.0	64.1	5.0	52.5	55.0	57.6	61.0	64.6	67.1	69.8	71.9	79.1	240
0.0	52.9	4.9	36.9	41.4	49.3	50.9	53.4	55.4	58.3	60.5	67.4	240
0.0	40.2	5.5	22.2	31.8	33.0	36.8	39.6	44.0	47.4	49.4	56.1	239

UNE 1982 BUOY: 1734

ER OF DATA SAMPLES IS 240

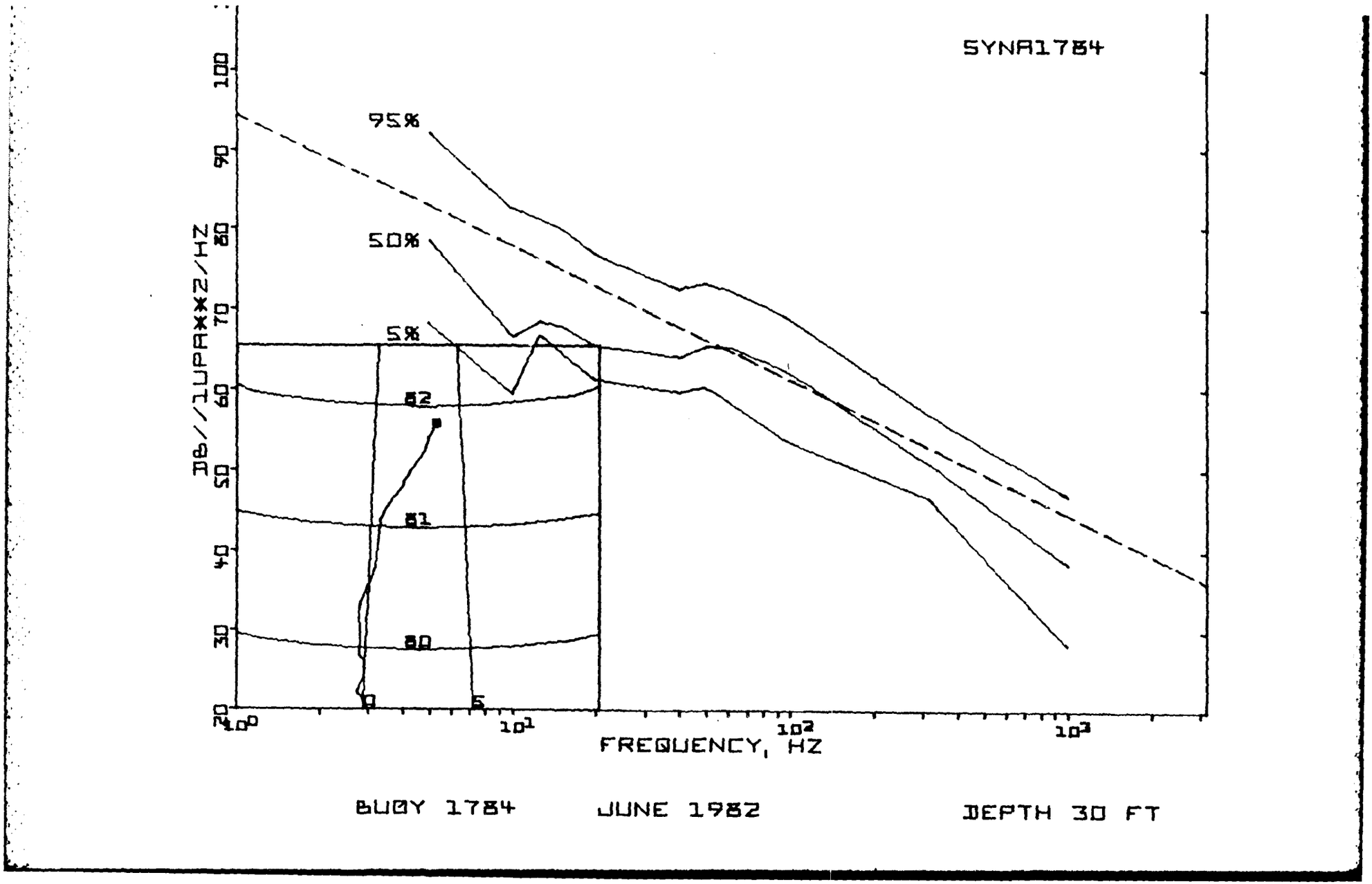
200FT

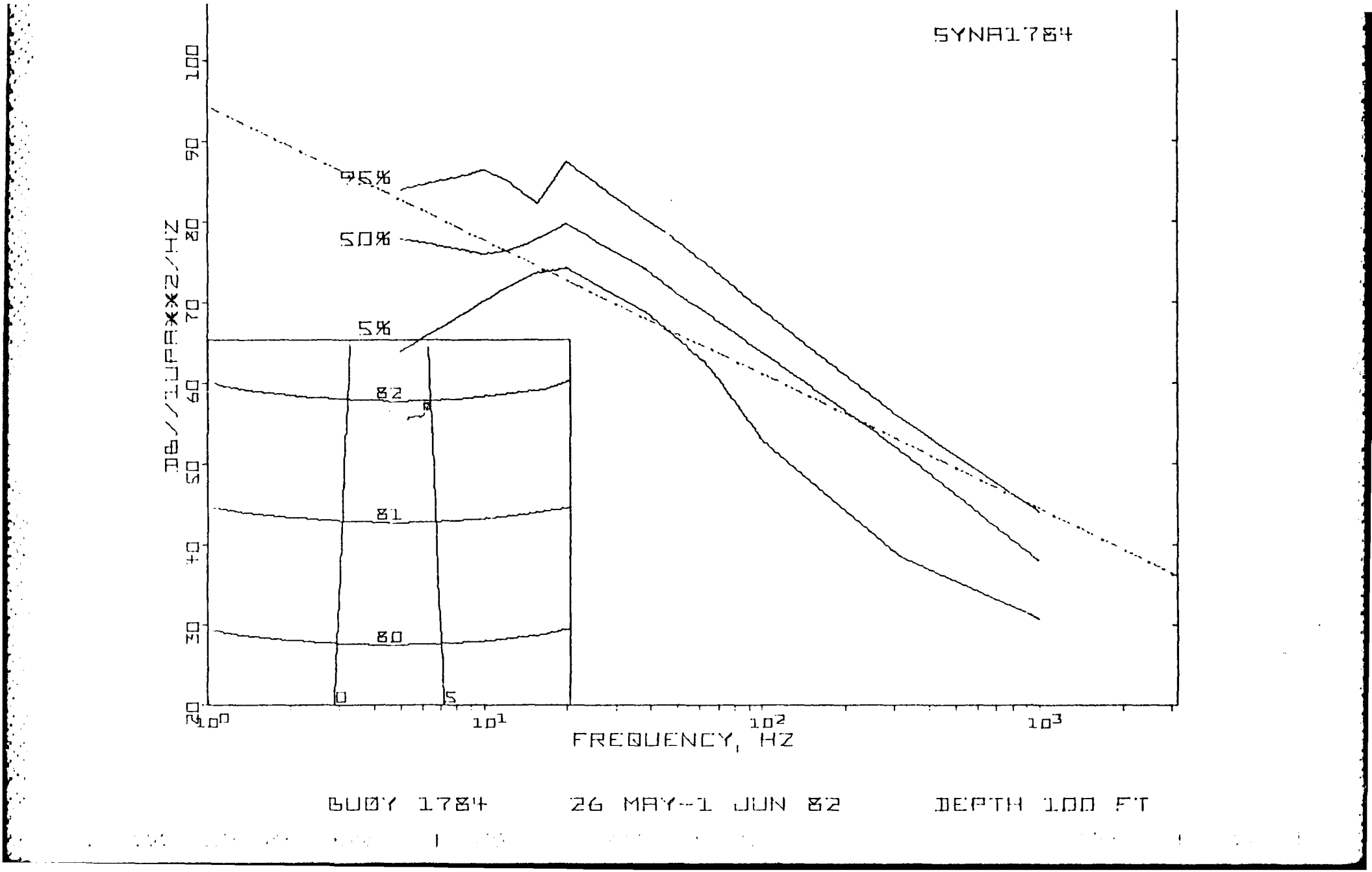
ICY	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
)	93.6	11.1	69.6	78.7	80.1	84.7	92.8	101.0	107.4	113.6	124.0	237
)	86.0	9.5	70.6	74.6	76.0	77.8	83.3	92.6	100.7	102.9	114.2	239
)	84.1	8.3	72.1	74.9	76.2	77.5	80.9	89.0	98.1	100.4	112.4	240
)	83.1	7.3	73.3	75.5	76.4	77.3	80.5	86.0	96.1	98.6	106.9	240
)	81.1	5.9	72.0	74.5	75.5	76.4	79.4	83.3	90.1	94.5	100.5	239
)	74.8	4.4	62.2	68.3	70.1	72.0	74.3	77.2	79.7	82.2	90.9	240
)	72.3	4.9	59.5	64.8	65.4	68.9	71.4	74.9	78.5	80.2	89.5	240
)	68.3	4.8	55.5	60.9	62.4	64.2	68.4	71.2	73.7	75.7	85.8	240
)	64.9	5.3	48.1	57.8	58.3	61.1	65.4	68.6	71.4	73.2	78.3	240
)	53.7	4.4	41.7	47.7	48.5	50.3	53.6	56.8	59.6	61.1	68.3	232
)	46.7	5.5	28.5	36.0	41.5	42.7	47.0	50.1	53.1	55.2	61.3	228

ER OF DATA SAMPLES IS 240

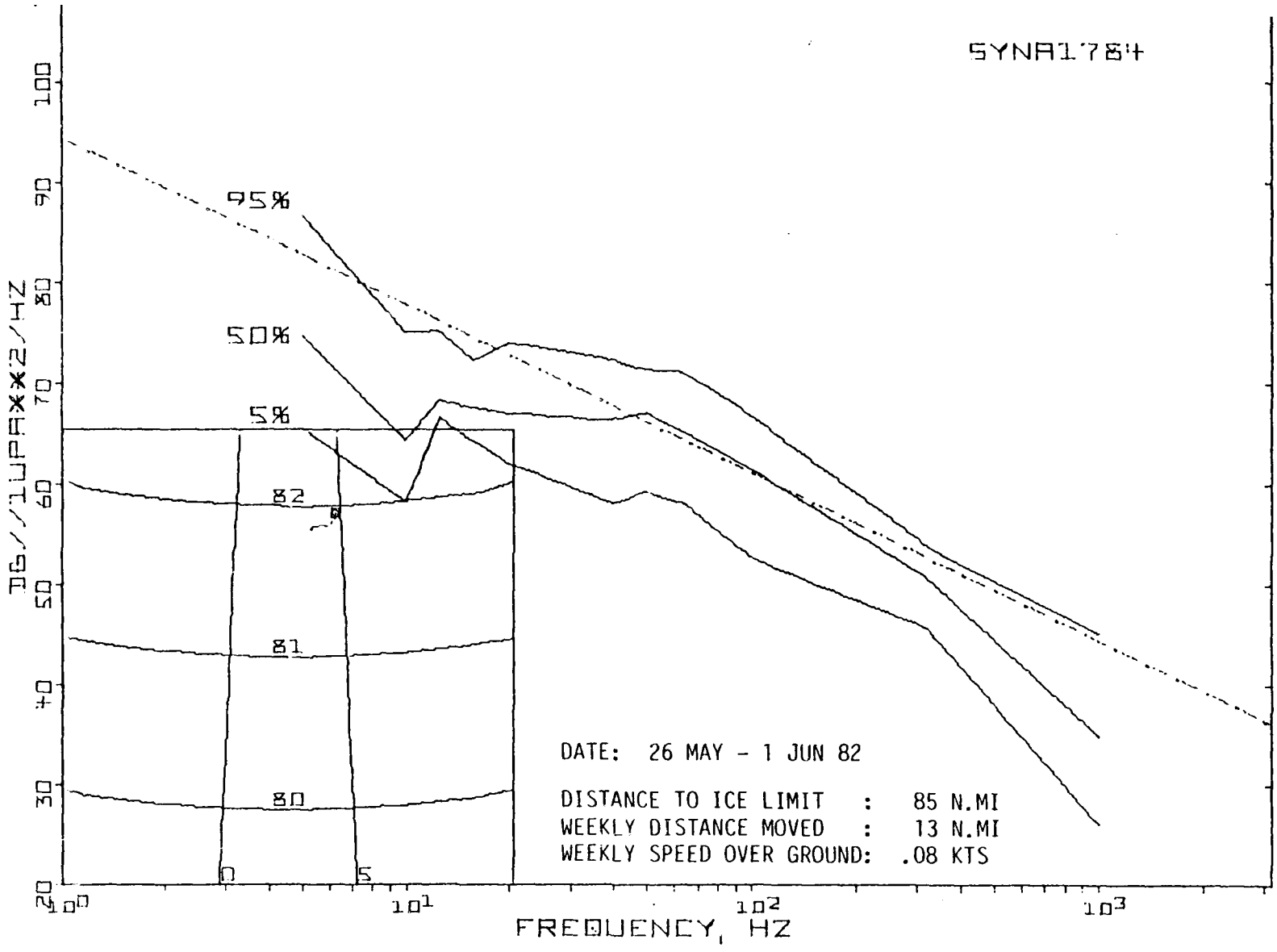
300FT

ICY	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
)	94.9	12.5	76.1	78.4	80.2	85.1	92.3	103.2	111.8	124.0	124.0	240
)	80.1	10.7	71.5	74.9	76.3	80.0	85.0	98.1	105.3	106.1	112.4	240
)	84.9	9.4	70.6	74.5	75.6	77.7	81.2	92.5	100.6	101.8	103.9	240
)	85.2	8.7	72.7	76.6	77.4	79.3	81.8	89.8	100.9	102.8	104.4	240
)	82.7	7.8	69.5	73.7	75.5	77.4	79.7	84.3	97.8	98.4	99.6	240
)	74.4	7.0	61.0	64.8	66.4	70.2	72.7	76.8	87.1	88.9	92.4	240
)	72.8	7.3	56.6	61.3	63.4	68.4	71.9	76.0	84.0	88.1	90.6	240
)	72.1	6.9	57.7	61.6	63.0	66.8	71.6	76.3	82.4	84.9	88.4	240
)	64.7	7.9	39.0	49.8	53.5	60.0	65.5	69.6	74.9	78.1	81.6	240
)	53.8	6.1	31.1	39.7	46.2	51.6	53.9	57.1	58.9	61.7	69.8	214
)	46.5	6.1	30.4	36.5	39.3	42.7	47.1	50.7	53.2	55.7	61.7	162


SYNA1784
95%
50%
5%
B2
B1
B0
D
S
DB//1UPA**2/HZ
100
90
80
70
60
50
40
30
20
10^0
10^1
10^2
10^3
FREQUENCY, HZ
BUOY 1784
JUNE 1982
DEPTH 30 FT



BUOY 1784 26 MAY-1 JUN 82 DEPTH 100 FT



BUOY 1784 26 MAY-1 JUN 82 DEPTH 30 FT

S: 26 MAY-1 JUN 82 BUOY: 1784

NUMBER OF DATA SAMPLES IS 57

H = 200FT

QUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	
5.0	86.6	10.0	72.0	73.7	74.5	78.7	84.9	91.5	101.0	102.8	124.0	5
10.0	83.6	6.2	74.6	76.6	77.2	78.6	82.0	86.6	90.9	93.4	102.9	5
12.5	83.1	6.1	74.4	75.6	76.3	79.1	81.6	85.2	91.2	96.2	102.2	5
15.6	82.0	4.9	73.6	76.1	77.3	78.7	81.6	84.1	86.6	88.5	101.4	5
20.0	81.3	5.5	70.8	72.6	75.3	77.4	80.0	84.7	88.5	91.4	95.3	5
40.0	72.9	5.0	59.8	63.2	66.4	69.5	73.6	76.1	78.9	80.3	81.6	5
50.0	70.3	4.8	59.5	60.4	64.8	66.4	70.8	73.3	74.9	77.4	80.2	5
63.0	66.0	5.4	51.4	55.5	58.2	62.4	67.0	70.2	72.1	73.0	76.2	5
00.0	62.2	6.2	43.2	48.9	55.1	58.3	63.2	66.3	68.6	69.8	73.9	5
20.0	51.7	4.4	38.6	46.8	46.8	49.2	50.8	53.6	58.8	59.6	62.9	5
00.0	43.9	4.6	32.3	36.0	37.3	41.5	44.1	45.0	48.2	49.2	59.1	5

NUMBER OF DATA SAMPLES IS 57

H = 300FT

QUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	
5.0	86.6	8.4	76.1	77.0	77.7	79.7	86.3	90.5	94.2	98.3	124.0	5
10.0	84.4	5.5	74.4	76.2	78.1	80.9	84.1	86.9	92.1	95.0	100.4	5
12.5	82.2	5.6	71.7	73.3	76.5	77.7	81.2	83.7	89.2	90.8	99.3	5
15.6	82.8	4.4	74.9	76.6	77.7	79.9	81.8	84.6	87.9	90.6	97.4	5
20.0	81.4	5.2	70.3	73.6	76.3	77.4	80.4	85.1	87.6	91.1	95.5	5
40.0	71.8	4.8	61.0	62.3	65.8	68.9	70.8	75.7	77.9	78.8	80.4	5
50.0	70.0	5.1	56.8	61.3	62.1	66.5	70.7	73.5	75.3	76.0	78.5	5
63.0	69.8	5.8	55.0	58.8	61.6	66.2	70.3	72.8	76.3	78.8	80.8	5
00.0	61.8	7.4	39.0	49.0	50.6	58.2	62.8	67.1	68.8	71.5	74.0	5
20.0	53.2	6.0	31.1	35.9	49.1	51.8	53.9	55.7	58.9	60.9	63.2	4
00.0	44.6	5.0	33.4	38.4	39.8	40.9	44.1	46.2	48.5	50.7	64.5	4

: 26 MAY-1 JUN 82 BUOY: 1784

IT IN FILE SYNA1784

ACEMENT (N. MI.): 13.692 NORTH: -7.860 EAST: -11.211
TION (TRUE): 234.995

UMBER OF DATA SAMPLES IS 57

 = 30FT

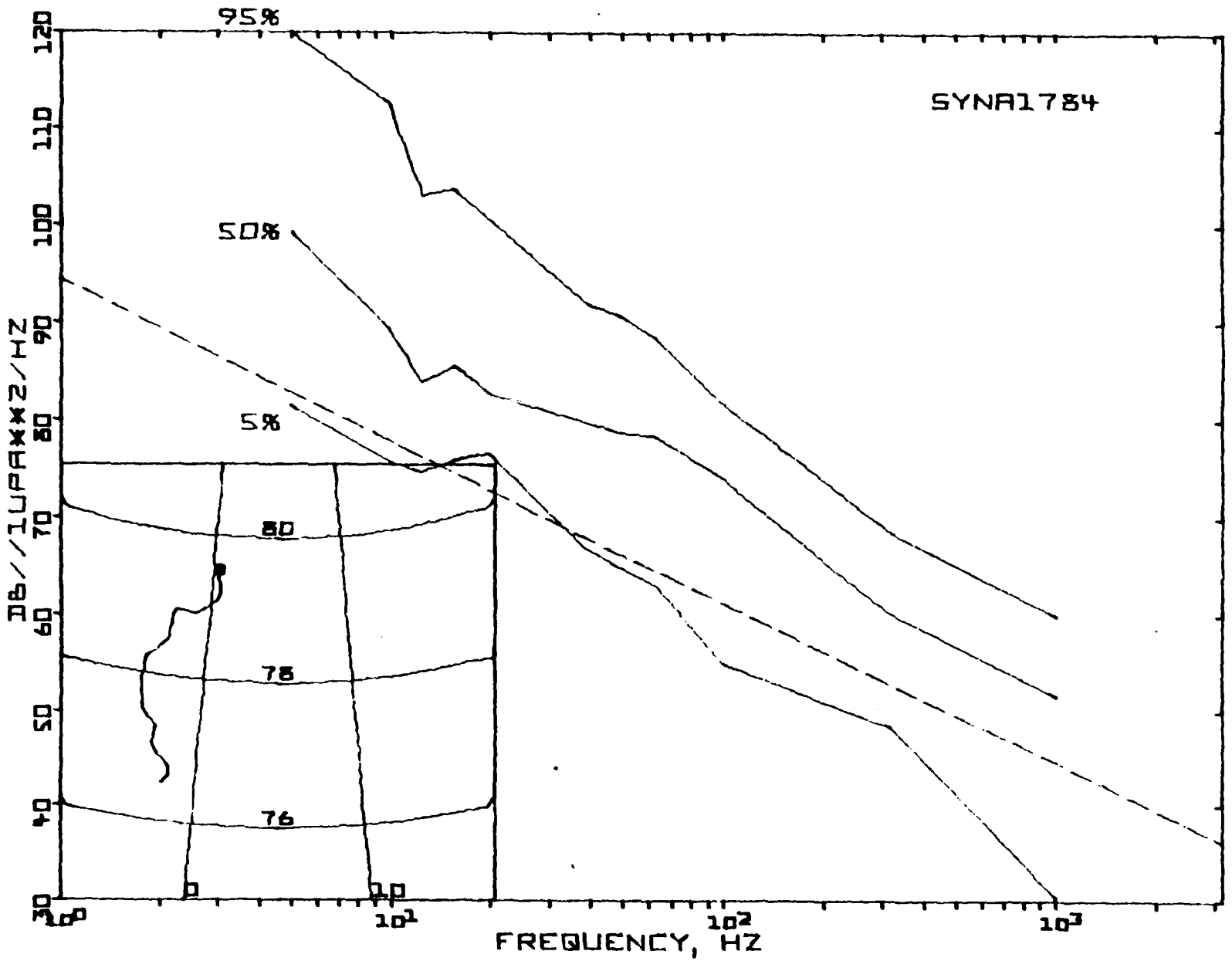
QUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	75.3	7.8	49.1	65.5	68.7	71.5	74.7	79.3	83.6	86.7	91.3	57
10.0	65.6	5.6	57.4	58.2	59.3	61.3	64.2	69.6	72.4	74.9	81.6	57
12.5	69.0	3.6	60.4	66.6	66.6	66.6	68.3	71.0	72.6	75.1	84.7	57
15.6	67.9	2.5	60.6	64.2	65.0	66.3	67.5	69.4	70.3	72.3	74.5	57
20.0	67.4	3.9	58.5	62.0	62.9	64.5	67.0	69.8	72.4	74.0	77.9	57
40.0	65.4	4.0	56.9	58.0	59.6	62.1	66.3	67.5	70.0	72.3	74.1	57
50.0	66.1	3.8	56.3	59.3	60.5	63.1	67.1	69.1	70.3	71.3	73.1	57
63.0	64.9	4.1	55.6	58.1	58.1	62.3	65.1	67.6	70.1	71.1	75.0	57
00.0	60.8	4.8	50.6	52.6	53.4	57.7	61.5	63.7	66.2	66.9	68.7	57
20.0	49.9	3.7	35.7	45.6	46.5	47.9	50.7	52.5	53.9	53.9	57.7	57
00.0	35.4	5.7	25.9	26.1	27.6	30.8	34.9	39.1	42.8	45.1	49.7	57

NUMBER OF DATA SAMPLES IS 57

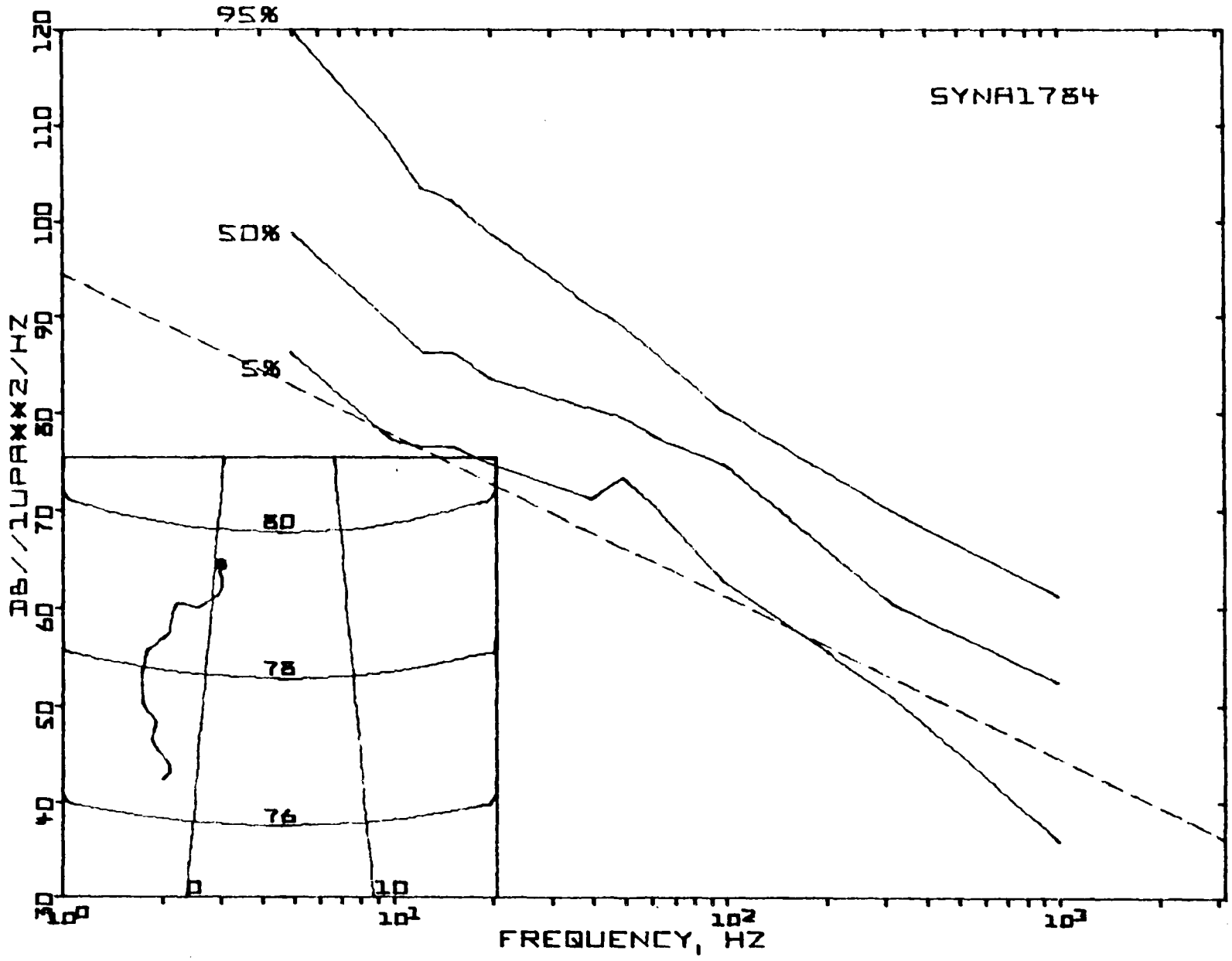
H = 100FT

QUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	77.0	5.2	63.1	63.8	69.9	73.7	77.9	79.7	83.2	83.9	85.7	57
10.0	76.5	4.7	68.9	69.9	71.6	73.0	75.9	80.3	82.8	86.4	88.0	57
12.5	77.3	4.0	69.4	72.1	73.4	74.6	76.5	79.4	83.4	84.8	86.6	57
15.6	77.9	2.8	72.3	73.6	74.2	75.8	77.7	80.2	80.9	82.2	84.7	57
20.0	80.0	4.1	72.7	74.2	75.4	77.3	79.8	81.4	86.7	87.5	91.9	57
40.0	73.9	3.8	66.7	68.3	69.5	71.5	73.7	76.2	78.7	79.8	83.6	57
50.0	71.3	3.8	64.3	65.5	65.6	69.0	70.9	73.4	76.2	77.6	80.5	57
63.0	68.9	3.9	60.9	62.5	64.4	66.3	68.8	70.4	74.8	74.8	77.8	57
00.0	62.8	4.6	50.6	53.1	55.0	59.9	63.8	65.9	68.1	69.0	70.6	57
20.0	51.1	4.7	36.9	38.3	43.0	50.2	51.6	53.4	54.4	55.4	58.3	57
00.0	37.4	4.0	29.6	30.7	31.8	34.0	38.0	39.6	41.3	44.0	48.1	57

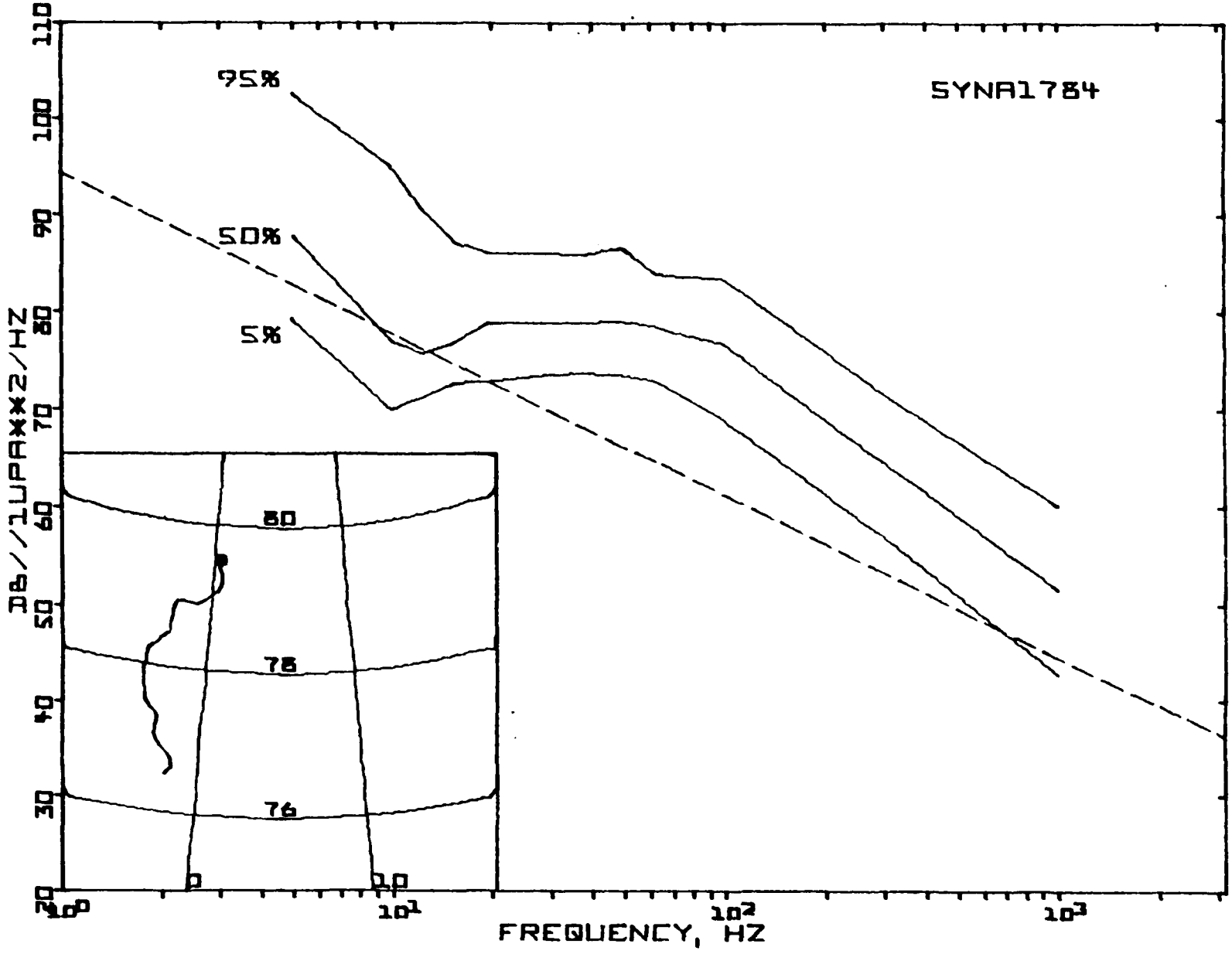
DATA BY WEEKS



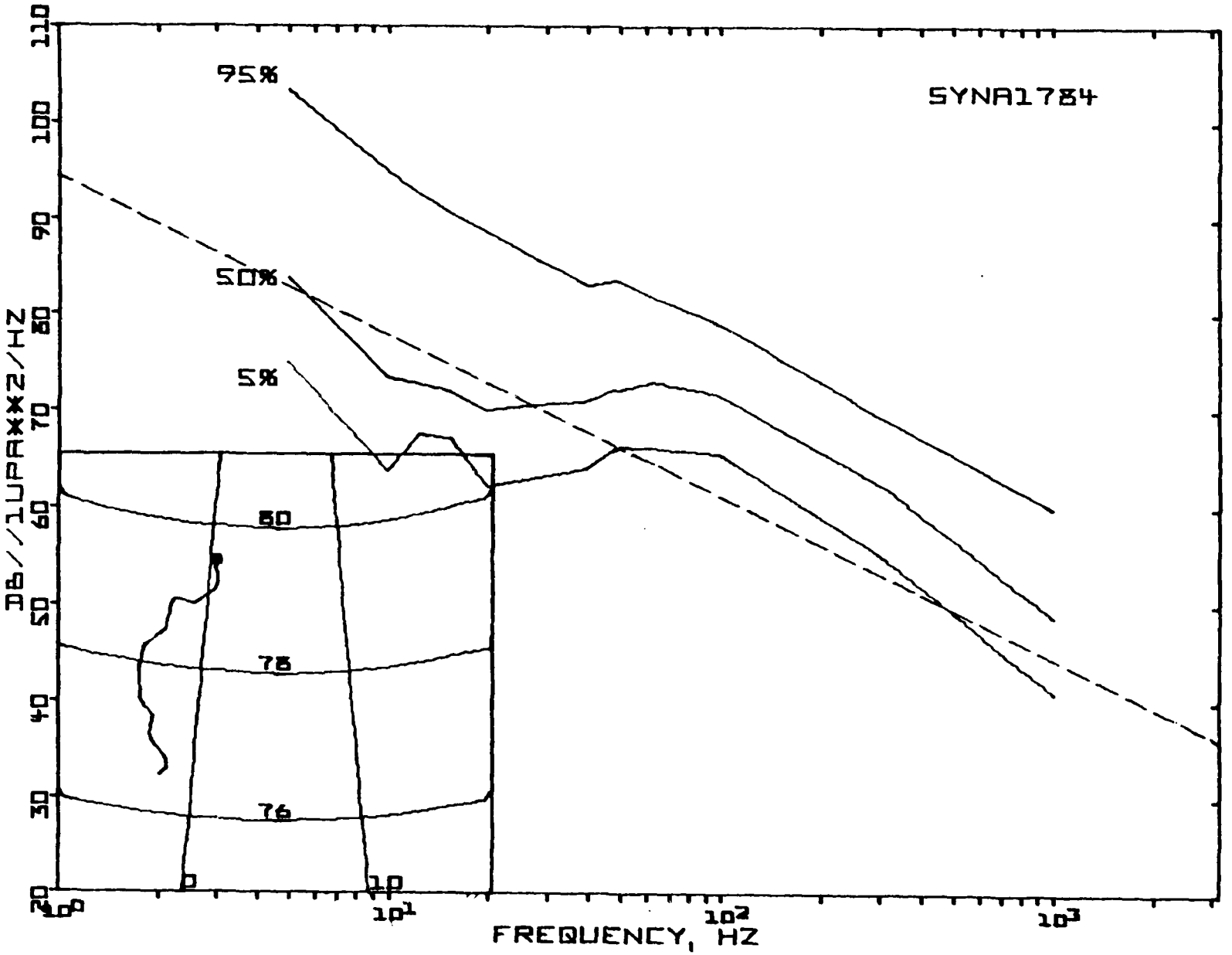
JUL 1[illegible]4 [illegible]LY 1987 DEPTH 300 FT



BUOY 1784 JULY 1982 DEPTH 200 FT



BUOY 1784 JULY 1982 DEPTH 100 FT



BUOY 1784 JULY 1982 DEPTH 30 FT

MONTH: JULY 1982 BUOY: 1784

E NUMBER OF DATA SAMPLES IS 188

DEPTH = 200FT

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	99.8	10.5	80.1	86.1	88.0	91.5	98.8	105.5	113.6	124.0	124.0	187
10.0	91.0	11.2	55.8	77.2	78.8	83.3	89.3	99.4	103.8	103.2	122.0	188
12.5	88.0	8.7	67.8	76.3	78.1	81.0	86.1	94.4	101.6	103.2	109.3	187
15.6	86.9	8.1	70.1	76.4	78.0	80.5	86.0	91.4	100.5	102.0	105.0	188
20.0	85.3	7.1	62.6	74.5	78.0	80.5	83.3	89.3	96.8	98.6	101.4	188
40.0	80.0	7.2	41.1	71.1	73.0	77.2	80.3	84.1	87.6	90.9	93.7	188
50.0	79.8	5.5	51.9	73.3	74.2	76.9	79.4	83.5	87.0	88.9	91.4	186
63.0	77.3	4.7	58.2	70.2	72.1	74.4	77.3	80.4	83.3	85.8	87.7	184
100.0	72.9	5.6	49.1	62.6	66.3	70.4	74.6	76.4	78.3	79.9	88.5	185
320.0	60.5	6.2	30.5	50.8	52.8	56.3	60.4	64.8	68.3	69.9	73.1	184
1000.0	50.9	7.9	24.4	36.0	39.3	46.4	52.4	56.2	60.2	61.3	72.3	169

THE NUMBER OF DATA SAMPLES IS 188

DEPTH = 300FT

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	99.0	12.8	74.7	81.3	82.2	89.2	99.3	106.5	120.1	124.0	124.0	186
10.0	92.4	12.4	74.0	78.6	76.9	82.3	89.0	103.2	109.3	112.4	122.0	183
12.5	87.6	10.3	71.7	74.5	75.8	78.5	83.7	95.3	101.8	102.8	104.9	188
15.6	88.5	9.8	74.6	75.8	77.7	80.0	85.4	99.9	102.8	103.7	105.2	188
20.0	86.4	8.6	71.1	76.5	77.4	79.6	82.6	96.3	99.6	100.6	101.6	186
40.0	80.2	7.7	62.9	66.4	67.0	75.0	79.6	87.7	90.5	91.6	93.0	188
50.0	78.8	7.6	54.3	64.6	68.1	74.4	78.5	84.6	89.4	90.6	91.6	185
63.0	77.6	7.1	54.1	63.0	65.9	73.6	78.3	83.0	86.3	88.4	89.1	188
100.0	72.0	7.6	43.0	54.9	60.0	68.0	74.0	78.1	80.0	81.6	84.1	186
320.0	57.1	6.9	31.1	43.2	52.0	53.7	60.0	63.3	66.9	68.5	72.5	177
1000.0	46.7	8.3	30.4	30.4	33.2	44.1	51.6	55.1	56.5	59.3	74.8	112

STOP
F

MONTH: JULY 1982 BUOY: 1784

OUTPUT IN FILE SYNA1784

DISPLACEMENT (N. MI.): 182.465 NORTH:-180.060 EAST: -29.528
DIRECTION (TRUE): 189.332

THE NUMBER OF DATA SAMPLES IS 188

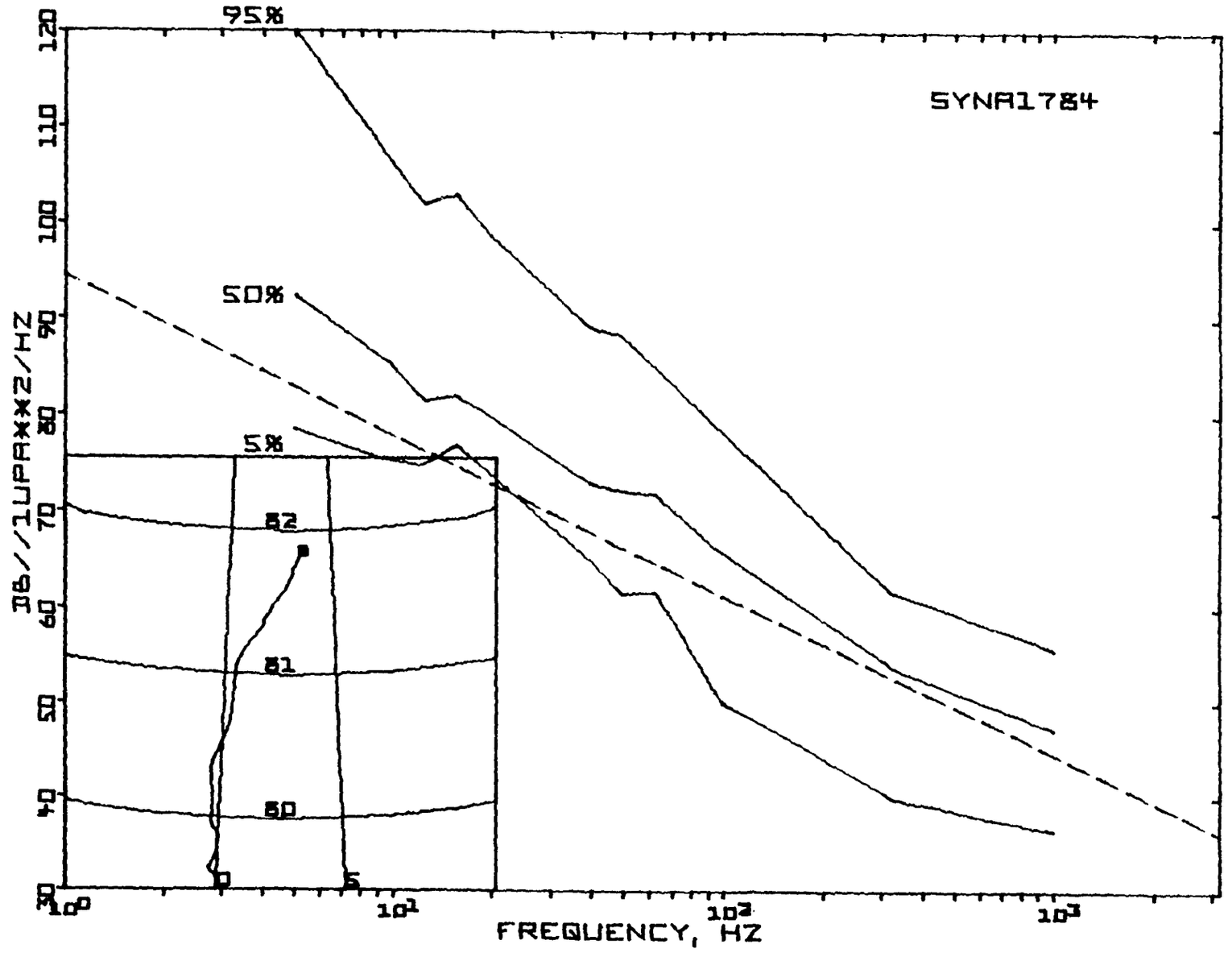
DEPTH = 30FT

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	85.9	8.8	70.5	74.7	76.5	79.3	83.6	90.5	98.8	103.4	124.0	188
10.0	75.2	9.9	62.1	63.6	64.2	67.3	73.3	80.2	88.3	94.9	108.9	188
12.5	75.1	7.9	64.6	67.5	67.5	69.1	72.6	78.6	87.8	92.4	102.7	188
15.6	73.9	7.7	63.0	66.9	66.9	68.5	71.7	77.0	85.6	90.4	101.1	188
20.0	72.1	8.0	59.8	62.0	63.7	65.8	69.8	75.8	83.2	88.6	98.1	188
40.0	71.9	5.4	61.5	64.0	65.6	68.1	70.9	74.1	79.0	82.9	91.6	188
50.0	73.4	4.8	64.3	66.2	67.8	70.3	72.2	75.8	79.9	83.4	90.3	188
63.0	73.5	4.5	64.1	66.0	68.3	70.1	72.9	76.1	80.3	81.6	87.6	188
100.0	71.9	4.2	62.1	65.4	66.9	68.7	71.5	74.7	77.5	78.9	84.9	188
320.0	62.0	4.5	52.5	54.6	55.7	58.5	61.8	65.3	67.8	68.8	74.8	188
1000.0	49.9	5.8	37.6	40.9	41.9	46.3	48.8	52.9	56.4	60.0	69.8	188

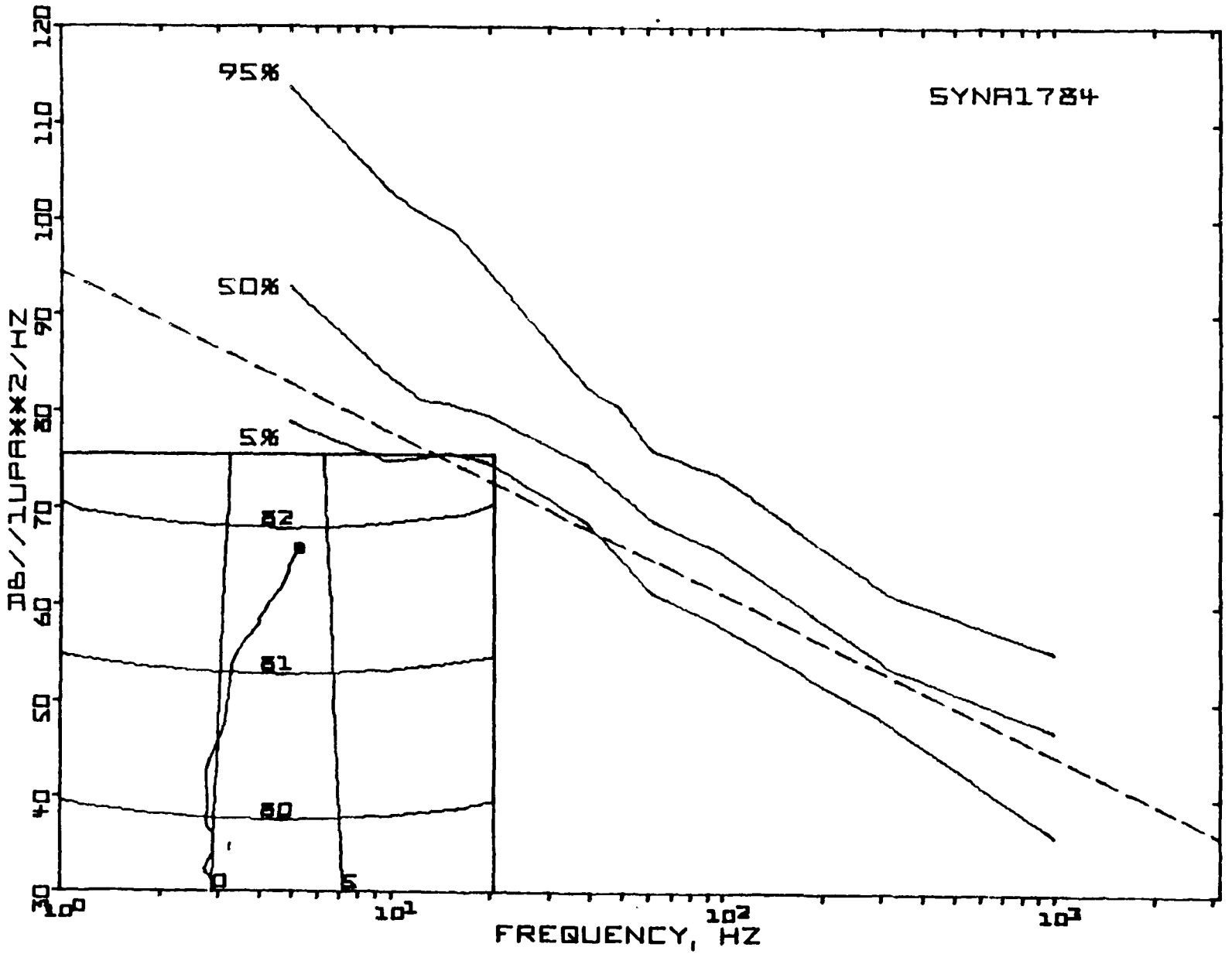
THE NUMBER OF DATA SAMPLES IS 188

DEPTH = 100FT

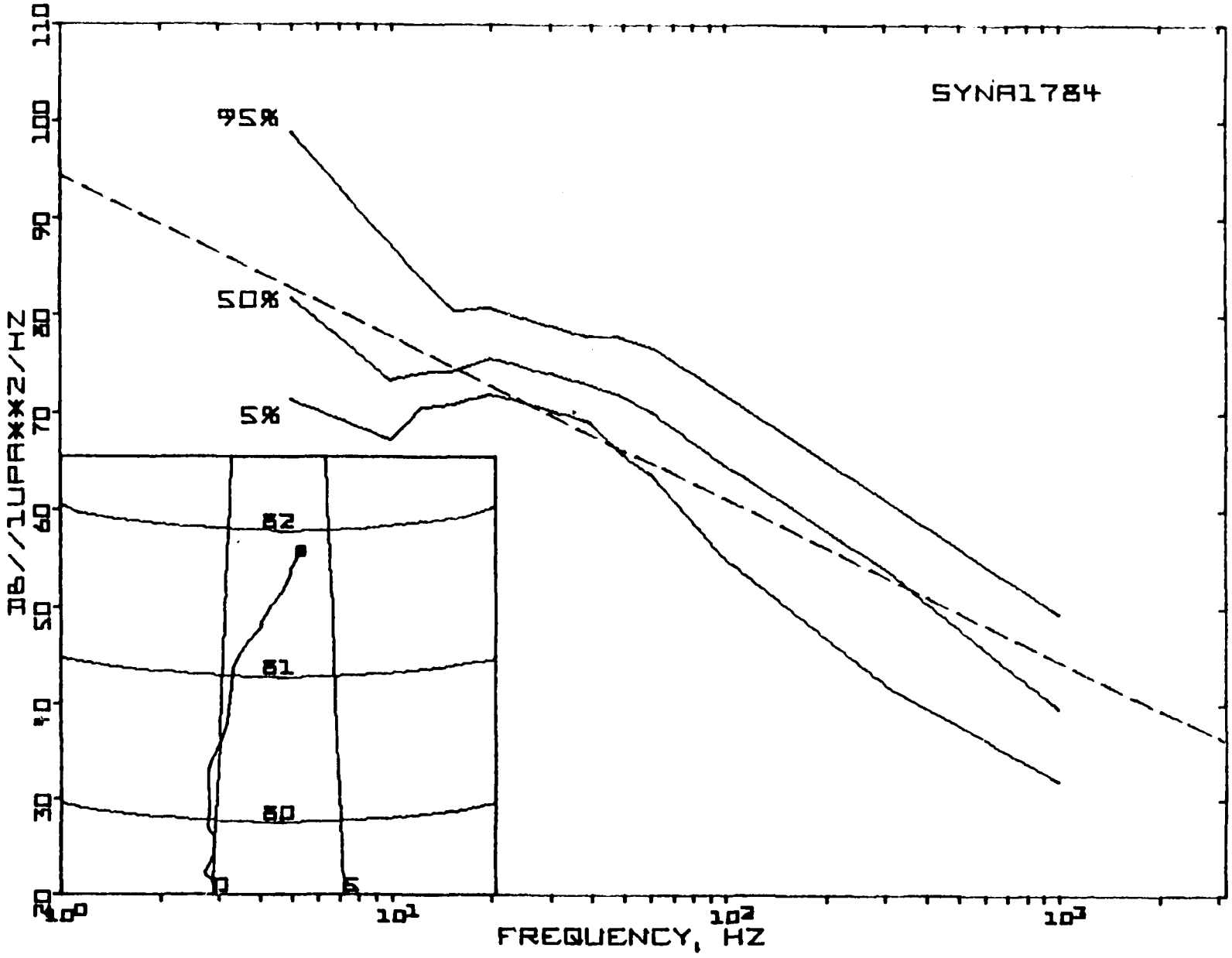
FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	88.3	7.7	75.6	79.1	80.7	83.9	87.7	91.8	97.8	102.6	124.0	188
10.0	78.1	7.0	68.3	69.9	70.8	73.1	76.0	80.9	86.9	94.9	100.0	188
12.5	77.5	5.7	70.5	71.3	72.1	73.4	75.6	80.0	84.8	90.2	99.7	188
15.6	77.9	5.0	70.7	72.6	73.3	74.2	76.7	80.2	83.8	86.9	101.8	188
20.0	79.5	4.5	70.7	72.9	74.7	76.1	78.9	82.1	85.0	85.9	100.2	188
40.0	79.4	3.6	72.1	73.7	75.5	76.9	78.7	81.5	84.2	85.8	90.2	188
50.0	79.2	3.5	70.9	73.4	74.4	76.9	78.9	80.5	83.6	86.5	90.3	188
63.0	78.2	3.7	66.9	72.9	73.9	74.8	78.4	80.9	82.5	83.8	89.2	188
100.0	76.3	4.2	65.3	69.0	71.3	73.1	76.6	79.1	81.0	83.3	92.4	188
320.0	63.5	4.8	49.3	56.2	56.9	60.5	63.7	67.4	69.0	70.9	78.5	188
1000.0	51.4	5.4	31.1	42.8	44.0	46.1	51.6	54.8	57.6	60.1	68.7	188



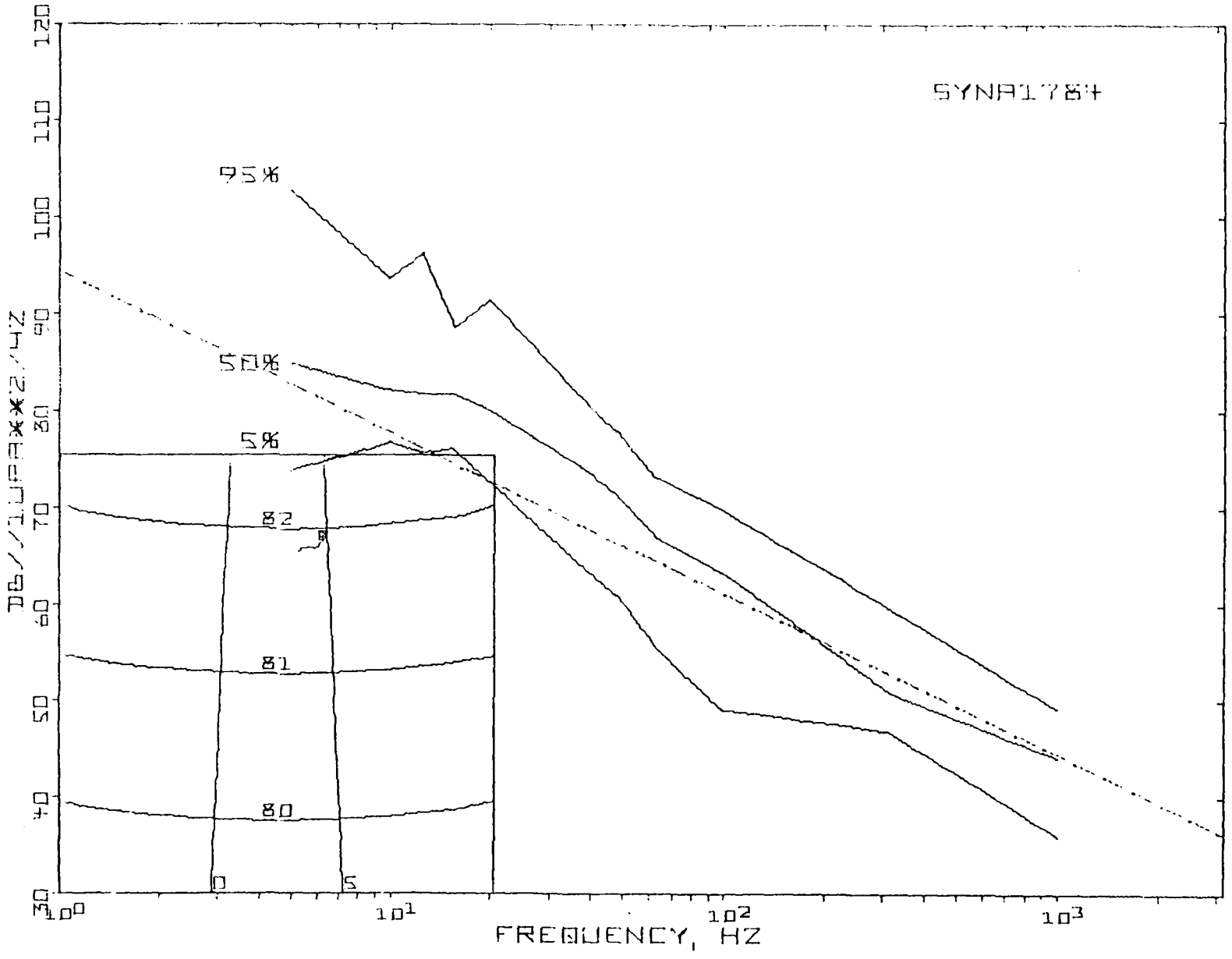
BUOY 1784 JUNE 1982 DEPTH 300 FT



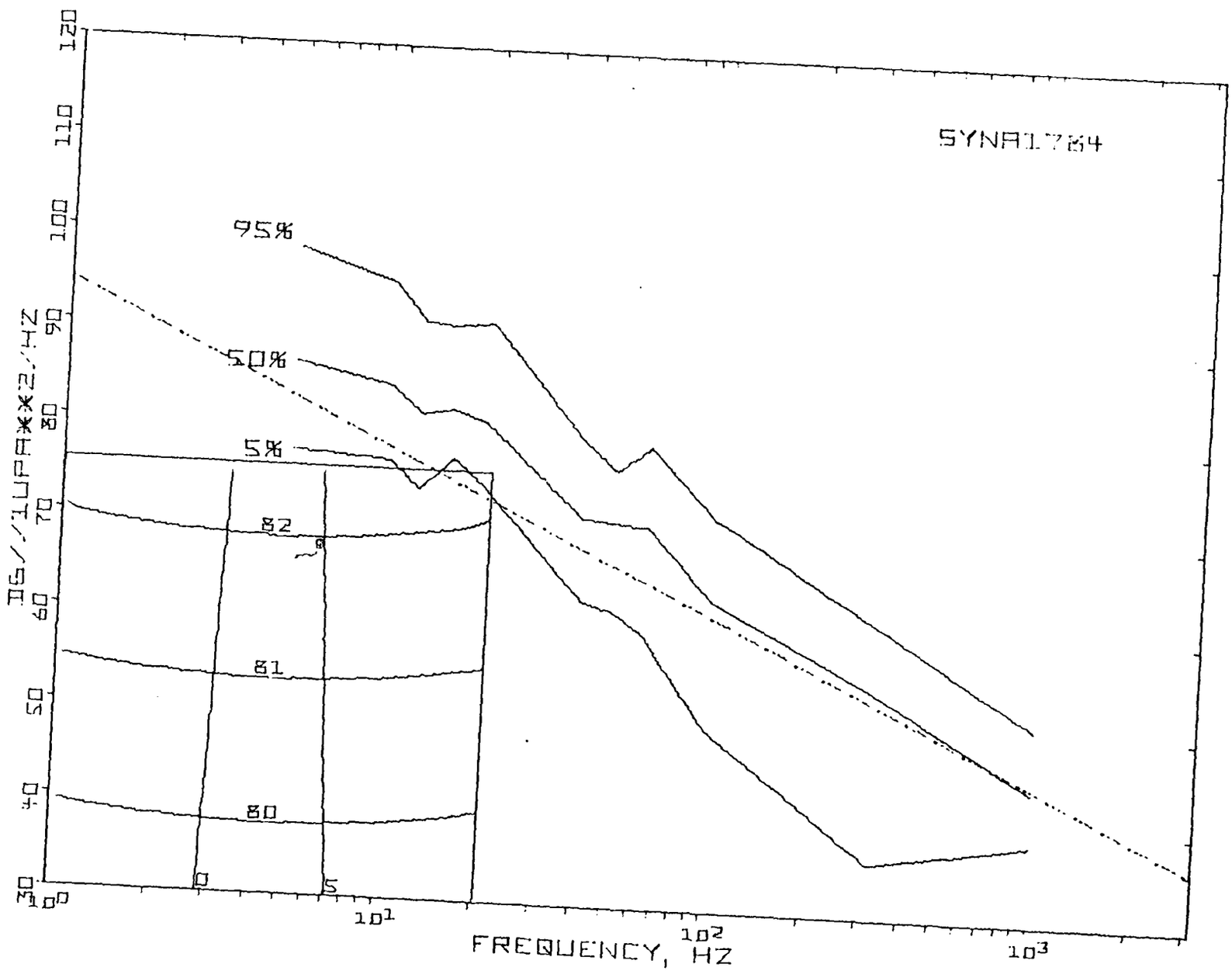
BUOY 1784 JUNE 1982 DEPTH 200 FT



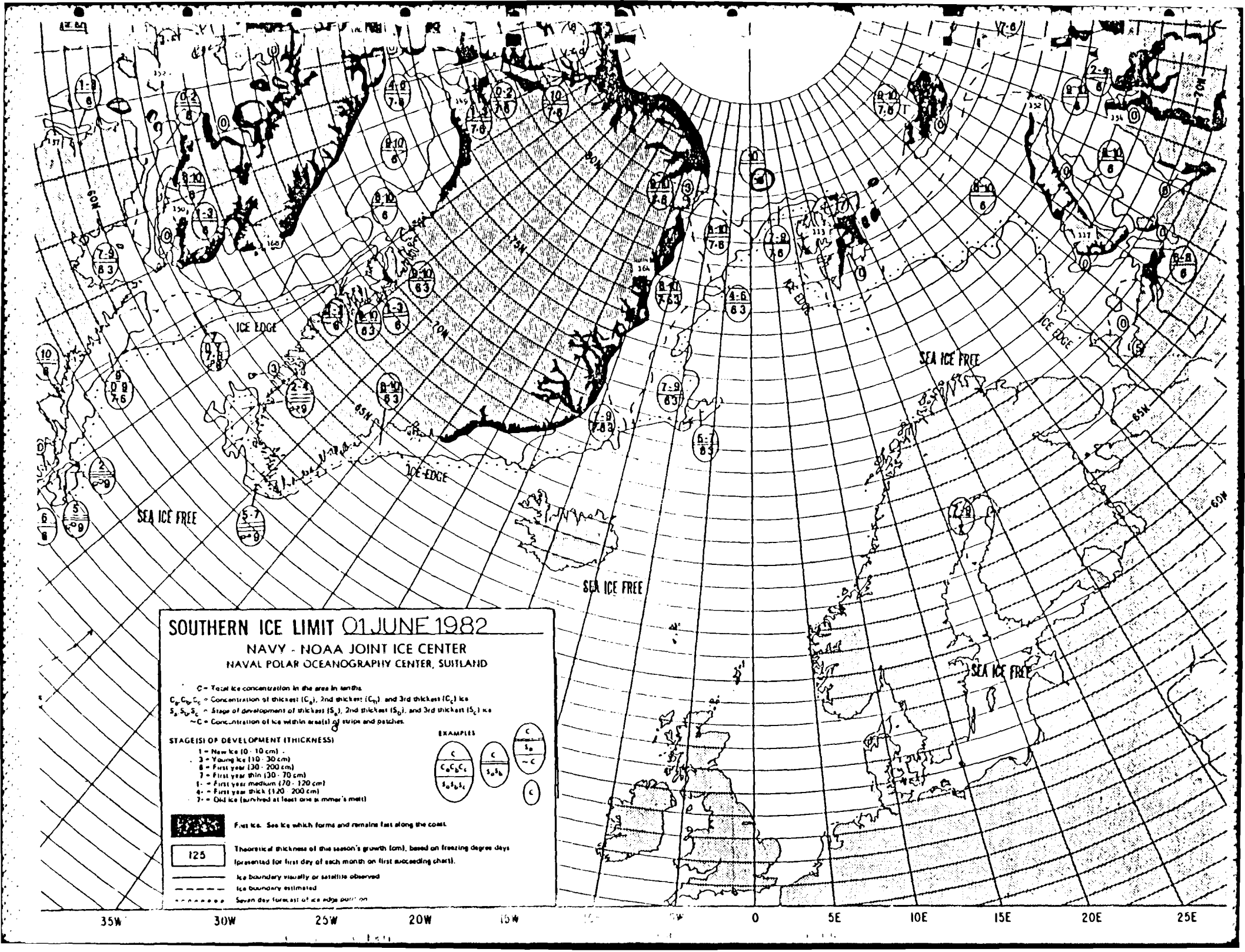
BUOY 1784 JUNE 1982 DEPTH 100 FT



BUOY 1784 26 MAY-1 JUN 82 DEPTH 200 FT



BUOY 1784 26 MAY-1 JUN 82 DEPTH 300 FT


SOUTHERN ICE LIMIT 01JUNE 1982
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
$C_a C_b C_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice
$S_a S_b S_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice
~C = Concentration of ice within area(s) of strips and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
8 = First year medium (70 - 120 cm)
9 = First year thick (120 - 200 cm)
7- = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. See ice which forms and remains fast along the coast.
125
Theoretical thickness of the season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
Ice boundary visually or satellite observed
Ice boundary estimated
Seven day forecast of ice edge position
ICE EDGE
SEA ICE FREE
60N
65N
70N
75N
35W
30W
25W
20W
15W
0
5E
10E
15E
20E
25E

DATES: 2-8 JUN 82 BUOY: 1784

OUTPUT IN FILE SYNA1784

DISPLACEMENT (N. MI.): 25.940 NORTH: -22.620 EAST: -12.697
DIRECTION (TRUE): 209.329

THE NUMBER OF DATA SAMPLES IS 56

DEPTH = 30FT

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	74.5	6.1	60.6	67.2	68.0	69.3	73.3	78.4	82.0	84.5	91.3	56
10.0	64.2	5.6	6.8	58.2	58.8	59.3	62.1	67.3	71.4	75.6	82.3	56
12.5	67.8	3.1	61.1	63.1	66.6	66.6	66.6	67.5	71.6	72.6	81.1	56
15.6	66.5	2.8	59.5	63.4	64.2	65.0	65.7	66.9	70.3	72.9	74.5	56
20.0	65.2	3.1	61.0	62.0	62.0	63.2	64.5	65.8	68.0	72.4	74.9	56
40.0	63.2	3.8	58.3	58.8	58.8	60.9	62.1	64.0	68.1	70.0	76.1	56
50.0	63.5	4.2	58.3	58.3	59.3	61.0	62.5	65.3	67.1	68.5	81.2	56
63.0	62.0	3.7	55.6	58.1	58.1	60.0	60.8	62.9	66.0	68.3	78.1	56
100.0	58.5	4.5	49.7	51.5	53.4	55.5	57.7	60.9	65.4	65.4	70.6	56
320.0	48.0	3.5	35.7	36.8	46.5	47.2	47.9	49.7	51.7	53.2	55.7	56
1000.0	32.4	5.4	25.9	26.1	26.9	29.2	31.6	34.3	35.9	38.4	60.9	56

THE NUMBER OF DATA SAMPLES IS 56

DEPTH = 100FT

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	79.7	9.6	60.1	63.8	67.7	73.7	79.1	85.2	94.5	96.6	100.5	56
10.0	74.9	5.0	68.9	69.9	69.9	71.1	73.7	75.9	80.9	85.1	90.5	56
12.5	75.2	3.6	68.6	71.3	72.1	72.8	74.0	75.6	81.6	82.5	83.4	56
15.6	75.4	2.5	70.7	71.5	72.6	73.0	74.9	76.7	78.6	80.2	80.9	56
20.0	76.5	2.4	72.9	73.5	73.8	74.7	76.1	77.9	79.8	80.7	83.9	56
40.0	72.0	2.5	66.7	68.6	69.5	70.2	71.5	73.7	74.6	76.2	79.8	56
50.0	69.4	3.1	65.5	65.5	66.2	67.4	68.4	70.9	74.4	75.3	78.3	56
63.0	66.5	3.0	61.7	62.5	63.1	64.4	65.7	67.9	70.4	72.3	74.8	56
100.0	60.4	4.1	53.1	54.1	55.0	57.8	60.5	63.0	65.9	67.1	69.8	56
320.0	49.7	4.3	37.6	40.5	41.4	50.2	50.2	52.3	53.4	54.4	56.2	56
1000.0	35.8	3.4	30.4	31.8	31.8	33.0	36.1	37.4	40.5	41.3	48.1	56

DATES: 2-8 JUN 82 BUOY: 1784

THE NUMBER OF DATA SAMPLES IS 56

DEPTH = 200FT

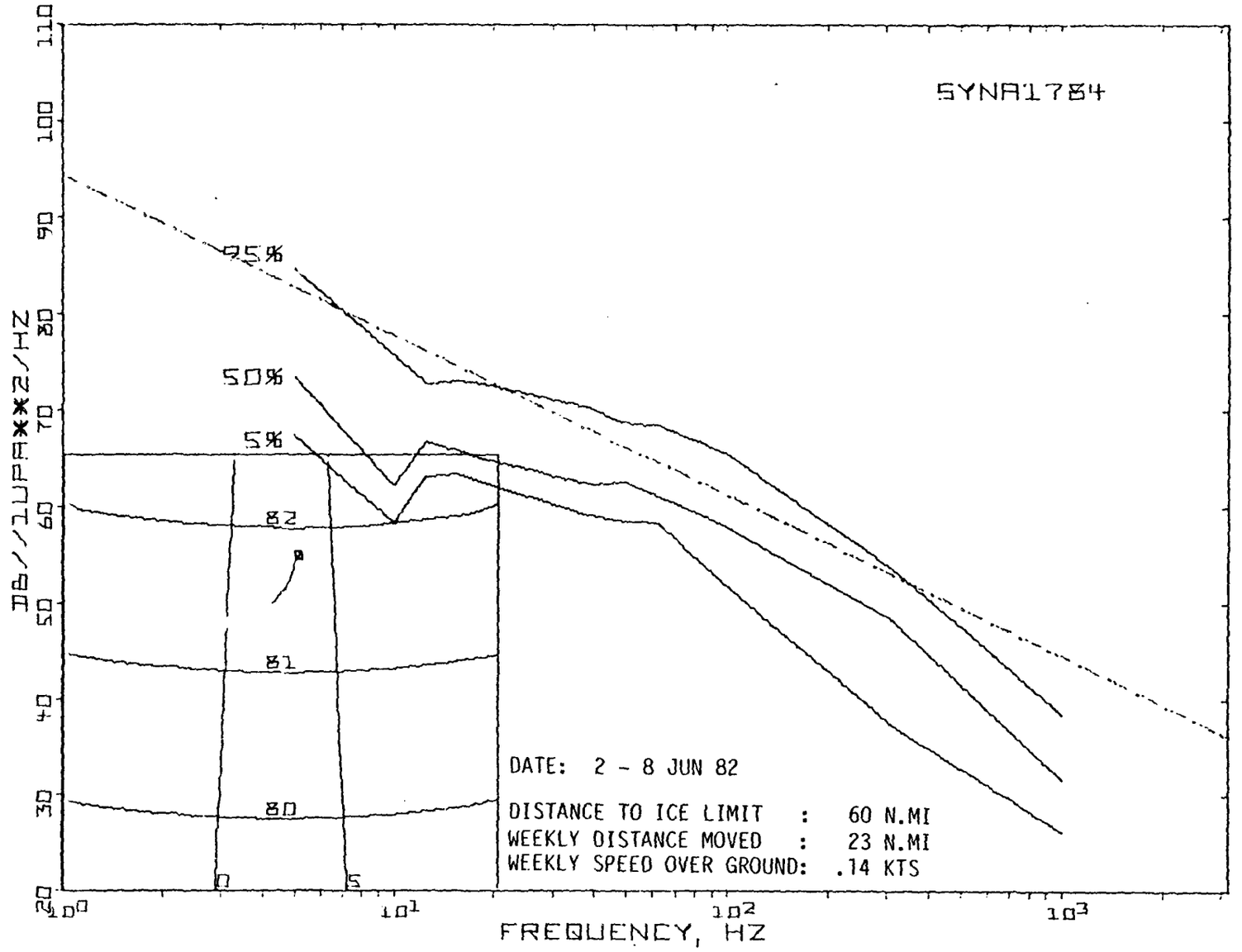
FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	89.2	10.6	69.6	72.9	75.2	79.4	89.9	95.9	101.9	104.2	113.6	56
10.0	83.4	8.1	73.7	74.6	75.3	77.8	80.6	86.6	95.9	98.6	105.0	5
12.5	82.1	6.9	75.6	76.3	76.3	77.5	79.1	84.1	90.2	98.1	101.6	56
15.6	81.4	5.6	75.5	76.4	76.4	78.0	80.0	82.5	86.0	94.5	101.4	56
20.0	79.9	4.6	73.9	74.5	75.5	76.4	79.4	80.5	83.3	90.1	96.8	6
40.0	72.4	3.8	65.7	67.6	69.5	70.1	71.1	74.3	76.1	78.9	86.4	56
50.0	69.0	4.0	62.9	64.2	65.4	65.4	68.2	70.2	73.3	76.3	83.5	56
63.0	65.2	4.3	58.2	59.8	60.9	62.4	64.2	67.7	70.2	73.0	80.4	56
100.0	61.6	4.3	48.9	52.5	57.8	58.3	61.1	64.4	67.9	68.6	69.8	56
320.0	50.5	3.2	46.8	46.8	47.7	48.5	49.2	50.8	55.0	58.8	59.6	53
1000.0	43.8	2.8	32.3	40.8	41.5	42.7	44.1	45.0	47.6	48.1	49.2	52

THE NUMBER OF DATA SAMPLES IS 56

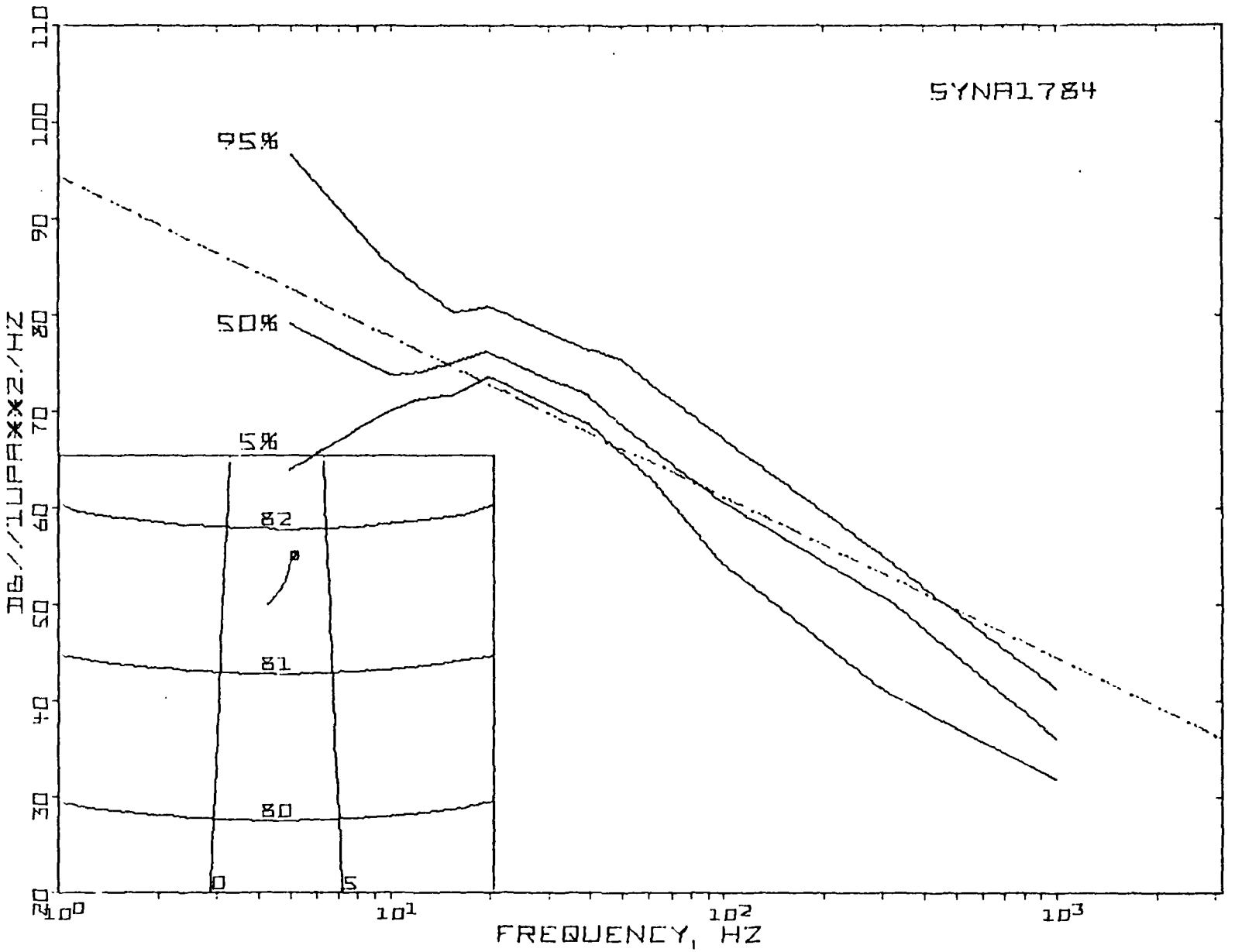
DEPTH = 300FT

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	89.1	9.2	76.1	78.4	79.7	81.3	88.2	92.3	101.8	106.5	124.0	56
10.0	83.2	6.9	72.1	75.6	76.3	78.1	81.6	85.0	87.7	98.1	104.4	56
12.5	80.3	5.9	72.5	75.2	75.8	77.7	78.7	80.6	83.7	94.0	100.0	6
15.6	81.3	4.8	72.7	76.8	77.7	78.6	80.7	81.8	82.9	92.7	98.1	56
20.0	79.6	4.4	69.5	73.6	75.5	76.5	79.0	81.5	83.5	86.4	93.0	56
40.0	70.6	4.1	61.7	64.8	65.6	67.7	70.2	72.7	76.3	76.8	80.4	6
50.0	68.1	4.1	59.6	61.3	62.1	64.7	68.4	70.7	72.5	75.3	76.0	6
63.0	67.3	3.8	58.8	61.6	62.4	64.9	66.8	69.6	72.2	73.8	76.3	56
100.0	59.7	6.4	43.7	46.9	50.6	56.8	60.0	64.3	67.1	67.1	74.0	6
320.0	50.0	6.2	31.1	35.9	38.3	49.1	51.8	52.9	54.9	57.8	58.9	3
1000.0	42.7	3.8	30.4	30.6	39.0	40.9	42.7	44.1	47.1	47.8	48.5	39

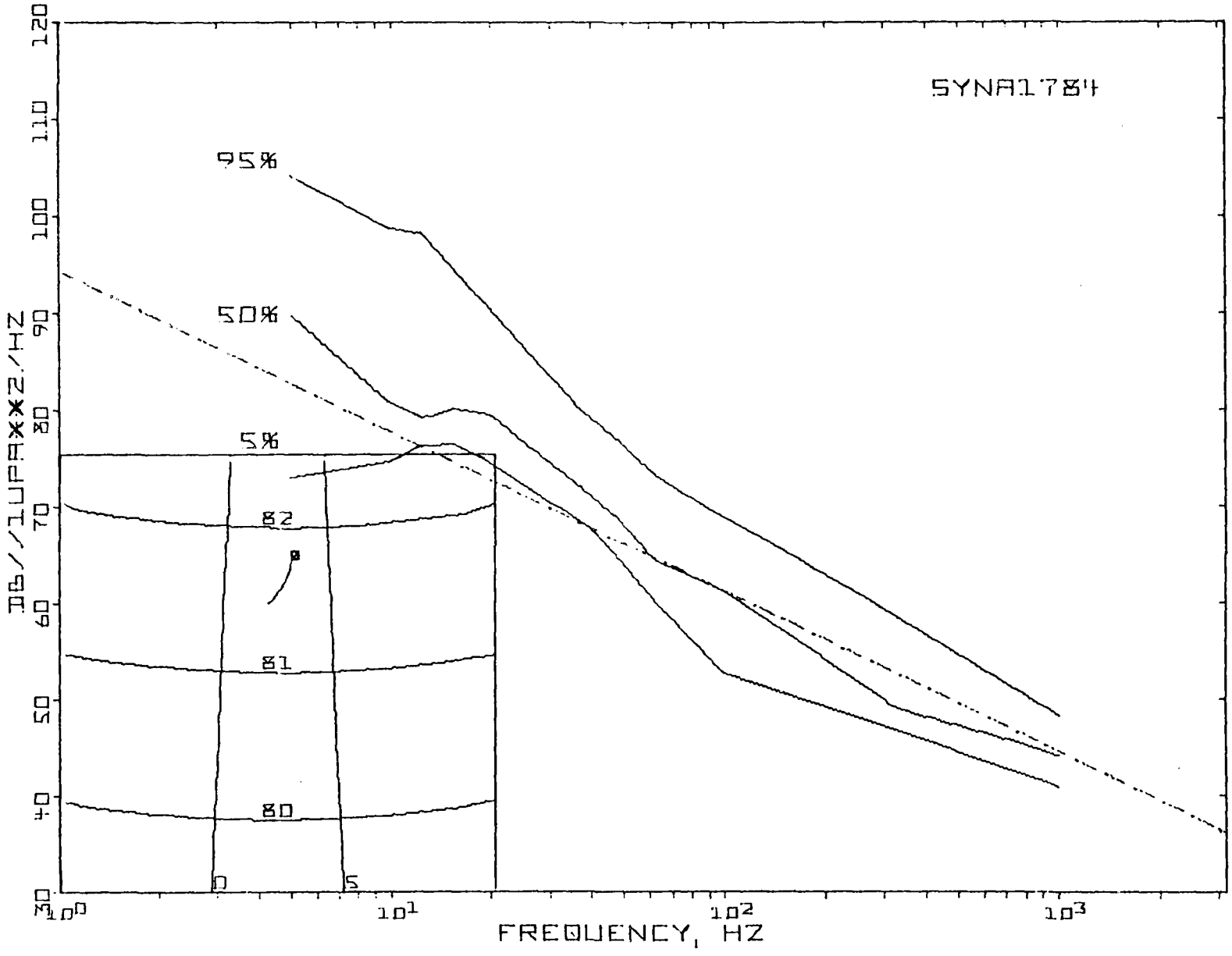
STOP



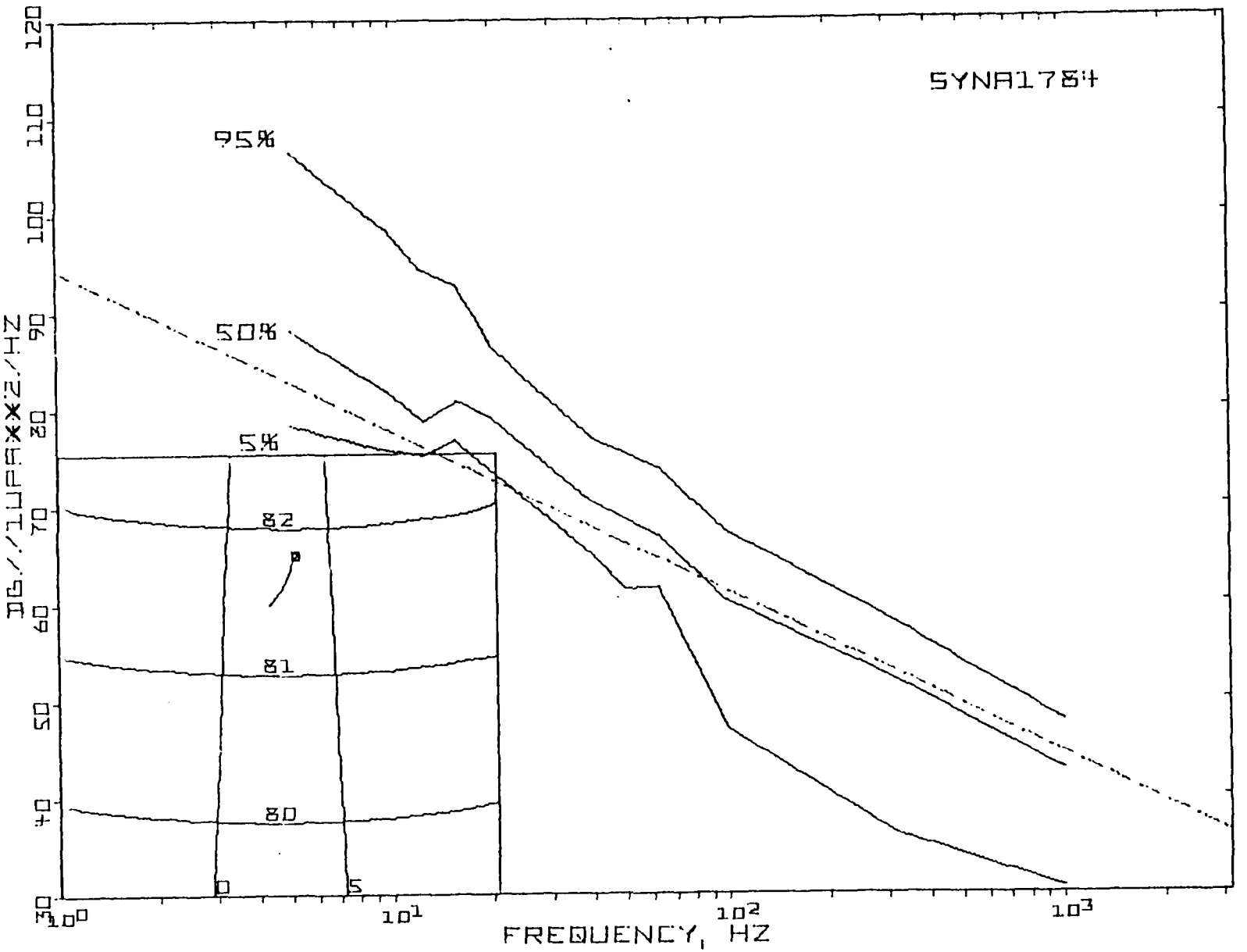
BUOY 1784 2-8 JUN 82 DEPTH 30 FT



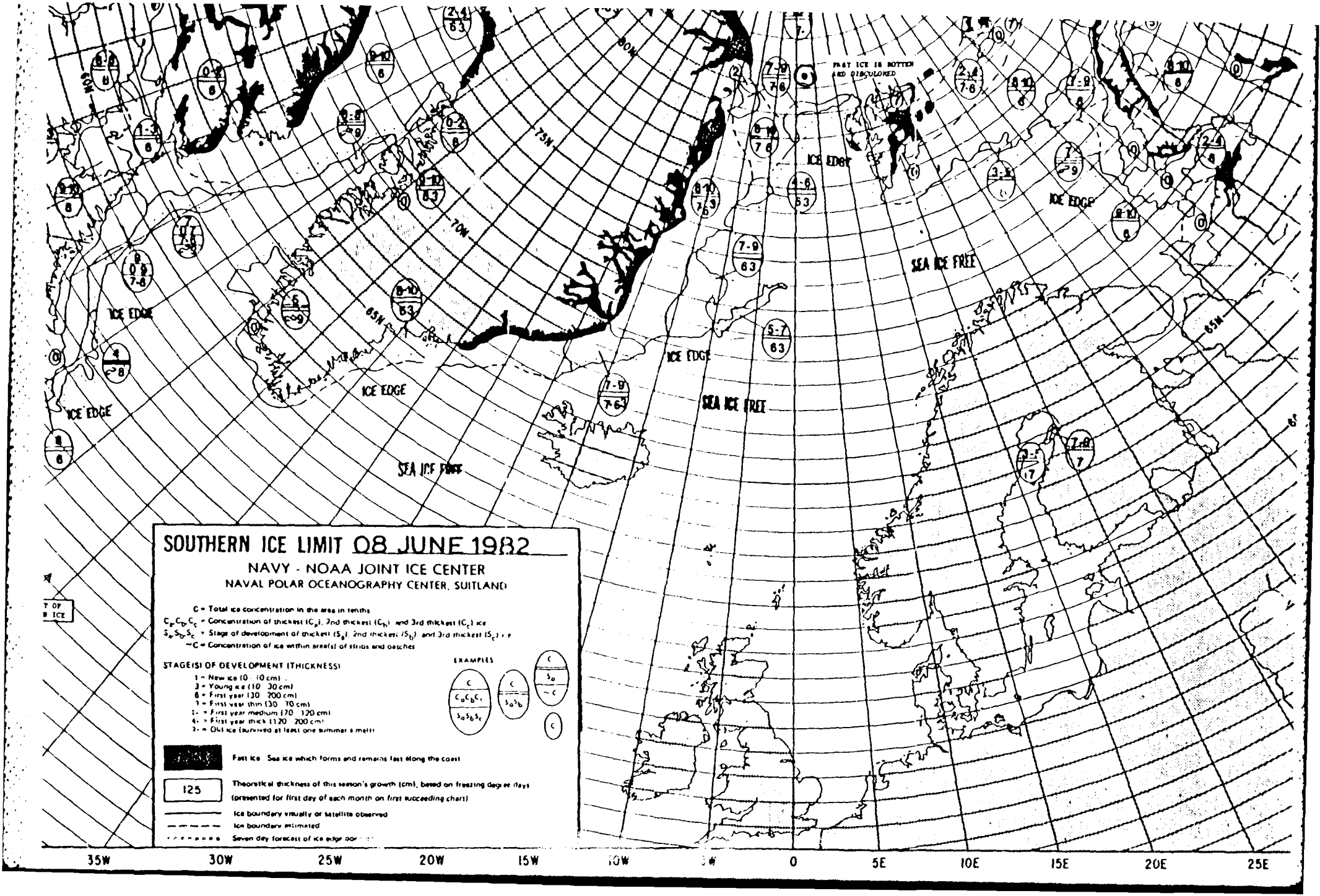
BUOY 1784 2-8 JUN 82 DEPTH 100 FT



BUOY 1784 2-8 JUN 82 DEPTH 200 FT



BUOY 1784 2-8 JUN 82 DEPTH 300 FT


SOUTHERN ICE LIMIT 08 JUNE 1982
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
$C_a C_b C_c$ = Concentration of thickest (C_a), 2nd thickest (C_b) and 3rd thickest (C_c) ice
$S_a S_b S_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b) and 3rd thickest (S_c) ice
~C = Concentration of ice within area(s) of floes and leads
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
8 = First year medium (70 - 120 cm)
9 = First year thick (120 - 200 cm)
1 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice - Sea ice which forms and remains fast along the coast
125
Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart)
Ice boundary visually or satellite observed
Ice boundary estimated
Seven day forecast of ice edge
ICE EDGE
SEA ICE FREE
FAST ICE IS ROTTEN AND DISCOLORED
80N
75N
70N
65N
35W
30W
25W
20W
15W
10W
5W
0
5E
10E
15E
20E
25E

?-15 JUN 82 BUOY: 1784

IN FILE SYNA1784

EMENT (N. MI.): 31.176 NORTH: -27.960 EAST: -13.789
ON (TRUE): 206.273

BER OF DATA SAMPLES IS 56

30FT

NCY	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
0	74.1	5.8	65.3	68.0	69.3	71.5	75.3	79.3	82.5	84.5	94.0	56
0	64.9	5.4	57.4	58.8	59.3	61.3	63.6	67.3	71.4	72.4	86.2	56
.5	68.4	4.1	58.6	66.6	66.6	66.6	66.6	69.1	71.0	74.4	86.4	56
.6	66.9	4.0	60.6	63.4	64.2	64.2	65.7	67.5	71.7	72.9	82.3	56
.0	64.2	3.7	59.8	60.1	61.0	62.0	63.7	65.2	68.0	68.9	77.9	55
.0	62.7	2.5	57.1	57.7	60.3	60.9	63.1	64.0	64.9	65.6	70.9	56
.0	63.5	2.6	57.4	59.3	60.2	61.8	63.7	65.3	66.2	67.8	72.2	56
.0	62.4	3.3	54.3	56.9	59.1	60.0	61.6	64.1	66.0	67.6	71.1	56
.0	59.0	3.6	50.6	53.4	54.8	56.6	58.6	61.5	63.7	64.6	68.7	56
.0	49.4	2.5	38.5	47.2	47.2	47.9	49.2	50.7	51.7	52.5	55.2	56
.0	36.4	3.2	28.2	30.8	31.6	34.3	36.8	38.4	39.1	40.3	45.1	56

MBER OF DATA SAMPLES IS 56

= 100FT

ENCY	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
.0	88.3	9.3	73.1	73.1	73.7	79.7	90.6	96.9	99.7	99.7	103.8	56
.0	77.6	7.5	67.1	67.7	68.3	70.8	76.8	83.8	86.9	89.2	94.0	56
.5	76.3	4.4	70.5	71.3	72.1	72.8	74.6	78.8	83.4	84.7	88.6	56
.6	75.5	3.4	70.7	70.7	71.7	73.5	74.9	76.7	80.2	82.7	84.7	56
.0	75.3	2.6	70.7	71.3	72.7	73.5	74.7	76.1	77.9	79.8	83.4	56
.0	71.7	2.2	66.7	67.7	69.0	70.2	71.5	72.7	73.7	75.5	76.9	56
.0	70.2	3.0	64.3	65.5	66.5	67.4	70.2	72.2	73.4	75.3	79.4	56
.0	67.3	3.5	60.9	61.7	63.6	65.1	66.9	69.7	71.1	73.9	78.4	56
.0	61.6	4.8	53.1	54.1	55.0	58.5	62.1	63.8	66.5	68.1	79.1	56
.0	50.5	4.3	36.9	40.5	43.0	50.2	51.6	53.4	53.4	54.4	58.3	56
.0	37.8	4.3	22.2	30.7	33.0	36.8	38.0	39.6	42.1	43.4	46.5	55

-15 JUN 82 BUOY: 1784

ER OF DATA SAMPLES IS 56

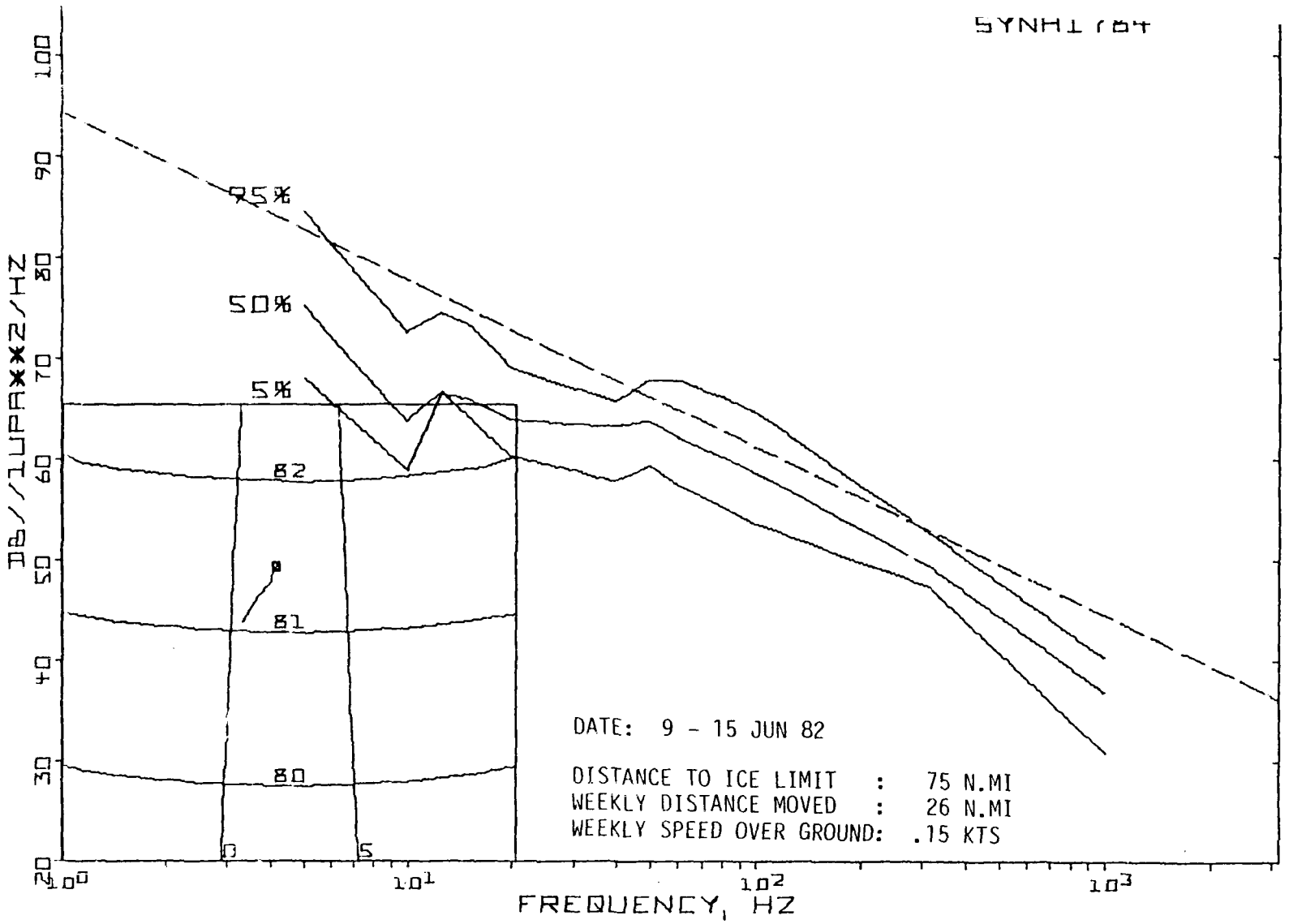
200FT

DY	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
	99.7	12.2	78.7	81.9	83.9	89.0	100.0	106.2	113.6	124.0	124.0	55
	90.8	10.4	73.7	76.0	77.2	79.7	89.3	101.9	102.9	104.0	105.0	56
	87.9	9.8	74.0	74.9	76.3	79.1	85.0	97.2	100.4	101.0	103.2	56
	86.7	8.6	74.5	75.5	76.4	78.7	85.4	94.5	98.6	99.6	100.5	56
	83.3	7.6	73.3	74.5	75.3	76.4	80.5	90.1	94.5	96.1	98.0	56
	74.9	5.1	65.7	68.3	69.2	72.0	73.6	77.2	82.2	84.1	88.2	56
	72.4	5.4	62.9	64.2	64.8	68.9	71.4	74.9	79.4	80.2	87.0	56
	68.5	5.3	60.1	60.4	61.1	64.2	67.7	72.1	75.1	76.2	82.3	56
	62.1	4.3	48.1	50.3	58.3	60.3	62.6	64.4	66.3	67.1	68.6	56
	51.1	2.5	45.7	48.5	48.5	49.2	50.8	51.8	54.3	55.7	57.9	52
	43.0	5.0	30.7	32.3	34.4	40.8	44.1	46.4	47.6	48.2	54.2	51

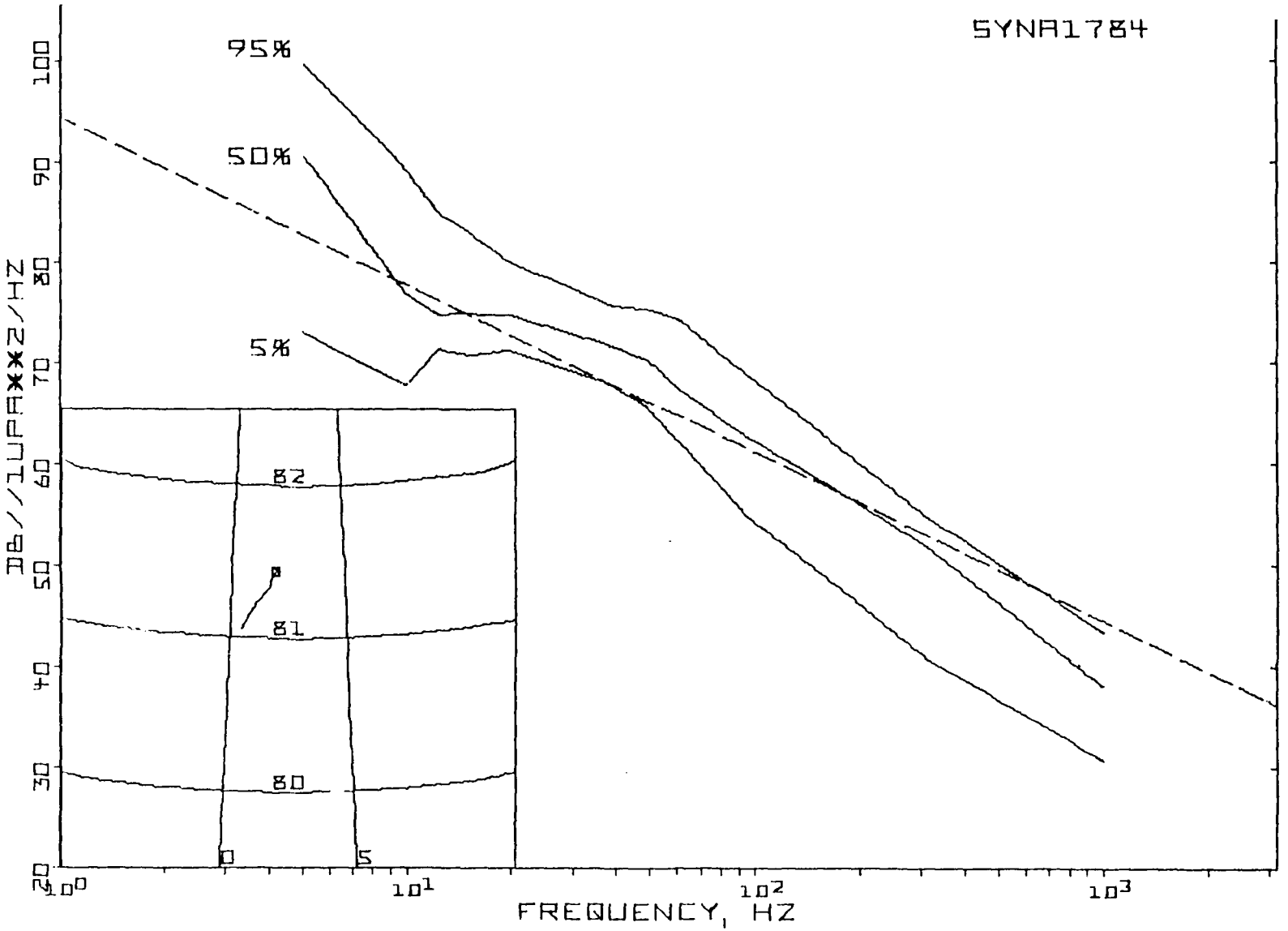
ER OF DATA SAMPLES IS 56

300FT

NCY	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
)	103.6	13.2	77.7	81.3	85.7	93.1	104.3	111.8	124.0	124.0	124.0	5
)	96.4	11.1	74.9	79.1	80.9	85.7	101.6	105.3	107.3	107.3	112.4	5
5	91.9	10.0	74.5	76.5	77.1	81.8	95.8	101.2	101.8	102.8	103.9	56
6	91.9	9.9	73.9	77.7	79.3	81.8	91.4	101.8	102.8	102.8	103.7	5
)	88.4	9.7	73.6	74.9	75.5	79.0	86.4	98.4	99.0	99.6	99.6	5
)	78.8	9.0	64.8	65.6	68.9	70.8	75.7	88.9	89.9	89.9	91.6	56
)	77.0	9.0	62.1	64.6	66.5	69.3	72.5	86.5	88.1	88.8	90.6	5
)	75.3	8.2	60.8	64.3	64.9	68.7	72.8	83.0	84.9	85.9	87.6	5
)	67.0	8.2	48.0	53.5	56.3	61.1	66.1	75.6	78.1	80.0	80.9	5
)	52.8	4.8	31.1	45.8	49.1	51.8	52.9	54.9	58.4	58.4	61.7	5
)	41.5	5.1	30.4	30.4	30.4	36.5	42.7	45.2	46.2	47.1	50.7	2



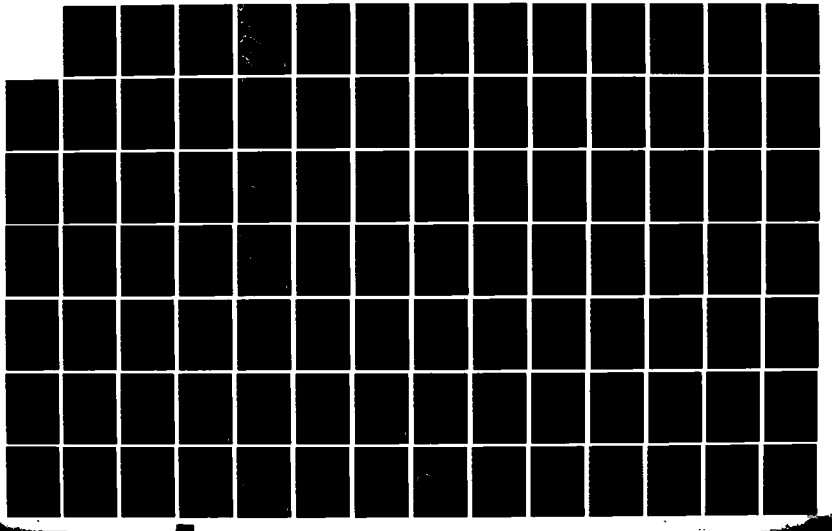
BUOY 1784 9-15 JUN 82 DEPTH 30 FT

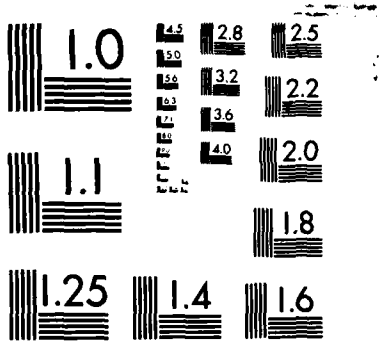


BUOY 1784 9-15 JUN 82 DEPTH 100 FT

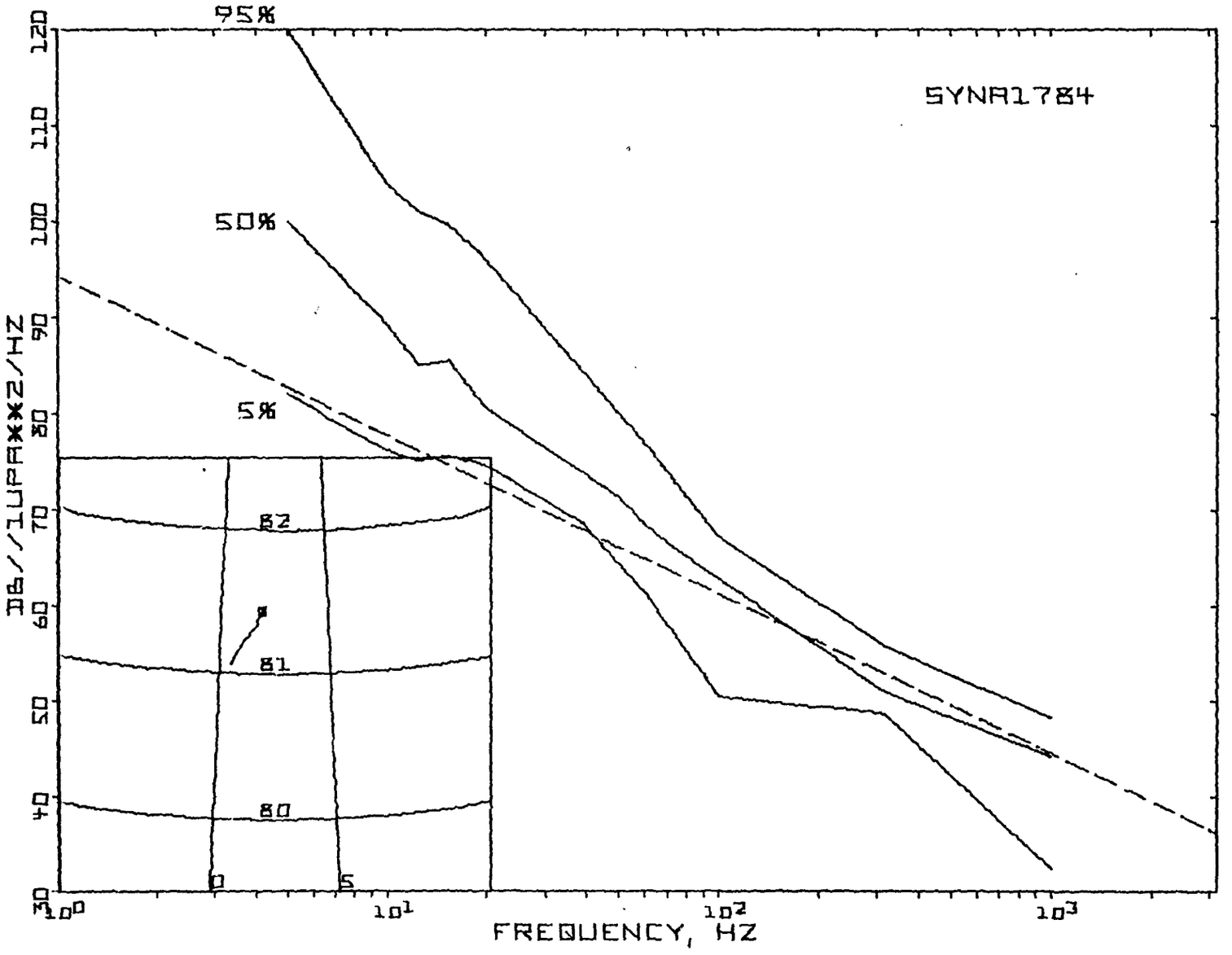
AD-A156 818 LONG TERM STATISTICAL MEASUREMENTS OF ENVIRONMENTAL ACOUSTICS PARAMETERS I..(U) POLAR RESEARCH LAB INC CARPINTERIA CA B M BUCK ET AL. 13 DEC 84 PRL-TR-53 4/7

UNCLASSIFIED N00014-84-C-0394 F/G 20/1 NL

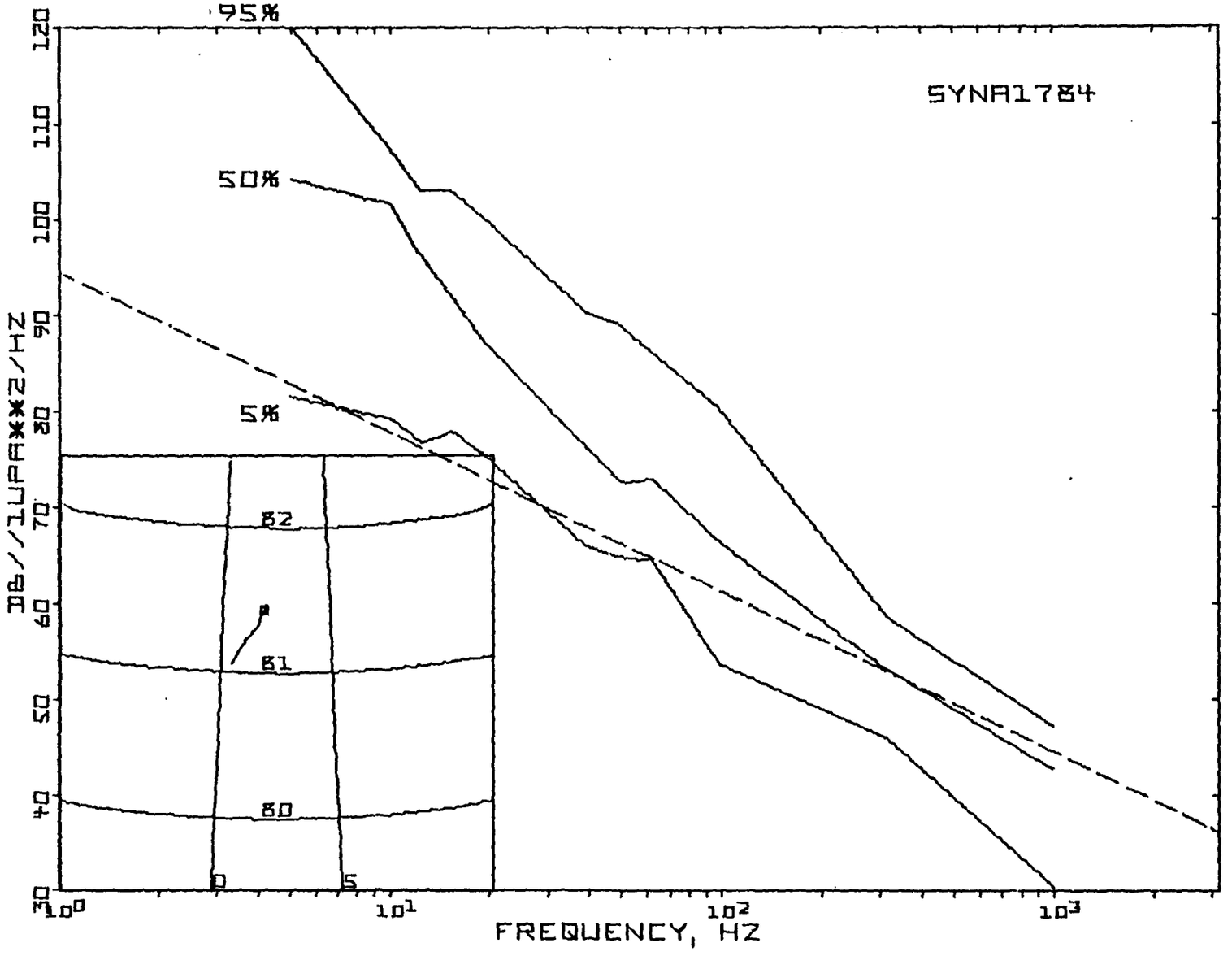




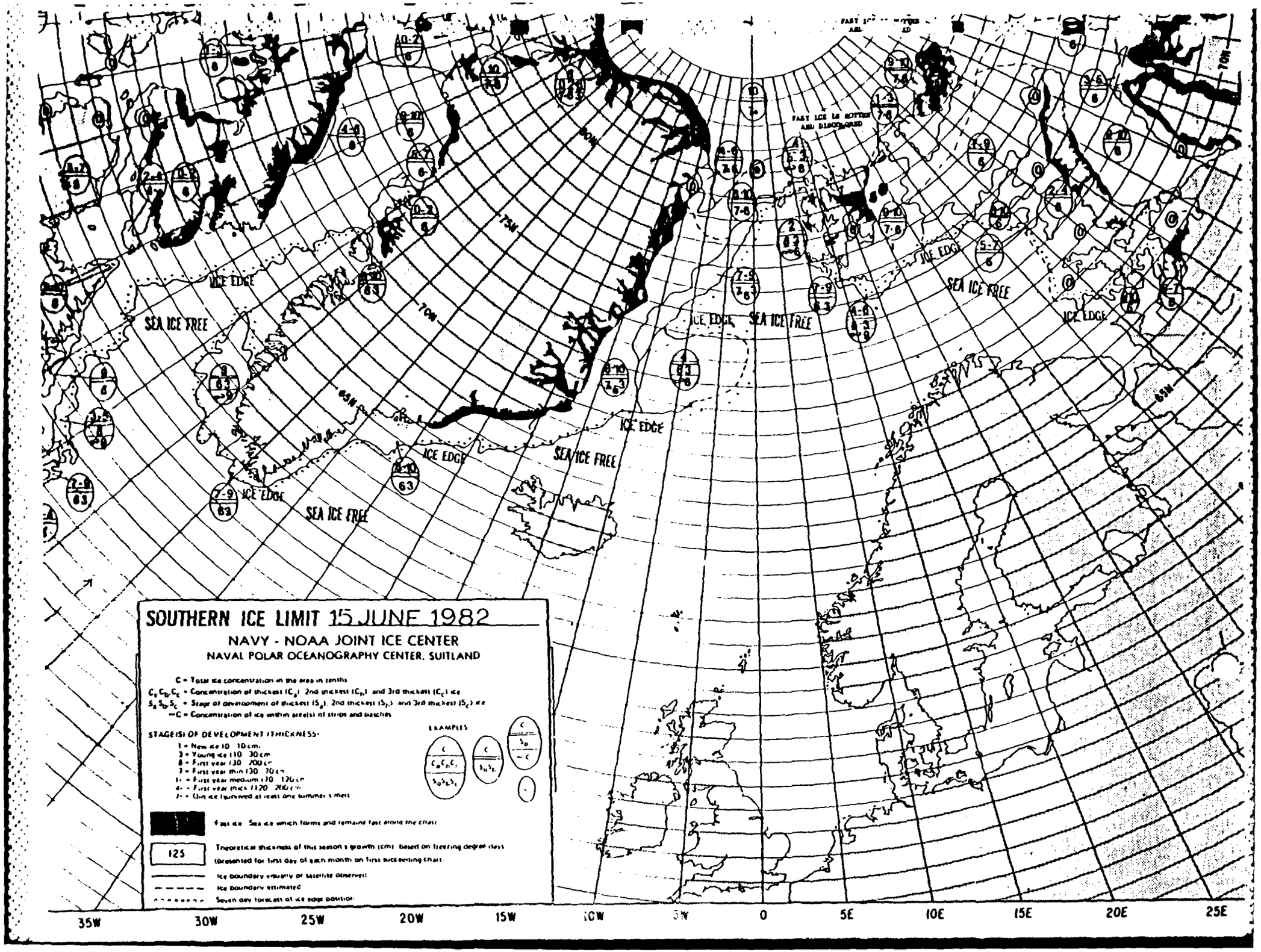
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A



BUOY 1784 9-15 JUN 82 DEPTH 200 FT



BUOY 1784 9-15 JUN 82 DEPTH 300 FT


SOUTHERN ICE LIMIT 15 JUNE 1982
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
$C_a C_b C_c$ = Concentration of thickest (C_a), 2nd thickest (C_b) and 3rd thickest (C_c) ice
$S_a S_b S_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice
—C = Concentration of ice within area(s) of strips and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0–10 cm)
2 = Young ice (10–30 cm)
3 = First year (30–200 cm)
7 = First year thin (30–70 cm)
1– = First year medium (70–120 cm)
4– = First year thick (120–200 cm)
7– = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast
125
Theoretical thickness of this season's growth (cm) based on freezing degree days (presented for first day of each month on first succeeding chart)
Ice boundary usually or satellite observed
Ice boundary estimated
Seven day forecast of ice edge position
ICE EDGE
SEA ICE FREE
FAST ICE AS OF 15 JUNE
70N
65N
35W
30W
25W
20W
15W
10W
5W
0
5E
10E
15E
20E
25E

DATES: 16-22 JUN 82 BUOY: 1784

OUTPUT IN FILE SYNA1784

DISPLACEMENT (N. MI.): 49.723 NORTH: -49.200 EAST: -7.196
DIRECTION (TRUE): 188.340

THE NUMBER OF DATA SAMPLES IS 56

DEPTH = 30FT

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	81.0	5.8	70.5	71.5	74.0	76.5	80.0	84.5	88.6	91.3	93.4	56
10.0	72.4	6.3	62.1	62.9	64.2	65.4	73.3	76.8	79.3	82.3	84.5	56
12.5	72.6	4.8	66.6	66.6	67.5	68.3	71.6	75.8	77.6	81.8	85.6	56
15.6	72.0	4.8	65.0	65.7	66.3	67.5	71.0	76.3	77.7	79.5	85.0	56
20.0	68.9	5.1	61.0	62.0	62.9	65.2	68.0	71.8	75.8	77.2	85.1	56
40.0	66.4	3.8	60.3	60.9	62.1	64.0	65.6	67.5	69.1	72.3	79.6	56
50.0	66.8	2.9	62.5	63.1	63.7	64.3	66.2	68.5	70.3	71.3	76.3	56
63.0	66.8	2.7	62.3	63.5	64.1	65.1	66.9	67.6	68.9	72.0	76.1	56
100.0	63.3	2.9	58.6	58.6	59.4	61.5	62.7	63.7	66.2	69.7	72.2	56
320.0	52.6	2.4	49.2	49.7	49.7	50.7	52.5	53.9	55.7	56.8	60.0	56
1000.0	40.8	3.2	34.9	34.9	36.8	38.4	40.9	42.8	44.4	45.1	47.9	56

THE NUMBER OF DATA SAMPLES IS 56

DEPTH = 100FT

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	83.9	8.6	68.7	72.5	73.7	76.5	81.6	90.6	95.3	98.8	103.8	56
10.0	74.6	6.2	66.4	67.1	68.3	69.9	73.1	79.1	81.9	85.1	94.0	56
12.5	74.6	3.9	69.6	70.5	70.5	72.1	74.0	75.6	80.0	80.6	90.2	56
15.6	74.7	3.0	70.1	70.7	70.7	72.6	74.2	75.5	78.6	79.5	86.3	56
20.0	75.7	2.9	70.7	71.9	71.9	72.9	75.4	77.9	79.8	80.7	82.1	56
40.0	73.3	1.9	69.5	70.2	71.5	72.1	72.7	74.6	75.5	76.9	78.2	56
50.0	72.4	2.4	69.3	69.3	70.2	70.9	71.6	73.4	76.2	76.9	79.4	56
63.0	71.2	2.5	66.3	66.9	67.9	68.8	71.1	72.9	73.9	74.8	77.1	56
100.0	65.5	2.4	61.0	62.1	63.0	63.8	65.3	67.1	68.1	70.6	71.3	56
320.0	55.4	3.1	50.9	51.6	52.3	53.4	54.4	56.9	58.9	62.2	64.9	56
1000.0	43.4	4.0	36.1	37.4	38.0	40.5	43.4	46.5	48.1	48.8	52.5	56

DATES: 16-22 JUN 82 BUOY: 1784

THE NUMBER OF DATA SAMPLES IS 56

DEPTH = 200FT

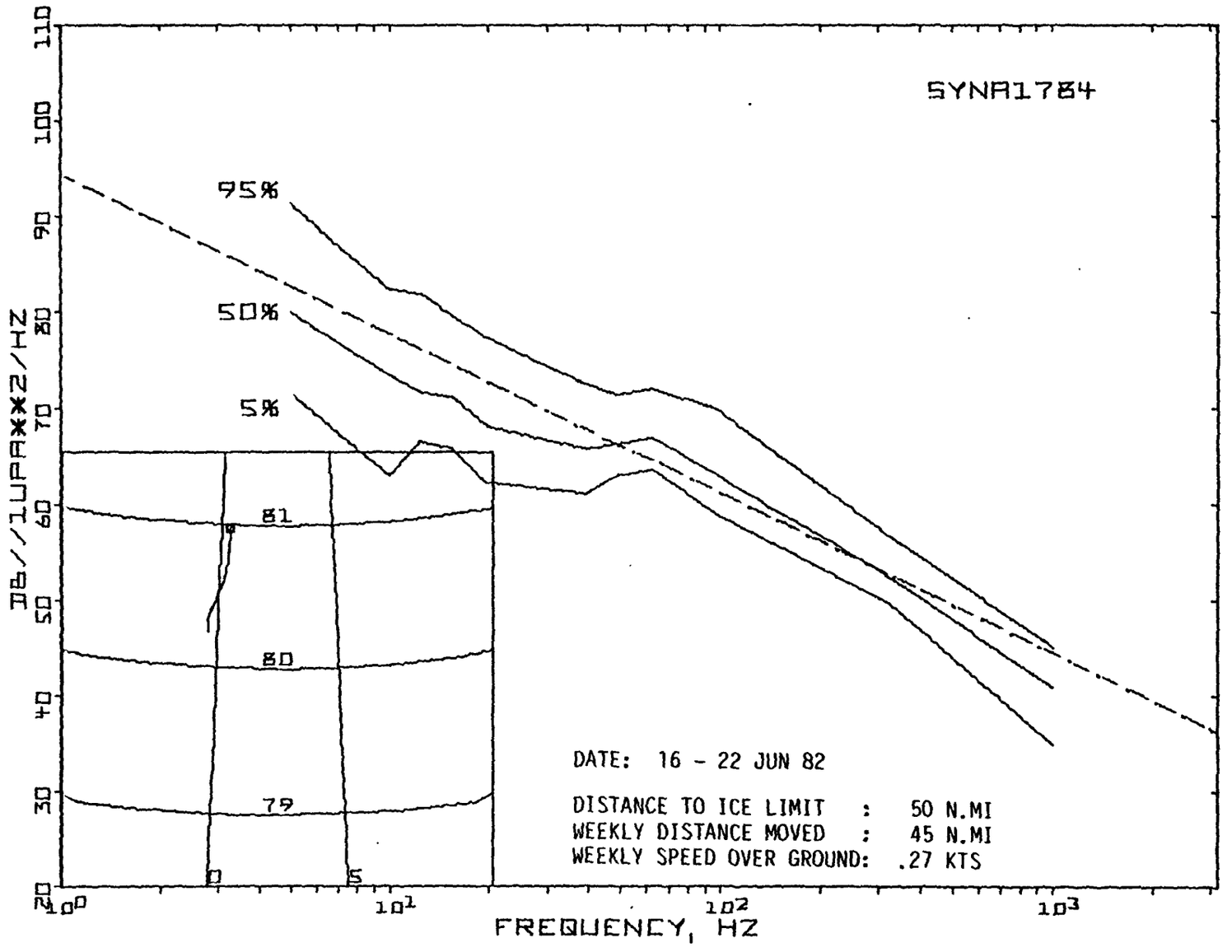
FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	93.9	11.1	78.7	79.4	80.1	84.7	90.7	101.0	110.3	110.3	124.0
10.0	86.9	8.8	72.8	74.6	76.0	80.6	84.9	94.1	100.1	101.3	106.7
12.5	85.1	7.6	74.9	75.6	76.3	8.1	83.0	90.2	96.2	98.1	104.4
15.6	83.8	6.5	75.5	76.4	77.3	78.7	81.6	86.6	94.5	96.1	102.0
20.0	82.6	5.0	74.5	74.5	76.4	79.4	81.6	84.1	89.3	90.1	98.6
40.0	75.3	3.0	69.5	72.0	72.9	73.6	75.0	76.1	78.9	79.7	89.2
50.0	72.6	3.0	68.2	69.6	70.2	70.8	71.4	73.3	74.9	76.3	88.3
63.0	69.0	3.4	62.4	64.2	64.2	67.0	69.0	70.2	72.1	73.0	83.3
100.0	66.6	2.8	61.1	62.6	63.2	64.4	66.3	68.6	70.4	71.4	73.9
320.0	55.5	2.8	50.8	51.8	51.8	53.6	55.0	56.8	59.6	61.1	62.9
1000.0	49.7	3.0	42.7	45.7	46.4	47.6	49.2	51.0	53.1	53.7	59.1

THE NUMBER OF DATA SAMPLES IS 56

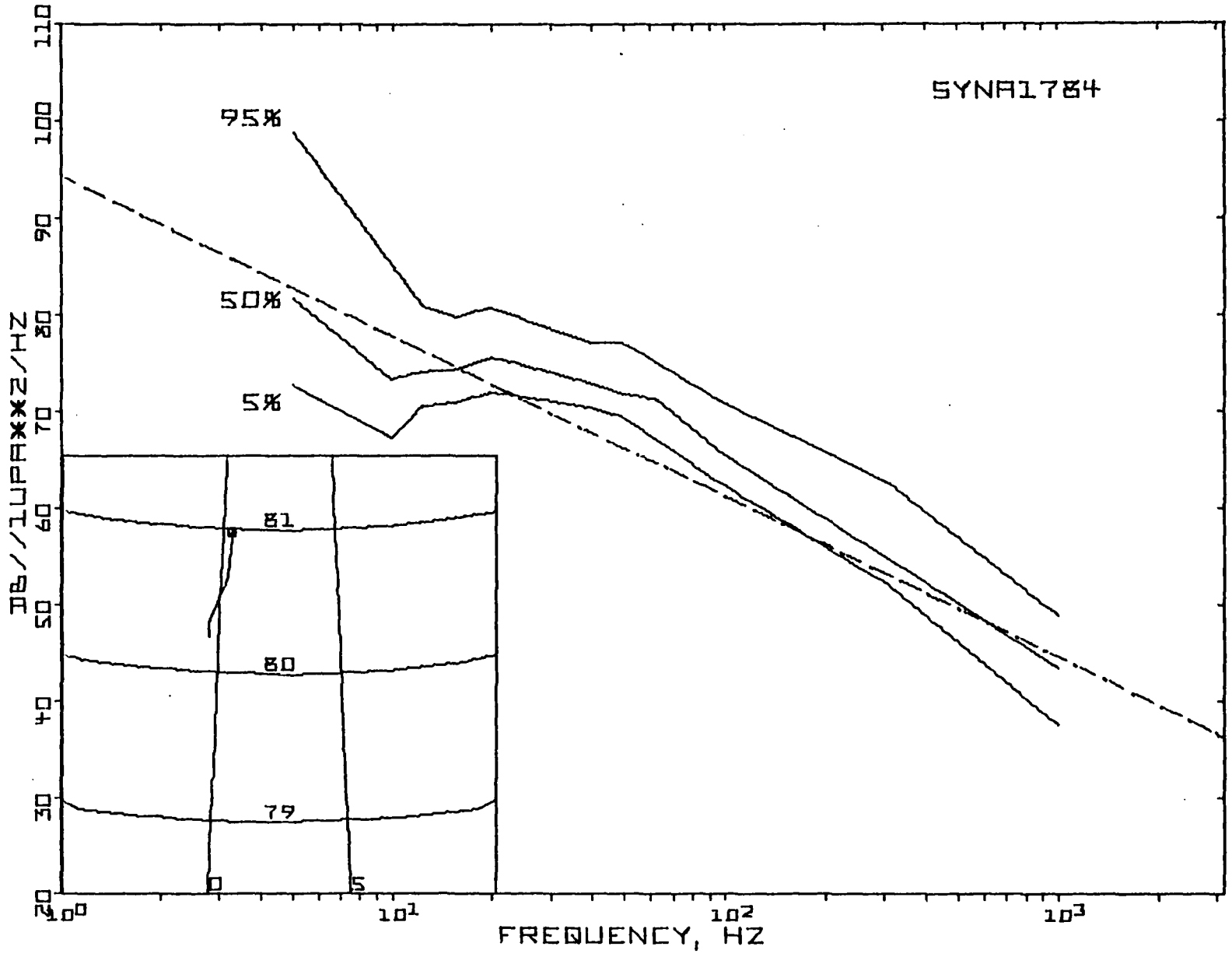
DEPTH = 300FT

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	97.2	11.1	77.7	80.2	81.3	87.3	97.7	106.5	109.6	111.8	124.0
10.0	90.5	9.4	74.9	76.9	79.1	82.3	89.0	99.7	103.2	104.4	107.3
12.5	86.8	8.7	70.8	75.9	76.5	79.6	83.7	94.6	100.0	100.6	102.8
15.6	86.5	8.3	75.8	76.8	77.7	79.9	83.8	93.9	99.3	100.9	104.4
20.0	83.2	7.0	69.5	75.5	76.5	78.3	81.5	88.6	93.6	97.1	99.6
40.0	73.5	5.9	62.3	64.8	67.7	70.2	72.7	75.0	78.8	86.4	92.4
50.0	72.4	5.7	58.5	59.6	67.3	70.7	71.9	74.4	76.0	79.6	90.6
63.0	72.4	5.4	58.8	63.0	64.9	70.3	72.2	74.7	77.7	80.8	88.4
100.0	64.9	6.1	48.0	50.6	57.5	62.8	65.5	68.0	69.6	74.0	81.6
320.0	54.7	3.9	43.1	48.2	51.1	52.9	54.9	57.1	58.4	58.4	67.7
1000.0	48.3	4.0	36.5	38.4	40.9	47.1	49.2	50.7	51.6	52.5	53.9

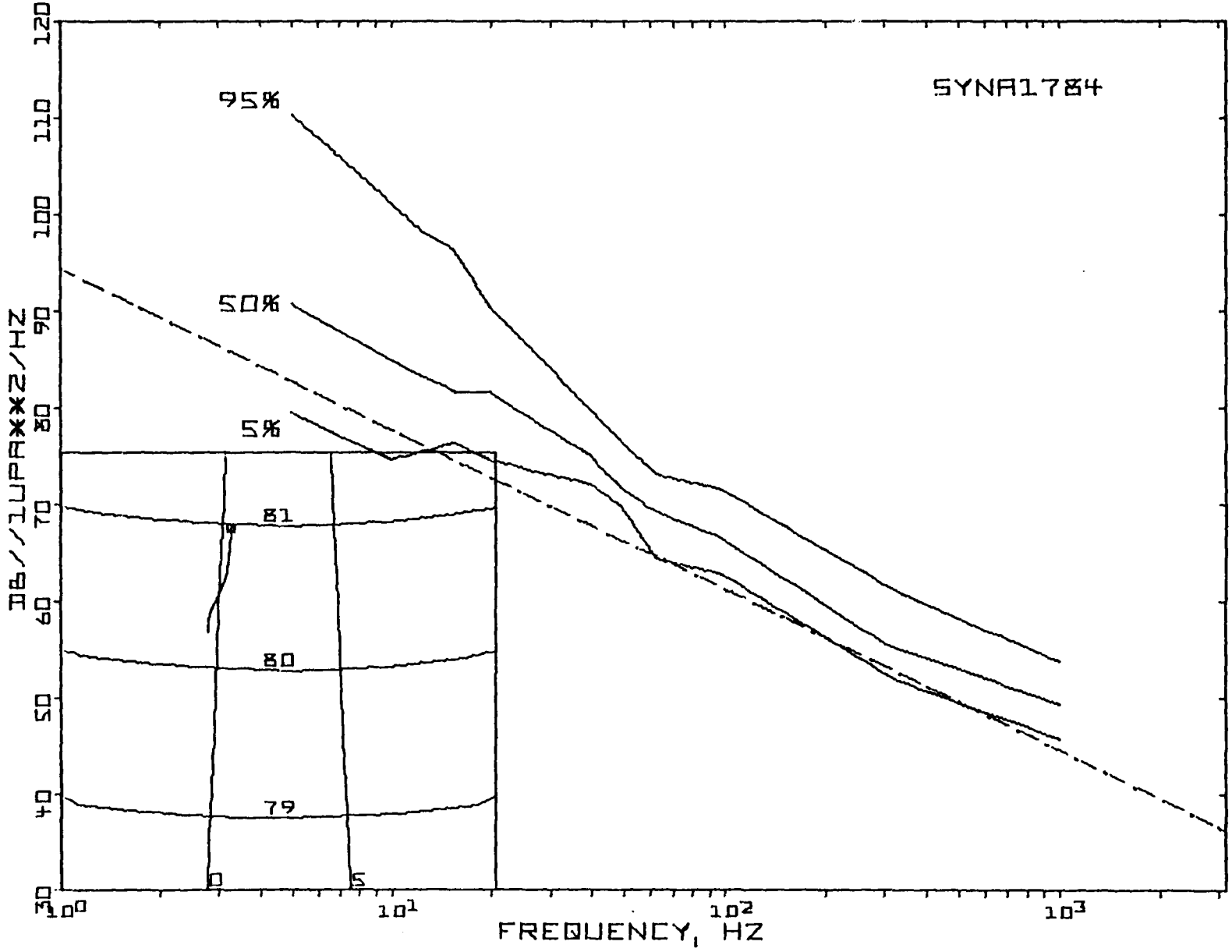
STOP



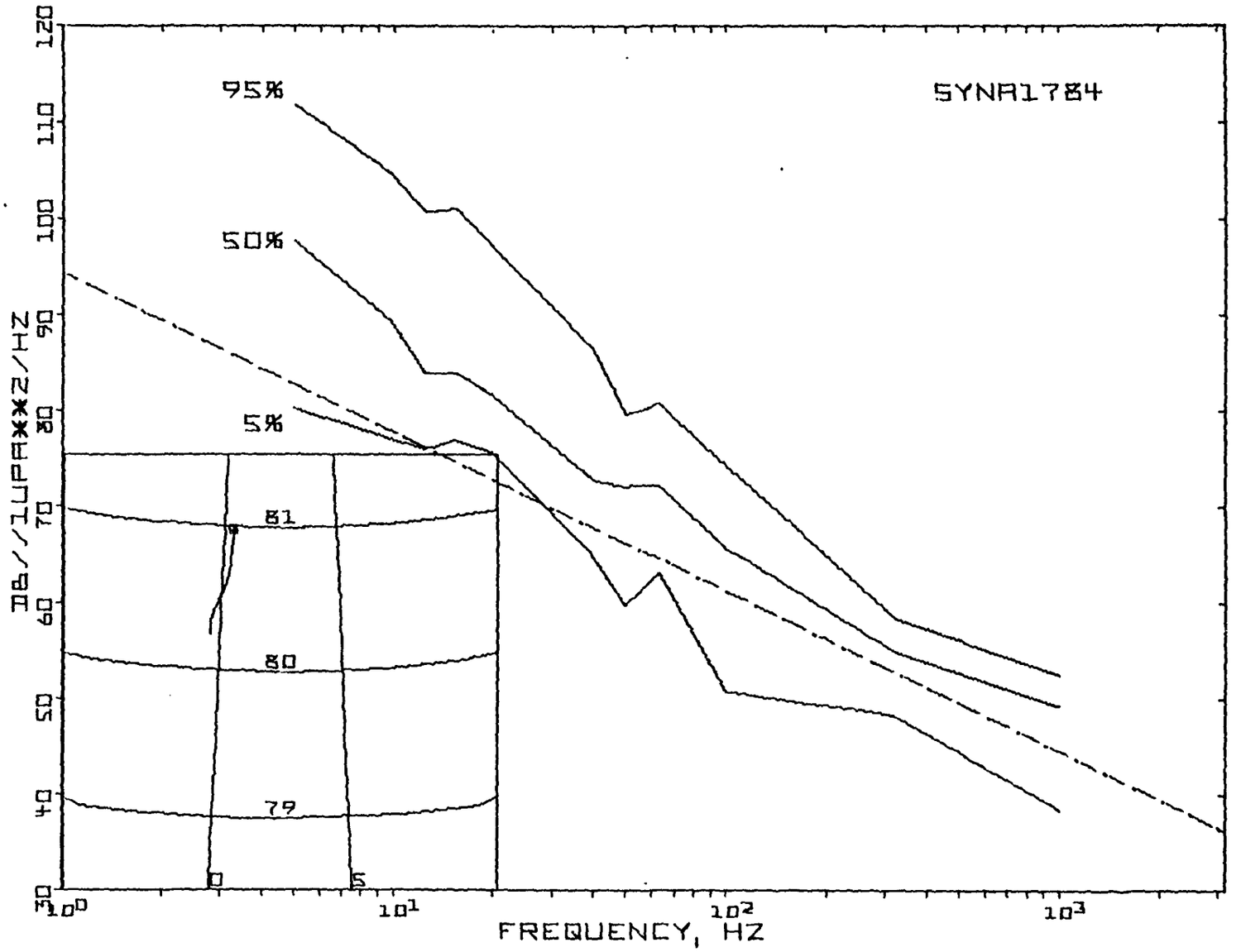
BUOY 1784 16-22 JUN 82 DEPTH 30 FT



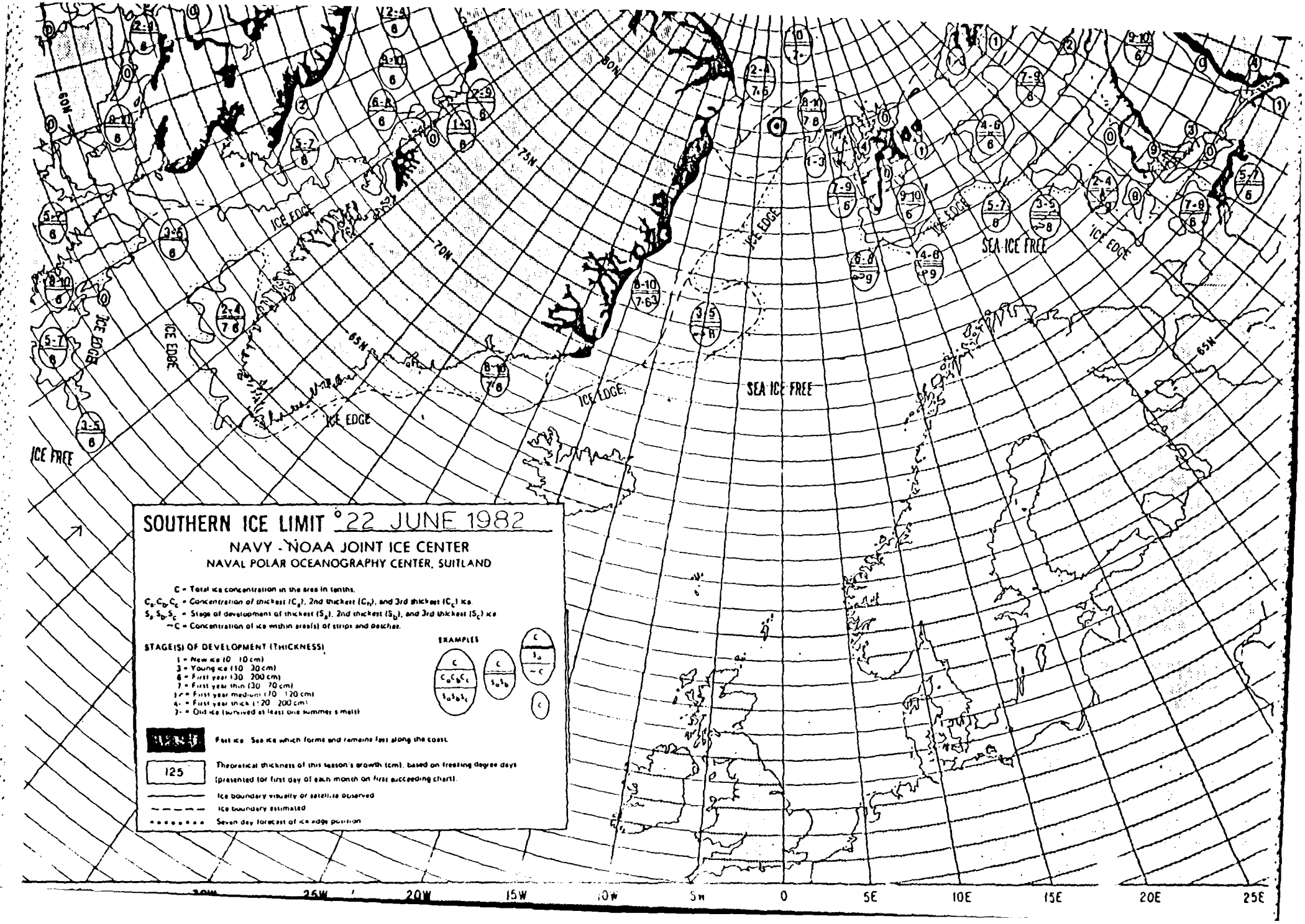
BUOY 1784 16-22 JUN 82 DEPTH 100 FT



BUOY 1784 16-22 JUN 82 DEPTH 200 FT



BUOY 1784 16-22 JUN 82 DEPTH 300 FT


SOUTHERN ICE LIMIT 22 JUNE 1982
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths.
$C_a C_b C_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_a S_b S_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
~C = Concentration of ice within area(s) of strips and patches.
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
3 = First year thin (30 - 70 cm)
5 = First year medium (70 - 120 cm)
6 = First year thick (120 - 200 cm)
7 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice - Sea ice which forms and remains fast along the coast.
125
Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
Ice boundary visually or satellite observed
Ice boundary estimated
Seven day forecast of ice edge position
ICE FREE
ICE EDGE
SEA ICE FREE
60N
65N
70N
75N
80N
30W
25W
20W
15W
10W
5W
0
5E
10E
15E
20E
25E

S: 23-29 JUN 82 BUOY: 1784

UT IN FILE SYNA1784

LACEMENT (N. MI.): 33.809 NORTH: -33.660 EAST: 3.172
CTION (TRUE): 174.633

NUMBER OF DATA SAMPLES IS 56

'H = 30FT

:QUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	81.7	7.1	69.3	71.5	73.3	77.5	80.7	84.5	89.6	94.6	101.6	56
10.0	71.5	7.5	61.3	62.1	62.9	65.4	70.2	74.9	80.9	86.2	93.7	56
12.5	72.1	5.3	66.6	66.6	67.5	68.3	70.4	74.4	78.6	81.1	93.2	56
15.6	71.1	4.8	64.2	65.7	66.3	67.5	70.3	73.5	77.0	79.5	88.3	56
20.0	67.1	5.6	60.4	61.0	61.0	62.9	65.8	70.5	74.0	75.8	89.3	56
40.0	66.2	3.4	62.1	62.1	62.1	63.1	65.6	67.5	70.0	70.9	82.1	56
50.0	67.9	2.9	63.1	64.3	64.3	66.2	67.1	69.1	70.3	73.1	79.9	56
63.0	68.0	3.0	61.6	62.9	64.1	66.0	67.6	69.5	71.1	72.9	78.1	56
100.0	64.8	2.5	59.4	60.9	61.5	62.7	64.6	66.2	68.1	68.7	71.5	56
320.0	53.2	2.1	49.7	49.7	50.7	51.7	53.2	54.6	55.7	56.8	57.7	56
000.0	41.1	3.3	34.3	35.9	37.6	39.1	40.9	41.9	45.7	47.9	48.8	56

NUMBER OF DATA SAMPLES IS 56

TH = 100FT

EQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	81.0	5.7	71.9	71.9	73.7	77.2	79.7	83.9	89.3	91.8	95.3	56
10.0	71.7	4.7	64.8	65.6	67.1	68.3	69.9	74.9	79.7	80.9	83.7	56
12.5	73.1	2.7	69.6	70.5	70.5	71.3	72.1	74.6	77.4	78.1	80.6	56
15.6	73.4	2.0	70.7	70.7	70.7	71.7	73.5	74.9	75.5	76.7	79.5	56
20.0	74.1	1.9	70.7	71.3	71.9	71.9	73.8	75.4	76.7	76.7	78.9	56
40.0	74.7	2.9	70.2	70.9	70.9	72.7	74.6	76.2	76.2	78.2	89.0	56
50.0	74.5	2.4	69.3	70.9	71.6	72.2	74.4	76.2	76.9	77.6	80.5	56
63.0	73.0	2.6	66.3	67.9	68.8	71.7	72.9	74.8	75.7	76.4	78.9	56
100.0	68.3	2.8	61.0	63.0	65.9	66.5	68.1	69.8	71.9	72.5	73.1	56
320.0	55.9	2.6	51.6	52.3	53.4	53.4	55.4	56.9	60.5	60.5	61.4	56
000.0	43.7	3.9	36.8	37.4	38.6	40.5	43.4	45.6	49.4	50.0	53.4	56

S: 23-29 JUN 82 BUOY: 1784

NUMBER OF DATA SAMPLES IS 56

H = 200FT

QUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	92.1	8.5	76.4	80.8	81.9	85.5	89.9	96.7	101.9	104.9	119.0	5
10.0	83.2	8.6	70.6	72.8	74.6	77.2	80.6	88.7	93.4	100.7	108.2	5
12.5	81.2	6.4	72.1	74.0	74.0	76.3	80.0	84.1	89.0	93.7	98.9	56
15.6	80.9	6.3	73.3	73.3	74.5	76.4	80.5	82.5	86.6	92.6	101.4	56
20.0	78.7	4.7	72.0	73.9	74.5	76.4	78.0	79.4	82.5	86.6	96.1	5
40.0	76.5	2.5	71.1	72.9	72.9	74.3	76.1	78.1	79.7	79.7	84.1	5
50.0	75.0	3.1	69.6	70.2	71.4	72.4	74.9	77.4	78.5	78.5	87.0	56
63.0	70.6	2.7	63.6	65.2	67.7	69.6	70.2	72.1	73.7	73.7	79.0	5
100.0	69.3	3.6	60.3	62.6	65.4	66.3	69.8	71.4	73.2	73.9	78.3	5
320.0	56.9	3.6	49.2	51.8	53.6	55.0	56.8	57.9	61.1	63.9	68.3	56
000.0	49.4	5.6	28.5	36.0	46.4	48.2	50.1	52.4	54.2	56.2	59.1	5

NUMBER OF DATA SAMPLES IS 56

TH = 300FT

EQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	
5.0	91.4	11.6	76.1	76.1	79.1	82.2	89.8	97.1	103.2	111.8	124.0	56
10.0	84.1	10.0	71.5	73.1	74.9	76.3	80.9	87.1	103.2	105.3	106.1	5
12.5	82.4	8.4	71.7	72.7	73.6	75.9	80.5	83.7	98.5	100.0	102.8	5
15.6	82.7	7.5	74.9	75.8	76.8	77.7	80.0	83.4	98.7	99.9	102.8	56
20.0	81.0	6.5	69.5	74.3	75.5	77.4	79.0	81.0	92.4	96.3	99.6	56
40.0	75.6	5.4	63.9	66.4	67.7	72.7	75.7	76.8	81.7	84.8	90.8	5
50.0	74.6	5.7	60.5	63.4	65.6	71.9	75.3	76.7	79.6	81.3	90.0	5
63.0	74.2	5.9	58.3	60.8	65.9	72.8	75.6	77.7	78.8	79.9	87.6	56
100.0	67.8	6.3	49.8	51.3	57.5	66.1	69.6	71.5	73.1	74.9	78.1	5
320.0	56.9	5.0	41.2	45.8	51.1	54.9	57.1	58.9	61.7	63.8	67.7	5
000.0	50.5	5.0	30.4	36.5	46.2	49.2	50.7	52.5	55.7	57.7	59.9	45

P

S: 7-13 JUL 82 BUOY: 1784

NUMBER OF DATA SAMPLES IS 56

H = 200FT

QUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	100.4	11.0	84.7	85.5	88.0	90.7	99.4	105.5	119.0	124.0	124.0	[illegible]
10.0	89.6	8.8	73.7	77.2	77.8	83.3	88.0	95.3	102.9	104.0	105.8	[illegible]
12.5	87.1	7.9	74.9	76.3	79.1	80.9	84.1	91.2	100.4	102.2	105.3	56
15.6	86.6	7.1	75.5	76.4	78.0	81.6	86.0	89.3	99.6	100.5	102.0	[illegible]
20.0	84.9	6.0	73.3	77.3	79.4	80.5	83.3	87.6	94.5	97.4	98.6	[illegible]
40.0	80.6	3.8	71.1	75.6	76.1	78.1	80.3	83.2	85.7	87.6	89.2	56
50.0	80.0	3.7	74.2	74.9	75.6	77.4	78.5	81.6	86.2	87.0	88.3	54
63.0	77.0	3.4	67.0	70.2	73.7	75.1	76.2	78.2	80.4	83.3	85.0	[illegible]
00.0	74.0	3.0	64.4	69.2	69.2	72.3	74.6	75.8	76.4	78.3	81.9	[illegible]
320.0	62.7	4.9	51.8	52.8	55.0	60.4	62.9	66.4	68.9	69.9	72.4	56
000.0	54.3	6.5	36.0	39.3	46.4	51.7	54.2	57.7	61.3	62.2	72.3	[illegible]

NUMBER OF DATA SAMPLES IS 56

TH = 300FT

EQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	97.7	12.6	74.7	81.3	82.2	87.3	96.5	104.3	120.1	124.0	124.0	56
10.0	89.5	11.0	74.9	75.6	76.3	78.1	87.7	97.2	104.4	107.3	116.9	[illegible]
12.5	84.9	9.1	71.7	74.5	75.2	76.5	83.7	89.2	100.0	101.8	103.9	[illegible]
15.6	86.3	8.8	74.6	75.8	77.7	80.0	81.8	89.8	100.9	102.8	103.7	56
20.0	84.4	7.5	75.5	76.5	77.4	79.0	81.5	87.0	97.8	99.6	100.6	[illegible]
40.0	78.9	6.8	62.9	65.6	69.9	75.7	77.9	81.7	88.9	90.8	90.8	[illegible]
50.0	76.9	6.8	54.3	62.7	69.3	74.4	77.4	79.6	86.5	88.8	90.6	56
63.0	76.4	6.8	54.1	58.8	69.1	73.8	77.0	79.9	84.9	85.9	87.6	56
100.0	70.6	7.9	48.0	49.0	60.0	67.1	73.1	75.6	78.1	78.1	81.6	[illegible]
320.0	61.2	5.7	45.8	51.1	52.4	58.9	61.7	65.0	66.9	67.7	72.9	[illegible]
000.0	51.9	6.5	30.4	33.4	42.7	49.2	53.9	55.7	58.5	59.2	60.6	43

>

3: 7-13 JUL 82 BUOY: 1784

JT IN FILE SYNA1784

LACEMENT (N. MI.): 81.083 NORTH: -64.560 EAST: -49.055
CTION (TRUE): 217.253

NUMBER OF DATA SAMPLES IS 56

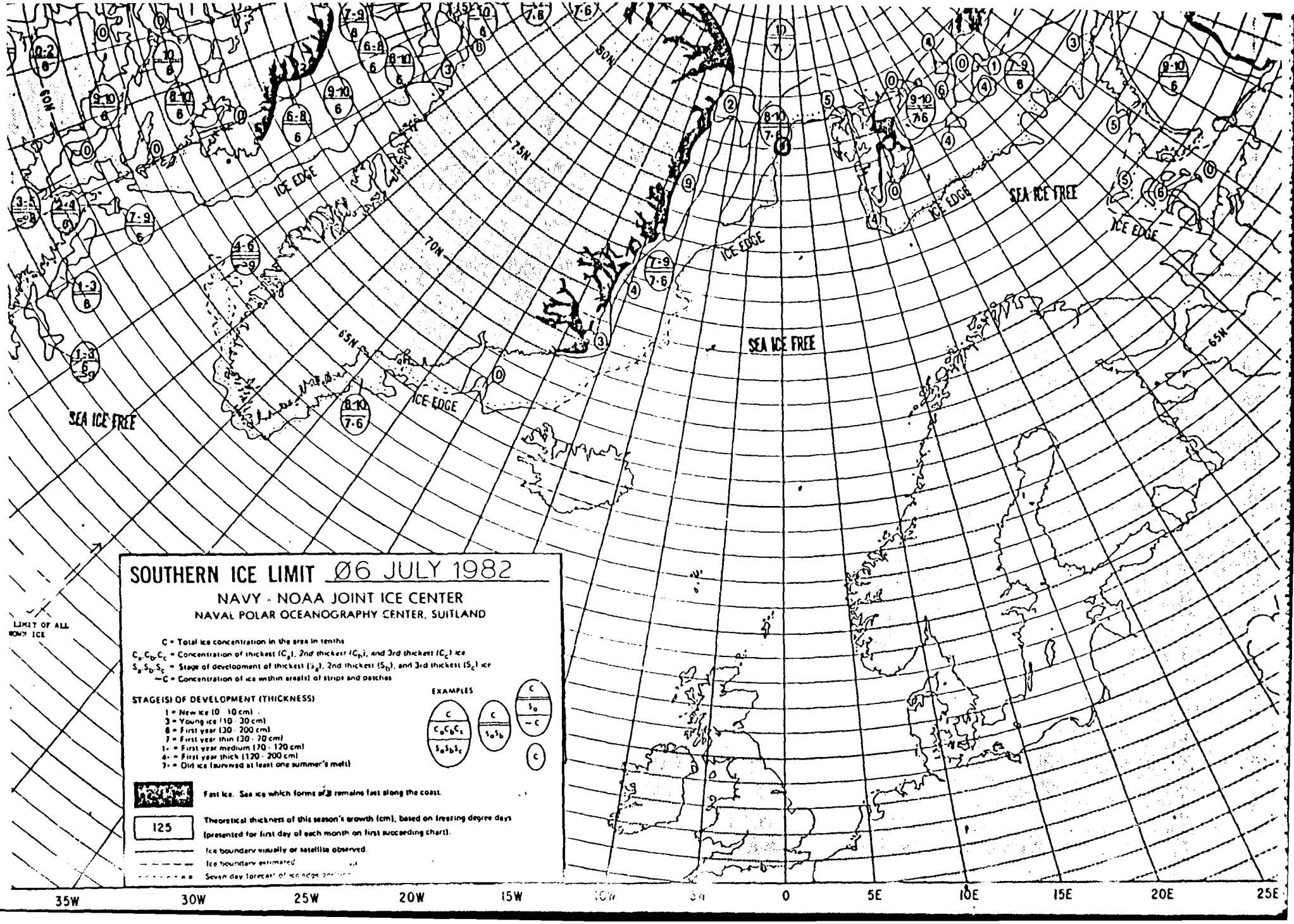
H = 30FT

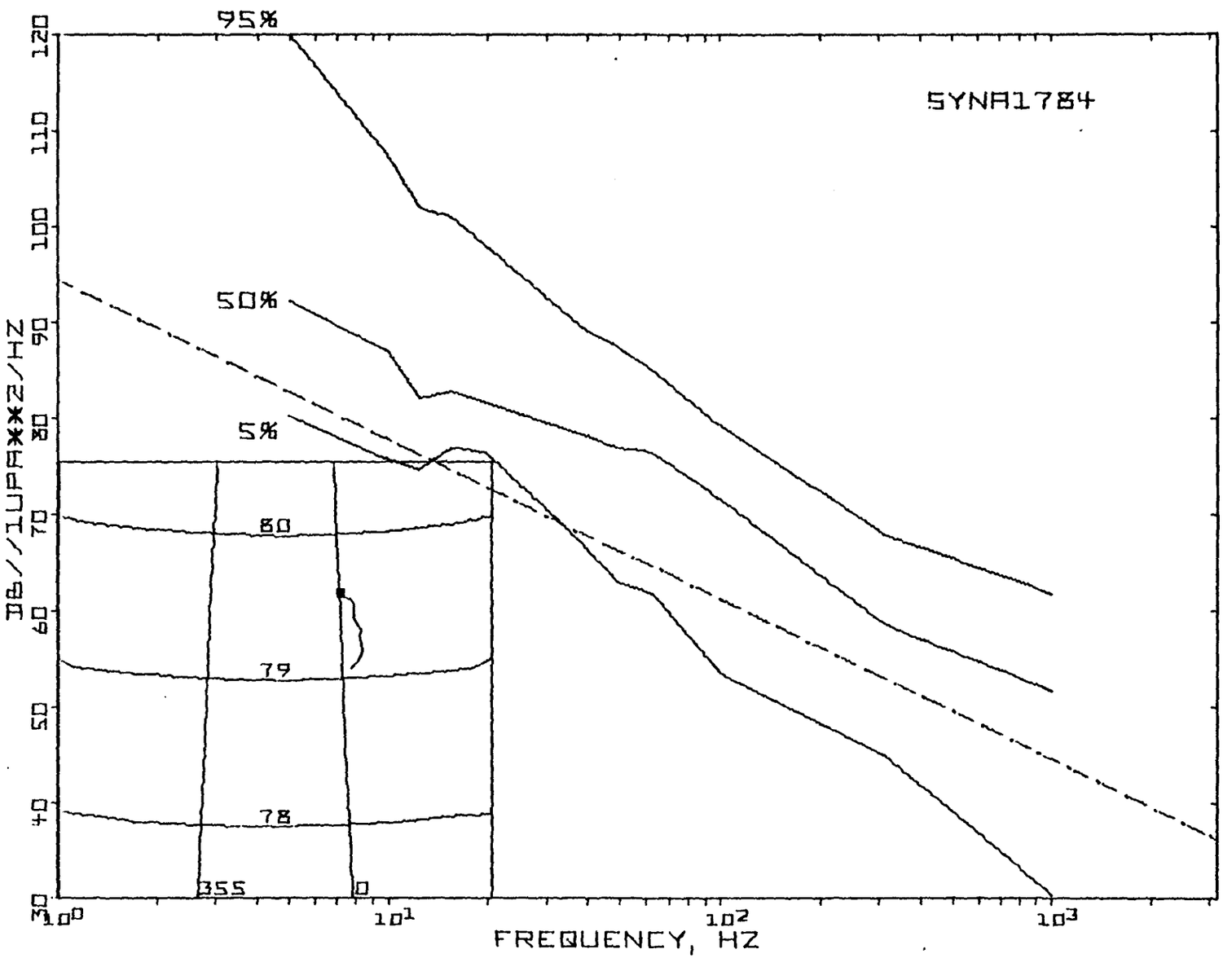
QUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	84.9	5.5	74.7	74.7	78.4	81.4	84.5	88.6	91.3	92.8	99.4	56
10.0	74.4	7.2	63.6	63.6	64.8	68.1	73.3	79.3	84.5	87.0	89.5	56
12.5	74.7	6.4	66.6	67.5	68.3	69.1	72.6	78.6	84.7	86.4	91.6	56
15.6	72.7	5.5	66.3	66.3	67.5	68.5	71.0	75.4	80.6	83.7	86.6	56
20.0	71.5	5.8	62.9	64.5	65.8	67.0	69.8	74.9	79.0	82.6	89.3	56
40.0	72.3	3.9	66.3	66.9	67.5	70.0	71.6	74.1	76.9	79.0	83.7	56
50.0	74.1	3.3	69.1	69.7	70.3	71.3	73.8	75.8	79.1	79.9	82.4	56
63.0	74.2	3.0	69.5	70.1	71.1	72.0	72.9	76.1	78.1	78.9	82.2	56
100.0	73.3	3.3	68.1	68.7	69.7	70.6	73.5	74.7	75.7	78.2	84.9	56
320.0	62.7	3.6	55.2	56.8	57.7	60.6	62.8	64.5	66.6	66.6	73.8	56
000.0	49.8	3.8	40.9	42.8	44.4	47.9	49.7	51.8	53.9	57.1	57.8	56

NUMBER OF DATA SAMPLES IS 56

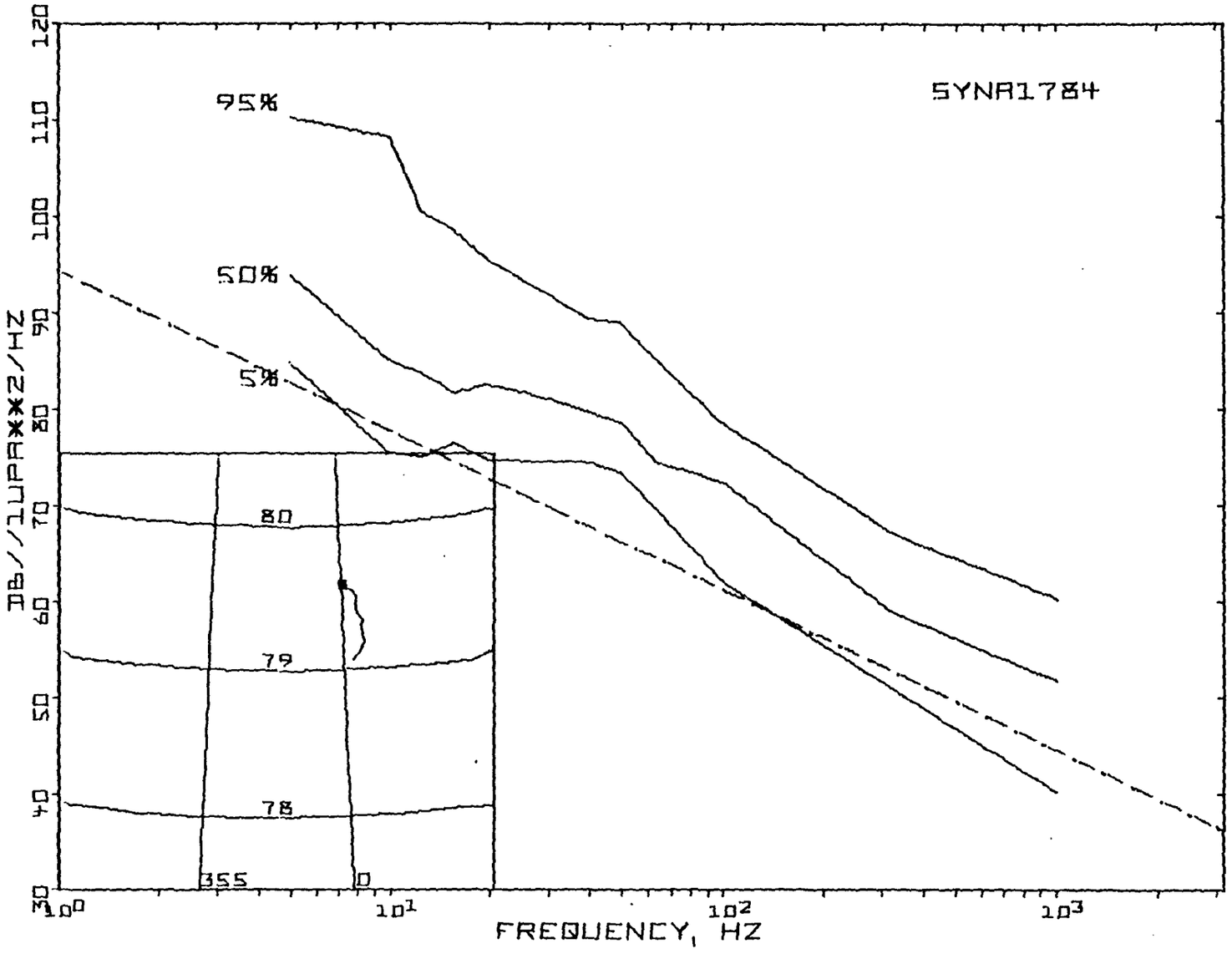
TH = 100FT

EQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	88.2	7.0	75.6	77.9	80.7	83.2	86.8	91.8	95.3	97.8	112.1	56
10.0	77.2	6.0	69.9	70.8	71.6	72.4	75.9	79.1	84.4	86.9	100.0	56
12.5	76.9	4.3	72.1	72.1	72.8	73.4	75.6	78.8	80.0	81.6	92.1	56
15.6	77.9	3.5	72.6	73.5	74.2	75.5	77.7	79.5	80.9	84.7	90.7	56
20.0	79.7	3.1	74.7	75.4	75.4	77.3	79.8	81.4	83.9	85.0	85.9	56
40.0	79.6	2.7	75.5	76.2	76.2	78.2	78.7	80.7	82.3	84.2	89.6	56
50.0	79.2	2.7	73.4	74.4	76.2	76.9	79.4	80.5	82.2	83.6	87.4	56
63.0	78.7	3.0	72.9	73.9	74.8	76.4	78.4	80.9	81.7	83.8	89.2	56
100.0	76.3	3.0	71.3	71.3	71.9	74.1	76.6	77.9	79.1	81.0	84.6	56
320.0	64.2	3.4	56.9	58.3	59.4	62.2	64.9	66.5	67.4	68.2	74.3	56
000.0	52.1	3.8	42.8	45.6	47.4	49.4	51.6	54.1	56.6	57.6	64.6	56

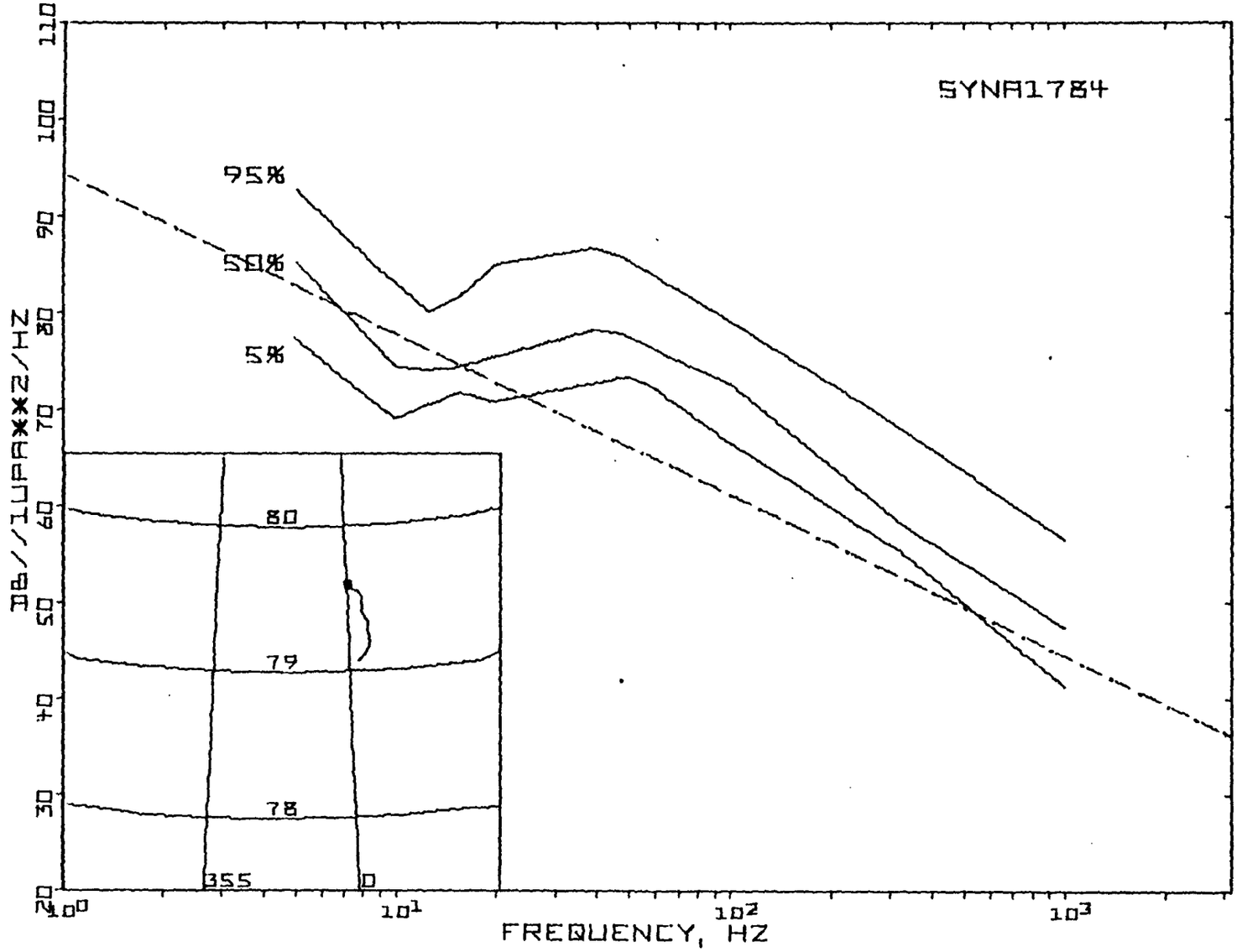

SOUTHERN ICE LIMIT Ø6 JULY 1982
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
$C_a C_b C_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice
$S_a S_b S_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice
–C = Concentration of ice within areal(s) of strips and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1- = First year medium (70 - 120 cm)
4- = First year thick (120 - 200 cm)
7+ = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. See ice which forms and remains fast along the coast.
125
Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
Ice boundary visually or satellite observed.
Ice boundary estimated
Seven day forecast of ice edge
LIMIT OF ALL KNOWN ICE
ICE EDGE
SEA ICE FREE
60N
65N
70N
75N
80N
35W
30W
25W
20W
15W
0
5E
10E
15E
20E
25E



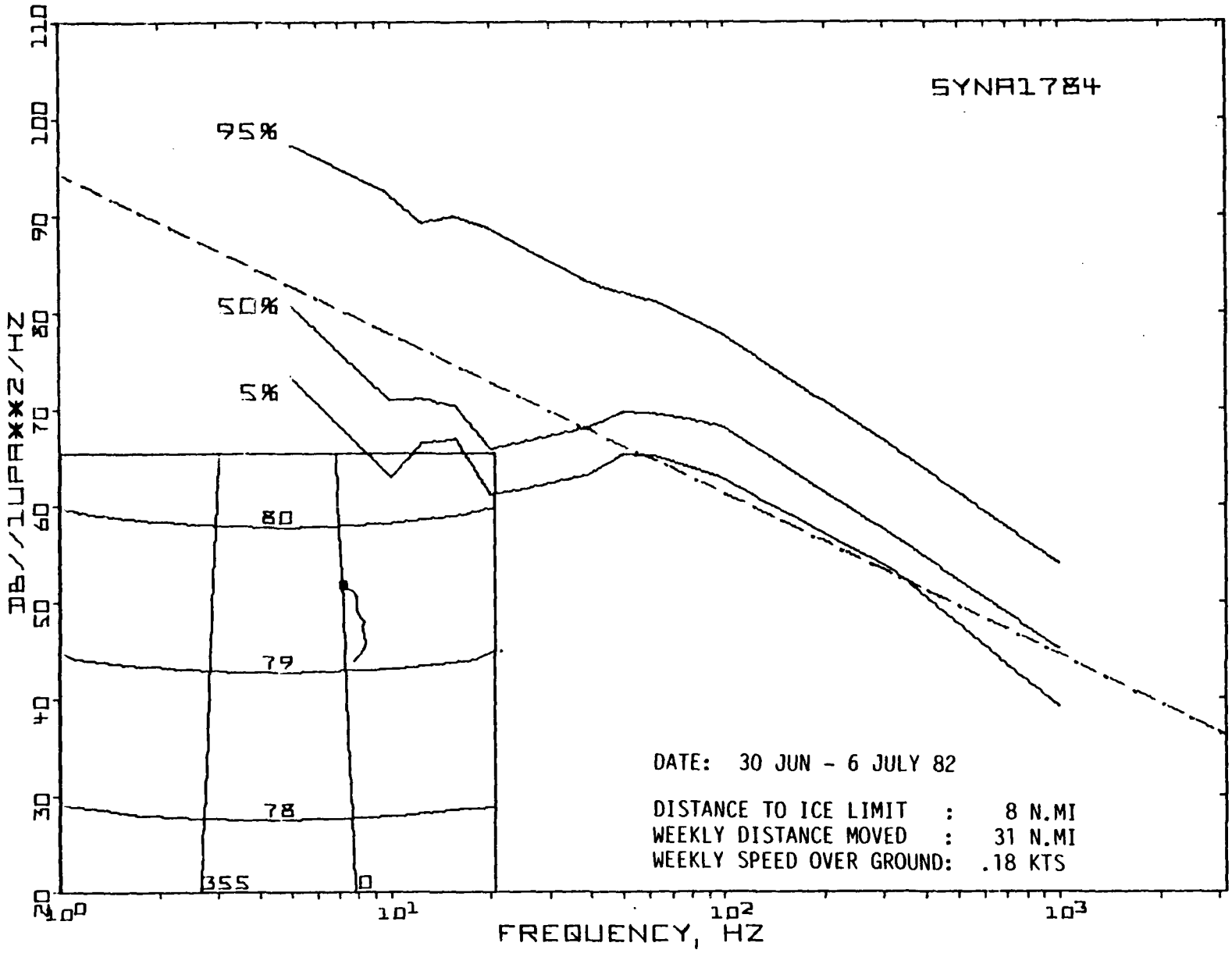
BUOY 1784 30 JUN-6 JUL 82 DEPTH 300 FT



BUOY 1784 30 JUN-6 JUL 82 DEPTH 200 FT



BUOY 1784 30 JUN-6 JUL 82 DEPTH 100 FT



BUOY 1784 30 JUN-6 JUL 82 DEPTH 30 FT

DATES: 30 JUN-6 JUL 82 BUOY: 1784

THE NUMBER OF DATA SAMPLES IS 56

DEPTH = 200FT

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	95.4	8.9	80.1	84.7	86.1	89.0	94.0	100.0	102.8	110.3	124.0
10.0	88.0	11.2	71.8	75.3	77.8	79.7	84.9	92.6	100.1	108.2	122.0
12.5	85.9	8.7	74.0	74.9	76.3	79.1	83.6	92.1	97.2	100.4	112.4
15.6	84.6	7.6	74.5	76.4	77.3	78.7	81.6	90.1	93.6	98.6	106.9
20.0	83.4	6.0	73.9	74.5	76.4	79.4	82.5	85.4	89.3	95.3	100.5
40.0	80.0	5.1	64.1	74.3	75.6	76.1	79.7	83.2	86.4	89.2	90.9
50.0	79.3	5.3	62.9	73.3	74.2	76.3	78.5	82.9	86.2	88.9	89.5
63.0	75.6	4.9	58.2	69.6	71.2	73.0	74.4	78.2	81.7	85.0	85.8
100.0	72.3	5.1	53.3	61.9	67.1	70.4	72.3	75.2	77.4	78.3	81.3
320.0	59.0	5.9	30.5	50.8	53.6	56.8	58.8	61.7	63.9	67.1	71.7
1000.0	51.8	5.6	34.4	40.1	44.1	50.1	51.7	54.2	59.7	60.2	63.8

THE NUMBER OF DATA SAMPLES IS 56

DEPTH = 300FT

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX
5.0	96.4	11.9	77.0	80.2	81.3	88.5	92.3	104.3	107.4	124.0	124.0
10.0	90.2	11.5	74.0	75.6	76.9	81.6	86.9	98.9	105.3	107.3	122.0
12.5	85.4	9.4	73.6	74.5	75.9	77.7	81.9	92.5	100.0	101.8	102.8
15.6	86.6	8.6	74.6	76.8	76.8	80.7	82.7	90.6	100.9	100.9	105.2
20.0	84.5	7.5	73.7	76.3	76.5	79.0	81.5	87.0	97.8	97.8	100.6
40.0	78.1	6.8	65.6	66.4	68.9	73.6	77.9	82.3	86.4	88.9	93.0
50.0	76.9	7.2	60.5	62.7	66.5	73.5	76.7	82.1	84.6	87.3	91.6
63.0	75.7	7.1	59.9	61.6	64.3	71.6	76.3	80.8	84.3	84.9	89.1
100.0	70.0	7.6	51.3	53.5	59.1	65.5	71.5	74.9	79.1	79.1	83.0
320.0	57.8	7.0	31.1	44.6	50.4	55.7	58.4	60.9	64.4	67.7	71.0
1000.0	49.3	8.5	30.4	30.4	30.4	44.1	51.6	54.6	58.5	61.7	61.7

STOP

DATES: 30 JUN-6 JUL 82 BUOY: 1784

OUTPUT IN FILE SYNA1784

DISPLACEMENT (N. MI.): 33.960 NORTH: -33.960 EAST: 0.223
DIRECTION (TRUE): 179.640

THE NUMBER OF DATA SAMPLES IS 56

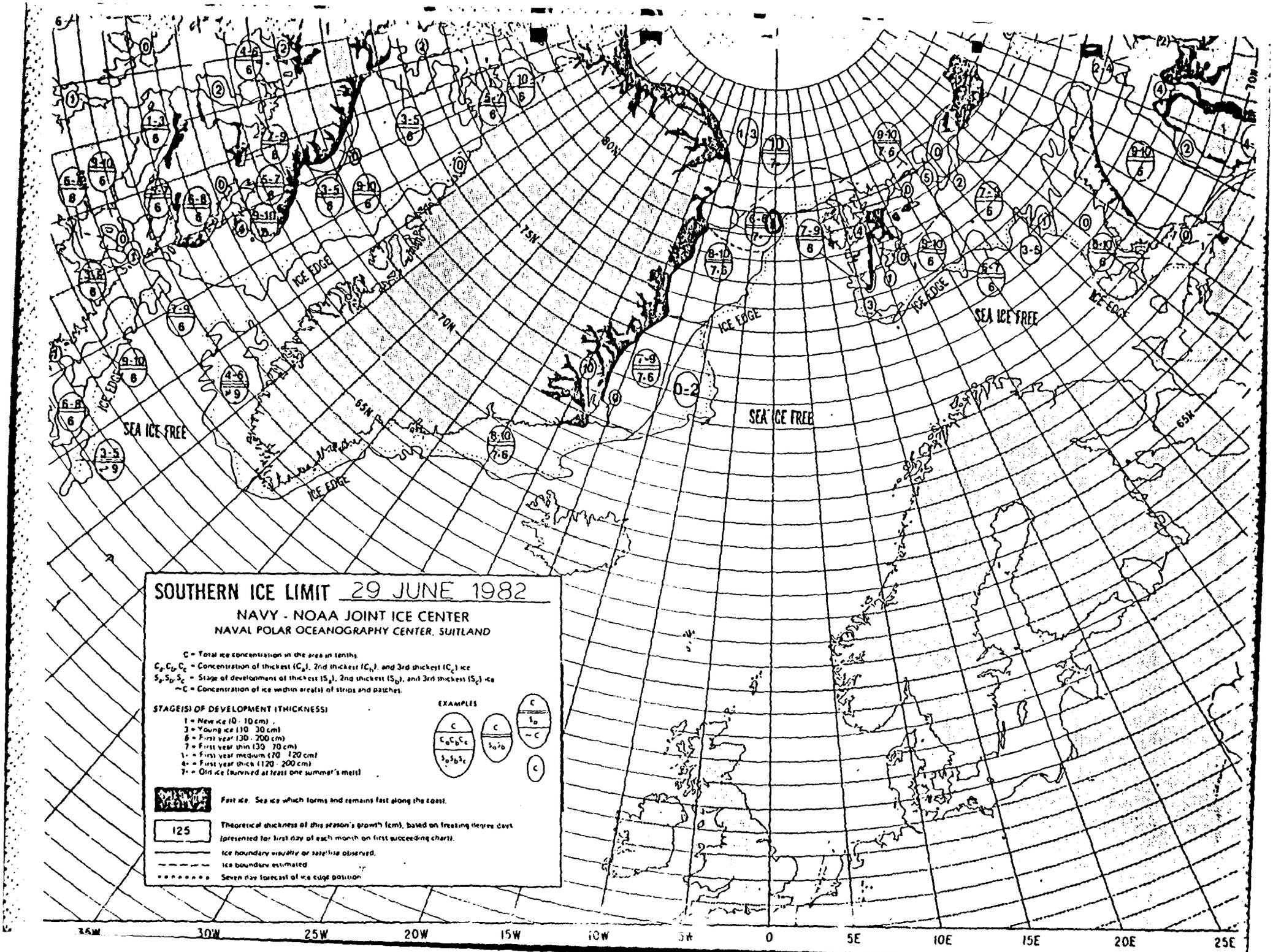
DEPTH = 30FT

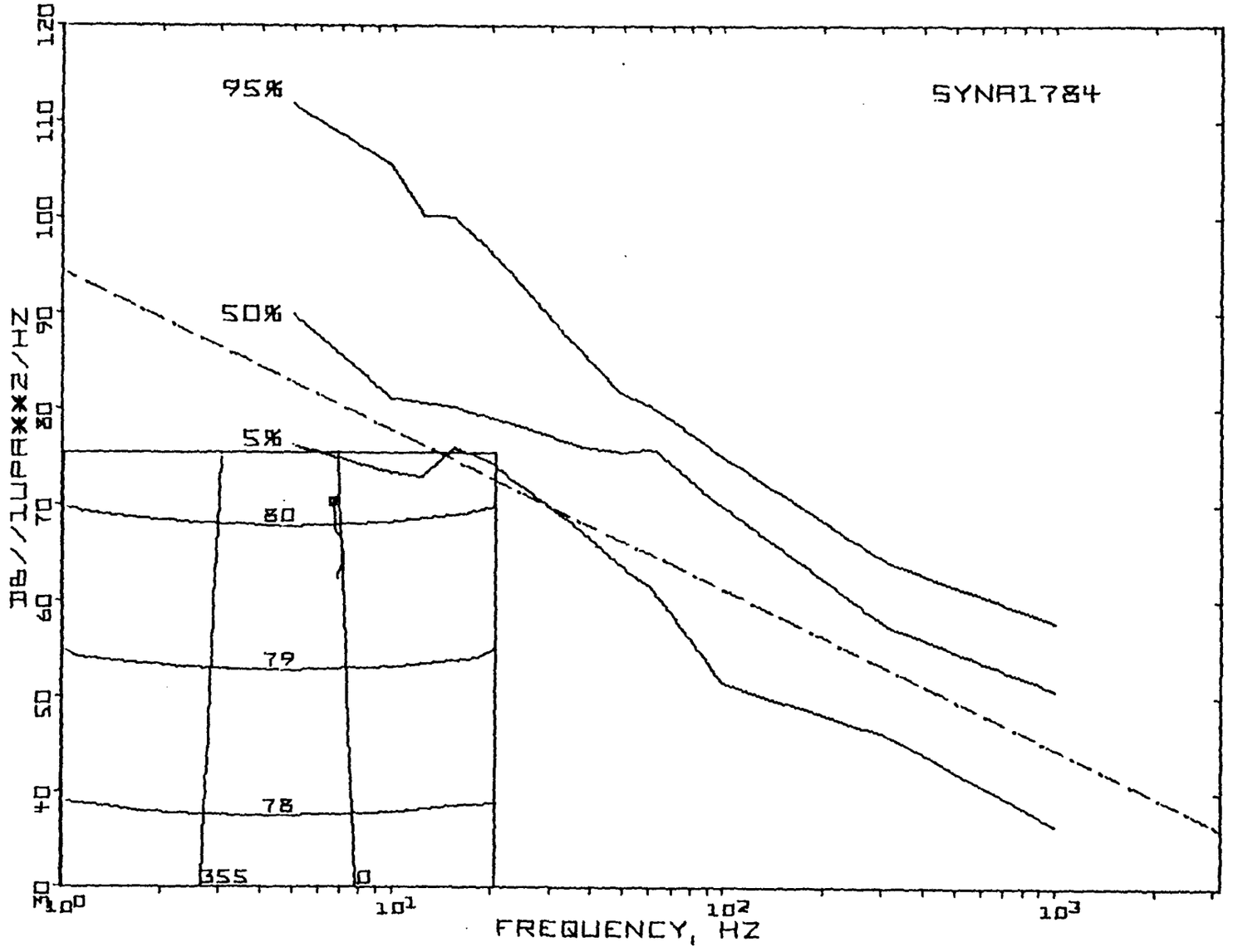
FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	82.7	8.0	70.5	73.3	74.7	76.5	80.7	86.7	94.6	97.3	104.1	56
10.0	72.9	9.2	62.1	62.9	62.9	65.4	70.8	76.8	87.0	92.2	97.4	56
12.5	73.5	7.4	66.6	66.6	67.5	68.3	71.0	75.1	84.7	89.1	96.7	56
15.6	73.6	7.8	66.3	66.9	66.9	67.5	70.3	75.4	83.7	89.8	97.0	56
20.0	69.7	8.9	59.8	61.0	61.0	62.9	65.8	73.0	83.2	88.6	92.1	56
40.0	69.9	6.0	61.5	63.1	64.0	65.6	68.1	72.3	78.3	82.9	85.6	56
50.0	71.6	5.5	64.3	65.3	65.3	67.1	69.7	73.8	80.5	81.8	84.3	56
63.0	71.2	4.9	64.1	65.1	66.0	67.6	69.5	73.6	78.9	81.0	82.2	56
100.0	68.8	4.2	62.1	62.7	64.6	65.4	68.1	69.7	75.7	77.5	80.2	56
320.0	58.0	3.8	52.5	53.2	53.9	55.2	56.8	60.0	63.7	66.0	67.2	56
1000.0	45.4	4.8	37.6	39.1	39.7	40.9	45.1	47.9	51.8	53.9	56.4	56

THE NUMBER OF DATA SAMPLES IS 56

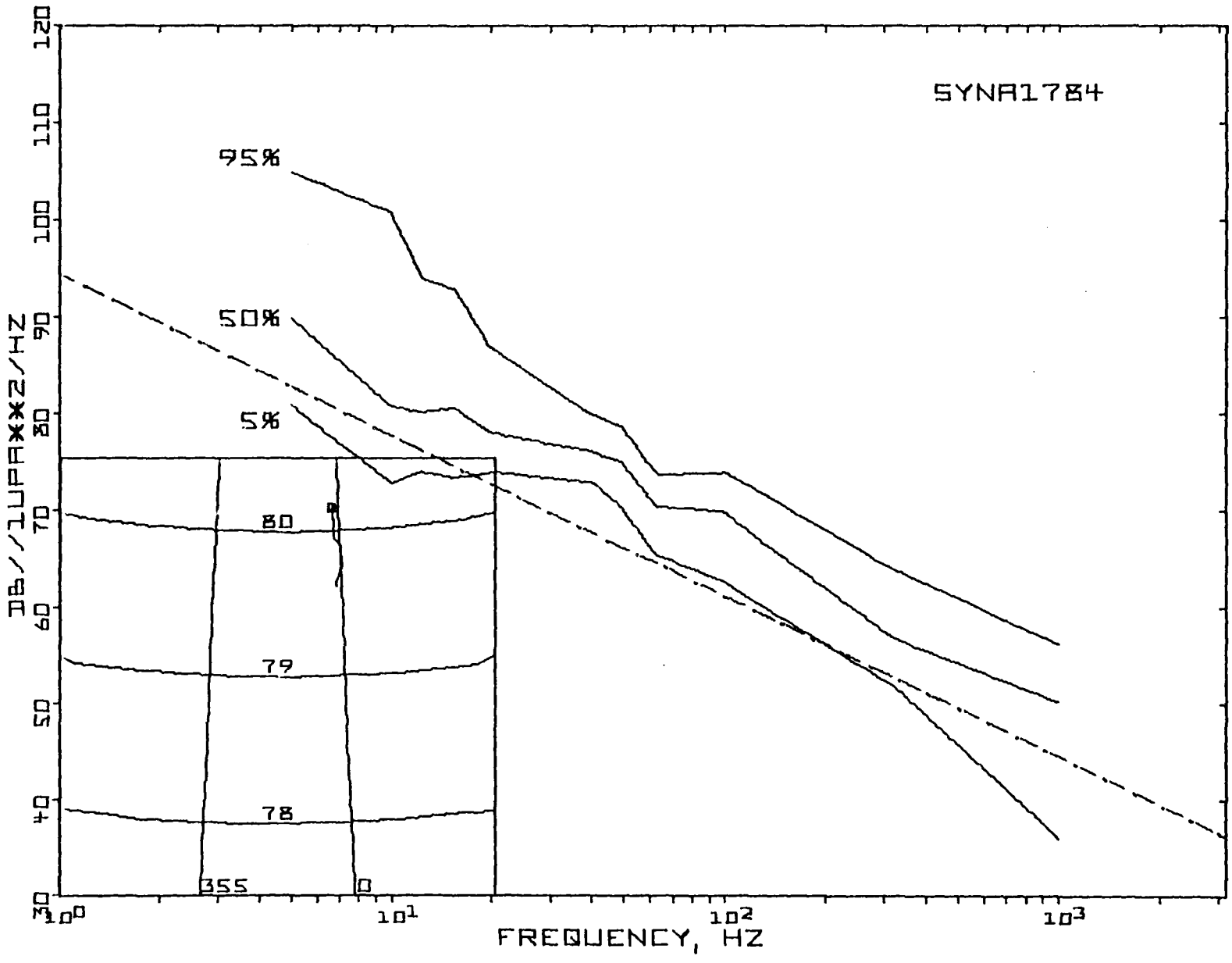
DEPTH = 100FT

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	85.5	4.7	76.5	77.2	79.7	82.5	85.2	87.7	91.8	92.8	98.8	56
10.0	75.1	4.6	68.3	68.9	69.9	71.6	74.3	77.7	80.9	82.8	90.5	56
12.5	74.8	3.3	70.5	70.5	71.3	72.8	74.0	77.4	79.4	80.0	86.6	56
15.6	75.2	3.1	70.7	71.7	71.7	73.5	74.2	76.1	78.6	81.6	85.5	56
20.0	76.3	4.0	70.7	70.7	71.9	73.8	75.4	77.3	82.1	85.0	86.7	56
40.0	79.1	4.5	72.1	72.7	73.7	76.2	78.2	83.6	84.8	86.7	87.5	56
50.0	78.5	4.2	70.9	73.4	73.4	75.3	77.6	81.4	84.3	85.5	87.4	56
63.0	76.8	4.0	71.1	71.7	72.9	72.9	75.7	80.0	81.7	83.1	85.0	56
100.0	72.9	3.8	65.3	66.5	68.1	69.8	72.5	75.0	79.1	79.1	80.1	56
320.0	60.1	4.2	54.4	55.4	56.2	56.9	58.3	61.4	67.4	68.2	70.9	56
1000.0	48.1	4.9	41.3	41.3	42.8	43.4	47.4	50.6	54.8	56.6	60.8	56

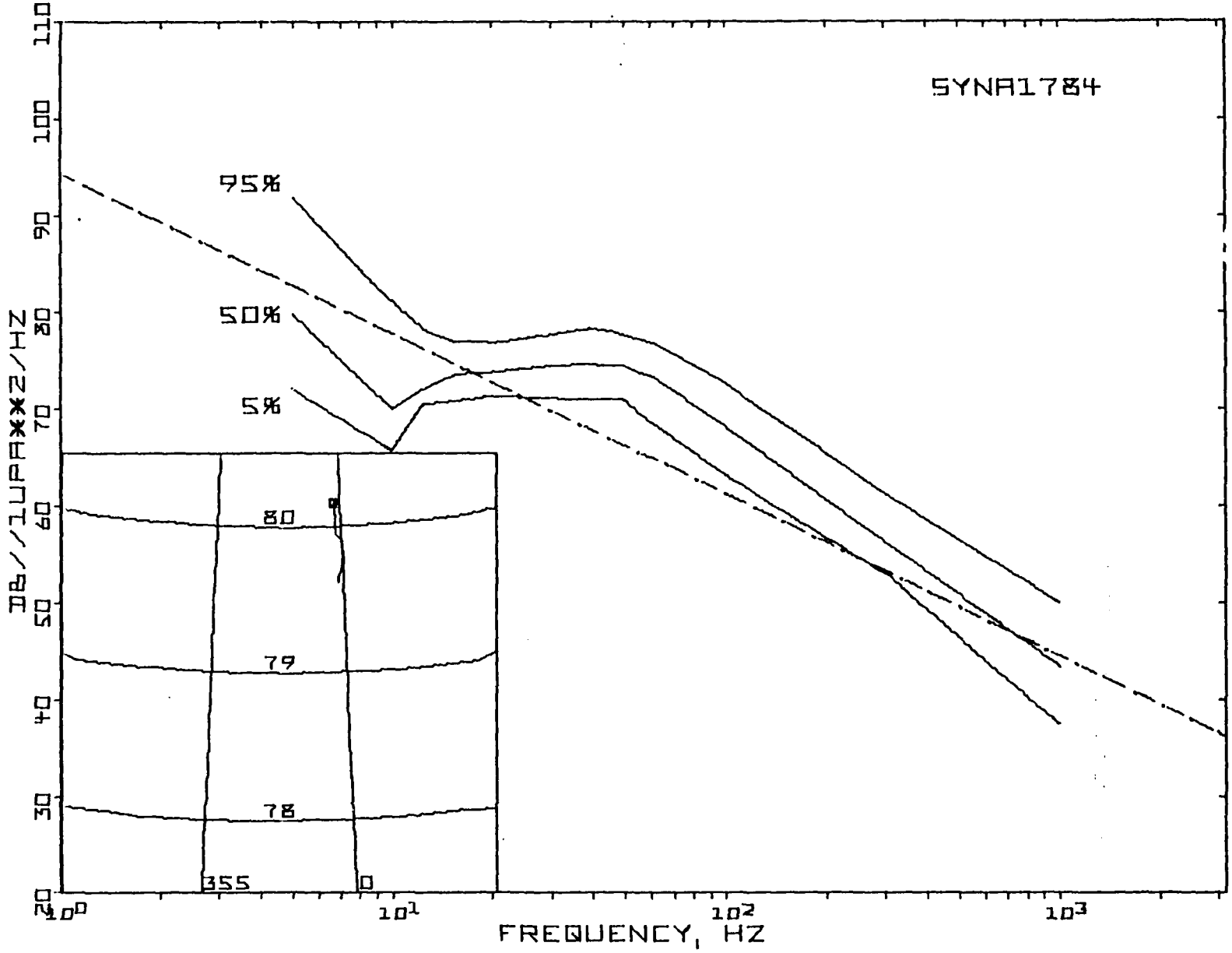

SOUTHERN ICE LIMIT 29 JUNE 1982
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths.
$C_a C_b C_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice
$S_a S_b S_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice
~C = Concentration of ice within area(s) of strips and patches.
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
4 = First year medium (70 - 120 cm)
5 = First year thick (120 - 200 cm)
7+ = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast.
125
Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding charts).
Ice boundary visually or satellite observed.
Ice boundary estimated
Seven day forecast of ice edge position
ICE EDGE
SEA ICE FREE
80N
75N
70N
65N
35W
30W
25W
20W
15W
10W
5W
0
5E
10E
15E
20E
25E



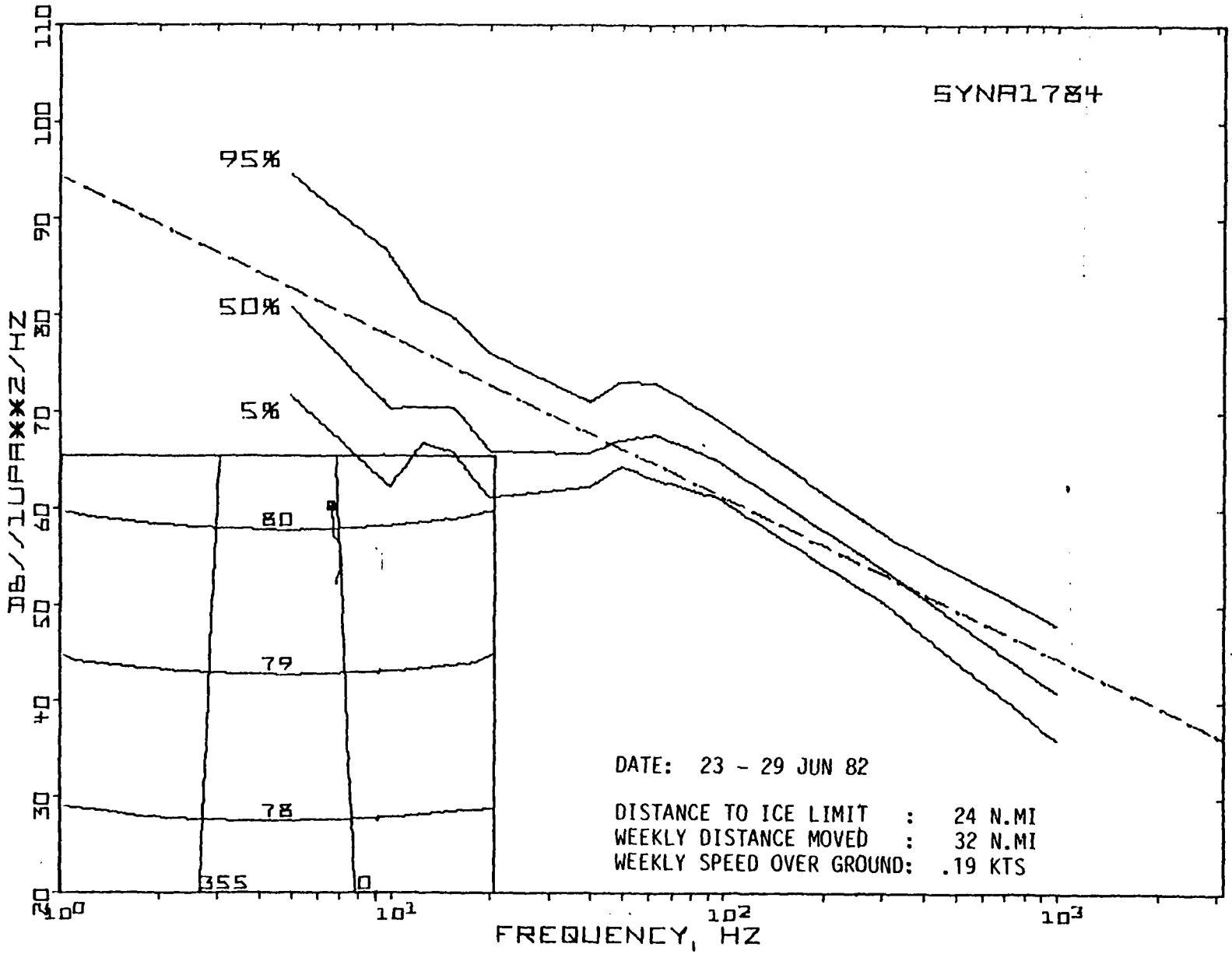
BUOY 1784 23-29 JUN 82 DEPTH 300 FT



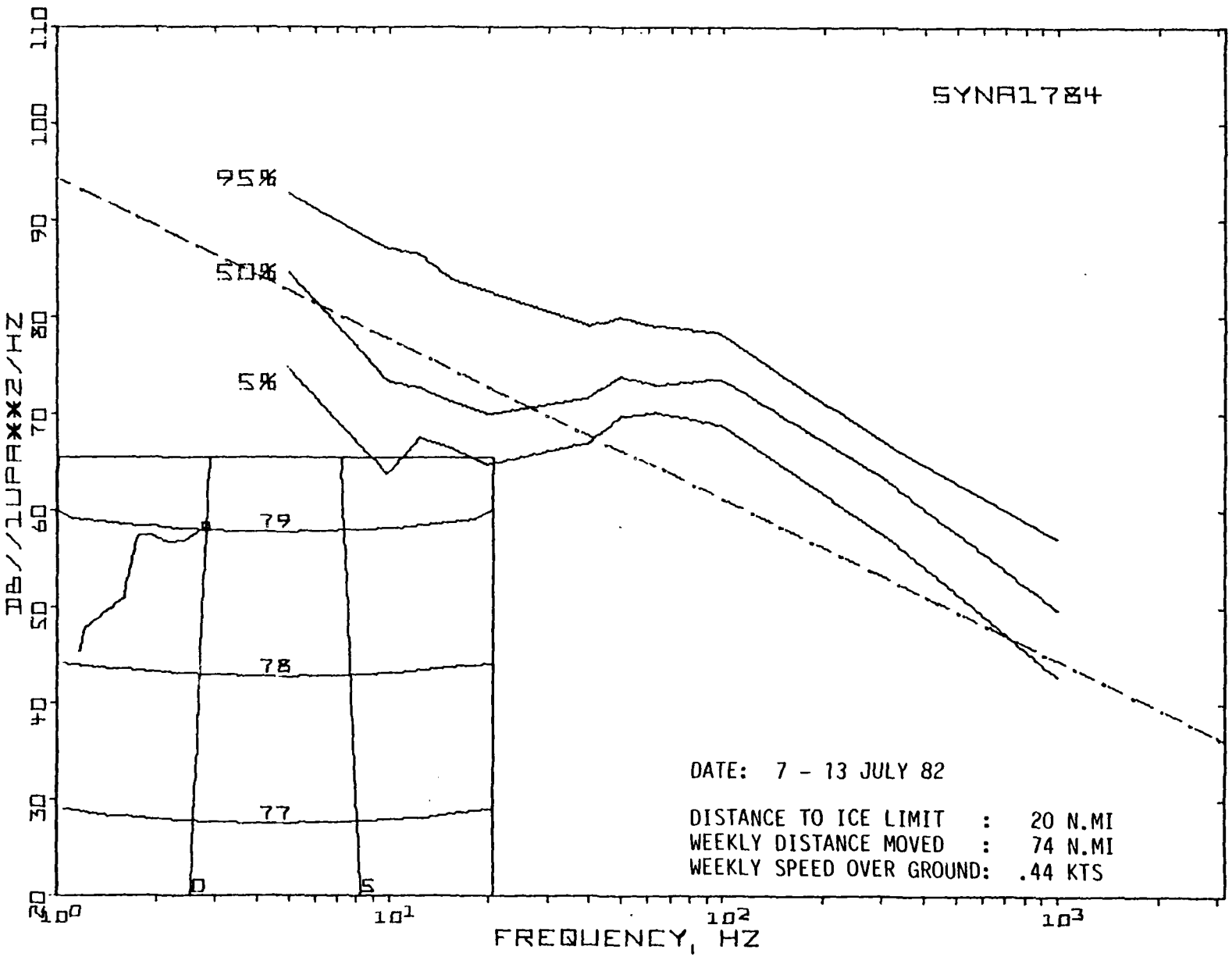
BUOY 1784 23-29 JUN 82 DEPTH 200 FT



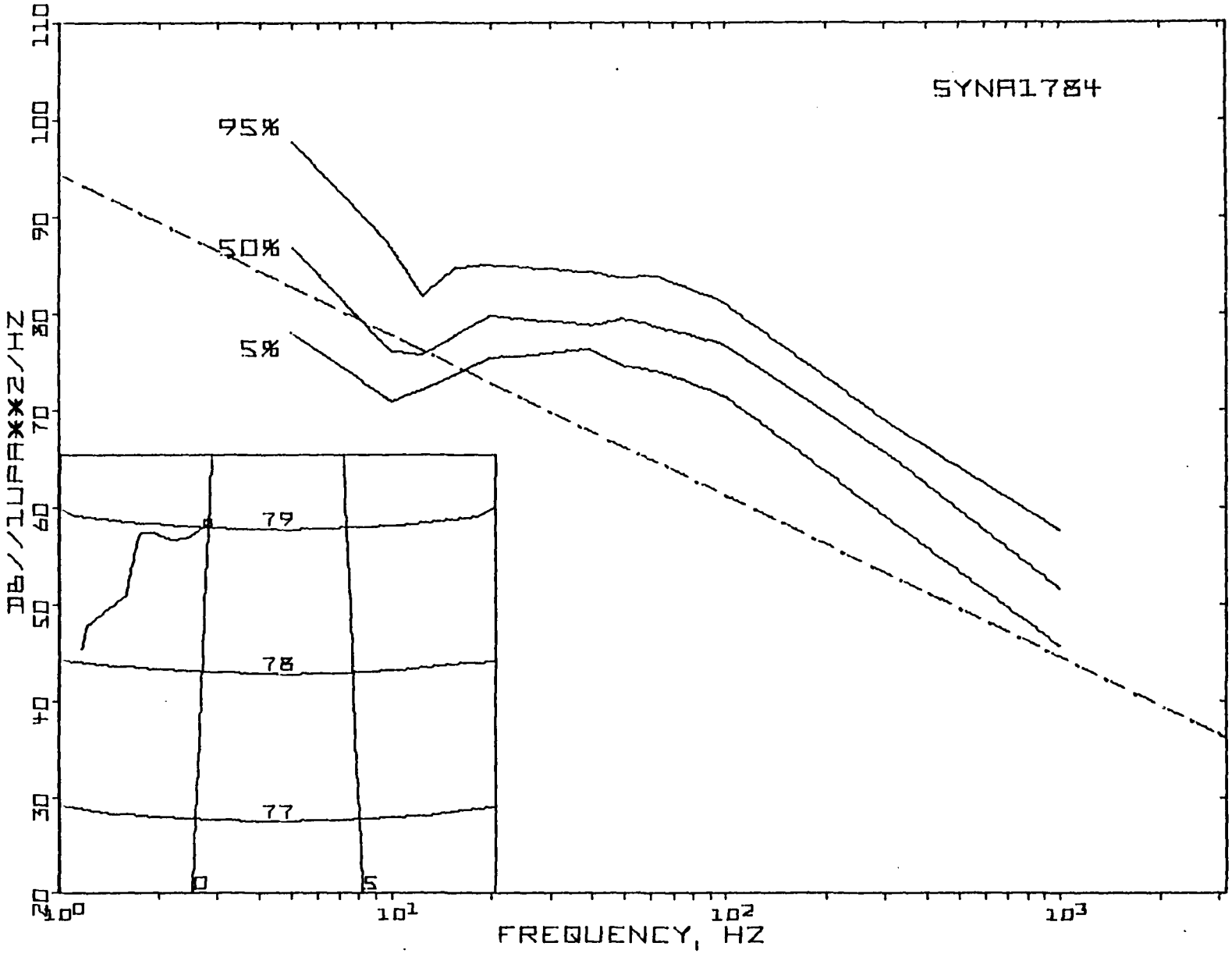
BUOY 1784 23-29 JUN 82 DEPTH 100 FT



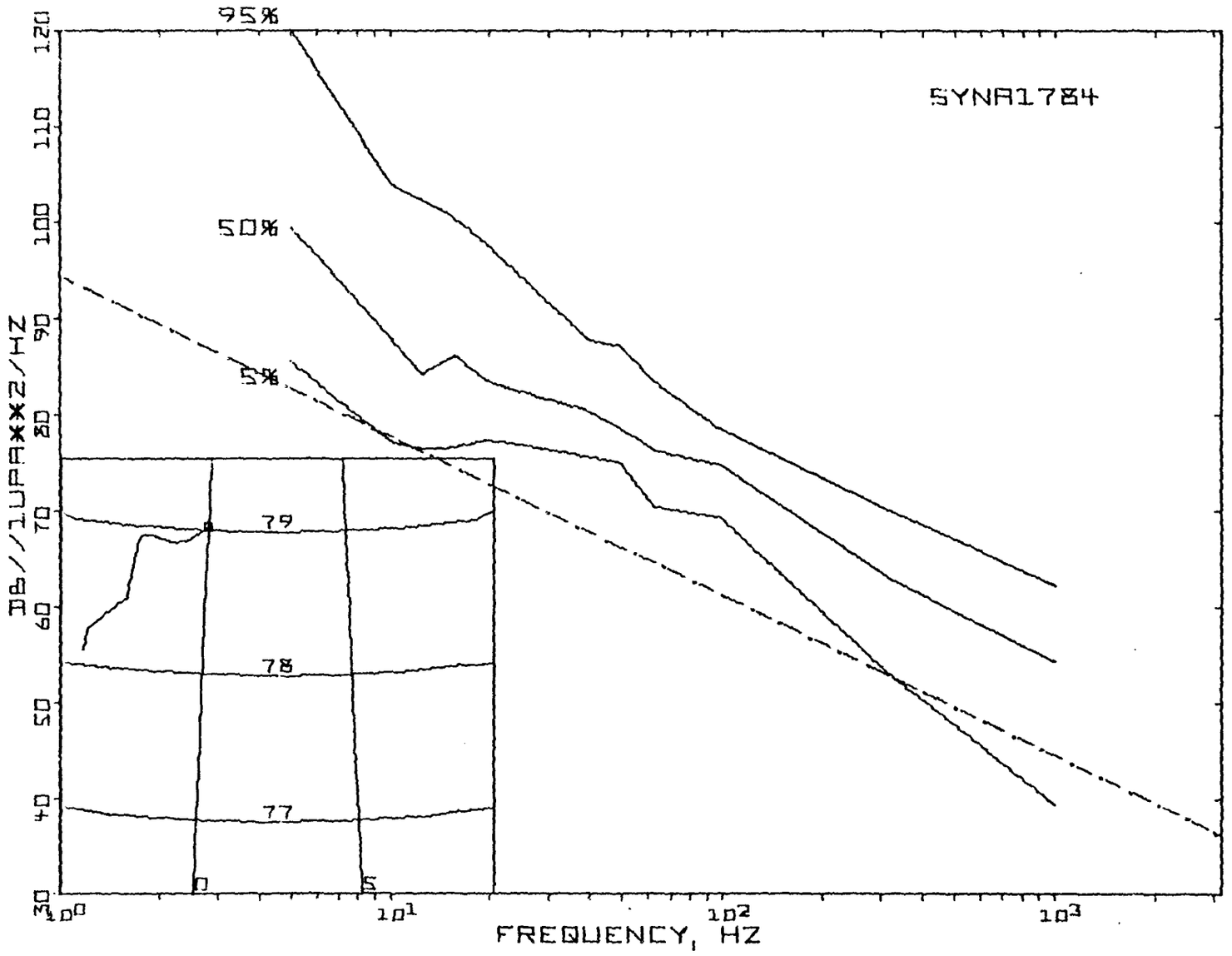
BUOY 1784 23-29 JUN 82 DEPTH 30 FT



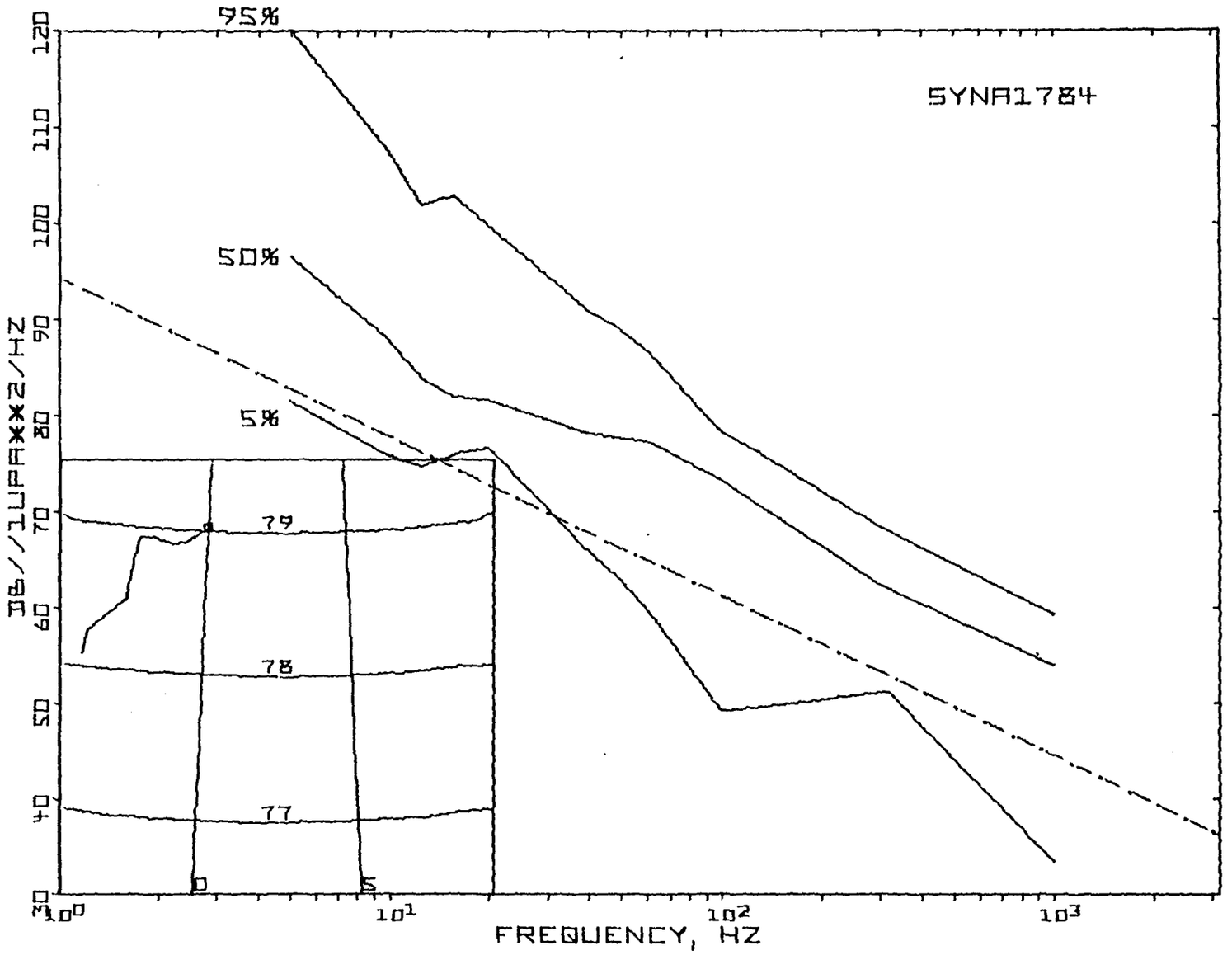
BUOY 1784 7-13 JUL 82 DEPTH 30 FT



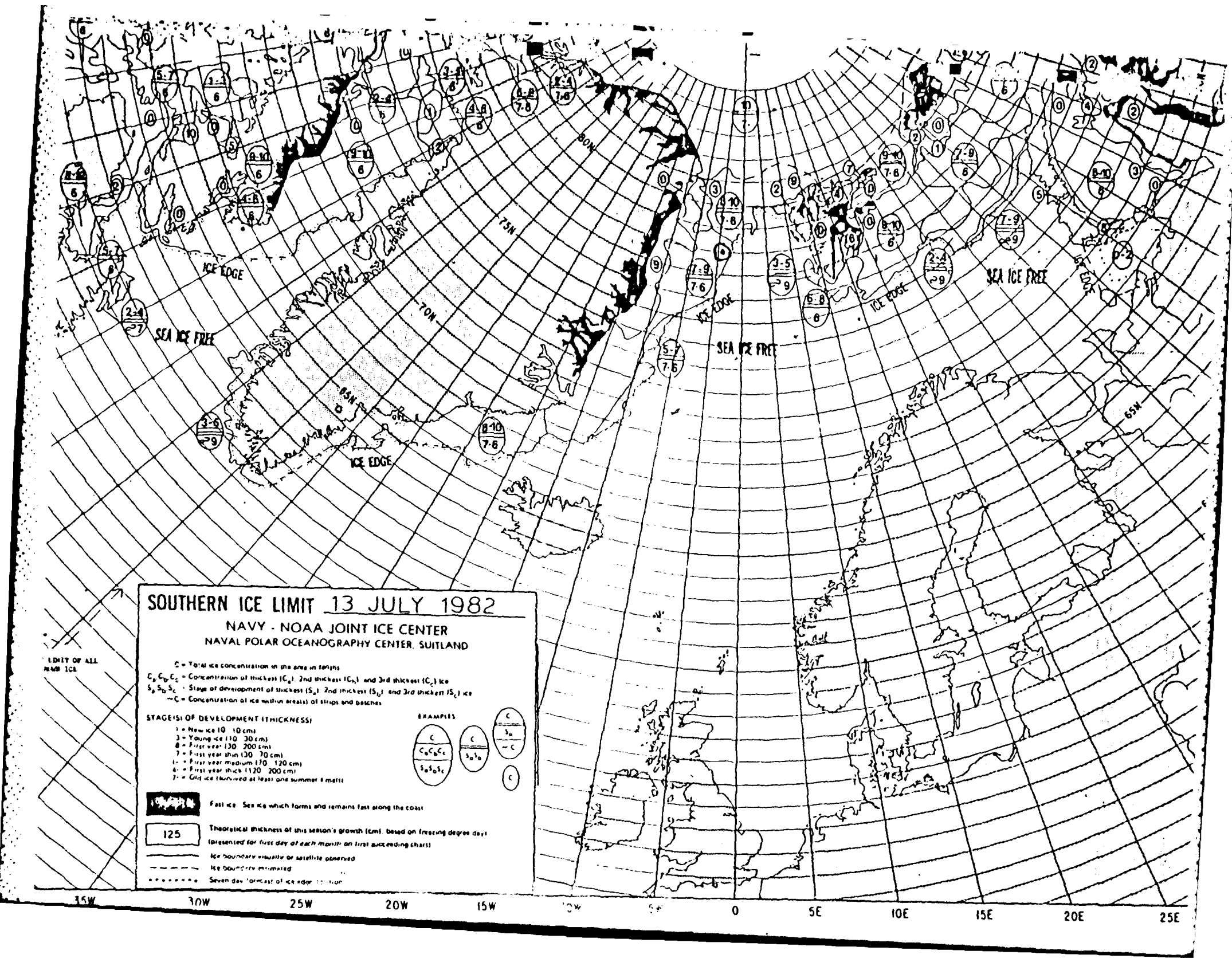
BUOY 1784 7-13 JUL 82 DEPTH 100 FT



BUOY 1784 7-13 JUL 82 DEPTH 200 FT



BUOY 1784 7-13 JUL 82 DEPTH 300 FT


SOUTHERN ICE LIMIT 13 JULY 1982
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
$C_a C_b C_c$ = Concentration of thickest (C_a), 2nd thickest (C_b) and 3rd thickest (C_c) ice
$S_a S_b S_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b) and 3rd thickest (S_c) ice
~C = Concentration of ice within area(s) of strips and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
5 = First year medium (70 - 120 cm)
6 = First year thick (120 - 200 cm)
7 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice - Sea ice which forms and remains fast along the coast
125
Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart)
Ice boundary visually or satellite observed
Ice boundary estimated
Seven day forecast of ice edge position
LIMIT OF ALL NAVAL ICE
ICE EDGE
SEA ICE FREE
80N
75N
70N
65N
35W
30W
25W
20W
15W
10W
5W
0
5E
10E
15E
20E
25E

DATES: 14-20 JUL 82 BUOY: 1784

OUTPUT IN FILE SYNA1784

DISPLACEMENT (N. MI.): 70.279 NORTH: -65.160 EAST: 26.332
DIRECTION (TRUE): 158.008

THE NUMBER OF DATA SAMPLES IS 56

DEPTH = 30FT

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	84.0	5.7	74.7	76.5	76.5	79.3	82.5	87.4	91.3	93.4	101.6	56
10.0	72.7	7.9	62.1	63.6	64.2	65.4	71.4	76.8	83.4	87.6	93.7	56
12.5	72.5	5.0	66.6	67.5	67.5	69.1	71.0	74.4	78.6	80.4	92.4	56
15.6	71.1	5.1	65.0	66.3	66.9	67.5	69.4	72.9	76.3	79.5	90.4	56
20.0	70.6	4.6	62.9	63.7	65.8	67.0	69.8	73.0	75.8	77.2	86.1	56
40.0	70.8	3.7	63.1	64.9	66.9	68.1	70.0	72.3	76.1	76.9	82.9	56
50.0	72.4	3.3	66.2	66.2	69.1	69.7	72.2	74.5	76.3	78.3	79.9	56
63.0	72.6	3.2	67.6	68.9	68.9	70.1	72.0	73.6	76.1	78.1	81.0	56
100.0	71.9	3.1	66.9	67.5	68.1	69.7	71.5	74.1	75.7	77.5	78.9	56
320.0	62.9	2.8	58.5	58.5	59.3	60.6	62.8	64.5	66.6	67.8	68.8	56
1000.0	50.4	3.3	44.4	45.1	45.7	47.9	50.4	52.9	53.9	55.7	57.8	56

THE NUMBER OF DATA SAMPLES IS 56

DEPTH = 100FT

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	89.0	7.8	75.6	79.1	80.7	85.2	88.5	91.2	96.6	99.7	124.0	56
10.0	78.0	6.5	68.3	69.9	70.8	73.7	76.8	79.7	86.4	89.7	100.0	56
12.5	77.2	5.0	70.5	71.3	73.4	74.0	75.6	78.8	83.4	87.7	96.2	56
15.6	77.5	3.9	70.7	73.5	73.5	75.5	76.7	78.6	80.9	85.5	94.2	56
20.0	80.4	2.5	76.1	77.3	77.9	78.9	79.8	81.4	83.9	83.9	90.0	56
40.0	79.0	2.8	72.7	74.6	75.5	76.9	78.7	80.7	82.3	84.2	86.7	56
50.0	78.9	2.3	73.4	74.4	76.2	77.6	78.9	80.5	80.5	81.4	86.5	56
63.0	78.3	2.6	72.9	73.9	74.8	76.4	78.4	80.0	81.7	82.5	83.8	56
100.0	77.6	2.3	73.1	73.1	75.0	75.9	77.3	79.1	80.1	81.0	84.0	56
320.0	64.8	2.4	60.5	61.4	61.4	62.2	64.9	66.5	67.4	67.4	71.5	56
1000.0	52.2	3.1	46.5	46.5	48.1	50.0	51.6	54.8	56.1	56.6	60.1	56

DATES: 14-20 JUL 82 BUOY: 1784

THE NUMBER OF DATA SAMPLES IS 56

DEPTH = 200FT

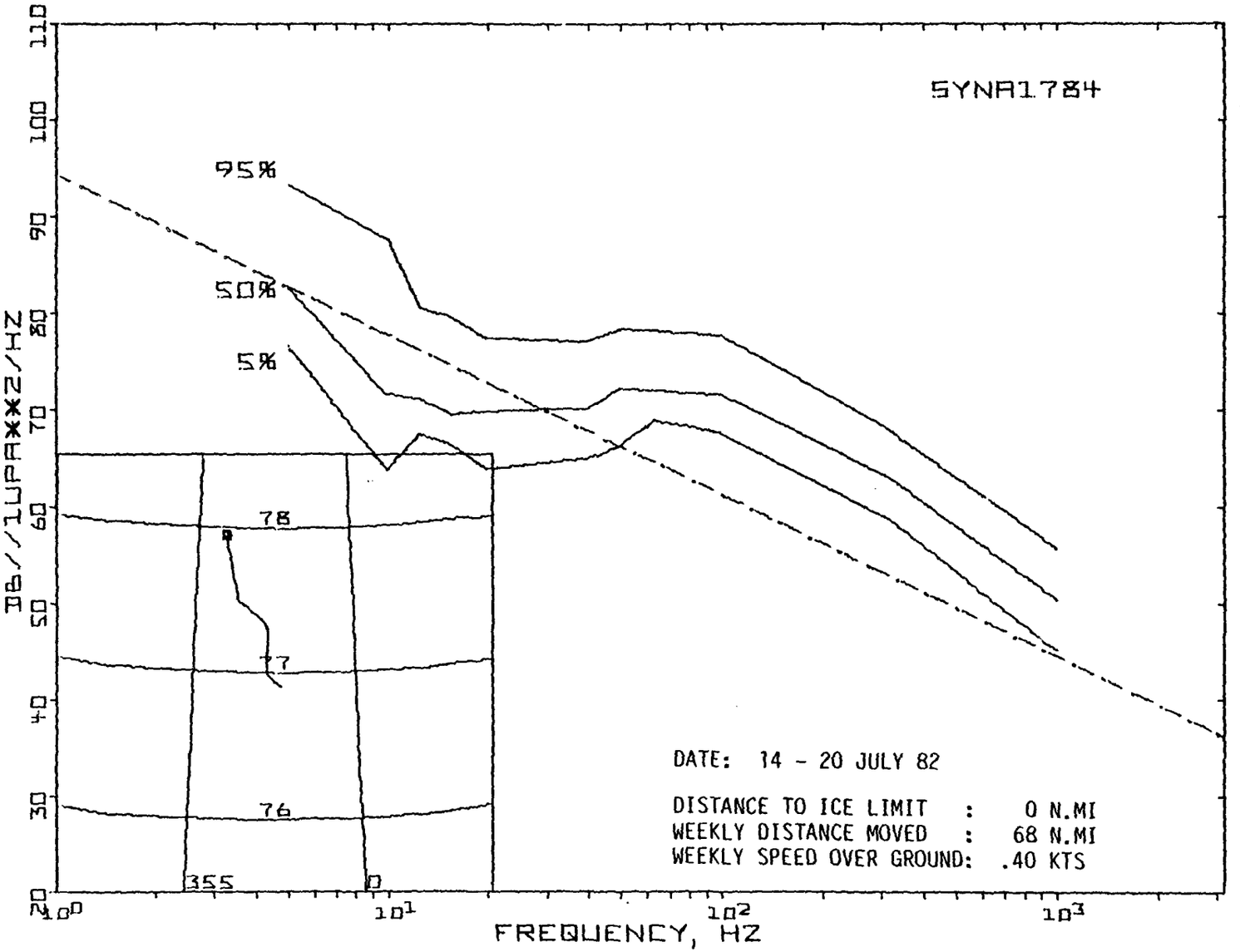
FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	102.2	10.8	86.8	87.4	89.9	94.0	100.0	107.4	119.0	124.0	124.0	5
10.0	93.0	10.7	77.8	78.8	80.6	83.8	89.9	101.9	106.7	108.2	122.0	5
12.5	90.4	9.1	76.9	79.1	80.9	83.0	87.7	98.1	102.2	104.4	109.3	56
15.6	89.0	8.1	75.5	78.0	80.5	81.6	86.6	95.3	101.4	103.0	105.0	5
20.0	87.1	6.8	77.3	78.0	80.0	81.6	86.6	90.8	98.6	99.6	101.4	5
40.0	81.6	5.0	74.3	75.0	75.6	78.1	80.3	84.1	89.2	91.7	92.9	56
50.0	81.3	4.5	74.2	74.2	75.6	77.4	80.2	84.5	88.3	89.5	91.4	56
63.0	78.6	3.9	73.0	73.0	73.7	75.7	78.2	81.1	83.3	86.5	87.7	5
100.0	74.1	4.7	63.8	65.4	67.1	70.4	75.8	77.4	78.3	79.9	80.6	5
320.0	61.0	5.4	51.8	51.8	52.8	55.7	62.3	65.6	67.7	68.3	68.9	56
1000.0	48.5	8.6	24.4	32.3	36.0	41.5	50.1	55.2	58.4	59.1	60.2	5

THE NUMBER OF DATA SAMPLES IS 56

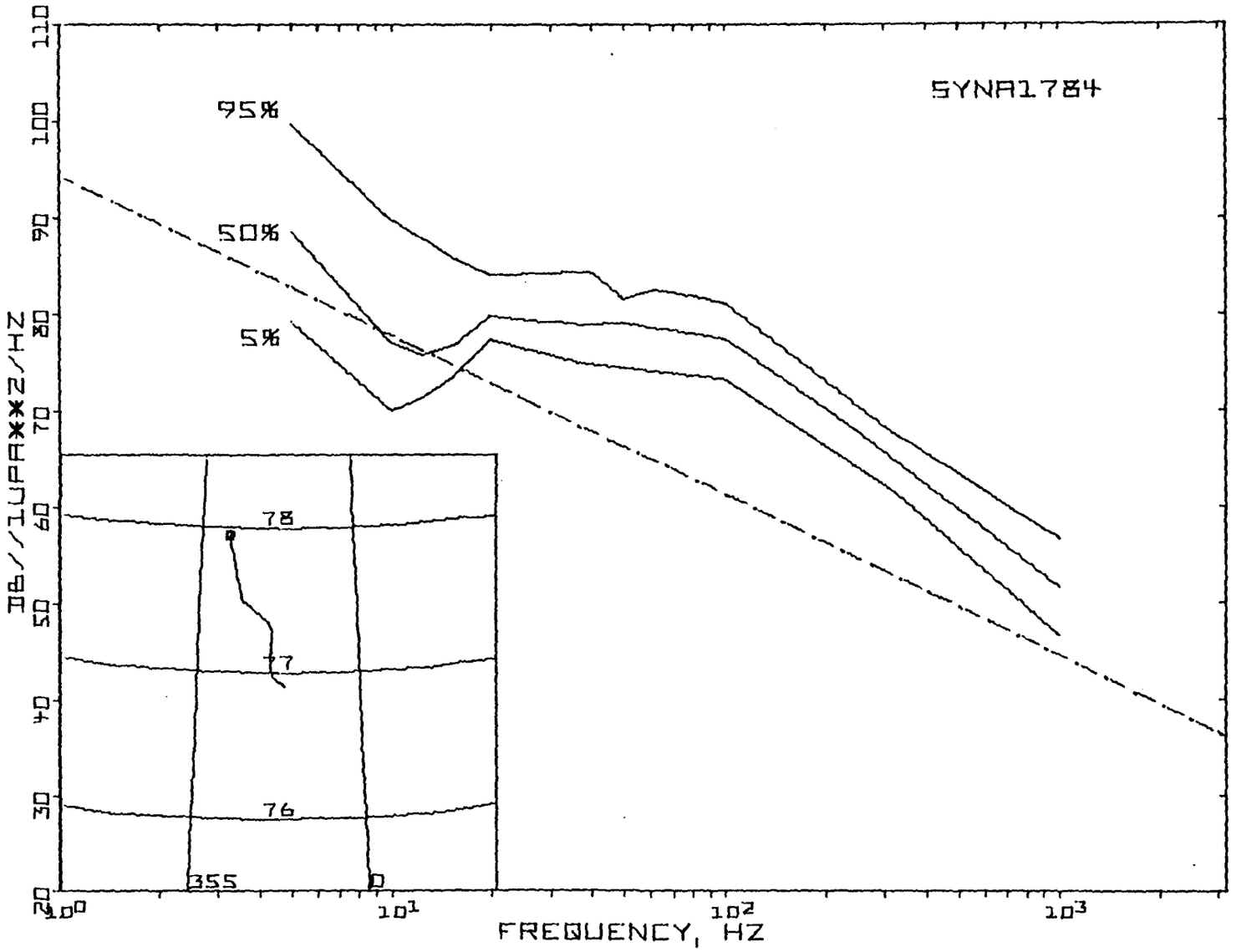
DEPTH = 300FT

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	99.6	13.7	79.7	82.2	83.0	87.3	99.3	107.4	124.0	124.0	124.0	56
10.0	93.4	13.9	74.0	75.6	76.9	80.9	88.3	107.3	112.4	112.4	116.9	5
12.5	88.9	11.3	72.7	74.5	75.8	77.7	85.7	101.8	102.8	102.8	104.9	5
15.6	89.5	10.7	75.2	76.8	77.7	80.0	84.6	101.8	103.7	103.7	104.4	56
20.0	87.8	9.3	75.5	77.1	77.4	79.7	82.6	98.4	99.6	100.6	101.6	5
40.0	82.3	7.3	64.8	71.6	73.6	76.3	81.0	88.9	90.8	91.6	92.4	5
50.0	82.1	6.7	62.7	68.1	75.3	77.4	80.5	88.1	90.0	90.6	91.6	56
63.0	80.3	5.9	63.7	69.1	72.8	76.3	79.9	84.9	86.8	88.4	89.1	56
100.0	75.2	6.4	54.9	62.3	65.5	72.1	76.9	79.1	80.9	82.3	84.1	5
320.0	59.4	6.2	35.9	51.8	52.9	54.9	58.9	64.4	66.9	67.7	70.4	5
1000.0	48.9	10.2	30.4	30.4	33.4	40.9	51.6	55.2	56.7	59.2	74.8	38

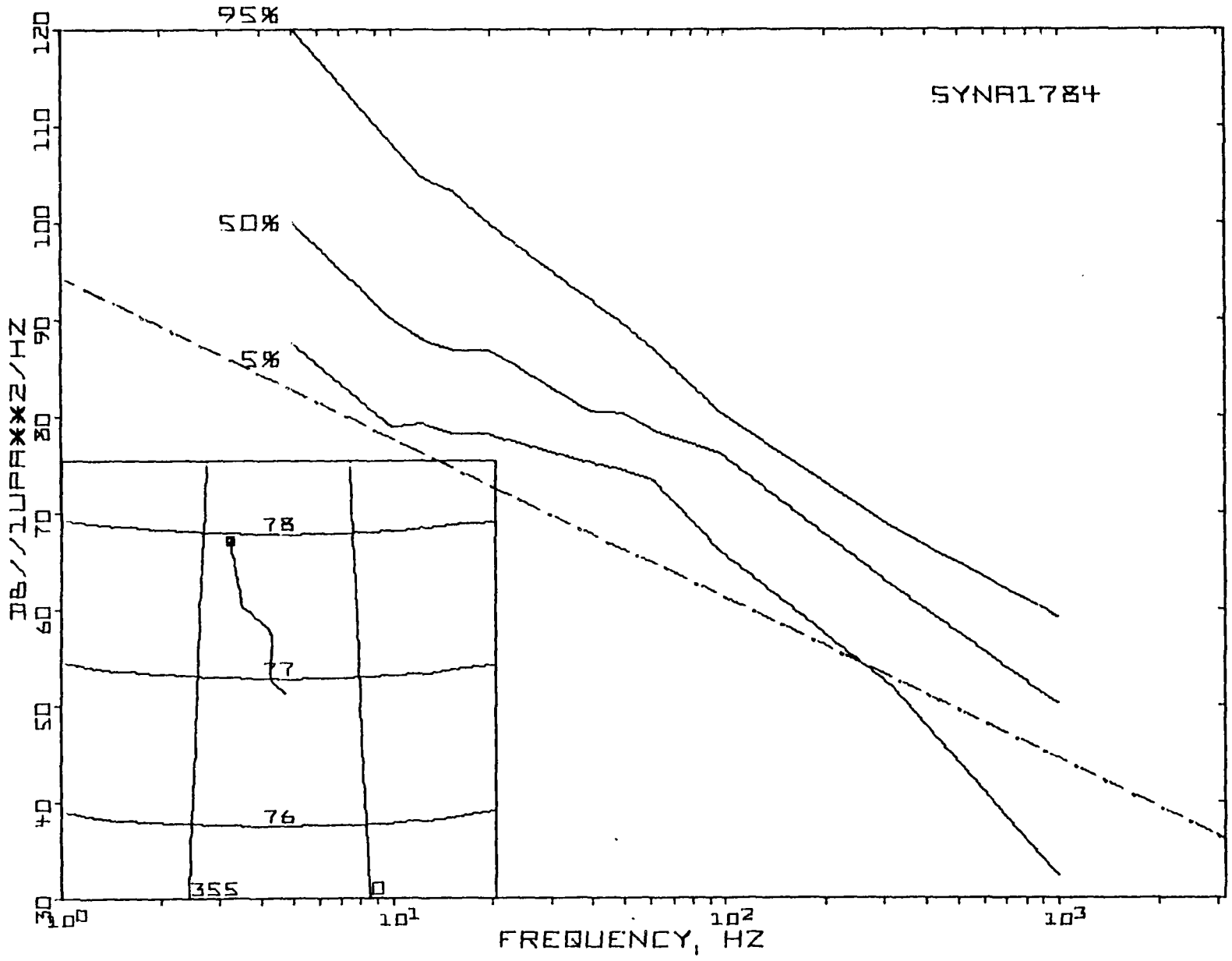
STOP



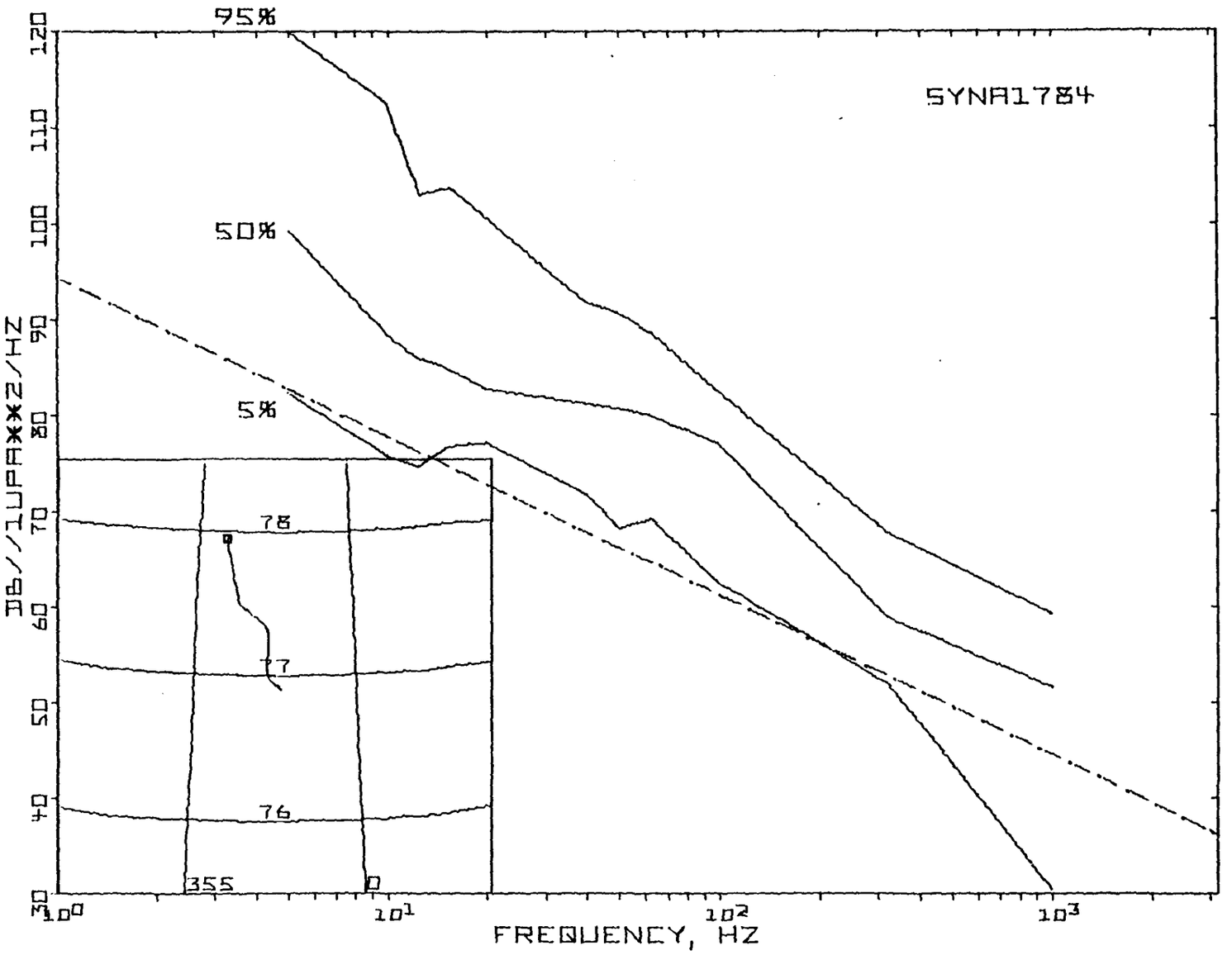
BUOY 1784 14-20 JUL 82 DEPTH 30 FT



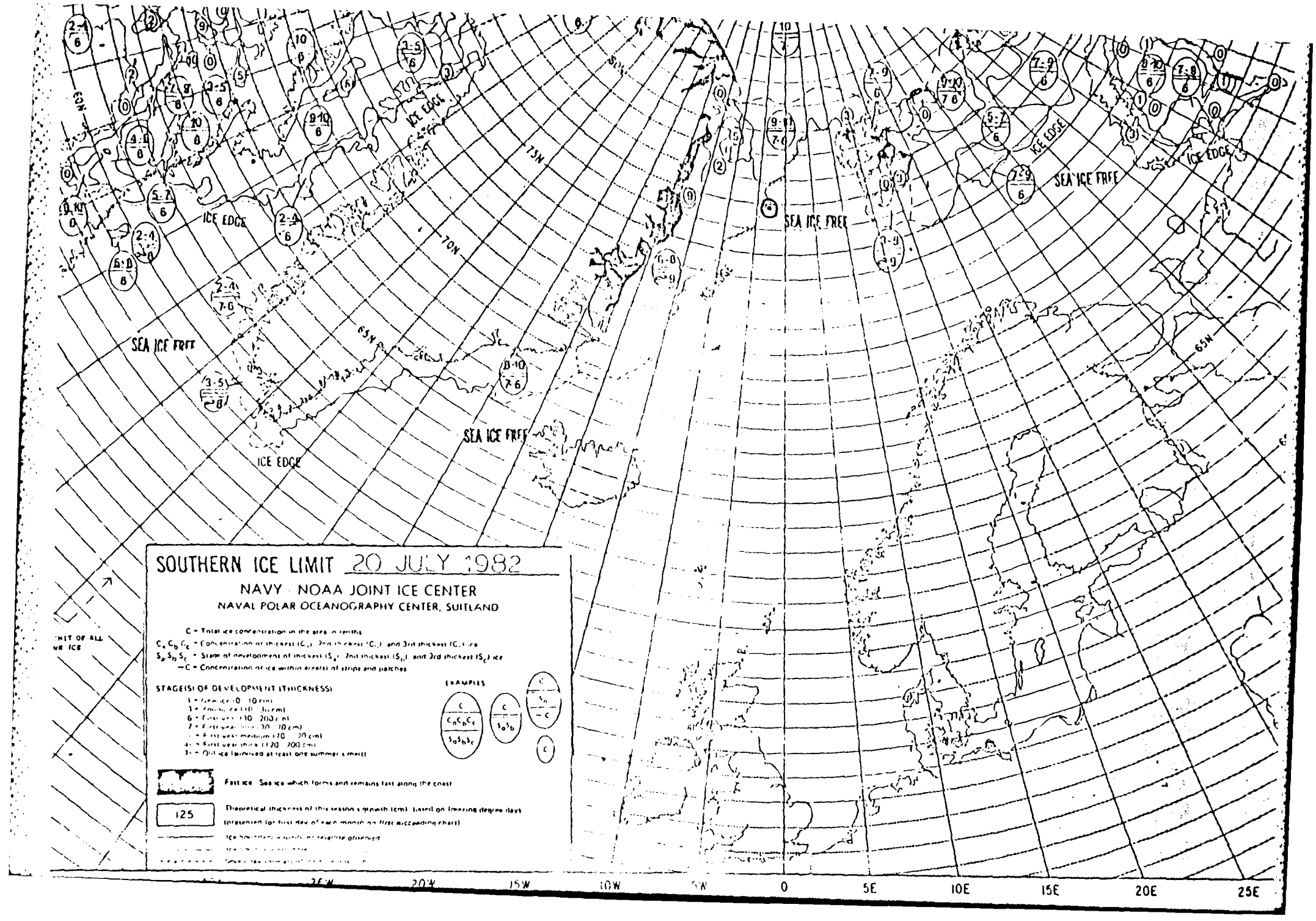
BUOY 1784 14-20 JUL 82 DEPTH 100 FT



BUOY 1784 14-20 JUL 82 DEPTH 200 FT



BUOY 1784 14-20 JUL 82 DEPTH 300 FT


SOUTHERN ICE LIMIT 20 JULY 1982
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
$C_a C_b C_c$ = Concentration of thickest (C_a), 2nd thickest (C_b) and 3rd thickest (C_c) ice
$S_a S_b S_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b) and 3rd thickest (S_c) ice
—C = Concentration of ice within area(s) of strips and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
EXAMPLES
Fast ice - Sea ice which forms and remains fast along the coast
125
Theoretical thickness of this season's growth (cm), based on freezing degree days
(presented for first day of each month on three succeeding charts)
ICE EDGE
SEA ICE FREE
80N
75N
70N
65N
60N
25W
20W
15W
10W
5W
0
5E
10E
15E
20E
25E

): 21-27 JUL 82 BUOY: 1784

JT IN FILE SYNA1784

LACEMENT (N. MI.): 20.015 NORTH: -19.860 EAST: 2.491
CTION (TRUE): 172.867

NUMBER OF DATA SAMPLES IS 25

H = 30FT

QUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	100.5	8.7	84.5	84.5	90.5	95.6	99.4	106.3	108.0	112.8	124.0	25
10.0	89.3	9.4	72.4	72.4	78.4	80.9	88.3	95.5	100.9	104.5	108.9	25
12.5	86.3	8.5	71.6	71.6	76.4	77.6	87.8	92.4	94.5	99.2	102.7	25
15.6	85.0	7.7	72.3	72.3	72.9	78.4	85.6	89.8	91.6	95.8	101.1	25
20.0	83.7	7.0	72.4	72.4	74.0	76.5	83.9	87.0	92.1	97.1	98.1	25
40.0	78.6	5.4	70.9	70.9	72.3	73.6	77.7	81.2	82.9	88.9	91.6	25
50.0	78.7	5.3	71.3	71.3	72.2	73.1	77.4	83.4	84.3	87.8	90.3	25
63.0	79.1	4.0	72.9	72.9	73.6	75.6	79.7	81.6	82.2	87.0	87.6	25
100.0	75.8	3.2	71.5	71.5	72.2	72.9	74.7	77.5	79.6	81.8	82.7	25
320.0	66.9	3.4	59.3	59.3	63.7	64.5	66.6	68.8	70.6	72.0	74.8	25
000.0	58.8	4.6	52.9	52.9	53.9	55.7	57.1	60.9	64.4	67.7	69.8	25

NUMBER OF DATA SAMPLES IS 25

TH = 100FT

EQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	96.0	9.5	83.9	83.9	86.8	89.3	91.8	101.3	104.8	115.5	124.0	25
10.0	86.3	8.1	74.3	74.3	76.8	79.1	83.7	94.9	97.2	98.4	99.0	25
12.5	85.3	7.2	76.5	76.5	78.1	80.0	82.5	88.6	96.9	98.7	99.7	25
15.6	84.6	7.0	76.7	76.7	77.7	78.6	82.7	86.9	94.8	96.7	101.8	25
20.0	84.3	5.9	72.9	72.9	78.9	80.7	83.9	87.5	88.8	94.8	100.2	25
40.0	80.9	4.9	72.7	72.7	73.7	76.2	80.7	84.2	85.8	89.6	90.2	25
50.0	81.8	4.3	73.4	73.4	76.9	78.9	81.4	83.6	87.4	89.0	90.3	25
63.0	80.0	5.2	66.9	66.9	72.9	76.4	80.9	82.5	86.9	87.7	87.7	25
100.0	80.4	4.8	70.6	70.6	75.0	77.9	78.5	84.6	86.2	87.1	92.4	25
320.0	67.2	7.4	49.3	49.3	53.4	62.2	69.0	70.9	71.5	77.5	78.5	25
000.0	55.8	8.4	31.1	31.1	43.4	51.6	58.6	60.1	60.8	68.1	68.7	25

3: 21-27 JUL 82 BUOY: 1784

NUMBER OF DATA SAMPLES IS 25

H = 200FT

QUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	102.3	8.7	88.0	88.0	88.8	95.0	101.9	106.2	113.6	113.6	124.0	4
10.0	96.0	14.8	55.8	55.8	81.3	85.4	96.9	100.1	114.2	122.0	122.0	5
12.5	89.3	10.0	67.8	67.8	71.2	81.0	90.2	95.0	103.2	104.4	104.4	24
15.6	88.4	10.5	70.1	70.1	74.5	79.6	88.5	96.8	103.7	104.4	105.0	25
20.0	86.2	10.7	62.6	62.6	71.4	78.6	87.6	96.1	98.6	99.6	100.5	5
40.0	76.6	15.8	41.1	41.1	51.0	63.2	83.2	87.0	90.9	91.7	93.7	25
50.0	78.3	10.0	51.9	51.9	60.8	71.4	80.2	85.4	90.5	90.5	90.5	23
63.0	78.9	7.2	60.9	60.9	65.8	76.2	79.8	85.0	85.8	85.8	87.1	2
00.0	69.7	10.5	49.1	49.1	52.7	62.6	71.4	78.3	79.9	82.4	88.5	22
20.0	58.1	9.3	45.7	45.7	45.7	49.2	55.0	67.1	70.8	71.7	73.1	22
00.0	47.3	10.7	24.4	24.4	32.3	42.7	46.4	59.7	60.2	60.2	64.5	3

NUMBER OF DATA SAMPLES IS 25

TH = 300FT

EQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	105.5	10.6	87.8	87.8	89.2	92.3	107.4	109.6	115.2	124.0	124.0	25
10.0	100.2	10.5	83.2	83.2	85.7	87.7	102.2	106.1	112.4	116.9	116.9	5
12.5	94.3	8.6	80.0	80.0	80.6	83.7	97.7	100.6	101.8	103.9	104.9	5
15.6	94.5	9.4	75.8	75.8	80.9	83.8	98.1	101.8	103.7	104.4	104.4	25
20.0	91.2	8.7	71.1	71.1	78.4	81.0	91.8	99.6	99.6	100.6	100.6	5
40.0	83.6	9.2	63.9	63.9	68.3	76.8	87.7	89.9	91.6	92.4	93.0	25
50.0	80.5	8.5	62.7	62.7	67.3	75.3	80.5	86.5	90.6	91.6	91.6	25
63.0	79.1	8.3	63.0	63.0	64.9	75.6	79.9	85.9	88.4	89.1	89.1	25
100.0	73.2	9.0	48.0	48.0	60.0	68.0	76.3	79.1	82.3	83.0	83.6	5
320.0	59.1	6.8	44.6	44.6	46.8	54.9	58.4	61.7	69.8	70.4	71.0	24
000.0	49.6	8.9	30.4	30.4	36.0	42.7	51.6	54.6	59.9	61.2	61.7	18

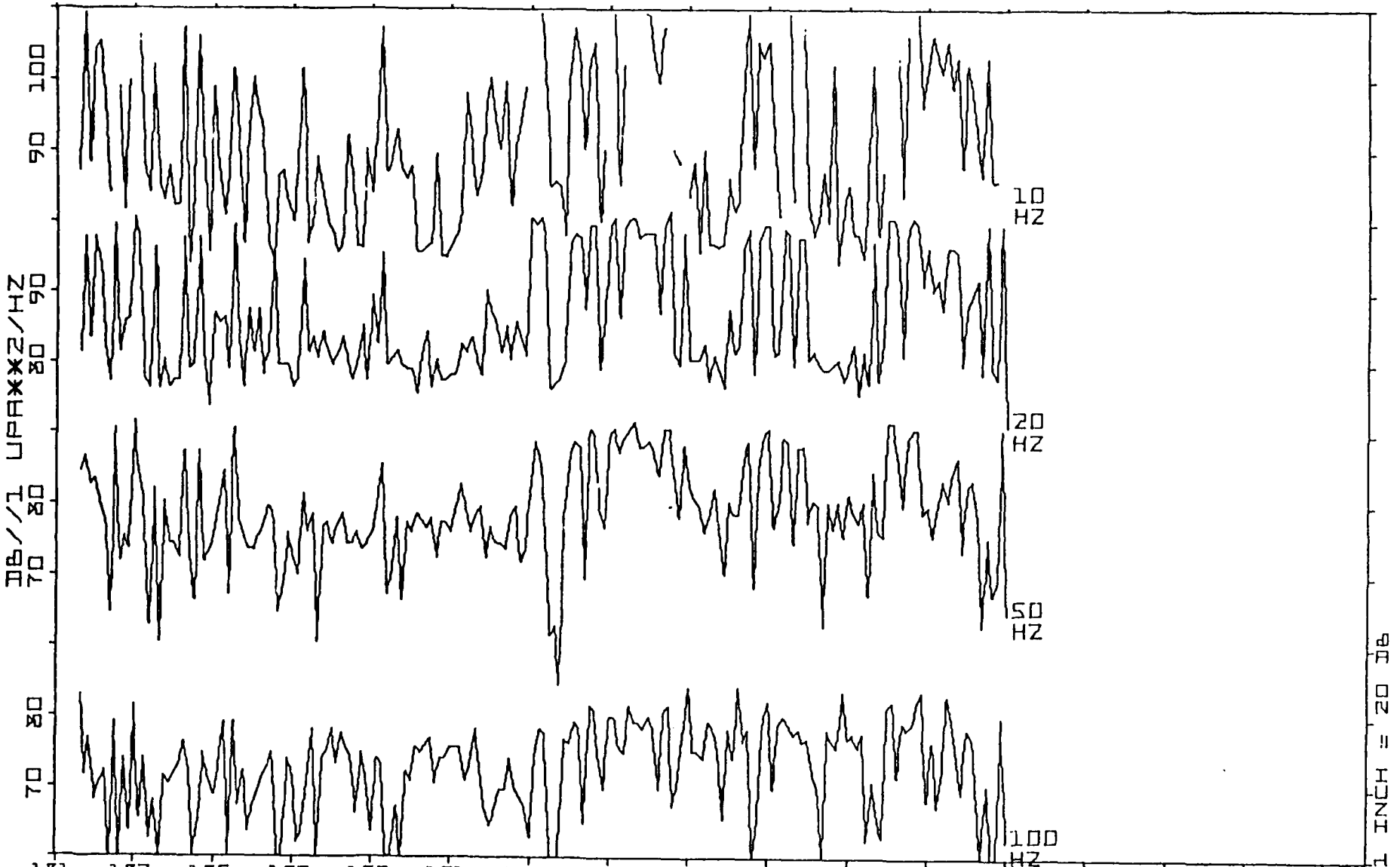
APPENDIX 6

Date Buoy I.D. 2888

Life in Reporting Area 2 (West Greenland Sea)

1 Dec 1983 - 30 Apr 1984

Type: SYNARGOS (5 - 320 Hz)

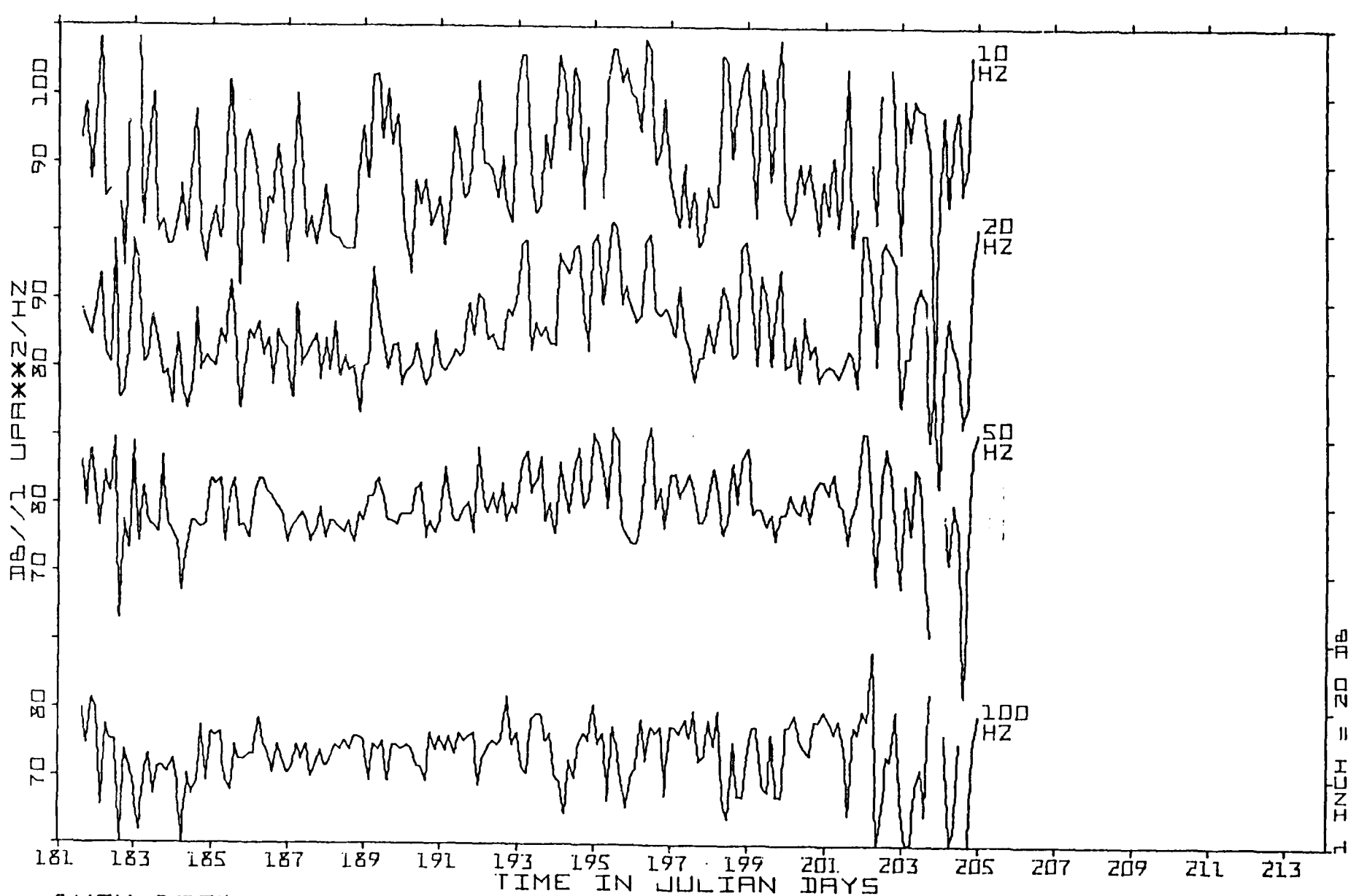


BUOY 1784

JULY 1982

NOISE LEVEL VS TIME

DEPTH 300 FT

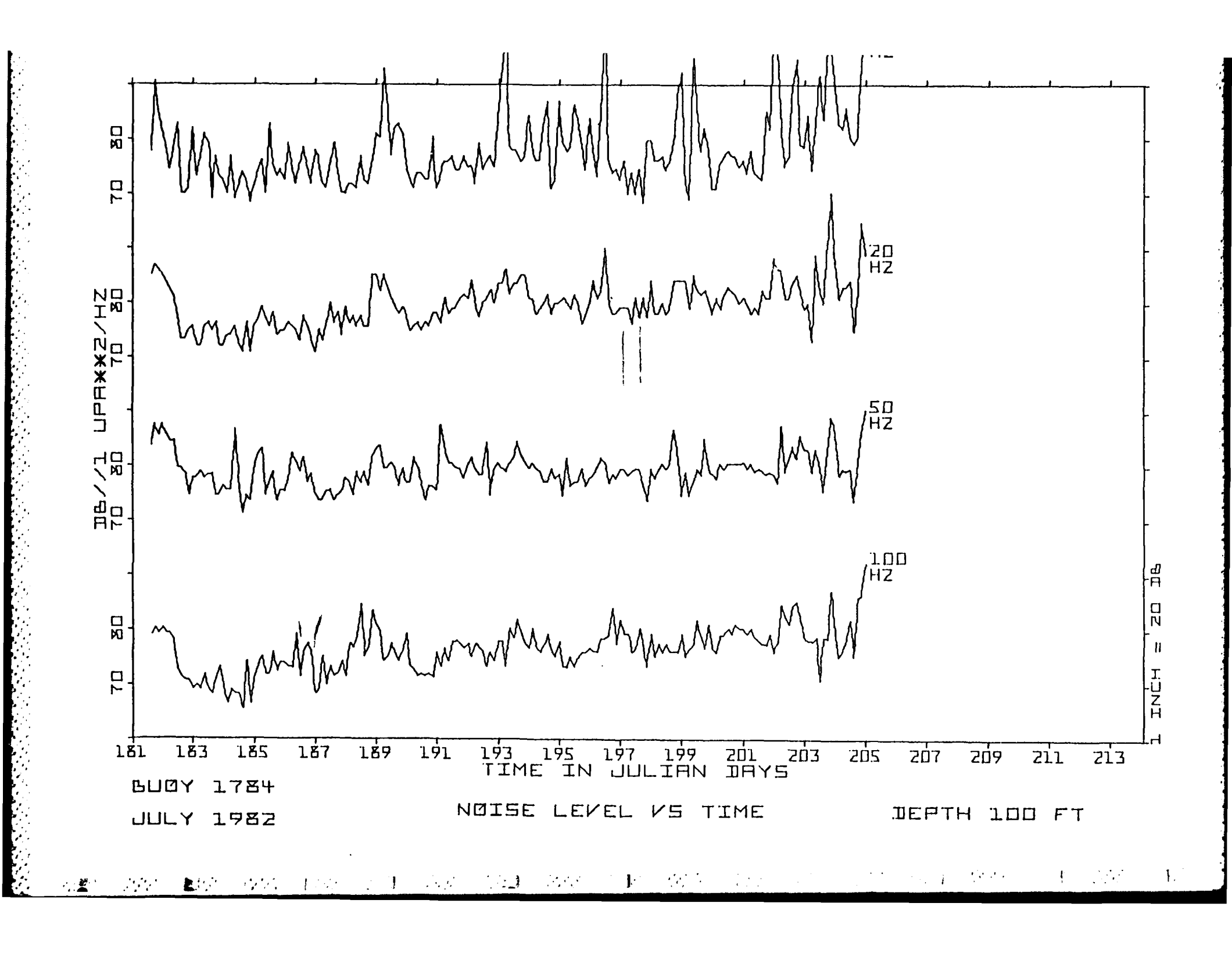


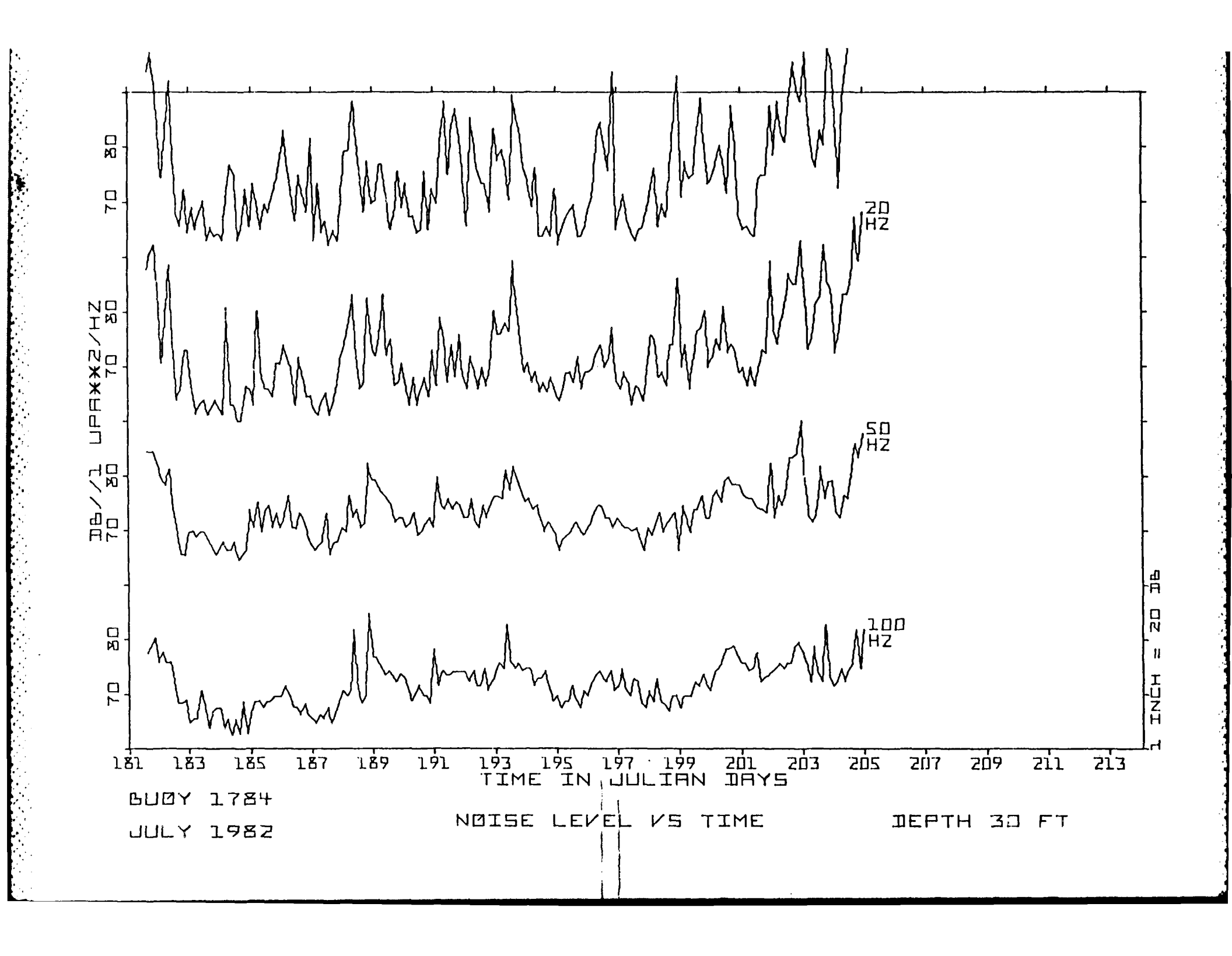
BUOY 1784

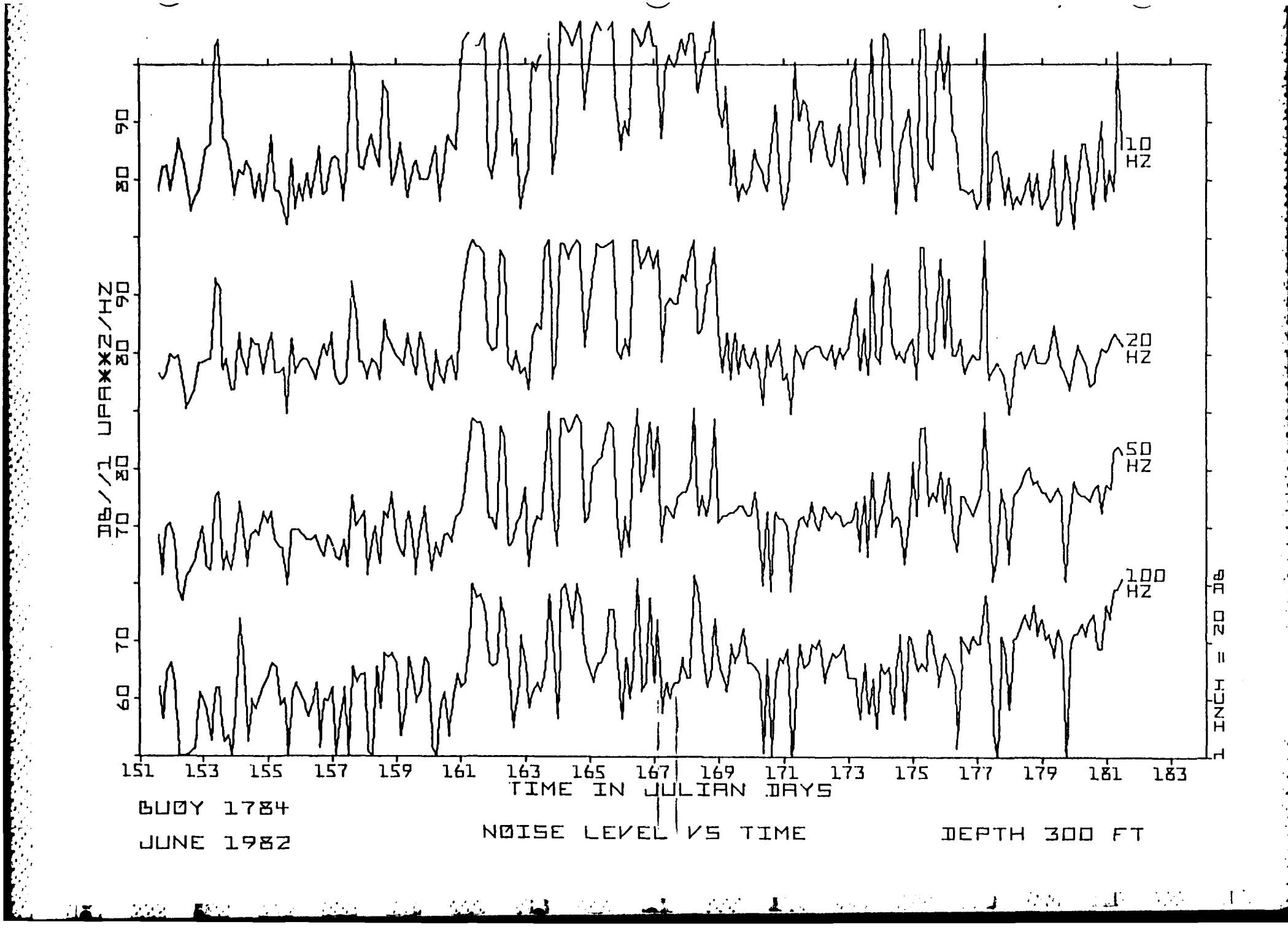
JULY 1982

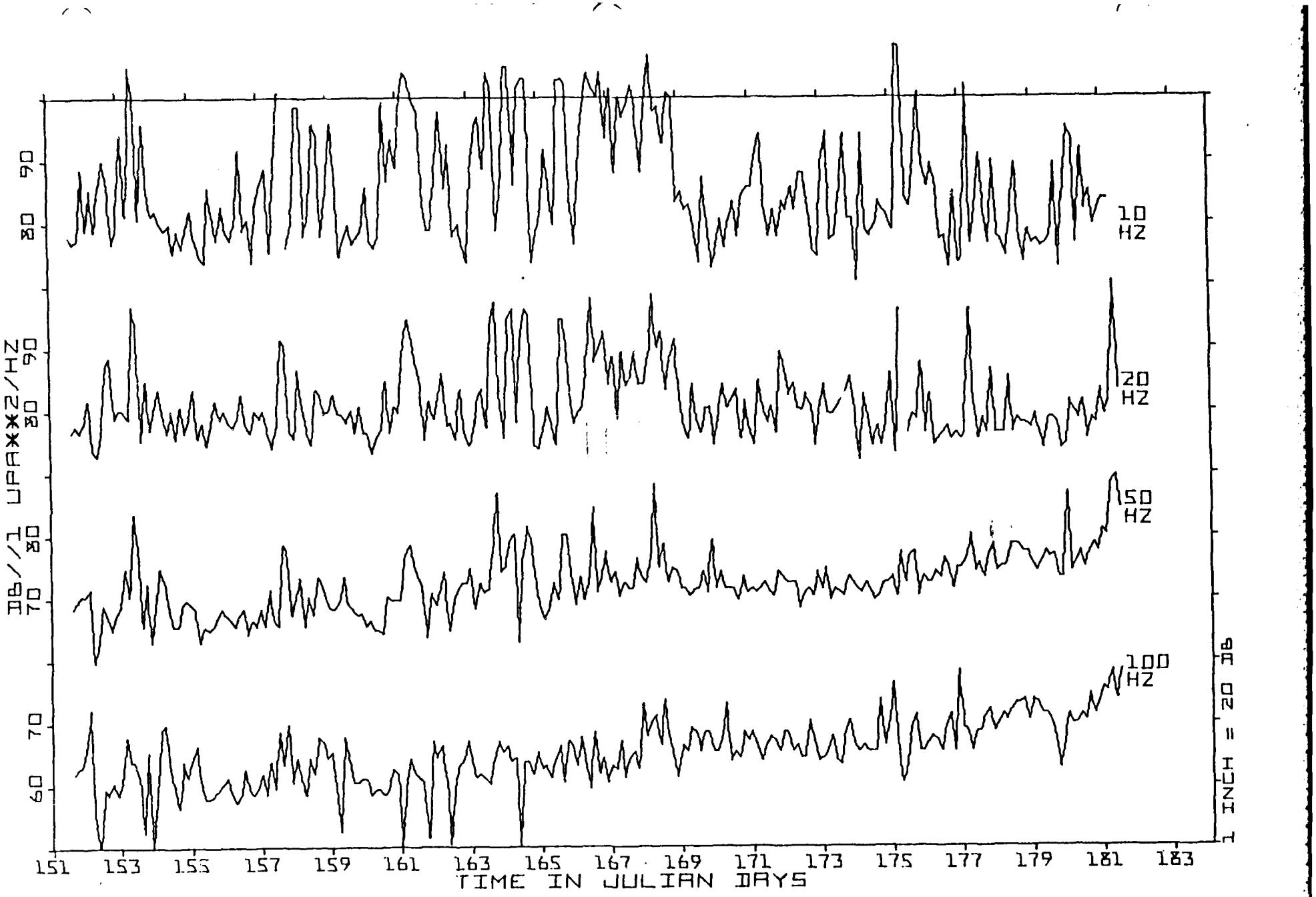
NOISE LEVEL VS TIME

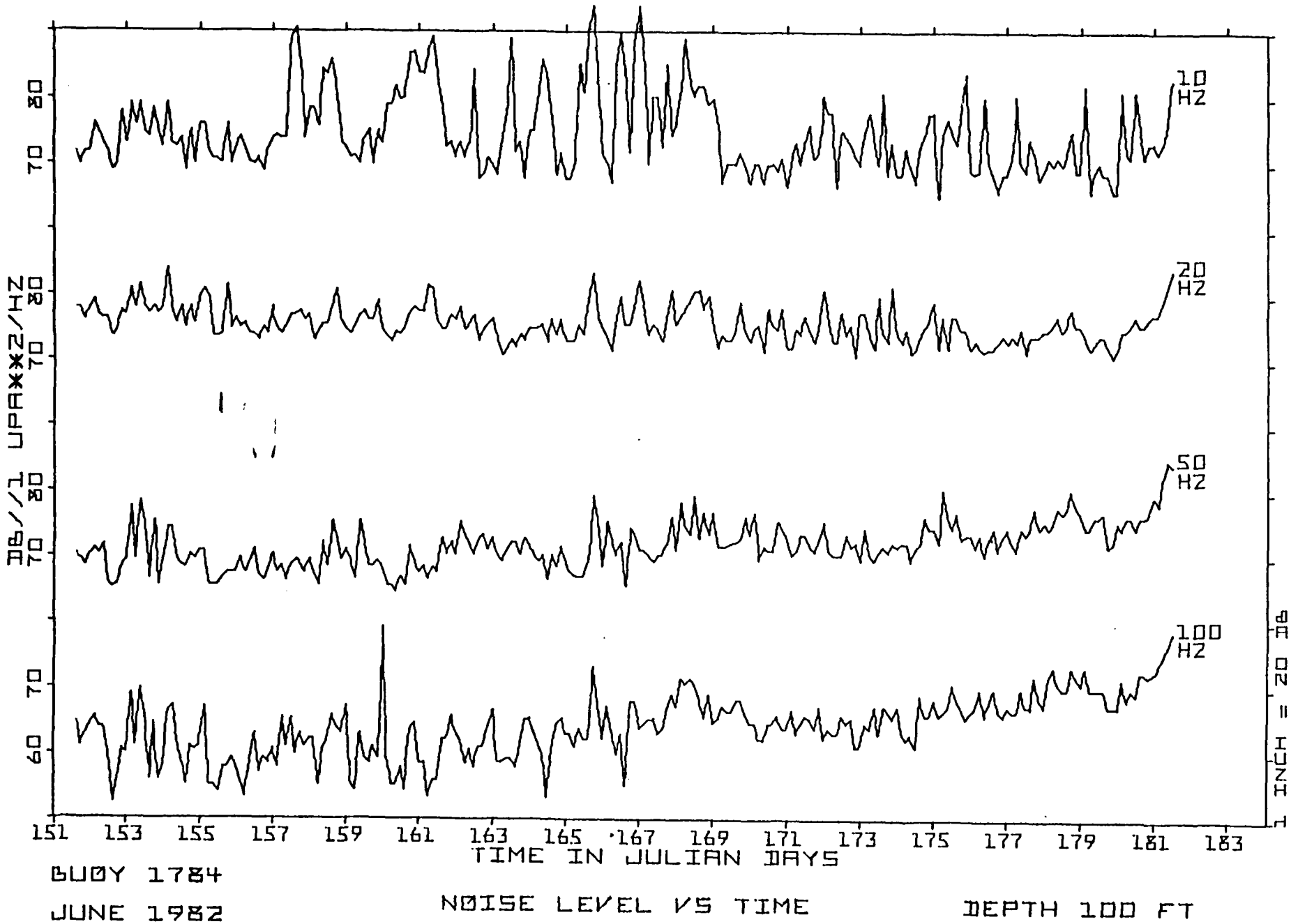
DEPTH 200 FT

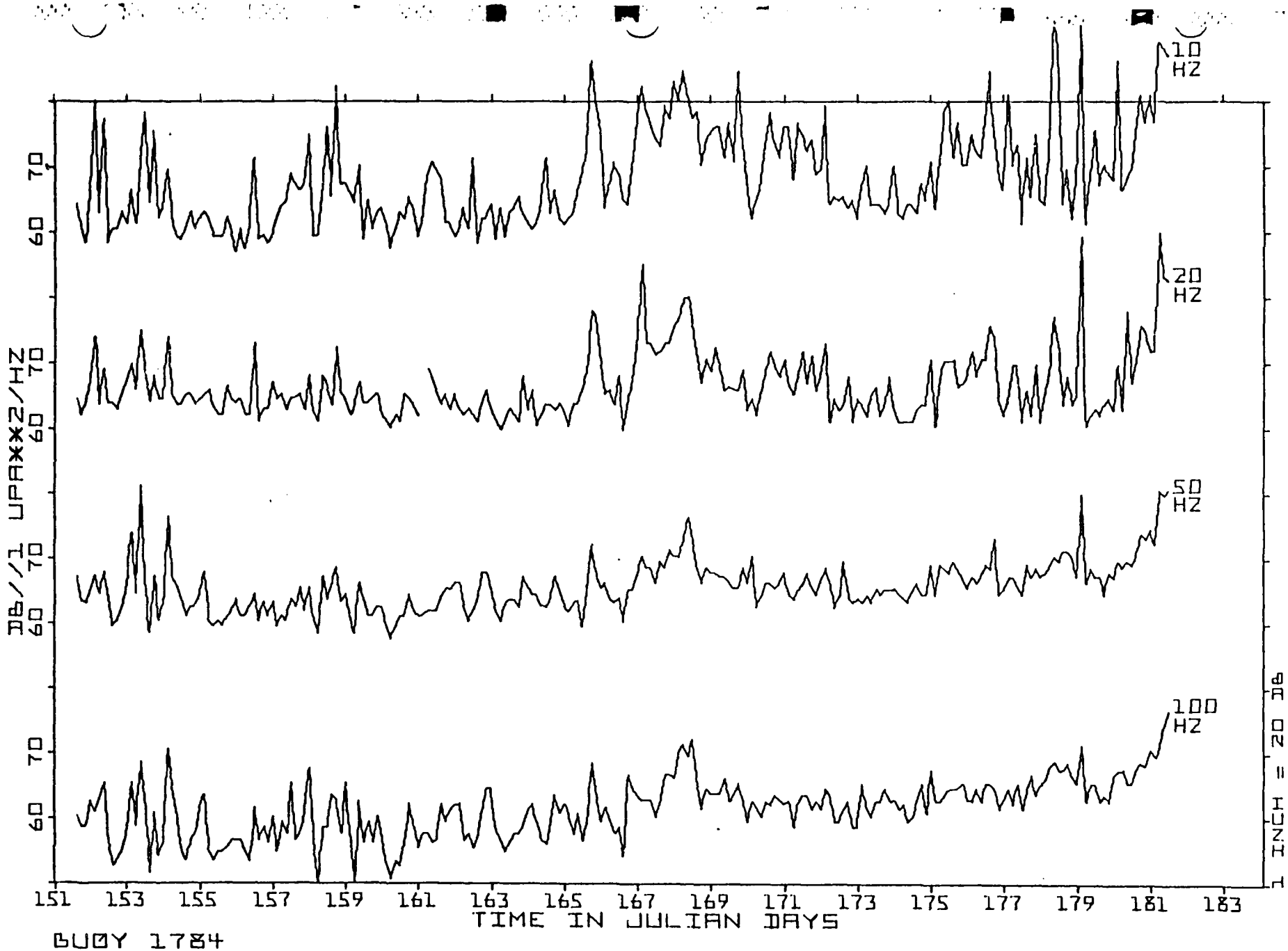

DB//1 UPA**2/HZ
70
80
20 HZ
50 HZ
100 HZ
1 INCH = 20 DB
181 183 185 187 189 191 193 195 197 199 201 203 205 207 209 211 213
TIME IN JULIAN DAYS
BUOY 1784
JULY 1982
NOISE LEVEL VS TIME
DEPTH 100 FT


DB//1 UPA**2/HZ
70 80
20 HZ
50 HZ
100 HZ
1 INCH = 20 DB
181 183 185 187 189 191 193 195 197 199 201 203 205 207 209 211 213
TIME IN JULIAN DAYS
BUOY 1784
JULY 1982
NOISE LEVEL VS TIME
DEPTH 30 FT


DB/1 UPA**2/HZ
60
70
80
90
70
80
90
10 HZ
20 HZ
50 HZ
100 HZ
1 INCH = 20 DB
151 153 155 157 159 161 163 165 167 169 171 173 175 177 179 181 183
TIME IN JULIAN DAYS
BUOY 1784
JUNE 1982
NOISE LEVEL VS TIME
DEPTH 300 FT


DB//1 UPA**2/HZ
90
80
90
80
80
70
70
60
10 HZ
20 HZ
50 HZ
100 HZ
1 INCH = 20 DB
151 153 155 157 159 161 163 165 167 169 171 173 175 177 179 181 183
TIME IN JULIAN DAYS
BUOY 1784
JUNE 1982
NOISE LEVEL VS TIME
DEPTH 200 FT


DB//1 UPA**2/HZ
80
70
80
70
80
70
70
60
10 HZ
20 HZ
50 HZ
100 HZ
1 INCH = 20 DB
151 153 155 157 159 161 163 165 167 169 171 173 175 177 179 181 183
TIME IN JULIAN DAYS
BUOY 1784
JUNE 1982
NOISE LEVEL VS TIME
DEPTH 100 FT

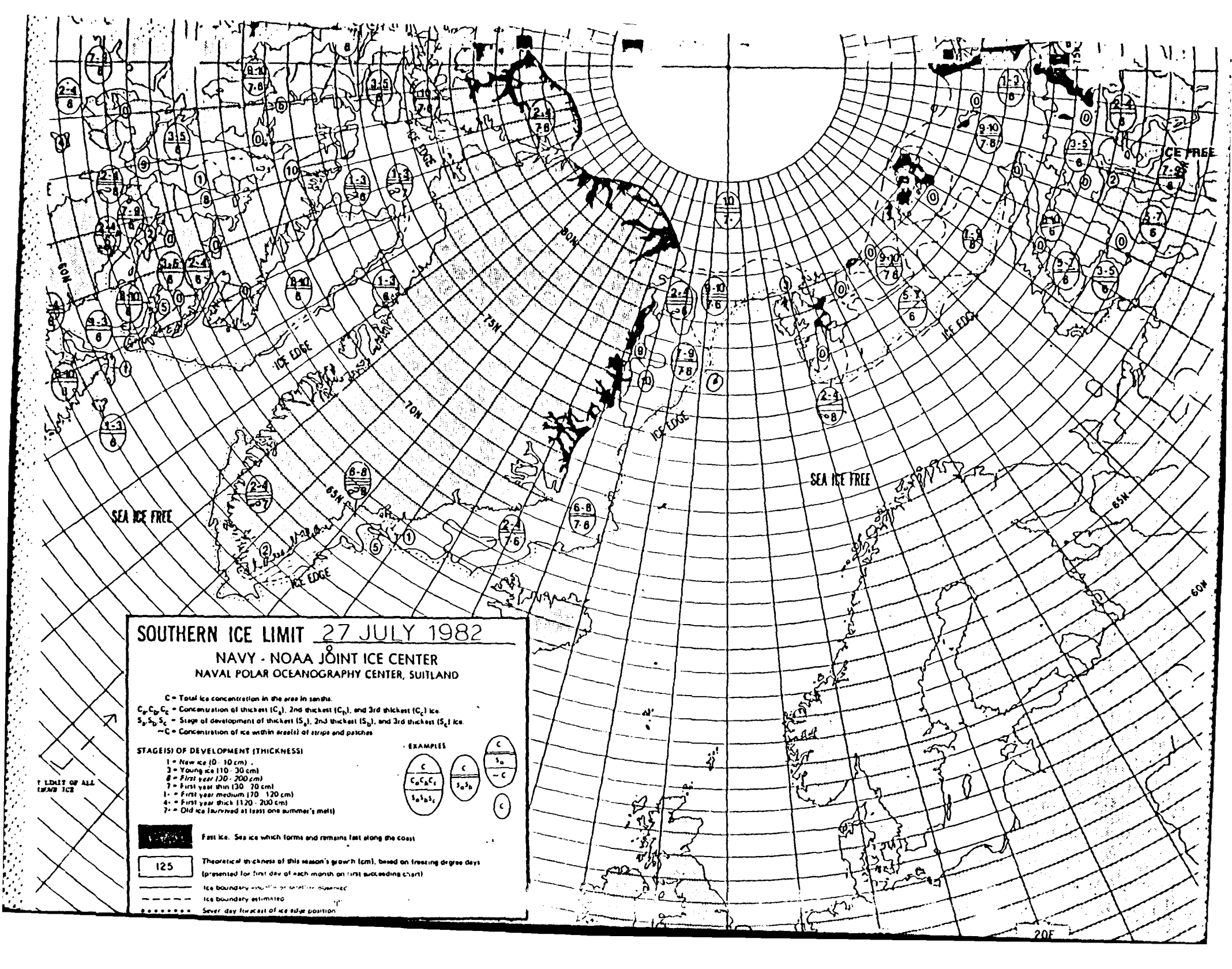


BUOY 1784

JUNE 1982

NOISE LEVEL VS TIME

DEPTH 30 FT



SOUTHERN ICE LIMIT 27 JULY 1982

NAVY - NOAA JOINT ICE CENTER

NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths.

$C_a C_b C_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_a S_b S_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

—C = Concentration of ice within area(s) of *strips* and patches

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
4 = *First year (30 - 200 cm)*
7 = First year thin (30 - 70 cm)
8 = First year medium (70 - 120 cm)
9 = First year thick (120 - 200 cm)
7+ = Old ice (survived at least one summer's melt)

EXAMPLES

C
$C_a C_b C_c$
$S_a S_b S_c$

C
$S_a S_b$

C
S_a
—C

C

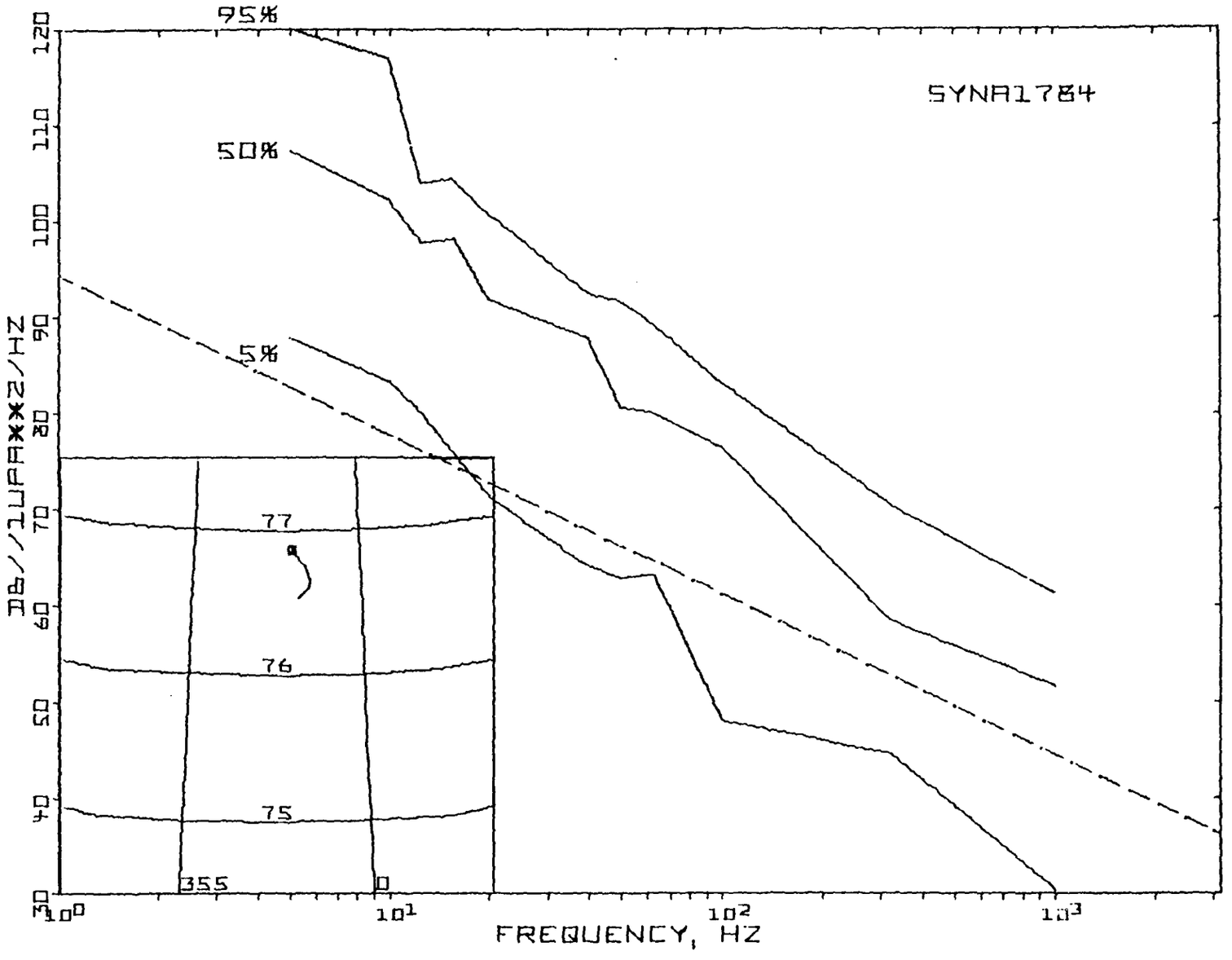
Fast ice. Sea ice which forms and remains fast along the coast

125 — Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart)

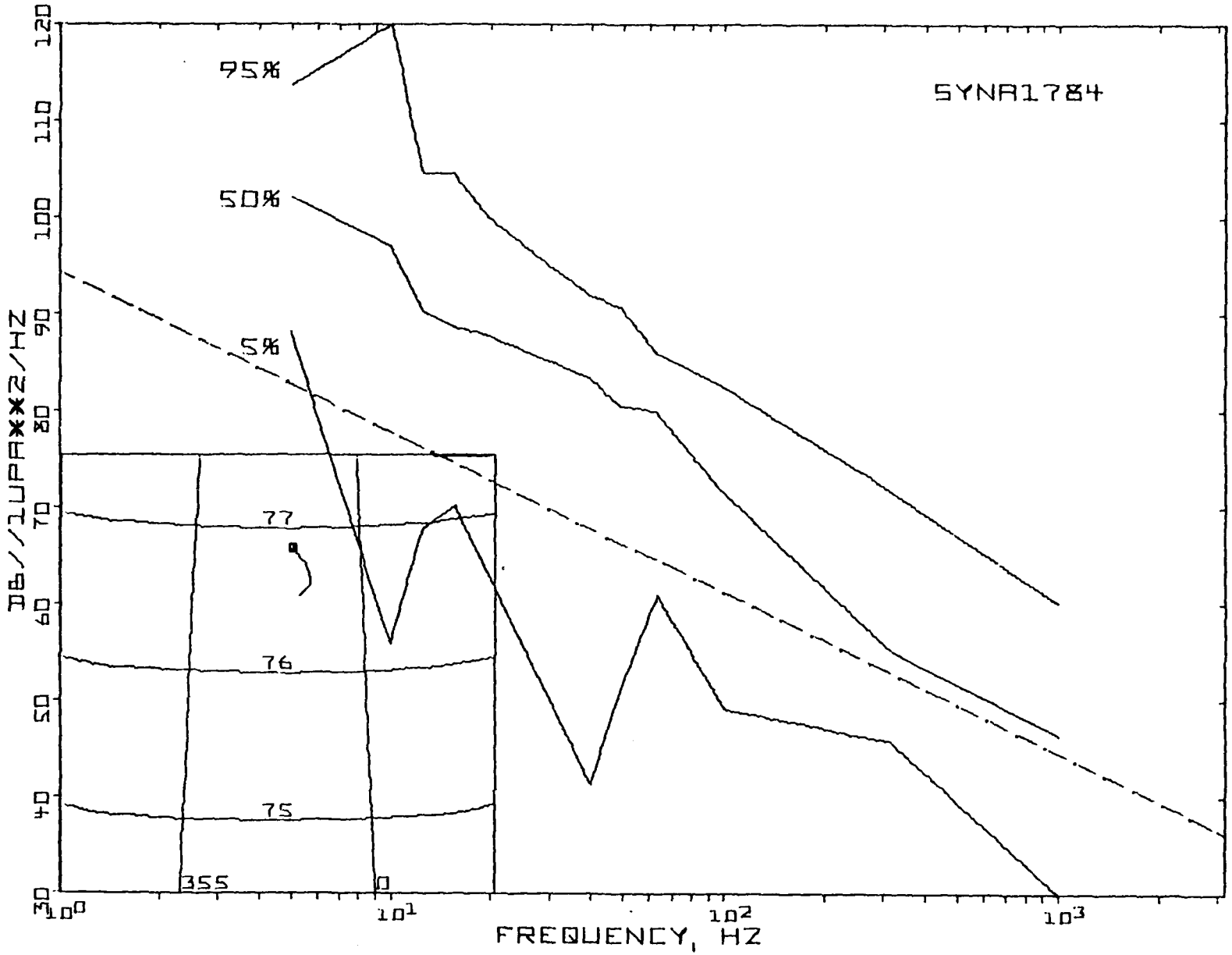
Ice boundary

Ice boundary estimated

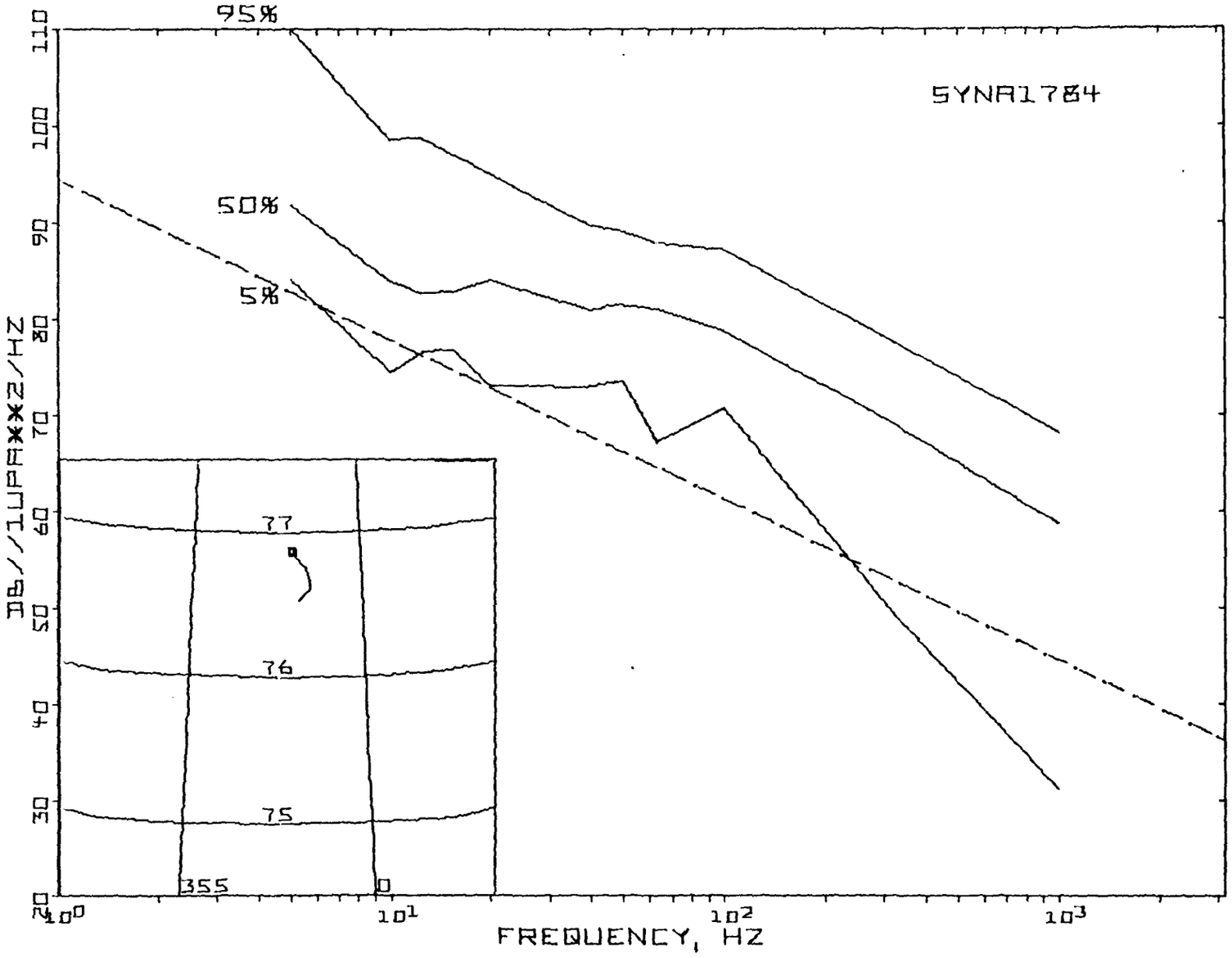
Seven day forecast of ice edge position



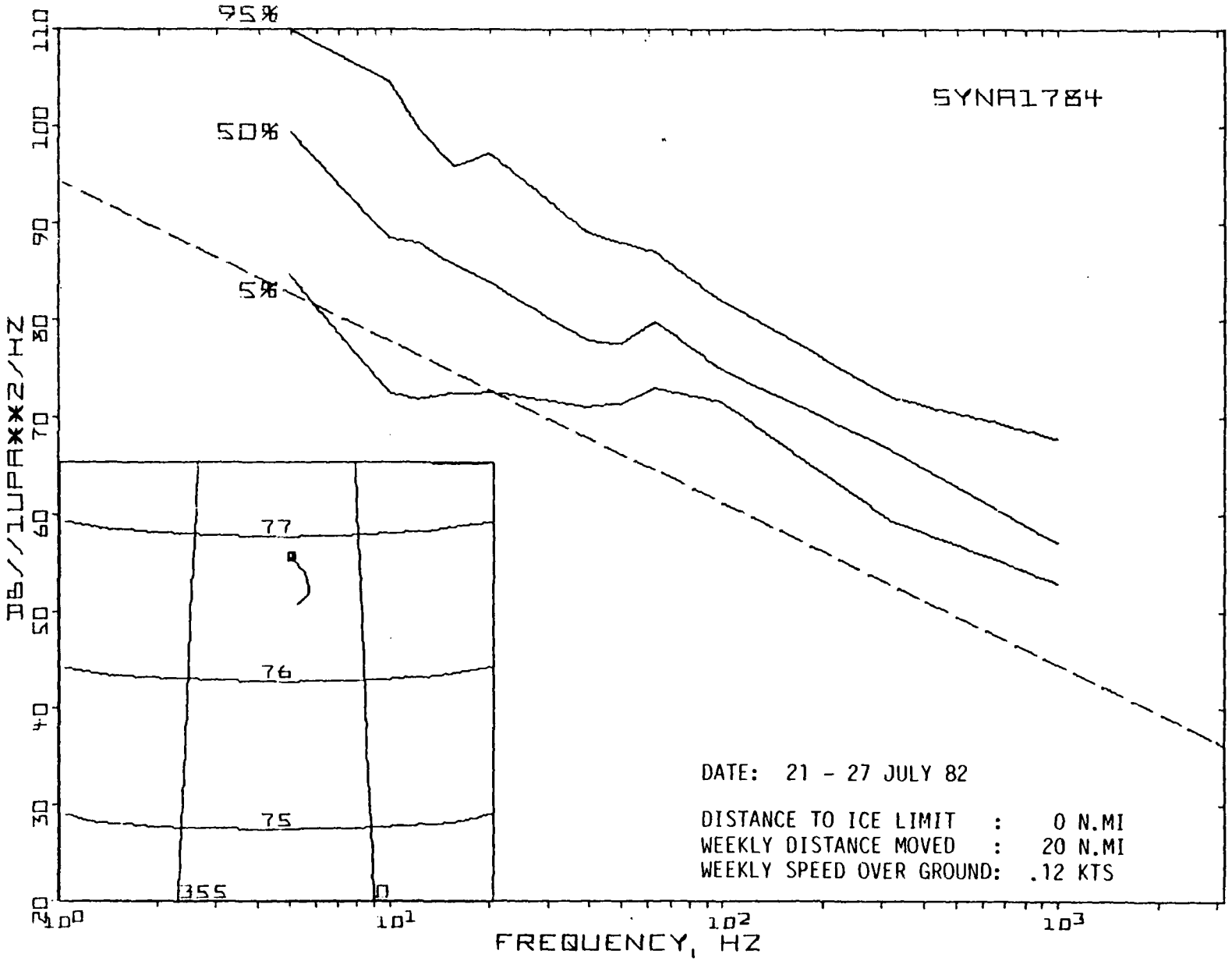
BUOY 1784 21-27 JUL 82 DEPTH 300 FT



BUOY 1784 21-27 JUL 82 DEPTH 200 FT



BUOY 1784 21-27 JUL 82 DEPTH 100 FT



BUOY 1784 21-27 JUL 82 DEPTH 30 FT

BUOY ID 2888

DECEMBER 1983

DAY	GMT	POSITION			
335	503	82.962	N	0.697	W
336	446	83.111	N	2.633	W
337	431	83.110	N	2.663	W
338	420	82.998	N	2.906	W
339	404	82.896	N	2.871	W
340	455	82.889	N	2.858	W
341	433	82.697	N	2.968	W
342	503	82.506	N	3.735	W
343	458	82.506	N	3.735	W
344	503	82.438	N	3.908	W
345	447	82.406	N	4.043	W
346	426	82.313	N	4.275	W
347	410	82.256	N	4.379	W
348	359	82.192	N	4.633	W
349	500	82.183	N	4.653	W
350	503	82.081	N	4.735	W

DAY	GMT	POSITION			
351	503	82.077	N	4.745	W
352	452	81.960	N	4.641	W
353	436	81.876	N	4.453	W
354	453	81.863	N	4.421	W
355	431	81.722	N	4.217	W
356	408	81.349	N	3.846	W
357	350	81.226	N	3.884	W
358	503	81.177	N	3.749	W
359	502	81.176	N	3.761	W
360	453	81.060	N	4.051	W
361	441	81.041	N	3.842	W
362	430	81.041	N	3.847	W
363	417	80.896	N	4.099	W
364	434	80.651	N	4.517	W
365	415	80.649	N	4.514	W

BUOY ID 2888

JANUARY 1984

DAY	GMT	POSITION			
1	353	80.352	N	5.214	W
2	503	80.062	N	5.626	W
3	457	79.833	N	5.912	W
4	446	79.712	N	5.845	W
5	433	79.605	N	5.863	W
6	418	79.492	N	5.966	W
7	502	79.383	N	6.102	W
8	443	79.380	N	6.079	W
9	421	79.014	N	7.340	W
10	503	78.724	N	8.859	W
11	458	78.190	N	10.408	W
12	457	78.190	N	10.408	W
13	435	77.367	N	11.701	W
14	421	77.365	N	11.728	W
15	410	77.066	N	11.952	W
16	503	76.811	N	11.920	W

DAY	GMT	POSITION			
17	449	76.535	N	12.140	W
18	503	76.227	N	12.554	W
19	503	76.218	N	12.587	W
20	451	76.006	N	12.846	W
21	502	75.975	N	13.037	W
22	441	75.976	N	13.036	W
23	416	75.945	N	12.997	W
24	403	75.912	N	13.044	W
25	349	75.696	N	13.196	W
26	453	75.546	N	13.226	W
27	503	75.536	N	13.239	W
28	453	75.325	N	13.589	W
29	440	75.166	N	13.867	W
30	503	75.204	N	14.004	W
31	445	75.208	N	14.013	W

BUOY ID 2888

FEBRUARY 19

DAY	GMT	POSITION
32	424	75.170 N 14.119 W
33	402	74.991 N 15.207 W
34	337	74.991 N 15.207 W
35	503	74.938 N 15.942 W
36	457	74.926 N 16.009 W
37	444	74.754 N 16.880 W
38	431	74.339 N 18.047 W
39	417	74.047 N 18.716 W
40	451	73.911 N 18.814 W
41	429	73.790 N 18.758 W
42	405	73.485 N 18.921 W
43	503	73.352 N 18.938 W
44	503	73.343 N 18.928 W
45	447	72.767 N 19.191 W
46	434	72.767 N 19.191 W

DAY	GMT	POSITION
47	422	72.338 N 19.860 W
48	410	71.366 N 20.879 W
49	453	71.366 N 20.879 W
50	343	70.133 N 21.309 W
51	331	69.654 N 20.878 W
52	501	68.930 N 23.072 W
53	451	68.689 N 24.203 W
54	438	68.445 N 24.720 W
55	425	68.445 N 24.720 W
56	410	68.245 N 25.662 W
57	359	68.159 N 26.342 W
58	348	68.159 N 26.342 W
59	334	68.109 N 26.870 W
60	503	68.109 N 26.870 W

BUOY ID 2888

MARCH 1984

DAY	GMT	POSITION
61	453	68.076 N 27.525 W
63	427	68.078 N 27.863 W
64	414	68.084 N 27.949 W
65	400	68.084 N 27.949 W
66	347	68.084 N 27.949 W
67	334	68.084 N 27.949 W
68	503	68.134 N 28.239 W
69	453	68.142 N 28.243 W
70	440	68.151 N 28.154 W
71	430	68.155 N 28.225 W
72	417	68.155 N 28.225 W
73	400	68.155 N 28.225 W
74	349	68.155 N 28.225 W
75	336	68.155 N 28.225 W
76	503	68.282 N 27.964 W

DAY	GMT	POSITION
77	457	68.325 N 27.744 W
78	443	68.325 N 27.744 W
79	430	68.325 N 27.744 W
80	417	68.292 N 28.089 W
81	406	68.292 N 28.089 W
82	352	68.292 N 28.089 W
83	339	68.292 N 28.089 W
84	503	68.292 N 28.089 W
85	458	68.346 N 27.723 W
86	446	68.346 N 27.723 W
87	432	68.346 N 27.723 W
88	419	68.346 N 27.723 W
89	407	68.315 N 27.689 W
90	357	68.315 N 27.689 W
91	340	68.315 N 27.689 W

BUOY ID 2888

APRIL 1984

DAY	GMT	POSITION	DAY	GMT	POSITION
92	328	68.273 N 27.855 W	107	345	68.226 N 28.055 W
93	459	68.269 N 27.856 W	108	334	68.226 N 28.055 W
94	448	68.272 N 27.842 W	109	503	68.176 N 28.793 W
95	435	68.272 N 27.842 W	110	451	68.176 N 28.793 W
96	423	68.272 N 27.842 W	111	437	68.176 N 28.793 W
97	411	68.272 N 27.842 W	112	426	68.176 N 28.793 W
98	355	68.272 N 27.842 W	113	412	68.176 N 28.793 W
99	343	68.272 N 27.842 W	114	400	68.176 N 28.793 W
100	330	68.255 N 27.854 W	115	348	68.176 N 28.793 W
101	502	68.257 N 27.845 W	116	334	68.176 N 28.793 W
102	450	68.252 N 27.855 W	117	503	68.141 N 29.449 W
103	438	68.241 N 27.933 W	118	455	68.089 N 29.829 W
104	425	68.226 N 28.055 W	119	441	68.089 N 29.829 W
105	413	68.226 N 28.055 W	120	427	68.089 N 29.829 W
106	358	68.226 N 28.055 W	121	416	68.071 N 29.998 W

BUOY ID 2888

MAY 1984

DAY	GMT	POSITION	DAY	GMT	POSITION
122	405	68.066 N 29.994 W	134	451	68.019 N 30.527 W
123	349	68.066 N 29.994 W	135	445	68.019 N 30.527 W
124	335	68.066 N 29.994 W	136	433	68.019 N 30.527 W
125	503	68.066 N 29.994 W	137	421	68.019 N 30.527 W
126	456	68.019 N 30.527 W	138	409	68.019 N 30.527 W
127	443	68.019 N 30.527 W	139	357	68.019 N 30.527 W
128	431	68.019 N 30.527 W	140	339	68.019 N 30.527 W
129	415	68.019 N 30.527 W	141	328	68.019 N 30.527 W
130	404	68.019 N 30.527 W	142	500	68.019 N 30.527 W
131	351	68.019 N 30.527 W	143	447	68.019 N 30.527 W
132	340	68.019 N 30.527 W	144	435	68.019 N 30.527 W
133	504	68.019 N 30.527 W	145	423	68.019 N 30.527 W

DATA BY MONTHS

MONTH: DECEMBER 83 BUOY: 2888

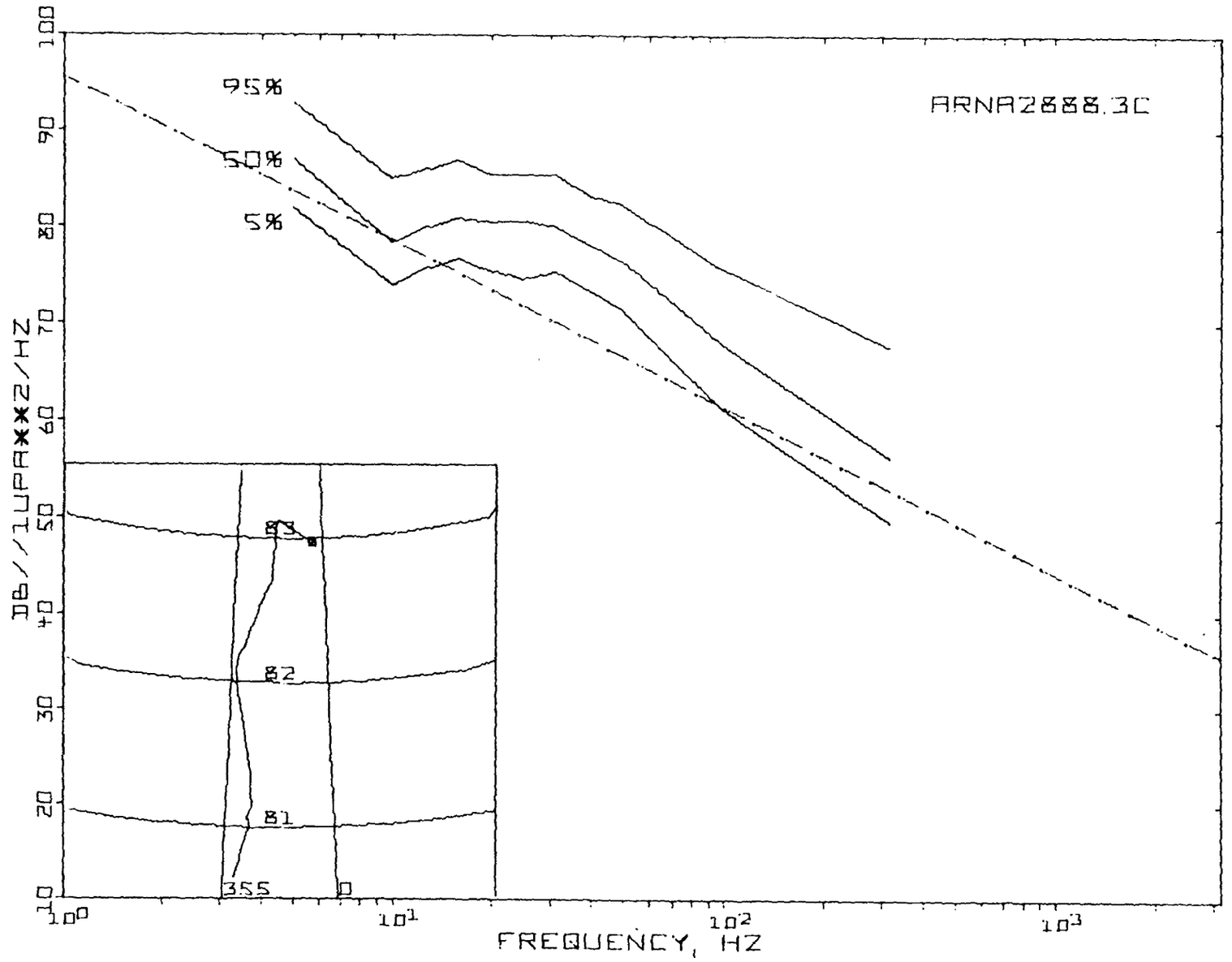
OUTPUT IN FILE ARNA2888

DISPLACEMENT (N. MI.): 142.588 NORTH:-138.780 EAST: -32.730
DIRECTION (TRUE): 193.290

THE NUMBER OF DATA SAMPLES IS 248

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	86.9	3.5	80.9	81.8	82.6	84.7	86.9	88.6	90.7	92.9	106.7	247
10.0	78.8	3.9	70.9	73.7	74.6	76.2	78.2	80.7	83.6	84.8	102.3	248
12.5	80.3	3.5	72.1	75.5	76.2	78.2	79.8	82.3	84.8	85.8	100.3	248
16.0	81.4	3.3	73.7	76.5	77.9	79.2	80.8	83.3	85.8	86.8	92.8	248
20.0	80.6	3.4	71.4	75.1	76.7	78.1	80.3	83.4	84.7	85.3	90.7	248
25.0	80.2	3.2	71.2	74.4	76.4	78.0	80.5	82.4	84.0	85.3	91.3	248
31.5	80.2	3.2	71.6	75.2	75.7	77.7	79.9	81.8	84.5	85.3	92.6	248
40.0	78.2	3.3	70.0	73.2	74.4	76.0	77.8	80.5	82.1	83.0	89.0	248
50.0	76.5	3.5	66.1	71.2	72.1	73.7	76.2	79.0	81.1	82.2	86.4	248
100.0	67.7	4.5	57.3	60.9	62.2	64.4	67.6	70.4	73.6	75.4	83.4	248
315.0	57.2	5.3	47.8	49.4	51.4	53.9	56.1	59.0	64.0	67.5	78.8	248

STOP



BUOY 2888 DEC 1983

MONTH: JANUARY 84 BUOY: 2888

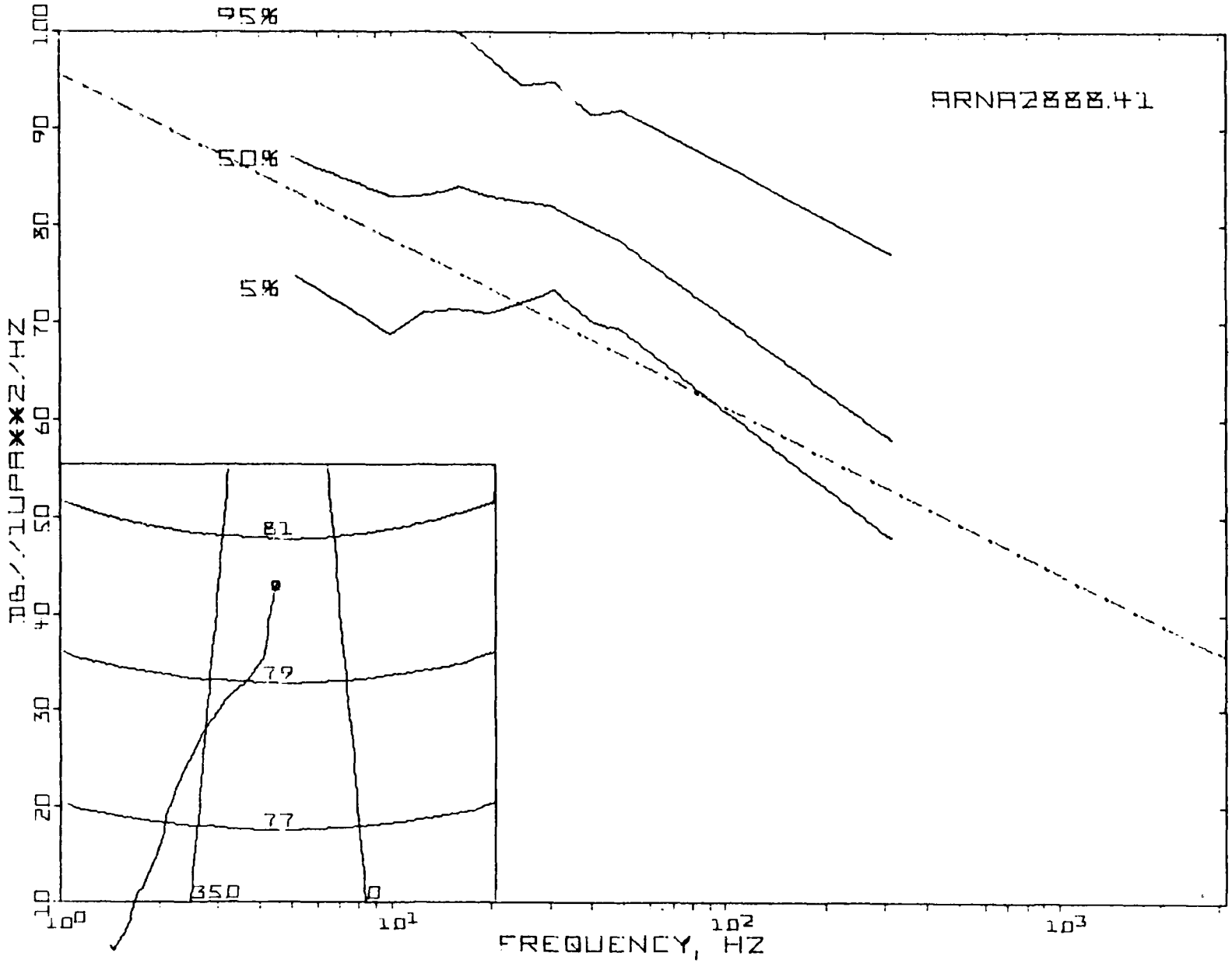
OUTPUT IN FILE ARNA2888

DISPLACEMENT (N. MI.): 328.297 NORTH:-308.641 EAST:-111.892
DIRECTION (TRUE): 199.948

THE NUMBER OF DATA SAMPLES IS 248

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	89.1	9.4	71.3	74.9	77.4	83.4	86.9	94.7	105.0	108.8	110.0	247
10.0	83.8	9.9	65.5	68.6	70.9	76.2	82.9	90.8	99.6	102.3	104.8	248
12.5	84.4	8.9	67.7	70.9	72.7	78.2	82.9	90.2	97.8	101.7	103.8	246
16.0	84.5	8.6	67.7	71.2	73.1	77.9	83.9	90.0	96.0	100.6	103.8	247
20.0	83.2	7.9	68.2	70.7	72.6	77.4	82.8	88.0	94.0	97.3	101.5	247
25.0	82.7	6.7	69.4	71.9	74.4	78.0	82.4	86.5	92.5	94.4	97.4	247
31.5	82.4	6.3	69.7	73.2	73.9	77.7	81.8	86.6	90.5	94.8	96.6	247
40.0	80.0	6.2	67.8	70.0	71.8	75.0	79.9	84.6	87.1	91.3	97.3	247
50.0	78.8	6.4	66.9	69.0	70.2	74.4	78.1	83.3	87.7	91.8	95.3	248
100.0	71.1	7.3	56.8	60.9	62.8	65.3	70.4	75.4	80.9	86.3	91.0	246
315.0	59.3	8.8	45.3	47.8	49.4	51.9	57.9	64.0	71.9	77.0	84.0	248

STOP



BUOY 2888 JAN 1984

MONTH: FEBRUARY 84 BUOY: 2888

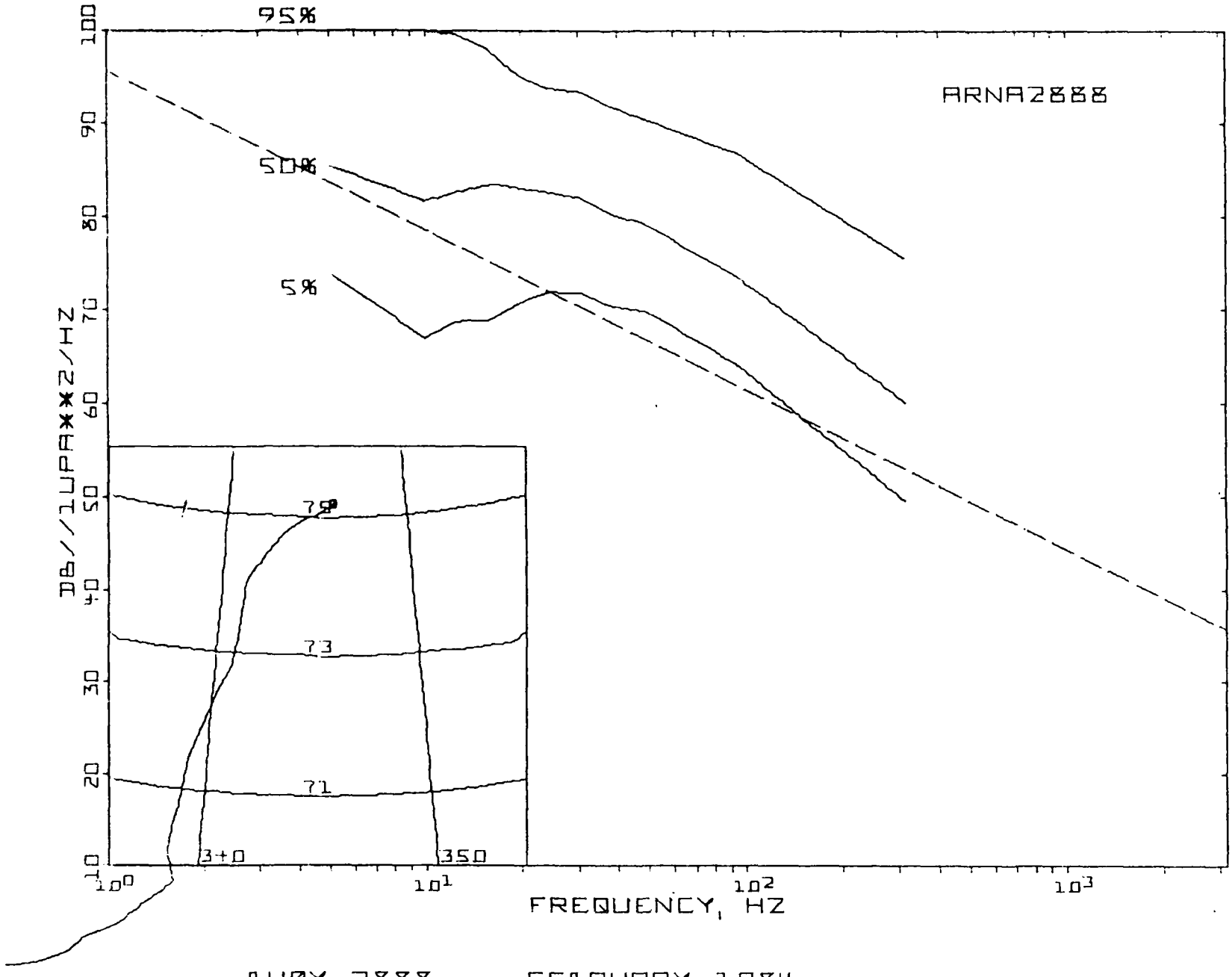
OUTPUT IN FILE ARNA2888

DISPLACEMENT (N. MI.): 487.481 NORTH:-423.660 EAST:-241.142
DIRECTION (TRUE): 209.671

THE NUMBER OF DATA SAMPLES IS 218

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	87.9	10.2	58.7	73.8	77.4	79.9	85.3	93.8	103.9	108.8	110.0	217
10.0	82.0	10.3	63.6	66.7	69.5	74.6	81.5	87.5	97.8	101.0	107.0	217
12.5	82.9	9.3	64.2	68.6	70.9	76.9	82.3	88.3	96.2	99.6	107.7	218
16.0	83.3	8.7	65.2	68.7	72.5	77.2	83.3	89.3	95.3	97.8	104.8	215
20.0	82.6	7.9	64.1	70.7	72.0	76.7	82.8	88.0	92.3	94.8	103.3	216
25.0	82.3	7.0	65.3	71.9	73.3	76.4	82.4	87.5	90.7	93.5	98.0	218
31.5	82.0	7.1	63.7	71.6	72.5	76.8	81.8	87.2	90.5	93.2	101.8	216
40.0	80.0	6.9	63.8	70.0	70.9	75.0	79.9	83.8	88.1	91.3	99.1	218
50.0	79.1	6.9	61.7	69.6	71.2	73.7	79.0	83.3	88.3	90.2	99.1	216
100.0	73.6	7.2	55.4	63.4	64.4	68.2	72.9	78.9	83.4	86.3	92.3	218
315.0	61.1	7.8	43.4	49.4	51.4	56.1	59.9	65.9	71.9	75.4	84.0	218

STOP
R



BUOY 2888 FEBRUARY 1984

MONTH: MARCH 84 BUOY: 2888

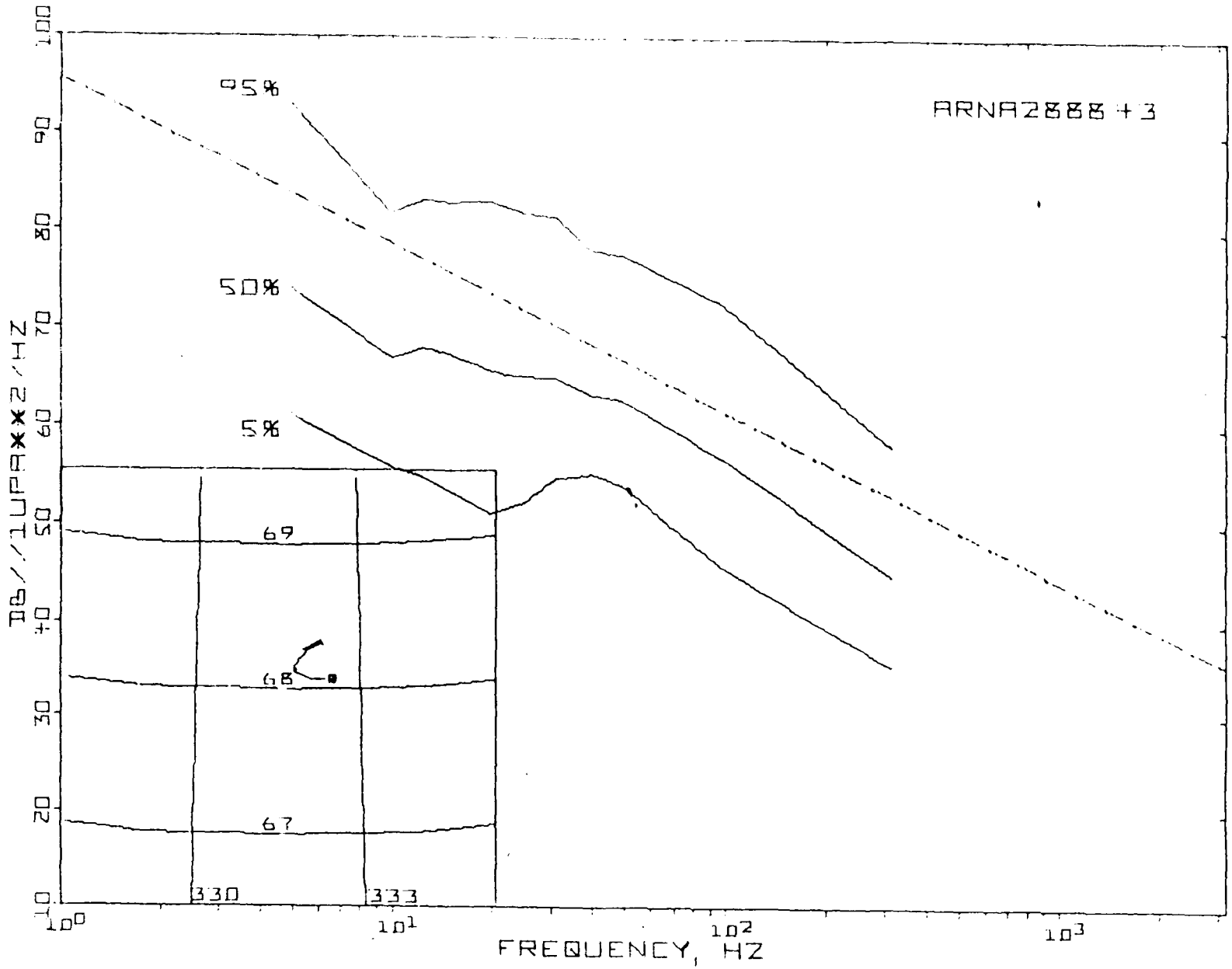
OUTPUT IN FILE ARNA2888

DISPLACEMENT (N. MI.): 14.777 NORTH: 14.340 EAST: -3.566
DIRECTION (TRUE): 346.016

THE NUMBER OF DATA SAMPLES IS 187

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	74.4	10.6	58.7	60.9	61.8	64.7	73.8	82.6	85.9	92.9	112.2	185
10.0	67.4	9.1	27.3	55.5	56.9	59.8	66.7	72.7	78.7	81.5	103.6	185
12.5	67.7	8.5	50.9	54.6	56.2	59.8	67.7	73.7	78.2	82.9	90.8	182
16.0	67.0	9.3	48.7	52.5	54.7	59.7	66.8	72.5	80.8	82.5	93.7	186
20.0	65.7	9.9	39.9	50.7	53.2	58.7	65.3	72.0	79.2	82.8	94.0	183
25.0	65.9	9.3	46.6	51.9	55.5	58.6	64.7	71.9	79.3	81.5	102.0	185
31.5	66.2	8.6	42.5	54.6	56.8	59.9	64.7	72.5	78.5	81.2	95.7	183
40.0	64.9	7.6	52.5	55.0	56.9	59.2	63.0	70.0	76.0	77.8	95.0	186
50.0	64.3	8.0	50.2	53.7	56.2	58.1	62.4	69.0	75.6	77.2	94.3	183
100.0	57.4	8.7	37.3	45.3	46.1	50.4	56.4	63.4	69.4	72.2	78.2	182
315.0	43.8	8.0	34.7	35.4	35.4	36.1	44.7	48.7	53.9	57.9	77.9	181

STOP
R



BUOY 2888 MAR 1984

MONTH: APRIL 84 BUOY: 2888

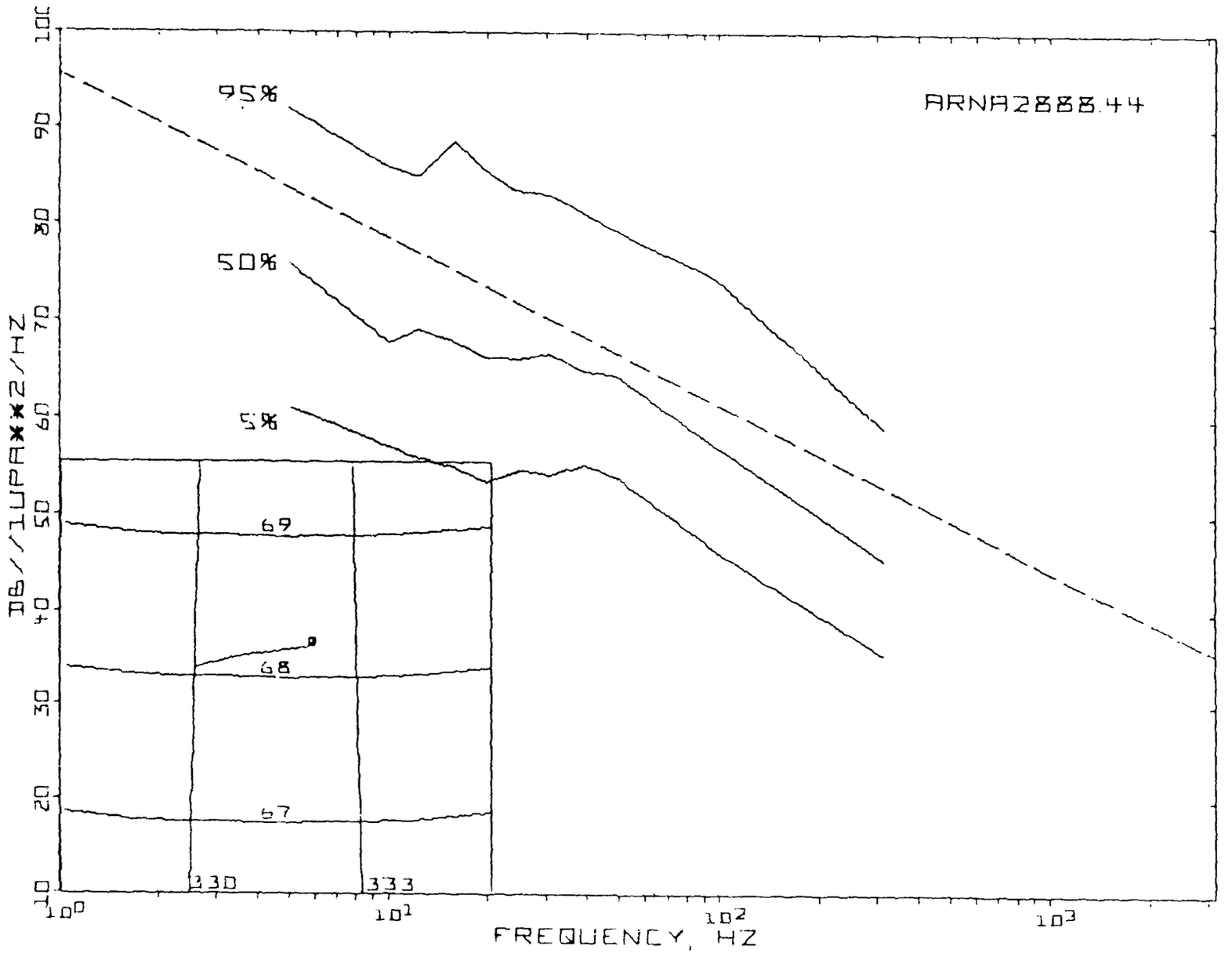
OUTPUT IN FILE ARNA2888

DISPLACEMENT (N. MI.): 49.280 NORTH: -12.120 EAST: -47.766
DIRECTION (TRUE): 255.794

THE NUMBER OF DATA SAMPLES IS 156

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	75.1	10.1	59.9	60.9	61.8	64.7	75.8	82.6	87.8	91.9	98.9	156
10.0	69.3	9.2	54.6	56.9	58.2	61.5	67.7	75.5	81.5	85.8	96.8	155
12.5	68.9	9.4	53.7	55.5	56.9	60.7	69.0	74.6	80.7	84.8	93.5	154
16.0	68.6	10.8	27.5	54.7	56.5	60.8	67.7	74.7	81.7	88.5	113.9	155
20.0	67.2	9.4	43.1	53.2	56.0	61.2	66.0	71.4	81.2	85.3	91.3	156
25.0	66.7	8.8	47.8	54.4	56.4	61.5	65.9	70.3	80.5	83.2	90.7	154
31.5	67.1	8.9	25.1	53.9	57.7	61.8	66.5	71.6	79.9	82.8	89.7	155
40.0	66.2	8.5	49.0	55.0	56.0	60.5	64.6	70.0	77.8	81.0	99.1	154
50.0	64.9	8.5	23.0	53.7	55.0	59.0	64.2	69.0	76.2	79.0	87.1	154
100.0	58.0	9.1	24.0	46.1	48.2	52.2	56.8	62.8	70.4	74.2	85.0	155
315.0	43.9	8.1	34.7	35.4	35.4	36.1	45.3	47.8	53.9	59.0	72.8	153

STOP
R



BUOY 2888 APRIL 1984

MONTH: 4-10 JAN 84 BUOY: 2888

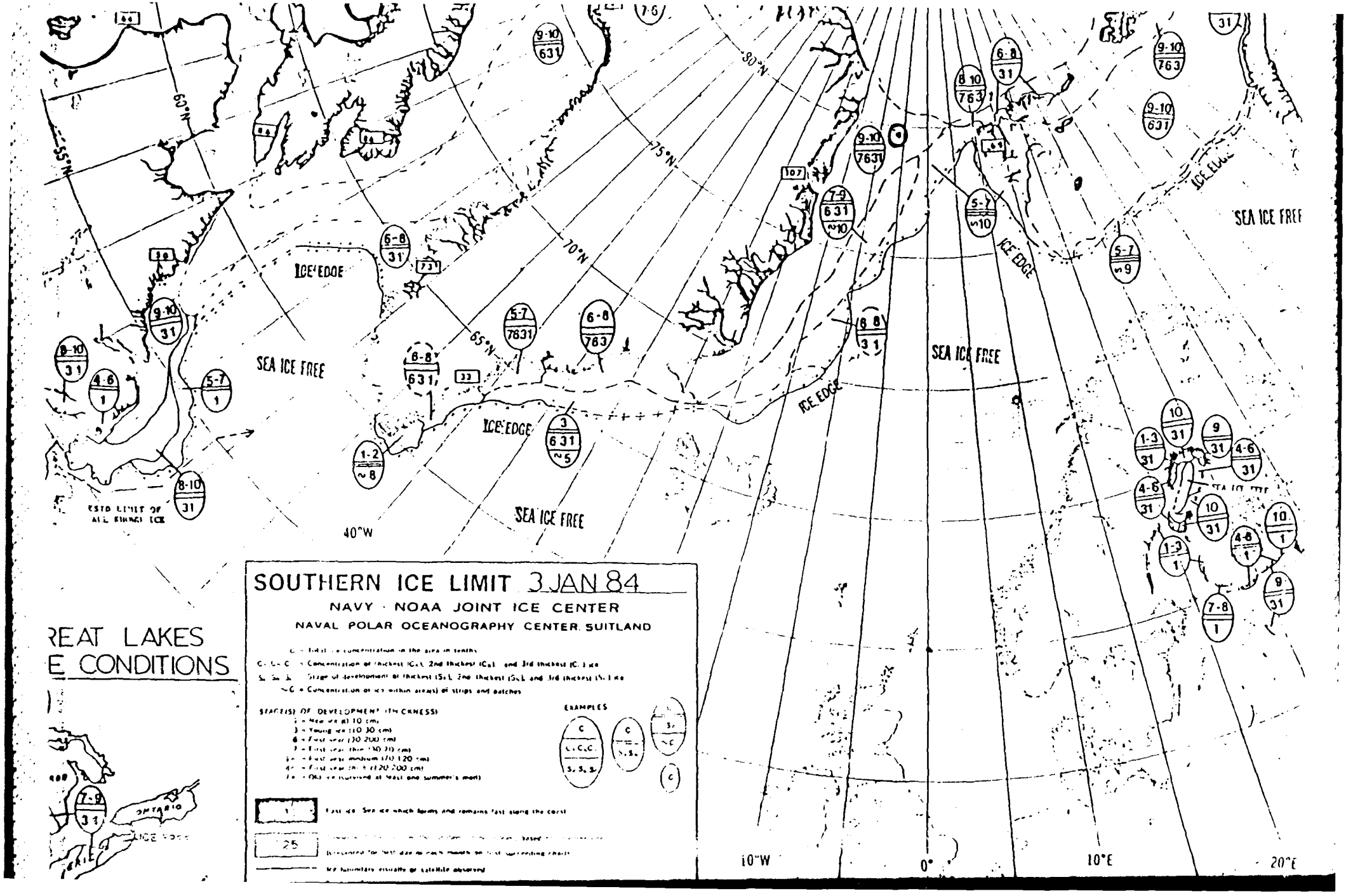
OUTPUT IN FILE ARNA2888

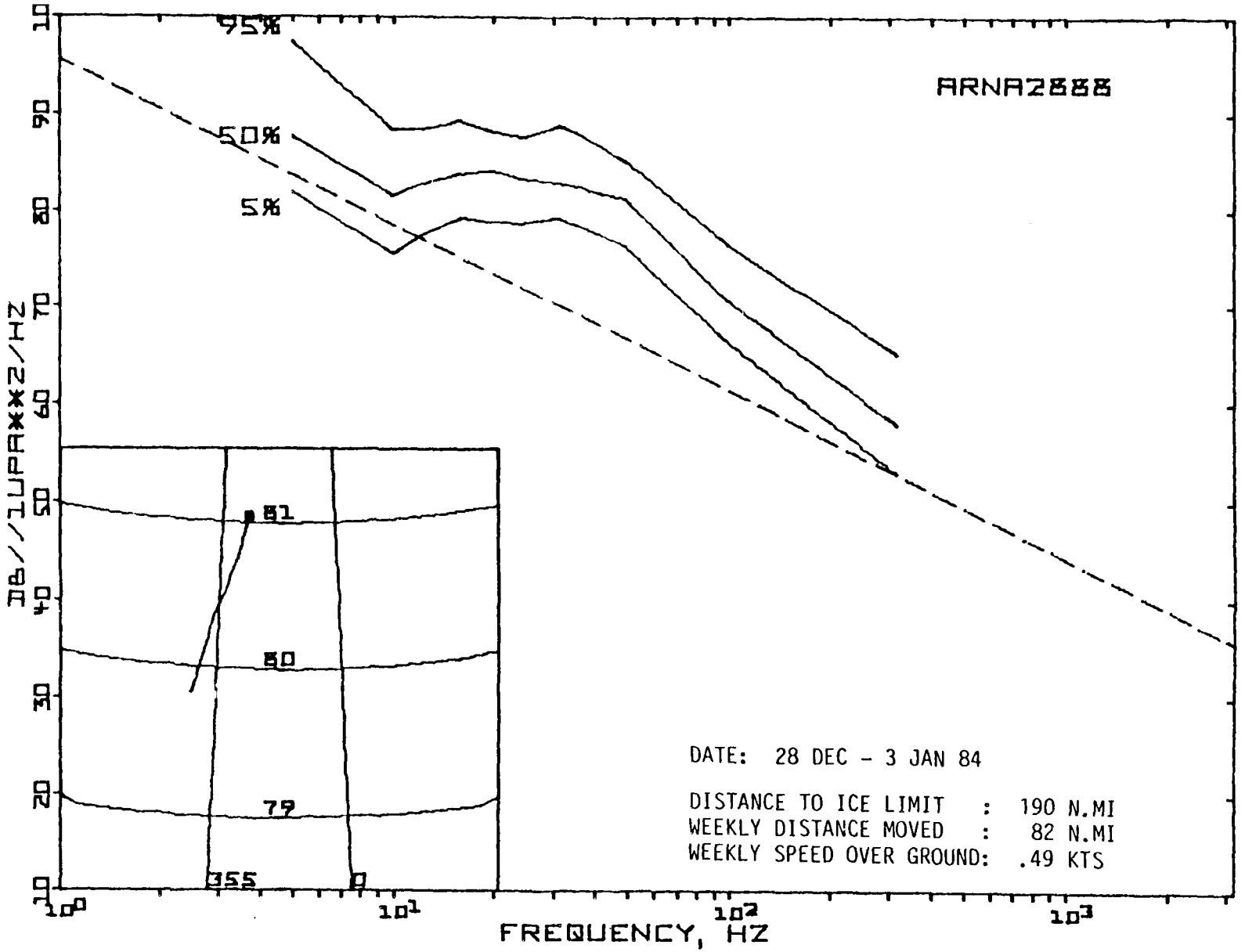
DISPLACEMENT (N. MI.): 105.337 NORTH: -91.320 EAST: -52.503
DIRECTION (TRUE): 209.918

THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	89.8	8.3	78.0	81.8	82.6	84.7	86.9	90.1	105.0	106.7	108.8	55
10.0	82.6	8.0	72.7	73.7	74.6	76.2	79.8	88.3	94.3	98.7	102.8	56
12.5	84.0	6.2	75.5	76.2	77.6	78.7	81.5	89.0	91.8	95.0	98.7	55
16.0	84.3	5.4	76.5	76.5	77.9	79.2	83.3	89.3	91.8	92.8	95.3	55
20.0	83.1	4.4	76.0	76.7	78.7	79.2	82.8	85.3	88.8	90.1	93.2	55
25.0	83.0	3.6	77.2	78.0	78.6	80.5	82.4	85.3	87.5	90.0	92.5	55
31.5	82.5	3.5	75.7	76.8	79.3	79.9	81.8	84.5	87.2	88.8	90.5	55
40.0	80.1	3.7	71.8	73.8	76.0	77.8	79.9	83.0	85.2	86.5	87.1	55
50.0	78.8	3.9	71.2	72.1	74.4	76.2	78.1	81.1	84.2	85.0	87.7	56
100.0	69.9	4.8	61.6	62.8	63.4	66.1	69.4	73.6	76.4	78.2	81.4	55
315.0	56.6	5.5	49.4	49.4	50.1	51.4	55.4	60.7	64.0	65.0	69.4	56

STOP


SOUTHERN ICE LIMIT 3 JAN 84
NAVY · NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
REAT LAKES
E CONDITIONS
ONTARIO
ICE EDGE
ICE EDGE
ICE EDGE
ICE EDGE
SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
80°N
75°N
70°N
65°N
60°N
55°N
40°W
10°W
0°
10°E
20°E



BUOY 2888 28 DEC-3 JAN 84

MONTH: 28 DEC-3 JAN 84 BUOY: 2888

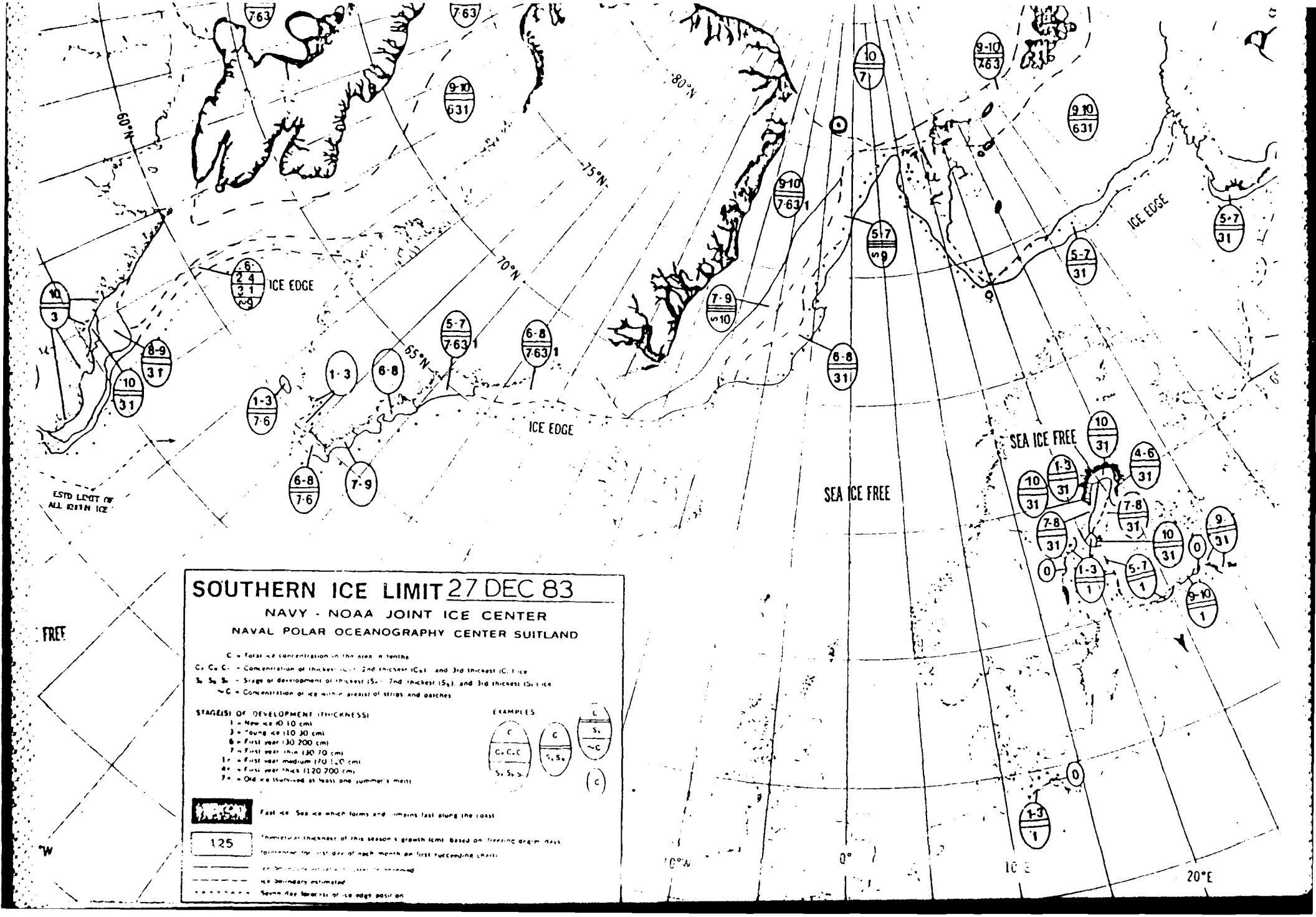
OUTPUT IN FILE ARNA2888

DISPLACEMENT (N. MI.): 82.232 NORTH: -79.740 EAST: -20.092
DIRECTION (TRUE): 194.162

THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	89.3	4.8	80.9	81.8	84.1	85.9	87.8	92.9	95.4	97.4	100.7	55
10.0	81.7	5.2	72.7	75.5	76.9	77.6	81.5	84.8	86.7	88.3	102.3	56
12.5	82.9	4.2	76.2	77.6	78.7	78.7	82.9	85.8	87.5	88.3	100.3	56
16.0	83.9	3.5	76.5	79.2	79.7	80.8	83.9	86.8	87.7	89.3	92.8	56
20.0	83.4	3.2	76.0	78.7	79.2	80.3	84.1	85.3	87.2	88.0	88.8	56
25.0	83.3	2.9	77.2	78.6	79.9	81.5	83.2	85.9	86.5	87.5	89.2	56
31.5	83.8	2.9	77.7	79.3	80.6	81.8	82.8	86.0	87.8	88.8	89.7	56
40.0	82.3	2.8	76.9	77.8	78.5	79.9	82.1	83.8	85.9	87.1	89.0	56
50.0	81.1	2.7	75.6	76.2	77.2	79.7	81.1	83.3	84.2	85.0	85.8	56
100.0	70.8	3.4	64.4	66.1	66.9	68.2	70.4	72.9	75.4	76.4	78.2	56
315.0	58.4	3.8	51.9	52.9	53.9	56.1	57.9	59.9	63.4	65.0	67.5	56

STOP



SOUTHERN ICE LIMIT 27 DEC 83

NAVY - NOAA JOINT ICE CENTER

NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND

C = Total ice concentration in the area in tenths

C_1 C_2 C_3 = Concentration of thickest (1st), 2nd thickest (C_2), and 3rd thickest (C_3) ice

S_1 S_2 S_3 = Stage of development of thickest (S_1), 2nd thickest (S_2), and 3rd thickest (S_3) ice

~C = Concentration of ice within areas of strips and patches

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
6 = First year (30-200 cm)
7 = First year thin (30-70 cm)
1. = First year medium (70-120 cm)
4. = First year thick (120-200 cm)
7. = Old ice (survived at least one summer's melt)

EXAMPLES

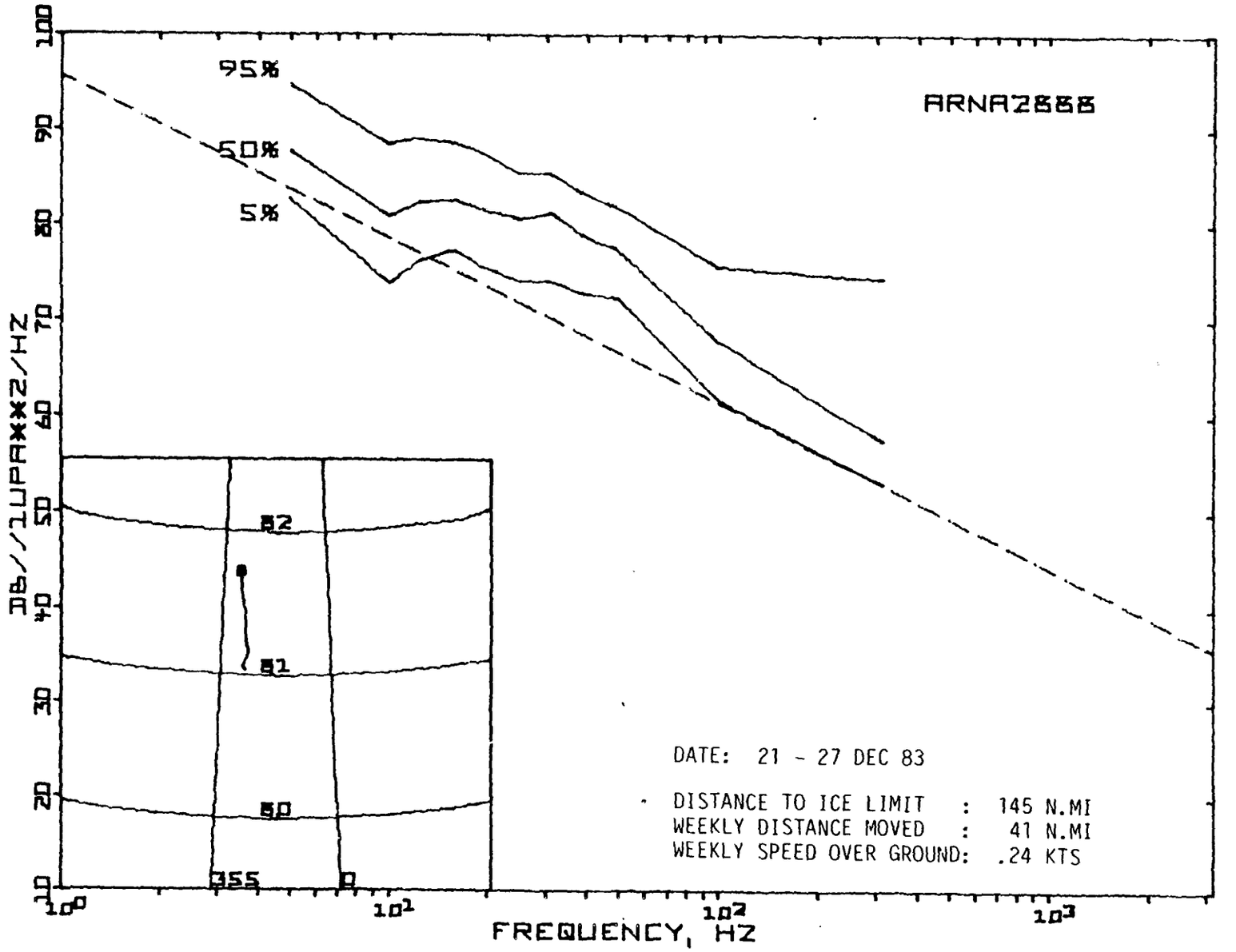
Fast ice: Sea ice which forms and remains fast along the coast

125: Theoretical thickness of this season's growth (cm) based on freezing degree days

Forecast for first day of each month on first succeeding chart

Ice boundary estimated

Seven day forecast of ice edge position



BUOY 2888 21-27 DEC 83

MONTH: 21-27 DEC 83 BUOY: 2888

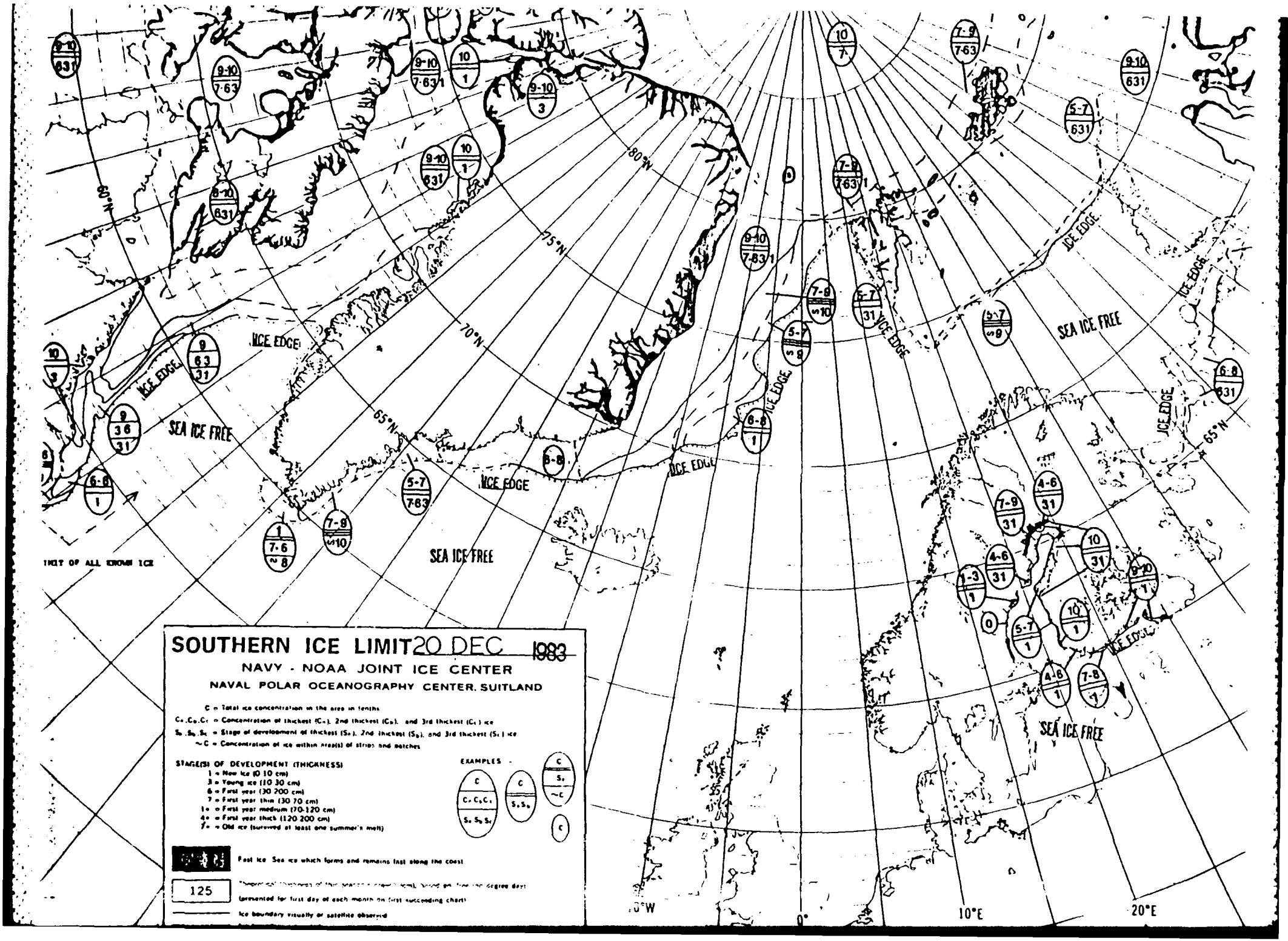
OUTPUT IN FILE ARNA2888

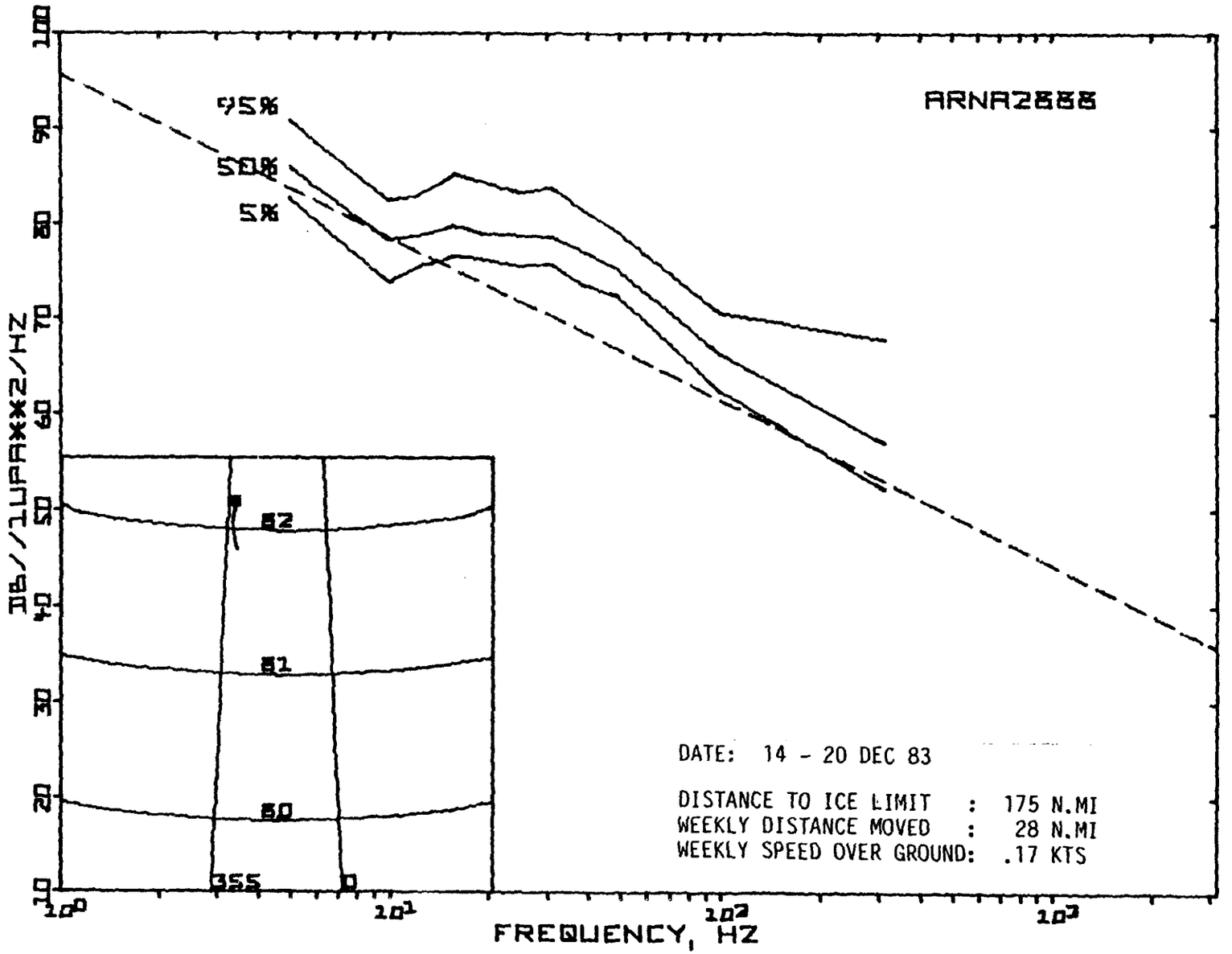
DISPLACEMENT (N. MI.): 40.996 NORTH: -40.860 EAST: 3.332
DIRECTION (TRUE): 175.355

THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	88.4	4.2	81.8	82.6	83.4	85.9	87.8	90.1	91.9	94.7	106.7	56
10.0	80.3	4.7	71.5	73.7	74.6	76.9	80.7	82.9	84.8	88.3	94.3	56
12.5	81.8	4.0	72.7	76.2	77.6	78.2	82.3	84.2	86.7	89.0	90.8	56
16.0	82.6	3.8	73.7	77.2	78.6	79.2	82.5	85.2	86.8	88.5	90.6	56
20.0	81.4	3.8	71.4	75.1	76.7	78.7	81.2	84.1	85.3	87.2	90.1	56
25.0	80.5	3.4	71.2	73.9	76.4	78.6	80.5	82.4	84.7	85.3	87.5	56
31.5	80.4	3.2	72.5	73.9	75.7	78.5	81.2	82.8	83.7	85.3	86.6	56
40.0	78.4	3.0	70.0	72.5	74.4	76.0	78.5	80.5	82.1	83.0	84.6	56
50.0	76.9	3.2	69.6	72.1	73.0	74.4	77.2	79.7	80.4	81.7	84.2	56
100.0	67.9	4.1	59.3	61.6	63.4	64.4	67.6	70.4	72.9	75.4	77.3	56
315.0	59.2	6.1	49.4	52.9	53.9	56.1	57.4	60.7	65.9	74.2	78.8	56

STOP


SOUTHERN ICE LIMIT 20 DEC 1983
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
C_t, C_o, C_y = Concentration of thickest (C_t), 2nd thickest (C_o), and 3rd thickest (C_y) ice
S_t, S_o, S_y = Stage of development of thickest (S_t), 2nd thickest (S_o), and 3rd thickest (S_y) ice
~C = Concentration of ice within area(s) of strips and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
6 = First year (30-200 cm)
7 = First year thin (30-70 cm)
1o = First year medium (70-120 cm)
4o = First year thick (120-200 cm)
7o = Old ice (survived at least one summer's melt)
EXAMPLES
Fast Ice Sea ice which forms and remains fast along the coast
125
Ice boundary visually or satellite observed
ICE EDGE
SEA ICE FREE
80°N
75°N
70°N
65°N
0°W
0°
10°E
20°E



BUOY 2888 14-20 DEC 83

MONTH: 14-20 DEC 83 BUOY: 2888

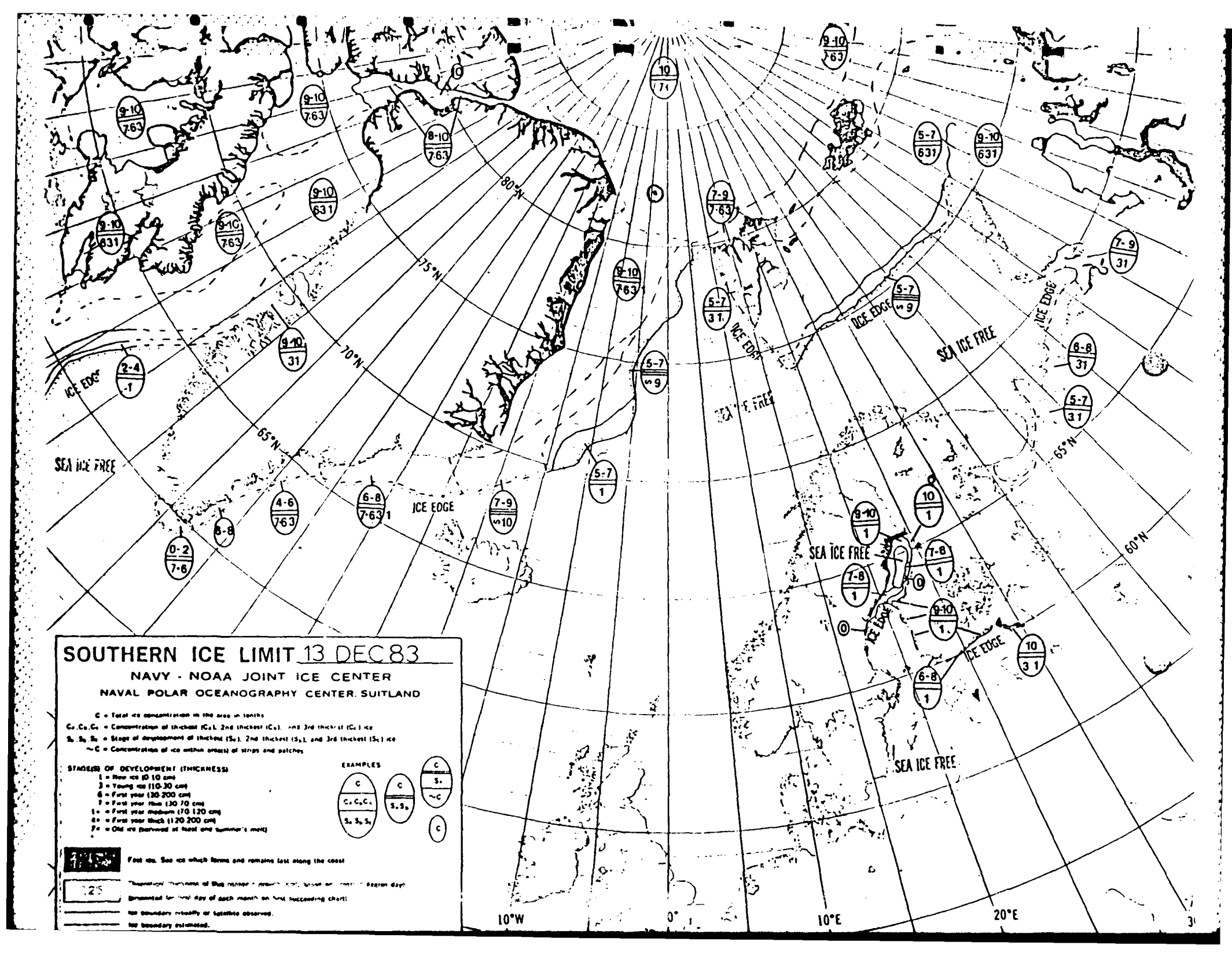
OUTPUT IN FILE ARNA2888

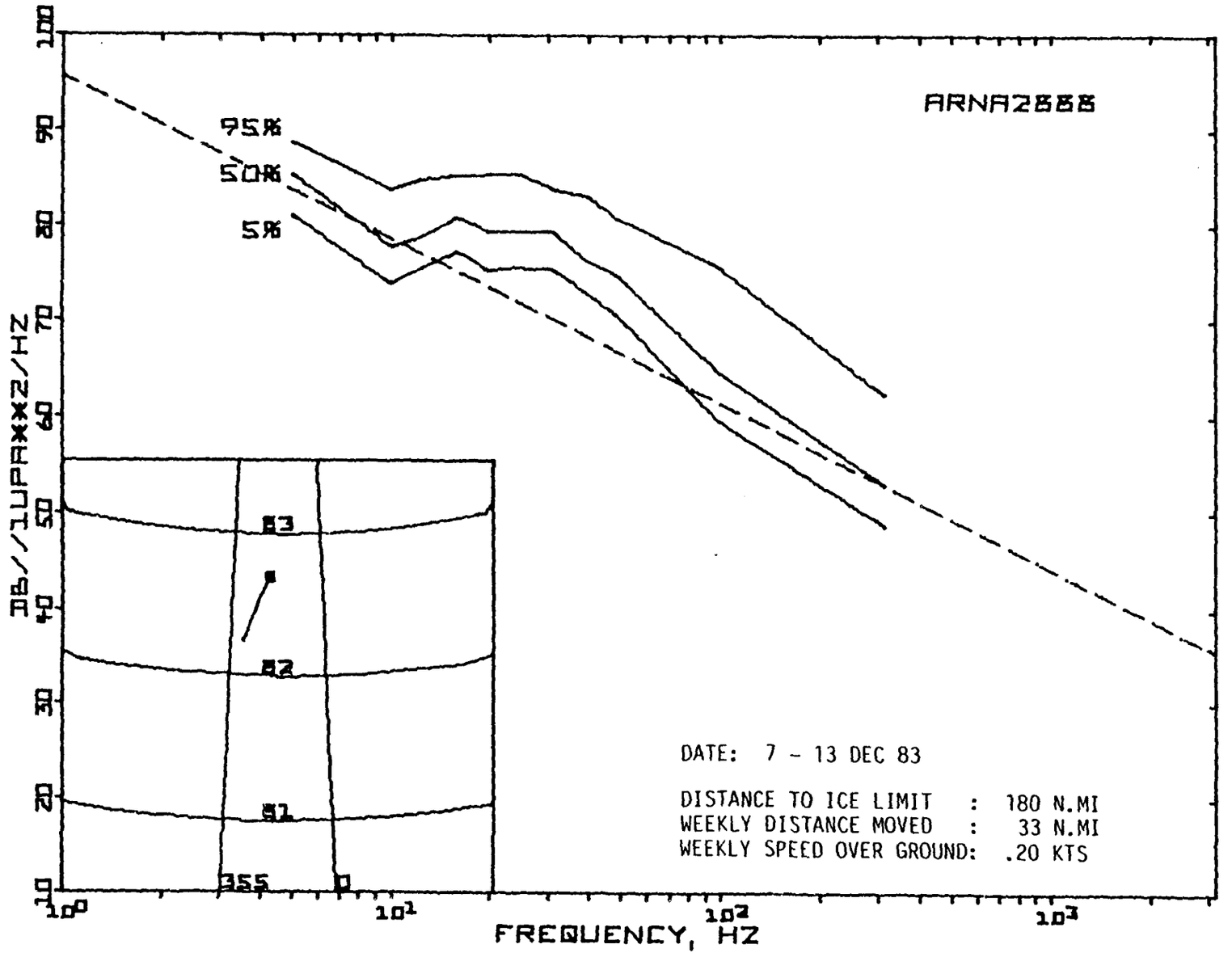
DISPLACEMENT (N. MI.): 28.420 NORTH: -28.200 EAST: 3.532
DIRECTION (TRUE): 172.877

THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	86.2	2.5	80.9	82.6	82.6	84.1	85.9	88.6	89.4	90.7	90.7	56
10.0	77.9	2.7	72.7	73.7	74.6	76.2	78.2	79.8	81.5	82.3	83.6	56
12.5	79.3	2.3	75.5	75.5	76.9	77.6	78.7	80.7	82.3	82.9	84.8	56
16.0	80.1	2.6	74.7	76.5	77.2	78.6	79.7	81.7	83.9	85.2	85.8	56
20.0	79.0	2.4	74.2	76.0	76.0	77.4	78.7	80.3	82.0	84.1	85.3	56
25.0	78.8	2.4	74.4	75.5	75.5	77.2	78.6	80.5	81.5	83.2	84.7	56
31.5	79.0	2.4	74.6	75.7	76.8	76.8	78.5	79.9	82.8	83.7	86.0	56
40.0	76.8	2.6	70.0	73.2	73.8	75.0	76.9	77.8	79.9	81.0	84.6	56
50.0	75.2	2.0	71.2	72.1	73.0	73.7	75.0	76.2	78.1	79.0	80.4	56
100.0	66.6	2.6	61.6	62.2	63.4	64.4	66.1	68.2	70.4	70.4	73.6	56
315.0	57.4	4.4	50.1	51.9	52.9	53.9	56.8	57.9	61.5	67.5	70.0	56

STOP


SOUTHERN ICE LIMIT 13 DEC83
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
$C_1 C_2 C_3$ = Concentration of thickest (C_1), 2nd thickest (C_2), and 3rd thickest (C_3) ice
$S_1 S_2 S_3$ = Stage of development of thickest (S_1), 2nd thickest (S_2), and 3rd thickest (S_3) ice
~C = Concentration of ice within area(s) of strips and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
2 = Young ice (10-30 cm)
3 = First year (30-200 cm)
4 = First year thin (30-70 cm)
5 = First year medium (70-120 cm)
6 = First year thick (120-200 cm)
7 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast
Isopleths (numbers of thaw number of degree days) presented for first day of each month on next succeeding chart
Ice boundary mostly or satisfactorily observed.
Ice boundary estimated.
ICE EDGE
SEA ICE FREE
80°N
75°N
70°N
65°N
60°N
10°W
0°
10°E
20°E



BUØY 2888 7-13 DEC 83

MONTH: 7-13 DEC 83 BUOY: 2888

OUTPUT IN FILE ARNA2888

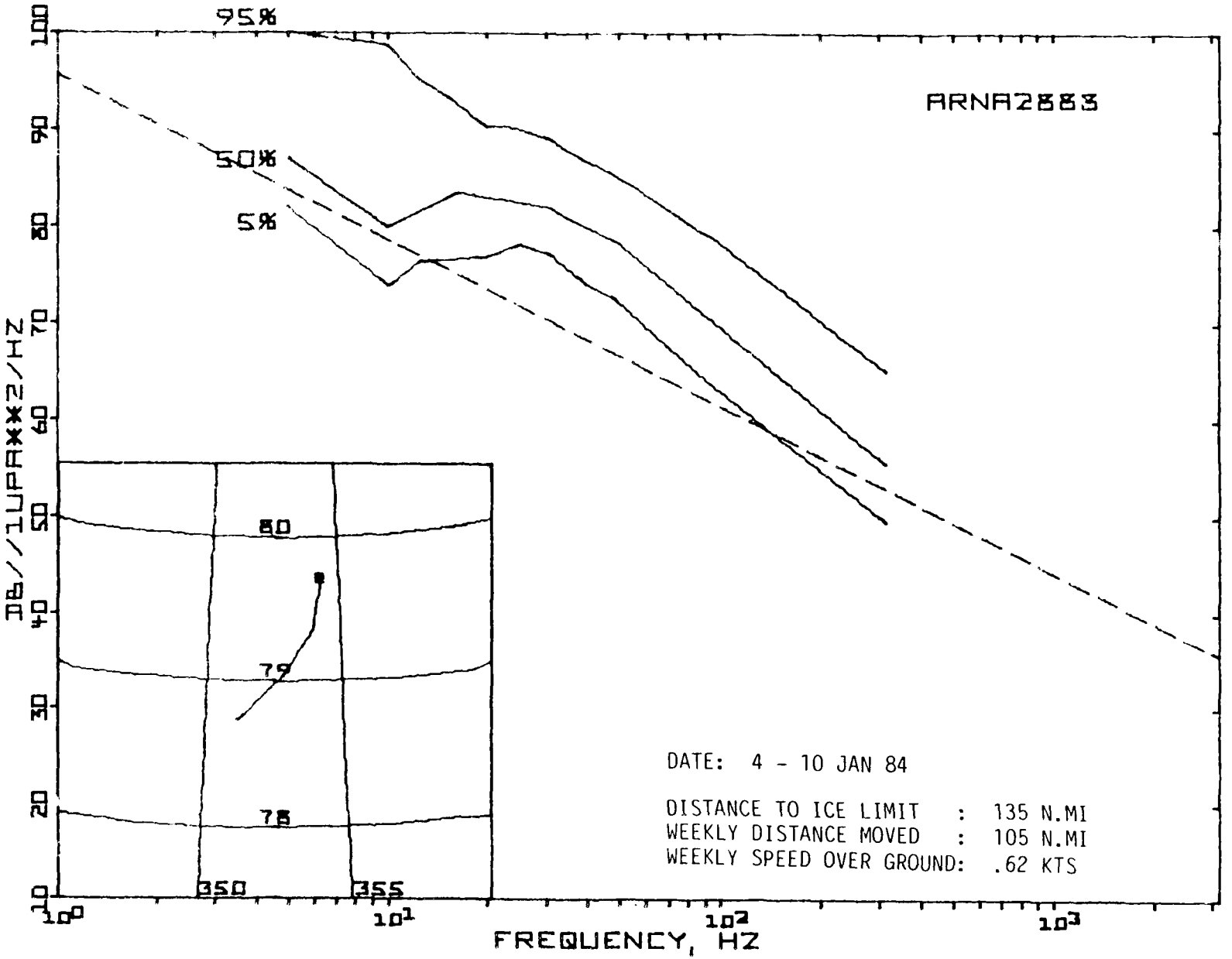
DISPLACEMENT (N. MI.): 33.051 NORTH: -30.300 EAST: -13.201
DIRECTION (TRUE): 203.563

THE NUMBER OF DATA SAMPLES IS 56

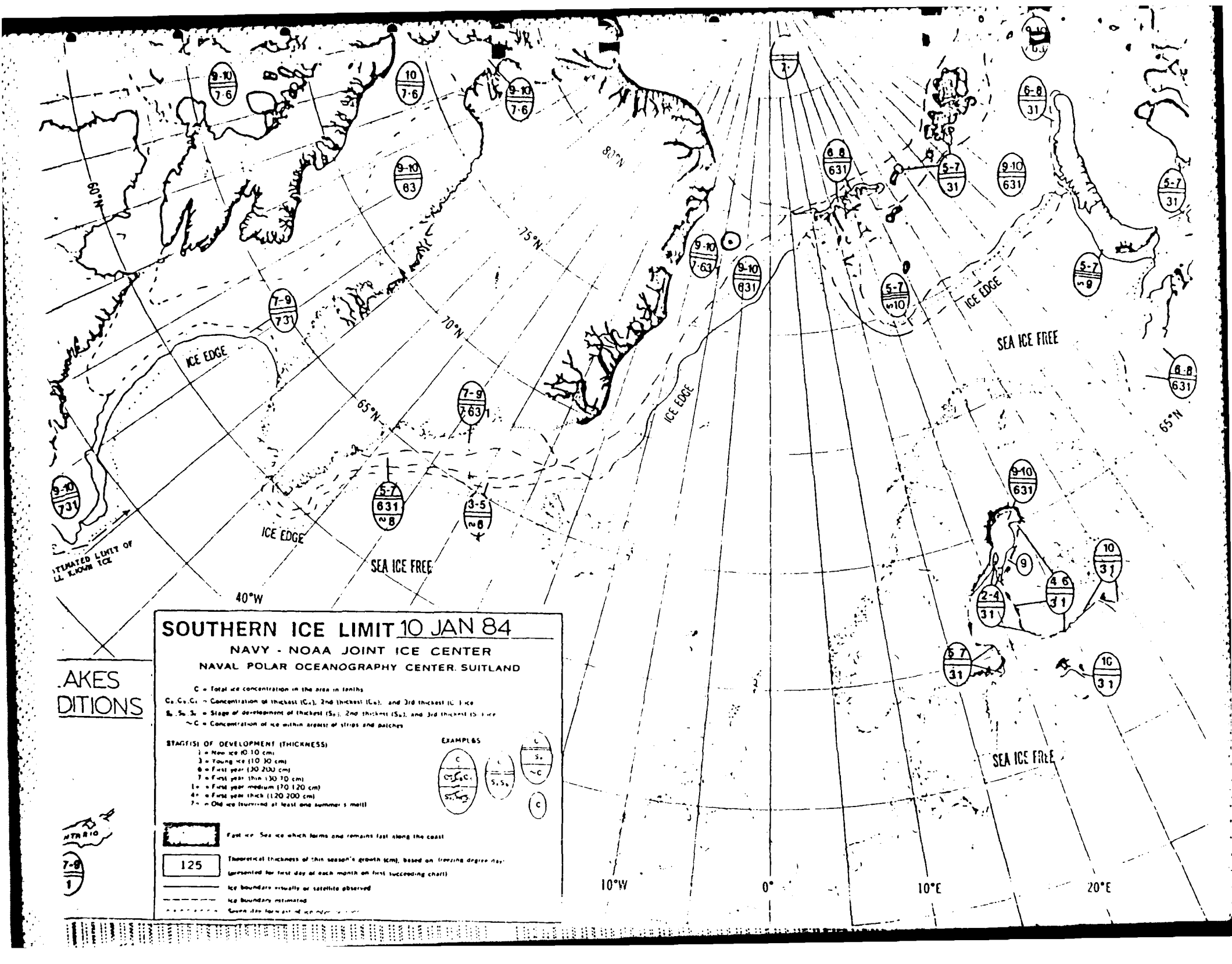
FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	85.3	2.6	80.9	80.9	81.8	83.4	85.3	86.9	87.8	88.6	96.8	56
10.0	78.0	2.9	72.7	73.7	74.6	76.2	77.6	78.7	81.5	83.6	85.8	56
12.5	79.5	2.9	74.6	75.5	75.5	78.2	78.7	80.7	82.9	84.8	89.6	56
16.0	81.0	2.6	75.6	77.2	77.9	79.2	80.8	82.5	84.6	85.2	89.3	56
20.0	80.2	3.3	73.2	75.1	76.0	78.1	79.2	82.0	84.7	85.3	90.7	56
25.0	79.9	3.4	73.9	75.5	76.4	77.2	79.3	81.5	84.7	85.3	91.3	56
31.5	79.4	3.3	73.2	75.2	75.7	77.7	79.3	80.6	82.8	83.7	92.6	56
40.0	77.3	3.5	70.9	72.5	73.8	75.0	76.0	79.9	82.1	83.0	89.0	56
50.0	75.0	3.4	69.0	70.2	71.2	73.0	74.4	76.2	79.7	80.4	86.4	56
100.0	65.8	5.5	57.3	59.3	60.9	61.6	64.4	68.2	72.9	75.4	83.4	56
315.0	53.9	4.8	47.8	48.7	49.4	50.8	52.9	56.1	59.9	62.2	69.4	56

STOP

DATA BY WEEKS



BUOY 2888 4-10 JAN 84


SOUTHERN ICE LIMIT 10 JAN 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
AKES
DITIONS
C = Total ice concentration in the area in tenths
Cd, Cs, Ct = Concentration of thickest (Cd), 2nd thickest (Cs), and 3rd thickest (Ct) ice
Sd, Ss, St = Stage of development of thickest (Sd), 2nd thickest (Ss), and 3rd thickest (St) ice
~C = Concentration of ice within areas of strips and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
4 = First year (30-200 cm)
7 = First year thin (30-70 cm)
1 = First year medium (70-120 cm)
4 = First year thick (120-200 cm)
7 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice - Sea ice which forms and remains fast along the coast
125
Theoretical thickness of this season's growth (cm), based on freezing degree days
(presented for first day of each month on first succeeding chart)
Ice boundary visually or satellite observed
Ice boundary estimated
ICE EDGE
SEA ICE FREE
ESTIMATED LIMIT OF ALL KNOWN ICE
ONTARIO
80°N
75°N
70°N
65°N
40°W
10°W
0°
10°E
20°E

MONTH: 11-17 JAN 84 BUOY: 2888

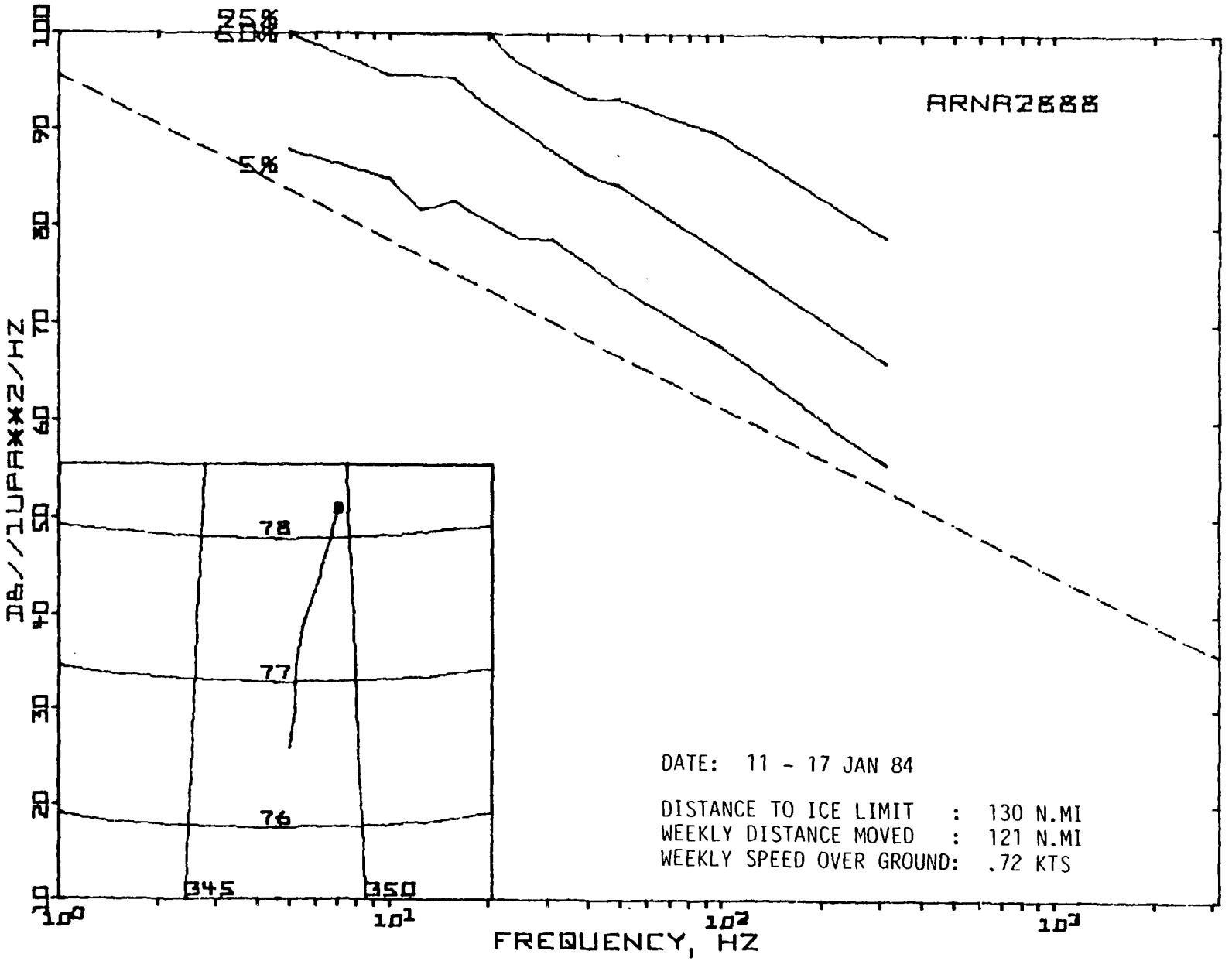
OUTPUT IN FILE ARNA2888

DISPLACEMENT (N. MI.): 121.201 NORTH:-117.780 EAST: -28.595
DIRECTION (TRUE): 193.666

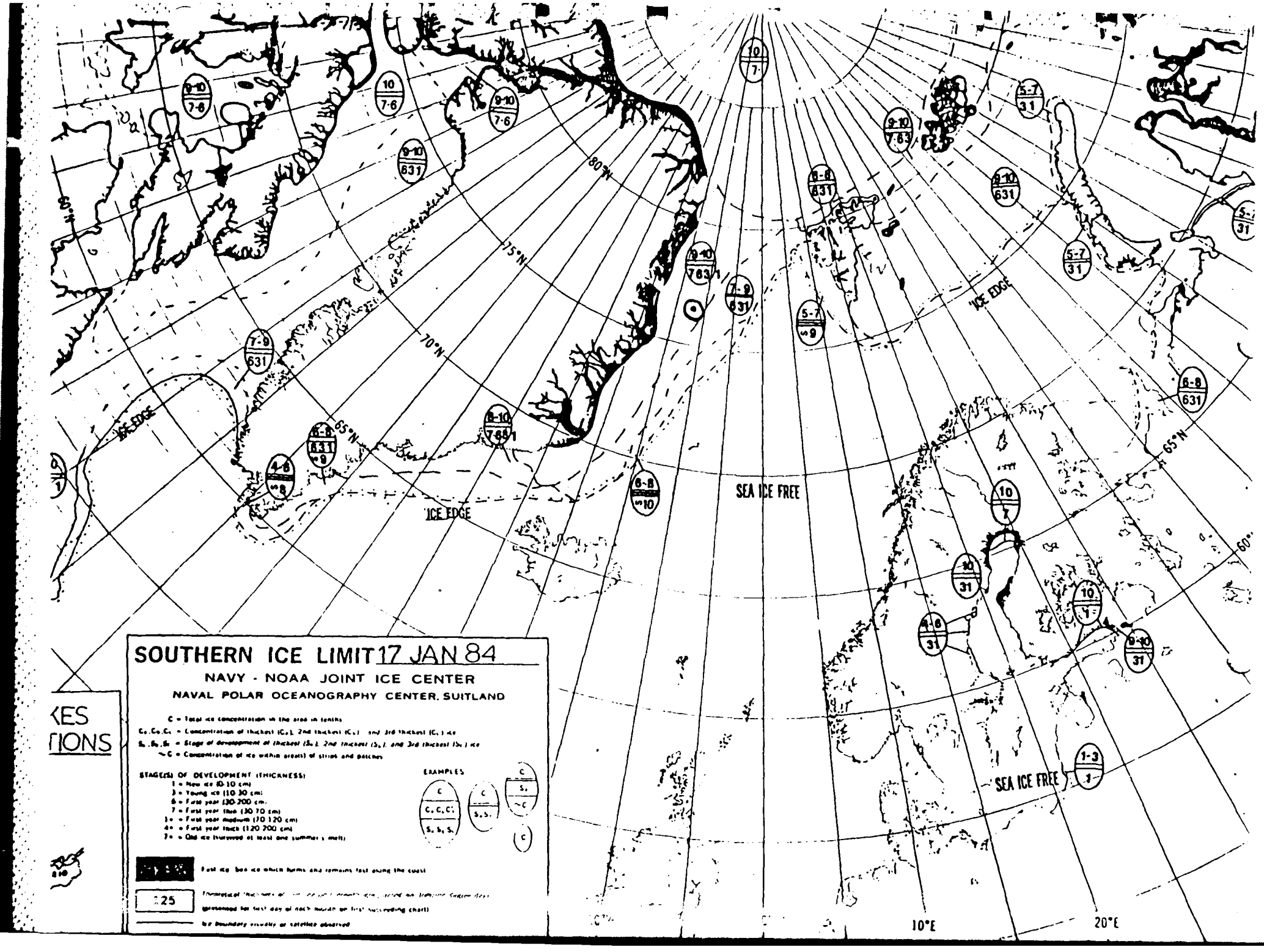
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	99.6	7.6	86.9	87.8	89.4	91.9	99.9	107.5	109.4	109.4	110.0	56
10.0	95.4	6.9	79.8	84.8	84.8	89.6	95.6	102.3	102.8	103.8	104.8	56
12.5	94.7	6.7	79.8	81.5	85.8	90.2	95.6	101.0	102.8	102.8	103.8	56
16.0	94.1	6.2	79.2	82.5	85.8	90.0	95.3	98.8	102.0	102.7	103.8	56
20.0	91.7	6.2	75.1	80.3	82.8	87.2	92.3	96.7	100.1	100.8	101.5	56
25.0	89.6	5.7	75.5	78.6	81.5	85.3	90.0	94.4	96.7	96.7	97.4	56
31.5	88.3	5.5	73.2	78.5	79.9	84.5	87.8	93.2	94.8	94.8	96.6	56
40.0	85.3	5.4	70.9	76.0	77.8	82.1	85.2	89.0	92.5	93.1	95.0	56
50.0	84.4	6.2	69.0	73.7	75.6	80.4	84.2	88.3	92.5	93.1	94.3	56
100.0	78.0	7.4	58.4	67.6	68.2	72.9	77.3	84.2	86.9	89.4	91.0	56
315.0	67.4	8.2	47.8	55.4	56.8	61.5	65.9	73.5	77.0	78.8	84.0	56

STOP



BUOY 2888 11-17 JAN 84


SOUTHERN ICE LIMIT 17 JAN 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
C_1, C_2, C_3 = Concentration of thickest (C_1), 2nd thickest (C_2) and 3rd thickest (C_3) ice
S_1, S_2, S_3 = Stage of development of thickest (S_1), 2nd thickest (S_2), and 3rd thickest (S_3) ice
~C = Concentration of ice within areas of strips and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
6 = First year (30-200 cm)
7 = First year thin (30-70 cm)
8 = First year medium (70-120 cm)
9 = First year thick (120-200 cm)
7+ = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice: Sea ice which forms and remains fast along the coast
Theoretical thickness of ice as given on thickness isopleth (line) generated for first day of each month on first succeeding chart
Ice boundary usually as satellite observed
ICE EDGE
SEA ICE FREE
80°W
75°W
70°W
65°N
60°
10°E
20°E

MONTH: 18-24 JAN 84 BUOY: 2888

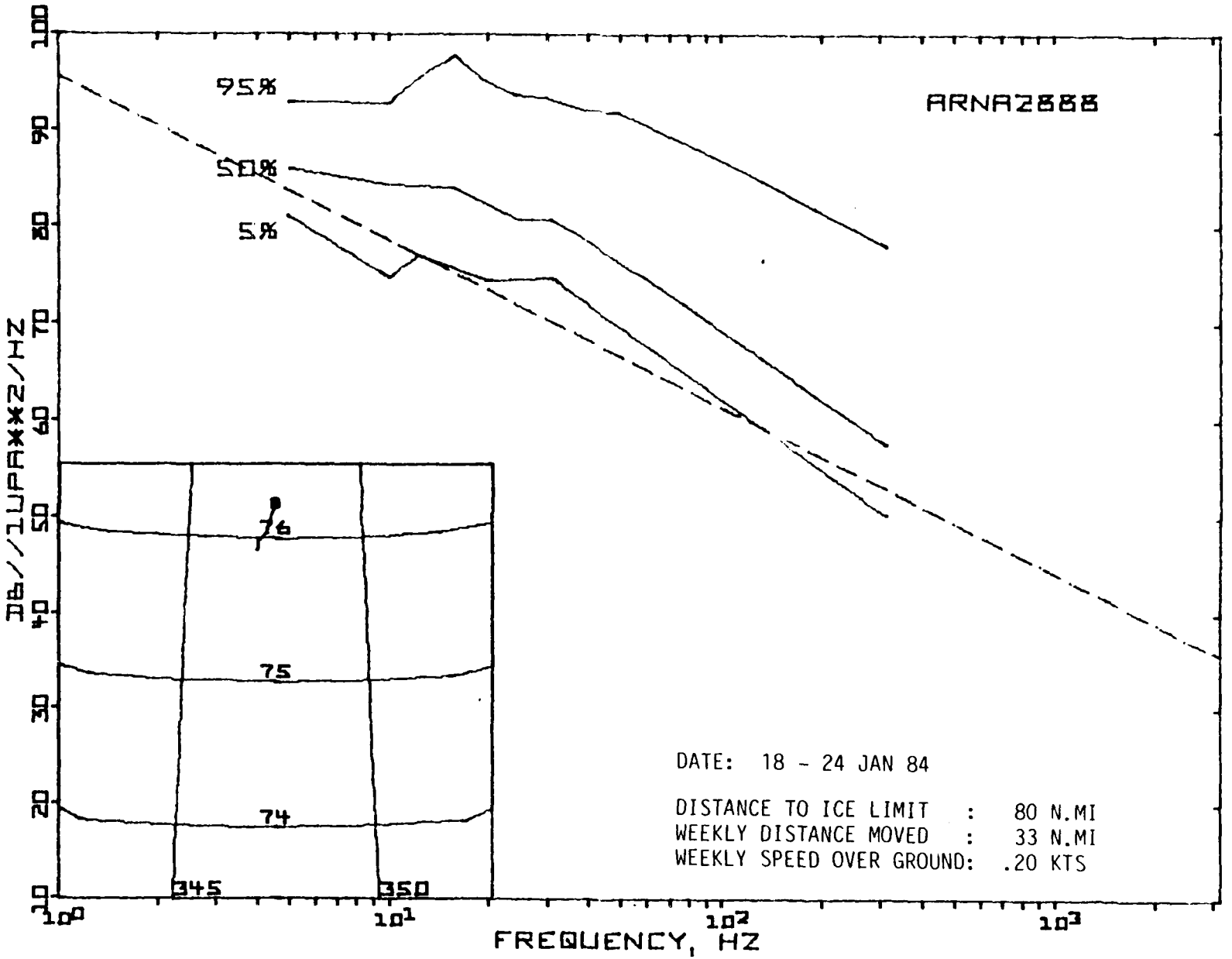
OUTPUT IN FILE ARNA2888

DISPLACEMENT (N. MI.): 33.196 NORTH: -31.860 EAST: -9.323
DIRECTION (TRUE): 196.330

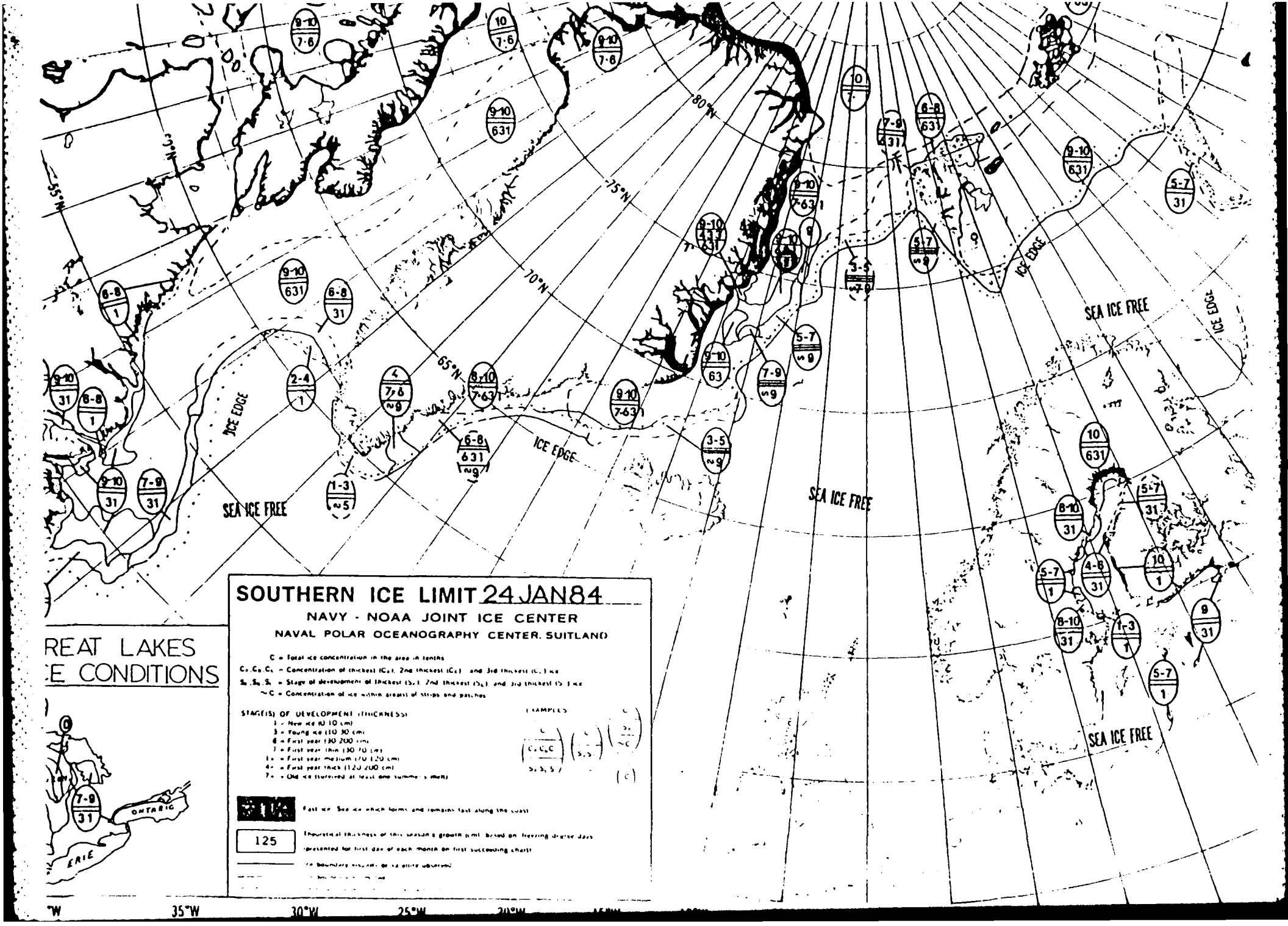
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	86.4	4.3	77.4	80.9	81.8	83.4	85.9	88.6	90.7	92.9	98.9	56
10.0	84.3	6.5	72.1	74.6	76.2	78.7	84.2	89.0	92.7	92.7	101.7	56
12.5	84.5	6.1	74.6	76.9	77.6	79.8	84.2	87.5	90.8	95.6	102.8	56
16.0	84.9	6.7	73.1	75.6	77.9	79.7	83.9	87.7	91.8	97.8	103.8	56
20.0	83.1	6.5	70.7	74.2	76.7	78.1	82.0	87.2	91.3	94.8	100.8	56
25.0	81.9	5.7	71.9	74.4	76.4	78.0	80.5	85.9	88.4	93.5	97.4	56
31.5	81.8	5.5	70.7	74.6	75.7	77.7	80.6	83.7	88.8	93.2	96.6	56
40.0	79.3	5.5	70.0	71.8	73.8	75.0	78.5	82.1	83.8	91.9	97.3	56
50.0	77.7	5.8	67.7	69.6	72.1	74.4	76.2	79.7	82.2	91.8	95.3	56
100.0	70.8	6.9	60.1	62.2	65.3	66.1	69.4	72.9	76.4	86.9	91.0	56
315.0	60.0	9.4	46.9	50.1	50.8	51.4	57.4	66.7	72.8	77.9	82.0	56

STOP



BUOY 2888 18-24 JAN 84


SOUTHERN ICE LIMIT 24 JAN 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
GREAT LAKES
ICE CONDITIONS
ICE EDGE
SEA ICE FREE
80°N
75°N
70°N
65°N
55°N
35°W
30°W
25°W
20°W
ERIE
ONTARIO

MONTH: 25-31 JAN 84 BUOY: 2888

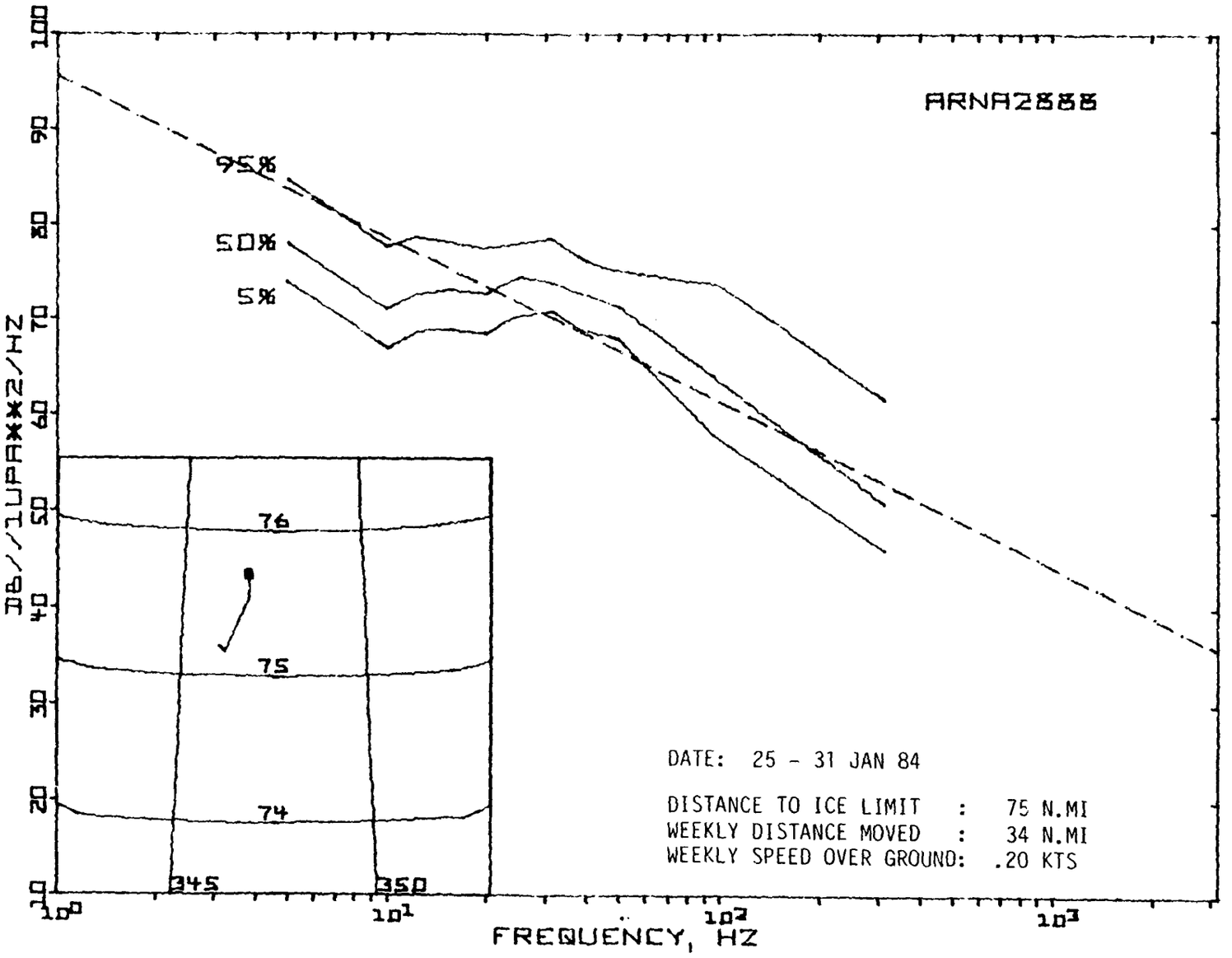
OUTPUT IN FILE ARNA2888

DISPLACEMENT (N. MI.): 34.485 NORTH: -31.560 EAST: -13.899
DIRECTION (TRUE): 203.790

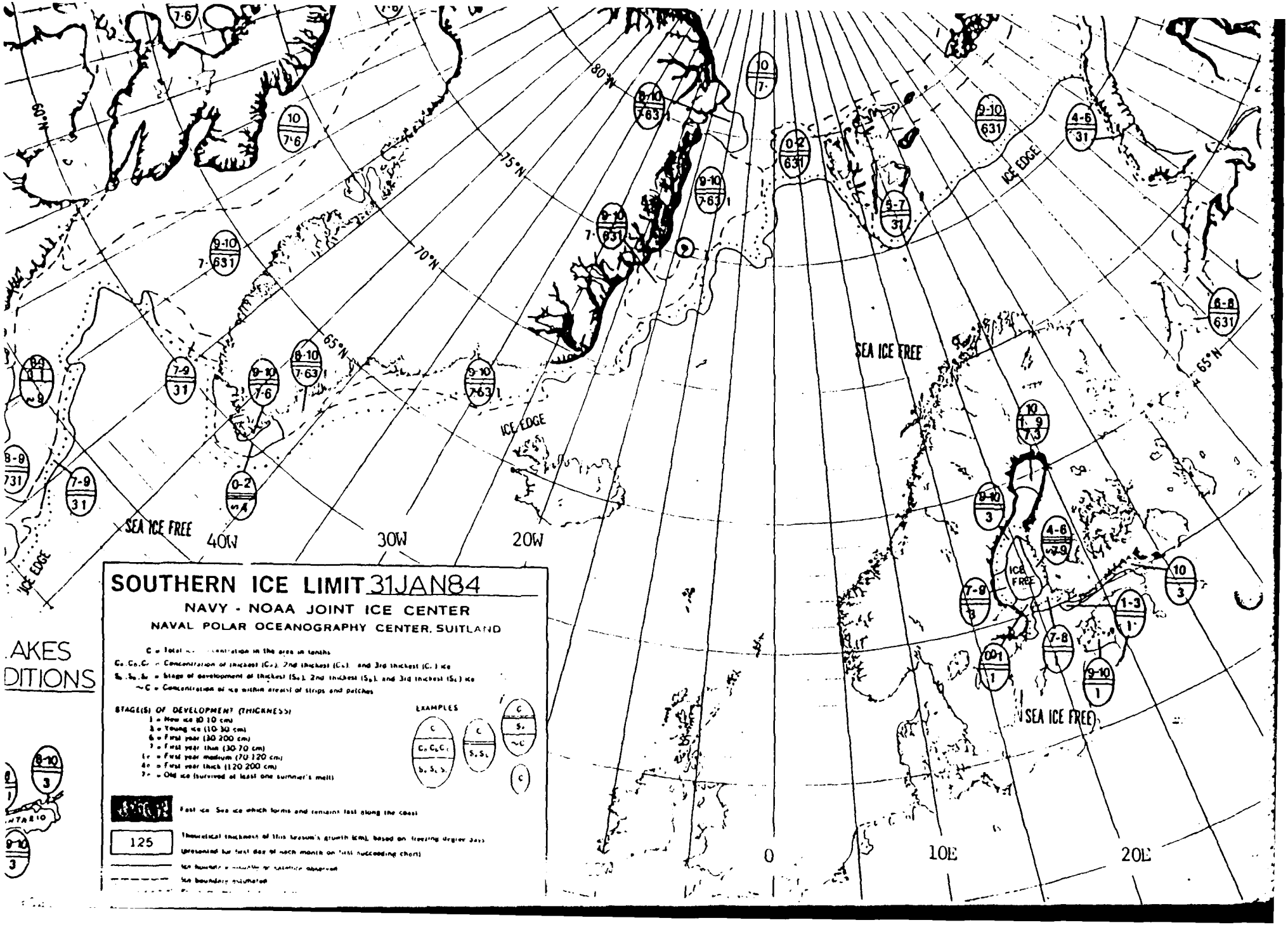
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	78.4	3.6	71.3	73.8	73.8	75.8	78.0	79.9	83.4	84.7	90.1	56
10.0	71.8	3.4	65.5	66.7	68.6	69.5	70.9	73.7	76.2	77.6	79.8	56
12.5	73.1	3.2	67.7	68.6	69.5	70.9	72.7	74.6	77.6	78.7	79.8	55
16.0	73.4	2.9	67.7	68.7	69.6	71.2	73.1	75.6	77.2	77.9	79.2	56
20.0	72.9	2.9	68.2	68.2	69.1	70.7	72.6	75.1	77.4	77.4	78.7	56
25.0	74.3	2.4	69.4	70.3	71.2	72.6	74.4	76.4	77.2	78.0	79.9	56
31.5	74.5	2.7	69.7	70.7	70.7	73.2	73.9	75.7	77.7	78.5	82.8	56
40.0	72.5	2.5	67.8	68.4	69.0	70.9	72.5	74.4	76.0	76.0	78.5	56
50.0	71.6	2.5	66.9	67.7	68.4	69.6	71.2	73.7	74.4	75.0	79.0	56
100.0	64.2	4.0	56.8	57.3	59.3	62.8	63.4	65.3	67.6	73.6	74.2	55
315.0	52.5	6.1	45.3	45.9	45.9	47.8	50.8	54.7	59.9	61.5	73.5	56

STOP



BUOY 2888 25-31 JAN 84


SOUTHERN ICE LIMIT 31JAN84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
2 = Young ice (10-30 cm)
4 = First year (30-200 cm)
7 = First year thin (30-70 cm)
4 = First year medium (70-120 cm)
4 = First year thick (120-200 cm)
7 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast
125
Theoretical thickness of this season's growth (cm), based on freezing degree days
(presented for last day of each month on next succeeding chart)
ICE EDGE
SEA ICE FREE
ICE FREE
80°N
75°N
70°N
65°N
60°N
40W
30W
20W
0
10E
20E

MONTH: 1-7 FEB 84 BUOY: 2888

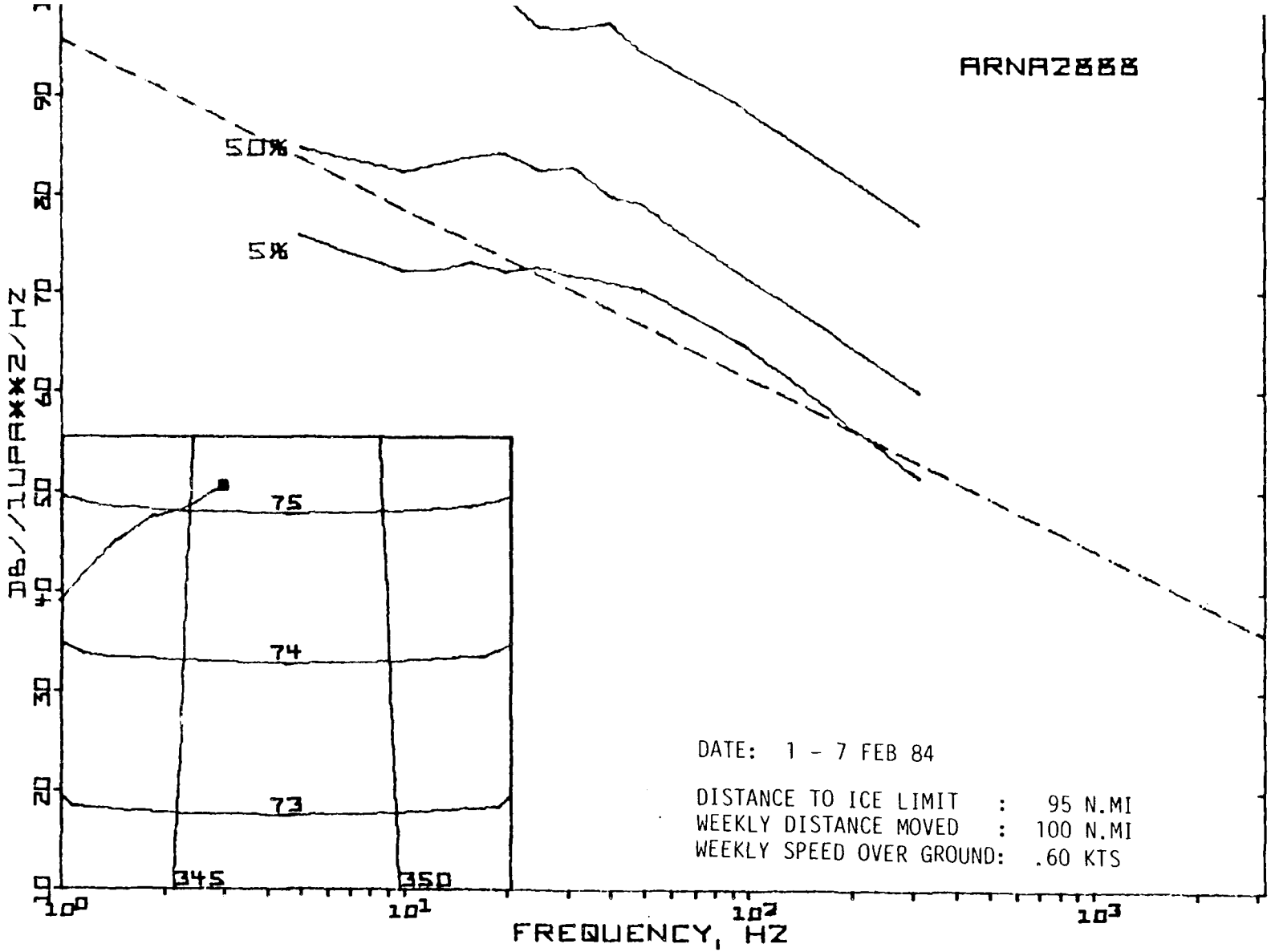
OUTPUT IN FILE ARNA2888

DISPLACEMENT (N. MI.): 99.576 NORTH: -67.380 EAST: -73.317
DIRECTION (TRUE): 227.442

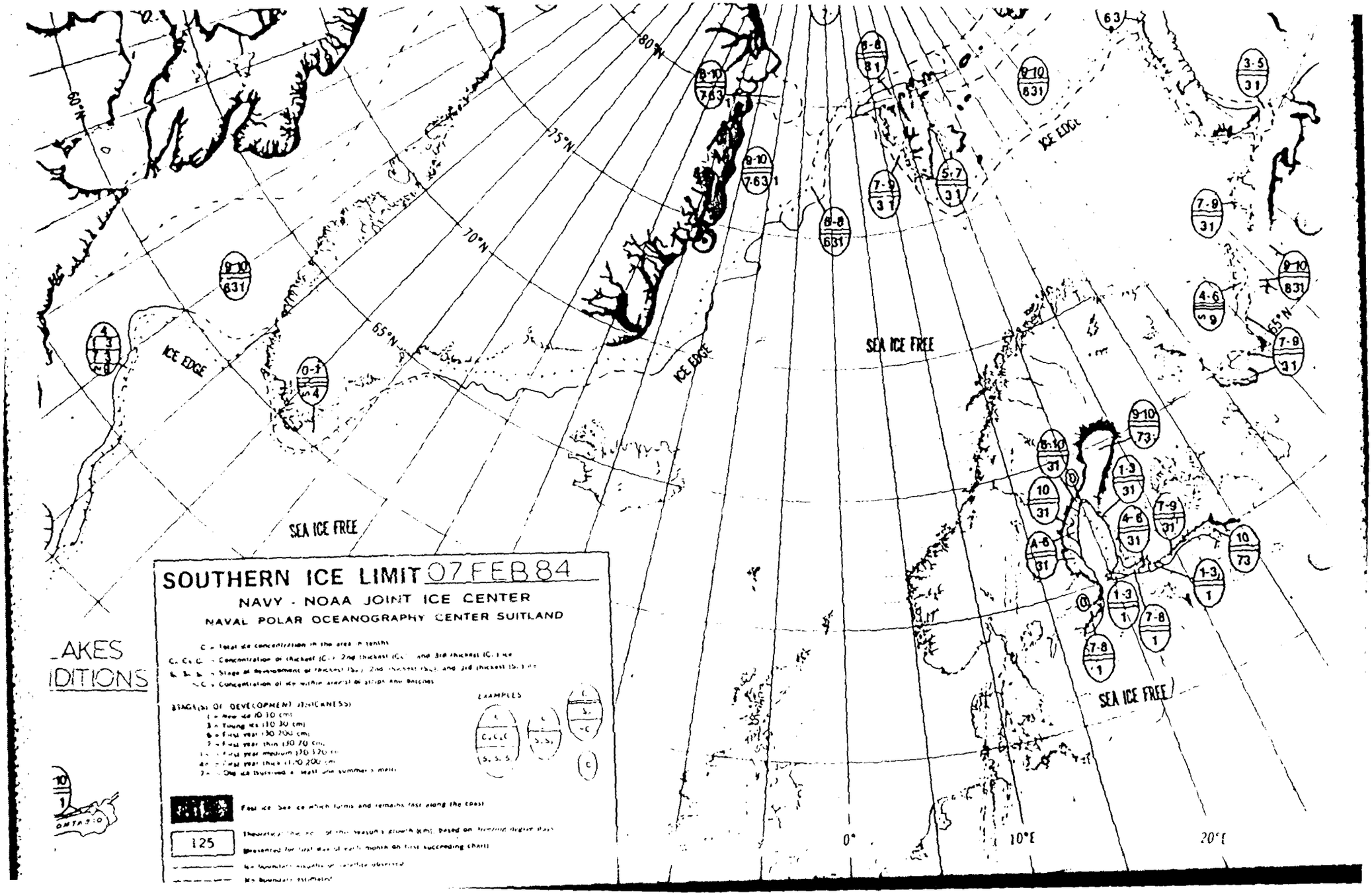
THE NUMBER OF DATA SAMPLES IS 52

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	87.3	9.6	74.9	75.8	76.6	79.9	84.7	92.9	101.4	103.4	109.4	51
10.0	82.7	9.1	68.6	72.1	72.7	73.7	82.3	87.5	96.8	99.6	102.8	52
12.5	83.7	8.3	70.9	72.1	72.7	76.9	82.9	88.3	95.6	99.6	103.8	52
16.0	84.2	8.4	72.5	73.1	73.7	77.2	83.9	88.5	91.8	99.7	104.8	52
20.0	83.0	8.2	71.4	72.0	72.6	76.0	84.1	87.2	90.7	100.8	103.3	52
25.0	82.7	7.1	71.9	72.6	73.3	76.4	82.4	86.5	91.9	96.7	98.0	52
31.5	82.3	7.1	71.6	71.6	73.2	75.7	82.8	87.2	92.0	96.6	97.3	52
40.0	80.2	7.3	70.0	70.9	71.8	74.4	79.9	83.8	87.1	97.3	99.1	52
50.0	79.3	7.4	69.6	70.2	70.2	73.7	79.0	82.2	88.3	94.3	99.1	52
100.0	73.1	7.3	62.8	64.4	65.3	67.6	71.3	75.4	86.3	88.5	92.3	52
315.0	61.4	7.6	49.4	51.4	53.9	56.1	59.9	64.0	73.5	77.0	84.0	52

STOP

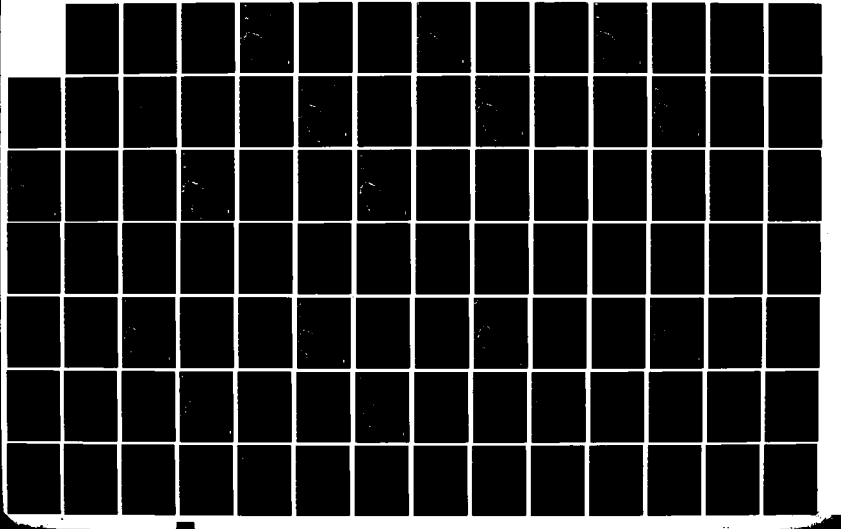


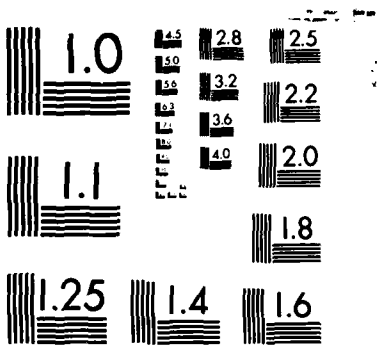
BUOY 2888 1-7 FEB 84


SOUTHERN ICE LIMIT 07 FEB 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
ICE EDGE
SEA ICE FREE
80°N
75°N
70°N
65°N
0°
10°E
20°E
AKES
IDITIONS

AD-A156 818 LONG TERM STATISTICAL MEASUREMENTS OF ENVIRONMENTAL ACOUSTICS PARAMETERS I..(U) POLAR RESEARCH LAB INC CARPINTERIA CA B M BUCK ET AL. 13 DEC 84 PRL-TR-53 5/7

UNCLASSIFIED N00014-84-C-0394 F/G 20/1 NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

MONTH: 8-14 FEB 84 BUOY: 2888

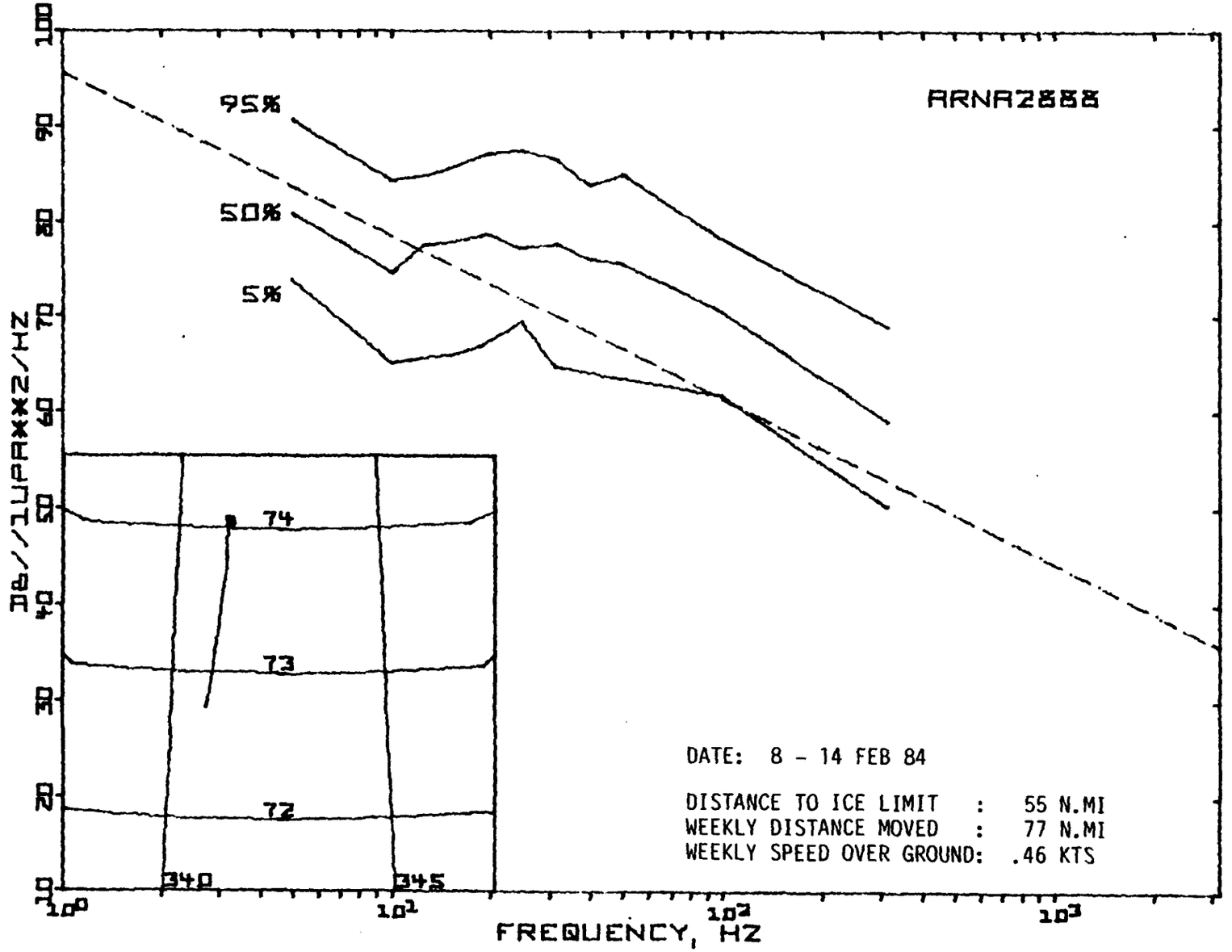
OUTPUT IN FILE ARNA2888

DISPLACEMENT (N. MI.): 77.240 NORTH: -76.800 EAST: -8.231
DIRECTION (TRUE): 186.135

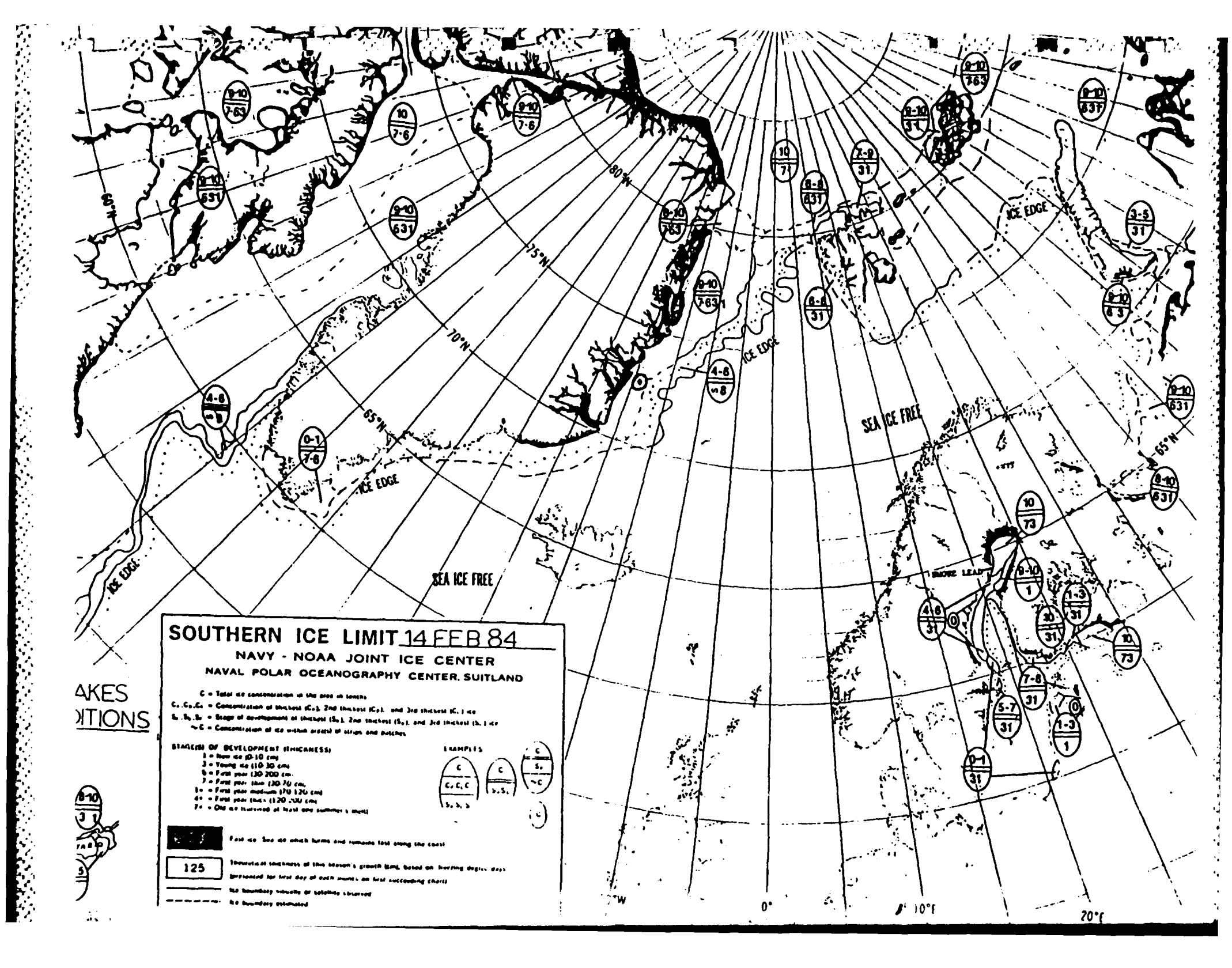
THE NUMBER OF DATA SAMPLES IS 55

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	81.5	6.0	58.7	73.8	73.8	77.4	80.9	85.3	88.6	90.7	93.8	55
10.0	74.7	6.5	63.6	64.9	65.5	67.7	74.6	78.7	83.6	84.2	85.8	55
12.5	76.1	6.4	64.2	65.5	66.7	69.5	77.6	80.7	83.6	84.8	86.7	55
16.0	76.8	6.5	65.2	65.9	67.1	70.5	77.[illegible]	80.8	85.8	85.8	88.5	53
20.0	77.7	6.5	64.1	67.2	70.0	72.6	78.7	82.0	86.3	87.2	90.1	55
25.0	77.9	5.7	65.3	69.4	71.2	73.3	77.2	82.4	85.9	87.5	89.2	55
31.5	77.6	6.4	63.7	64.5	69.7	72.5	77.7	81.2	85.3	86.6	90.5	55
40.0	75.6	6.0	63.8	64.0	69.0	70.0	76.0	79.9	83.0	83.8	88.1	55
50.0	75.0	6.1	61.7	63.3	66.1	71.2	75.6	79.7	81.7	85.0	86.4	55
100.0	69.7	5.9	55.4	61.6	62.2	64.4	70.4	73.6	76.4	78.2	82.5	55
315.0	58.8	5.5	43.4	50.1	50.8	56.1	59.0	61.5	65.0	68.8	71.9	55

STOP



BUOY 2888 8-14 FEB 84


SOUTHERN ICE LIMIT 14 FEB 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
ICE EDGE
SEA ICE FREE
80°N
75°N
70°N
65°N
60°W
0°
10°E
20°E

MONTH: 15-21 FEB 84 BUOY: 2888

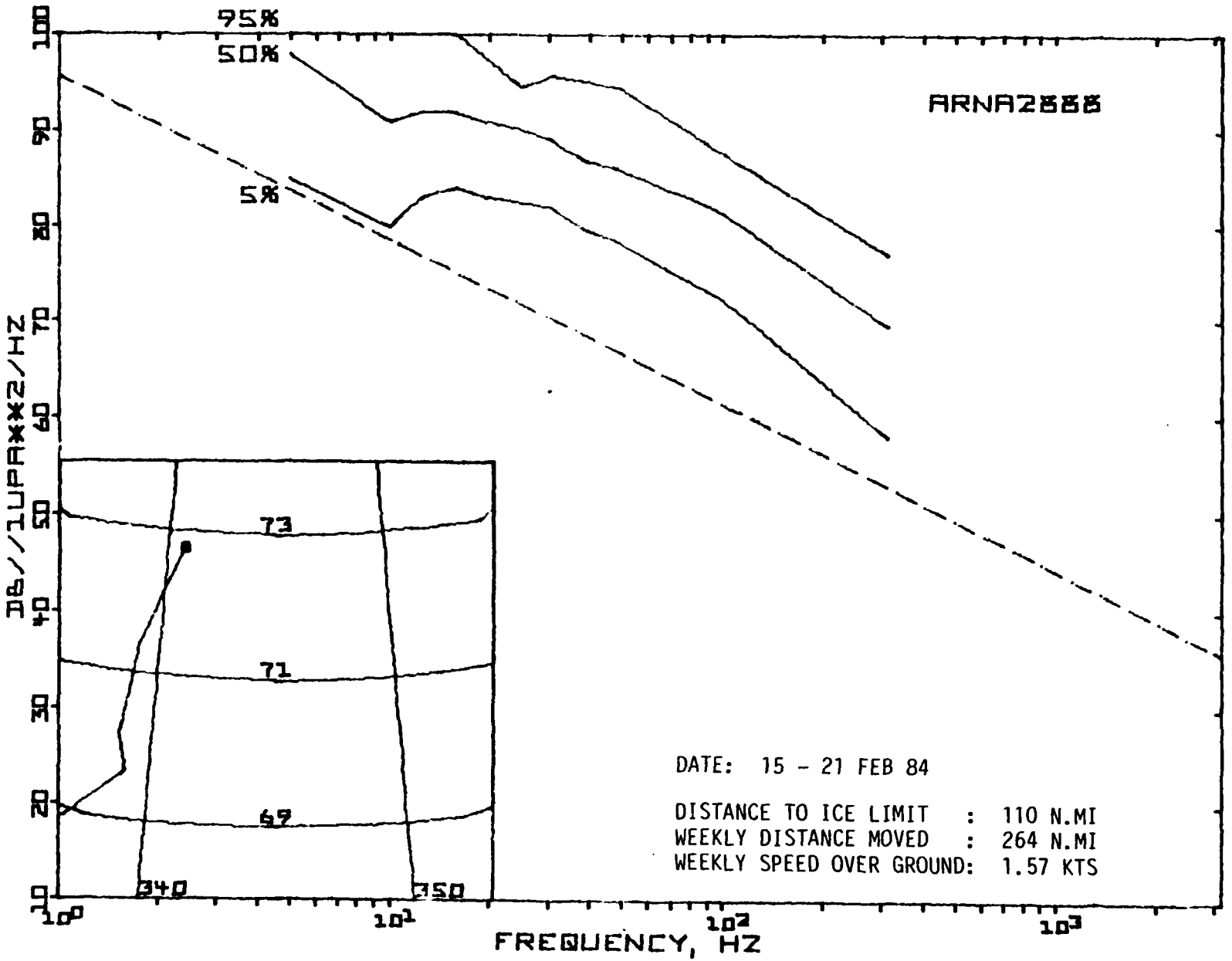
OUTPUT IN FILE ARNA2888

DISPLACEMENT (N. MI.): 264.055 NORTH:-244.680 EAST: -99.280
DIRECTION (TRUE): 202.106

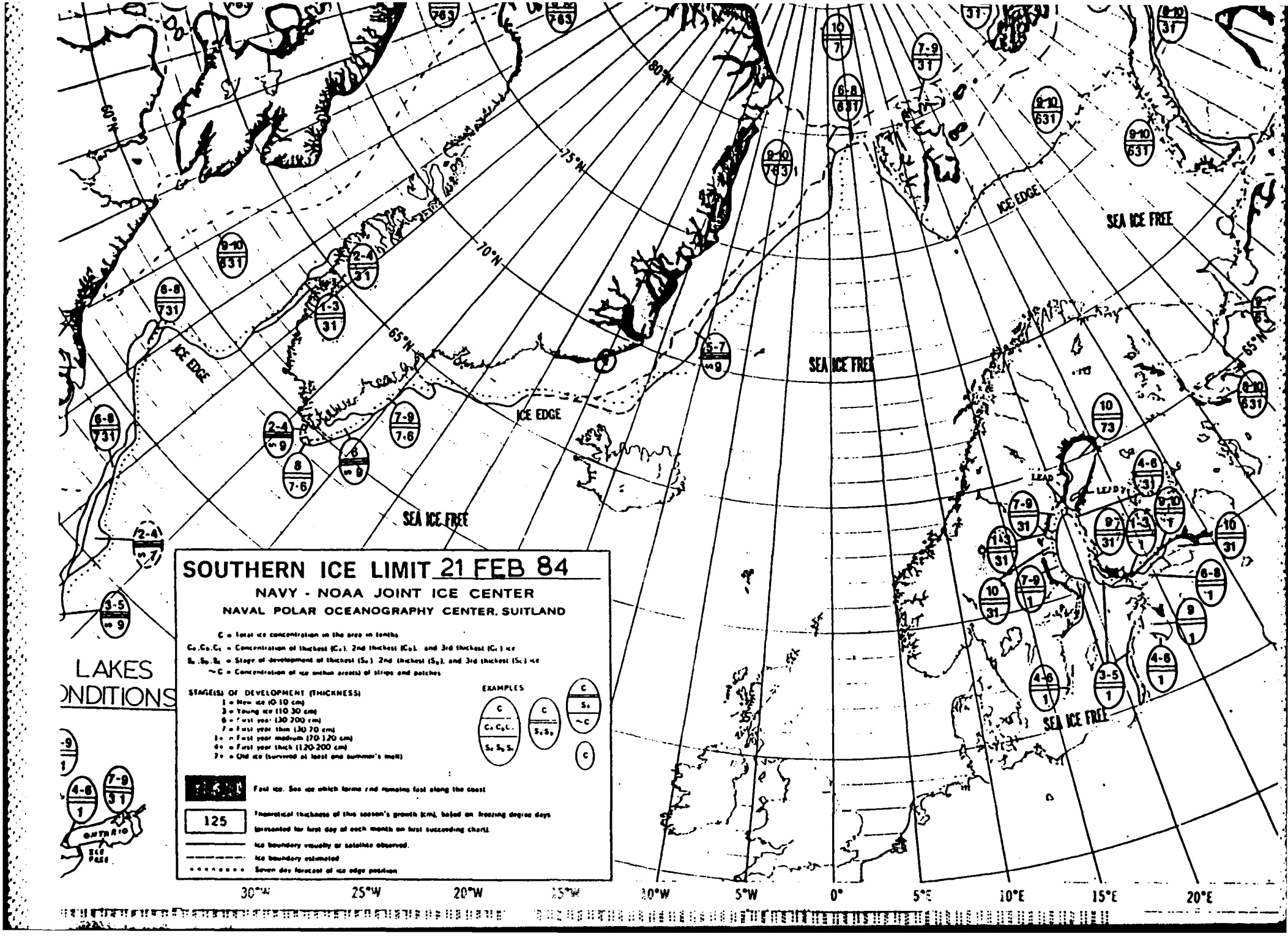
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	98.1	8.5	79.9	84.7	86.9	90.7	97.9	106.7	108.8	109.4	110.0	56
10.0	92.8	7.9	76.9	79.8	82.3	86.7	90.8	99.6	102.8	105.6	107.0	56
12.5	92.4	6.1	79.8	82.9	84.8	88.3	91.8	96.8	100.3	102.8	102.8	56
16.0	92.2	4.8	79.2	83.9	85.8	89.3	91.8	96.0	97.8	100.6	100.6	56
20.0	90.6	4.3	80.3	82.8	84.1	88.0	90.7	93.2	96.1	97.3	100.1	54
25.0	89.2	3.8	79.9	82.4	83.2	87.5	90.0	91.3	94.4	94.4	96.7	56
31.5	88.4	4.0	79.9	81.8	82.8	86.0	88.8	90.5	93.2	95.7	96.6	55
40.0	86.4	4.4	76.9	79.2	81.0	83.0	86.5	89.0	91.3	95.0	96.6	56
50.0	85.4	4.6	76.2	78.1	79.7	82.2	85.8	88.3	91.8	94.3	95.3	55
100.0	80.6	4.9	71.3	72.2	73.6	76.4	81.4	84.2	85.6	87.5	89.4	56
315.0	68.4	6.2	55.4	57.9	59.0	62.8	69.4	73.5	75.4	77.0	79.5	56

STOP



BUOY 2888 15-21 FEB 84


SOUTHERN ICE LIMIT 21 FEB 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = total ice concentration in the area in tenths
C_o, C_b, C_c = Concentration of thickest (C_o), 2nd thickest (C_b), and 3rd thickest (C_c) ice
S_o, S_b, S_c = Stage of development of thickest (S_o), 2nd thickest (S_b), and 3rd thickest (S_c) ice
~C = Concentration of ice within areas of strips and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
4 = First year (30-200 cm)
7 = First year thin (30-70 cm)
1 = First year medium (70-120 cm)
4 = First year thick (120-200 cm)
7 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast
125
Theoretical thickness of the season's growth (cm), based on freezing degree days forecasted for first day of each month on first succeeding chart.
Ice boundary visually or satellite observed.
Ice boundary estimated
Seven day forecast of ice edge position
ICE EDGE
SEA ICE FREE
LEAD
80°N
75°N
70°N
65°N
30°W
25°W
20°W
15°W
10°W
5°W
0°
5°E
10°E
15°E
20°E

MONTH: 22-28 FEB 84 BUOY: 2888

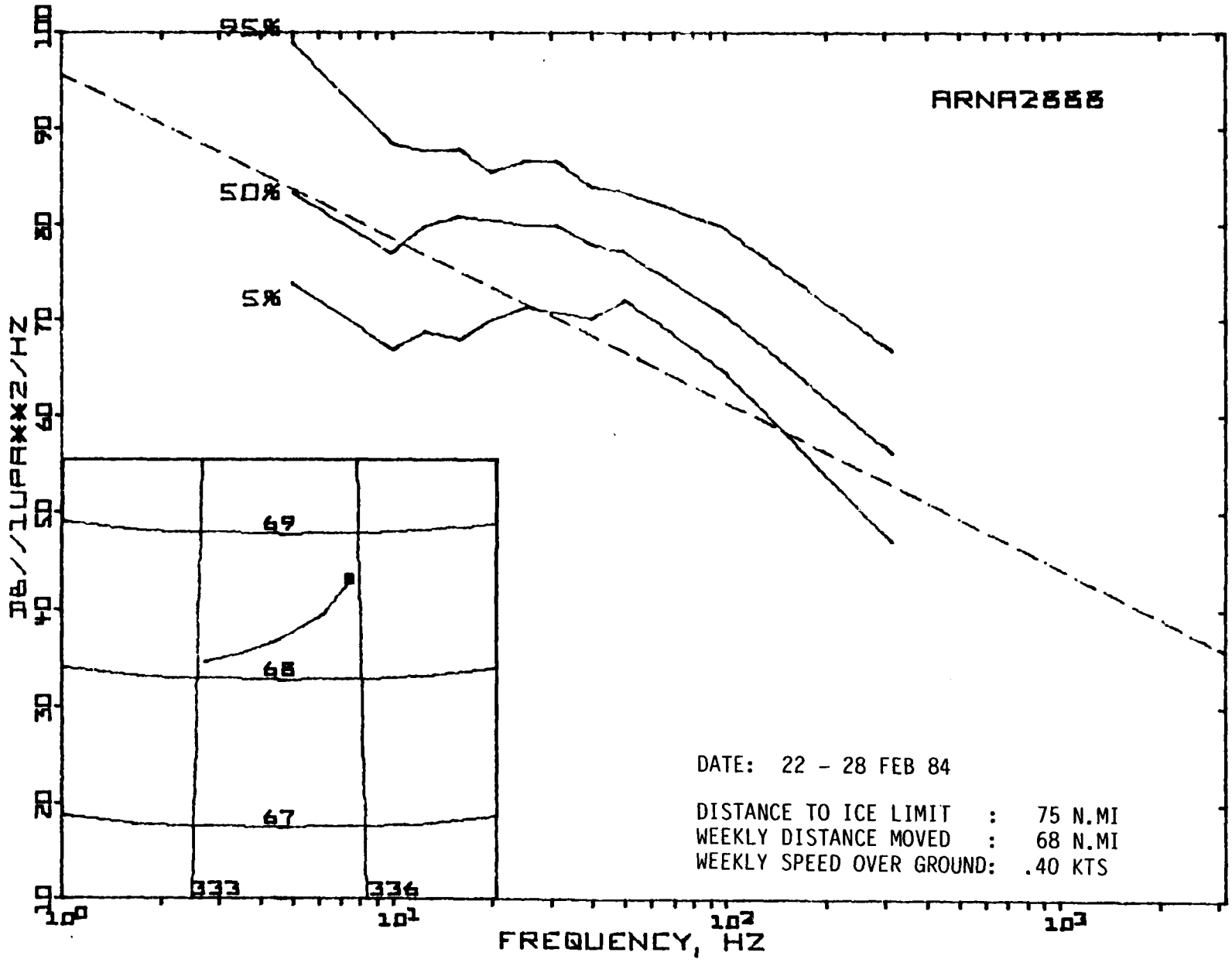
OUTPUT IN FILE ARNA2888

DISPLACEMENT (N. MI.): 68.320 NORTH: -34.800 EAST: -58.792
DIRECTION (TRUE): 239.406

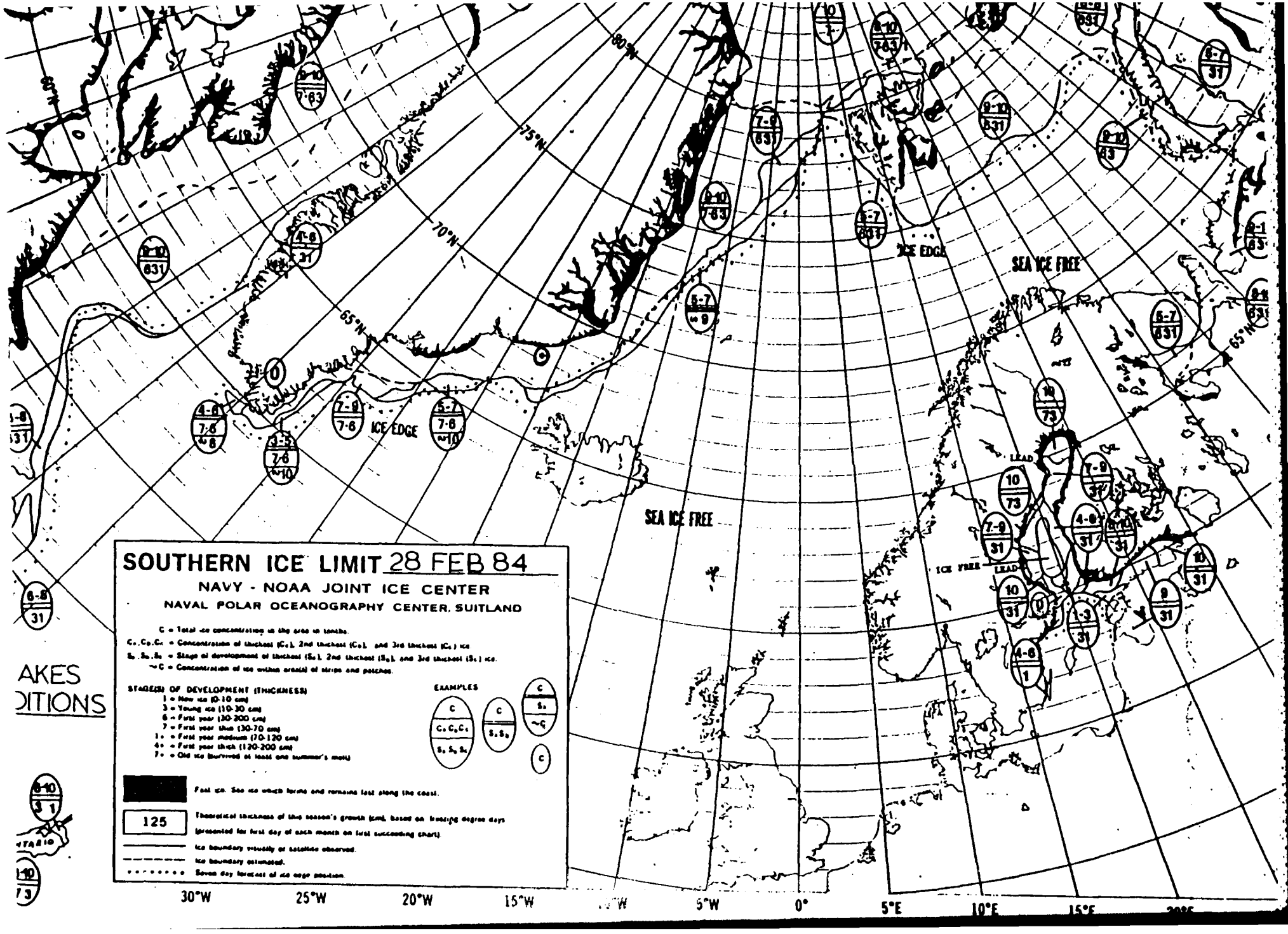
THE NUMBER OF DATA SAMPLES IS 47

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	85.3	7.7	73.8	73.8	78.0	79.9	83.4	87.8	97.9	98.9	108.1	47
10.0	78.5	6.7	65.5	66.7	67.7	75.5	76.9	82.3	86.7	88.3	100.3	46
12.5	80.4	7.1	68.6	68.6	68.6	76.9	79.8	82.9	85.8	87.5	107.7	47
16.0	80.5	5.5	67.1	67.7	71.2	77.9	80.8	84.6	85.8	87.7	92.8	46
20.0	80.2	4.6	70.0	70.0	73.2	76.7	80.3	82.8	85.3	85.3	90.7	47
25.0	80.0	4.3	69.4	71.2	74.4	77.2	79.9	83.2	85.3	86.5	90.0	47
31.5	79.9	4.1	70.7	70.7	75.7	76.8	79.9	82.8	84.5	86.6	87.8	46
40.0	78.3	4.0	69.0	70.0	73.8	76.0	77.8	81.0	83.0	83.8	87.1	47
50.0	77.6	3.8	69.0	72.1	73.0	75.0	77.2	79.7	83.3	83.3	85.0	46
100.0	71.7	4.8	62.8	64.4	66.1	67.6	70.4	75.4	78.9	79.6	80.3	47
315.0	56.1	5.9	45.9	46.9	48.7	51.4	56.1	59.9	63.4	66.7	68.2	47

STOP



BUOY 2888 22-28 FEB 84


SOUTHERN ICE LIMIT 28 FEB 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths.
C_t, C_o, C_v = Concentration of thickest (C_t), 2nd thickest (C_o), and 3rd thickest (C_v) ice
S_t, S_o, S_v = Stage of development of thickest (S_t), 2nd thickest (S_o), and 3rd thickest (S_v) ice.
~C = Concentration of ice within area(s) of strips and patches.
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
6 = First year (30-200 cm)
7 = First year thin (30-70 cm)
1. = First year medium (70-120 cm)
4. = First year thick (120-200 cm)
7. = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast.
125
Theoretical thickness of the season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart)
Ice boundary visually or satellite observed.
Ice boundary estimated.
Seven day forecast of ice edge position
ICE EDGE
SEA ICE FREE
LEAD
ICE FREE
80°N
75°N
70°N
65°N
30°W
25°W
20°W
15°W
5°W
0°
5°E
10°E
15°E

MONTH: 29FEB-6 MAR 84 BUOY: 2888

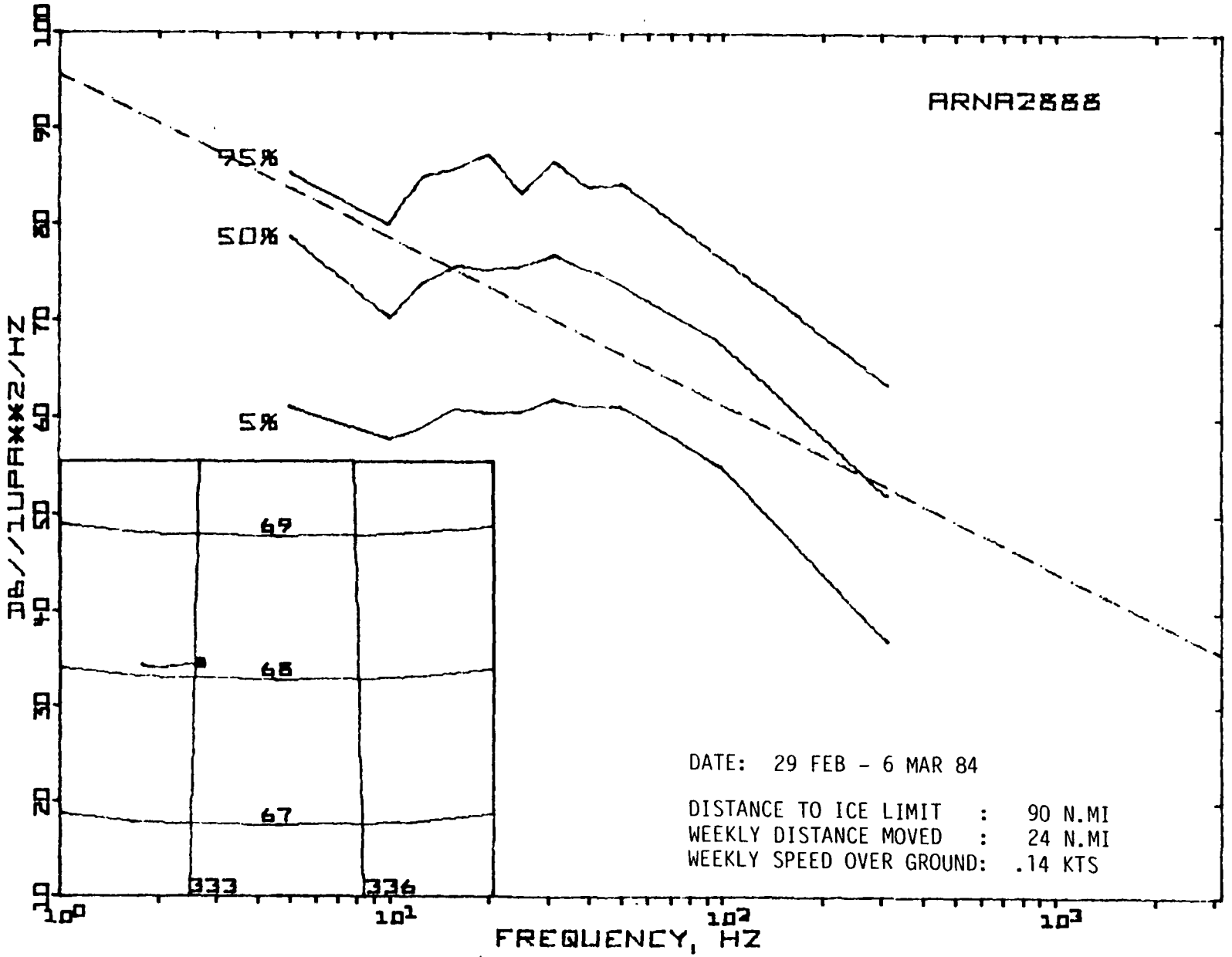
OUTPUT IN FILE ARNA2888

DISPLACEMENT (N. MI.): 24.229 NORTH: -1.500 EAST: -24.183
DIRECTION (TRUE): 266.485

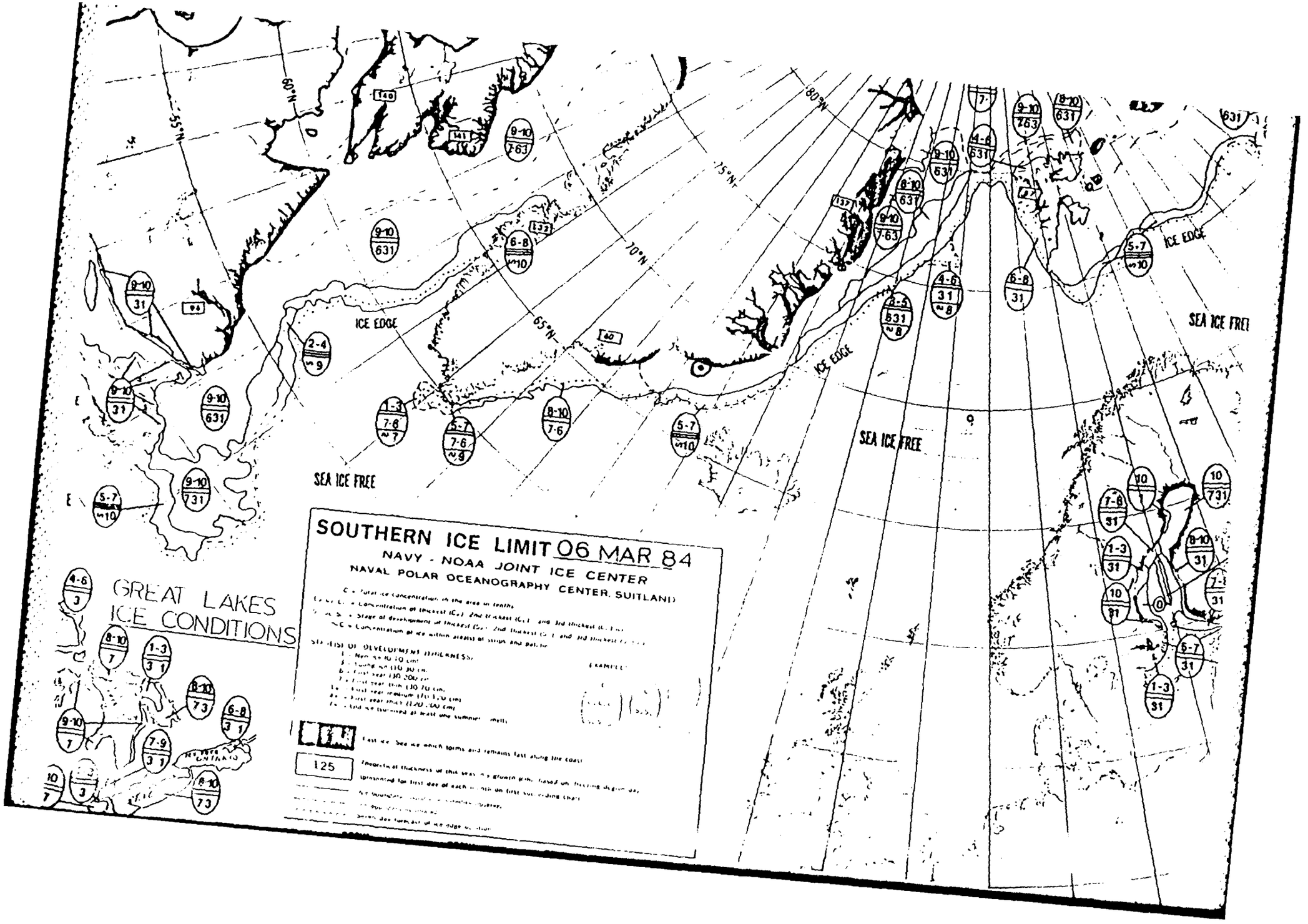
THE NUMBER OF DATA SAMPLES IS 38

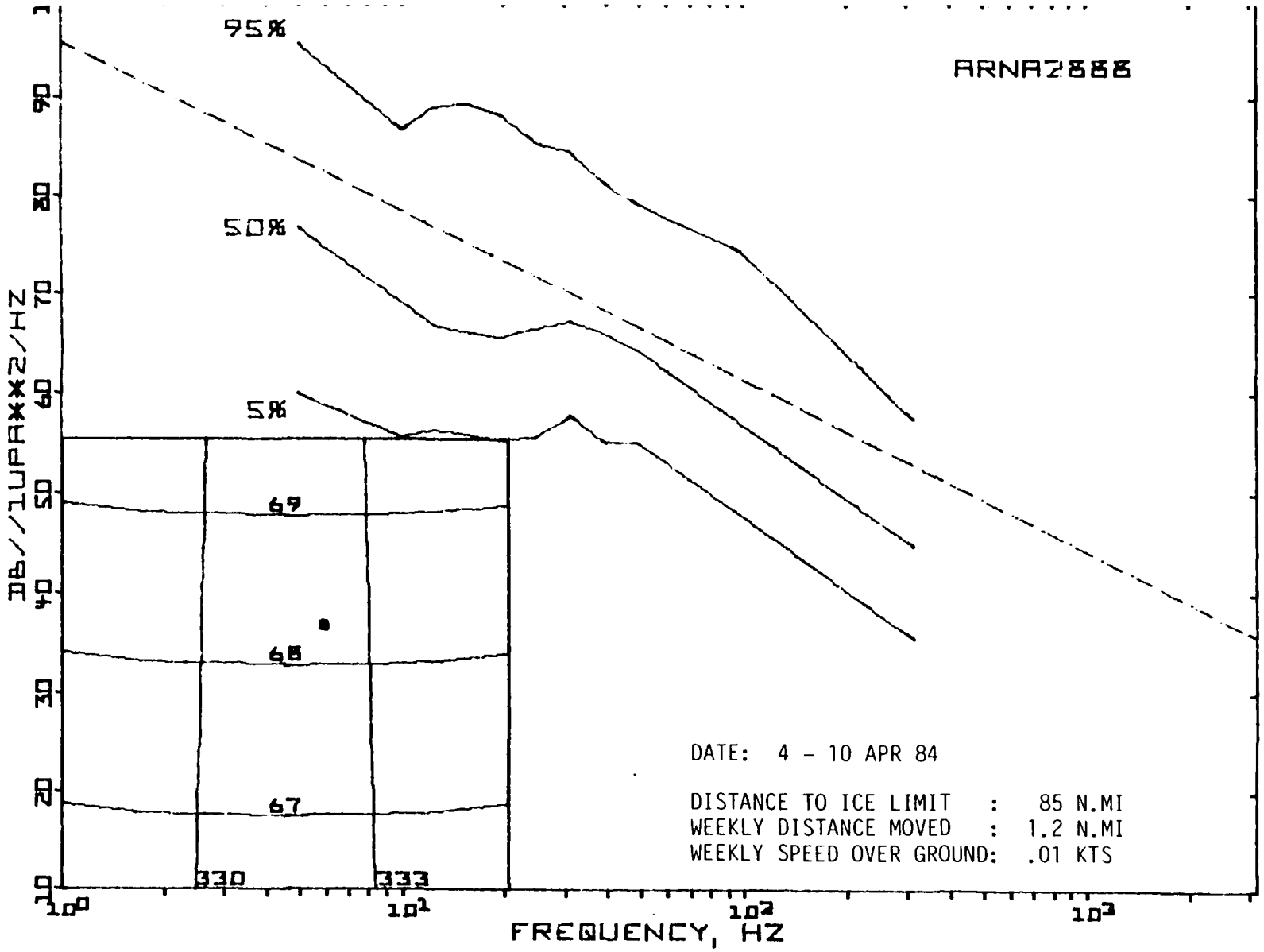
FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	77.8	7.2	59.3	60.9	61.8	74.9	78.7	83.4	84.7	85.3	87.8	38
10.0	70.8	6.8	56.2	57.6	58.7	66.7	70.2	76.2	78.7	79.8	86.7	38
12.5	73.5	7.5	58.2	58.7	58.7	69.5	73.7	78.7	80.7	84.8	90.8	38
16.0	75.7	7.7	59.2	60.8	62.5	70.5	75.6	80.8	85.2	85.8	93.7	38
20.0	75.7	7.7	59.2	60.3	66.3	71.4	75.1	81.2	84.1	87.2	94.0	38
25.0	75.3	7.1	59.9	60.5	67.5	70.3	75.5	80.5	82.4	83.2	94.4	38
31.5	76.4	8.2	61.2	61.8	67.2	71.6	76.8	80.6	82.8	86.6	101.8	37
40.0	73.6	7.0	61.0	61.0	65.7	68.4	75.0	77.8	81.0	83.8	95.0	38
50.0	73.7	7.6	60.4	61.1	65.2	68.3	73.7	77.2	81.7	84.2	94.3	38
100.0	66.7	6.5	52.2	54.8	58.4	60.1	67.6	70.4	74.8	76.4	77.3	37
315.0	52.8	8.1	36.8	36.8	45.9	47.5	51.9	57.9	59.9	63.4	77.9	38

STOP



BUOY 2888 29FEB-6 MAR 84


SOUTHERN ICE LIMIT 06 MAR 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
GREAT LAKES
ICE CONDITIONS
ICE EDGE
SEA ICE FREE
55°N
60°N
65°N
70°N
75°N
80°N



BUOY 2888 4-10 APR 84

MONTH: 4-10 APR 84 BUOY: 2888

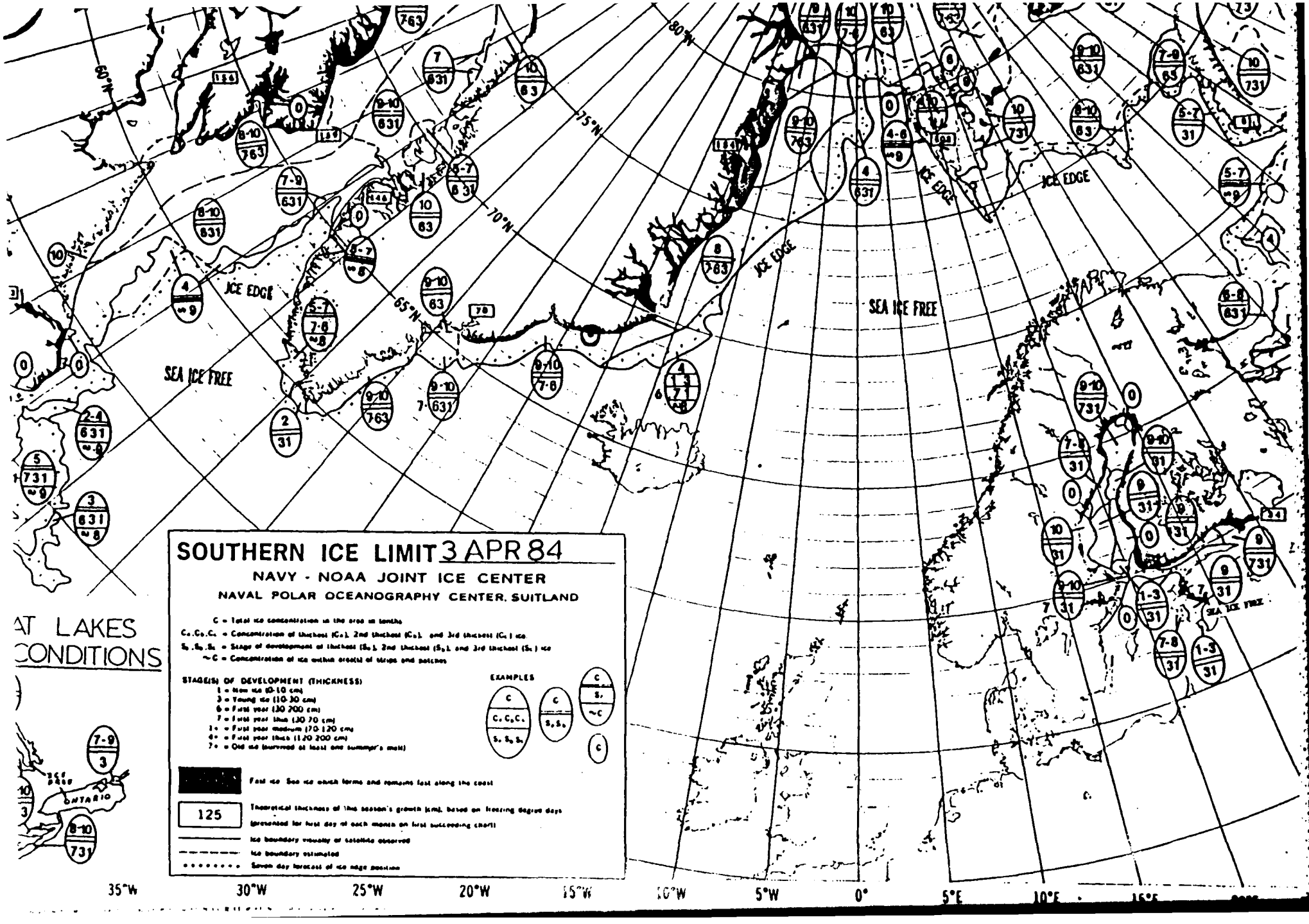
OUTPUT IN FILE ARNA2888

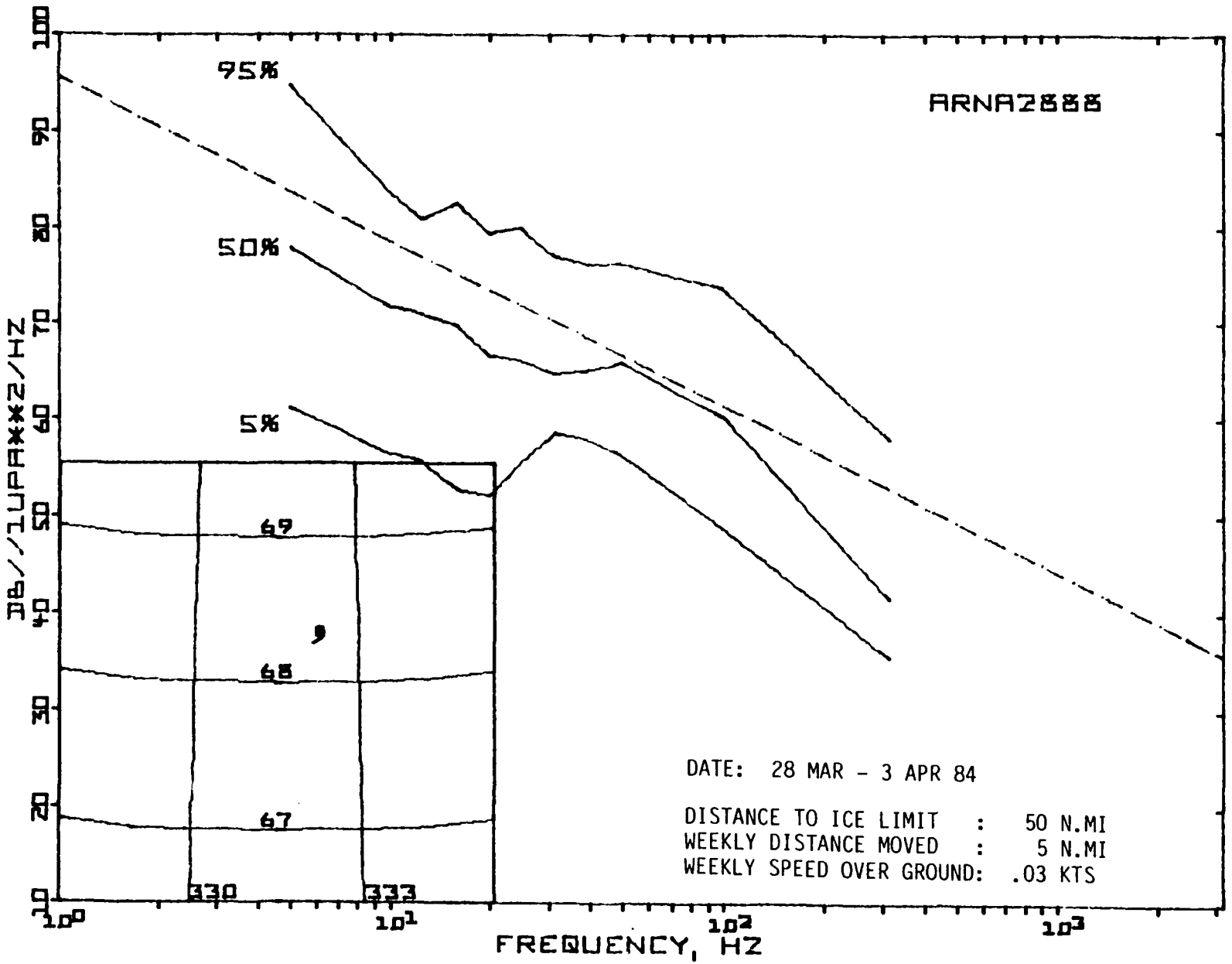
DISPLACEMENT (N. MI.): 1.221 NORTH: -1.200 EAST: -0.223
DIRECTION (TRUE): 190.524

THE NUMBER OF DATA SAMPLES IS 46

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	77.3	11.4	59.9	59.9	60.9	67.8	76.8	87.8	91.9	95.4	96.1	46
10.0	70.2	9.7	54.6	55.5	58.2	62.3	69.0	77.6	82.3	86.7	92.7	46
12.5	68.7	9.8	53.7	56.2	57.6	60.7	66.7	75.5	80.7	89.0	93.5	46
16.0	67.9	9.3	53.7	55.6	57.9	59.7	65.9	72.5	78.6	89.3	92.8	45
20.0	67.0	8.6	52.0	55.1	57.4	62.2	65.4	70.0	78.7	88.0	89.5	46
25.0	66.6	7.8	53.3	55.5	58.0	61.5	66.5	68.4	75.5	85.3	89.2	45
31.5	67.8	7.4	53.9	57.7	59.9	62.8	67.?	69.7	75.7	84.5	89.7	46
40.0	66.5	6.7	55.0	55.0	59.2	63.0	65.9	68.4	75.0	81.0	88.1	46
50.0	65.5	6.5	54.4	55.0	58.1	62.2	64.2	68.4	71.2	79.0	87.1	46
100.0	58.1	8.0	47.6	47.6	49.4	52.2	56.8	61.6	68.2	74.2	85.0	46
315.0	43.1	7.7	35.4	35.4	35.4	35.4	44.7	45.9	53.9	57.4	64.0	44

STOP


SOUTHERN ICE LIMIT 3 APR 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
C_1, C_2, C_3 = Concentration of thickest (C_1), 2nd thickest (C_2), and 3rd thickest (C_3) ice
S_1, S_2, S_3 = Stage of development of thickest (S_1), 2nd thickest (S_2), and 3rd thickest (S_3) ice
~C = Concentration of ice within area(s) of strips and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
6 = First year (30-200 cm)
7 = First year thin (30-70 cm)
1. = First year medium (70-120 cm)
6. = First year thick (120-200 cm)
7. = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. See ice chart terms and remains fast along the coast
125
Theoretical thickness of the season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart)
Ice boundary visually or satellite observed
Ice boundary estimated
Seven day forecast of ice edge position
SEA ICE FREE
ICE EDGE
80°N
75°N
70°N
65°N
60°N
35°W
30°W
25°W
20°W
15°W
10°W
5°W
0°
5°E
10°E
15°E
AT LAKES
CONDITIONS
ONTARIO



BUOY 2888 28MAR-3 APR 84

MONTH: 28MAR-3 APR 84 BUOY: 2888

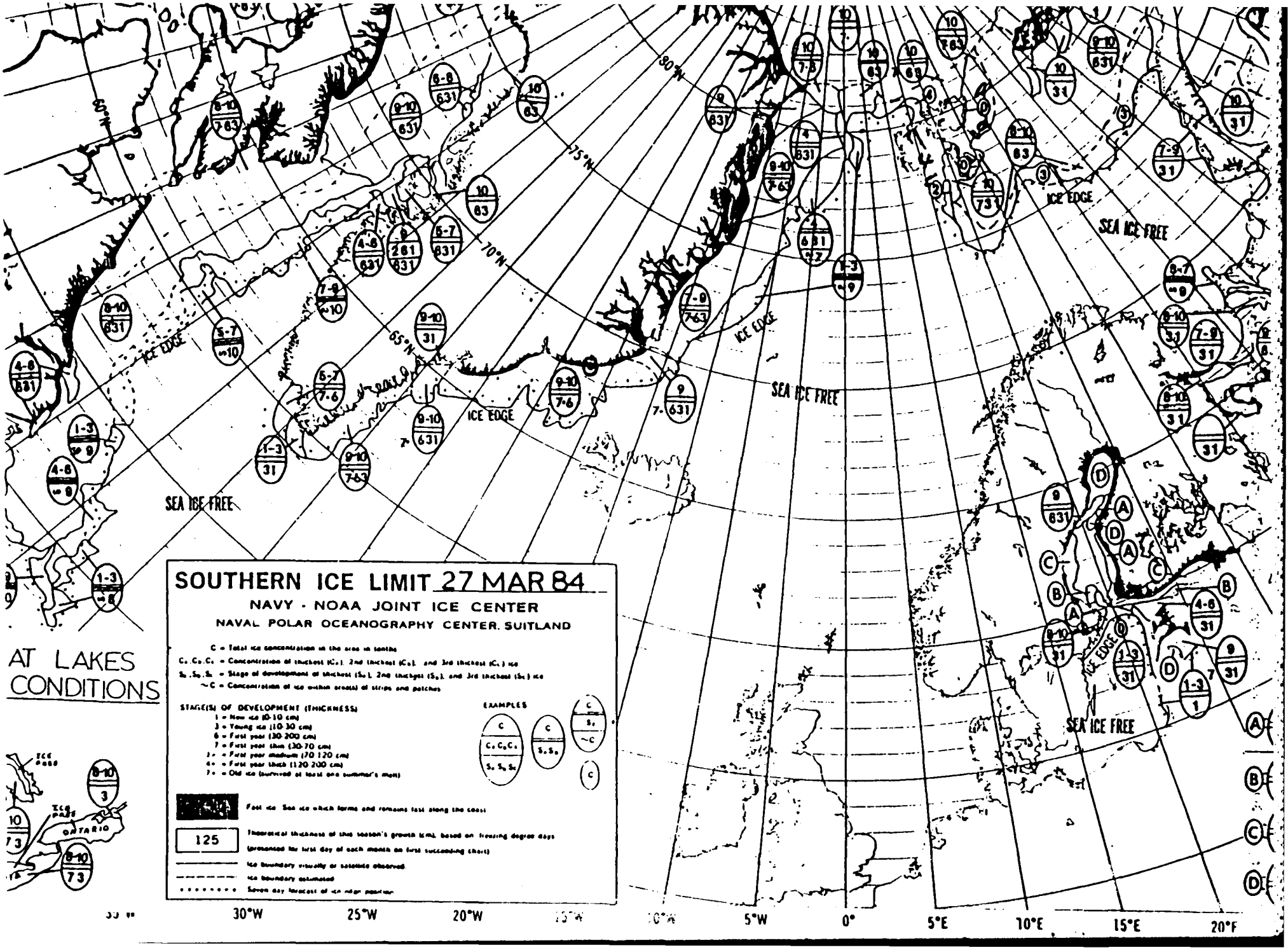
OUTPUT IN FILE ARNA2888

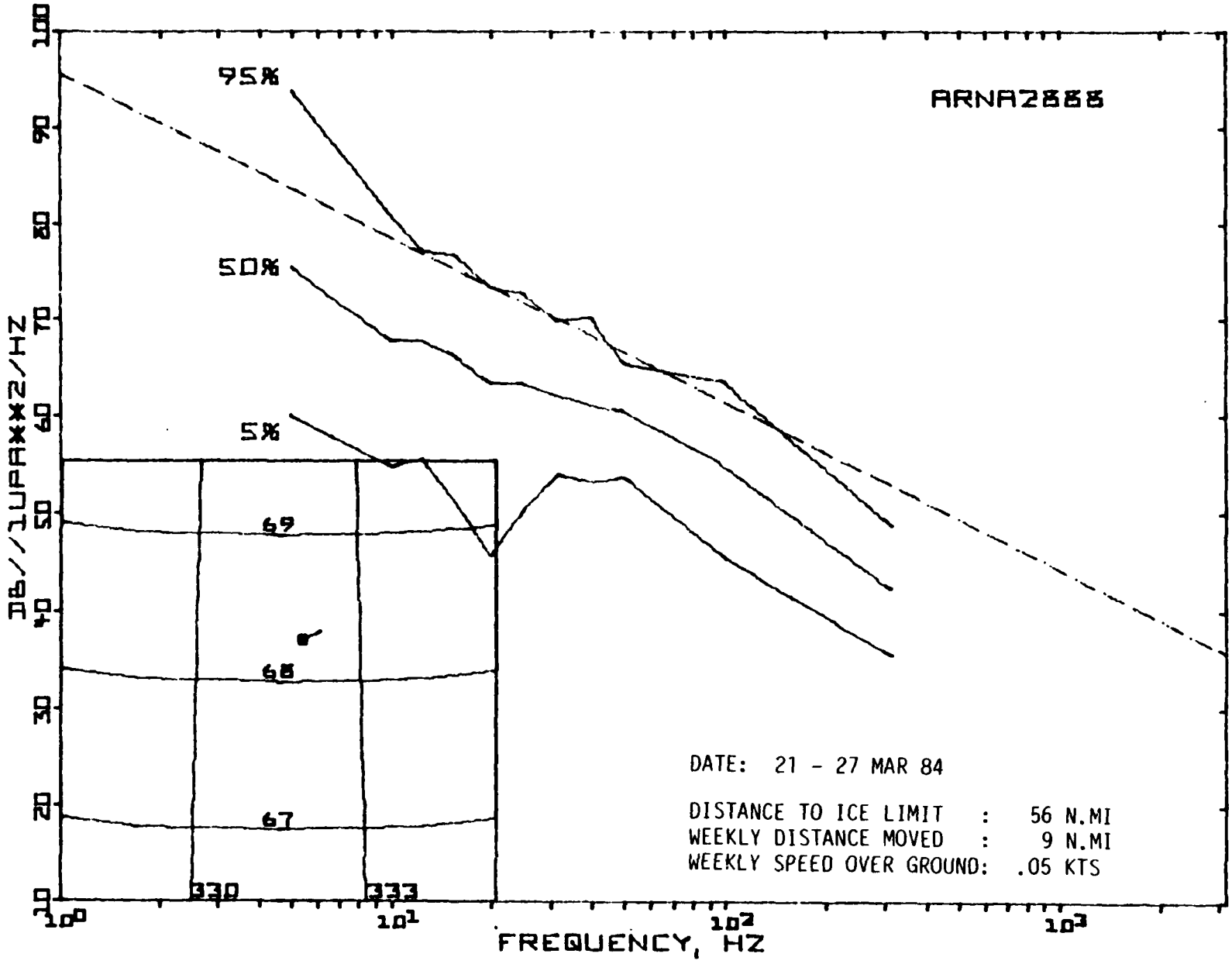
DISPLACEMENT (N. MI.): 5.178 NORTH: -4.439 EAST: -2.665
DIRECTION (TRUE): 211.002

THE NUMBER OF DATA SAMPLES IS 41

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	77.6	9.6	59.9	60.9	63.4	70.1	77.9	84.1	88.6	94.7	95.4	40
10.0	70.9	8.5	56.2	56.2	58.2	63.4	71.5	76.9	81.5	83.6	89.0	41
12.5	70.5	8.5	53.7	55.5	56.2	64.2	70.9	77.6	79.8	80.7	90.2	40
16.0	70.4	11.1	51.9	52.5	56.5	63.3	69.6	75.6	80.8	82.5	113.9	41
20.0	66.7	8.4	50.7	52.0	56.0	60.3	66.3	70.0	77.4	79.2	91.3	41
25.0	66.3	7.9	54.4	55.5	57.2	59.9	65.9	69.4	76.4	79.9	90.0	40
31.5	65.6	9.4	25.1	58.5	59.3	60.6	64.5	69.7	75.2	76.8	86.0	40
40.0	66.0	6.8	56.9	57.8	57.8	60.5	64.9	70.9	74.4	76.0	86.5	40
50.0	65.9	6.9	53.7	56.2	57.2	59.7	65.8	69.6	73.7	76.2	85.0	40
100.0	60.7	8.3	46.1	48.8	52.2	53.6	60.1	66.1	72.2	73.6	78.9	40
315.0	44.8	8.4	35.4	35.4	35.4	36.8	41.5	51.9	56.8	57.9	63.4	38

STOP


SOUTHERN ICE LIMIT 27 MAR 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
AT LAKES CONDITIONS
ICE EDGE
SEA ICE FREE
80°N
75°N
70°N
65°N
30°W
25°W
20°W
5°W
0°
5°E
10°E
15°E
20°E



BUOY 2888 21-27 MAR 84

MONTH: 21-27 MAR 84 BUOY: 2888

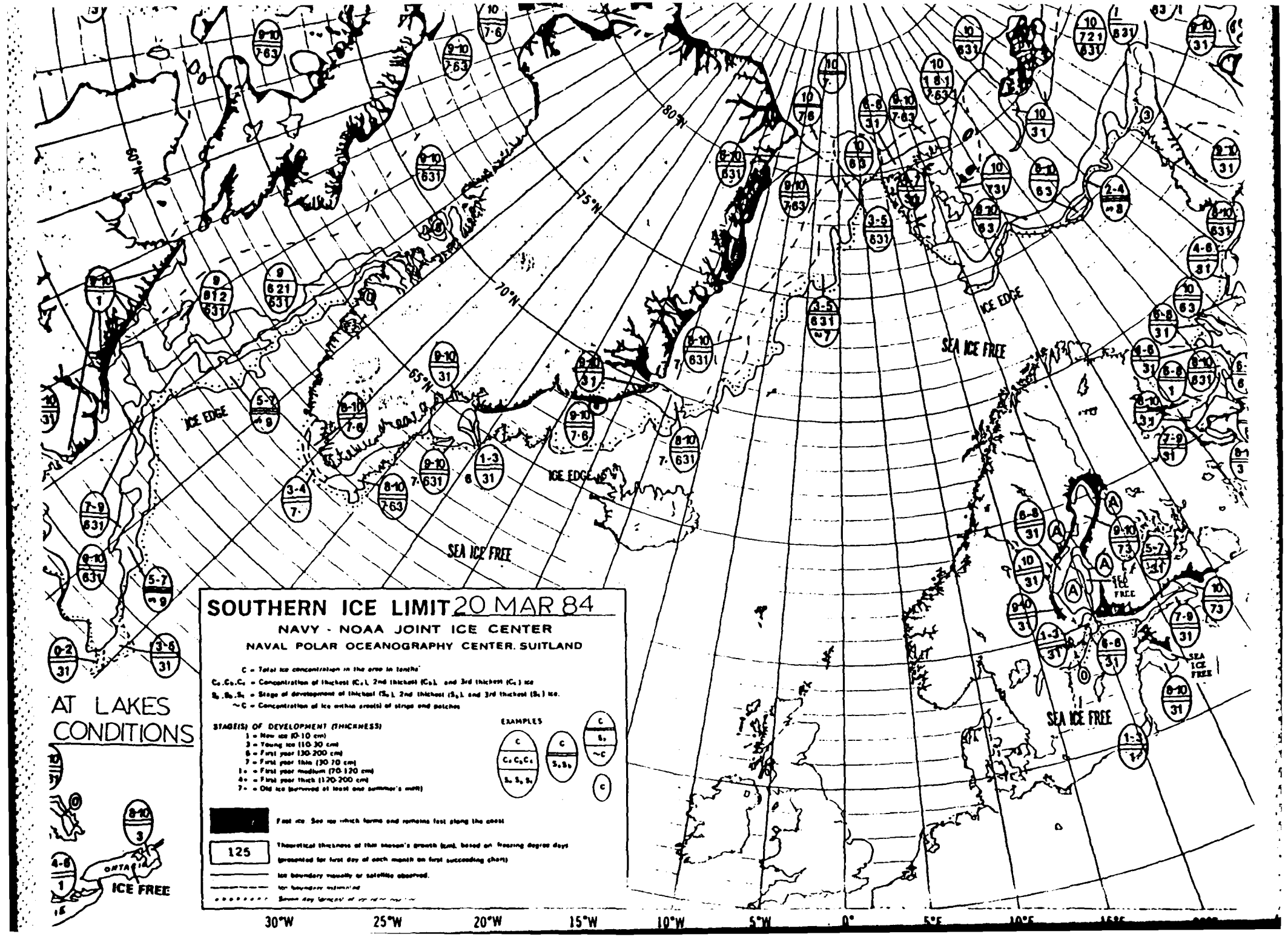
OUTPUT IN FILE ARNA2888

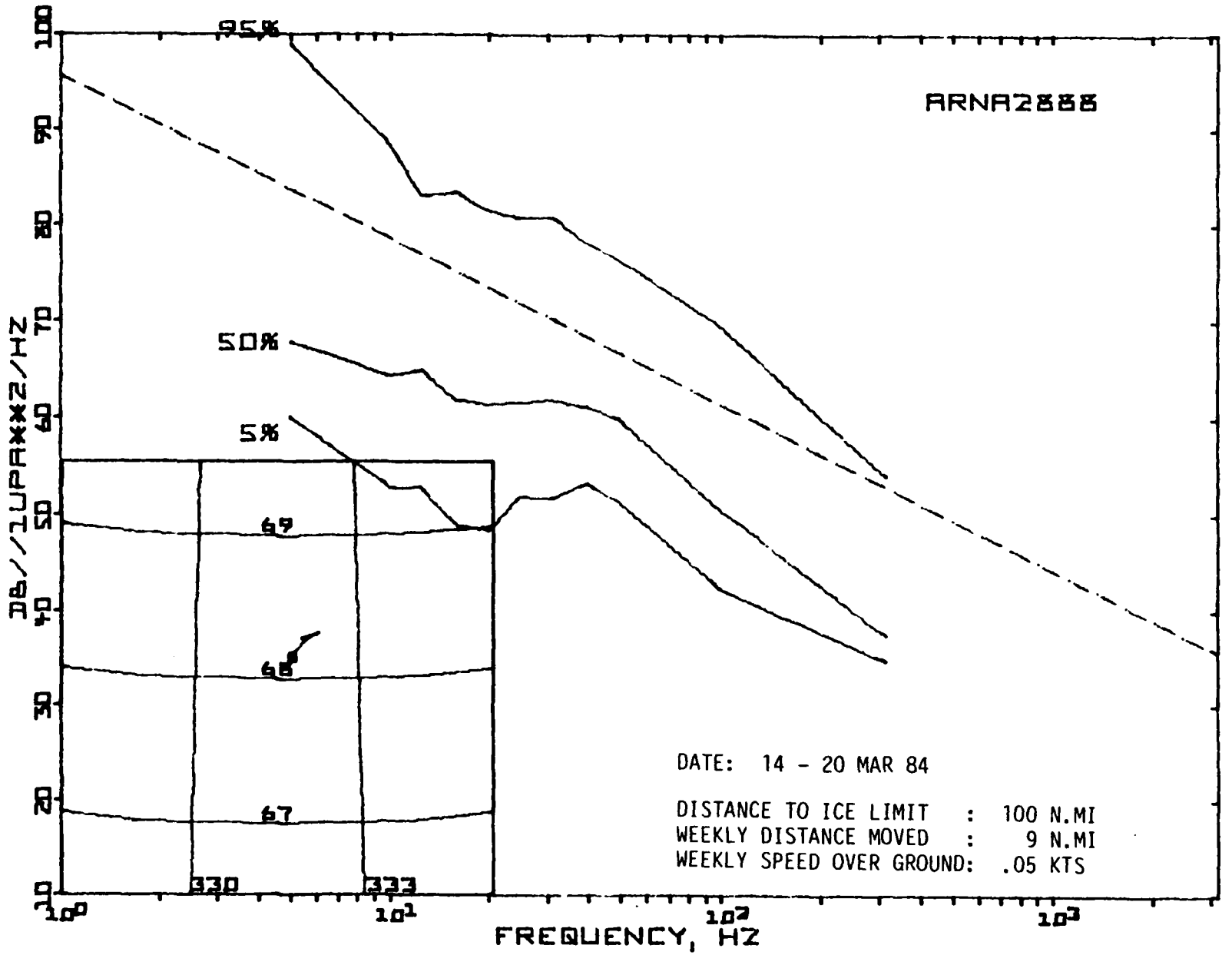
DISPLACEMENT (N. MI.): 8.619 NORTH: 3.239 EAST: 7.987
DIRECTION (TRUE): 67.920

THE NUMBER OF DATA SAMPLES IS 50

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	76.6	12.2	58.7	59.9	61.8	64.7	75.4	85.9	92.9	93.8	100.8	50
10.0	68.9	8.3	53.7	54.6	57.6	63.4	67.5	75.5	80.7	80.7	83.6	50
12.5	67.9	7.4	50.9	55.5	56.9	63.6	67.5	73.7	76.2	76.9	84.8	50
16.0	65.6	7.1	50.5	50.5	56.5	60.8	65.8	70.5	73.7	76.5	80.8	49
20.0	62.1	8.9	39.9	45.4	50.7	56.0	63.1	66.6	70.0	73.2	92.3	49
25.0	62.3	7.1	46.6	50.3	51.9	58.0	63.?	65.9	68.4	72.6	85.3	50
31.5	62.4	5.9	49.7	53.9	54.6	59.3	61.9	65.6	68.5	69.7	82.8	50
40.0	61.1	5.3	53.2	53.2	53.8	58.0	61.0	63.0	65.7	70.0	79.9	49
50.0	59.9	3.7	52.1	53.7	54.4	57.2	60.4	62.4	64.2	65.2	66.9	48
100.0	54.7	5.6	45.3	45.3	48.2	50.4	54.8	57.3	60.9	63.4	75.4	49
315.0	41.6	5.4	34.7	35.4	35.4	36.1	42.2	45.9	47.8	48.7	56.8	49

STOP


SOUTHERN ICE LIMIT 20 MAR 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
C_a C_b C_c = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice
S_a S_b S_c = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
~C = Concentration of ice within areas of strips and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
6 = First year (30-200 cm)
7 = First year thin (30-70 cm)
1- = First year medium (70-120 cm)
4- = First year thick (120-200 cm)
7- = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast
125
Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart)
Ice boundary mainly or satellite observed.
Ice boundary estimated
Seven day forecast of ice edge position
ICE EDGE
SEA ICE FREE
AT LAKES CONDITIONS
ONTARIO
ICE FREE
80°N
75°N
70°N
65°N
60°N
30°W
25°W
20°W
15°W
10°W
5°W
0°
5°E
10°E



BUOY 2888 14-20 MAR 84

MONTH: 14-20 MAR 84 BUOY: 2888

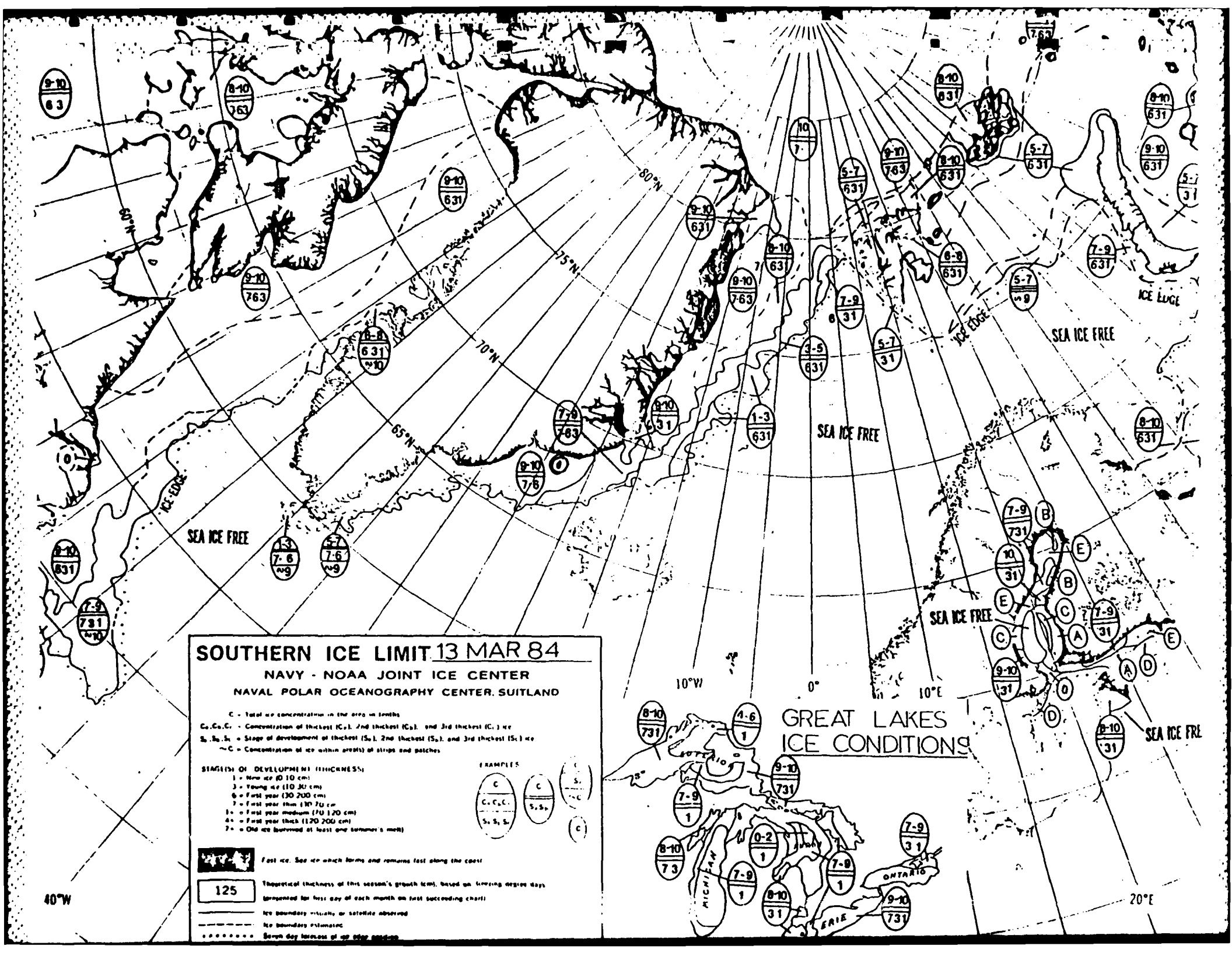
OUTPUT IN FILE ARNA2888

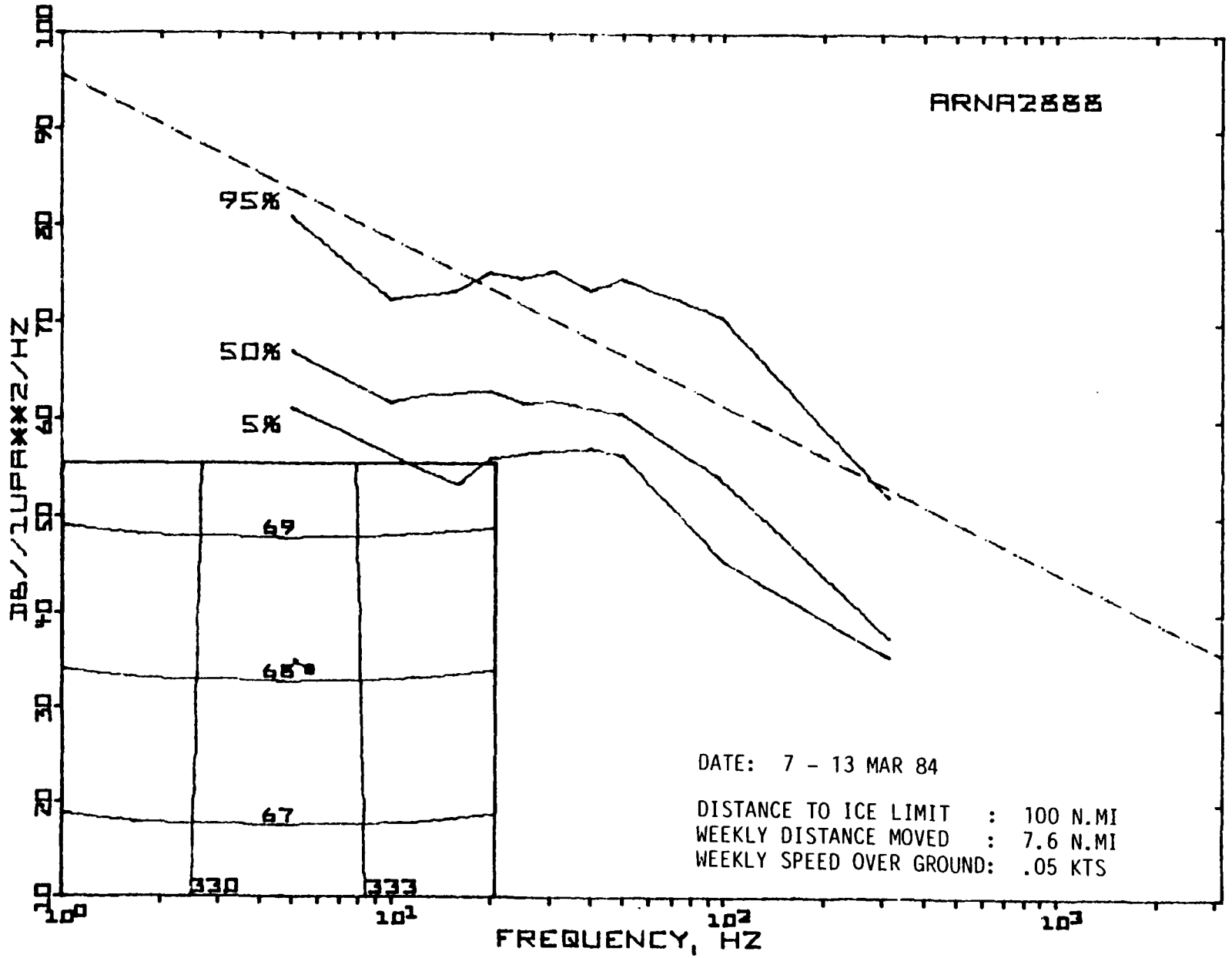
DISPLACEMENT (N. MI.): 8.791 NORTH: 8.221 EAST: 3.116
DIRECTION (TRUE): 20.744

THE NUMBER OF DATA SAMPLES IS 44

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	73.2	12.6	59.3	59.9	60.9	63.4	67.8	79.3	88.6	98.9	112.2	44
10.0	66.1	12.6	27.3	52.7	54.6	58.7	64.2	72.1	81.5	88.3	103.6	44
12.5	66.1	10.0	51.5	52.7	54.6	58.2	64.8	72.7	82.9	82.9	87.5	41
16.0	64.7	11.2	48.7	48.7	51.9	54.7	61.7	71.2	82.5	83.3	90.6	44
20.0	63.8	10.8	48.2	48.2	49.1	55.1	61.2	69.1	79.2	81.2	88.8	43
25.0	64.9	11.1	49.4	51.9	53.3	56.4	61.5	71.2	79.9	80.5	102.0	43
31.5	64.5	9.6	42.5	51.6	52.5	57.7	61.8	70.7	78.5	80.6	87.2	44
40.0	63.7	7.4	52.5	53.2	56.0	57.8	61.0	69.0	74.4	77.8	82.1	44
50.0	62.7	7.6	50.2	51.2	53.0	57.2	59.7	67.7	74.4	76.2	81.7	43
100.0	53.8	9.5	37.3	42.2	43.4	46.1	50.4	60.9	66.9	69.4	78.2	43
315.0	41.7	7.2	34.7	34.7	35.4	36.1	37.4	46.9	51.9	53.9	62.2	43

STOP


SOUTHERN ICE LIMIT 13 MAR 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
Ca,Cb,Cc = Concentration of thickest (Ca), 2nd thickest (Cb), and 3rd thickest (Cc) ice
Sa,Sb,Sc = Stage of development of thickest (Sa), 2nd thickest (Sb), and 3rd thickest (Sc) ice
~C = Concentration of ice within pack(s) of strips and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
6 = First year (30-200 cm)
7 = First year thin (30-70 cm)
1+ = First year medium (70-120 cm)
4+ = First year thick (120-200 cm)
7+ = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast
125
Theoretical thickness of this season's growth (cm), based on freezing degree days (computed for first day of each month on next succeeding chart)
Ice boundary mostly or satellite observed
Ice boundary estimated
Seven day forecast of ice edge position
GREAT LAKES ICE CONDITIONS
ICE EDGE
SEA ICE FREE
80°N
75°N
70°N
65°N
60°N
40°W
10°W
0°
10°E
20°E
SUPERIOR
MICHIGAN
HURON
ONTARIO
ERIE



BUOY 2888 7-13 MAR 84

MONTH: 7-13 MAR 84 BUOY: 2888

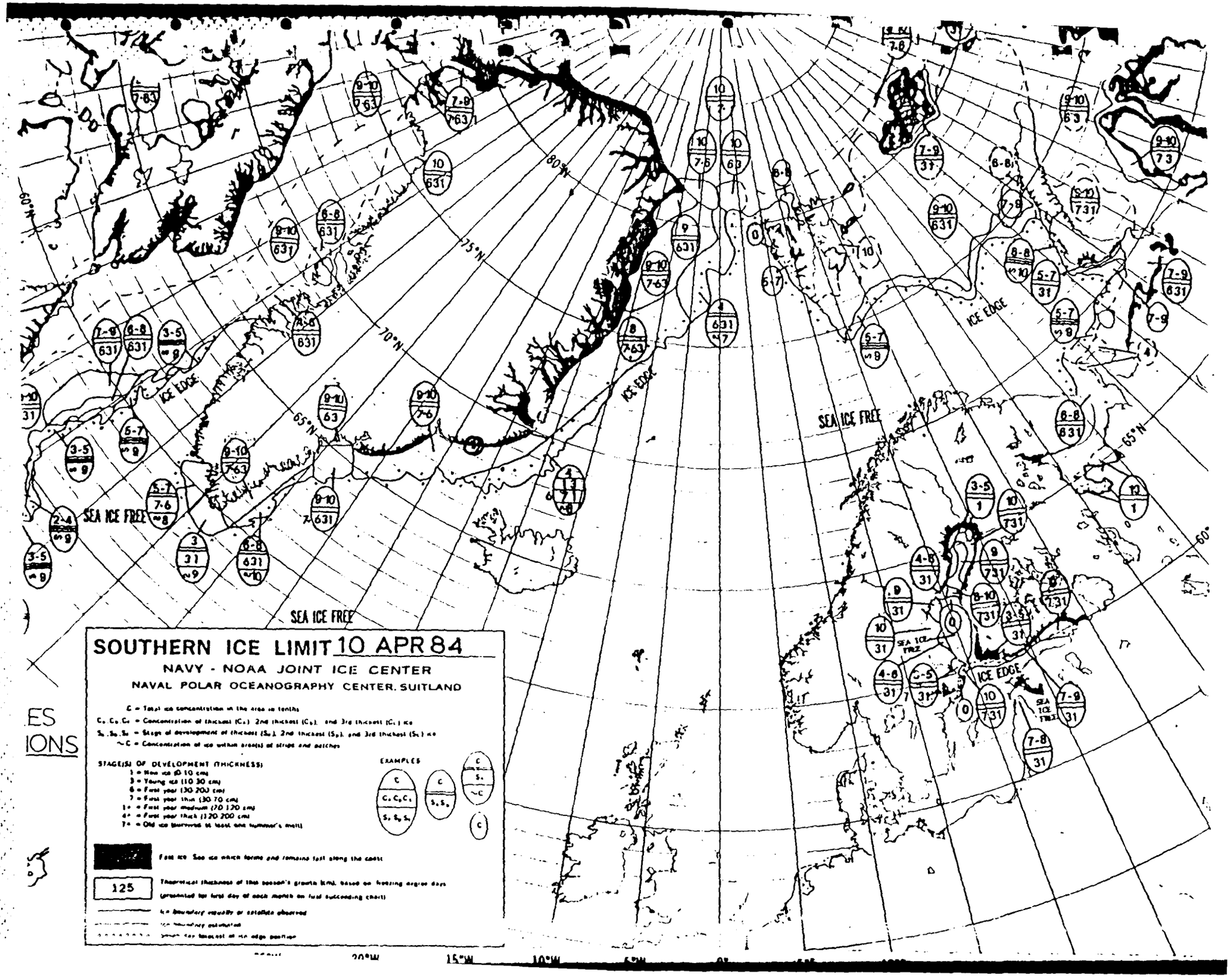
OUTPUT IN FILE ARNA2888

DISPLACEMENT (N. MI.): 7.576 NORTH: 4.260 EAST: -6.265
DIRECTION (TRUE): 304.187

THE NUMBER OF DATA SAMPLES IS 40

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	69.2	7.0	60.9	60.9	61.8	63.4	66.9	74.9	79.3	80.9	85.9	39
10.0	63.0	5.4	55.5	56.2	56.2	58.2	61.5	67.5	69.5	72.1	74.6	38
12.5	63.4	6.2	53.7	54.6	55.5	57.6	62.3	67.7	71.5	72.7	74.6	39
16.0	63.7	6.6	53.1	53.1	55.6	58.6	62.5	70.5	71.9	73.1	77.2	40
20.0	63.5	6.2	55.1	56.0	56.0	58.7	62.8	67.2	71.4	75.1	79.2	38
25.0	63.5	6.1	55.5	56.4	56.4	58.6	61.5	67.2	71.9	74.4	78.0	40
31.5	64.4	6.4	56.8	56.8	57.7	59.3	61.8	69.7	72.5	75.2	80.6	38
40.0	63.5	5.8	56.9	56.9	56.9	58.5	61.0	67.8	71.8	73.2	79.2	40
50.0	63.0	6.5	54.4	56.2	56.2	58.1	60.4	66.1	73.7	74.4	77.2	39
100.0	56.1	7.8	44.4	45.3	47.6	51.3	53.6	60.9	66.9	70.4	74.2	38
315.0	41.3	6.8	35.4	35.4	35.4	36.1	37.4	46.9	51.9	51.9	57.9	38

STOP


SOUTHERN ICE LIMIT 10 APR 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
$C_1 C_2 C_3$ = Concentration of thickest (C_1), 2nd thickest (C_2), and 3rd thickest (C_3) ice
$S_1 S_2 S_3$ = Stage of development of thickest (S_1), 2nd thickest (S_2), and 3rd thickest (S_3) ice
~C = Concentration of ice within area(s) of strips and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
2 = Young ice (10-30 cm)
3 = First year (30-200 cm)
4 = First year thin (30-70 cm)
5 = First year medium (70-120 cm)
6 = First year thick (120-200 cm)
7+ = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast
125
Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on field succeeding chart)
Ice boundary visually or satellite observed
Ice boundary estimated
Limit for forecast of ice edge position
SEA ICE FREE
ICE EDGE
80°N
75°N
70°N
65°N
60°
20°W
15°W
10°W
5°W

MONTH: 11-17 APR 84 BUOY: 2888

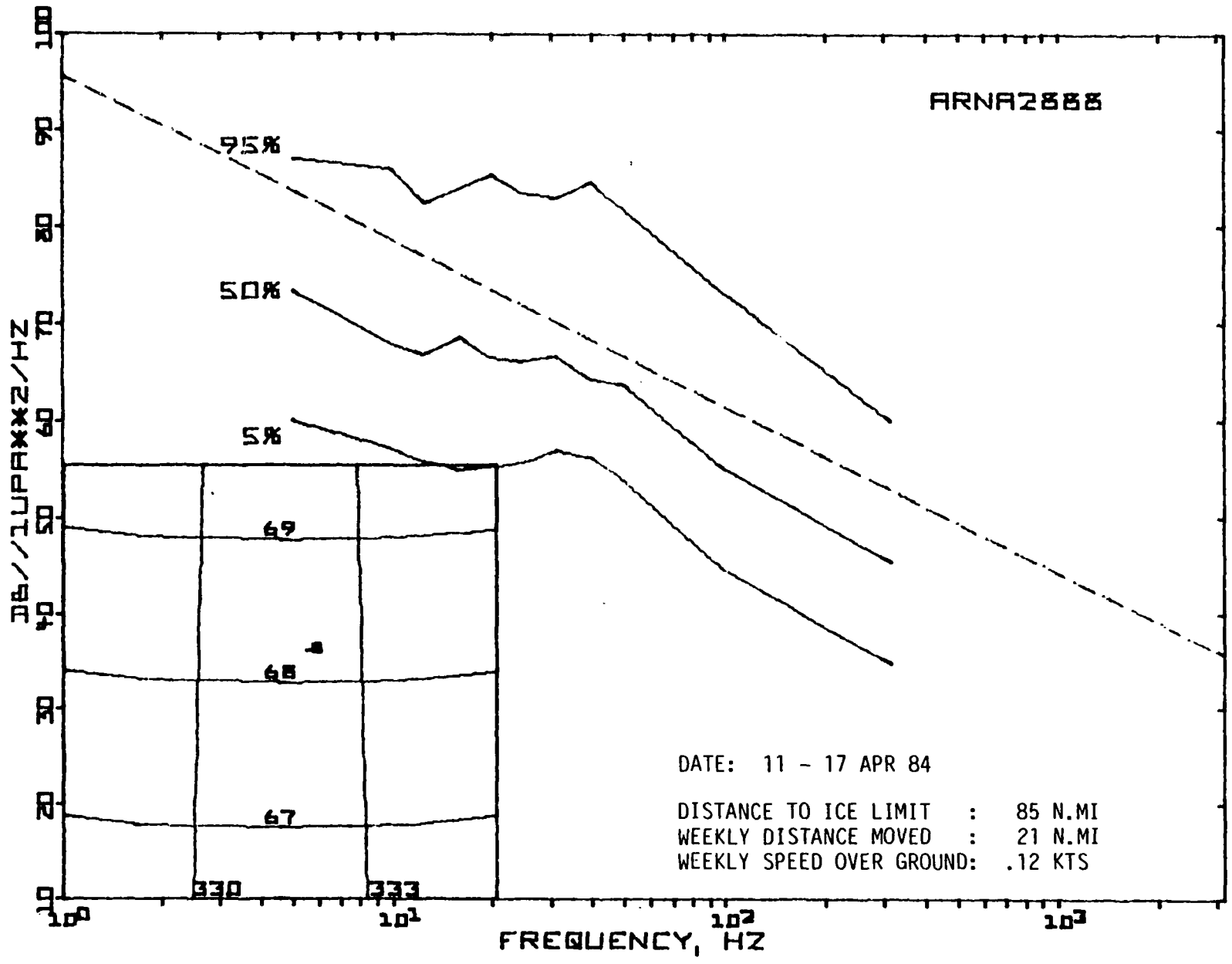
OUTPUT IN FILE ARNA2888

DISPLACEMENT (N. MI.): 21.434 NORTH: -4.560 EAST: -20.943
DIRECTION (TRUE): 257.747

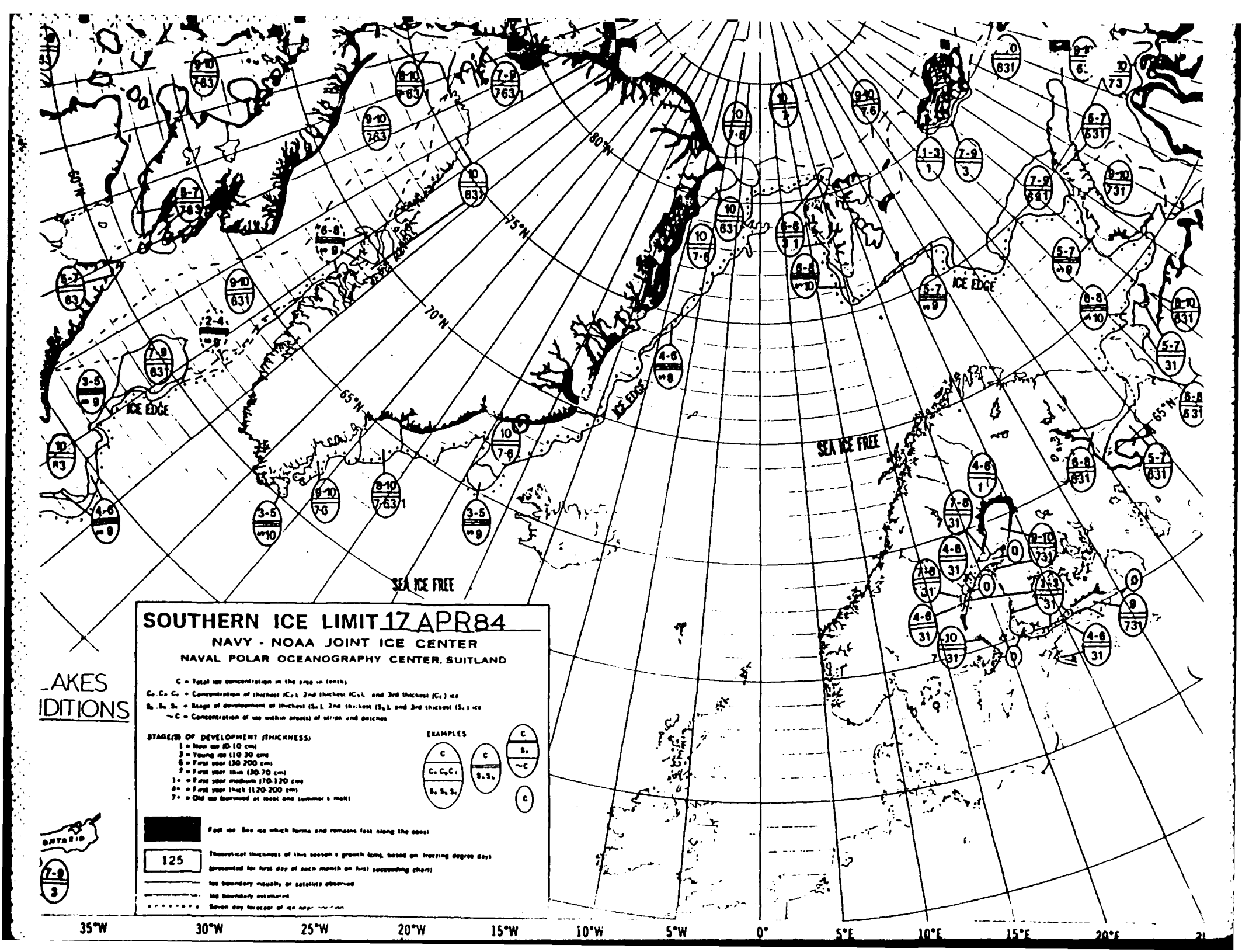
THE NUMBER OF DATA SAMPLES IS 44

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	73.8	9.7	59.9	59.9	60.9	64.7	73.3	81.8	85.9	86.9	98.9	44
10.0	68.8	8.8	55.5	56.9	58.2	62.3	67.7	72.7	78.7	85.8	96.8	43
12.5	68.9	9.1	54.6	55.5	57.6	60.7	66.7	74.6	79.8	82.3	90.8	42
16.0	68.5	11.7	27.5	54.7	55.6	59.7	68.5	75.6	83.3	83.9	90.6	44
20.0	68.4	9.6	53.2	55.1	56.7	61.2	66.3	74.2	82.0	85.3	91.3	44
25.0	68.2	9.0	54.4	55.5	57.2	61.5	65.9	74.4	82.4	83.2	90.7	43
31.5	68.5	8.2	55.2	56.8	59.3	62.8	66.6	73.9	79.9	82.8	88.8	43
40.0	67.3	9.6	53.8	56.0	56.9	60.5	64.0	72.5	77.8	84.6	99.1	43
50.0	64.4	10.3	23.0	53.7	57.2	58.1	63.6	70.2	75.6	81.7	87.1	43
100.0	57.0	9.7	24.0	44.4	47.6	52.2	54.8	62.2	70.4	72.9	80.9	44
315.0	44.1	8.8	34.7	34.7	35.4	36.1	45.3	48.7	52.9	59.9	72.8	44

STOP



BUOY 2888 11-17 APR 84


SOUTHERN ICE LIMIT 17 APR 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
LAKES
IDITIONS
STAGES OF DEVELOPMENT (THICKNESS)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast
125
Theoretical thickness of the season's growth (cm), based on freezing degree days
ICE EDGE
SEA ICE FREE
80°N
75°N
70°N
65°N
35°W
30°W
25°W
20°W
15°W
10°W
5°W
0°
5°E
10°E
15°E
20°E

MONTH: 18-24 APR 84 BUOY: 2888

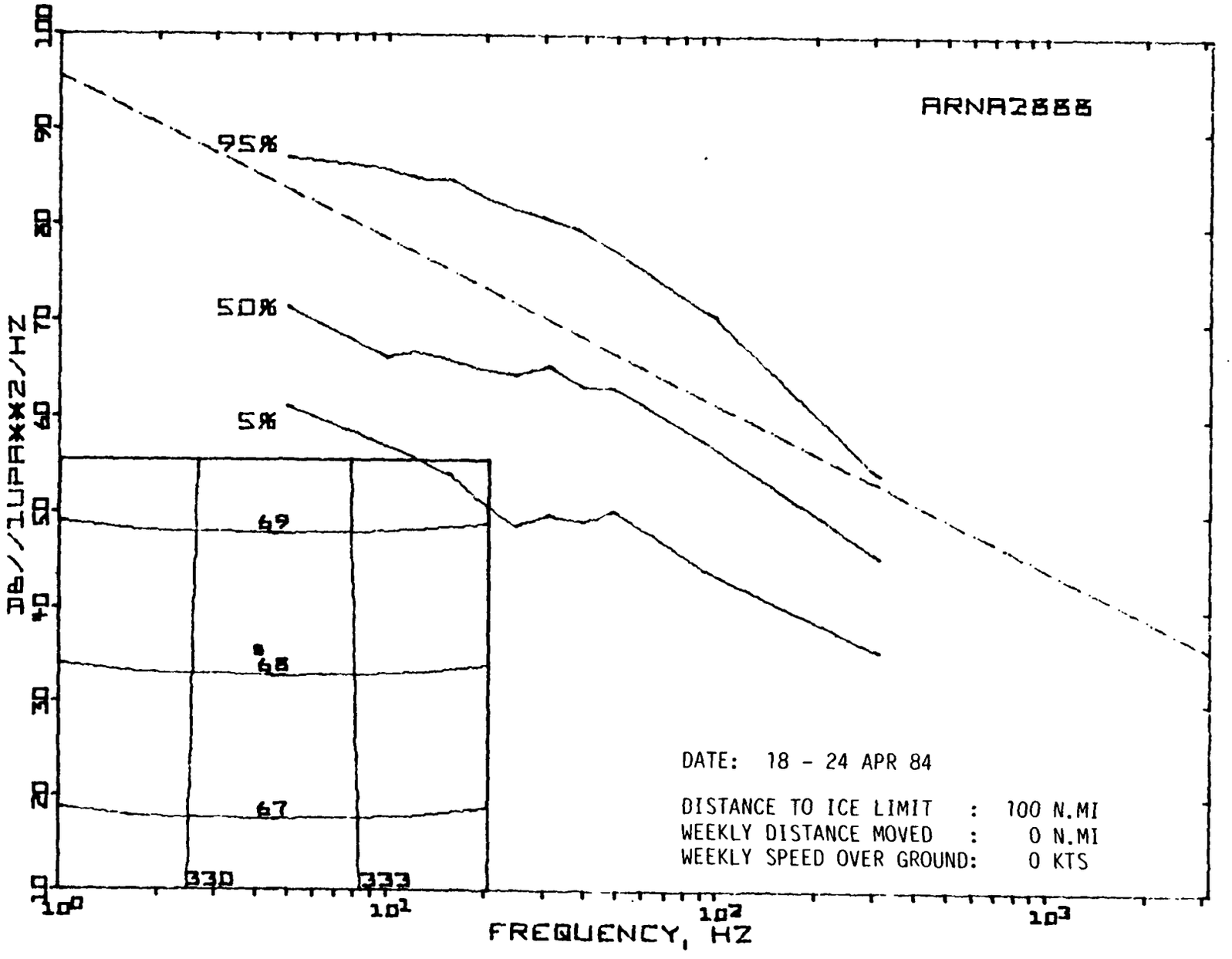
OUTPUT IN FILE ARNA2888

DISPLACEMENT (N. MI.): 0.000 NORTH: 0.000 EAST: 0.000
DIRECTION (TRUE): 90.000

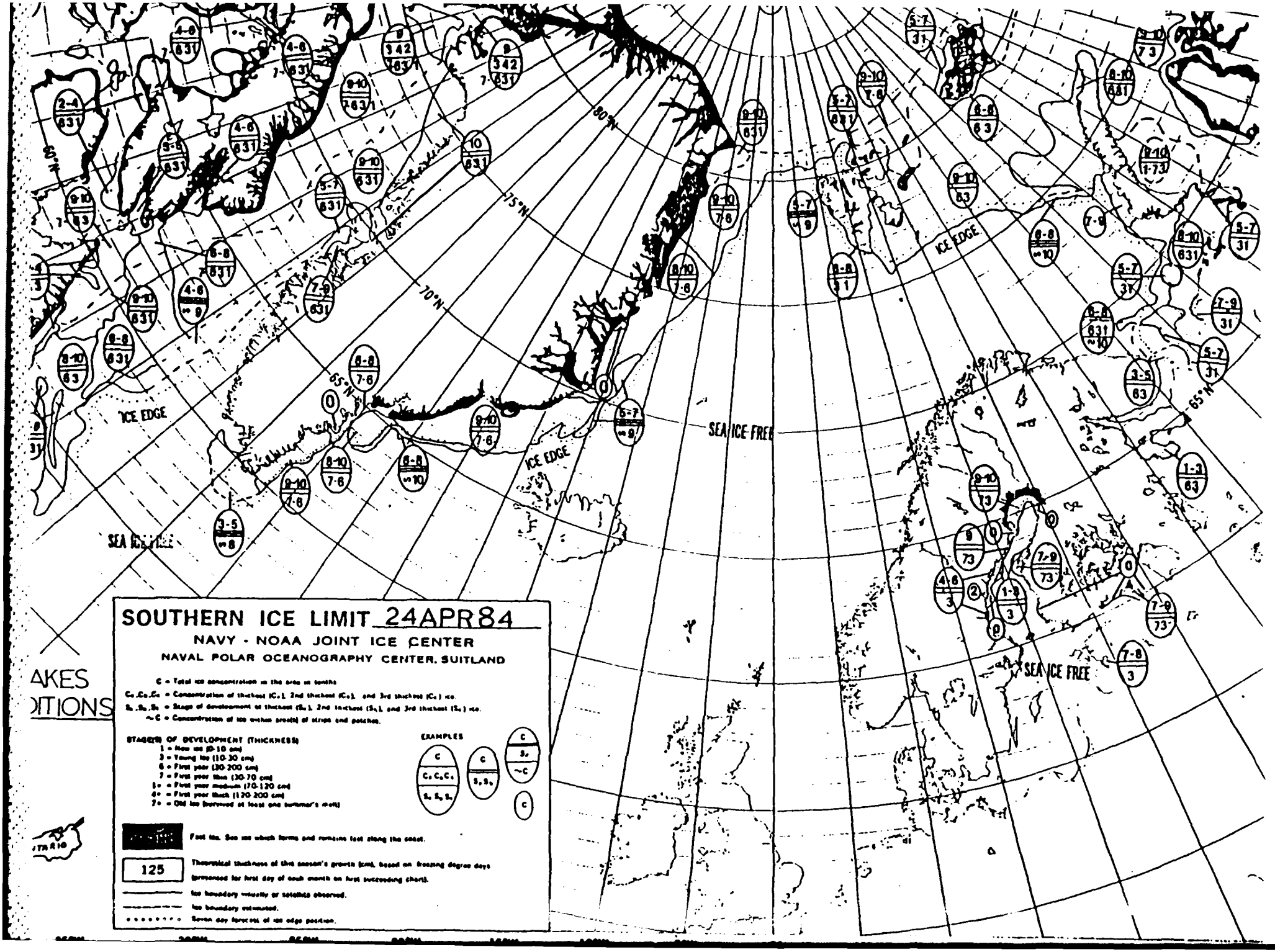
THE NUMBER OF DATA SAMPLES IS 42

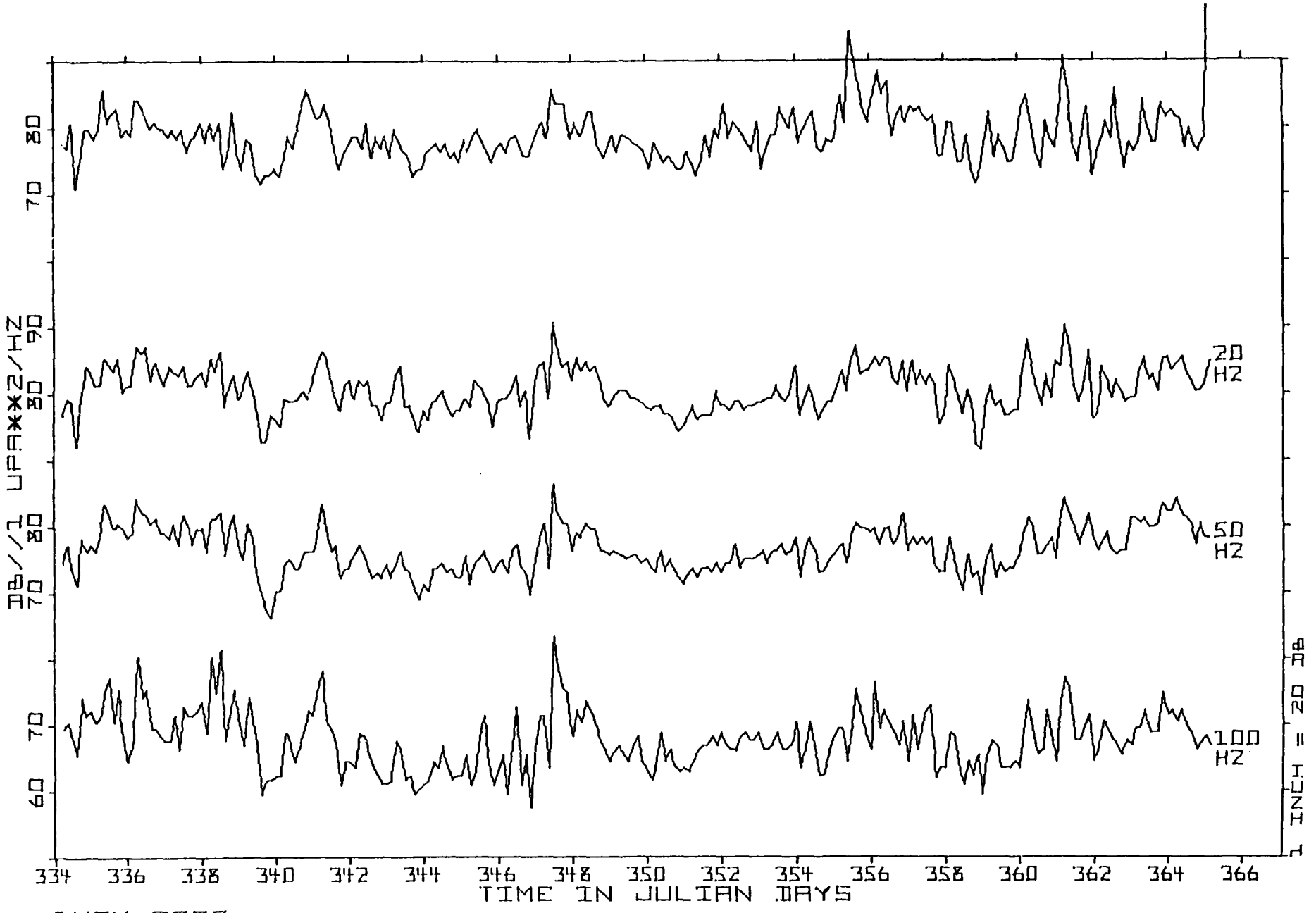
FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	72.0	8.0	60.9	60.9	63.4	64.7	71.3	78.7	83.4	86.9	87.8	42
10.0	67.1	8.7	55.5	56.9	57.6	59.8	66.1	72.7	78.7	85.8	89.6	42
12.5	67.3	9.5	53.7	55.5	55.5	58.2	66.7	72.7	81.5	84.8	90.8	42
16.0	67.1	10.1	53.1	53.7	54.7	58.6	65.8	73.7	80.8	84.6	91.8	42
20.0	65.5	10.5	43.1	50.7	52.0	57.4	64.7	70.7	80.3	82.8	89.5	42
25.0	65.0	10.0	47.8	48.4	51.2	57.2	64.3	70.3	79.9	81.5	90.7	42
31.5	65.8	9.5	47.9	49.7	52.5	59.3	65.3	71.6	79.9	80.6	86.0	42
40.0	64.3	9.5	49.0	49.0	51.8	56.9	63.0	69.0	77.8	79.2	88.1	42
50.0	63.5	9.1	48.4	50.2	51.2	56.2	63.0	69.0	76.2	77.2	87.1	42
100.0	57.0	9.2	40.9	43.4	45.3	48.8	56.8	61.6	69.4	70.4	79.6	42
315.0	43.4	7.5	34.7	35.4	35.4	36.1	45.3	46.9	51.9	53.9	63.4	42

STOP



BUOY 2888 18-24 APR 84

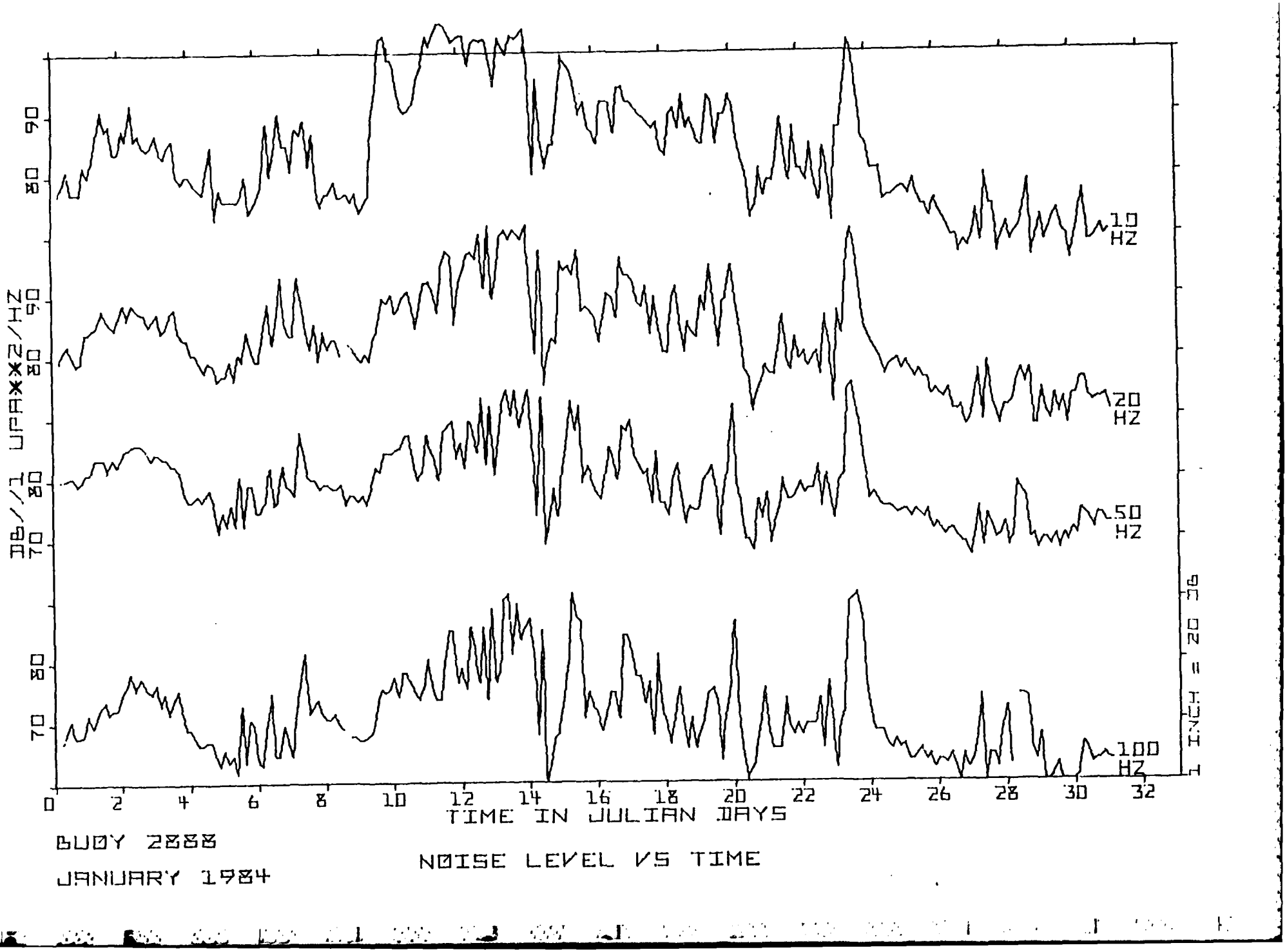

80°N
75°N
70°N
65°N
ICE EDGE
SEA ICE FREE
SEA ICE FREE
ICE EDGE
ICE EDGE
SEA ICE FREE
SOUTHERN ICE LIMIT 24APR84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
Ca,Cb,Cc = Concentration of thickest (Ca), 2nd thickest (Cb), and 3rd thickest (Cc) ice.
Sa,Sb,Sc = Stage of development of thickest (Sa), 2nd thickest (Sb), and 3rd thickest (Sc) ice.
~C = Concentration of ice within area(s) of strips and patches.
STAGES OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
2 = Young ice (10-30 cm)
3 = First year (30-200 cm)
4 = First year thin (30-70 cm)
5 = First year medium (70-120 cm)
6 = First year thick (120-200 cm)
7 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast.
125
Theoretical thickness of the season's growth (cm), based on freezing degree days (processed for first day of each month on first succeeding chart).
Ice boundary visually or satellite observed.
Ice boundary estimated.
Seven day forecast of ice edge position.

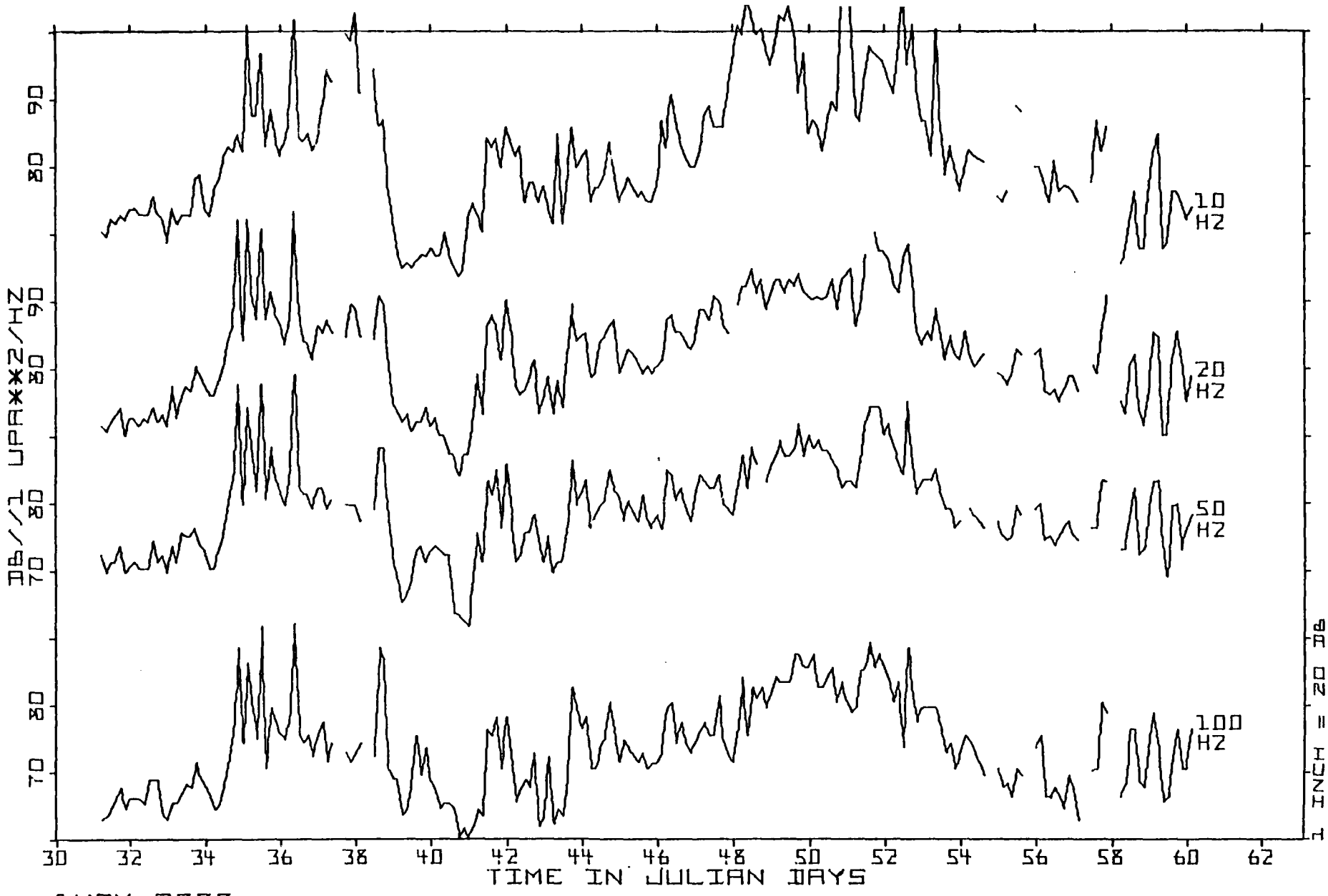


BUOY 2888

DECEMBER 1983

NOISE LEVEL VS TIME

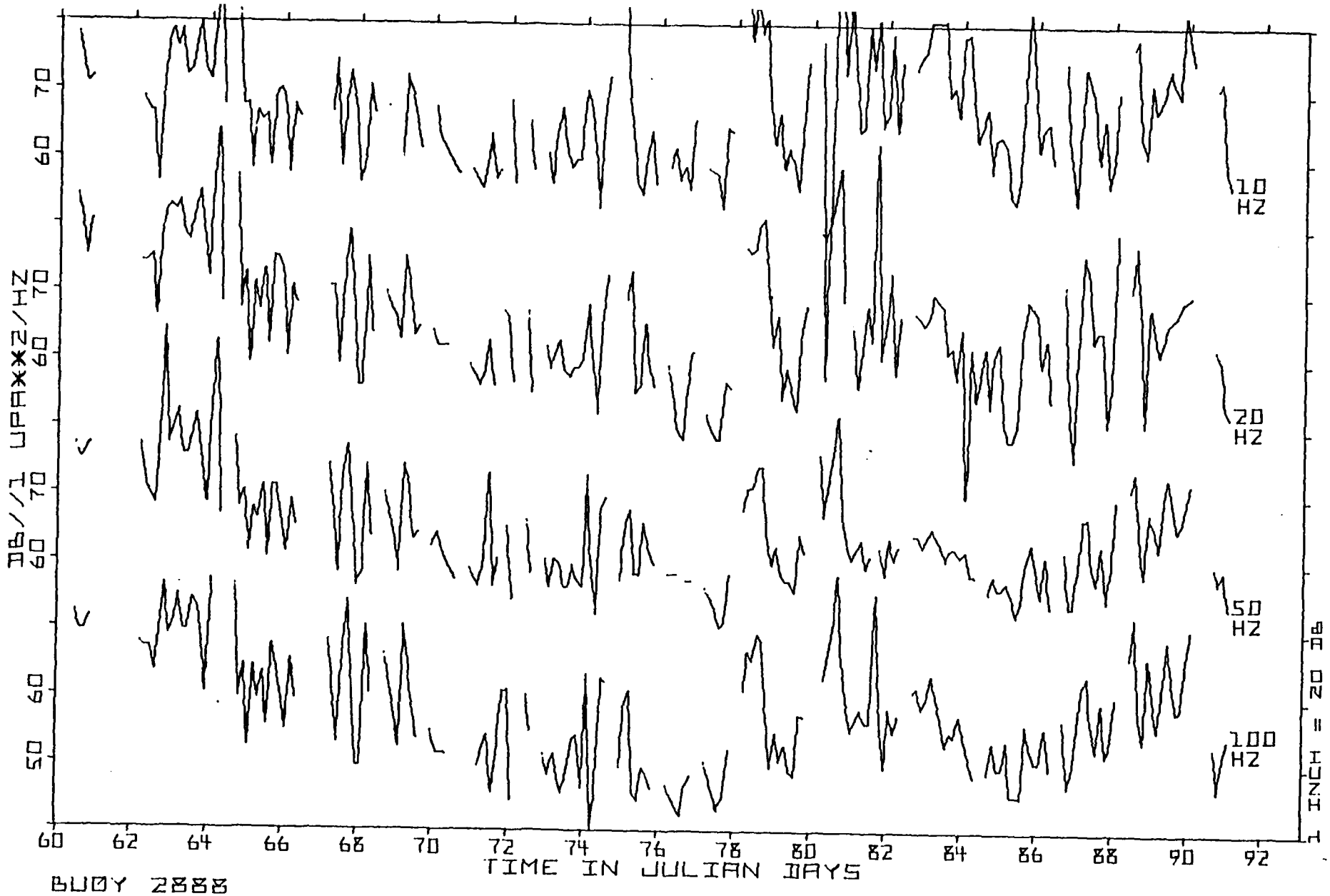

DB//1 UPA**2/HZ
90
80
90
80
80
70
80
70
10 HZ
20 HZ
50 HZ
100 HZ
1 INCH = 20 DB
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
TIME IN JULIAN DAYS
BUOY 2888
JANUARY 1984
NOISE LEVEL VS TIME



BUOY 2888

FEBRUARY 1984

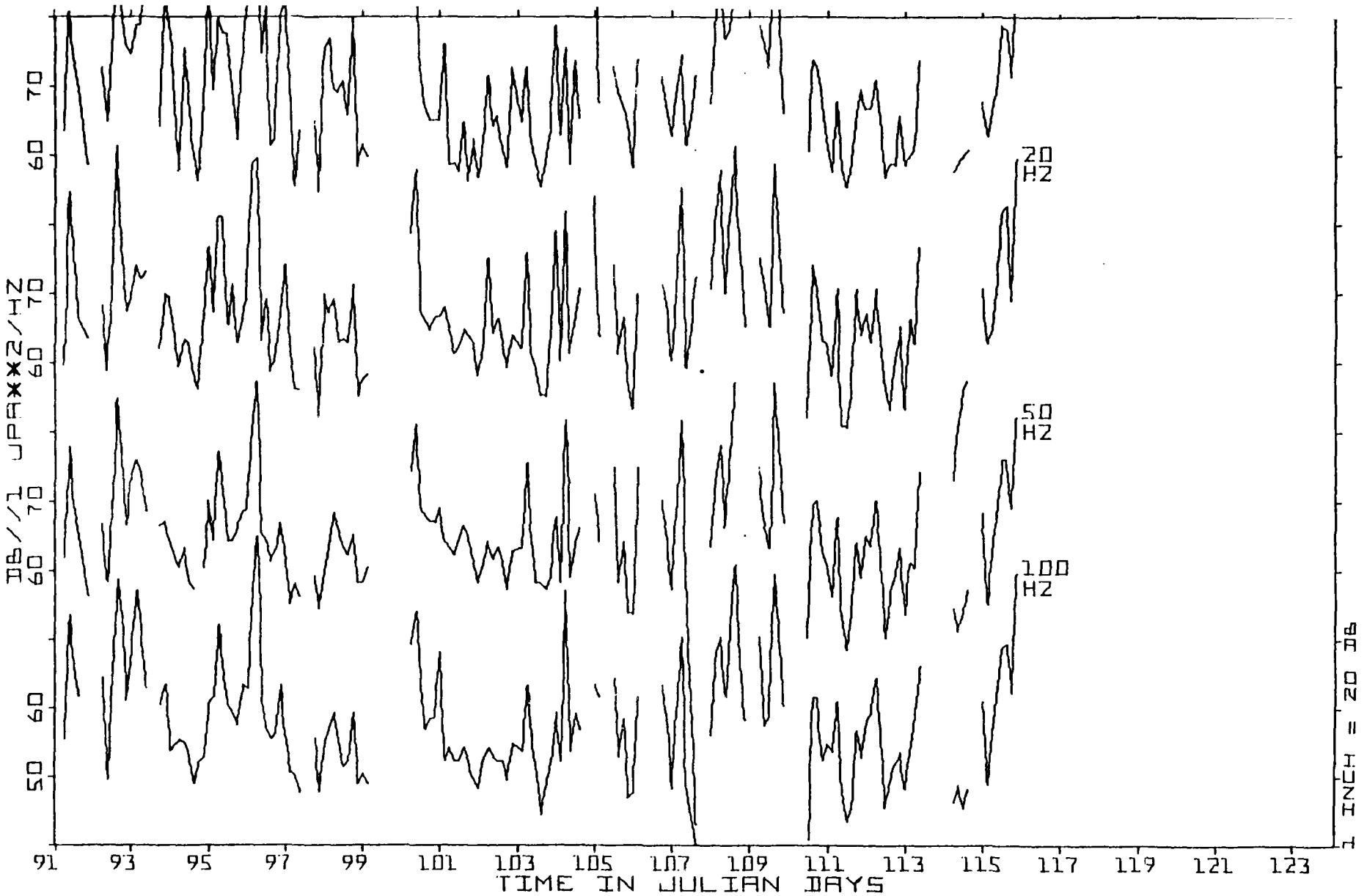
NOISE LEVEL VS TIME



BUOY 2888

MARCH 1984

NOISE LEVEL VS TIME



BUOY 2888

APRIL 1984

NOISE LEVEL VS TIME

APPENDIX 7

Date Buoy I.D. 2889

Life in Reporting Area 2 (West Greenland Sea)

1 May 1984 - 30 Sept 1984

Type: SYNARGOS (5 - 320 Hz)

BUOY ID 2889

MAY 1984

DAY	GMT	POSITION			
122	402	81.908	N	7.014	W
123	500	81.610	N	6.619	W
124	440	81.277	N	6.147	W
125	500	81.078	N	6.056	W
126	455	80.896	N	6.157	W
127	443	80.893	N	6.128	W
128	452	80.720	N	6.283	W
129	431	80.621	N	6.033	W
130	410	80.356	N	5.827	W
131	352	80.288	N	5.818	W
132	500	80.239	N	5.903	W
133	500	80.183	N	6.502	W
134	458	80.165	N	6.564	W
135	444	79.640	N	7.998	W
136	433	79.468	N	8.494	W
137	458	79.461	N	8.453	W

DAY	GMT	POSITION			
138	436	79.379	N	8.583	W
139	415	79.346	N	8.655	W
140	352	79.309	N	8.667	W
141	328	79.360	N	8.321	W
142	459	79.362	N	8.309	W
143	447	79.367	N	8.180	W
144	435	79.252	N	9.248	W
145	422	79.280	N	9.522	W
146	500	79.278	N	9.535	W
147	443	79.308	N	9.772	W
148	421	79.337	N	9.608	W
149	357	79.343	N	9.540	W
150	500	79.370	N	9.407	W
151	457	79.370	N	9.407	W
152	435	79.402	N	9.512	W

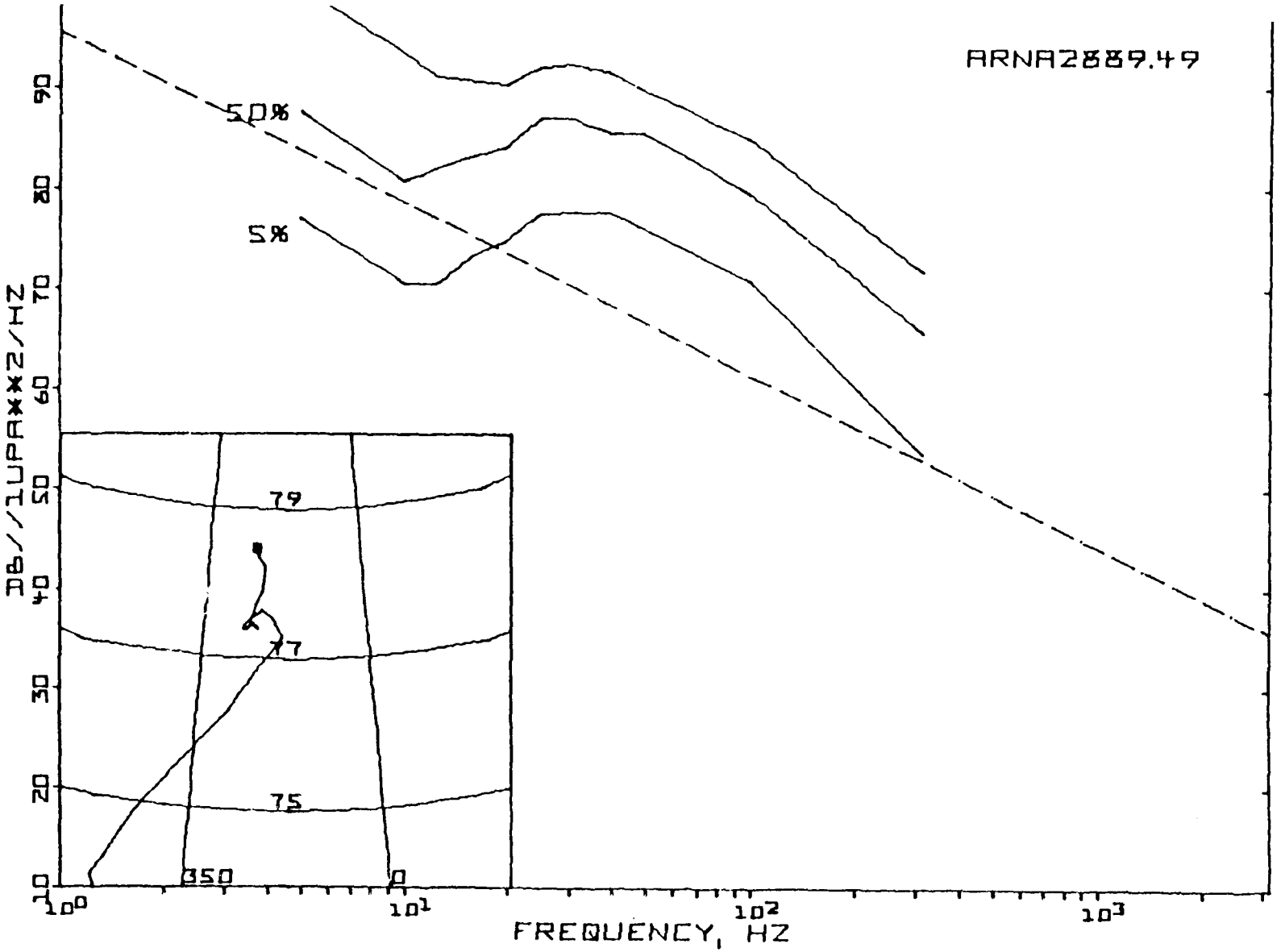
BUOY ID 2889

JUNE 1984

DAY	GMT	POSITION			
153	424	79.421	N	9.991	W
154	412	79.419	N	9.991	W
155	359	79.417	N	10.100	W
156	440	79.333	N	10.451	W
157	427	79.307	N	10.405	W
158	500	79.231	N	10.711	W
159	451	79.158	N	10.892	W
160	459	79.148	N	10.898	W
161	440	79.046	N	10.742	W
162	413	78.838	N	10.376	W
163	401	78.752	N	10.190	W
164	348	78.645	N	10.395	W
165	335	78.583	N	10.433	W
166	500	78.506	N	10.782	W
167	454	78.375	N	10.278	W

DAY	GMT	POSITION			
168	441	78.375	N	10.278	W
169	427	78.388	N	10.203	W
170	416	78.248	N	9.698	W
171	402	77.995	N	8.999	W
172	358	77.994	N	9.000	W
173	338	77.857	N	9.881	W
174	500	77.882	N	10.287	W
175	455	77.884	N	10.319	W
176	443	77.873	N	10.894	W
177	431	77.835	N	11.442	W
178	417	77.907	N	11.875	W
179	405	78.013	N	11.748	W
180	353	78.141	N	11.579	W
181	408	78.204	N	11.502	W
182	500	78.206	N	11.502	W

DATA BY WEEKS



BUOY 2889 SEP 1984

MONTH: SEPT 84 BUOY: 2889

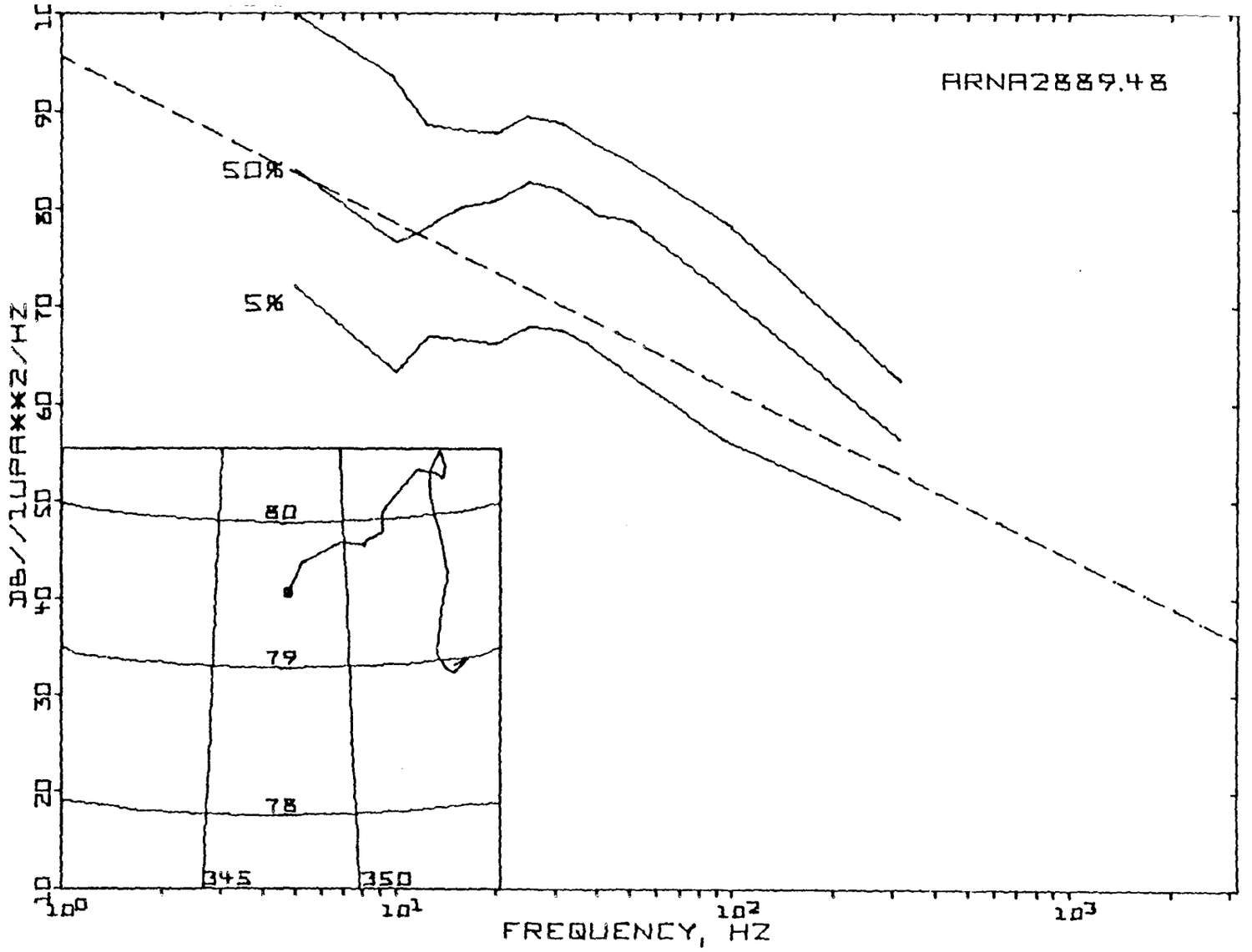
OUTPUT IN FILE ARNA2889

DISPLACEMENT (N. MI.): 299.493 NORTH:-280.320 EAST:-105.434
DIRECTION (TRUE): 200.434

THE NUMBER OF DATA SAMPLES IS 240

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	88.6	8.3	71.4	76.8	79.0	82.2	87.5	94.9	101.5	104.0	106.2	240
10.0	81.0	6.7	62.5	70.4	73.8	77.0	80.6	85.0	90.1	93.3	96.1	240
12.5	81.1	5.6	65.9	70.3	74.4	78.0	81.8	84.9	88.4	90.9	93.2	239
16.0	82.4	5.1	66.3	73.3	75.8	79.4	83.2	85.4	87.9	90.4	93.9	240
20.0	83.9	4.8	69.5	74.8	77.5	80.8	84.1	87.6	89.5	90.1	94.9	240
25.0	86.0	4.6	72.8	77.5	80.0	82.7	87.0	89.5	91.4	92.0	98.0	240
31.5	86.2	4.6	74.8	77.6	79.7	82.8	86.9	89.6	91.1	92.3	95.7	239
40.0	85.0	4.3	73.3	77.5	78.8	82.1	85.4	88.1	90.2	91.4	94.9	239
50.0	84.0	4.2	72.7	75.8	77.4	81.0	85.4	87.0	88.7	89.5	93.0	240
100.0	78.9	4.3	67.3	70.7	72.7	75.8	79.4	81.9	84.1	84.8	88.7	240
315.0	64.1	5.7	50.3	53.5	55.3	60.2	65.6	68.4	70.2	71.6	78.9	240

STOP



BUOY 2889 AUG 1984

MONTH: AUG 84 BUOY: 2889

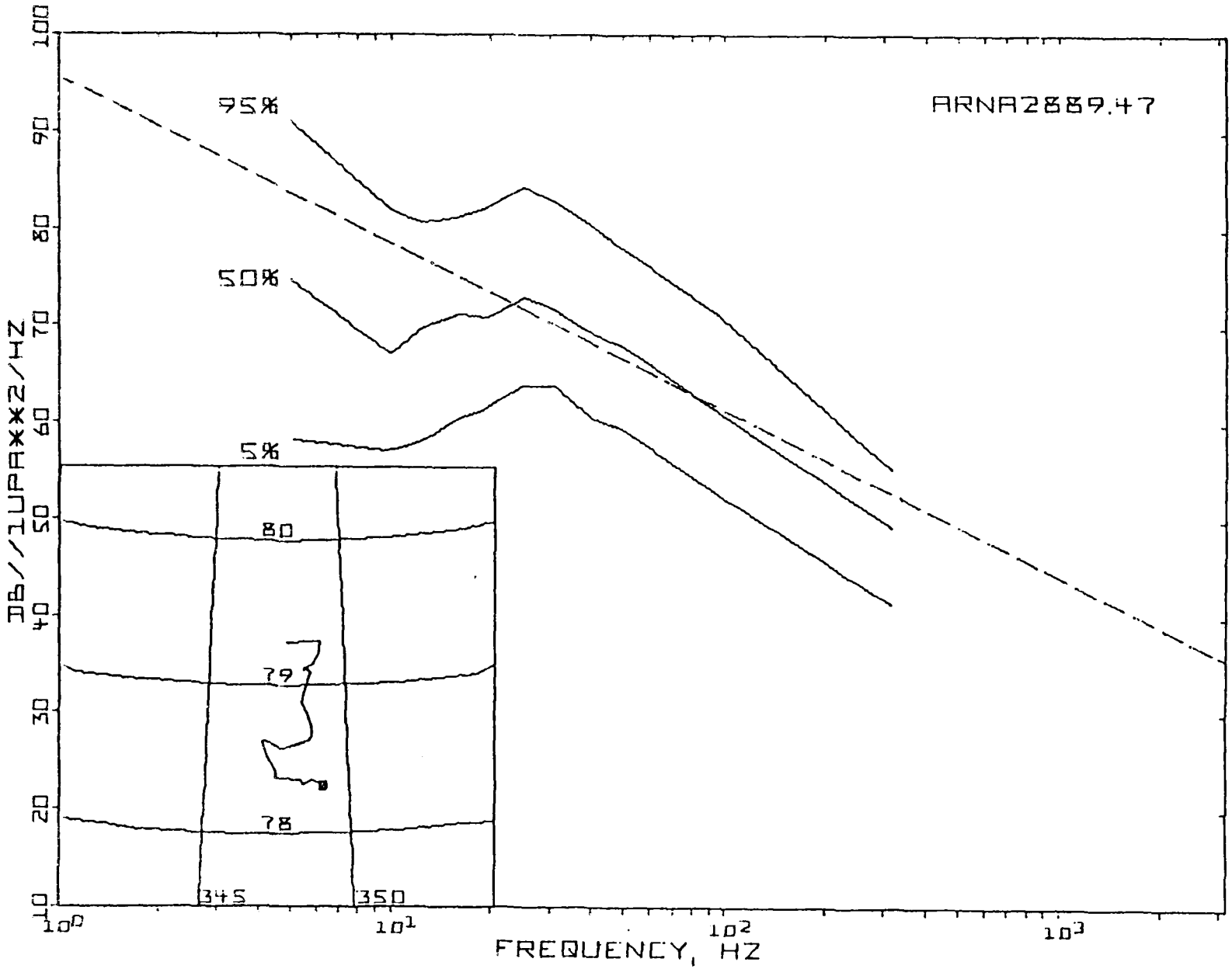
OUTPUT IN FILE ARNA2889

DISPLACEMENT (N. MI.): 74.386 NORTH: -33.720 EAST: 66.304
DIRECTION (TRUE): 116.961

THE NUMBER OF DATA SAMPLES IS 248

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	85.6	8.9	56.1	71.9	74.7	79.0	84.0	91.0	97.0	103.1	109.1	248
10.0	77.0	8.6	56.5	63.2	66.0	71.0	76.5	82.5	87.9	93.3	103.9	248
12.5	77.5	7.0	61.1	66.8	68.4	71.9	78.0	81.8	86.5	88.4	101.0	247
16.0	78.8	6.7	62.2	66.3	69.1	74.2	80.3	83.2	85.4	87.9	99.2	246
20.0	79.5	6.4	61.9	66.0	70.2	75.5	80.8	84.1	86.0	87.6	95.5	247
25.0	81.2	6.4	64.2	67.9	70.7	77.5	82.7	86.0	87.9	89.5	93.0	248
31.5	81.0	6.2	64.4	67.6	72.3	76.8	81.9	85.7	87.9	88.8	91.7	248
40.0	78.6	6.4	59.3	65.5	69.2	74.3	79.3	83.5	85.4	86.4	94.9	248
50.0	77.3	6.6	58.1	62.9	67.9	73.9	78.8	81.9	83.5	84.8	105.0	247
100.0	69.8	6.4	49.8	55.8	60.1	66.7	70.7	74.9	76.7	78.1	81.0	248
315.0	55.7	5.0	41.4	48.2	48.8	51.3	56.4	59.6	61.4	62.4	67.4	247

STOP



BUOY 2889 JULY 1984

MONTH: JULY 84 BUOY: 2889

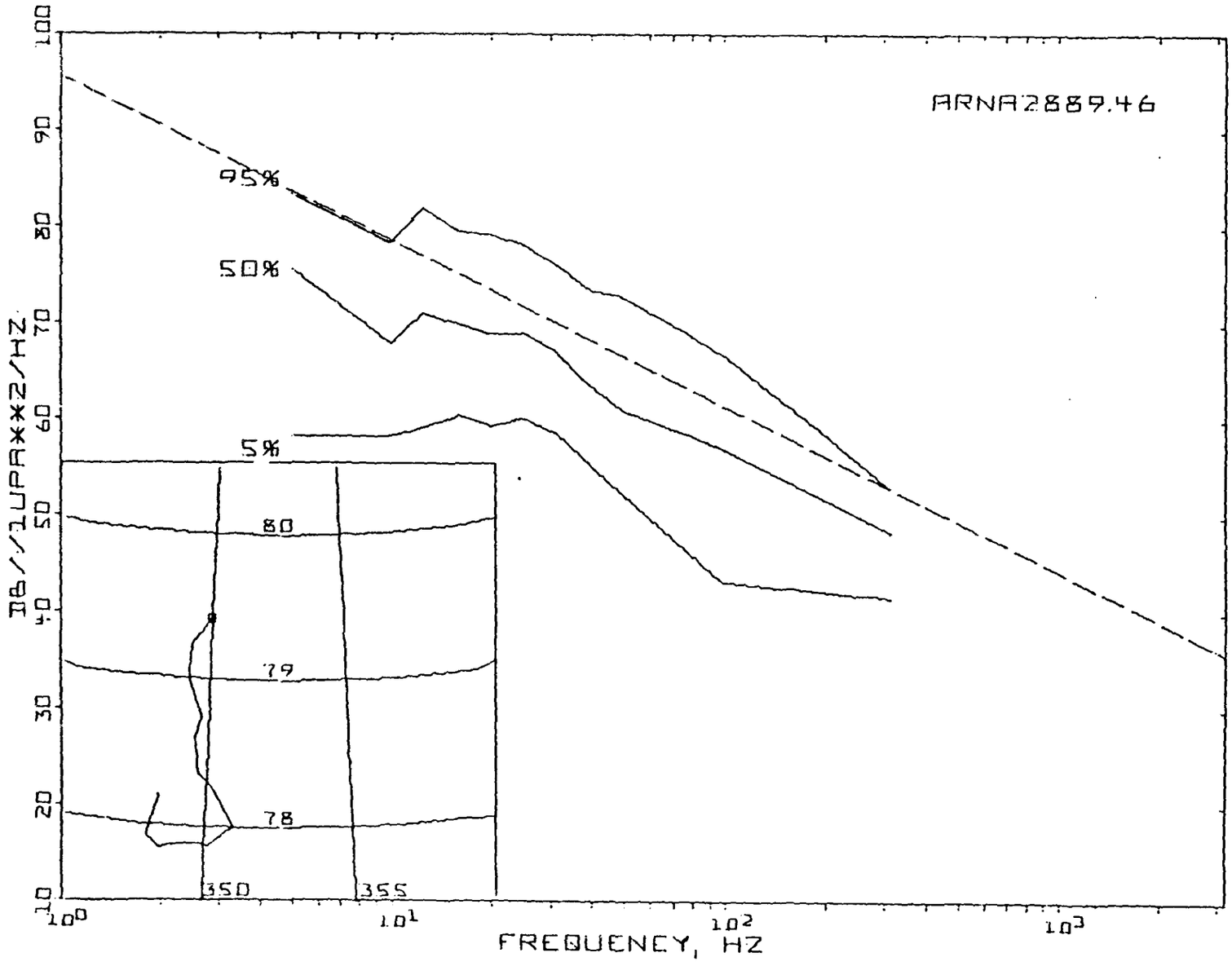
OUTPUT IN FILE ARNA2889

DISPLACEMENT (N. MI.): 61.136 NORTH: 59.400 EAST: -14.463
DIRECTION (TRUE): 346.296

THE NUMBER OF DATA SAMPLES IS 243

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	76.0	8.6	53.9	58.0	70.1	71.9	74.7	79.0	87.5	91.0	107.5	240
10.0	68.2	7.3	52.0	57.0	61.7	63.8	66.9	71.0	77.0	81.9	97.9	240
12.5	70.2	6.3	54.4	58.0	65.9	66.8	69.7	72.8	78.0	80.5	94.4	240
16.0	71.1	6.0	54.2	60.3	63.8	67.3	71.1	74.2	78.3	81.1	92.3	243
20.0	71.3	5.9	55.5	61.6	64.1	67.9	70.8	73.9	78.0	82.2	89.5	242
25.0	73.1	5.6	58.8	63.8	66.1	69.8	72.8	75.9	80.0	84.2	90.2	243
31.5	72.4	5.8	60.3	63.8	65.1	68.2	71.6	75.9	80.9	82.8	90.4	242
40.0	69.6	6.2	56.8	60.4	61.3	64.8	69.2	73.3	78.2	80.4	88.1	243
50.0	67.8	6.0	56.7	59.4	59.9	62.9	67.9	72.1	74.9	78.1	84.8	243
100.0	61.1	6.2	47.9	52.1	53.9	55.8	60.7	65.4	68.9	70.7	79.9	243
315.0	49.7	4.[illegible]	41.4	41.4	47.5	48.2	49.3	51.3	54.2	55.3	64.9	243

STOP



BUOY 2889 JUNE 1984

MONTH: JUNE 84 BUOY: 2889

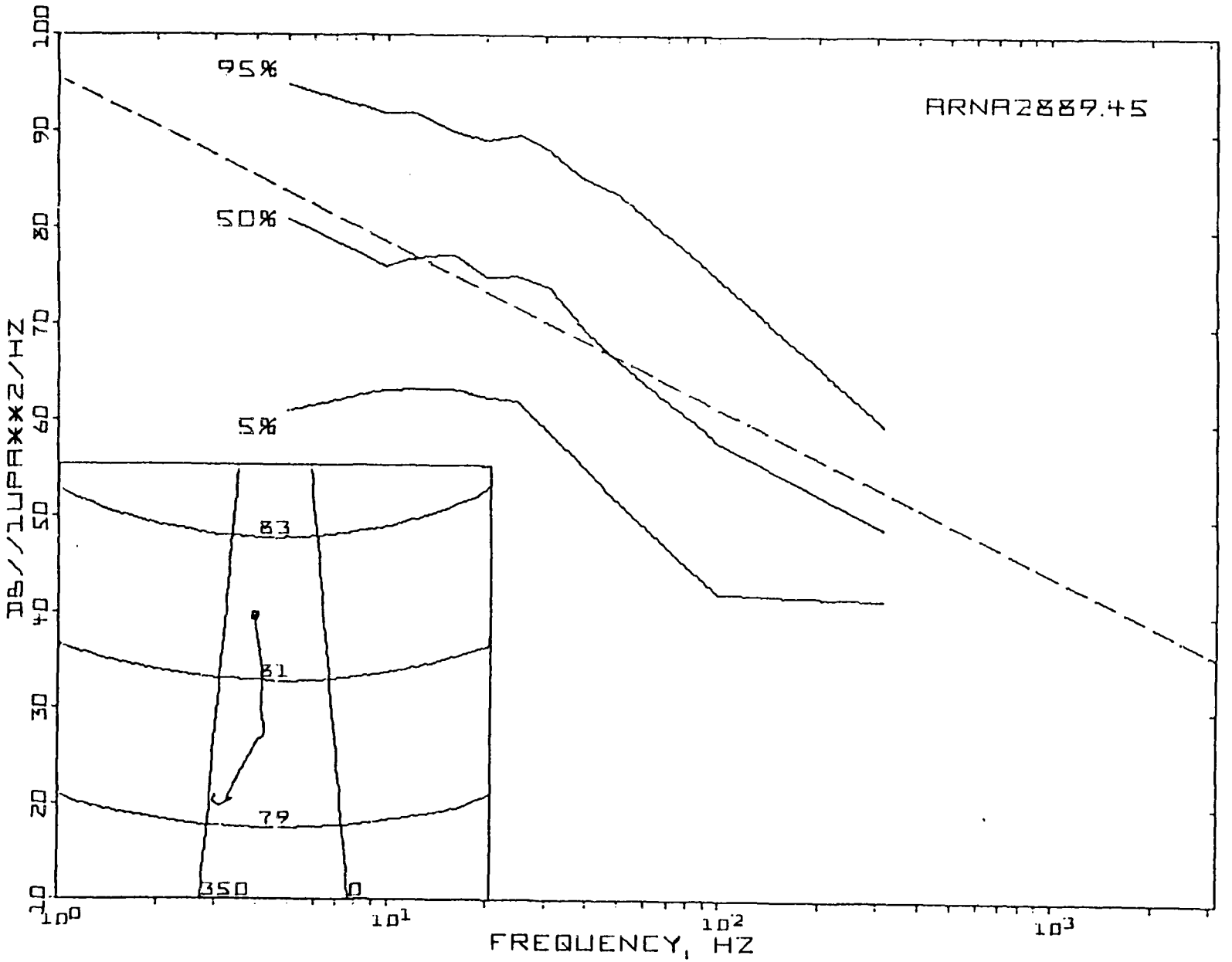
OUTPUT IN FILE ARNA2889

DISPLACEMENT (N. MI.): 74.995 NORTH: -72.901 EAST: -17.600
DIRECTION (TRUE): 193.592

THE NUMBER OF DATA SAMPLES IS 222

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	73.0	8.3	53.9	58.0	59.0	68.2	75.5	78.0	81.5	83.4	88.2	220
10.0	68.3	6.0	50.4	58.1	60.6	65.0	67.8	72.0	76.5	78.1	86.6	219
12.5	70.5	6.5	51.9	58.9	61.8	66.8	70.9	74.4	78.9	81.8	87.2	219
16.0	70.1	6.0	53.3	60.3	62.5	65.7	69.8	74.2	77.2	79.4	90.4	220
20.0	69.3	6.4	52.0	59.1	60.8	65.1	68.8	73.9	77.5	79.1	89.5	220
25.0	69.2	5.8	53.4	60.0	61.9	64.7	68.9	73.4	76.7	78.1	86.0	221
31.5	67.0	5.4	50.7	58.4	60.3	62.8	67.0	70.7	74.3	75.9	79.0	221
40.0	63.5	5.6	47.3	55.2	56.8	59.3	63.2	67.3	72.1	73.3	76.1	218
50.0	61.3	6.1	46.7	52.1	53.9	56.9	60.7	65.4	69.8	72.7	87.9	221
100.0	56.1	7.3	40.1	47.9	44.6	50.7	56.9	61.9	64.6	66.7	68.9	219
315.0	47.6	4.2	29.3	41.4	41.4	47.5	48.2	49.3	51.3	52.8	70.9	220

STOP



BUOY 2889 MAY 1984

MONTH: MAY 84 BUOY: 2889

OUTPUT IN FILE ARNA2889

DISPLACEMENT (N. MI.): 152.327 NORTH:-150.361 EAST: -24.396
DIRECTION (TRUE): 189.235

THE NUMBER OF DATA SAMPLES IS 248

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	79.7	8.9	57.4	60.7	69.4	74.7	80.7	84.0	91.0	94.9	104.0	248
10.0	76.3	8.4	56.5	63.1	66.0	69.8	75.9	82.5	87.9	91.8	96.1	248
12.5	77.4	8.2	58.9	63.0	67.7	70.9	76.9	82.4	89.0	91.7	97.8	248
16.0	77.0	8.0	59.4	63.2	67.3	71.4	77.2	83.2	87.9	89.8	93.9	248
20.0	75.0	8.6	56.9	62.2	64.2	67.9	74.8	82.2	86.8	88.9	92.0	248
25.0	75.4	9.0	57.5	61.9	63.5	67.9	75.0	82.7	87.9	89.5	93.0	248
31.5	73.6	9.1	53.7	58.4	61.6	65.6	73.7	80.9	85.7	87.9	91.1	248
40.0	69.9	9.9	49.2	55.2	56.8	61.3	69.2	78.8	82.9	84.8	87.3	248
50.0	67.6	10.3	47.9	51:4	54.7	58.6	66.1	77.4	81.0	83.5	87.9	248
100.0	58.6	9.7	38.6	41.9	47.9	51.8	57.8	65.4	72.1	74.9	79.9	248
315.0	49.8	4.5	41.4	41.4	47.5	48.2	48.8	51.3	55.3	59.6	64.9	248

STOP

DATA BY MONTHS

BUOY ID 2889

SEPTEMBER 1984

DAY	GMT	POSITION			
245	355	78.479	N	6.865	W
246	454	78.283	N	6.291	W
247	500	77.903	N	6.577	W
248	500	77.720	N	6.922	W
249	447	77.714	N	6.923	W
250	459	77.306	N	7.268	W
251	434	77.398	N	6.648	W
252	409	77.463	N	7.078	W
253	357	77.383	N	7.453	W
254	500	77.380	N	7.675	W
255	500	77.378	N	7.661	W
256	500	77.567	N	7.003	W
257	448	77.653	N	6.390	W
258	436	77.558	N	5.831	W
259	442	77.556	N	5.832	W
260	418	77.318	N	5.194	W
261	359	76.865	N	6.762	W
262	346	76.861	N	6.790	W
263	447	76.209	N	8.538	W
264	500	76.006	N	9.359	W
265	451	75.875	N	9.944	W
266	438	75.555	N	10.682	W
267	450	75.552	N	10.703	W
268	411	74.808	N	12.898	W
269	357	74.812	N	12.897	W
270	346	74.156	N	14.000	W
271	454	74.007	N	14.440	W
272	459	73.992	N	14.419	W
273	453	73.846	N	14.132	W
274	439	73.807	N	14.199	W

BUOY ID 2889 JULY 1984

DAY	GMT	POSITION				
183	500	78.310	N	10.960	W
184	444	78.357	N	11.438	W
185	431	78.357	N	11.438	W
186	419	78.327	N	11.491	W
187	459	78.362	N	11.741	W
188	353	78.377	N	12.664	W
189	341	78.368	N	12.546	W
190	459	78.386	N	12.554	W
191	500	78.387	N	12.564	W
192	445	78.450	N	12.497	W
193	434	78.527	N	12.962	W
194	422	78.624	N	13.081	W
195	410	78.614	N	12.727	W
196	448	78.589	N	12.539	W
197	426	78.563	N	12.374	W
198	401	78.580	N	12.024	W

DAY	GMT	POSITION				
199	500	78.584	N	11.944	W
200	447	78.627	N	11.328	W
201	436	78.695	N	11.269	W
202	424	78.789	N	11.424	W
203	411	78.876	N	11.661	W
204	357	79.091	N	11.281	W
205	345	79.125	N	11.534	W
206	410	79.118	N	11.590	W
207	500	79.111	N	11.556	W
208	500	79.107	N	11.517	W
209	436	79.151	N	11.163	W
210	424	79.247	N	10.908	W
211	410	79.306	N	10.897	W
212	500	79.300	N	12.198	W
213	444	79.300	N	12.198	W

BUOY ID 2889 AUGUST 1984

DAY	GMT	POSITION				
214	335	79.519	N	12.272	W
215	500	79.622	N	11.938	W
216	452	79.726	N	11.703	W
217	440	79.754	N	11.304	W
218	428	79.754	N	11.304	W
219	412	79.857	N	10.083	W
220	402	79.855	N	10.074	W
221	347	79.825	N	9.224	W
222	425	79.870	N	9.118	W
223	500	79.905	N	8.516	W
224	453	80.030	N	8.554	W
225	457	80.029	N	8.506	W
226	433	80.312	N	6.925	W
227	416	80.277	N	6.244	W
228	404	80.235	N	5.983	W
229	500	80.307	N	5.842	W

DAY	GMT	POSITION				
230	433	80.416	N	6.007	W
231	500	80.330	N	6.413	W
232	455	80.145	N	6.408	W
233	500	80.169	N	6.410	W
234	440	79.769	N	6.244	W
235	417	79.590	N	6.227	W
236	406	79.414	N	6.573	W
237	459	79.301	N	6.677	W
238	444	79.064	N	6.943	W
239	500	78.943	N	6.645	W
240	458	78.904	N	6.348	W
241	445	78.904	N	6.348	W
242	433	78.994	N	5.833	W
243	425	78.958	N	6.354	W
244	406	78.957	N	6.365	W

MONTH: 2-8 MAY 84 BUOY: 7889

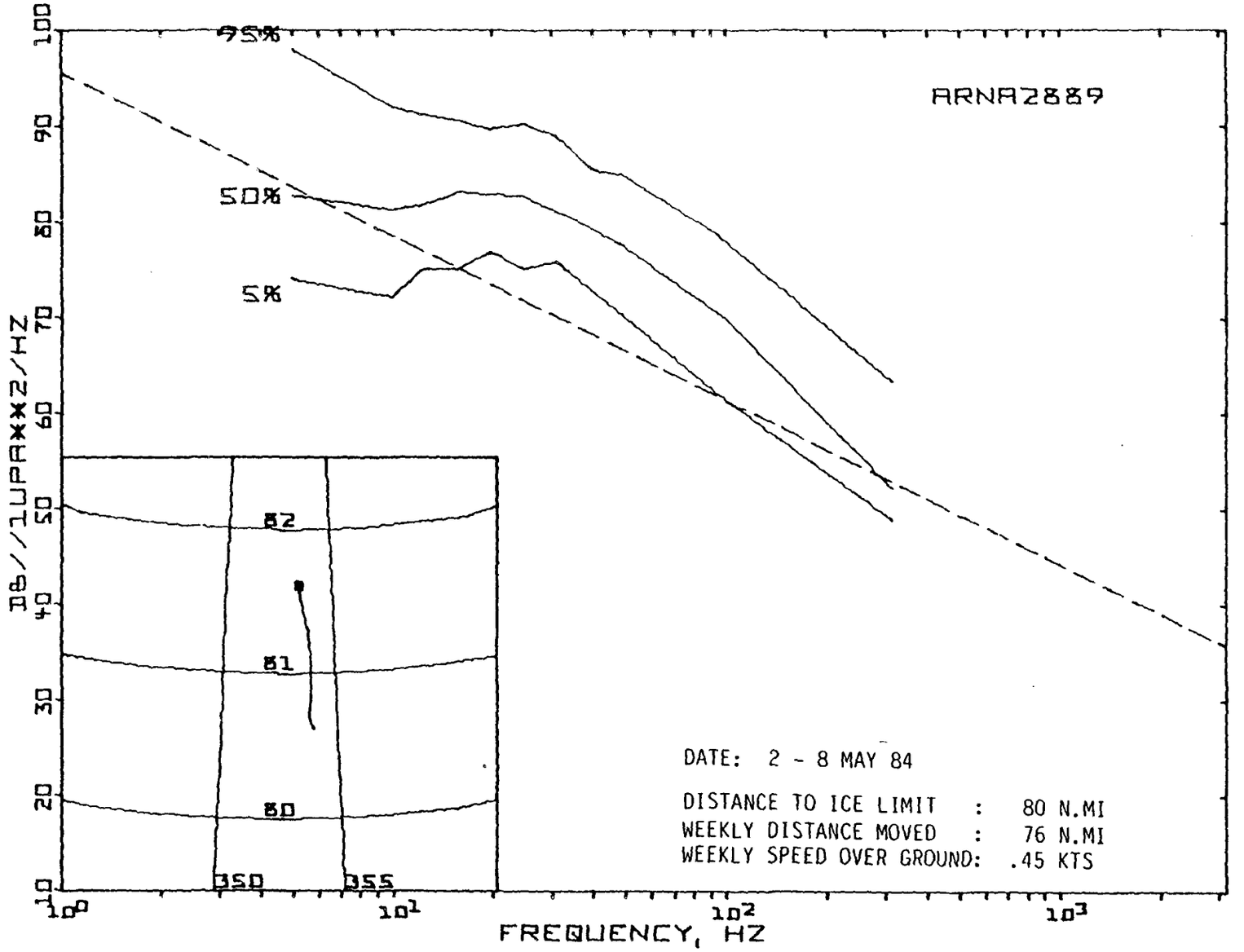
OUTPUT IN FILE ARNA2889

DISPLACEMENT (N. MI.): 75.607 NORTH: -75.240 EAST: 7.442
DIRECTION (TRUE): 174.367

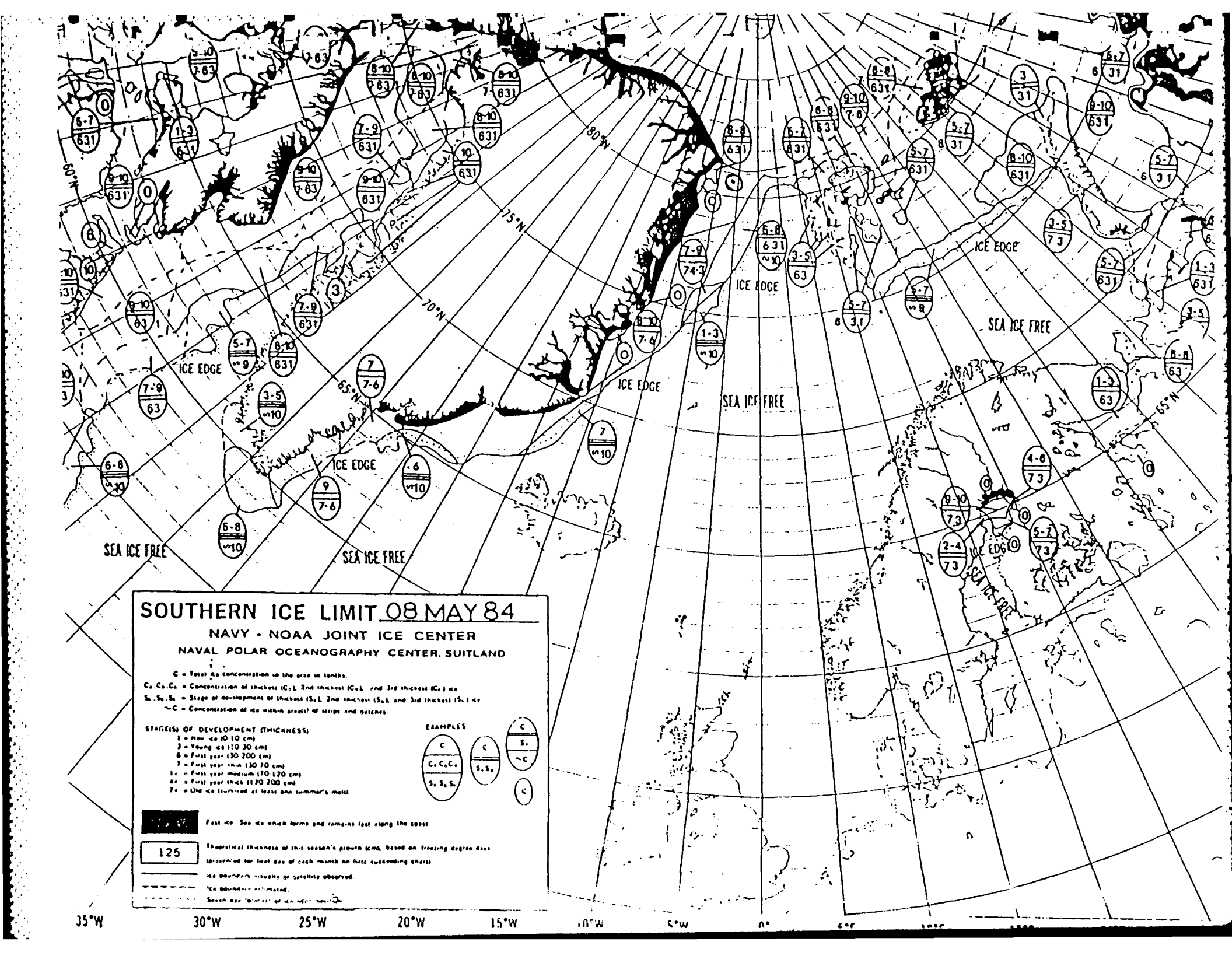
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	85.3	7.5	73.9	73.9	76.8	80.7	82.8	90.0	97.0	98.0	104.0	56
10.0	81.8	6.3	71.0	72.0	74.5	75.9	81.2	87.9	89.1	91.8	94.5	56
12.5	82.9	5.8	73.7	75.1	76.4	78.0	81.8	88.4	90.0	90.9	97.8	56
16.0	83.4	5.0	73.3	75.1	77.8	78.3	83.2	87.9	89.8	90.4	92.3	56
20.0	83.0	4.6	73.0	76.9	77.5	79.1	82.9	86.8	88.9	89.5	92.0	56
25.0	83.1	5.0	73.9	75.0	77.5	78.8	82.7	87.9	89.5	90.2	92.0	56
31.5	82.2	4.7	73.7	75.9	76.8	78.4	80.9	86.3	87.9	88.8	91.1	56
40.0	79.3	4.6	69.2	72.7	73.3	75.2	79.3	83.5	85.4	85.4	86.4	56
50.0	77.6	4.8	67.3	69.8	71.4	73.9	77.4	81.9	84.1	84.8	86.0	56
100.0	69.4	6.0	55.8	61.3	61.9	64.6	69.8	74.9	77.4	78.1	79.9	56
315.0	54.2	5.1	48.2	48.8	48.8	49.3	52.1	58.1	61.4	63.3	64.9	56

STOP



BUOY 2889 2-8 MAY 84


SOUTHERN ICE LIMIT 08 MAY 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths.
Cn.Cn.Cn = Concentration of thickest (Cn.) 2nd thickest (Cn.) and 3rd thickest (Cn.) ice
Sn.Sn.Sn = Stage of development of thickest (Sn.) 2nd thickest (Sn.) and 3rd thickest (Sn.) ice
~C = Concentration of ice within areas of strips and patches.
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
4 = First year (30-200 cm)
5 = First year thin (30-70 cm)
6 = First year medium (70-120 cm)
7 = First year thick (120-200 cm)
8 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast
125
Theoretical thickness of this season's growth (cm), based on freezing degree days accumulated for first day of each month or those succeeding shoals
Ice boundary usually or satellite observed
Ice boundary estimated
Seven day forecast of ice edge position
ICE EDGE
SEA ICE FREE
80°N
75°N
70°N
65°N
60°N
35°W
30°W
25°W
20°W
15°W
10°W
5°W
0°

MONTH: 9-15 MAY 84 BUOY: 2889

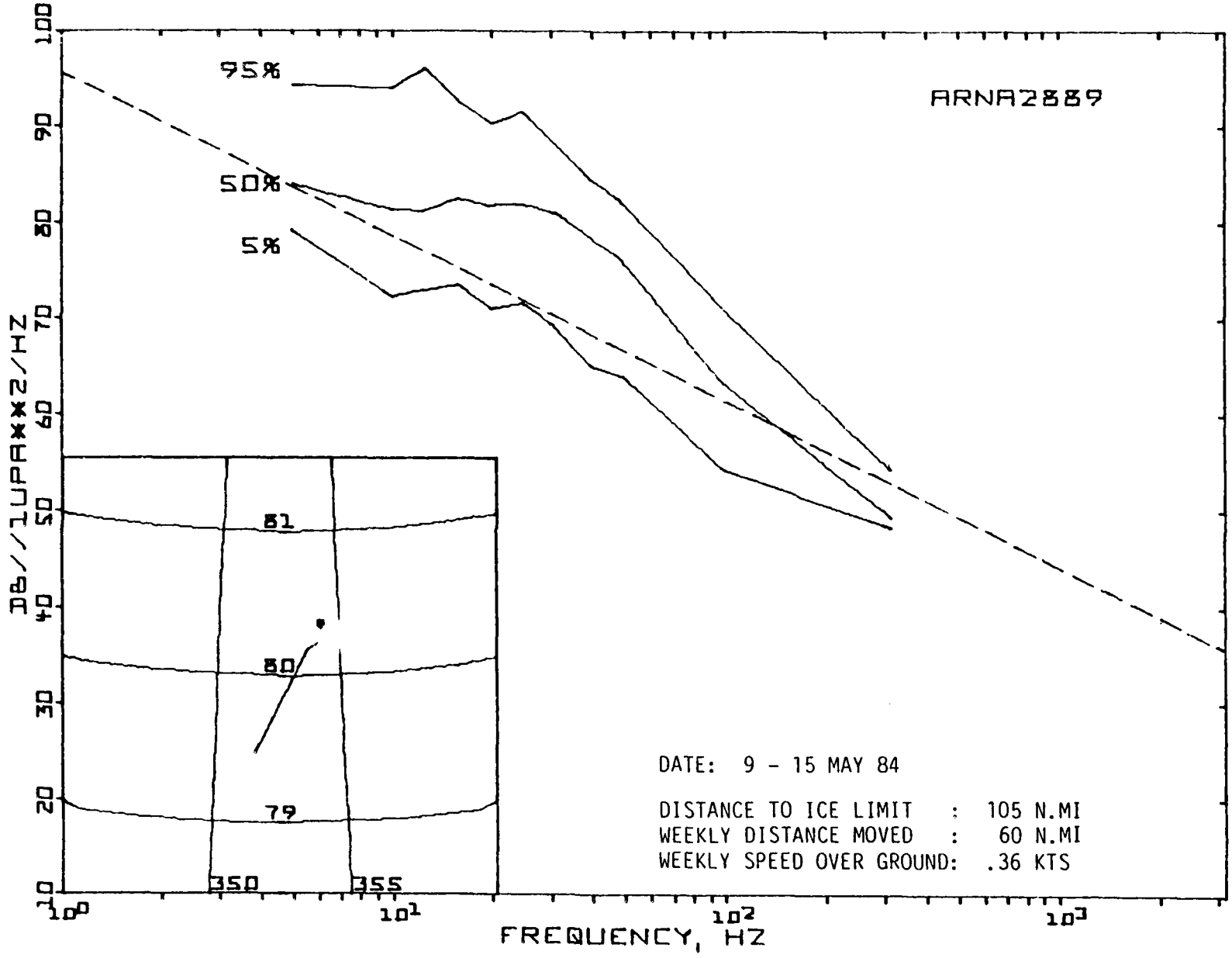
OUTPUT IN FILE ARN=2889

DISPLACEMENT (N. MI.): 60.419 NORTH: -53.700 EAST: -27.689
DIRECTION (TRUE): 207.299

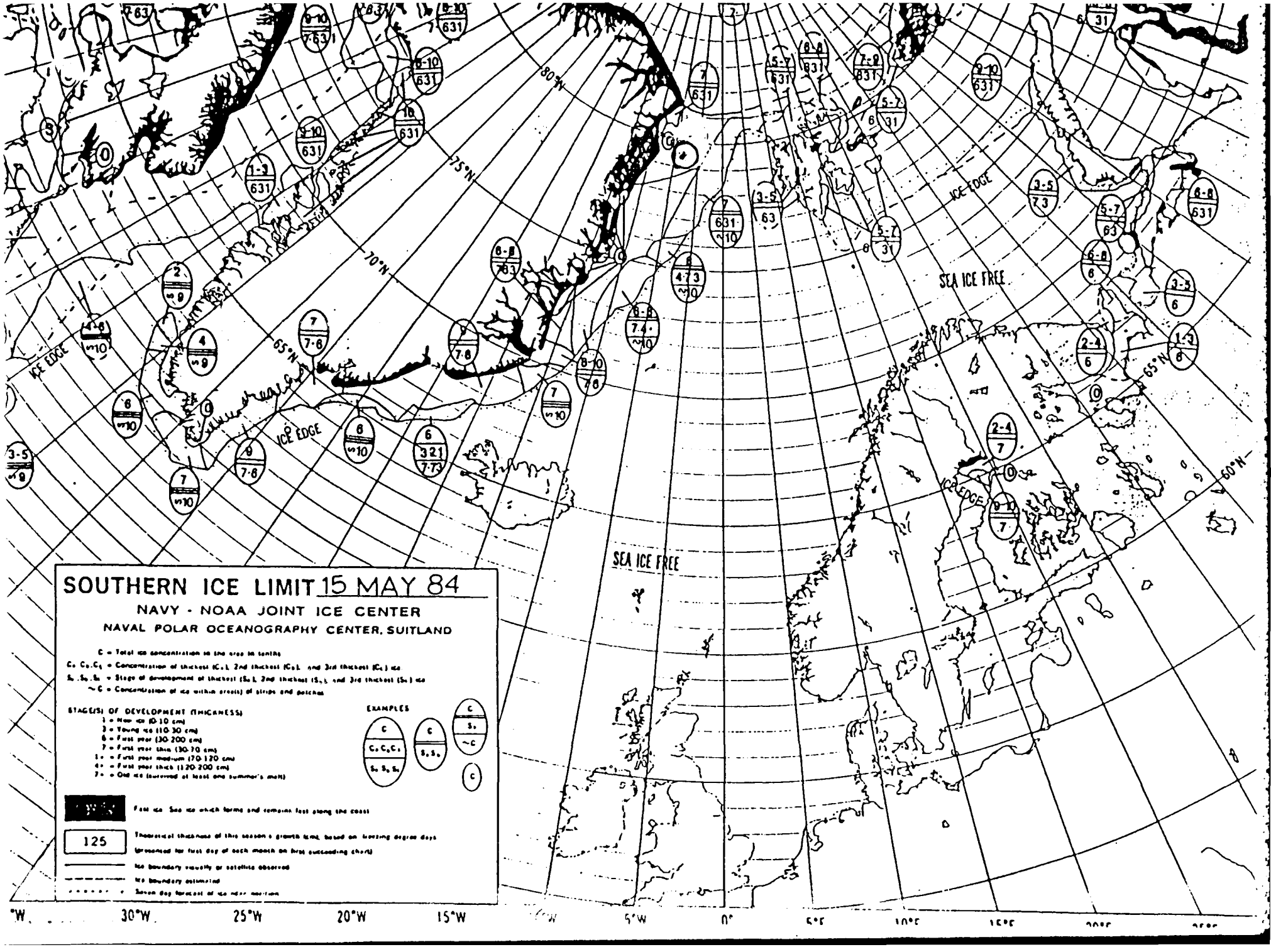
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	85.7	5.0	76.1	79.0	80.7	82.2	84.0	88.8	92.8	94.2	98.0	56
10.0	82.4	6.9	71.0	72.0	74.5	77.0	81.2	87.3	91.8	93.9	96.1	56
12.5	82.8	7.0	70.9	72.8	73.7	78.0	81.1	87.2	93.2	96.0	96.9	56
16.0	82.5	5.9	71.1	73.3	73.3	78.3	82.5	86.3	90.4	92.3	93.9	56
20.0	80.9	6.0	68.8	70.8	72.0	75.5	81.6	86.0	88.3	90.1	91.1	56
25.0	81.6	6.3	70.7	71.4	72.1	75.9	81.9	86.0	89.5	91.4	93.0	56
31.5	79.8	5.7	68.2	68.8	70.7	76.8	80.9	84.4	85.7	87.9	88.8	56
40.0	76.8	6.4	63.2	64.8	65.5	72.1	78.2	81.3	83.5	84.2	87.3	56
50.0	74.9	6.5	61.3	63.8	64.6	68.9	75.8	79.9	81.0	81.9	87.9	56
100.0	63.3	5.1	53.3	54.0	56.9	60.1	62.9	66.1	68.9	70.7	78.1	56
315.0	50.0	2.4	47.5	48.2	48.2	48.2	49.3	50.3	52.1	54.2	60.8	56

STOP



BUOY 2889 9-15 MAY 84


SOUTHERN ICE LIMIT 15 MAY 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
STAGE(S) OF DEVELOPMENT (THICKNESS)
EXAMPLES
125
80°N
75°N
70°N
65°N
60°N
ICE EDGE
SEA ICE FREE
30°W
25°W
20°W
15°W
5°W
0°

MONTH: 16-22 MAY 84 BUOY: 2889

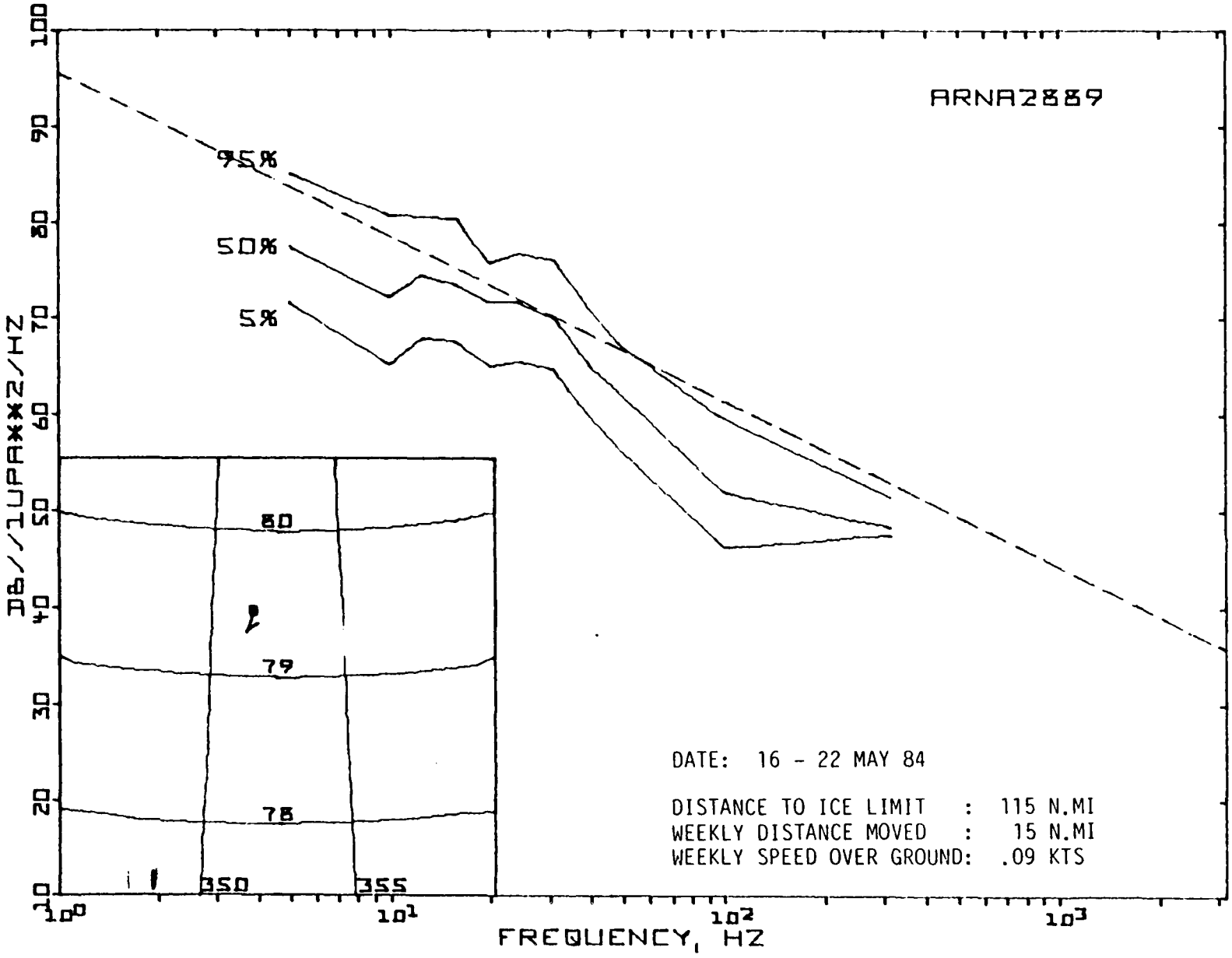
OUTPUT IN FILE ARNA2889

DISPLACEMENT (N. MI.): 15.301 NORTH: -12.540 EAST: -8.767
DIRECTION (TRUE): 214.983

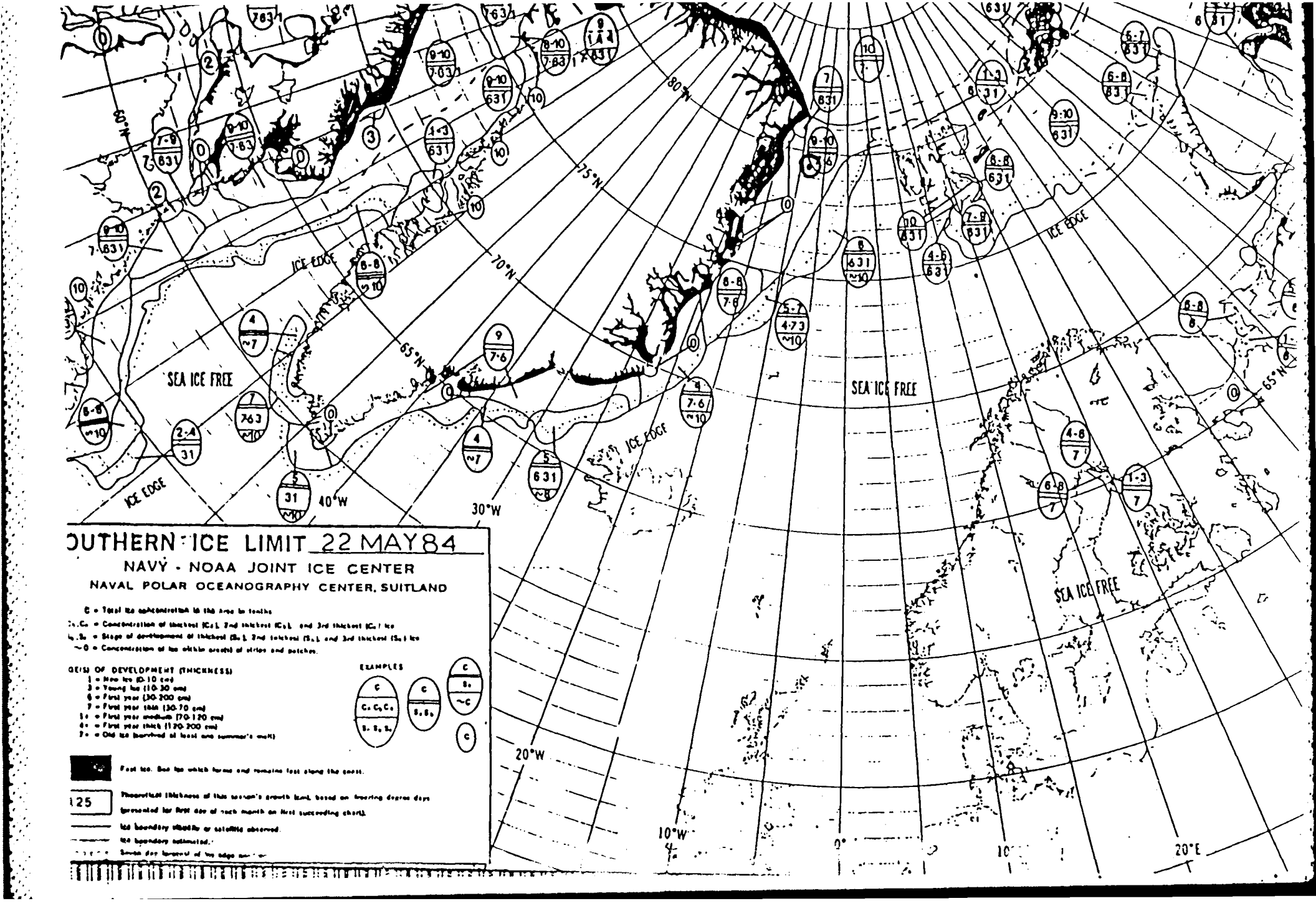
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	77.8	4.7	59.9	71.4	73.9	74.7	77.4	80.7	82.8	85.0	91.9	56
10.0	72.7	5.1	56.5	65.0	67.8	69.2	72.0	75.9	79.0	80.6	84.1	56
12.5	74.3	4.4	61.1	67.7	69.0	70.9	74.4	76.9	79.7	80.5	84.0	56
16.0	73.7	4.2	63.2	67.3	68.2	71.7	73.3	75.8	78.3	80.3	84.4	56
20.0	71.1	4.2	60.8	64.8	66.0	67.9	71.4	73.9	74.8	75.5	86.8	56
25.0	71.8	4.0	61.9	65.4	66.7	67.9	71.4	73.9	75.9	76.7	84.2	56
31.5	69.8	3.9	60.3	64.4	64.7	67.0	69.8	72.3	74.3	75.9	80.9	56
40.0	65.1	3.5	58.2	59.5	60.7	62.3	64.8	67.3	69.2	70.8	74.3	56
50.0	61.6	4.1	50.7	55.8	56.9	58.6	61.9	63.8	66.1	66.7	73.9	56
100.0	52.9	4.2	39.4	46.1	49.8	50.8	51.8	54.7	56.9	59.4	67.9	56
315.0	48.3	2.1	41.4	47.5	47.5	47.5	48.2	48.2	49.3	51.3	58.1	56

STOP



BUOY 2889 16-22 MAY 84



OUTHERN ICE LIMIT 22 MAY84

NAVY - NOAA JOINT ICE CENTER

NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths

C_1, C_2 = Concentration of thickest (C_1), 2nd thickest (C_2), and 3rd thickest (C_3) ice

S_1, S_2 = Stage of development of thickest (S_1), 2nd thickest (S_2), and 3rd thickest (S_3) ice

~0 = Concentration of ice within areas of floes and patches.

STAGES OF DEVELOPMENT (THICKNESS)

1 = New ice (0-10 cm)
2 = Young ice (10-30 cm)
3 = First year (30-200 cm)
4 = First year thin (30-70 cm)
5 = First year medium (70-120 cm)
6 = First year thick (120-200 cm)
7 = Old ice (survived at least one summer's melt)

EXAMPLES

Fast ice. Ice that which forms and remains fast along the coast.

125 Theoretical thickness of this season's growth limit, based on freezing degree days forecasted for first day of each month on first succeeding chart.

Ice boundary plotted or satellite observed.

Ice boundary estimated.

Seven day forecast of ice edge position.

MONTH: 23-29 MAY 8[illegible] BUOY: 2889

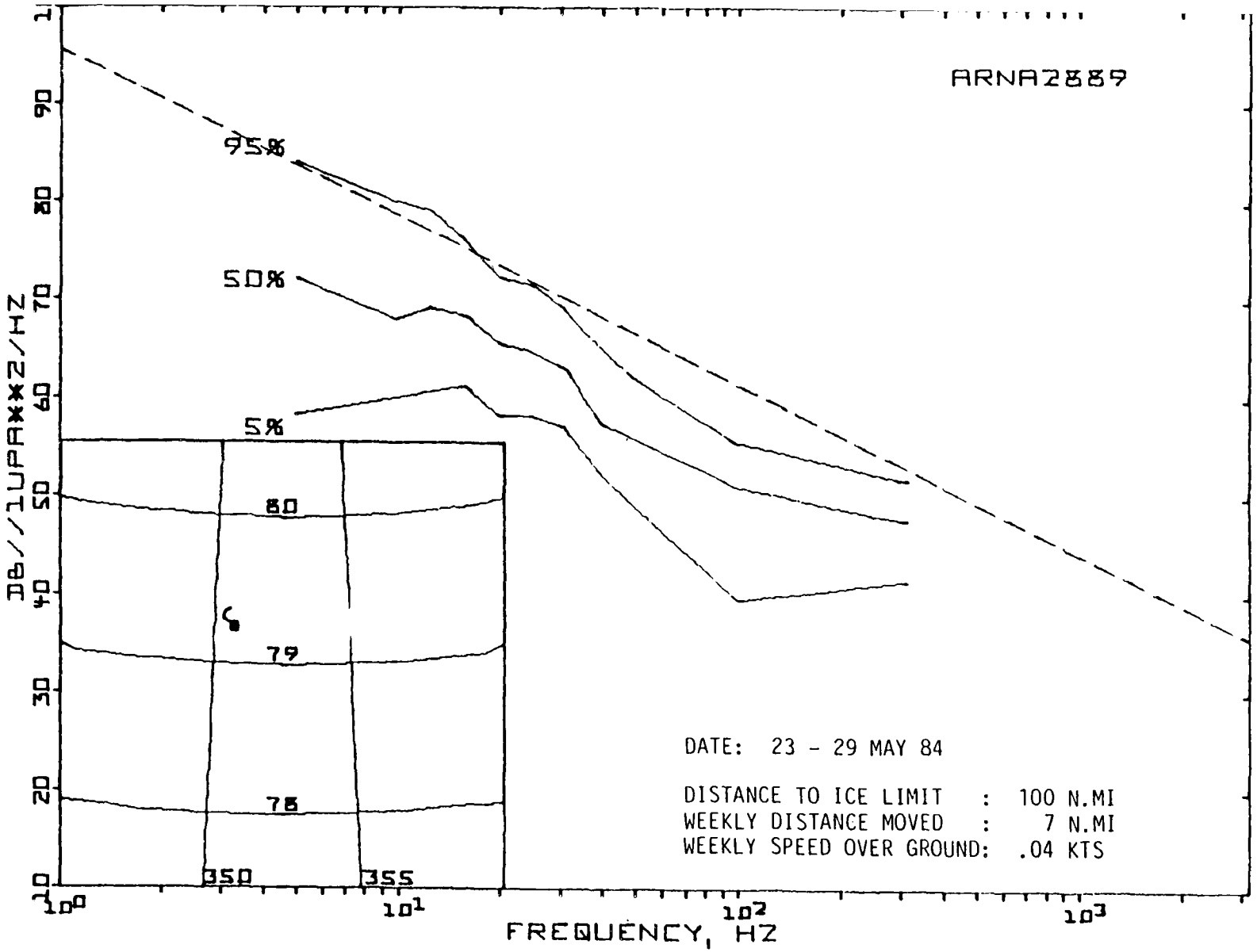
OUTPUT IN FILE ARNA2889

DISPLACEMENT (N. MI.): 7.301 NORTH: 7.080 EAST: -1.782
DIRECTION (TRUE): 345.852

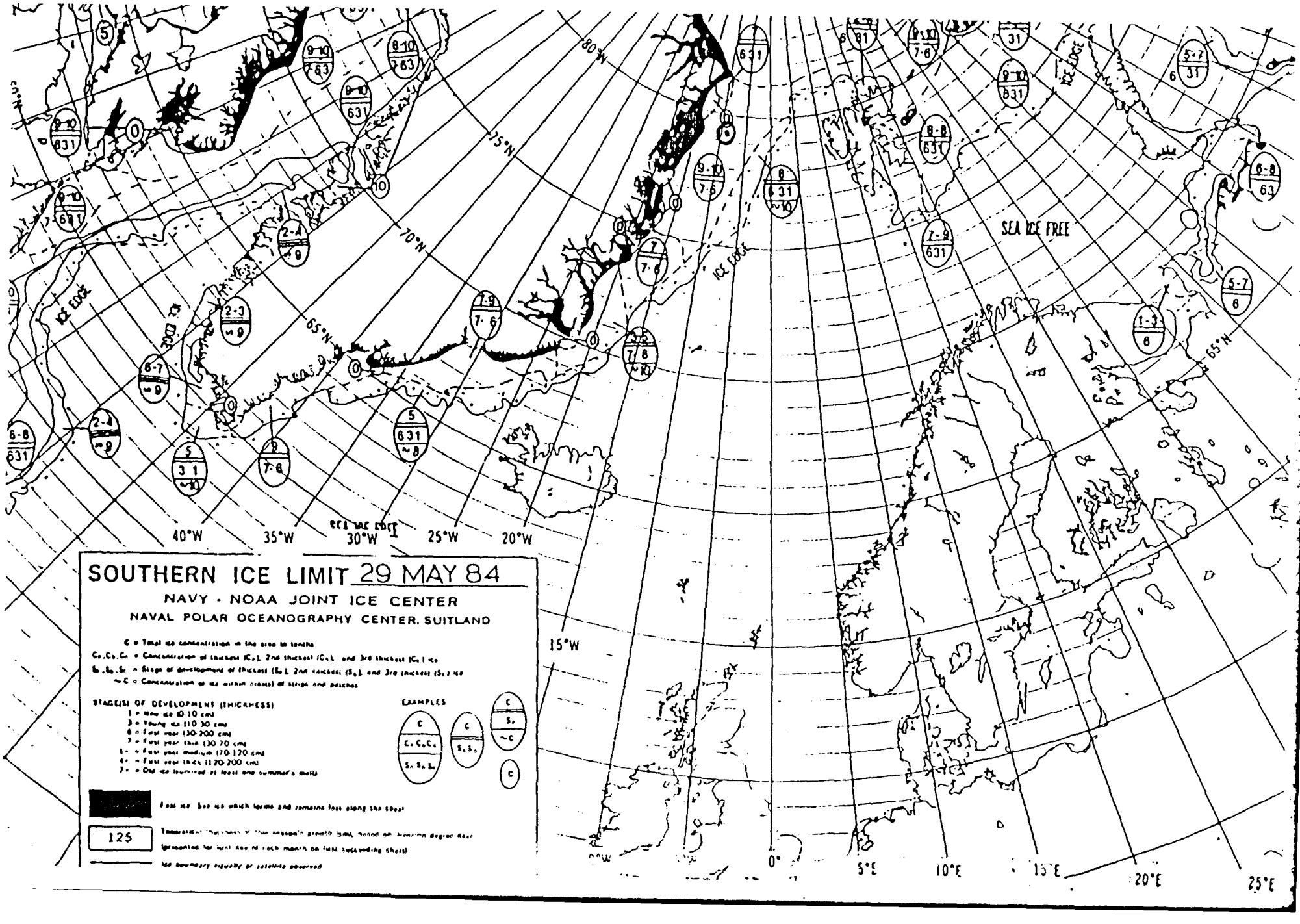
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	70.6	8.5	57.4	58.0	59.0	62.2	71.9	74.7	79.0	84.0	96.0	56
10.0	68.5	6.0	58.1	59.8	61.2	63.1	67.8	71.0	75.9	79.8	83.1	56
12.5	69.1	5.4	58.9	60.5	61.8	64.0	69.1	70.9	76.9	78.9	81.1	56
16.0	68.3	4.8	59.4	61.1	61.9	64.4	68.2	71.1	74.2	75.8	82.5	56
20.0	65.3	4.3	56.9	58.0	59.1	62.2	65.4	67.9	69.5	72.0	77.5	56
25.0	65.0	4.0	57.5	58.1	60.0	62.7	64.7	67.9	69.8	71.4	73.9	56
31.5	62.6	3.8	53.7	56.8	57.6	59.7	62.8	64.7	67.6	68.8	69.8	56
40.0	58.1	4.0	49.2	52.1	53.3	55.2	57.2	60.7	63.2	64.8	68.3	56
50.0	56.1	4.0	47.9	48.9	50.7	52.7	55.8	59.4	61.9	61.9	62.9	56
100.0	48.6	5.5	38.6	39.4	40.1	42.9	50.8	51.8	53.3	55.3	60.1	56
315.0	46.4	3.5	41.4	41.4	41.4	42.4	47.5	48.2	49.3	51.6	54.2	56

STOP



BUOY 2889 23-29 MAY 84


SOUTHERN ICE LIMIT 29 MAY 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
STAGE(S) OF DEVELOPMENT (THICKNESS)
EXAMPLES
ICE EDGE
SEA ICE FREE
80°W
75°N
70°N
65°N
40°W
35°W
30°W
25°W
20°W
15°W
0°
5°E
10°E
15°E
20°E
25°E

MONTH: 30MAY-5 JUN 84 BUOY: 2889

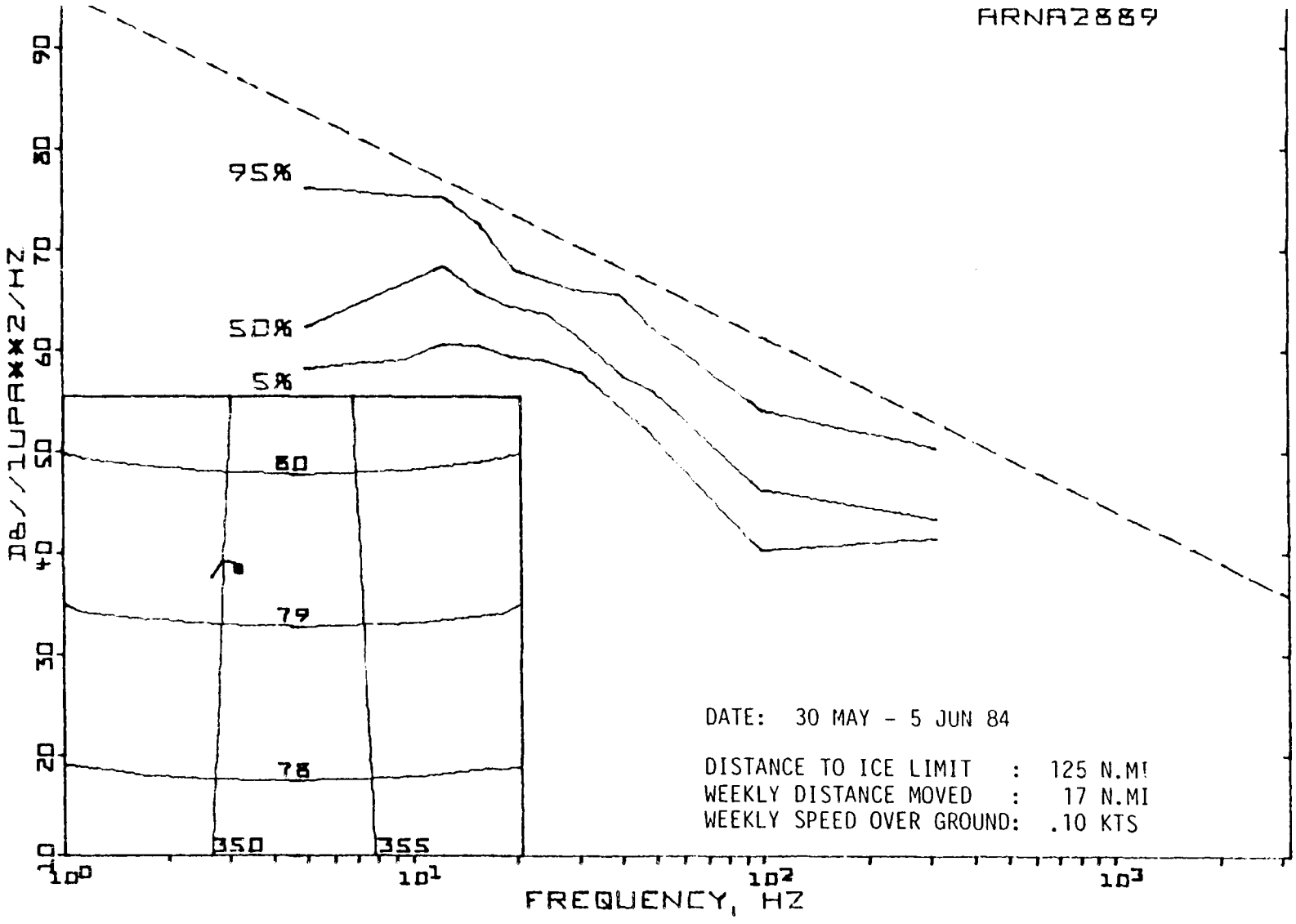
OUTPUT IN FILE ARNA2889

DISPLACEMENT (N. MI.): 16.826 NORTH: -8.340 EAST: -14.614
DIRECTION (TRUE): 240.316

THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	65.9	7.4	56.8	58.0	58.0	59.0	62.2	73.9	76.1	76.1	77.4	55
10.0	66.7	5.7	54.5	59.0	59.8	61.2	66.9	70.1	73.9	75.2	81.2	55
12.5	67.9	4.8	58.9	60.5	61.8	64.0	68.4	71.9	73.2	75.1	78.9	55
16.0	66.4	4.1	59.4	60.3	61.9	63.8	65.4	68.2	72.3	72.3	79.4	56
20.0	63.7	2.9	58.0	59.1	60.0	61.6	64.1	65.4	67.0	67.9	70.8	55
25.0	63.2	2.4	58.1	58.8	59.4	61.9	63.5	64.7	65.4	66.7	68.9	56
31.5	61.6	2.7	56.8	57.6	58.4	59.7	60.9	62.8	64.7	65.7	70.7	56
40.0	59.0	3.7	53.3	54.3	55.2	56.1	57.5	61.3	63.2	65.4	70.1	56
50.0	55.8	3.5	49.8	51.4	51.4	52.7	55.8	57.8	60.1	61.9	66.1	56
100.0	47.6	4.7	40.1	40.1	41.9	42.9	46.1	51.8	53.3	54.0	54.0	55
315.0	44.9	4.0	41.4	41.4	41.4	41.4	43.3	47.5	48.8	50.3	59.6	55

STOP



BUOY 2889 30MAY-5 JUN 84

MONTH: 4-10 JUL 84 BUOY: 2889

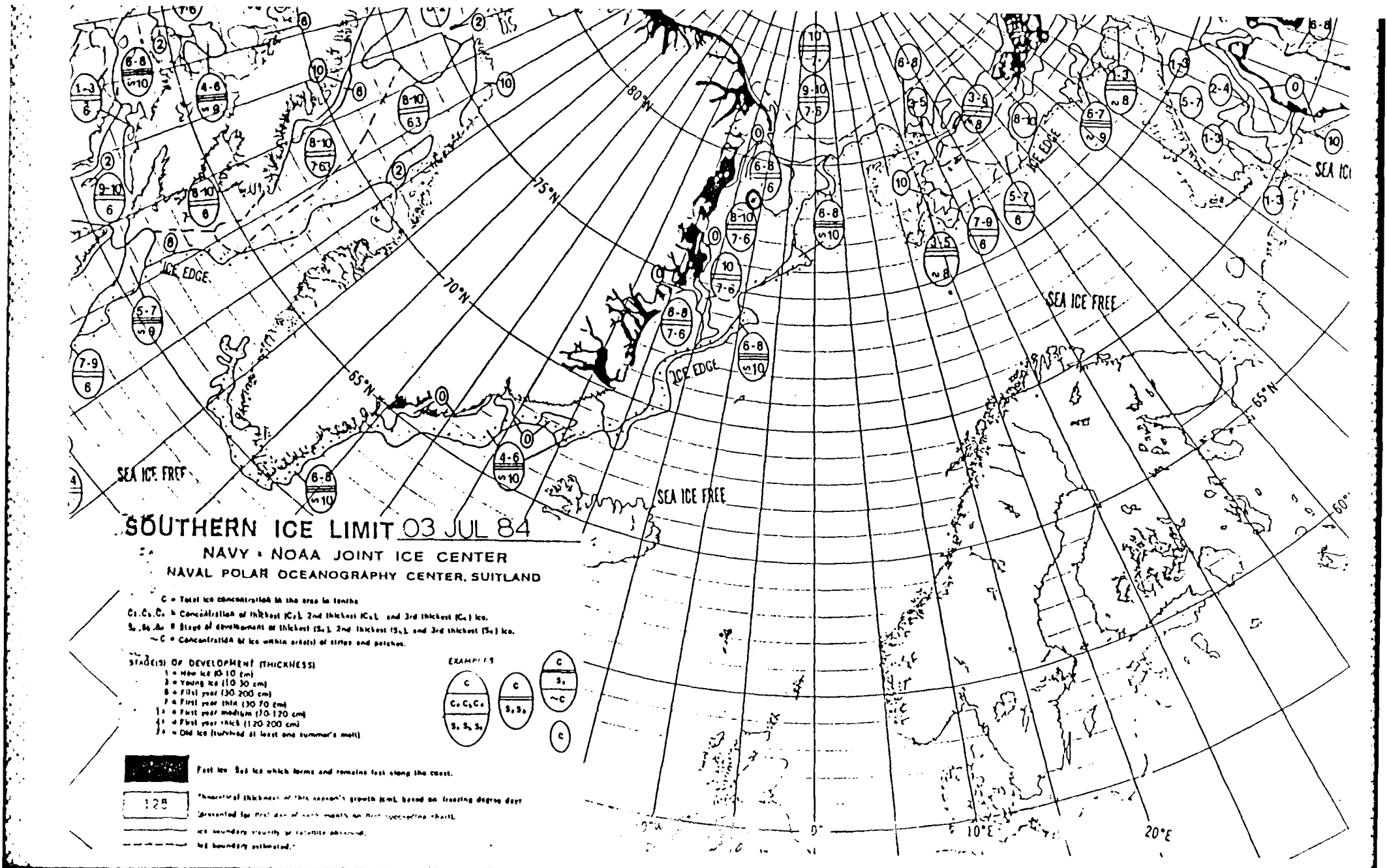
OUTPUT IN FILE ARNA2889

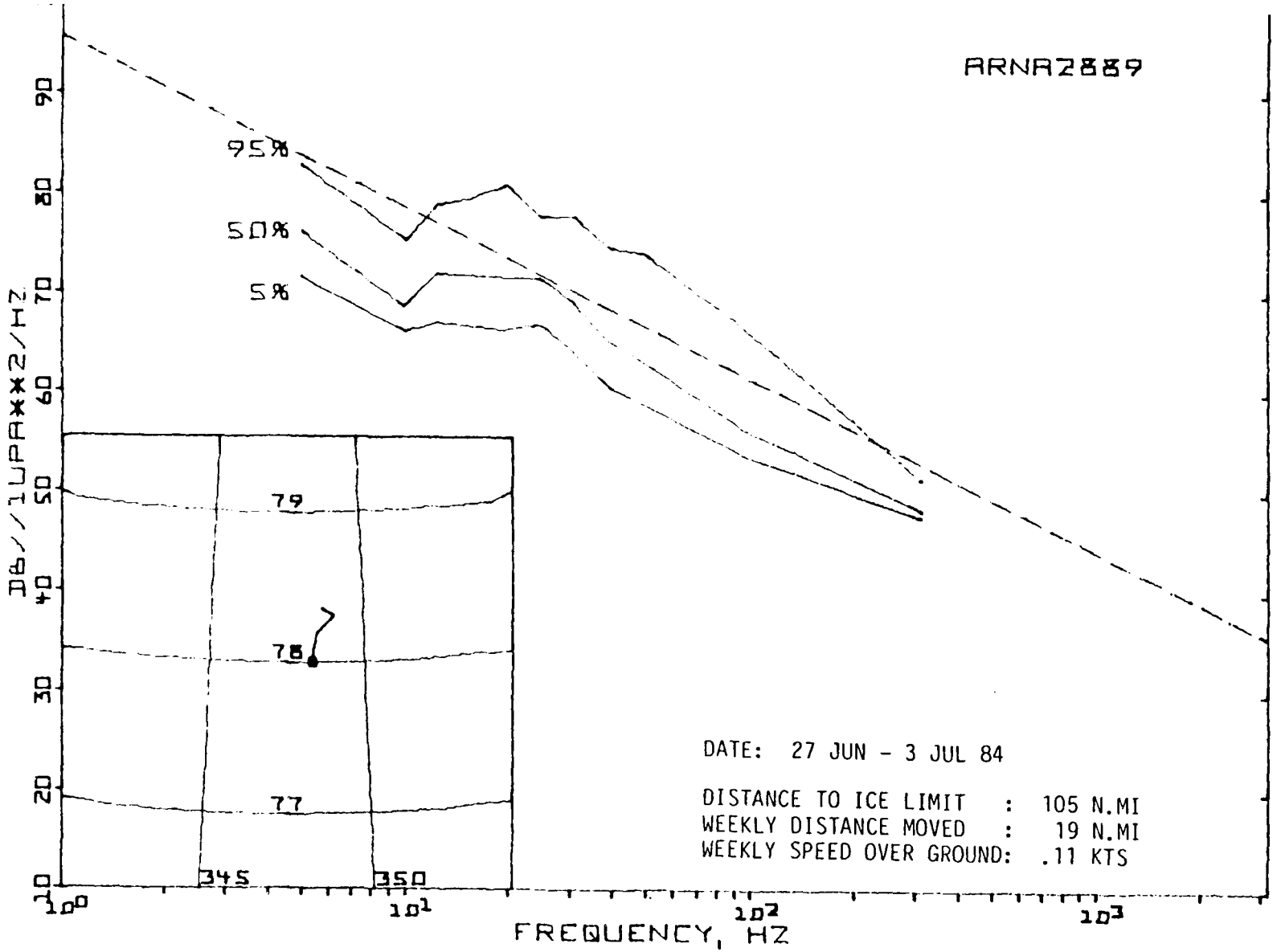
DISPLACEMENT (N. MI.): 19.450 NORTH: 17.000 EAST: -15.306
DIRECTION (TRUE): 308.069

THE NUMBER OF DATA SAMPLES IS 55

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	74.6	4.3	69.4	70.1	70.8	71.9	73.0	76.1	78.0	80.7	91.9	55
10.0	67.5	3.6	63.2	63.8	63.8	65.0	66.9	67.8	71.0	72.0	81.9	55
12.5	69.9	2.4	66.8	66.8	66.8	67.7	69.7	70.9	71.9	72.8	78.0	54
16.0	70.8	3.5	63.8	66.3	66.3	69.1	70.5	72.3	75.1	76.5	81.9	55
20.0	70.4	3.1	62.7	64.8	66.0	68.8	70.8	72.0	73.9	74.8	78.0	55
25.0	71.9	3.4	63.8	66.7	67.9	69.8	72.1	73.9	75.9	77.5	79.4	55
31.5	69.5	3.9	62.8	63.8	63.8	67.0	68.8	71.6	74.8	76.8	78.4	55
40.0	66.2	4.4	57.2	58.8	60.7	63.2	66.1	69.2	70.8	72.7	78.8	55
50.0	64.1	4.0	58.6	59.4	59.4	61.3	62.9	66.7	68.9	71.4	74.9	55
100.0	58.4	4.0	53.3	54.0	54.0	55.3	56.9	60.7	63.8	65.4	68.9	55
315.0	48.8	2.5	47.5	47.5	47.5	47.5	48.2	48.8	49.3	51.3	64.9	55

STOP


SOUTHERN ICE LIMIT 03 JUL 84
NAVY • NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
$C_1 C_2 C_3$ = Concentration of thickest (C_1), 2nd thickest (C_2), and 3rd thickest (C_3) ice.
$S_1 S_2 S_3$ = Stage of development of thickest (S_1), 2nd thickest (S_2), and 3rd thickest (S_3) ice.
~C = Concentration of ice within area(s) of strips and patches.
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
2 = Young ice (10-30 cm)
3 = First year (30-200 cm)
4 = First year thin (30-70 cm)
5 = First year medium (70-120 cm)
6 = First year thick (120-200 cm)
7 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice
Theoretical thickness of this season's growth (cm), based on freezing degree days
Ice boundary
Ice boundary estimated
ICE EDGE
SEA ICE FREE
80°N
75°N
70°N
65°N
0°
10°E
20°E
60°



BUOY 2889 27JUN-3 JUL 84

MONTH: 27JUN-3 JUL 84 BUOY: 2889

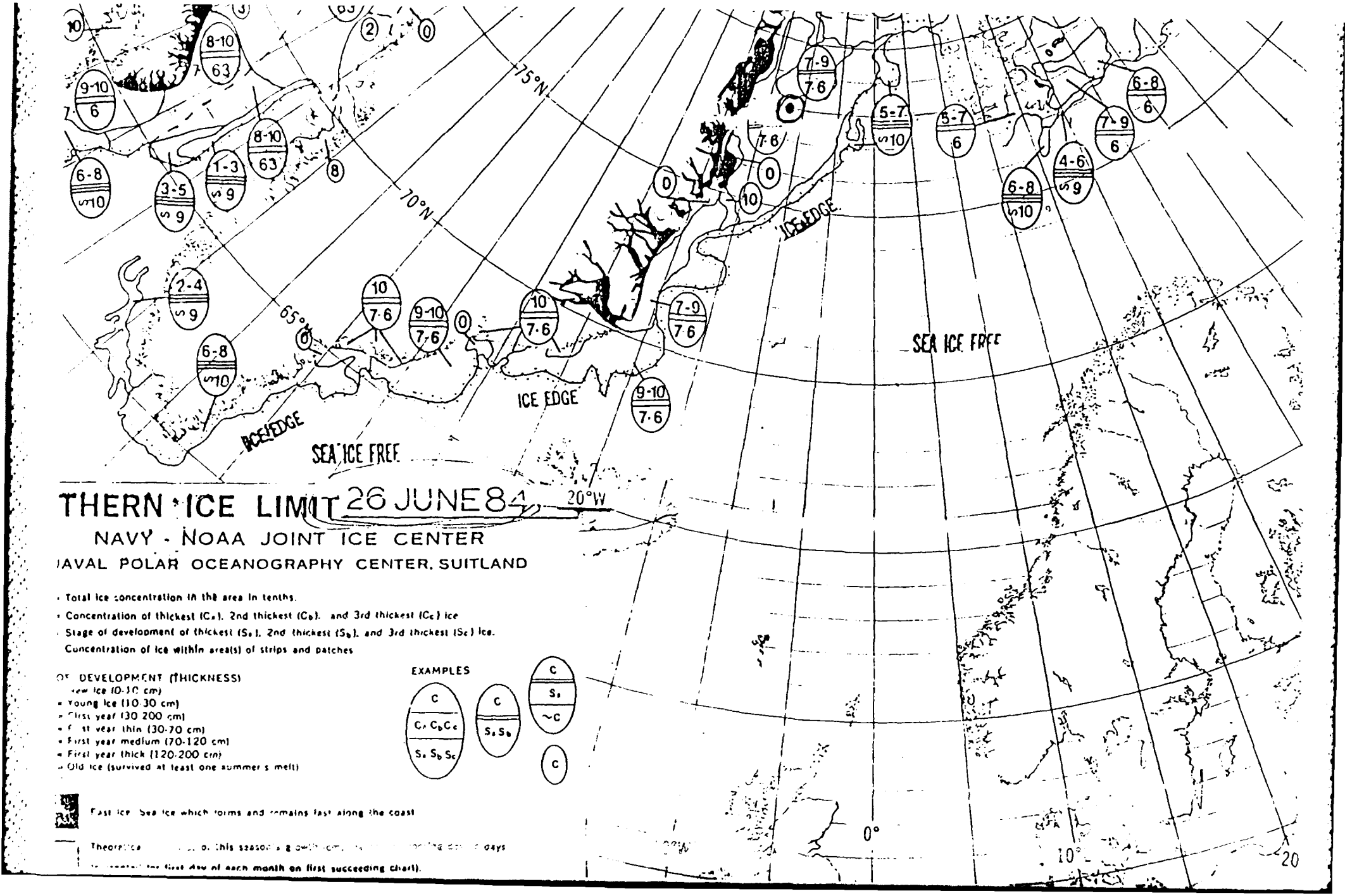
OUTPUT IN FILE ARNA2889

DISPLACEMENT (N. MI.): 18.850 NORTH: 18.840 EAST: 0.616
DIRECTION (TRUE): 1.857

THE NUMBER OF DATA SAMPLES IS 55

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	76.3	3.4	70.1	71.4	71.9	73.9	76.1	78.0	79.9	82.8	85.0	55
10.0	69.7	4.1	65.0	66.0	66.0	66.9	68.5	71.0	73.8	75.2	89.1	55
12.5	72.1	4.0	65.9	66.8	66.8	68.4	71.9	75.1	78.0	78.9	84.0	54
16.0	72.6	4.6	66.3	66.3	67.3	69.8	71.7	75.1	77.8	79.4	90.4	54
20.0	72.0	4.7	66.0	66.0	66.0	68.8	71.4	74.8	78.0	80.8	87.6	54
25.0	71.8	4.0	65.4	66.7	67.3	68.9	71.4	73.9	75.9	77.5	84.8	55
31.5	70.0	4.4	62.8	63.8	65.6	67.0	68.8	71.6	75.9	77.6	84.4	55
40.0	66.2	4.8	58.8	60.1	60.7	63.2	64.8	68.3	73.3	74.3	80.4	54
50.0	64.3	4.9	57.8	58.6	59.4	60.7	62.9	67.9	71.4	73.9	75.8	55
100.0	58.1	4.6	53.3	53.3	53.3	54.7	55.8	60.1	65.4	66.1	68.9	55
315.0	48.7	1.6	47.5	47.5	47.5	47.5	48.2	48.8	50.3	51.3	54.8	55

STOP



THERN ICE LIMIT 26 JUNE 84

NAVY - NOAA JOINT ICE CENTER

NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

- Total ice concentration in the area in tenths.
- Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice
- Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
- Concentration of ice within area(s) of strips and patches

OF DEVELOPMENT (THICKNESS)

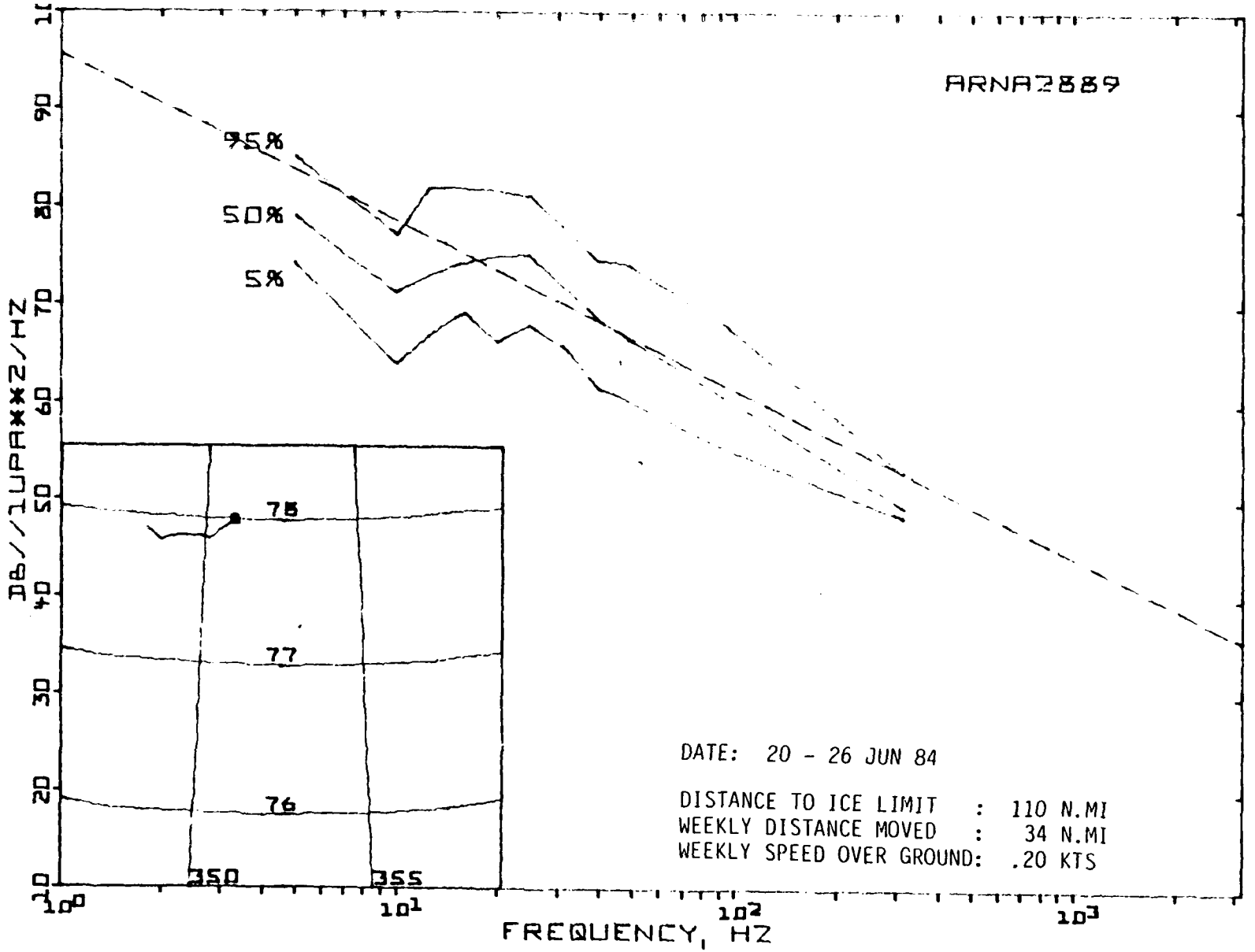
- New ice (0-10 cm)
- Young ice (10-30 cm)
- First year (30-200 cm)
- First year thin (30-70 cm)
- First year medium (70-120 cm)
- First year thick (120-200 cm)
- Old ice (survived at least one summer's melt)

EXAMPLES

Fast ice. Sea ice which forms and remains fast along the coast

Theoretical ice edge for this season's maximum extent (beginning each of 5 days

for example, the first day of each month on first succeeding chart).



BUOY 2889 20-26 JUN 84

MONTH: 20-26 JUN 84 BUOY: 2889

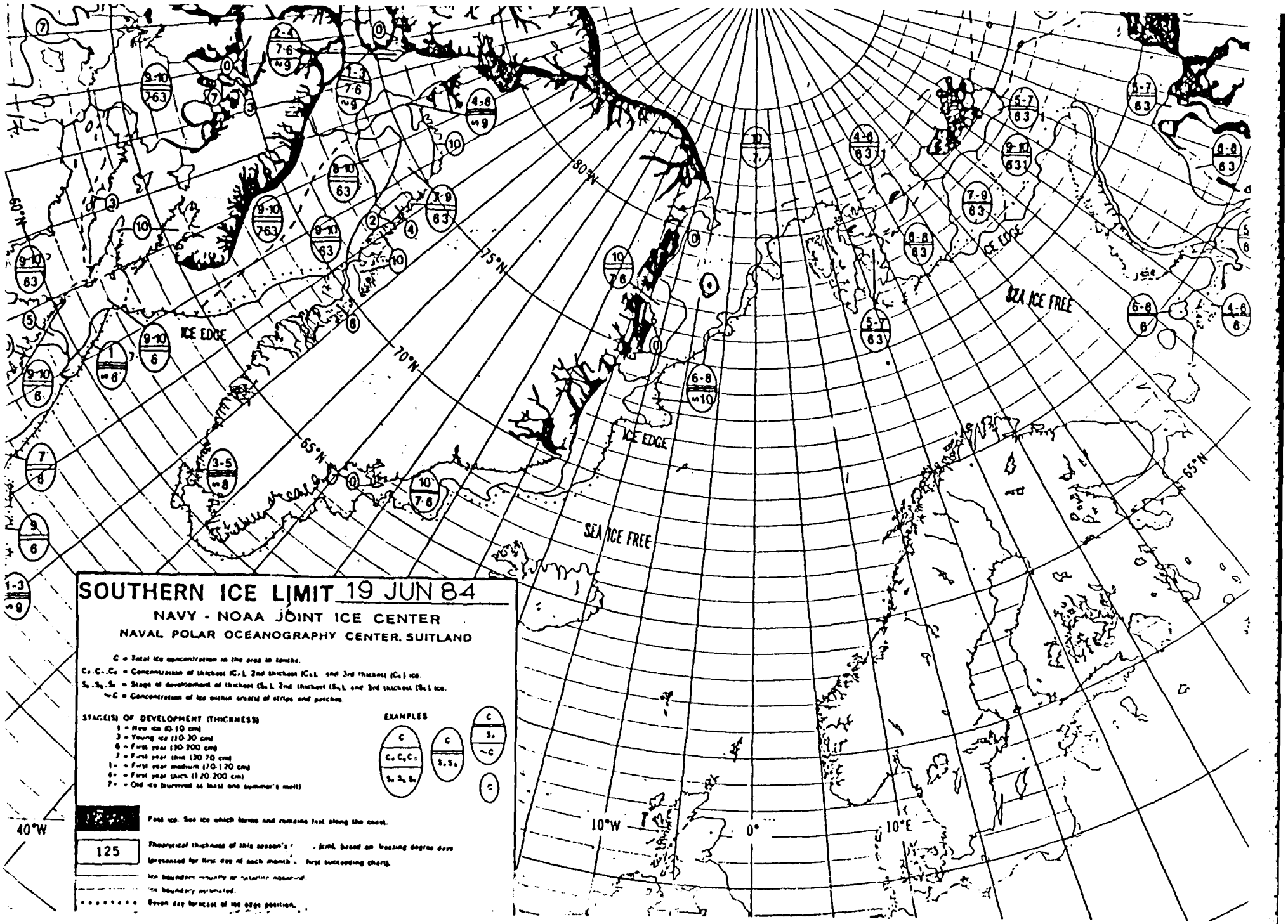
OUTPUT IN FILE ARNA2889

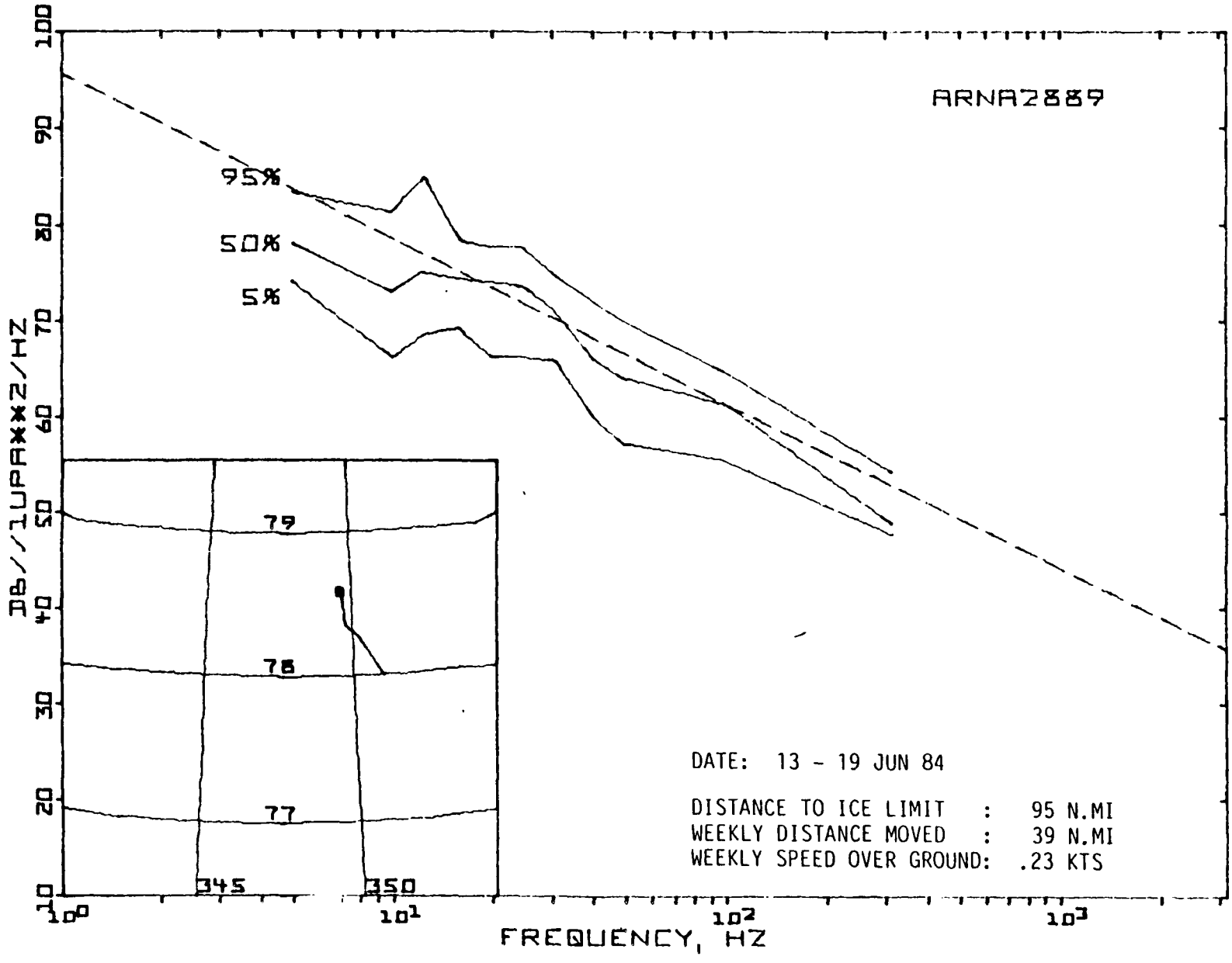
DISPLACEMENT (N. MI.): 34.356 NORTH: 1.140 EAST: -34.337
DIRECTION (TRUE): 271.868

THE NUMBER OF DATA SAMPLES IS 52

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	78.9	3.5	73.0	73.9	73.9	76.1	79.0	81.5	83.4	85.0	85.9	51
10.0	70.7	4.6	62.5	63.8	64.4	67.8	71.0	73.8	77.0	77.0	83.1	51
12.5	73.8	4.9	66.8	66.8	67.7	69.1	72.8	76.9	80.5	81.8	84.9	52
16.0	74.6	4.6	65.7	69.1	69.1	71.7	74.2	76.5	80.3	81.9	87.9	52
20.0	74.6	5.7	64.2	66.0	66.0	69.5	74.8	78.0	80.8	81.6	89.5	52
25.0	74.6	4.3	66.1	67.9	68.9	71.4	75.0	77.5	78.8	81.0	86.0	51
31.5	72.1	3.8	62.8	65.6	67.6	68.8	71.6	74.8	76.8	77.6	79.0	52
40.0	68.8	4.5	60.7	61.3	62.3	65.5	68.3	73.3	74.3	74.3	76.1	51
50.0	67.2	5.5	58.6	60.1	60.1	63.8	66.1	70.7	73.9	73.9	87.9	52
100.0	60.7	4.2	54.0	54.7	55.3	57.8	60.1	63.8	66.7	67.3	68.9	51
315.0	50.5	3.5	47.5	48.2	48.2	48.8	49.3	51.3	52.8	52.8	70.9	51

STOP


SOUTHERN ICE LIMIT 19 JUN 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths.
C_1, C_2, C_3 = Concentration of thickest (C_1), 2nd thickest (C_2), and 3rd thickest (C_3) ice.
S_1, S_2, S_3 = Stage of development of thickest (S_1), 2nd thickest (S_2), and 3rd thickest (S_3) ice.
~C = Concentration of ice within areas of strips and patches.
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
4 = First year (30-200 cm)
5 = First year thin (30-70 cm)
6 = First year medium (70-120 cm)
7 = First year thick (120-200 cm)
8 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. See ice which forms and remains fast along the coast.
125
Theoretical thickness of this season's ice, in cm, based on freezing degree days (processed for first day of each month's first succeeding chart).
Ice boundary
Ice boundary estimated.
Seven day forecast of ice edge position.
ICE EDGE
SEA ICE FREE
80°N
75°N
70°N
65°N
60°N
40°W
10°W
0°
10°E



BUOY 2889 13-19 JUN 84

MONTH: 13-19 JUN 84 BUOY: 2889

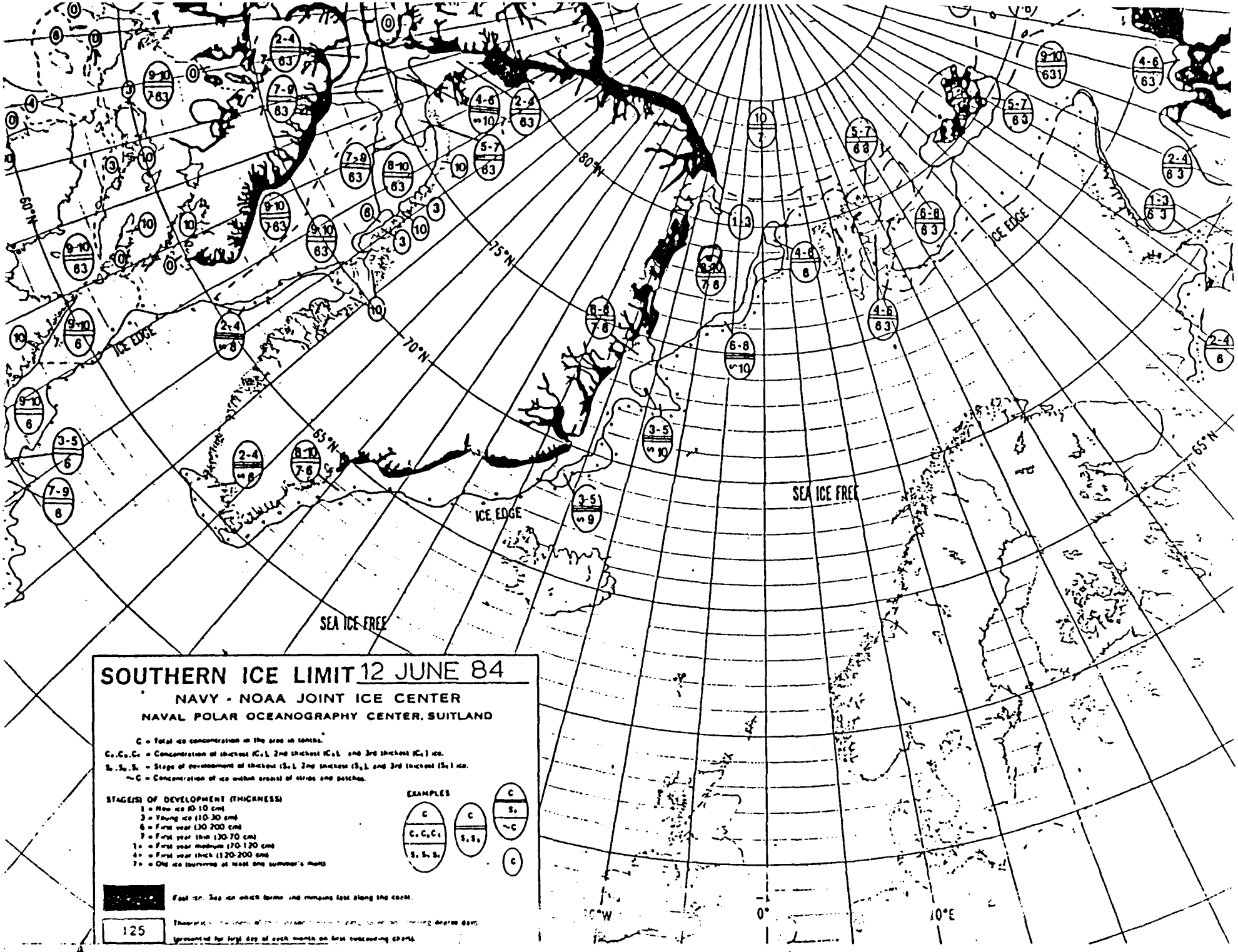
OUTPUT IN FILE ARNA2889

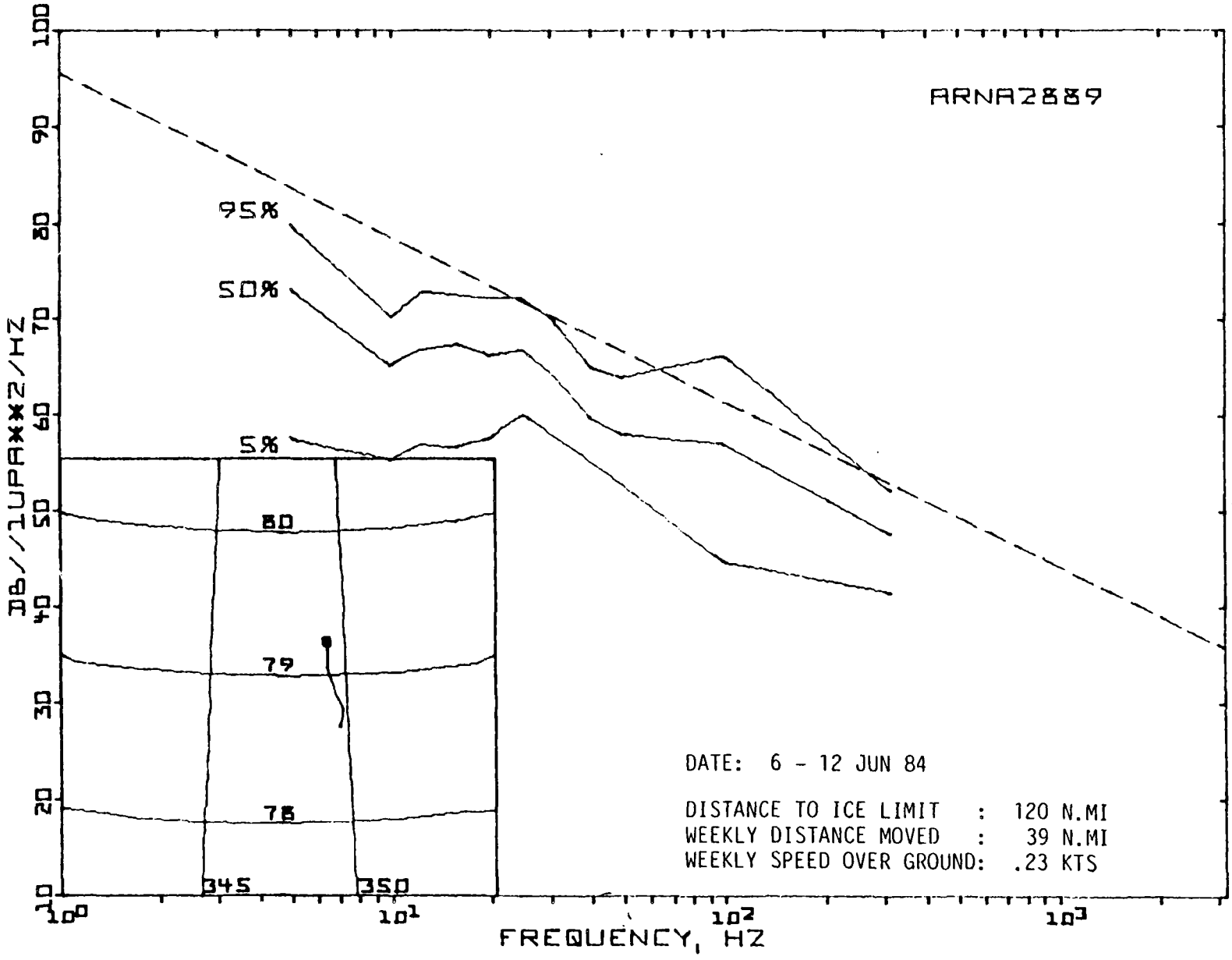
DISPLACEMENT (N. MI.): 39.461 NORTH: -35.339 EAST: 17.559
DIRECTION (TRUE): 153.591

THE NUMBER OF DATA SAMPLES IS 46

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	77.7	4.5	53.9	73.9	74.7	75.5	78.0	79.9	82.2	83.4	85.0	46
10.0	73.0	5.8	50.4	66.0	67.8	69.2	72.9	76.5	78.1	81.2	86.6	45
12.5	76.0	5.9	54.4	68.4	69.7	71.9	75.1	79.7	83.0	84.9	87.2	45
16.0	73.7	4.0	54.2	69.1	70.5	71.7	74.2	75.8	78.3	78.3	79.4	45
20.0	73.2	4.1	52.0	66.0	69.5	72.0	73.9	75.5	76.9	77.5	79.1	46
25.0	72.4	4.4	53.4	66.1	67.3	70.7	73.4	75.0	75.9	77.5	81.9	46
31.5	70.1	4.1	50.7	65.6	66.3	68.2	70.7	73.0	73.7	74.3	79.0	45
40.0	66.2	4.5	47.3	60.1	61.3	64.0	66.1	69.2	70.8	72.1	74.3	45
50.0	63.9	4.5	46.7	56.9	60.1	60.7	63.8	66.7	68.9	69.8	73.3	45
100.0	60.4	3.9	42.9	55.3	55.8	58.6	61.3	62.9	63.8	64.6	66.1	45
315.0	49.2	3.7	29.3	47.5	48.2	48.2	48.8	50.3	52.1	54.2	58.1	46

STOP


SOUTHERN ICE LIMIT 12 JUNE 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths.
$C_t C_s C_d$ = Concentration of thickest (C_t), 2nd thickest (C_s), and 3rd thickest (C_d) ice.
$S_t S_s S_d$ = Stage of development of thickest (S_t), 2nd thickest (S_s), and 3rd thickest (S_d) ice.
~C = Concentration of ice within cracks or strips and patches.
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
6 = First year (30-200 cm)
7 = First year thin (30-70 cm)
1 = First year medium (70-120 cm)
4 = First year thick (120-200 cm)
7 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast.
125
Thickness (centimeters) (presented for first day of each month on first succeeding charts)
ICE EDGE
SEA ICE-FREE
SEA ICE FREE
80°N
75°N
70°N
65°N
60°N
0°
10°E



BUOY 2889 6-12 JUN 84

MONTH: 6-12 JUN 84 BUOY: 2889

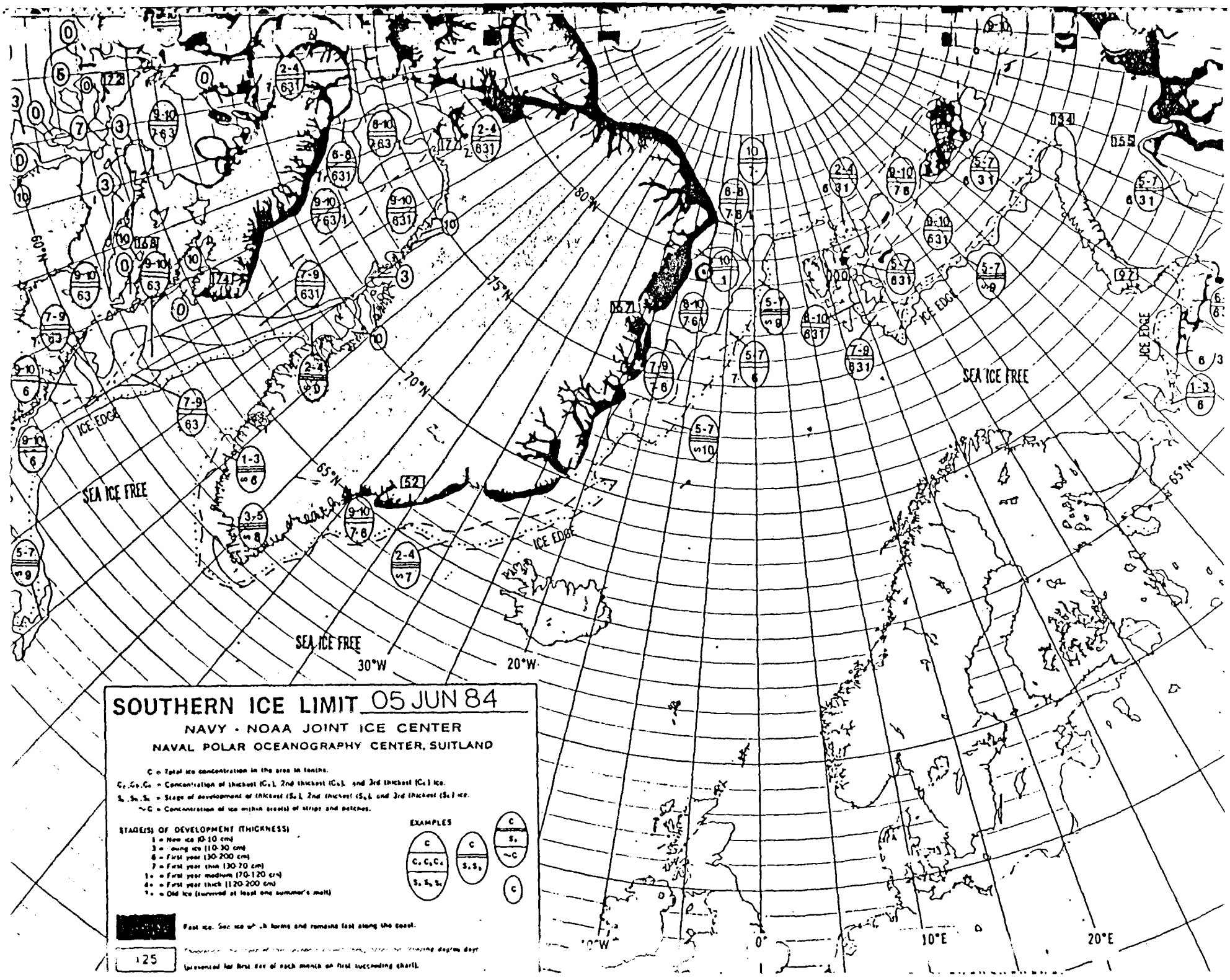
OUTPUT IN FILE ARNA2889

DISPLACEMENT (N. MI.): 39.015 NORTH: -38.881 EAST: 3.237
DIRECTION (TRUE): 175.257

THE NUMBER OF DATA SAMPLES IS 53

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	69.1	9.0	56.8	57.4	58.0	59.0	73.0	76.1	78.0	79.9	88.2	53
10.0	63.9	4.9	52.9	55.2	56.5	60.6	65.0	66.0	69.8	70.1	78.1	53
12.5	65.4	5.3	51.9	56.9	56.9	60.5	66.8	68.4	70.9	72.8	76.9	53
16.0	65.9	4.8	53.3	56.5	58.3	63.8	67.3	69.1	71.1	72.3	77.2	53
20.0	65.3	4.4	54.8	57.5	58.0	62.9	66.0	67.0	70.2	72.0	76.9	53
25.0	66.3	4.0	55.0	60.0	61.0	63.8	66.7	68.9	71.4	72.1	75.9	53
31.5	63.9	3.8	54.8	57.6	58.4	61.9	63.8	65.6	68.2	69.6	77.6	53
40.0	60.0	3.5	54.3	55.2	56.1	56.8	59.5	62.3	64.0	64.8	72.1	52
50.0	58.1	3.9	50.7	52.7	53.3	54.9	57.8	60.1	62.9	63.8	69.8	53
100.0	55.4	7.9	43.8	44.6	45.4	47.9	56.9	62.9	66.1	66.1	67.9	53
315.0	46.0	3.9	41.4	41.4	41.4	41.4	47.5	48.2	50.3	52.1	57.6	53

STOP



SOUTHERN ICE LIMIT 05 JUN 84

NAVY - NOAA JOINT ICE CENTER

NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths.

C_t, C_s, C_o = Concentration of thickest (C_t), 2nd thickest (C_s), and 3rd thickest (C_o) ice.

S_t, S_s, S_o = Stage of development of thickest (S_t), 2nd thickest (S_s), and 3rd thickest (S_o) ice.

~C = Concentration of ice within area(s) of stripe and patches.

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
6 = First year (30-200 cm)
7 = First year thin (30-70 cm)
1. = First year medium (70-120 cm)
4. = First year thick (120-200 cm)
7. = Old ice (survived at least one summer's melt)

EXAMPLES

C
$C_t C_s C_o$
$S_t S_s S_o$

C
$S_t S_s$

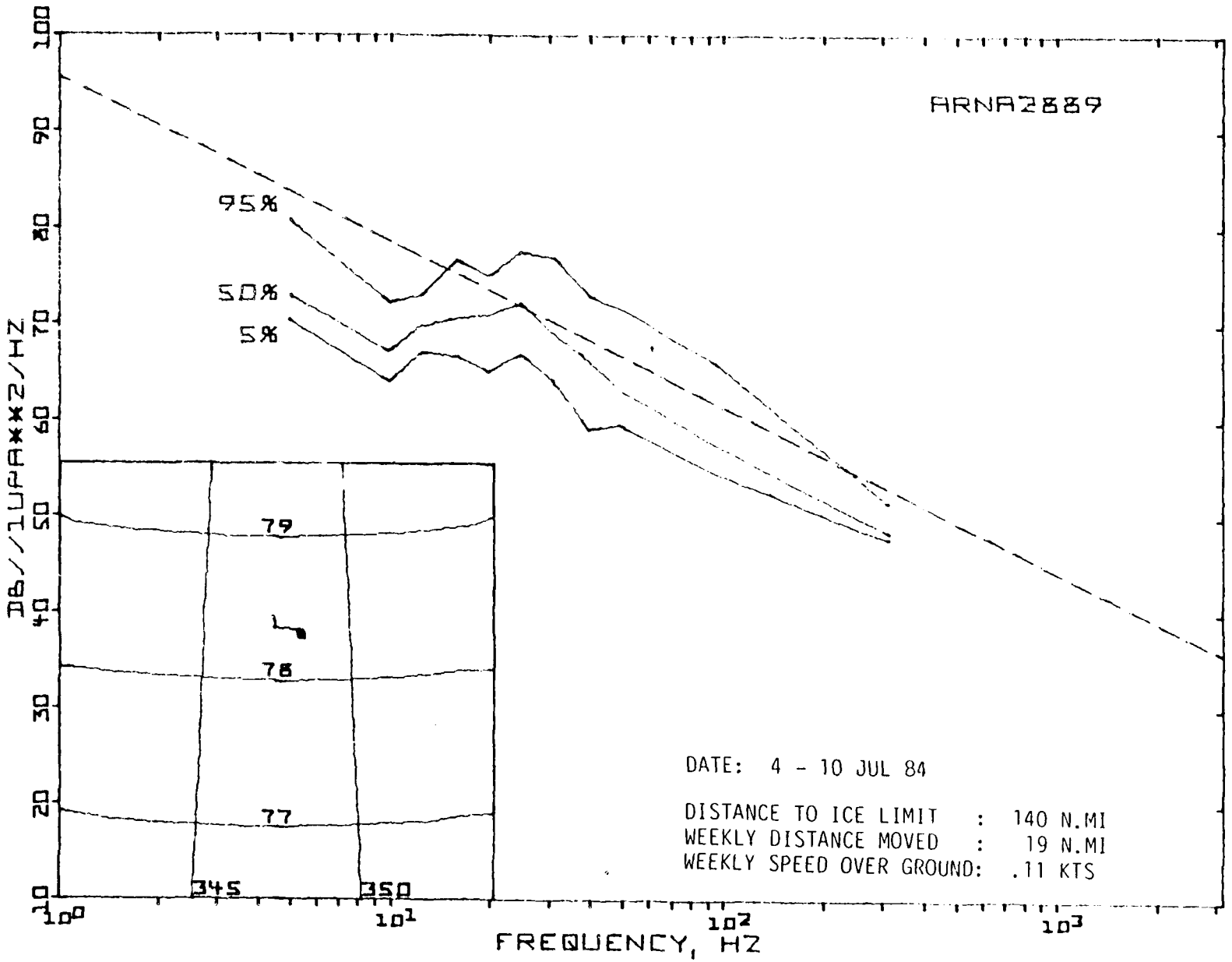
C
S_t
~C

C

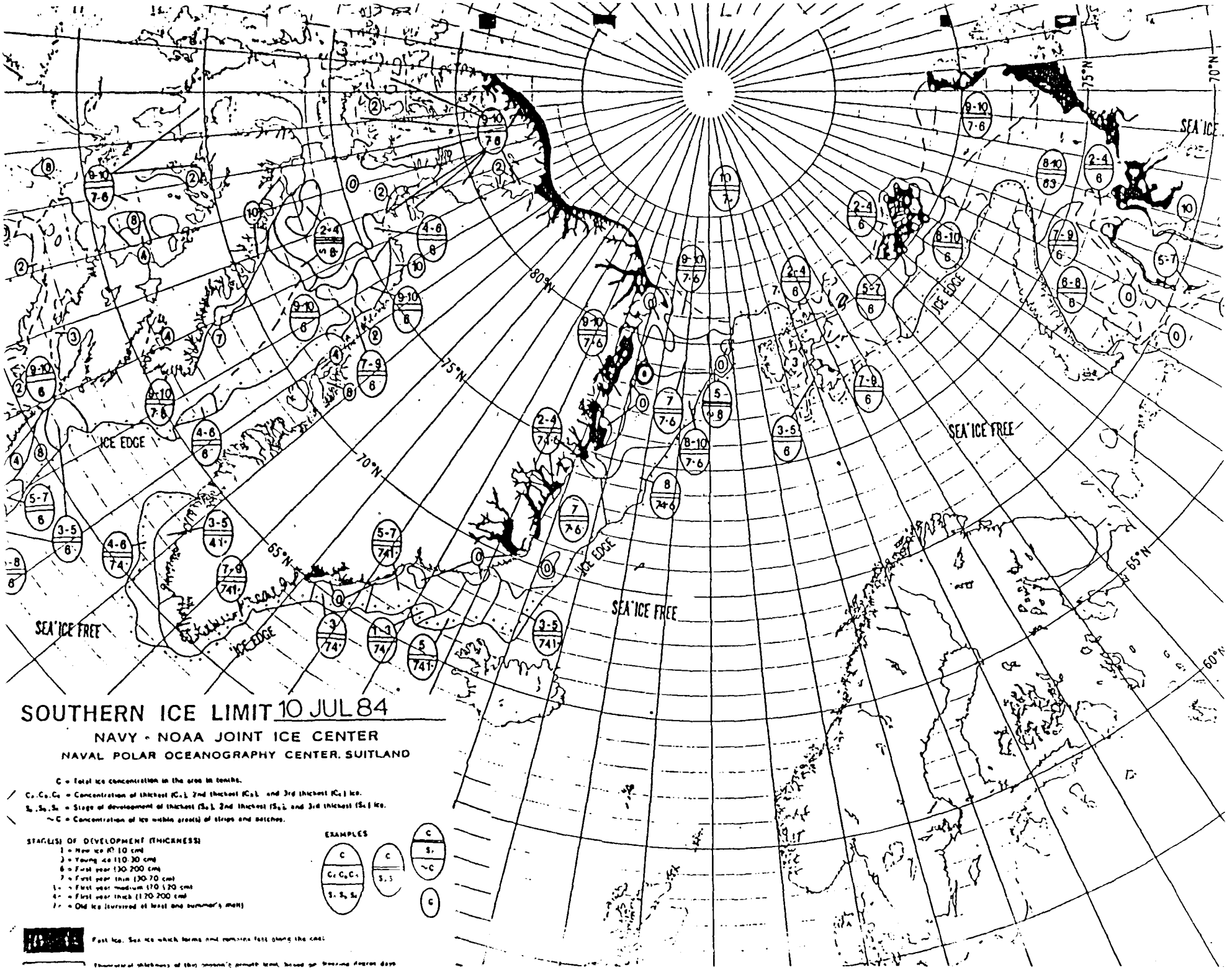
Fast ice. See ice atlas for terms and remains fast along the coast.

125

(presented for first day of each month on first succeeding chart).



BUOY 2889 4-10 JUL 84



SOUTHERN ICE LIMIT 10 JUL 84

NAVY - NOAA JOINT ICE CENTER

NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths.

C_1, C_2, C_3 = Concentration of thickest (C_1), 2nd thickest (C_2), and 3rd thickest (C_3) ice.

S_1, S_2, S_3 = Stage of development of thickest (S_1), 2nd thickest (S_2), and 3rd thickest (S_3) ice.

~C = Concentration of ice within areas of strips and patches.

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0-10 cm)
2 = Young ice (10-30 cm)
3 = First year (30-200 cm)
4 = First year thin (30-70 cm)
5 = First year medium (70-120 cm)
6 = First year thick (120-200 cm)
7 = Old ice (survived at least one summer's melt)

EXAMPLES

Fast ice. Sea ice which forms and remains fast along the coast.

Theoretical climatology of this season's ice limit, based on freezing degree days

MONTH: 11-17 JUL 84 BUOY: 2889

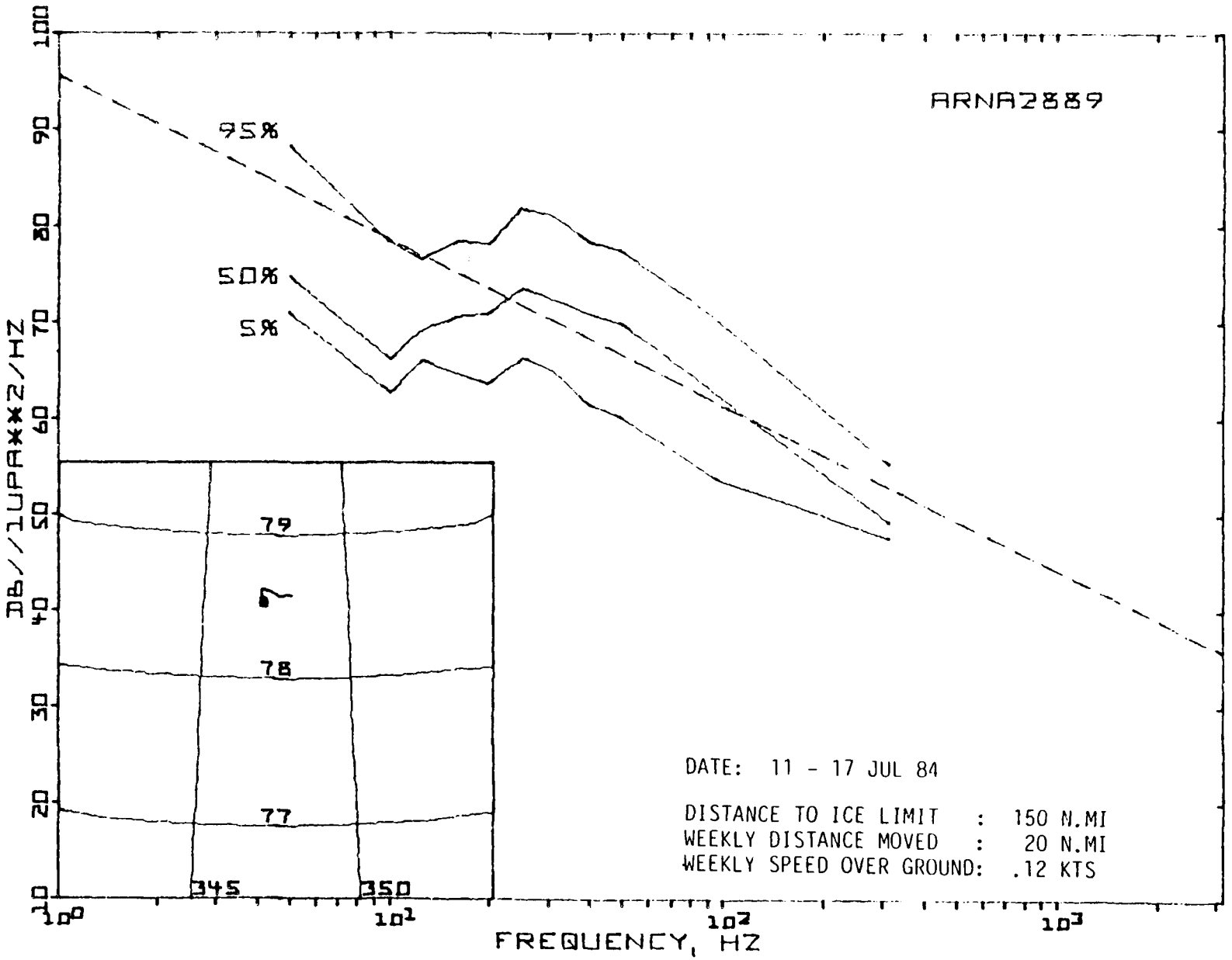
OUTPUT IN FILE ARNA2889

DISPLACEMENT (N. MI.): 20.414 NORTH: 6.000 EAST: 19.512
DIRECTION (TRUE): 72.903

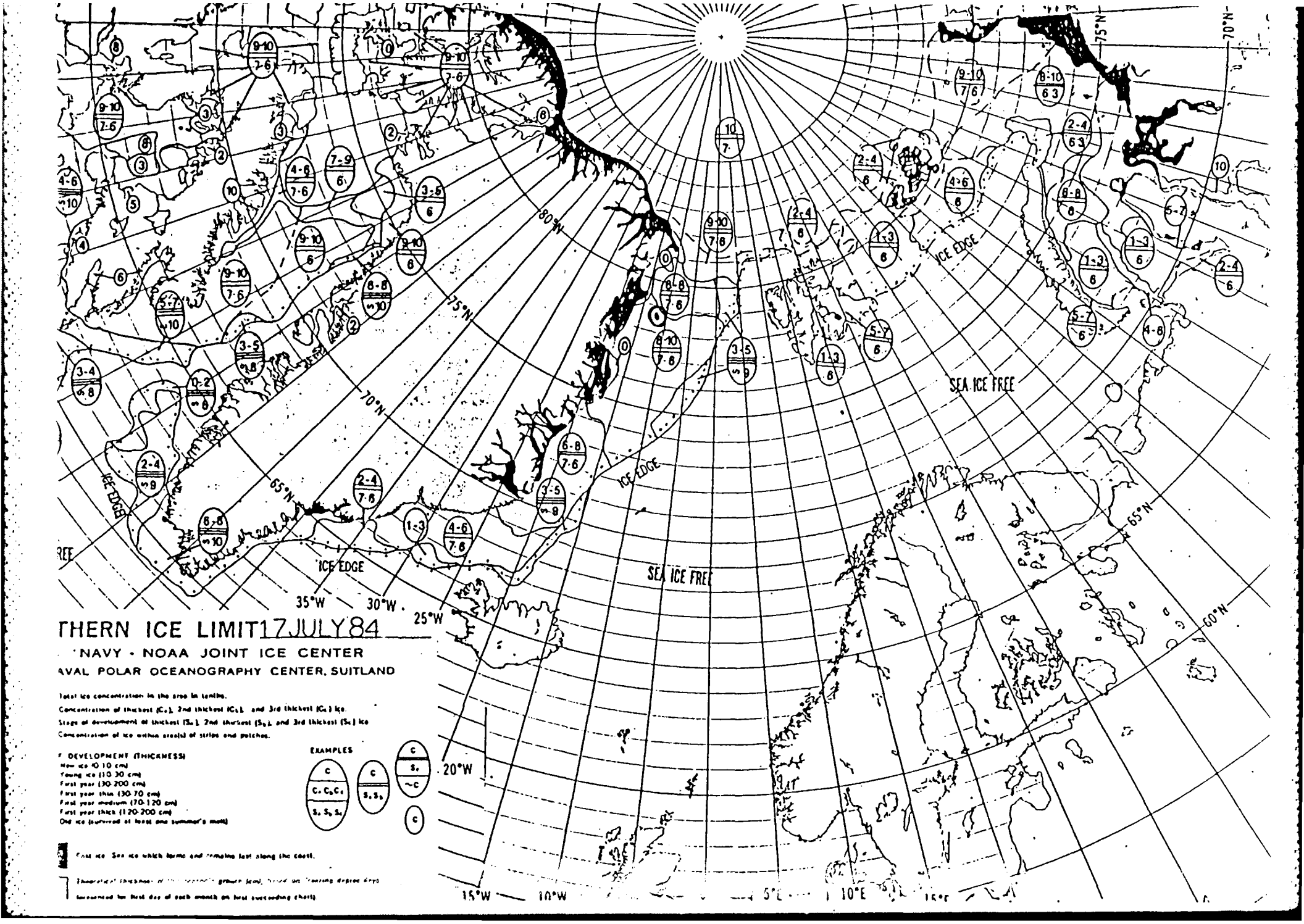
THE NUMBER OF DATA SAMPLES IS 52

FREQUENCY		STD				MEDIAN						
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	76.3	4.4	55.5	70.8	71.4	71.9	74.7	79.0	83.4	88.2	96.0	49
10.0	67.3	5.6	59.8	62.5	62.5	63.2	66.0	69.2	72.9	78.1	90.1	49
12.5	69.9	4.0	65.9	65.9	65.9	66.8	69.1	70.9	74.4	76.4	87.2	50
16.0	71.4	4.4	63.8	64.5	66.3	68.2	70.5	75.1	77.8	78.3	84.4	52
20.0	71.4	4.9	62.2	63.5	64.2	67.9	70.8	74.8	78.0	78.0	83.5	51
25.0	73.8	4.6	65.4	66.1	68.9	69.8	73.4	75.9	80.0	81.9	87.0	52
31.5	72.7	5.0	63.8	64.7	64.7	68.8	72.3	75.9	78.4	80.9	84.4	51
40.0	70.4	5.1	59.3	61.3	63.2	66.7	70.8	74.3	77.5	78.2	80.4	52
50.0	68.9	5.5	58.6	60.1	60.7	63.8	69.8	72.7	75.8	77.4	79.9	52
100.0	61.7	5.4	48.9	53.3	54.0	56.9	61.9	66.7	68.9	69.8	70.7	52
315.0	50.2	2.7	41.4	47.5	47.5	48.2	49.3	51.3	54.2	55.3	55.3	52

STOP



BUOY 2889 11-17 JUL 84



THERN ICE LIMIT 17 JULY 84

NAVY - NOAA JOINT ICE CENTER

AVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

Total ice concentration in the area in tenths.

Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice

Concentration of ice within area(s) of strips and patches.

F DEVELOPMENT (THICKNESS)

New ice (0-10 cm)
Young ice (10-30 cm)
First year (30-200 cm)
First year thin (30-70 cm)
First year medium (70-120 cm)
First year thick (120-200 cm)
Old ice (survived at least one summer's melt)

EXAMPLES

C
$C_a C_b C_c$
$S_a S_b S_c$

C
$S_a S_b$

C
S_a
~C

C

Fast ice. Sea ice which forms and remains fast along the coast.

[illegible] (thickness in centimetres, ground level), based on freezing degree days accumulated for first day of each month on first succeeding chart).

MONTH: 18-24 JUL 84 BUOY: 2889

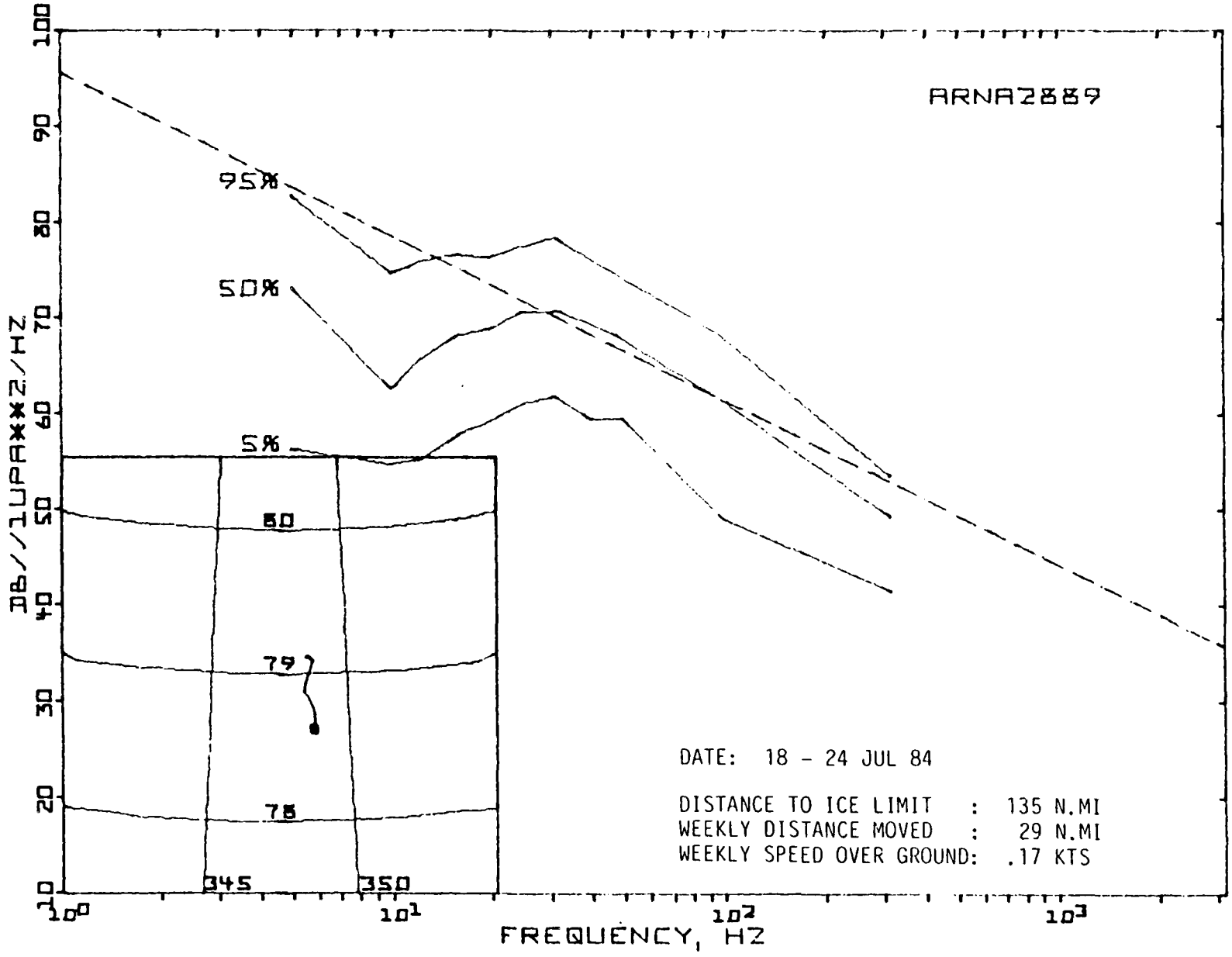
OUTPUT IN FILE ARNA2889

DISPLACEMENT (N. MI.): 29.162 NORTH: 29.040 EAST: -2.667
DIRECTION (TRUE): 354.734

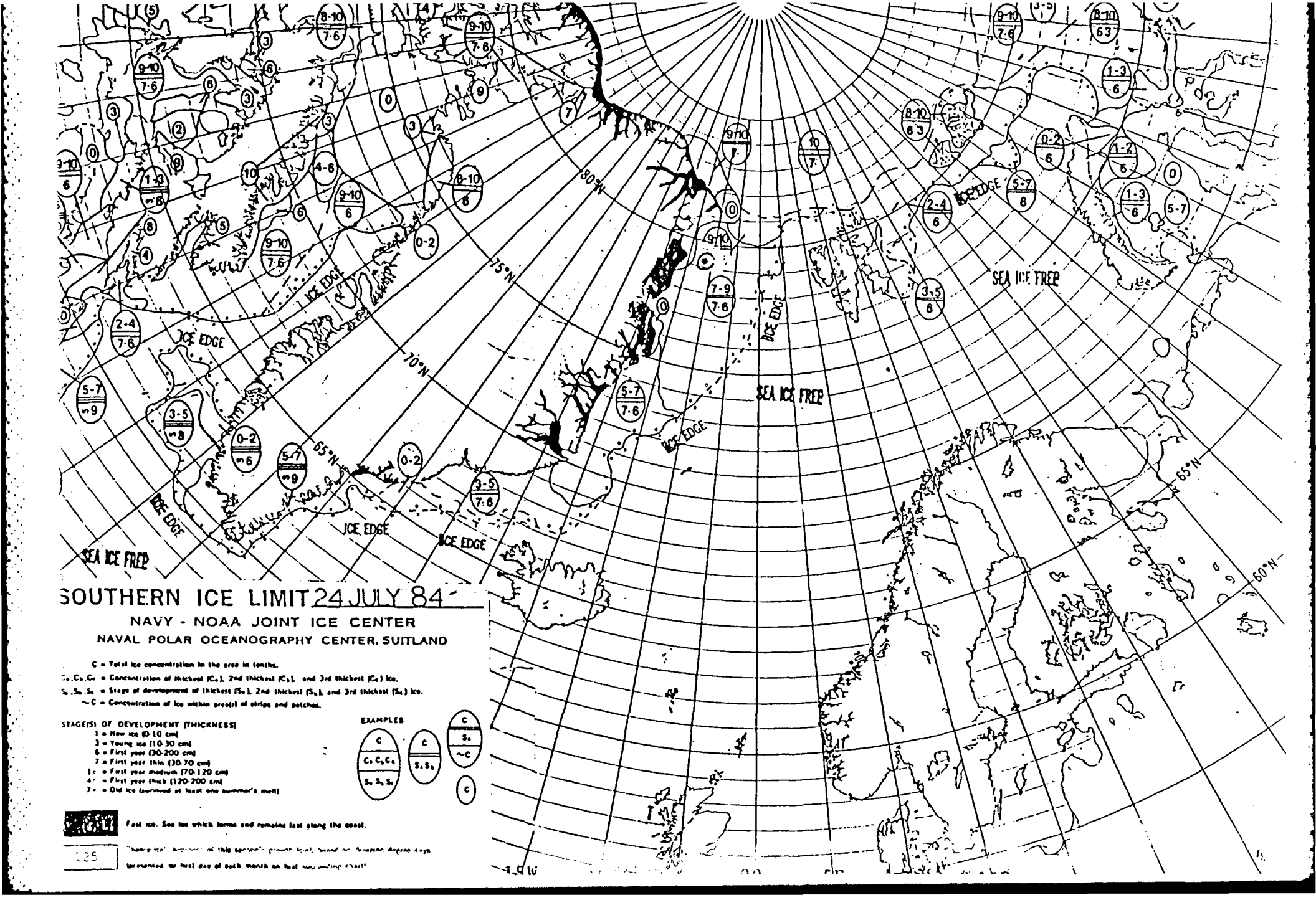
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	70.8	8.9	53.9	56.1	56.8	59.0	73.0	76.1	80.7	82.8	89.4	56
10.0	63.5	6.0	52.0	54.5	55.7	61.7	62.5	65.0	72.9	74.5	81.2	56
12.5	65.9	6.5	54.4	55.1	55.8	58.0	65.9	69.7	72.8	75.8	81.8	56
16.0	67.5	6.2	54.2	57.8	58.3	62.2	68.2	71.7	74.2	76.5	80.3	56
20.0	68.4	5.3	58.0	59.1	61.6	64.1	68.8	72.0	73.9	76.2	80.0	56
25.0	70.3	5.3	58.8	61.0	61.9	66.7	70.7	73.9	75.9	77.5	81.9	56
31.5	70.9	5.3	60.3	61.9	63.6	66.9	70.7	74.8	77.6	78.4	81.9	56
40.0	68.7	5.3	56.8	59.3	60.4	64.8	69.2	72.1	74.3	76.1	78.8	56
50.0	67.3	5.1	56.7	59.4	59.9	63.8	67.9	71.4	73.9	73.9	75.8	56
100.0	60.2	5.9	47.9	48.9	50.7	55.3	61.3	63.8	67.3	67.9	68.9	56
315.0	48.2	4.2	41.4	41.4	41.4	43.3	49.3	51.3	52.8	53.5	56.4	56

STOP



BUOY 2889 18-24 JUL 84



SOUTHERN ICE LIMIT 24 JULY 84

NAVY - NOAA JOINT ICE CENTER

NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths.

C_a, C_b, C_c = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

S_a, S_b, S_c = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

~C = Concentration of ice within area(s) of strips and patches.

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
6 = First year (30-200 cm)
7 = First year thin (30-70 cm)
8 = First year medium (70-120 cm)
9 = First year thick (120-200 cm)
7.- = Old ice (survived at least one summer's melt)

EXAMPLES

Fast ice. See ice which forms and remains fast along the coast.

125

Forecast location of this season's growth limit, based on forecast degree days forecasted for first day of each month on last map sailing chart.

MONTH: 25-31 JUL 84 BUOY: 2889

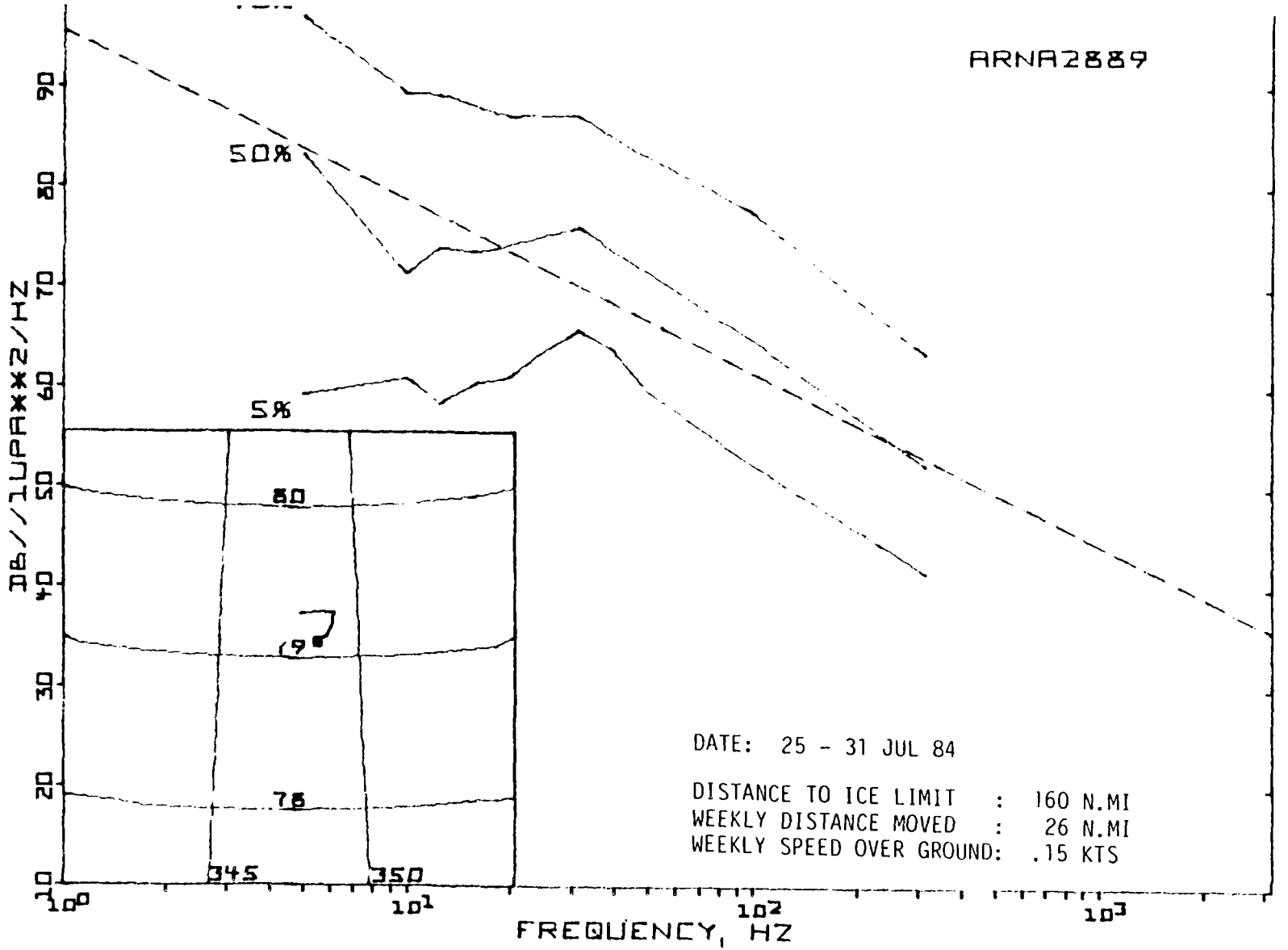
OUTPUT IN FILE ARNA2889

DISPLACEMENT (N. MI.): 25.761 NORTH: 24.480 EAST: -8.020
DIRECTION (TRUE): 341.839

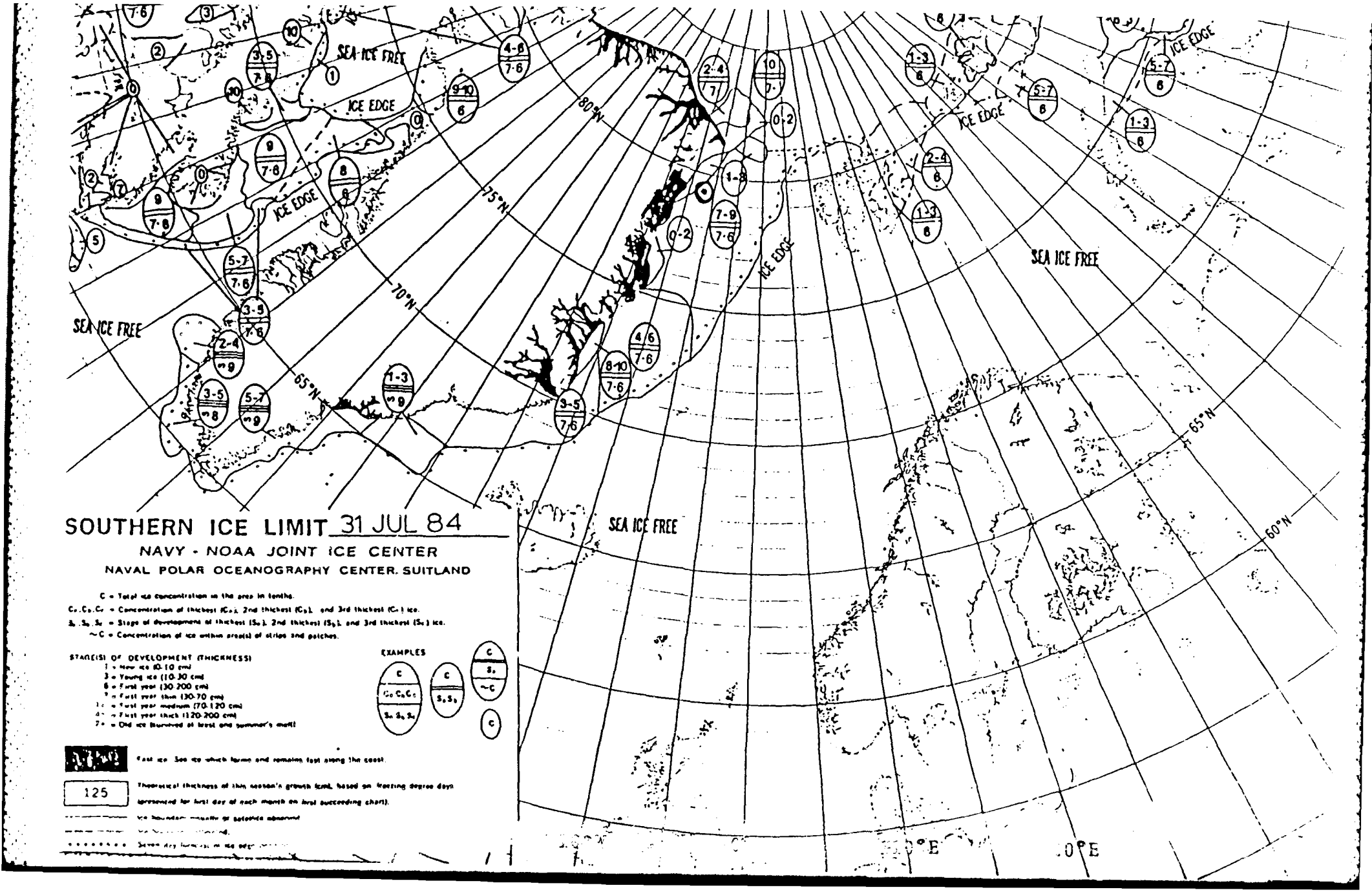
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	83.3	10.9	57.4	59.0	73.0	74.7	83.1	90.0	96.0	97.0	107.5	56
10.0	73.8	10.1	52.0	60.6	63.2	66.0	71.0	79.8	88.5	89.1	97.9	56
12.5	73.7	8.5	55.1	58.0	65.9	68.4	73.7	78.0	86.5	89.0	94.4	56
16.0	73.7	8.0	57.2	60.3	63.0	67.3	73.3	78.3	83.2	87.9	92.3	56
20.0	73.8	8.2	55.5	60.8	63.5	67.0	73.9	80.0	84.1	86.8	89.5	56
25.0	75.9	7.4	58.8	63.5	65.4	69.8	75.0	81.0	84.8	87.0	90.2	56
31.5	76.5	6.6	60.9	65.6	67.6	71.6	75.9	81.9	84.4	86.9	90.4	56
40.0	74.0	7.0	60.1	63.5	64.8	68.3	73.3	78.8	83.5	84.8	88.1	56
50.0	71.5	6.9	56.7	59.4	61.0	67.3	71.4	75.8	79.9	82.7	84.8	56
100.0	65.1	7.2	51.4	52.1	55.3	59.4	64.6	69.8	73.9	77.4	79.9	56
315.0	52.3	5.3	41.4	41.4	47.5	49.3	52.1	54.8	58.1	63.3	64.1	56

STOP



BUOY 2889 25-31 JUL 84



SOUTHERN ICE LIMIT 31 JUL 84

NAVY - NOAA JOINT ICE CENTER

NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths.

C_a, C_b, C_c = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

S_a, S_b, S_c = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

~C = Concentration of ice within area(s) of strips and patches.

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
4 = First year (30-200 cm)
7 = First year thin (30-70 cm)
5 = First year medium (70-120 cm)
6 = First year thick (120-200 cm)
8 = Old ice (survived at least one summer's melt)

EXAMPLES

Fast ice. See ice which forms and remains fast along the coast.

125 — Theoretical thickness of this season's growth (cm), based on freezing degree days (previous for first day of each month on first succeeding chart).

Ice boundary - majority of satellite observations

Ice boundary - minority of satellite observations

Shows dry limit of ice edge

MONTH: 1-7 AUG 84 BUOY: 2889

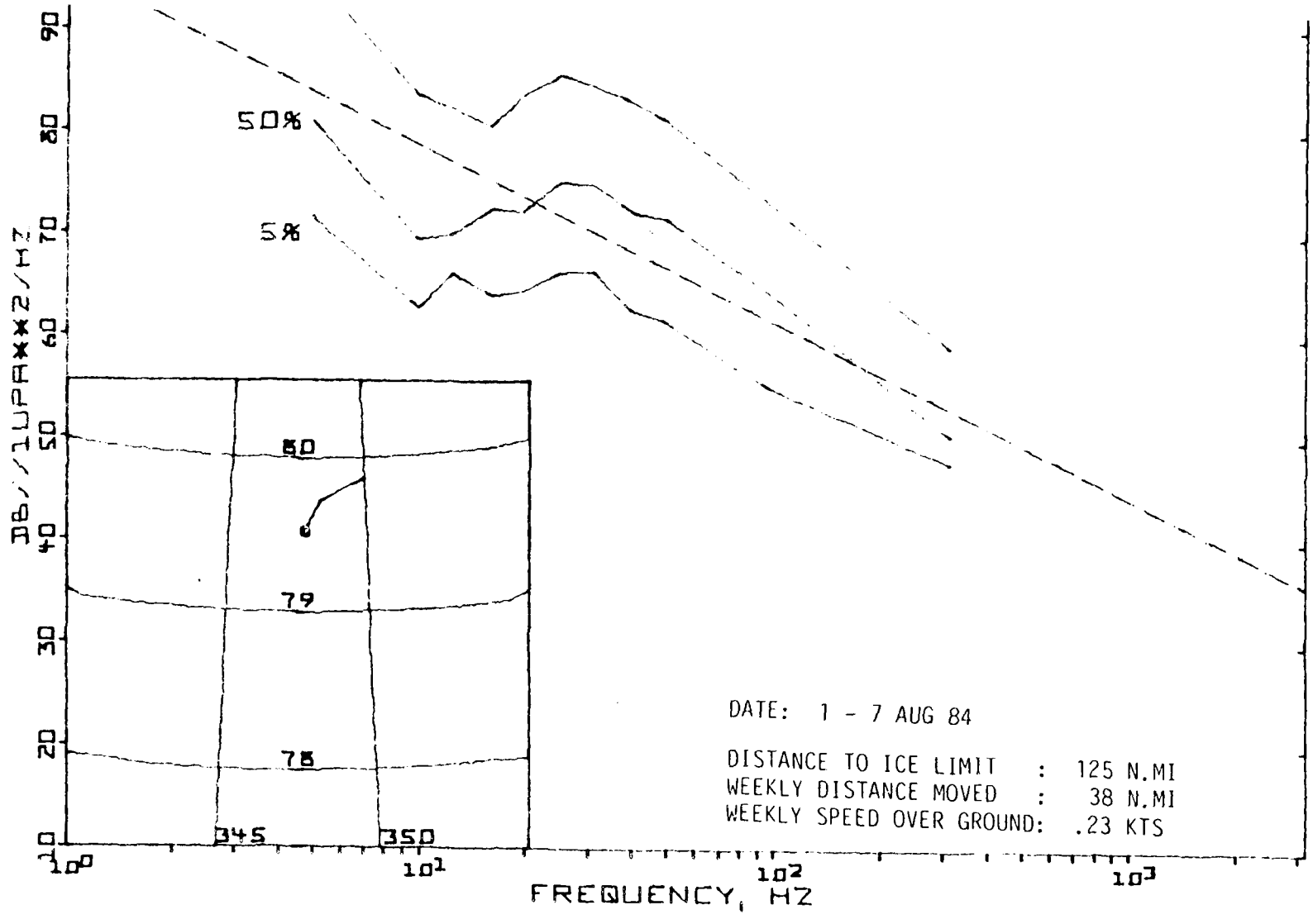
OUTPUT IN FILE ARNA2889

DISPLACEMENT (N. MI.): 37.638 NORTH: 18.360 EAST: 32.857
DIRECTION (TRUE): 60.798

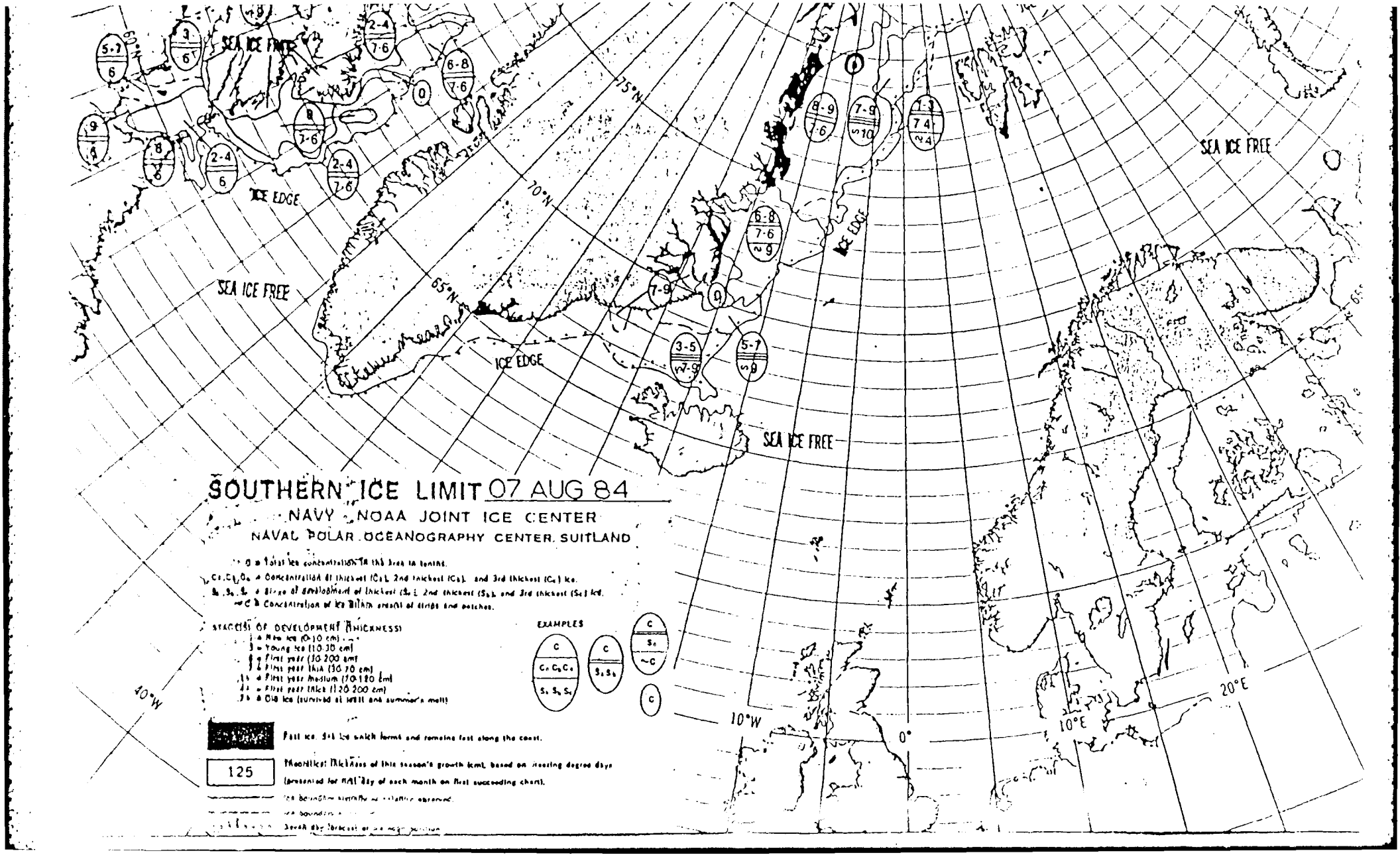
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	81.0	7.7	68.7	71.4	71.9	74.7	80.7	86.7	90.0	94.9	98.0	56
10.0	70.2	6.7	60.9	62.5	63.2	65.0	69.2	72.9	79.0	83.1	87.9	56
12.5	71.2	5.1	61.1	65.9	66.8	67.7	69.7	74.4	76.4	81.8	87.8	56
16.0	72.2	5.2	62.2	63.8	66.3	69.1	72.3	74.2	78.3	80.3	85.4	55
20.0	72.7	5.8	61.9	64.2	66.0	68.8	72.0	75.5	80.0	83.5	86.8	55
25.0	74.6	5.8	64.2	66.1	67.9	69.8	75.0	77.5	81.0	85.4	90.2	56
31.5	75.0	5.5	64.4	66.3	67.6	71.6	74.8	78.4	80.9	84.4	88.8	56
40.0	72.3	6.0	59.3	62.3	64.8	68.3	72.1	76.1	79.3	82.9	86.4	56
50.0	71.0	5.7	58.1	61.3	62.9	67.9	71.4	73.9	77.4	81.0	82.7	55
100.0	63.7	5.8	49.8	54.7	55.3	59.4	63.8	66.7	70.7	72.7	75.8	56
315.0	51.2	3.8	42.4	47.5	48.2	48.2	50.3	52.1	55.3	58.9	64.1	56

STOP

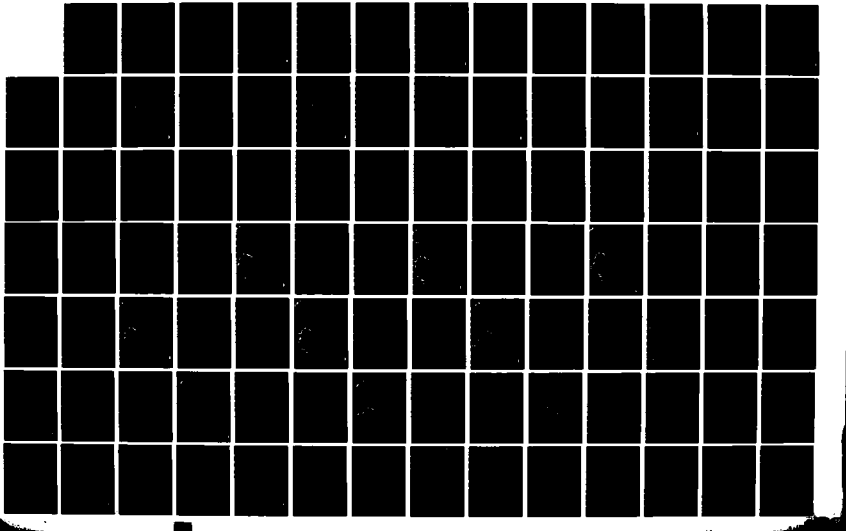


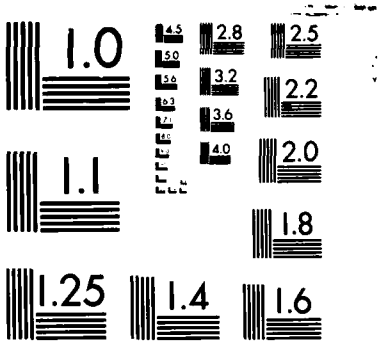
BUOY 2889 1-7 AUG 84


SEA ICE FREE
ICE EDGE
75°N
70°N
65°N
40°W
10°W
0°
10°E
20°E
SOUTHERN ICE LIMIT 07 AUG 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
EXAMPLES
STAGES OF DEVELOPMENT (THICKNESS)
Fast ice
Monthly thickness of this season's growth (cm), based on freezing degree days
125

AD-A156 818 LONG TERM STATISTICAL MEASUREMENTS OF ENVIRONMENTAL ACOUSTICS PARAMETERS I..(U) POLAR RESEARCH LAB INC CARPINTERIA CA B M BUCK ET AL. 13 DEC 84 PRL-TR-53 6/7

UNCLASSIFIED N00014-84-C-0394 F/G 20/1 NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

MONTH: 8-14 AUG 84 BUOY: 2889

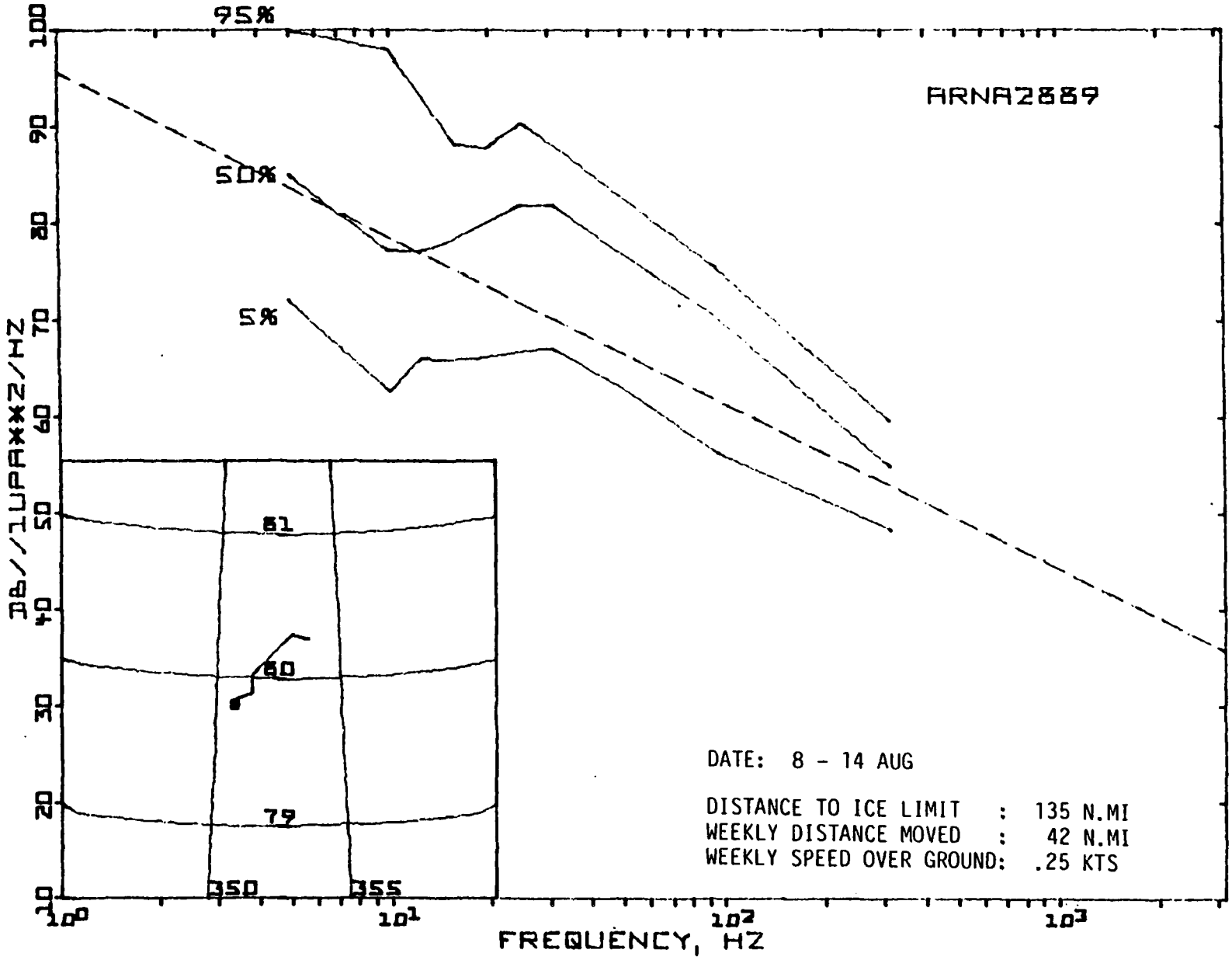
OUTPUT IN FILE ARNA2889

DISPLACEMENT (N. MI.): 41.730 NORTH: 24.600 EAST: 33.707
DIRECTION (TRUE): 53.871

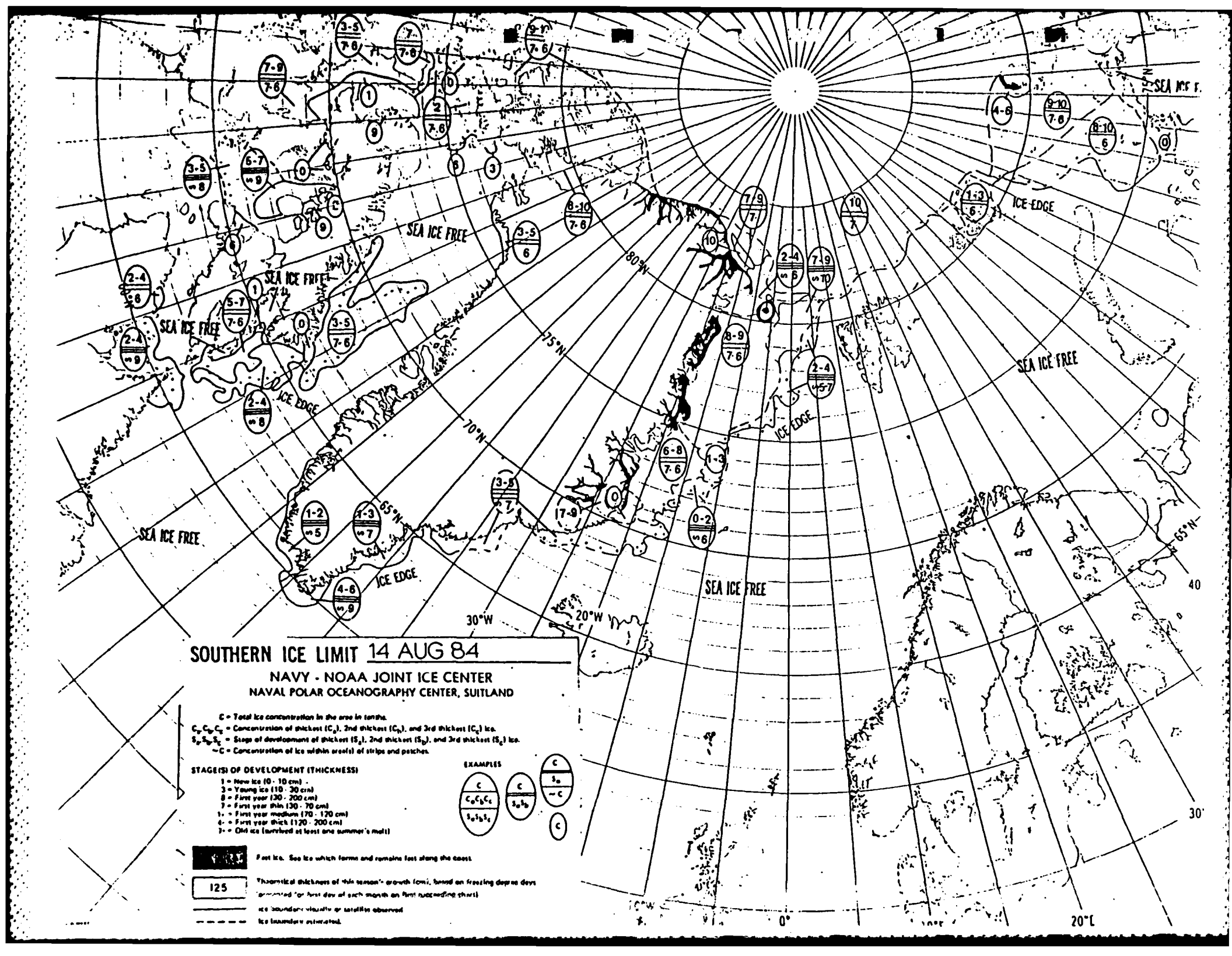
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	87.0	11.2	56.1	71.9	73.0	79.9	85.0	95.5	103.1	106.2	109.1	56
10.0	78.0	10.9	56.5	62.5	65.0	69.8	77.0	85.0	91.8	97.9	103.9	56
12.5	78.2	8.6	63.0	65.9	66.8	71.9	76.9	83.0	88.4	93.2	101.0	56
16.0	79.0	7.7	63.0	65.7	67.1	75.1	78.3	83.8	85.4	87.9	99.2	56
20.0	79.7	6.5	64.1	66.0	70.8	77.5	80.0	84.1	85.1	87.6	95.5	56
25.0	80.7	6.7	66.0	66.7	68.9	77.5	81.9	85.4	87.9	90.2	92.0	56
31.5	80.4	6.3	65.7	67.0	69.8	77.6	81.9	85.1	86.9	87.9	89.6	56
40.0	77.9	5.9	64.0	64.8	66.7	74.3	79.3	82.1	84.2	85.4	86.4	56
50.0	75.9	6.3	61.0	62.9	63.8	73.9	76.7	79.9	82.7	82.7	85.4	56
100.0	68.2	6.3	52.1	55.8	55.8	66.1	69.8	72.7	73.9	74.9	78.1	56
315.0	54.4	4.2	41.4	48.2	48.2	51.3	54.8	58.1	58.9	59.6	60.8	56

STOP



BUOY 2889 8-14 AUG 84


SEA ICE FREE
ICE EDGE
80°N
75°N
70°N
65°N
30°W
20°W
0°
20°E
40
30
SOUTHERN ICE LIMIT 14 AUG 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths.
$C_a C_b C_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_a S_b S_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
~C = Concentration of ice within area(s) of strips and patches.
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1. = First year medium (70 - 120 cm)
4. = First year thick (120 - 200 cm)
7. = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. See ice which forms and remains fast along the coast.
Theoretical thickness of thin season's growth (cm), based on freezing degree days accumulated for first day of each month on first succeeding chart)
ice boundary visually or satellite observed
Ice boundary estimated.

MONTH: 15-21 AUG 84 BUOY: 2889

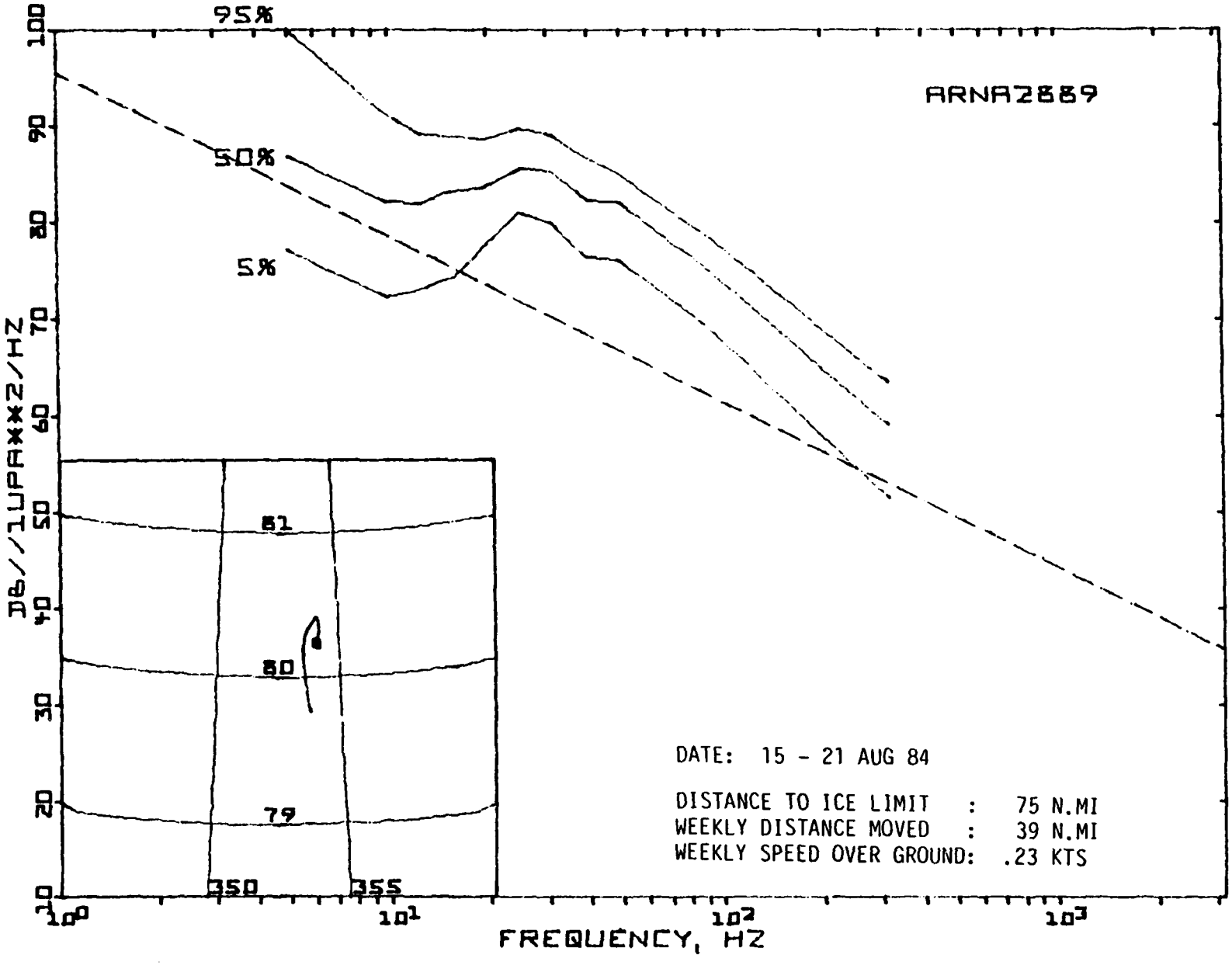
OUTPUT IN FILE ARNA2889

DISPLACEMENT (N. MI.): 38.783 NORTH: -38.700 EAST: -2.524
DIRECTION (TRUE): 183.752

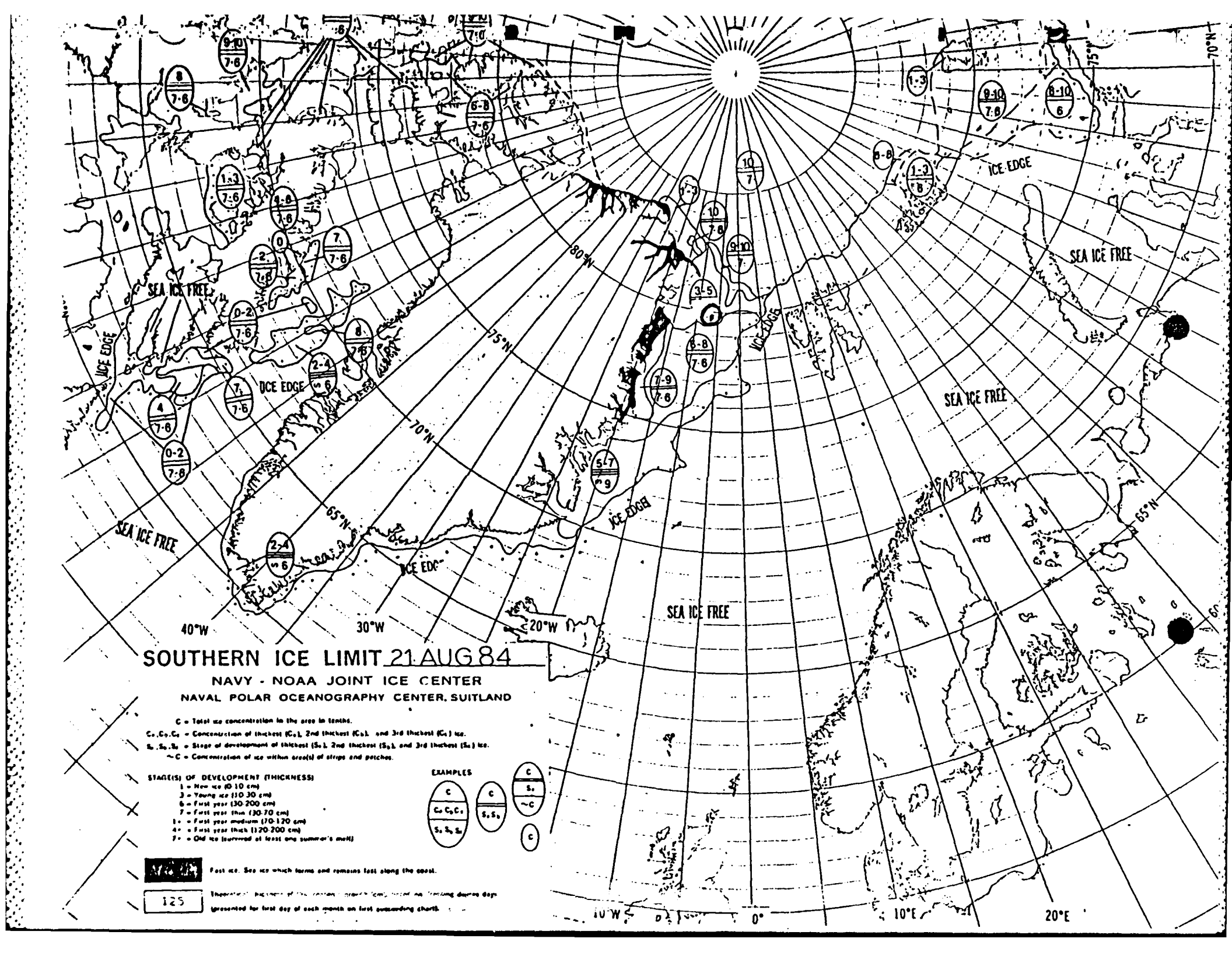
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	87.4	7.3	76.1	76.8	78.0	81.5	86.7	91.0	95.5	102.0	104.8	56
10.0	81.4	5.8	68.5	72.0	75.2	77.0	81.9	84.1	87.9	91.0	97.0	56
12.5	81.9	4.8	68.4	72.8	76.9	78.9	81.8	84.9	87.2	89.0	95.0	56
16.0	83.0	4.6	68.2	74.2	78.3	81.1	83.2	85.4	87.1	88.6	96.4	55
20.0	83.3	3.0	75.5	77.5	79.1	82.2	83.5	85.1	86.0	88.3	92.8	56
25.0	85.4	2.4	78.8	81.0	82.7	83.5	85.4	87.0	87.9	89.5	93.0	56
31.5	84.8	3.0	75.9	79.7	79.7	83.6	85.1	86.9	87.9	88.8	88.8	56
40.0	82.3	3.2	73.3	76.1	78.2	80.4	82.1	84.8	85.4	86.4	88.1	56
50.0	81.1	2.8	73.9	75.8	76.7	79.4	81.9	82.7	84.1	84.8	86.0	56
100.0	73.6	3.0	66.7	67.9	67.9	71.4	73.9	75.8	76.7	77.4	78.1	56
315.0	58.6	3.3	50.3	51.3	54.2	56.4	58.9	61.4	62.4	63.3	64.1	55

STOP



BUOY 2889 15-21 AUG 84


SEA ICE FREE
ICE EDGE
80°N
75°N
70°N
65°N
40°W
30°W
20°W
10°W
0°
10°E
20°E
SOUTHERN ICE LIMIT 21 AUG 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths.
C_a, C_b, C_c = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
S_a, S_b, S_c = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
~C = Concentration of ice within area(s) of strips and patches.
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
6 = First year (30-200 cm)
7 = First year thin (30-70 cm)
8 = First year medium (70-120 cm)
9 = First year thick (120-200 cm)
7+ = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast.
125
Thickness in centimeters of fast ice, measured on the indicated days, presented for first day of each month on first outstanding charts.

MONTH: 22-28 AUG 84 BUOY: 2889

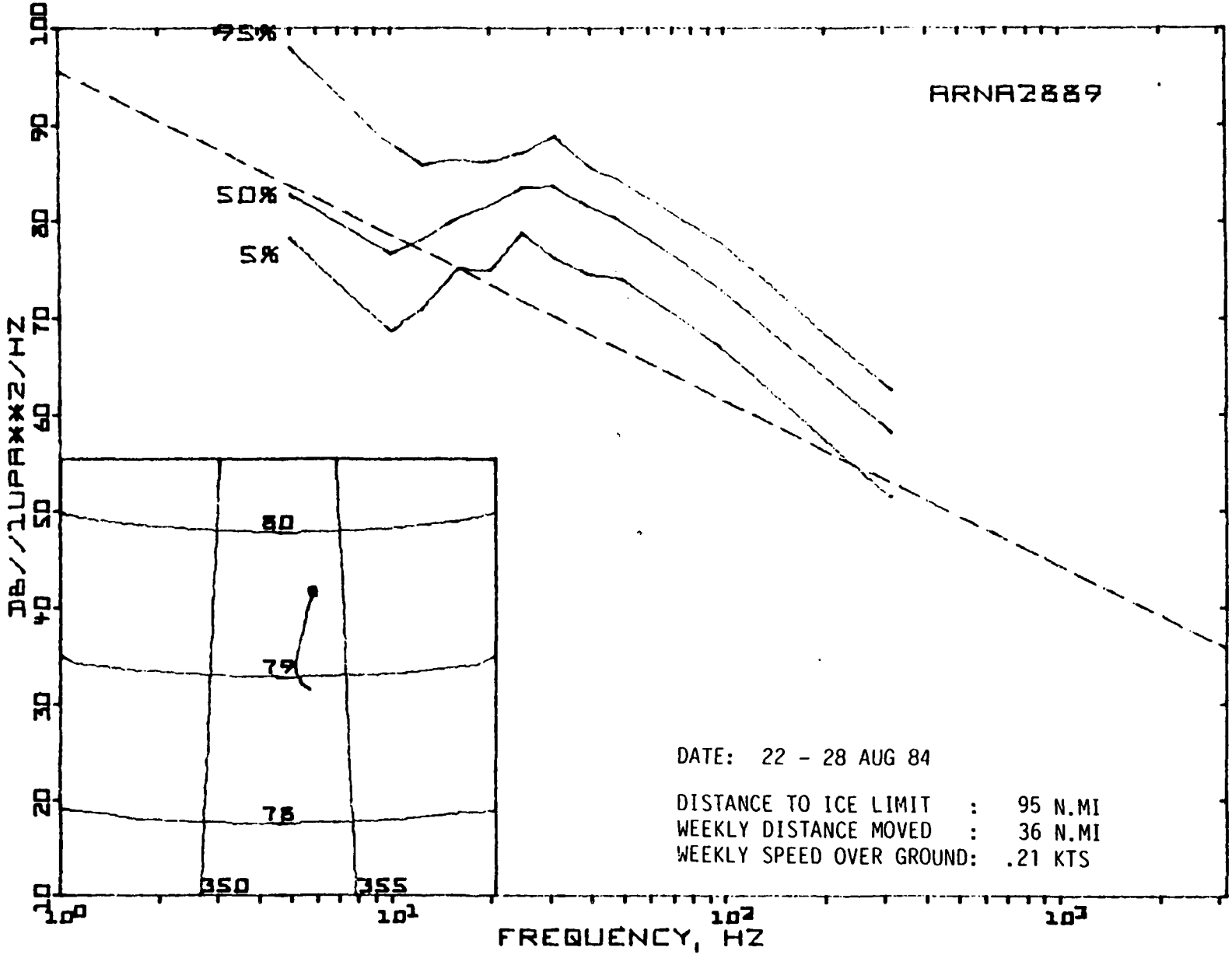
OUTPUT IN FILE ARNA2889

DISPLACEMENT (N. MI.): 36.023 NORTH: -35.760 EAST: 4.353
DIRECTION (TRUE): 173.076

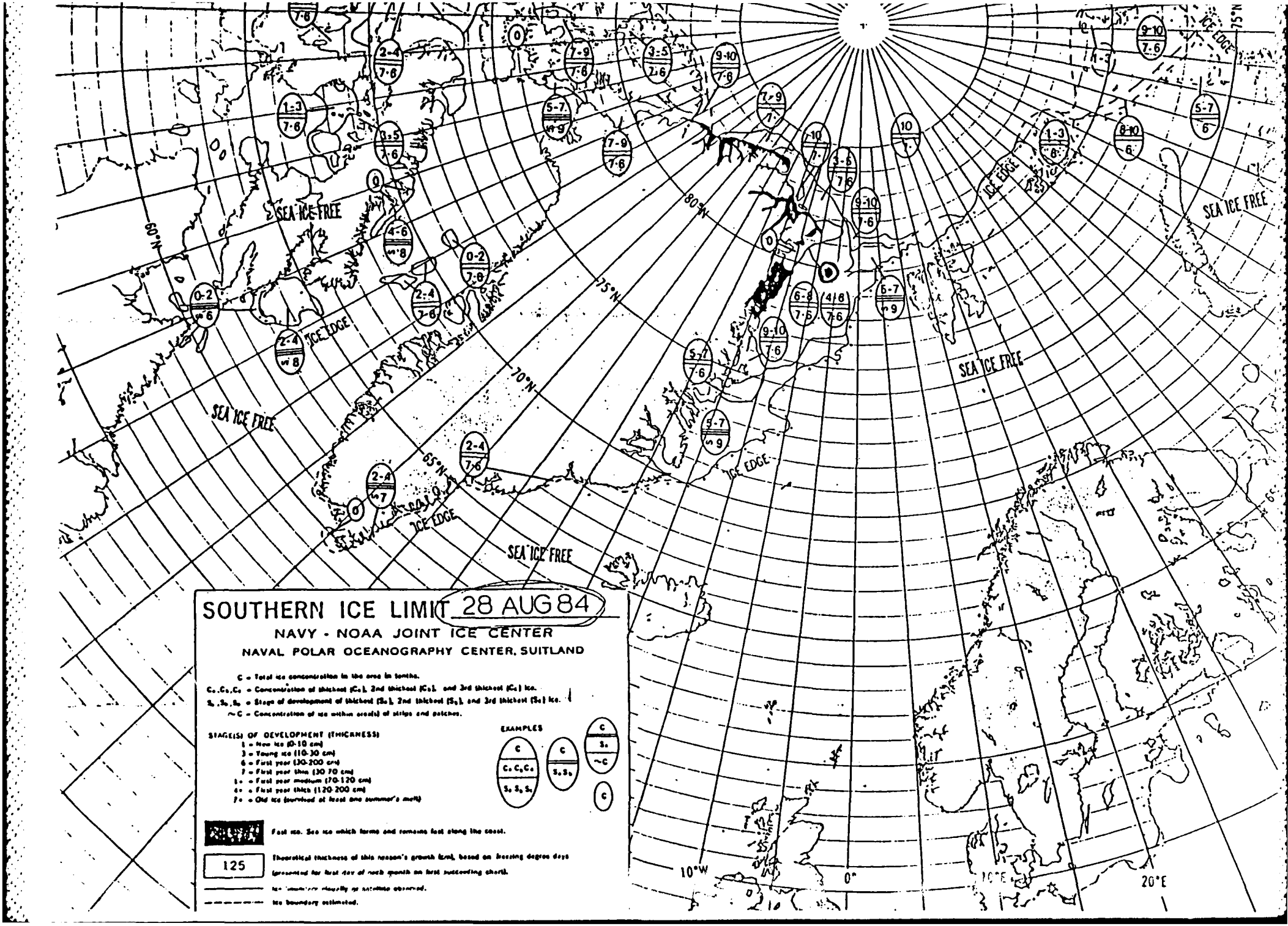
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	84.8	6.9	71.9	78.0	78.0	79.0	82.8	88.2	96.0	98.0	100.9	56
10.0	77.5	6.3	66.9	68.5	70.4	73.8	76.5	79.8	84.1	87.9	96.1	56
12.5	78.2	4.5	68.4	70.9	72.8	75.8	78.0	79.7	84.0	85.7	92.5	55
16.0	80.5	3.8	70.5	75.1	75.1	78.3	80.3	82.5	84.4	86.3	90.4	56
20.0	81.3	3.4	73.0	74.8	76.9	79.1	81.6	83.5	85.1	86.0	90.1	56
25.0	83.3	3.0	75.9	78.8	79.4	81.0	83.5	86.0	87.0	87.0	88.7	56
31.5	83.2	3.8	74.3	75.9	77.6	80.9	83.6	85.7	86.9	88.8	91.7	56
40.0	80.9	3.4	73.3	74.3	76.1	78.2	81.3	83.5	84.8	85.4	85.4	56
50.0	80.2	3.4	72.1	73.9	74.9	78.8	79.9	82.7	83.5	84.1	88.7	56
100.0	72.3	3.7	66.1	66.7	67.3	68.9	72.7	74.9	76.7	77.4	78.8	56
315.0	57.2	4.0	50.3	51.3	51.3	53.5	58.1	60.8	61.4	62.4	64.1	56

STOP



BUOY 2889 22-28 AUG 84


SEA ICE FREE
ICE EDGE
80°N
75°N
70°N
65°N
60°N
10°W
0°
10°E
20°E
SOUTHERN ICE LIMIT 28 AUG 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths.
C_a, C_b, C_c = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
S_a, S_b, S_c = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
~C = Concentration of ice within area(s) of strips and patches.
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
4 = First year (30-200 cm)
7 = First year thin (30-70 cm)
1. = First year medium (70-120 cm)
4. = First year thick (120-200 cm)
7. = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast.
125
Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
Ice boundary estimated.

MONTH: 29AUG-4 SEP 84 BUOY: 2889

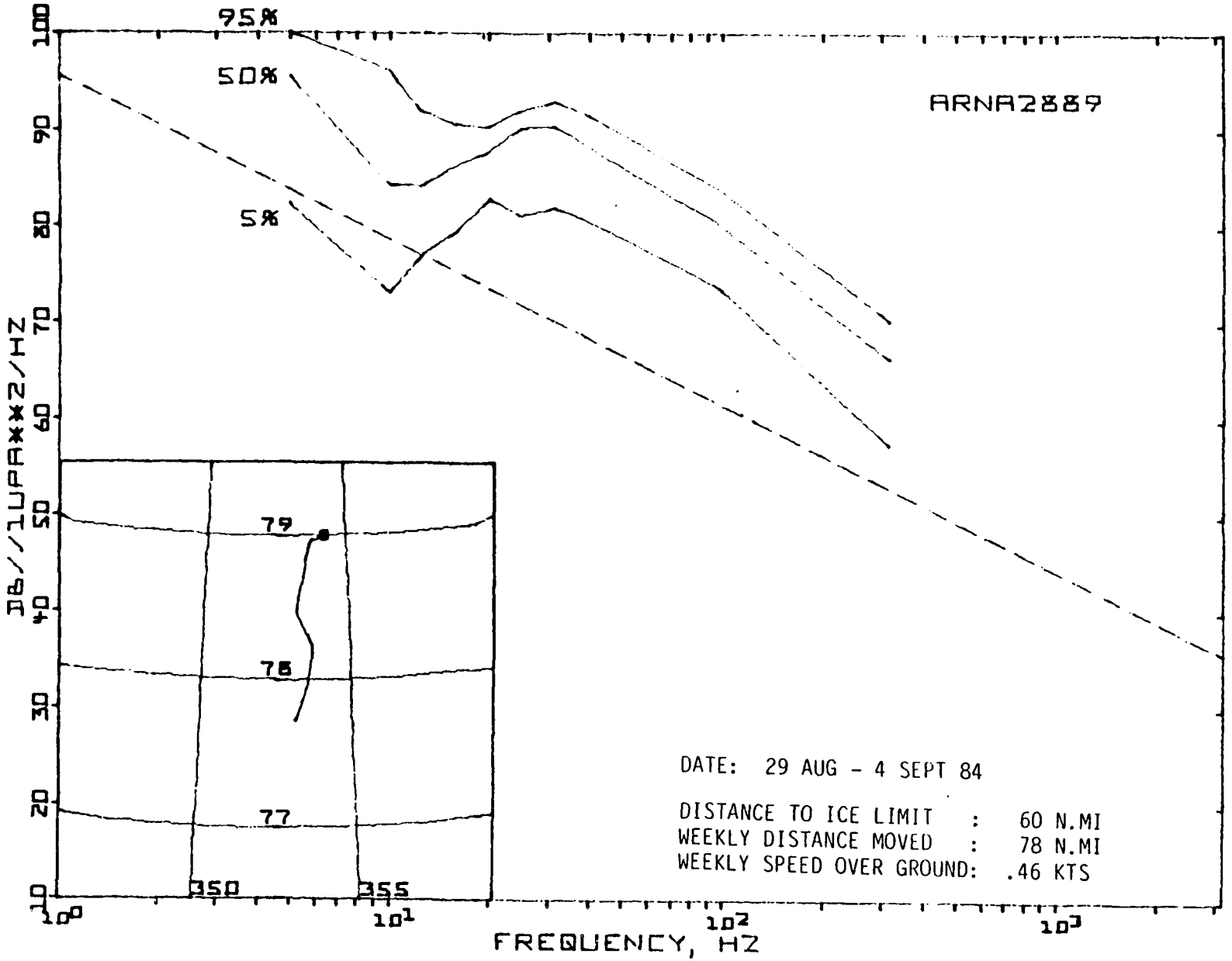
OUTPUT IN FILE ARNA2889

DISPLACEMENT (N. MI.): 77.929 NORTH: -76.800 EAST: -13.217
DIRECTION (TRUE): 189.783

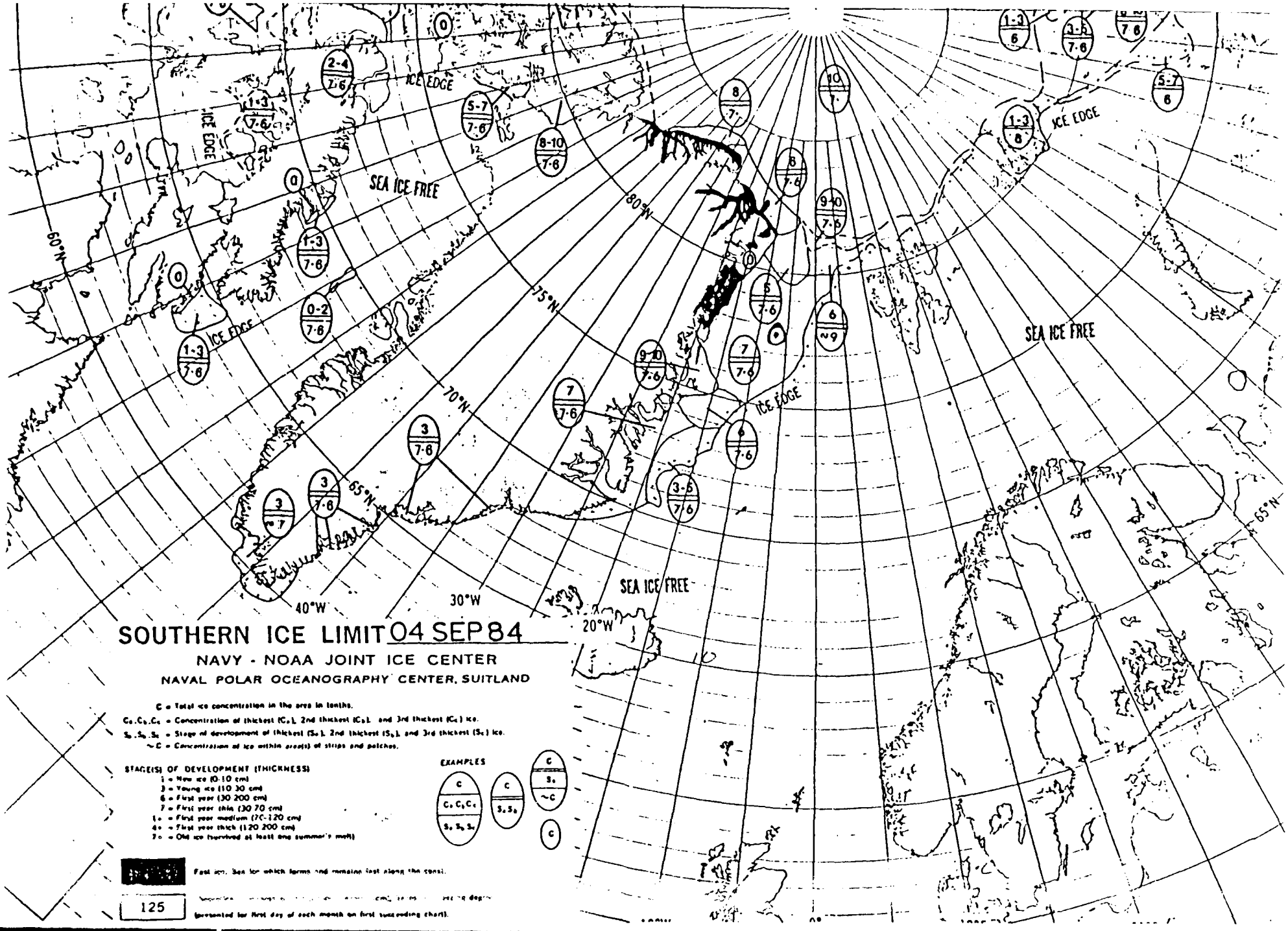
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	95.7	7.5	79.0	82.2	84.0	90.0	95.5	103.1	104.8	105.6	106.2	56
10.0	85.2	7.1	72.0	72.9	75.9	79.0	84.1	91.8	94.5	96.1	96.1	56
12.5	84.4	4.9	73.7	76.9	78.0	81.1	84.0	88.4	91.7	91.7	93.2	56
16.0	85.8	3.6	75.8	79.4	81.1	83.2	86.3	87.9	90.4	90.4	92.3	56
20.0	87.3	2.8	78.0	82.9	84.1	85.1	87.6	89.5	90.1	90.1	92.0	56
25.0	89.1	3.1	81.0	81.0	84.8	87.0	90.2	92.0	92.0	92.0	93.0	56
31.5	89.3	3.4	75.9	81.9	83.6	87.9	90.4	91.7	92.3	92.9	92.9	56
40.0	87.6	3.2	78.2	80.4	82.9	86.4	88.1	89.6	90.8	91.4	94.9	56
50.0	86.2	3.9	76.7	78.8	81.9	84.8	86.0	87.9	88.7	89.5	105.0	56
100.0	79.4	2.9	69.8	73.3	74.9	78.1	79.9	81.0	81.9	83.5	84.1	56
315.0	65.3	4.0	51.3	57.3	59.6	62.4	66.2	67.4	68.4	70.2	70.2	56

STOP



BUOY 2889 29AUG-4 SEP 84



SOUTHERN ICE LIMIT 04 SEP 84

NAVY - NOAA JOINT ICE CENTER

NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths.

C_a, C_b, C_c = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

S_a, S_b, S_c = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

~C = Concentration of ice within area(s) of strips and patches.

STAGE(S) OF DEVELOPMENT (THICKNESS)

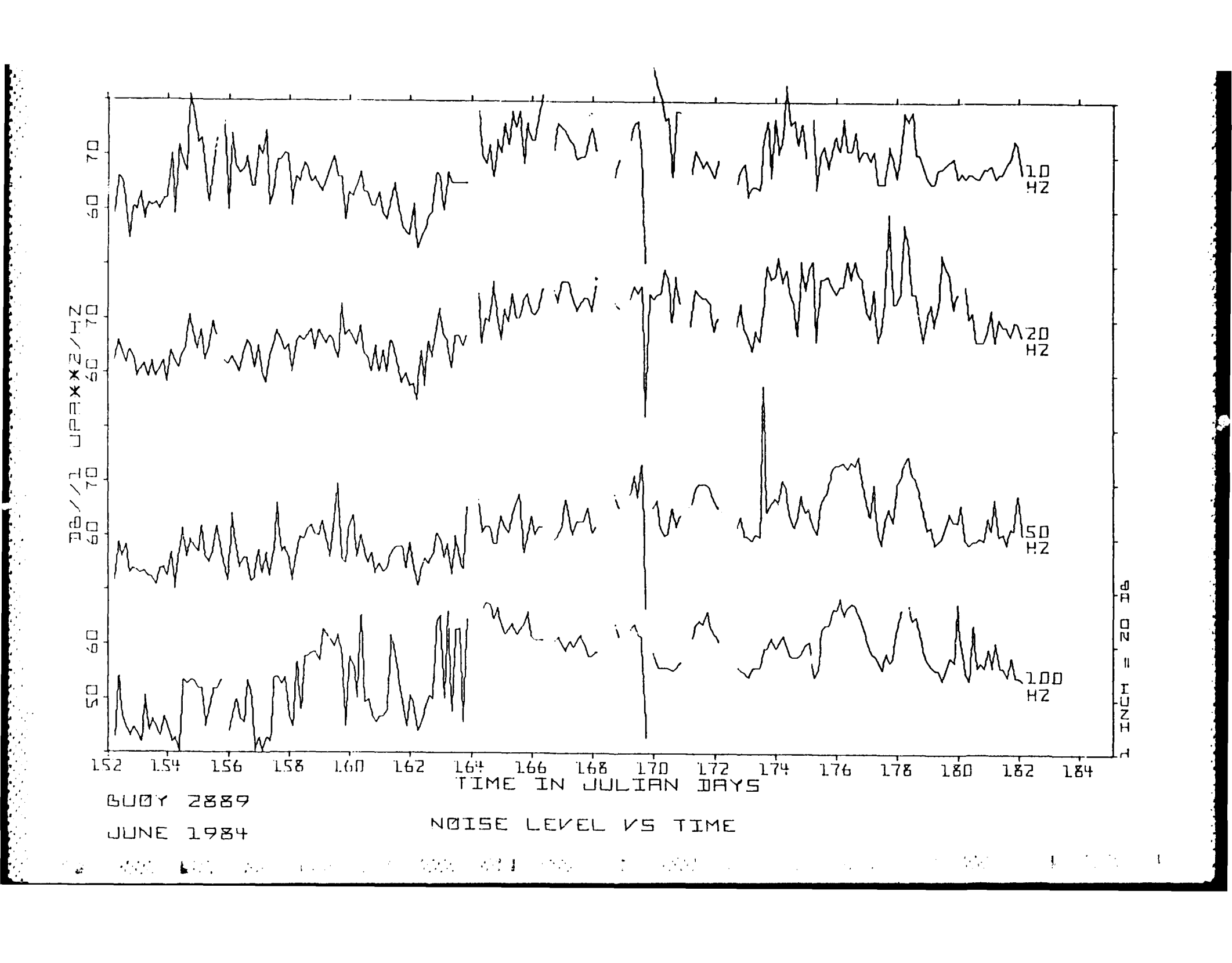
1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
6 = First year (30-200 cm)
7 = First year thin (30-70 cm)
1. = First year medium (70-120 cm)
4. = First year thick (120-200 cm)
7. = Old ice (survived at least one summer's melt)

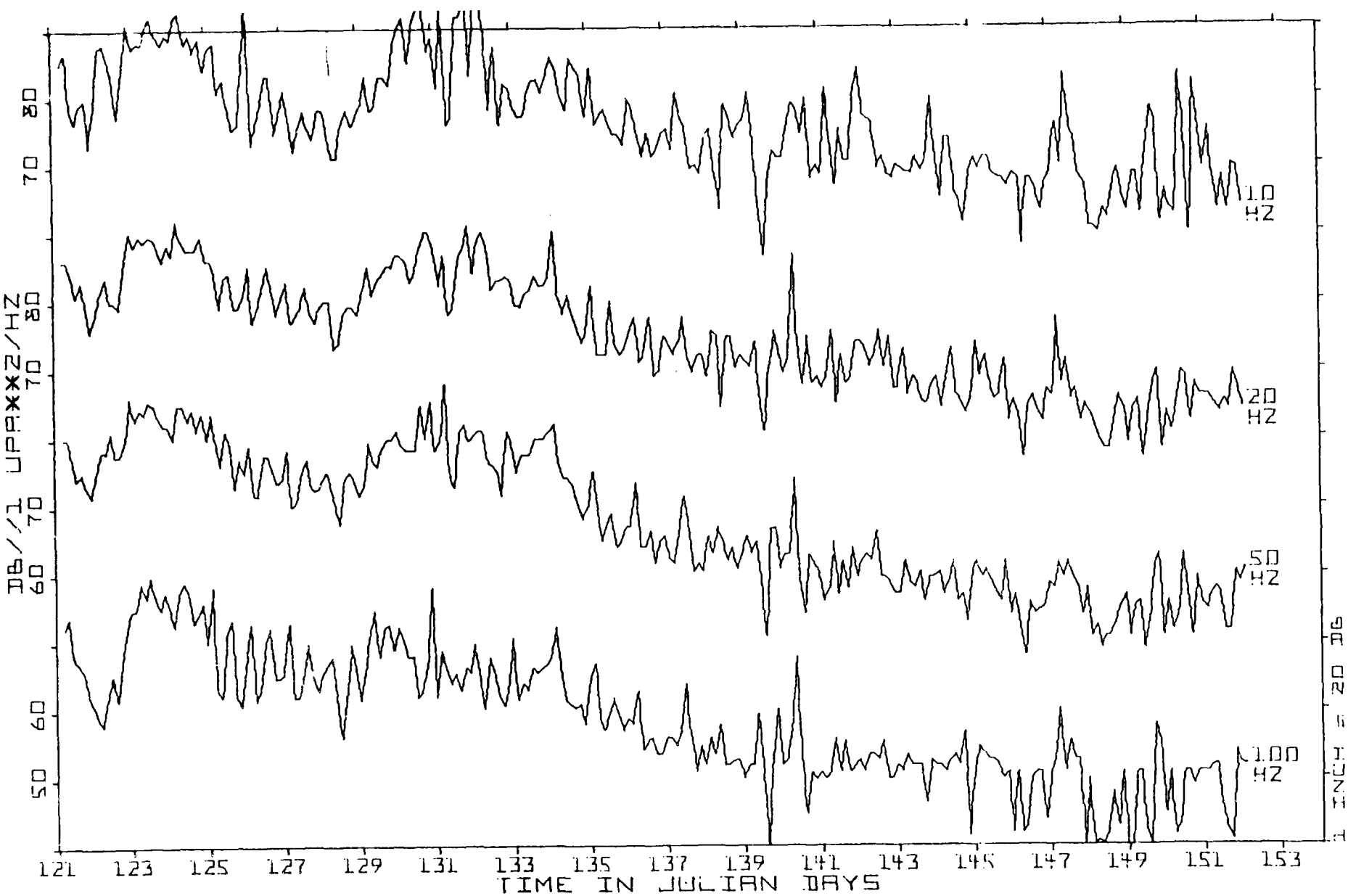
EXAMPLES

Fast ice. Box for which forms and remains fast along the coast.

125

Forecast for first day of each month on first succeeding chart).

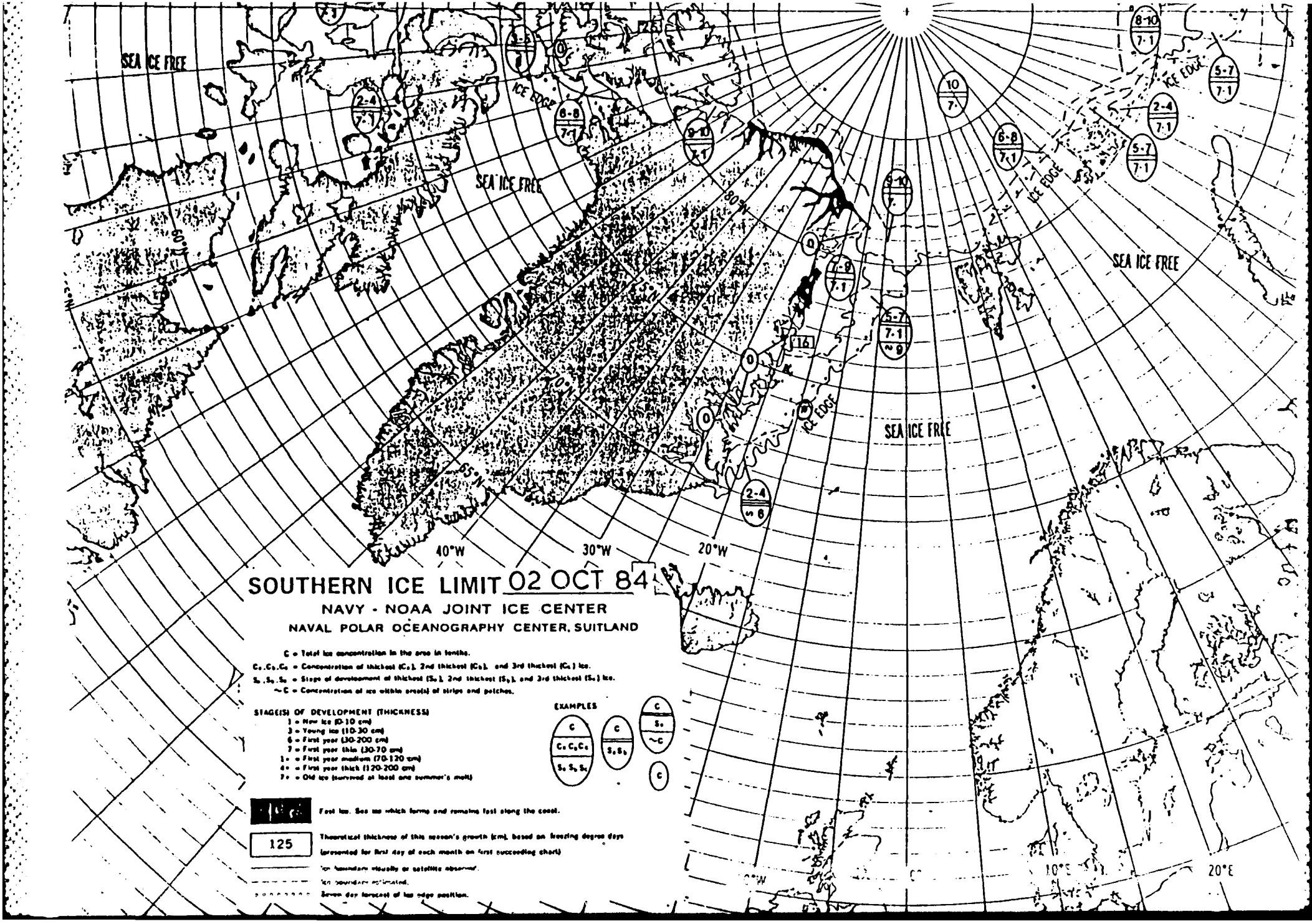

DB//1 UPA**2/HZ
50
60
70
10 HZ
20 HZ
50 HZ
100 HZ
1 INCH = 20 DB
152
154
156
158
160
162
164
166
168
170
172
174
176
178
180
182
184
TIME IN JULIAN DAYS
BUOY 2889
JUNE 1984
NOISE LEVEL VS TIME

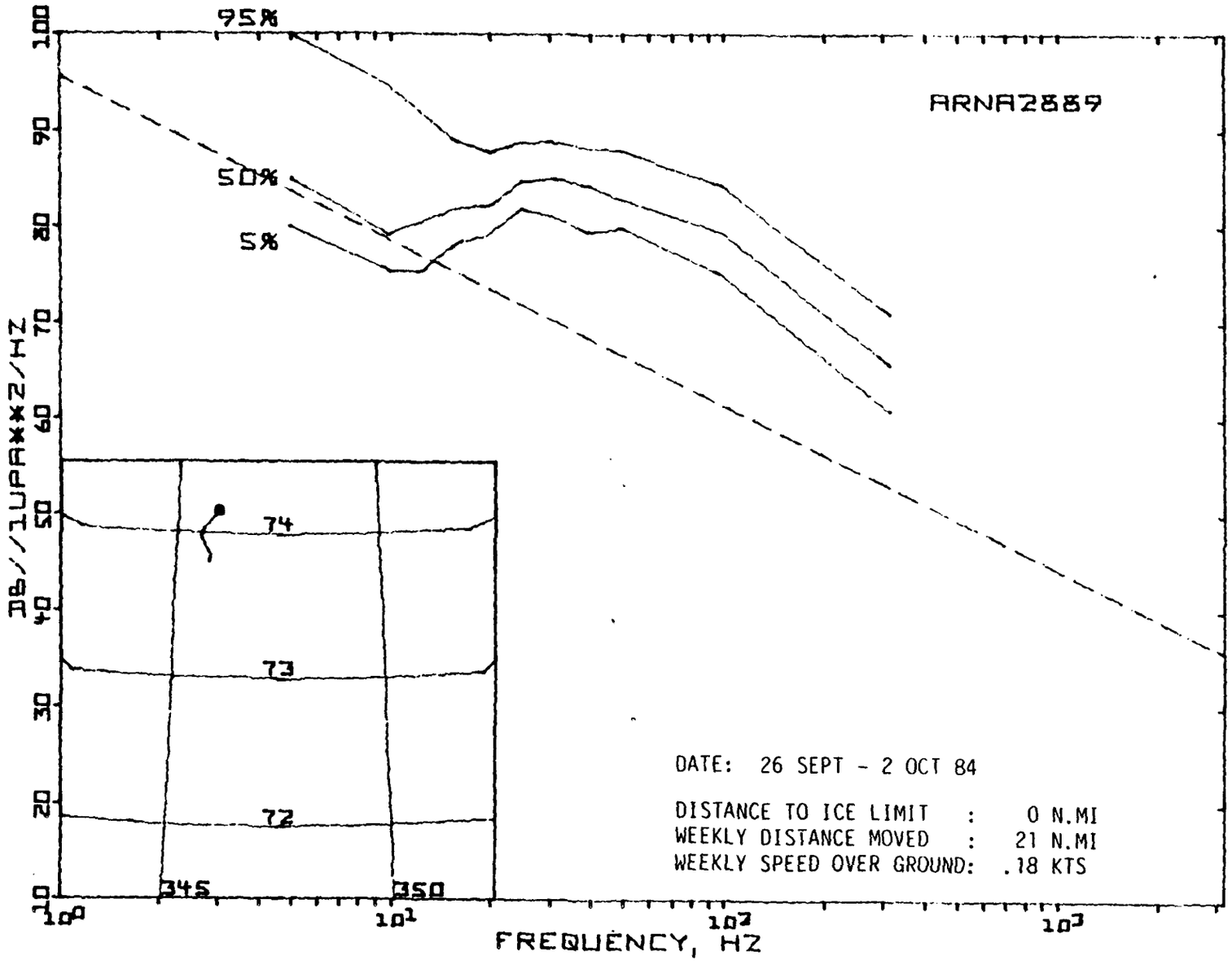


BUOY 2889

MAY 1984

NOISE LEVEL VS TIME


SEA ICE FREE
ICE EDGE
80°N
70°N
60°N
50°N
40°W
30°W
20°W
10°E
20°E
SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
SOUTHERN ICE LIMIT 02 OCT 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths.
C_a, C_b, C_c = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
S_a, S_b, S_c = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
~C = Concentration of ice within area(s) of strips and patches.
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
6 = First year (30-200 cm)
7 = First year thin (30-70 cm)
1. = First year medium (70-120 cm)
4. = First year thick (120-200 cm)
7. = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. See ice which forms and remains fast along the coast.
125
Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart)
Ice boundary visually or satellite observed.
Ice boundary estimated.
Seven day forecast of ice edge position.



BUØY 2889 26SEP-2 ØCT 84

MONTH: 26SEP-2 OCT 84 BUOY: 2889

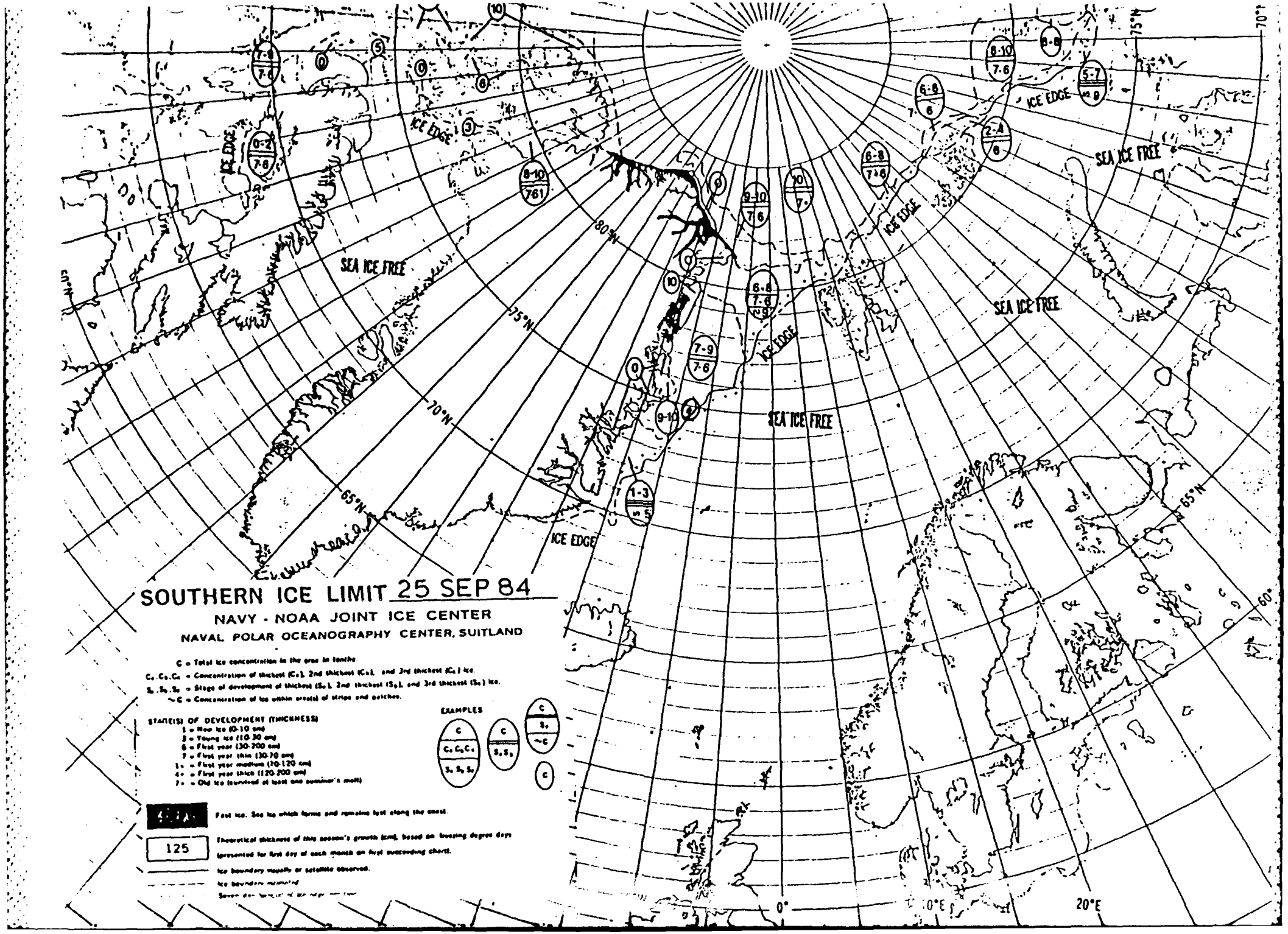
OUTPUT IN FILE ARNA2889

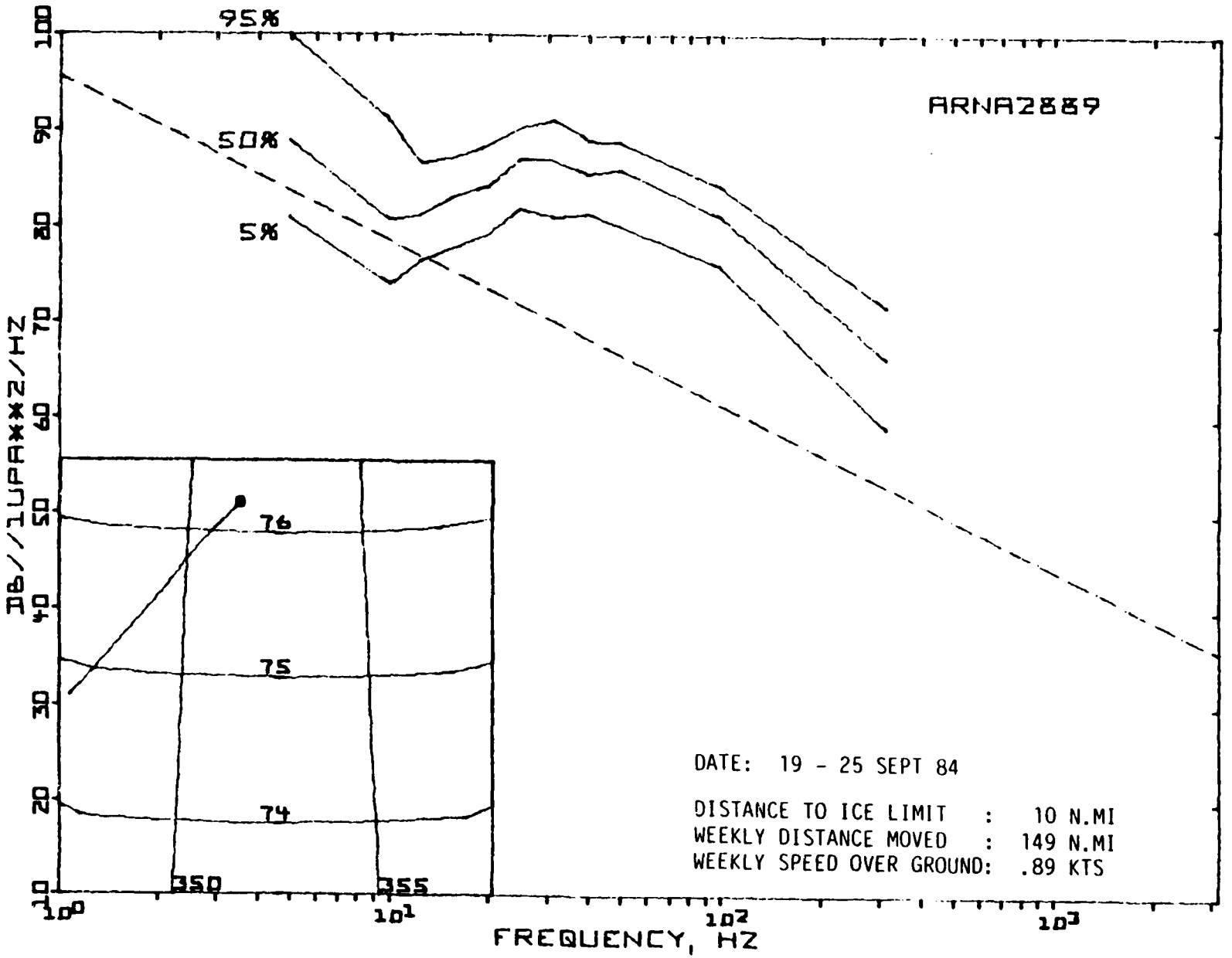
DISPLACEMENT (N. MI.): 21.200 NORTH: -20.940 EAST: -3.313
DIRECTION (TRUE): 189.010

THE NUMBER OF DATA SAMPLES IS 34

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	88.3	8.0	78.0	79.9	80.7	82.8	85.0	91.0	104.0	104.8	105.6	34
10.0	80.7	6.1	74.5	75.2	75.2	76.5	79.0	82.5	93.9	94.5	95.1	34
12.5	81.1	4.8	75.1	75.1	76.9	76.9	80.5	82.4	90.0	91.7	92.5	33
16.0	82.4	3.5	78.3	78.3	78.3	79.4	81.9	84.4	87.9	88.6	90.4	34
20.0	83.4	2.8	79.1	79.1	80.0	81.6	82.2	85.1	86.8	87.6	88.9	34
25.0	85.4	2.4	81.0	81.9	82.7	83.5	84.8	87.9	88.7	88.7	89.5	34
31.5	85.3	2.7	80.9	80.9	81.9	82.8	85.1	87.9	88.8	88.8	90.4	34
40.0	84.3	3.1	78.8	79.3	80.4	81.3	84.2	87.3	88.1	88.1	88.9	33
50.0	83.6	2.8	79.4	79.9	79.9	81.0	82.7	86.0	87.9	87.9	88.7	34
100.0	79.7	3.0	74.9	74.9	75.8	77.4	79.4	82.7	83.5	84.1	85.4	34
315.0	66.3	3.7	60.8	60.8	61.4	63.3	65.6	69.3	70.9	70.9	74.4	34

STOP


SEA ICE FREE
ICE EDGE
80°N
75°N
70°N
65°N
60°
0°
10°E
20°E
SOUTHERN ICE LIMIT 25 SEP 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
C_1, C_2, C_3 = Concentration of thickest (C_1), 2nd thickest (C_2) and 3rd thickest (C_3) ice.
S_1, S_2, S_3 = Stage of development of thickest (S_1), 2nd thickest (S_2), and 3rd thickest (S_3) ice.
~C = Concentration of ice within areas of strips and patches.
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
2 = Young ice (10-30 cm)
3 = First year (30-200 cm)
7 = First year thin (30-70 cm)
4 = First year medium (70-120 cm)
5 = First year thick (120-200 cm)
7 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast.
125
Theoretical thickness of this season's growth (cm), based on freezing degree days represented for first day of each month on first outgoing chart.
Ice boundary visually or satellite observed.
Ice boundary estimated.



BUOY 2889 19-25 SEP 84

MONTH: 19-25 SEP 84 BUOY: 2889

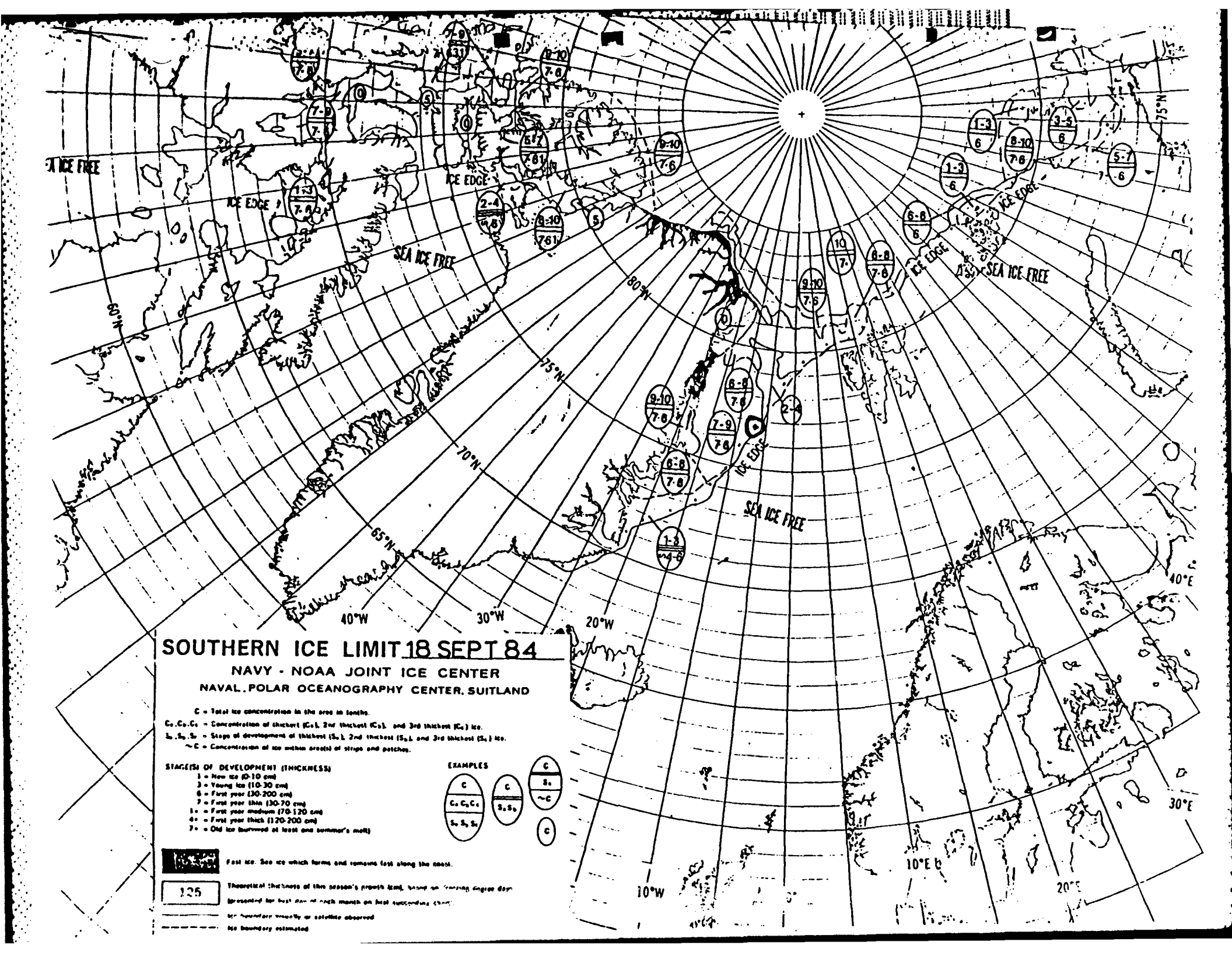
OUTPUT IN FILE ARNA2889

DISPLACEMENT (N. MI.): 149.015 NORTH:-123.180 EAST: -83.859
DIRECTION (TRUE): 214.270

THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	89.9	6.8	79.0	80.7	81.5	84.0	88.8	94.9	100.9	101.5	105.6	56
10.0	81.2	5.0	71.0	73.8	75.2	78.1	80.6	83.1	88.5	91.0	92.6	56
12.5	81.5	3.5	73.7	76.4	76.9	79.7	81.1	83.0	85.7	86.5	90.9	56
16.0	82.9	3.0	76.5	77.8	78.3	80.3	83.2	85.4	86.3	87.1	90.4	56
20.0	84.2	2.9	78.0	79.1	80.0	81.6	84.1	86.0	87.6	88.3	89.5	56
25.0	86.4	2.7	80.0	81.9	81.9	84.8	87.0	87.9	89.5	90.2	91.4	56
31.5	86.7	2.9	79.7	80.9	81.9	85.1	86.9	88.8	89.6	91.1	91.1	55
40.0	85.6	2.7	79.3	81.3	82.1	84.2	85.4	88.1	88.1	88.9	91.4	56
50.0	85.4	2.7	79.4	79.9	81.9	83.5	86.0	87.0	87.9	88.7	90.2	56
100.0	80.6	2.7	74.9	75.8	76.7	79.4	81.0	82.7	83.5	84.1	88.7	56
315.0	66.3	4.0	58.9	58.9	60.2	64.1	66.2	68.4	70.2	71.6	78.9	56

STOP



SOUTHERN ICE LIMIT 18 SEPT 84

NAVY - NOAA JOINT ICE CENTER

NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths.

C_1, C_2, C_3 = Concentration of thickest (C_1), 2nd thickest (C_2), and 3rd thickest (C_3) ice.

S_1, S_2, S_3 = Stage of development of thickest (S_1), 2nd thickest (S_2), and 3rd thickest (S_3) ice.

~C = Concentration of ice within area(s) of strips and patches.

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
6 = First year (30-200 cm)
7 = First year thin (30-70 cm)
1. = First year medium (70-120 cm)
4. = First year thick (120-200 cm)
7. = Old ice (survived at least one summer's melt)

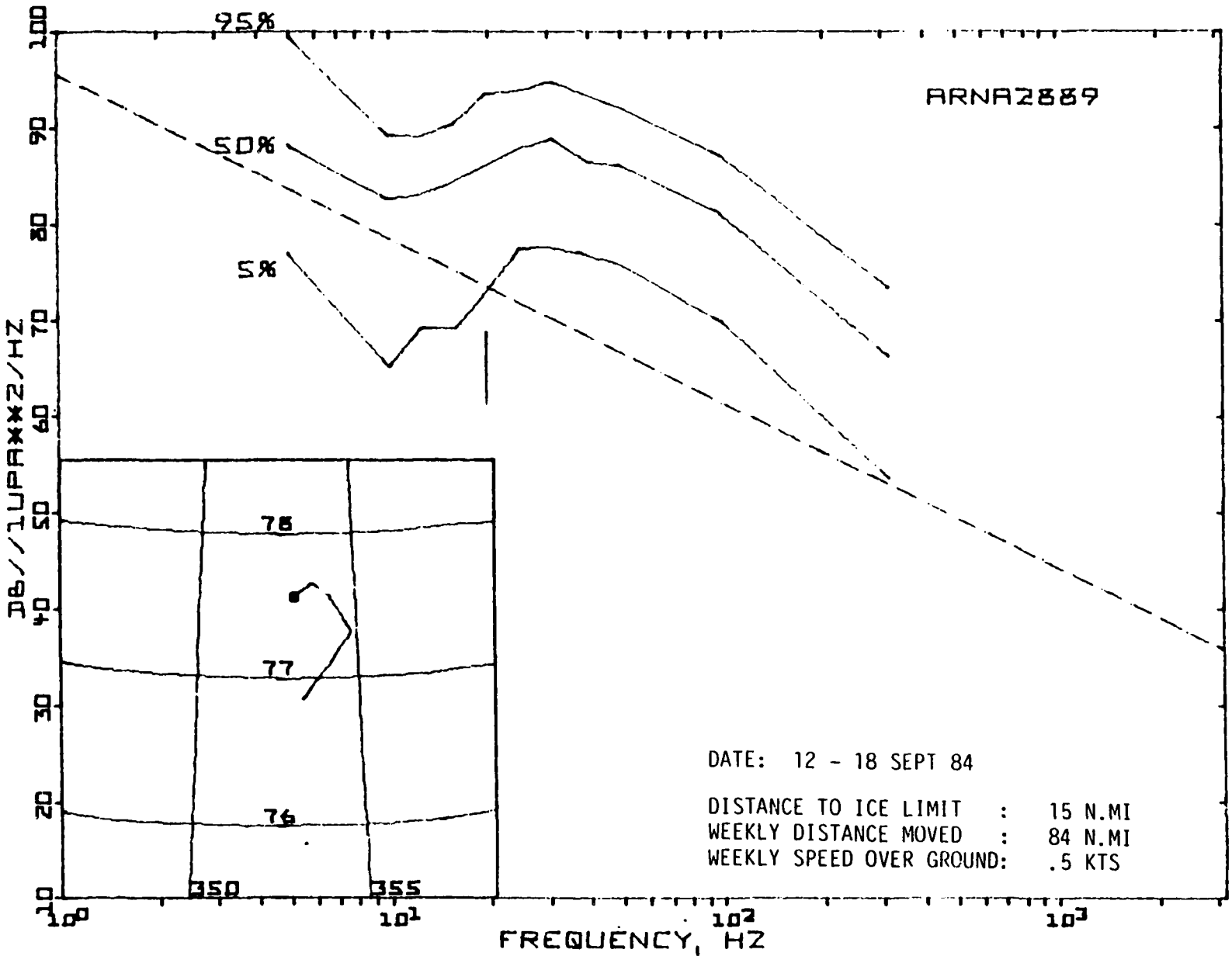
EXAMPLES

Fast ice. Sea ice which forms and remains fast along the coast.

135 Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for last day of each month on final succeeding chart).

Ice boundary mostly on satellite observed

Ice boundary estimated



BUOY 2889 12-18 SEP 84

MONTH: 12-18 SEP 84 BUOY: 2889

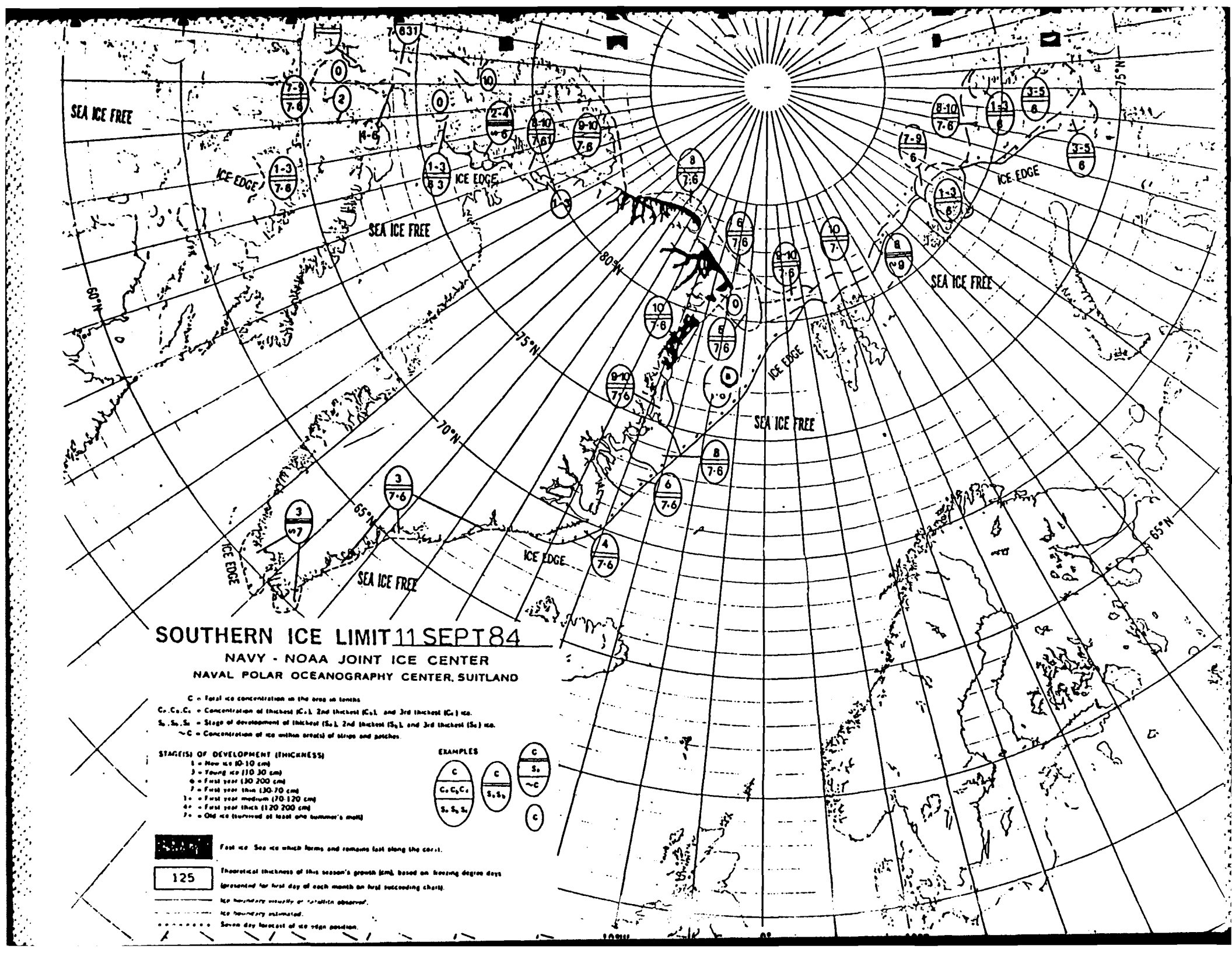
OUTPUT IN FILE ARNA2889

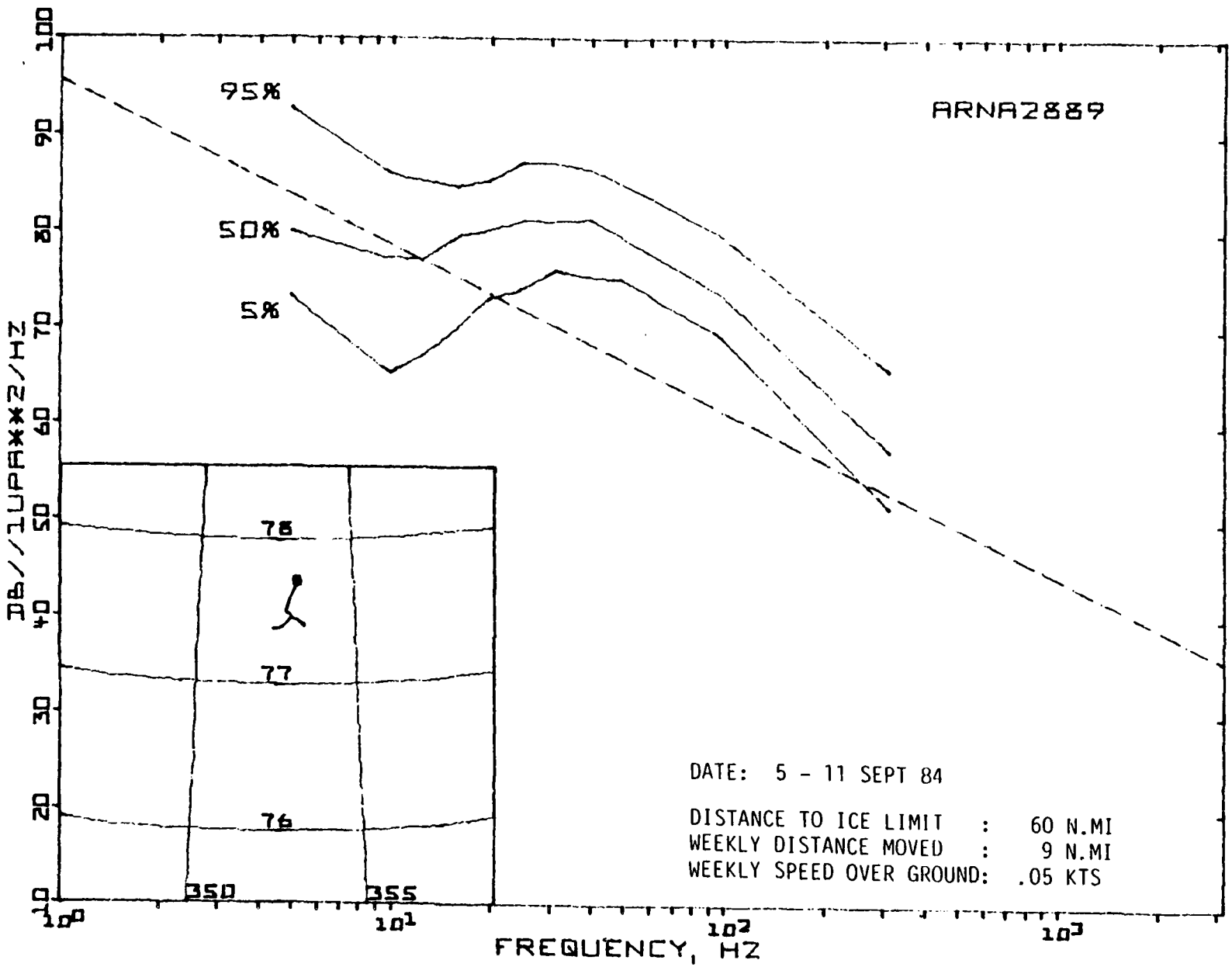
DISPLACEMENT (N. MI.): 84.105 NORTH: -81.480 EAST: -20.848
DIRECTION (TRUE): 194.372

THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	88.8	6.4	74.7	76.8	81.5	84.0	88.2	92.8	96.0	99.5	102.0	56
10.0	81.4	6.4	63.8	65.0	72.9	79.8	82.5	85.8	87.3	89.1	90.1	56
12.5	82.1	5.6	65.9	69.1	74.4	80.5	83.0	84.9	88.4	89.0	91.7	56
16.0	82.7	6.0	66.3	69.1	73.3	80.3	84.4	85.4	87.9	90.4	93.9	56
20.0	84.7	5.7	69.5	73.0	76.9	81.6	86.0	88.3	90.1	93.6	94.9	56
25.0	87.2	5.1	73.9	77.5	79.4	84.2	87.9	90.2	93.0	93.9	98.0	56
31.5	87.8	4.6	75.9	77.6	80.9	85.1	88.8	90.4	92.9	94.8	95.7	56
40.0	86.0	4.9	73.3	76.8	79.3	82.9	86.4	88.9	91.4	93.3	94.9	56
50.0	85.4	4.5	73.3	75.8	79.4	82.7	86.0	88.7	90.2	92.0	93.0	56
100.0	80.4	4.9	67.3	69.8	73.3	76.7	81.0	84.1	86.0	87.0	88.7	56
315.0	65.2	6.2	52.8	53.5	55.3	60.8	66.2	70.2	72.8	73.4	75.3	56

STOP


SEA ICE FREE
ICE EDGE
60°N
65°N
70°N
75°N
80°N
SOUTHERN ICE LIMIT 11 SEPT 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
C_a, C_b, C_c = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
S_a, S_b, S_c = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
~C = Concentration of ice within area(s) of strips and patches.
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
2 = Young ice (10-30 cm)
4 = First year (30-200 cm)
7 = First year thin (30-70 cm)
1. = First year medium (70-120 cm)
4. = First year thick (120-200 cm)
7. = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast.
125
Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).
Ice boundary usually as satellite observed.
Ice boundary estimated.
Seven day forecast of ice edge position.



BUOY 2889 5-11 SEP 84

MONTH: 5-11 SEP 84 BUOY: 2889

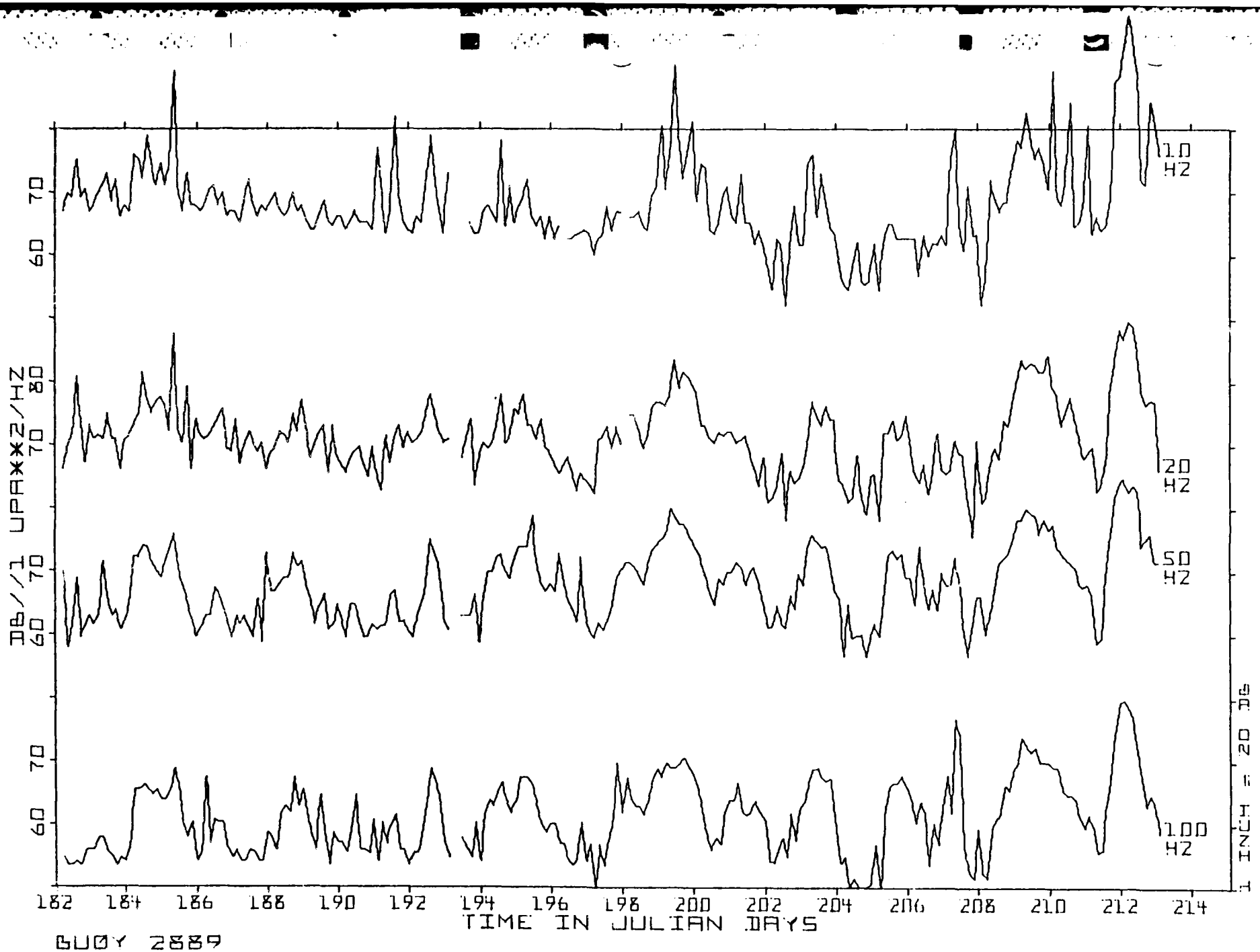
OUTPUT IN FILE ARNA2889

DISPLACEMENT (N. MI.): 8.880 NORTH: -8.820 EAST: -1.030
DIRECTION (TRUE): 186.676

THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	81.1	5.7	71.4	73.0	76.8	78.0	79.9	82.8	85.0	92.8	99.5	56
10.0	76.3	5.6	62.5	65.0	67.8	72.9	77.0	79.8	81.2	85.8	89.1	56
12.5	76.4	5.1	65.9	66.8	69.7	71.9	76.9	79.7	82.4	84.9	85.7	56
16.0	78.0	4.4	66.3	69.8	72.3	75.8	79.4	80.3	82.5	84.4	87.1	56
20.0	79.9	4.6	72.0	73.0	73.9	76.2	80.0	82.9	85.1	85.1	94.9	56
25.0	81.5	4.0	72.8	73.9	77.5	78.8	81.0	84.8	86.0	87.0	90.2	56
31.5	81.5	3.8	74.8	75.9	76.8	78.4	80.9	84.4	86.3	86.9	90.4	56
40.0	81.1	3.7	73.3	75.2	76.1	78.2	81.3	83.5	85.4	86.4	88.1	56
50.0	79.4	3.3	72.7	74.9	75.8	76.7	79.4	81.0	84.1	84.8	86.0	56
100.0	74.0	3.0	67.9	68.9	69.8	72.1	73.3	75.8	78.1	79.4	79.9	56
315.0	57.6	4.3	50.3	51.3	52.1	54.2	57.3	60.2	64.1	65.6	65.6	56

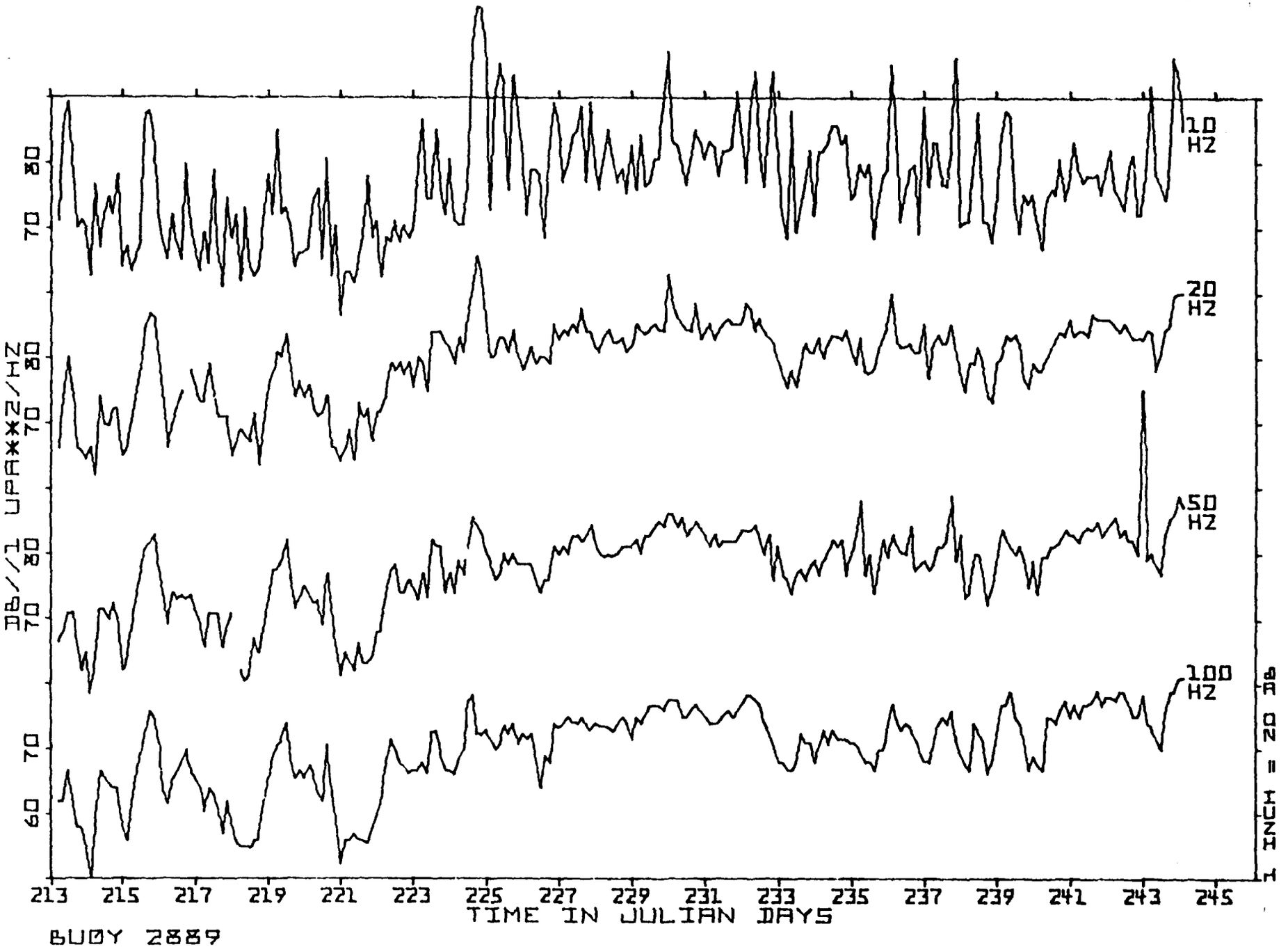
STOP



BUOY 2889

JULY 1984

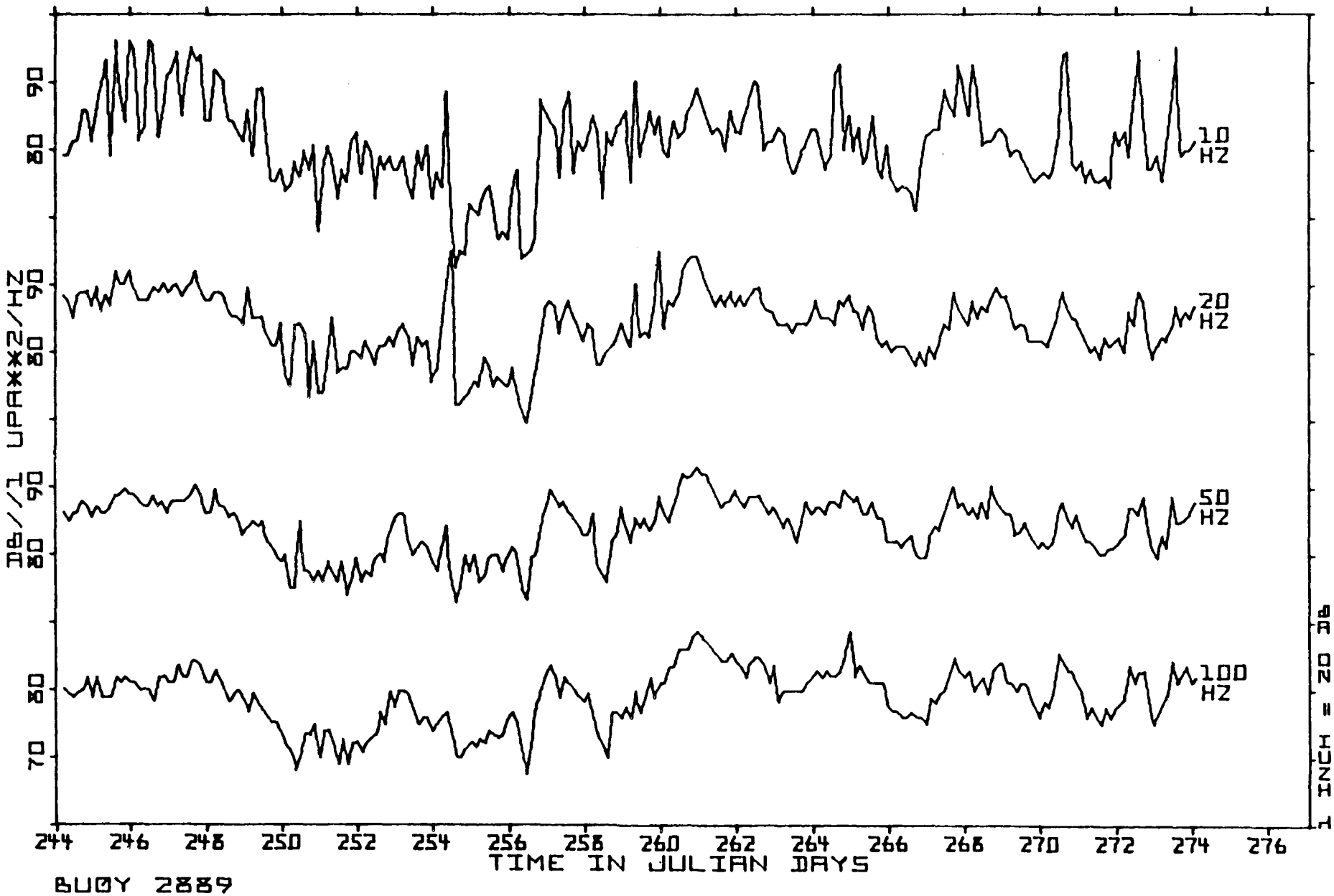
NOISE LEVEL VS TIME



BUOY 2889

AUG 1984

NOISE LEVEL VS TIME



BUOY 2889

SEP 1984

NOISE LEVEL VS TIME

APPENDIX 8

Date Buoy I.D. 2891

Life in Reporting Area 2 (West Greenland Sea)

1 May 1984 - 28 Aug 1984

Type: SYNARGOS (5 - 320 Hz)

BUOY ID 2891

MAY 1984

DAY	GMT	POSITION			
122	403	82.430	N	12.777	W
123	452	82.194	N	12.218	W
124	440	81.977	N	11.091	W
125	418	81.910	N	10.579	W
126	452	81.904	N	10.568	W
127	443	81.786	N	9.748	W
128	451	81.785	N	9.723	W
129	431	81.746	N	9.436	W
130	409	81.565	N	8.764	W
131	353	81.559	N	8.666	W
132	340	81.604	N	8.639	W
133	445	81.594	N	8.929	W
134	452	81.474	N	9.001	W
135	444	81.327	N	9.028	W
136	432	81.243	N	9.209	W
137	451	81.241	N	9.204	W

DAY	GMT	POSITION			
138	436	81.240	N	9.172	W
139	415	81.251	N	9.149	W
140	353	81.257	N	9.164	W
141	330	81.308	N	8.936	W
142	451	81.259	N	9.127	W
143	446	81.128	N	9.355	W
144	434	81.115	N	9.450	W
145	421	81.128	N	9.484	W
146	408	81.204	N	9.573	W
147	443	81.273	N	9.765	W
148	420	81.219	N	9.928	W
149	359	81.181	N	9.884	W
150	451	81.232	N	9.705	W
151	451	81.236	N	9.718	W
152	434	81.290	N	9.773	W

BUOY ID 2891

JUNE 1984

DAY	GMT	POSITION			
153	424	81.155	N	9.797	W
154	409	81.155	N	9.797	W
155	400	81.156	N	9.484	W
156	447	81.133	N	9.422	W
157	423	81.075	N	9.853	W
158	404	80.963	N	10.417	W
159	450	80.987	N	10.595	W
160	438	80.987	N	10.643	W
161	439	80.954	N	10.874	W
162	416	80.830	N	10.816	W
163	359	80.830	N	10.816	W
164	348	80.757	N	11.223	W
165	335	80.777	N	11.434	W
166	332	80.841	N	10.976	W
167	450	80.848	N	11.036	W

DAY	GMT	POSITION			
168	440	80.848	N	11.036	W
169	427	80.731	N	11.191	W
170	415	80.704	N	10.770	W
171	403	80.312	N	9.974	W
172	359	80.082	N	8.902	W
173	334	80.082	N	8.902	W
174	325	79.784	N	8.631	W
175	450	79.484	N	7.297	W
176	442	79.484	N	7.297	W
177	429	79.138	N	7.838	W
178	417	78.872	N	7.985	W
179	402	78.812	N	7.838	W
180	358	78.676	N	7.418	W
181	409	78.594	N	7.340	W
182	345	78.594	N	7.340	W

BUOY ID 2891

JULY 1984

DAY	GMT	POSITION
183	450	78.496 N 7.406 W
184	444	78.491 N 7.396 W
185	431	78.451 N 8.189 W
186	420	78.451 N 8.189 W
187	405	78.303 N 9.389 W
188	355	77.948 N 9.307 W
189	341	77.734 N 9.533 W
190	351	77.685 N 10.145 W
191	450	77.773 N 11.307 W
192	448	77.776 N 11.425 W
193	435	77.800 N 12.788 W
194	423	77.547 N 13.382 W
195	410	77.515 N 13.137 W
196	450	77.485 N 12.779 W
197	426	77.462 N 12.403 W
198	359	77.412 N 11.772 W

DAY	GMT	POSITION
199	450	77.447 N 11.301 W
200	450	77.476 N 11.314 W
201	437	77.476 N 11.314 W
202	423	77.548 N 11.743 W
203	409	77.553 N 12.181 W
204	356	77.647 N 13.700 W
205	346	77.407 N 13.600 W
206	407	77.228 N 13.137 W
207	345	77.247 N 12.814 W
208	448	77.254 N 12.814 W
209	437	77.465 N 12.613 W
210	424	77.559 N 13.111 W
211	411	77.633 N 13.995 W
212	400	77.419 N 15.146 W
213	443	77.419 N 15.146 W

BUOY ID 2891

AUGUST 1984

DAY	GMT	POSITION
214	335	77.199 N 13.444 W
215	323	77.000 N 12.196 W
216	449	77.012 N 11.388 W
217	438	77.087 N 11.067 W
218	428	77.087 N 11.067 W
219	415	77.017 N 10.071 W
220	403	76.992 N 9.870 W
221	349	76.941 N 9.935 W
222	428	76.901 N 9.882 W
223	403	76.915 N 9.901 W
224	449	76.989 N 9.956 W
225	449	76.978 N 9.927 W
226	433	76.971 N 10.331 W
227	417	76.939 N 10.261 W

DAY	GMT	POSITION
228	404	76.874 N 10.143 W
229	352	76.814 N 9.346 W
230	434	76.995 N 9.847 W
231	412	76.899 N 10.085 W
232	449	76.814 N 10.351 W
233	444	76.814 N 10.369 W
234	439	76.729 N 10.356 W
235	419	76.680 N 11.102 W
236	407	76.678 N 11.100 W
237	354	76.718 N 10.602 W
238	443	76.760 N 10.570 W
239	430	76.845 N 10.533 W
240	448	76.852 N 10.515 W
241	438	76.852 N 10.515 W

DATA BY MONTHS

MONTH: MAY 84 BUOY: 2891

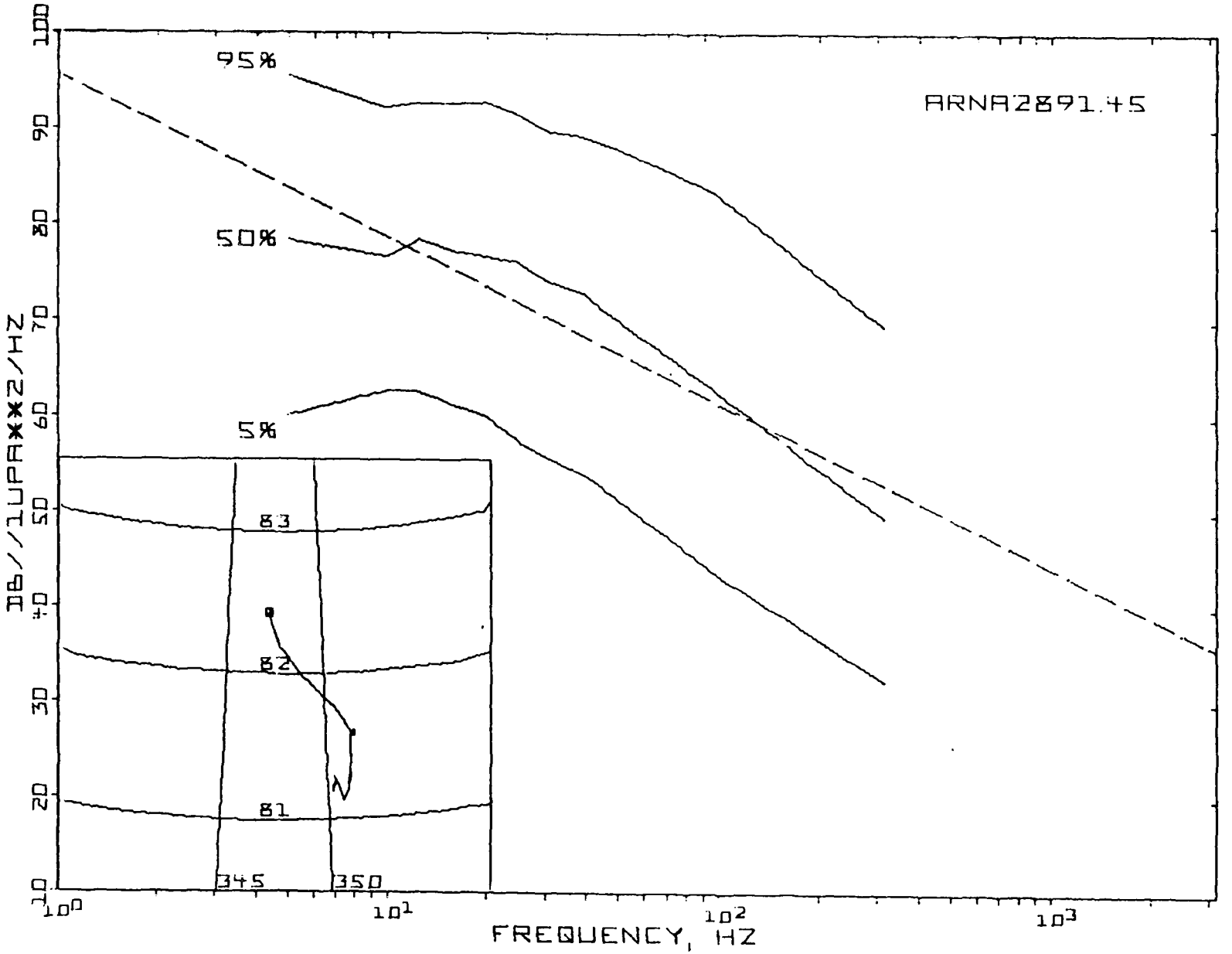
OUTPUT IN FILE ARNA2891

DISPLACEMENT (N. MI.): 73.011 NORTH: -68.400 EAST: 25.535
DIRECTION (TRUE): 159.542

THE NUMBER OF DATA SAMPLES IS 246

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	78.6	9.7	57.4	59.9	64.3	73.1	78.3	83.4	91.9	95.4	99.9	246
10.0	76.7	8.8	59.3	62.6	64.5	69.9	76.5	83.6	89.6	92.1	94.6	245
12.5	77.6	9.3	57.5	62.5	64.4	70.4	78.4	84.4	90.4	92.7	104.0	246
16.0	77.1	9.7	55.9	61.2	64.1	69.8	77.0	84.1	91.0	92.6	98.6	246
20.0	76.1	10.1	54.6	59.9	62.0	67.9	76.6	83.2	90.2	92.7	96.2	245
25.0	75.2	10.3	55.1	57.2	60.3	67.3	75.9	83.8	89.2	91.4	93.2	246
31.5	73.2	10.4	51.5	55.4	58.7	64.7	73.7	81.4	86.6	89.5	91.7	246
40.0	71.5	11.0	48.6	53.7	56.2	63.4	72.7	79.8	85.8	89.0	94.3	246
50.0	70.1	11.0	44.5	51.3	54.8	61.2	69.7	77.3	85.3	87.8	92.9	246
100.0	62.8	11.9	36.4	43.3	48.2	54.2	62.4	72.2	79.4	83.0	90.3	246
315.0	50.6	10.5	28.3	32.2	39.0	43.4	49.4	56.5	65.7	69.4	78.4	246

STOP



BUOY 2891 MAY 1984

MONTH: JUNE 84 BUOY: 2891

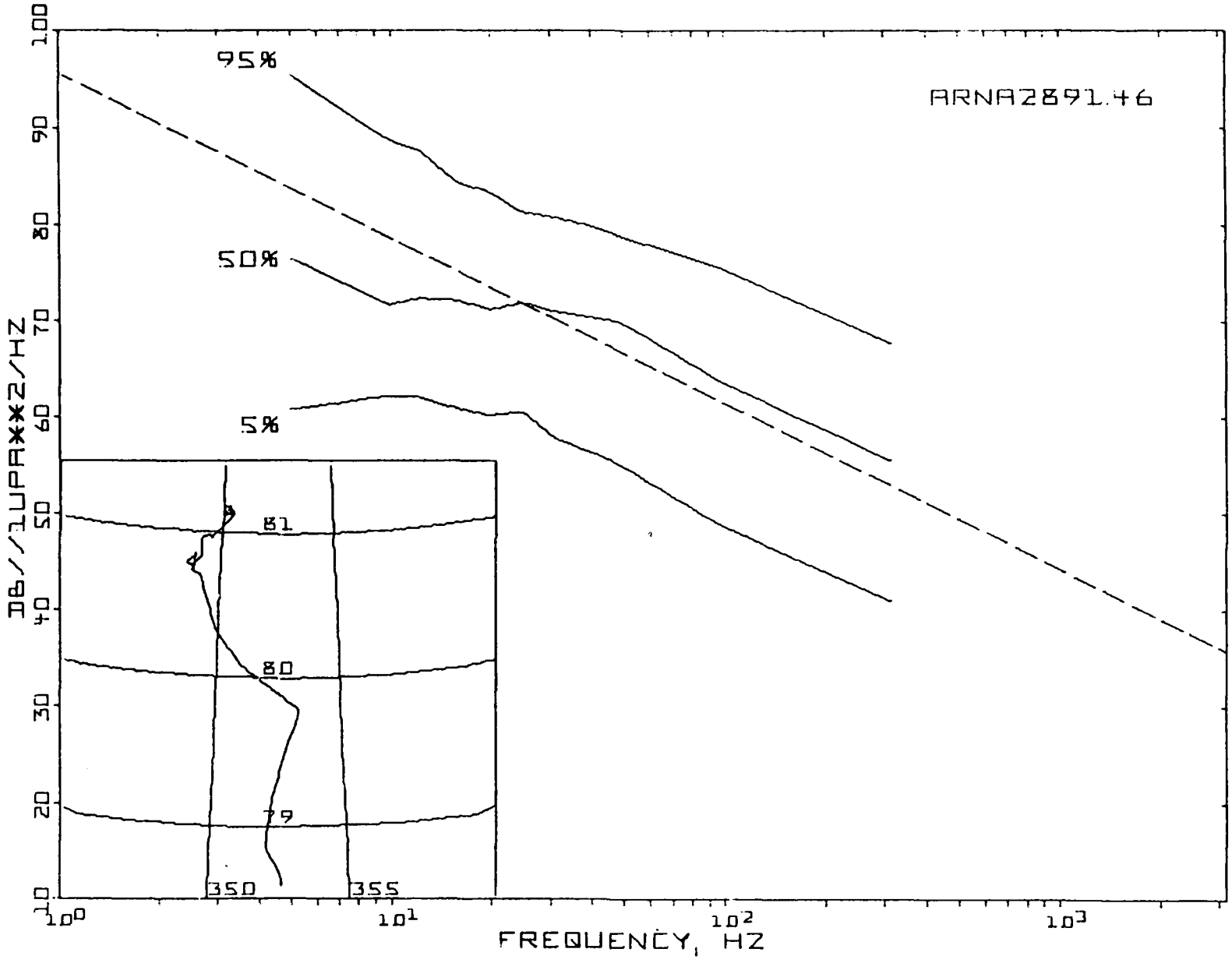
OUTPUT IN FILE ARNA2891

DISPLACEMENT (N. MI.): 155.842 NORTH:-153.660 EAST: 25.987
DIRECTION (TRUE): 170.416

THE NUMBER OF DATA SAMPLES IS 230

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	77.6	9.3	56.4	60.6	68.5	72.3	76.4	81.2	89.4	95.4	119.3	228
10.0	72.9	8.3	44.5	62.0	63.9	67.3	71.5	77.6	85.3	88.6	98.1	228
12.5	72.9	7.4	53.2	61.9	64.4	67.9	72.3	77.5	83.5	87.3	92.7	227
16.0	72.2	7.0	52.9	60.6	63.8	67.8	72.0	76.5	81.?	84.1	95.9	228
20.0	71.5	6.9	57.1	59.9	62.6	66.1	71.1	76.6	80.7	83.2	91.1	228
25.0	71.3	6.8	54.3	60.3	62.2	66.3	71.8	75.9	79.4	81.1	91.4	226
31.5	70.2	7.4	50.8	57.5	60.6	64.8	70.8	75.4	78.7	80.6	93.0	228
40.0	68.9	7.8	38.2	56.2	58.2	62.6	70.?	74.6	78.?	79.8	91.8	227
50.0	68.1	7.8	48.8	54.8	57.7	61.8	69.7	73.8	76.6	78.7	91.9	228
100.0	62.3	8.5	42.4	48.4	51.3	55.3	63.3	67.4	72.?	75.3	87.4	226
315.0	54.5	9.1	31.4	40.9	44.4	48.9	55.4	59.7	63.4	67.5	117.2	230

STOP



BUOY 2891 JUNE 1984

MONTH: JULY 84 BUOY: 2891

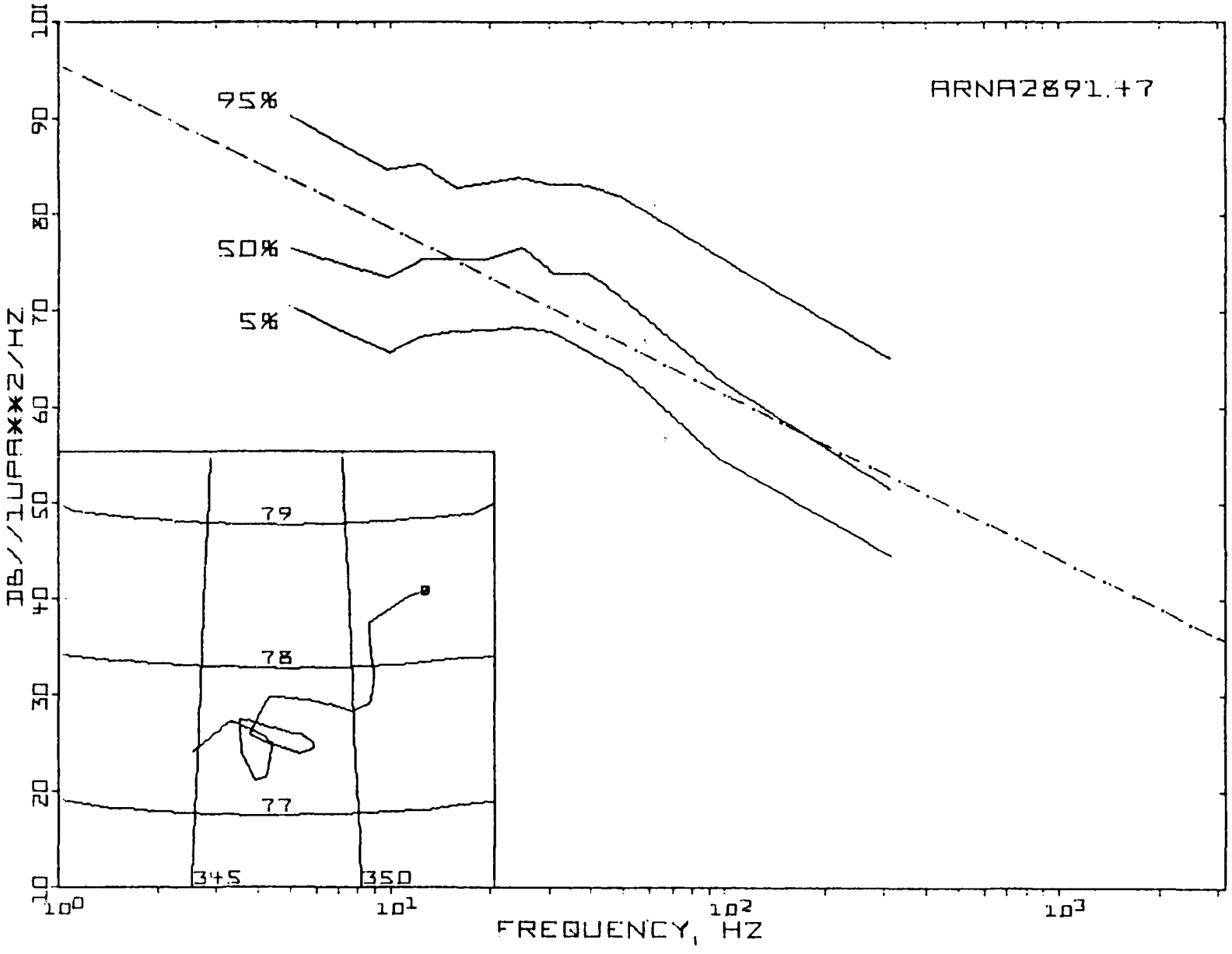
OUTPUT IN FILE ARNA2891

DISPLACEMENT (N. MI.): 116.560 NORTH: -64.620 EAST: -97.008
DIRECTION (TRUE): 236.359

THE NUMBER OF DATA SAMPLES IS 241

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	78.3	6.8	67.1	70.3	71.4	73.9	76.4	80.6	87.2	90.3	104.5	239
10.0	73.9	6.9	62.7	65.5	66.4	68.7	73.3	78.5	82.0	84.5	103.4	240
12.5	75.7	6.3	63.8	67.2	68.6	71.4	75.3	79.2	83.5	85.2	98.7	240
16.0	75.5	5.0	65.0	67.8	69.2	72.0	75.2	79.0	81.2	82.5	94.1	241
20.0	75.6	4.9	64.5	67.9	69.9	72.1	75.3	78.2	81.3	83.2	92.7	240
25.0	76.1	4.8	66.3	68.2	69.8	72.3	76.5	79.4	81.1	83.8	98.4	239
31.5	74.4	4.7	64.8	67.6	68.5	71.5	73.7	77.5	80.4	82.9	89.5	240
40.0	73.6	5.3	60.1	65.5	66.7	69.5	73.7	76.9	80.7	82.9	90.8	238
50.0	71.8	5.4	60.0	63.7	65.3	67.8	71.3	74.8	79.3	81.8	87.8	240
100.0	63.5	6.7	46.8	54.2	55.3	58.9	62.4	67.4	72.8	75.3	83.0	241
315.0	52.6	6.8	42.8	44.4	44.4	46.9	51.4	57.4	61.5	65.0	75.4	239

STOP



BUOY 2891 JULY 1984

MONTH: AUG 1984 BUOY: 2891

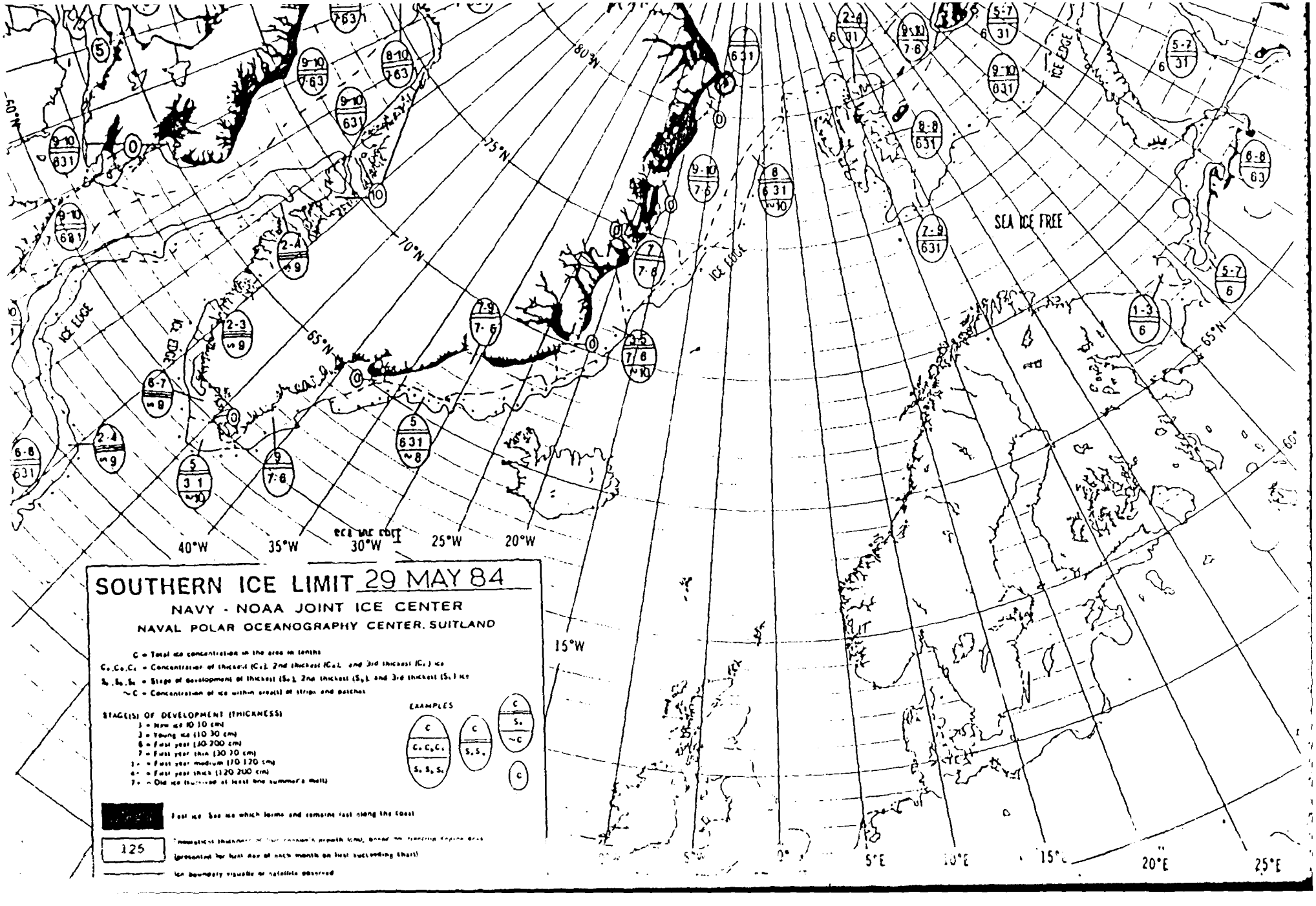
OUTPUT IN FILE ARNA2891

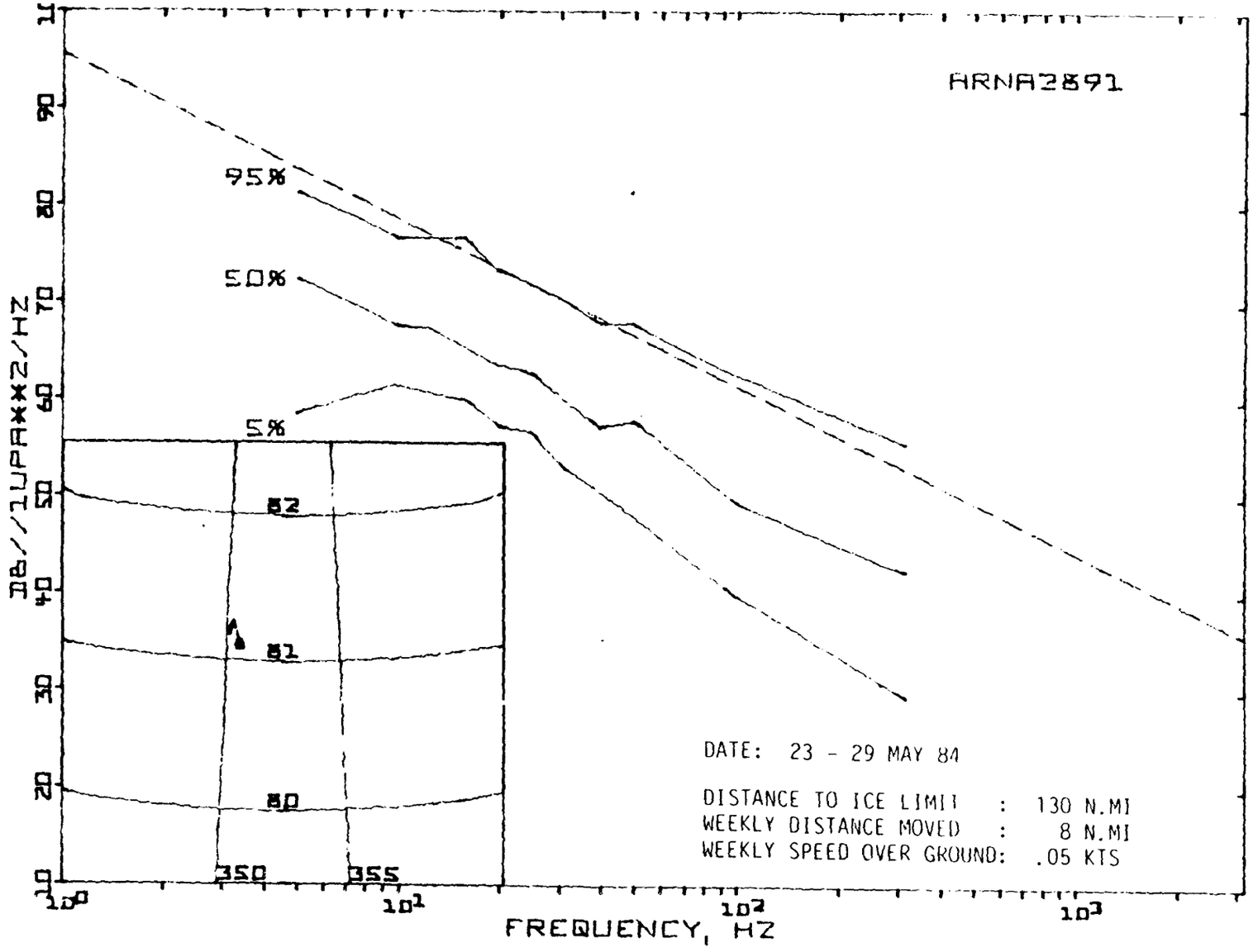
DISPLACEMENT (N. MI.): 44.662 NORTH: -20.820 EAST: 39.513
DIRECTION (TRUE): 117.791

THE NUMBER OF DATA SAMPLES IS 200

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	83.6	8.3	69.2	73.9	75.2	78.3	81.8	87.2	95.4	102.4	106.5	199
10.0	77.3	7.6	63.9	67.3	69.9	72.4	76.0	80.1	86.1	90.5	104.8	200
12.5	78.3	6.3	66.3	69.8	71.4	73.9	77.5	81.3	84.4	88.5	101.5	200
16.0	78.5	5.7	67.8	71.0	72.0	74.5	78.1	81.2	85.0	89.1	99.3	200
20.0	79.5	5.0	67.0	72.1	73.9	76.6	79.1	81.3	85.9	88.6	96.2	198
25.0	80.0	4.6	65.1	72.3	74.3	77.2	79.4	82.6	84.3	87.9	93.2	200
31.5	80.1	4.3	69.4	72.6	74.6	77.5	79.7	82.9	85.7	87.4	90.7	200
40.0	80.0	4.4	66.1	72.7	74.6	77.6	80.7	82.3	84.8	86.7	91.8	200
50.0	79.5	4.4	61.2	72.6	73.8	77.3	79.8	81.8	85.3	85.9	90.7	199
100.0	72.0	5.1	52.1	63.3	66.8	68.4	72.8	74.4	78.3	79.4	84.3	200
315.0	60.3	6.3	43.4	49.4	52.2	56.5	60.3	65.0	68.5	70.3	76.3	200

STOP
R


SEA ICE FREE
ICE EDGE
80°N
75°N
70°N
65°N
60°N
40°W
35°W
30°W
25°W
20°W
15°W
5°E
10°E
15°E
20°E
25°E
SOUTHERN ICE LIMIT 29 MAY 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
EXAMPLES
STAGE(S) OF DEVELOPMENT (THICKNESS)
125



BUOY 2891 23-29 MAY 84

MONTH: 23-29 MAY 84 BUOY: 2891

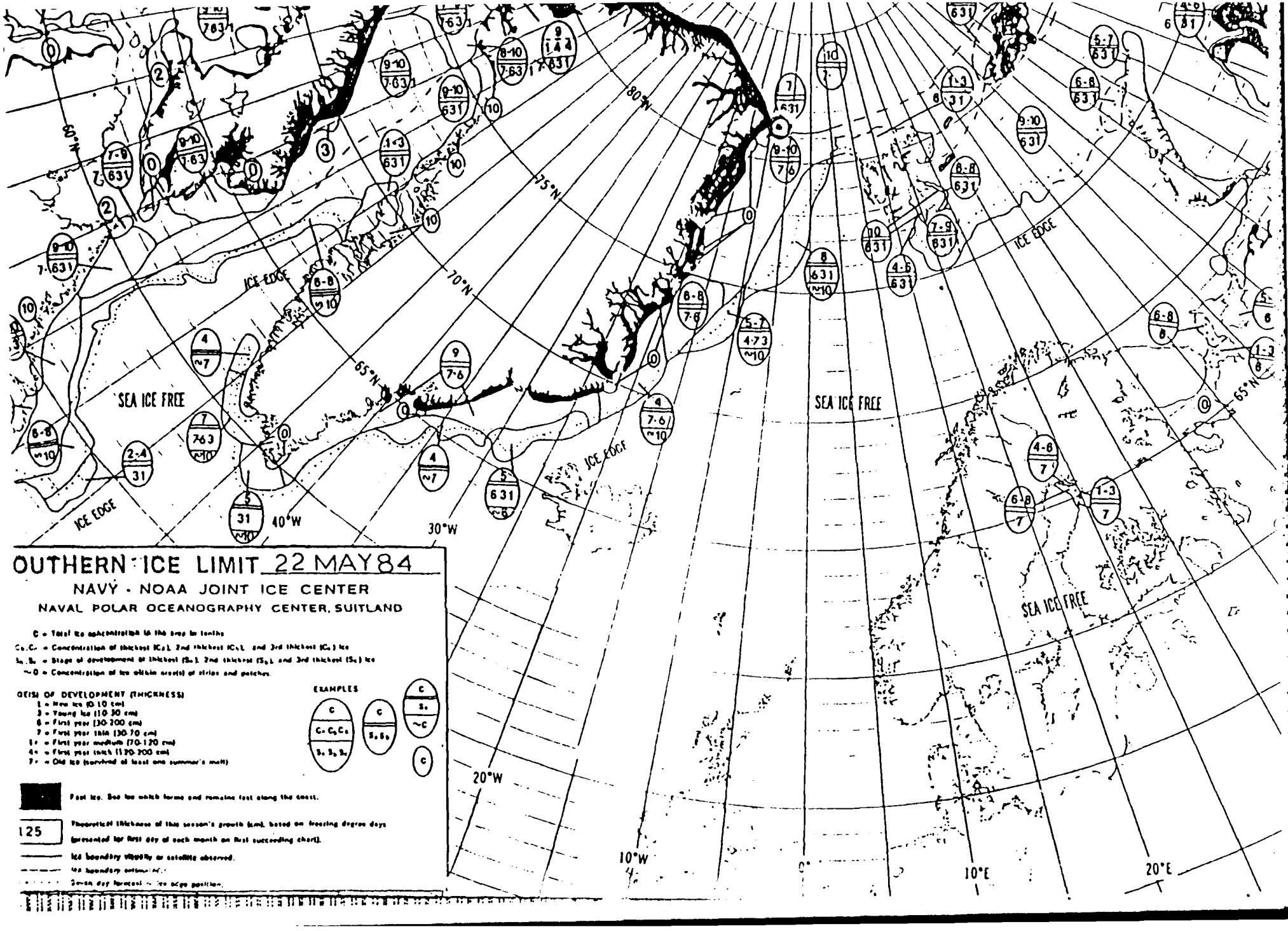
OUTPUT IN FILE ARNA2891

DISPLACEMENT (N. MI.): 7.674 NORTH: 7.259 EAST: -2.490
DIRECTION (TRUE): 341.049

THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	69.8	8.3	57.4	58.3	59.1	61.8	72.3	75.2	78.3	81.2	90.3	56
10.0	67.7	4.7	59.3	61.4	62.0	64.5	67.4	70.5	71.5	76.5	83.6	56
12.5	67.6	5.4	57.5	60.6	61.9	63.5	67.2	70.4	73.3	76.4	84.0	56
16.0	66.7	5.8	55.9	59.8	60.6	63.1	65.0	68.5	71.0	76.5	91.0	56
20.0	65.1	6.3	54.6	57.1	59.9	61.3	63.3	67.0	73.0	73.0	92.7	55
25.0	63.3	6.3	55.1	56.5	56.5	59.4	62.6	65.7	69.8	71.8	93.2	56
31.5	60.8	6.3	51.5	52.6	54.6	56.8	59.7	64.1	66.6	70.1	90.1	56
40.0	58.4	6.8	48.6	50.2	51.5	54.6	56.9	60.7	64.9	67.7	90.8	56
50.0	57.7	7.6	44.5	47.8	49.7	52.6	57.7	60.0	66.6	67.8	92.9	56
100.0	50.5	8.3	36.4	39.6	40.8	44.1	49.3	54.4	58.9	62.4	85.5	56
315.0	42.0	9.2	28.3	29.4	30.4	34.9	42.2	46.9	53.6	55.4	74.5	56

STOP



OUTHERN ICE LIMIT 22 MAY84

NAVY - NOAA JOINT ICE CENTER

NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths

C_t, C_2 = Concentration of thickest (C_t), 2nd thickest (C_2), and 3rd thickest (C_3) ice

S_t, S_2 = Stage of development of thickest (S_t), 2nd thickest (S_2), and 3rd thickest (S_3) ice

~0 = Concentration of ice within area(s) of strips and patches

STAGES OF DEVELOPMENT (THICKNESS)

1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
6 = First year (30-200 cm)
7 = First year thin (30-70 cm)
1- = First year medium (70-120 cm)
4- = First year thick (120-200 cm)
7- = Old ice (survived at least one summer's melt)

EXAMPLES

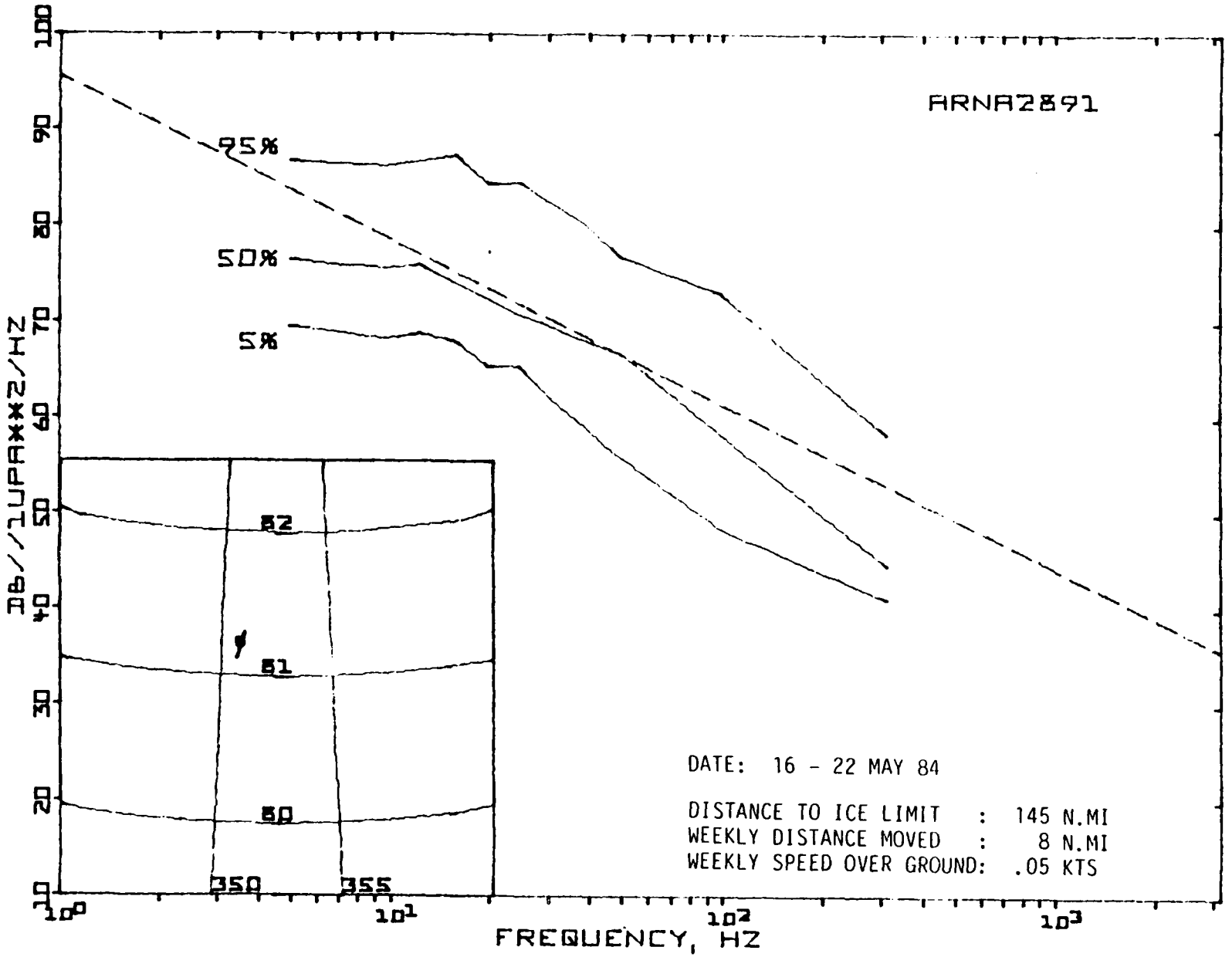
Fast ice. Sea ice which forms and remains fast along the coast.

125 Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart).

Ice boundary visually or satellite observed.

Ice boundary estimated.

Seven day forecast ice edge position.



BUOY 2891 16-22 MAY 84

MONTH: 16-22 MAY 84 BUOY: 2891

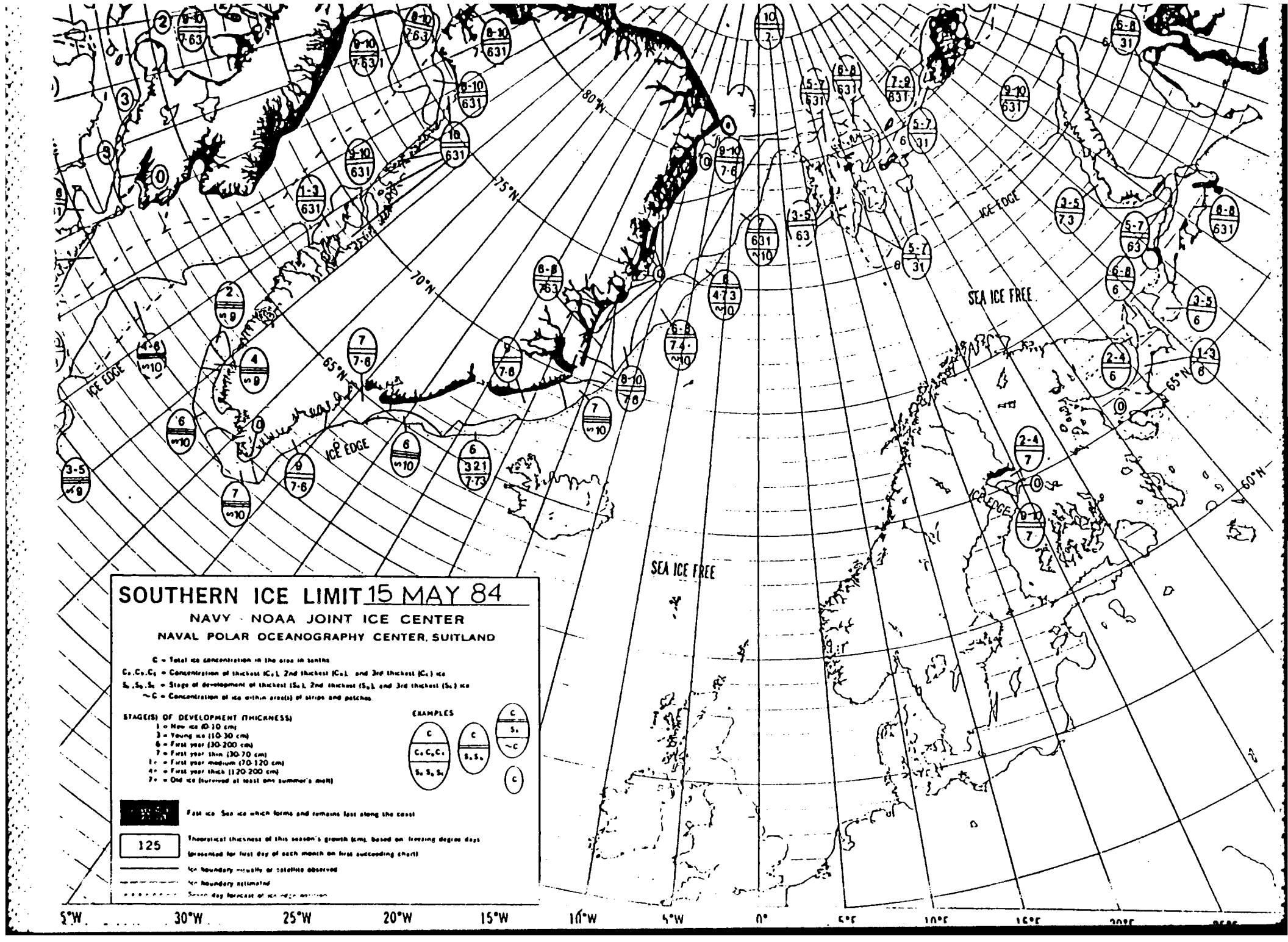
OUTPUT IN FILE ARNA2891

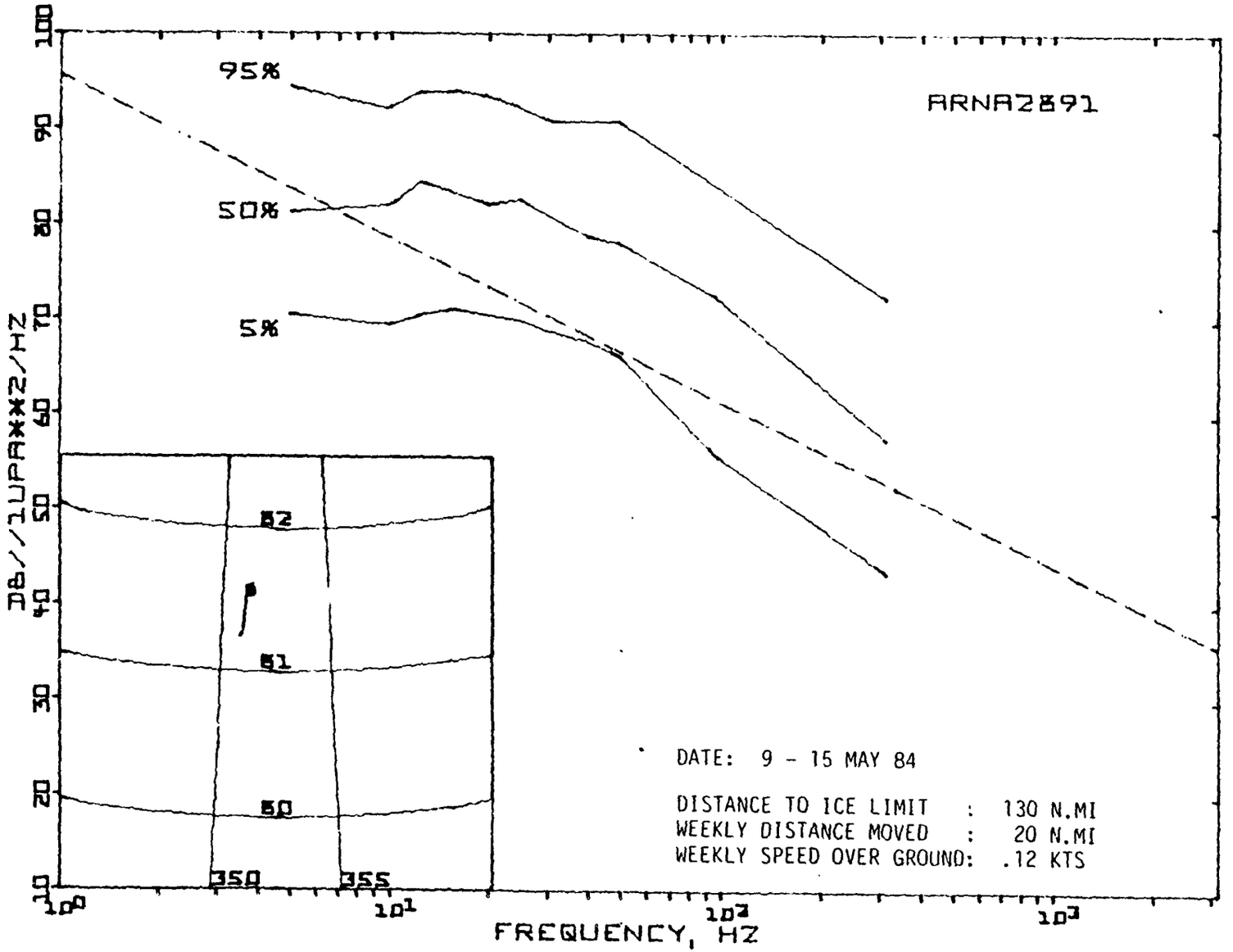
DISPLACEMENT (N. MI.): 7.877 NORTH: -7.560 EAST: -2.212
DIRECTION (TRUE): 196.331

THE NUMBER OF DATA SAMPLES IS 54

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	77.7	5.9	63.4	69.2	70.3	73.9	76.4	82.4	85.1	86.6	91.9	54
10.0	76.0	6.1	63.6	68.0	68.7	70.5	75.4	80.1	83.6	86.1	89.6	53
12.5	76.5	5.8	67.2	68.6	69.2	71.4	75.9	81.3	83.5	86.7	87.9	54
16.0	76.3	6.7	65.0	67.8	68.5	71.0	73.8	82.5	85.8	87.3	91.0	54
20.0	74.5	7.1	63.2	65.1	67.0	69.3	72.1	82.0	83.2	84.2	92.7	54
25.0	73.6	7.5	61.1	65.1	65.7	67.3	70.5	81.1	83.8	84.4	91.4	54
31.5	71.6	7.5	60.6	61.6	61.6	66.6	69.4	79.7	81.4	82.2	90.7	54
40.0	69.8	8.1	58.2	58.7	60.1	63.4	67.7	77.6	79.8	79.8	90.2	54
50.0	67.4	8.2	52.0	55.7	57.7	60.0	66.6	74.8	75.7	76.6	90.7	54
100.0	59.1	9.0	38.1	48.2	48.8	52.8	58.1	62.4	67.4	72.8	88.2	54
315.0	47.3	7.4	31.4	40.9	41.6	42.8	44.4	49.4	56.5	58.2	75.4	54

STOP


SOUTHERN ICE LIMIT 15 MAY 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
C_A, C_B, C_C = Concentration of thickest (C_A), 2nd thickest (C_B), and 3rd thickest (C_C) ice
S_A, S_B, S_C = Stage of development of thickest (S_A), 2nd thickest (S_B), and 3rd thickest (S_C) ice
~C = Concentration of ice within area(s) of strips and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
4 = First year (30-200 cm)
7 = First year thin (30-70 cm)
1c = First year medium (70-120 cm)
4c = First year thick (120-200 cm)
7c = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast
125
Theoretical thickness of this season's growth (cm), based on freezing degree days (presented for first day of each month on first succeeding chart)
Ice boundary usually or satellite observed
Ice boundary estimated
Seven day forecast of ice edge position
ICE EDGE
SEA ICE FREE
80°W
75°N
70°N
65°N
60°N
30°W
25°W
20°W
15°W
10°W
5°W
0°
5°E
10°E
15°E



BUOY 2891 9-15 MAY 84

MONTH: 9--15 MAY 84 BUOY: 2891

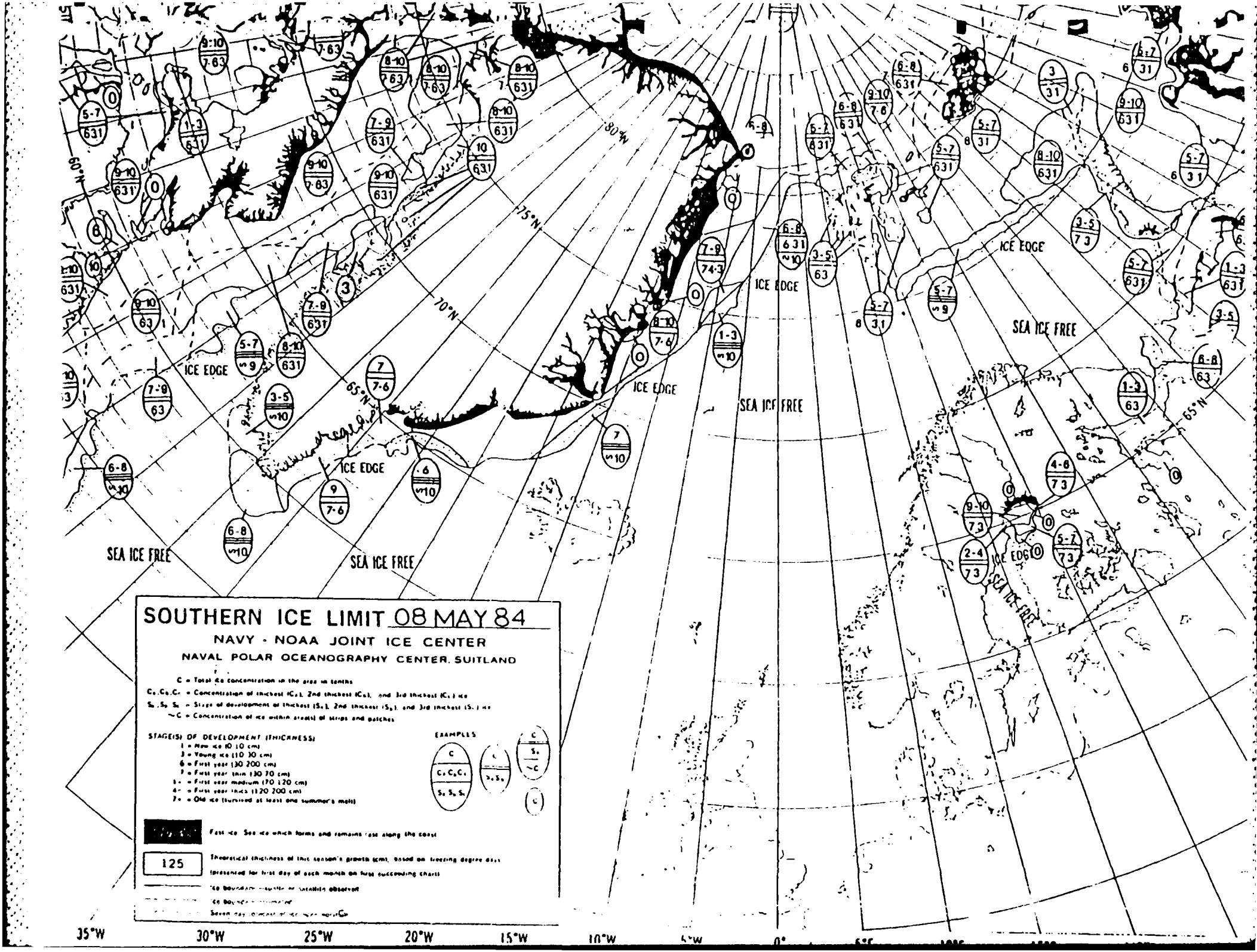
OUTPUT IN FILE ARNA2891

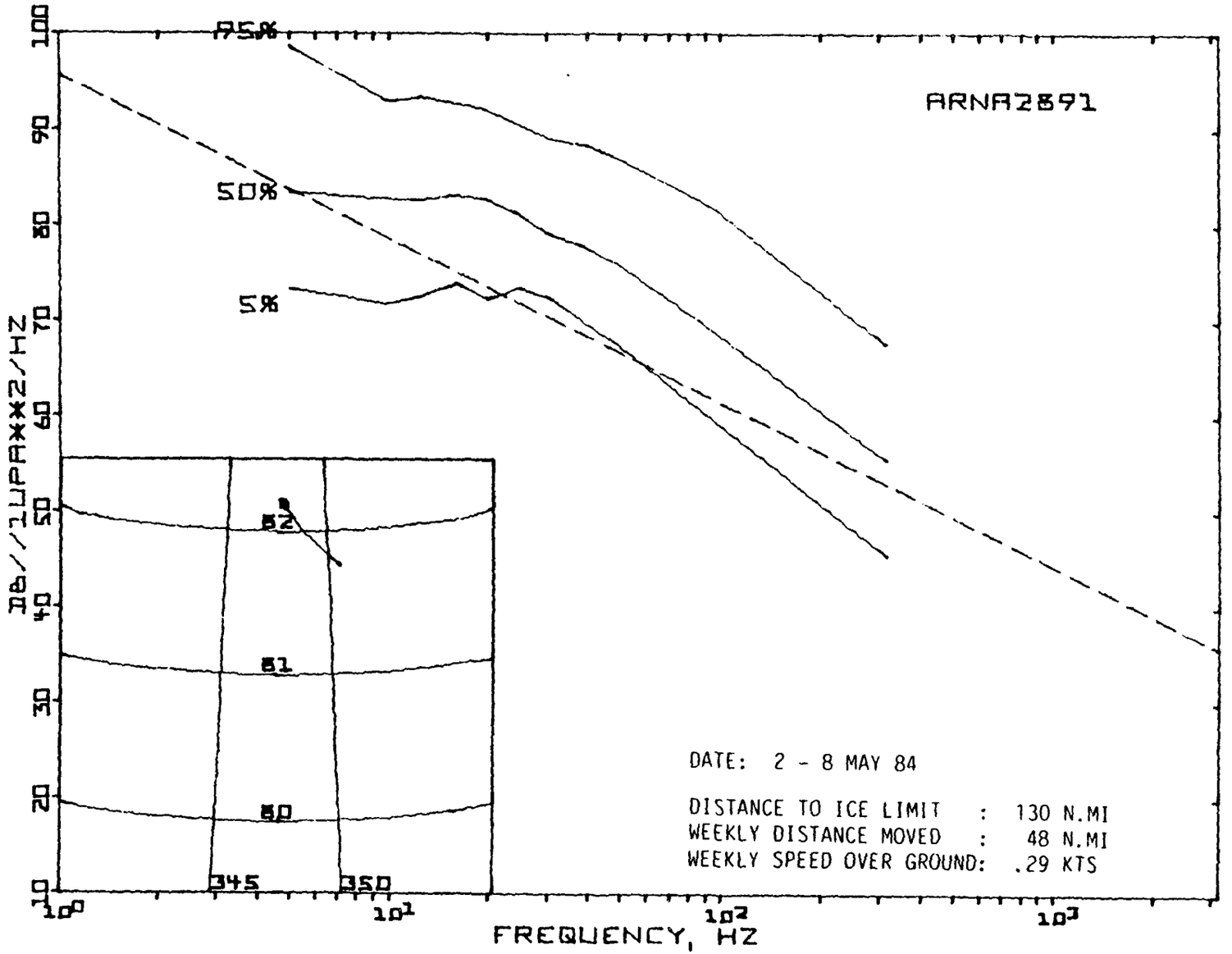
DISPLACEMENT (N. MI.): 19.838 NORTH: -19.440 EAST: -3.953
DIRECTION (TRUE): 191.513

THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	82.8	7.7	69.2	70.3	73.1	76.4	81.2	89.4	93.9	94.4	98.6	56
10.0	81.9	7.7	66.4	69.3	70.5	76.5	82.0	88.6	91.3	92.1	94.6	56
12.5	84.0	8.0	69.2	70.4	71.4	78.4	84.4	90.4	92.7	93.9	104.0	56
16.0	83.3	7.9	69.8	71.0	72.9	77.0	83.1	91.0	93.3	93.9	98.6	56
20.0	82.7	8.2	69.9	70.5	71.1	75.3	82.0	90.2	92.7	93.4	96.2	56
25.0	82.2	7.6	68.2	69.8	70.5	75.9	82.6	89.8	91.4	92.3	93.2	56
31.5	80.3	7.8	66.6	68.5	69.4	72.6	80.6	87.4	90.1	90.7	91.7	56
40.0	79.1	7.9	66.7	67.7	68.6	71.5	78.7	85.8	89.0	90.8	92.7	56
50.0	77.7	8.3	65.3	66.0	67.2	68.8	78.0	84.7	87.8	90.7	91.9	56
100.0	71.0	9.9	55.3	55.3	58.1	61.4	72.2	79.4	83.0	83.6	90.3	56
315.0	57.0	10.3	42.2	43.4	44.4	46.2	57.4	65.7	70.3	72.3	78.4	56

STOP


SOUTHERN ICE LIMIT 08 MAY 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths
C1,C2,C3 = Concentration of thickest (C1), 2nd thickest (C2), and 3rd thickest (C3) ice
S1,S2,S3 = Stage of development of thickest (S1), 2nd thickest (S2), and 3rd thickest (S3) ice
~C = Concentration of ice within areas of strips and patches
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
2 = Young ice (10-30 cm)
3 = Young ice (10-30 cm)
4 = First year (30-200 cm)
5 = First year thin (30-70 cm)
6 = First year medium (70-120 cm)
7 = First year thick (120-200 cm)
8 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. See ice which forms and remains fast along the coast
125
Theoretical thickness of this season's growth (cm), based on freezing degree days
forecasted for first day of each month on four succeeding charts
Ice boundary inferred or satellite observed
Ice boundary estimated
Seven day forecast of ice edge position
ICE EDGE
SEA ICE FREE
80°N
75°N
70°N
65°N
60°N
35°W
30°W
25°W
20°W
15°W
10°W
5°W
0°



BUOY 2891 2-8 MAY 84

MONTH: 2-8 MAY 84 BUOY: 2891

OUTPUT IN FILE ARNA2891

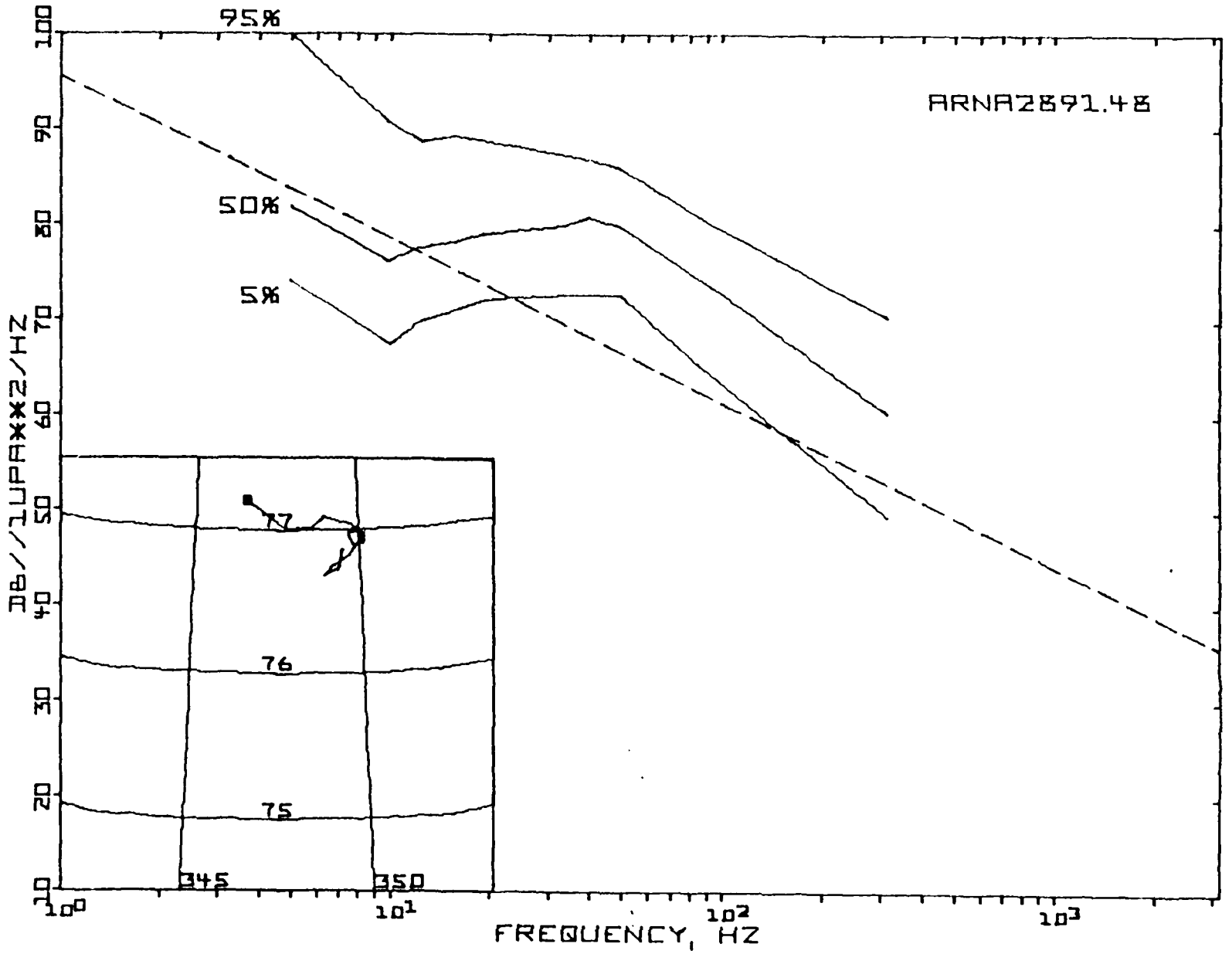
DISPLACEMENT (N. MI.): 47.775 NORTH: -37.740 EAST: 29.295
DIRECTION (TRUE): 142.190

THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	85.8	8.3	71.4	73.1	75.2	79.1	83.4	94.4	97.9	98.6	99.9	56
10.0	83.1	6.6	69.3	71.5	74.0	78.5	82.6	88.6	92.1	92.8	94.0	56
12.5	83.9	6.4	70.4	72.3	75.3	79.2	82.5	89.5	92.0	93.3	94.5	56
16.0	84.0	6.2	69.8	73.8	76.5	79.8	83.1	89.1	91.8	92.4	97.0	56
20.0	83.5	6.0	69.9	72.1	76.6	79.1	82.6	88.6	91.1	91.9	94.6	56
25.0	82.4	5.7	69.8	73.4	75.1	78.4	81.1	87.1	89.8	90.4	92.3	56
31.5	80.7	5.5	67.6	72.1	73.7	77.5	78.7	84.7	86.6	88.9	91.7	56
40.0	79.2	6.2	66.7	69.5	71.5	73.7	77.6	84.8	86.7	88.3	94.3	56
50.0	77.7	6.2	64.5	67.2	69.7	73.8	75.7	82.6	85.9	86.9	88.6	56
100.0	70.7	6.9	58.1	58.9	62.4	65.6	68.4	76.2	79.4	81.4	84.9	56
315.0	56.1	7.5	43.4	45.3	46.9	50.4	55.4	61.5	66.9	67.5	71.7	56

STOP

DATA BY WEEKS



BUOY 2891 AUG 1984

MONTH: 30MAY-5 JUN 84 BUOY: 7891

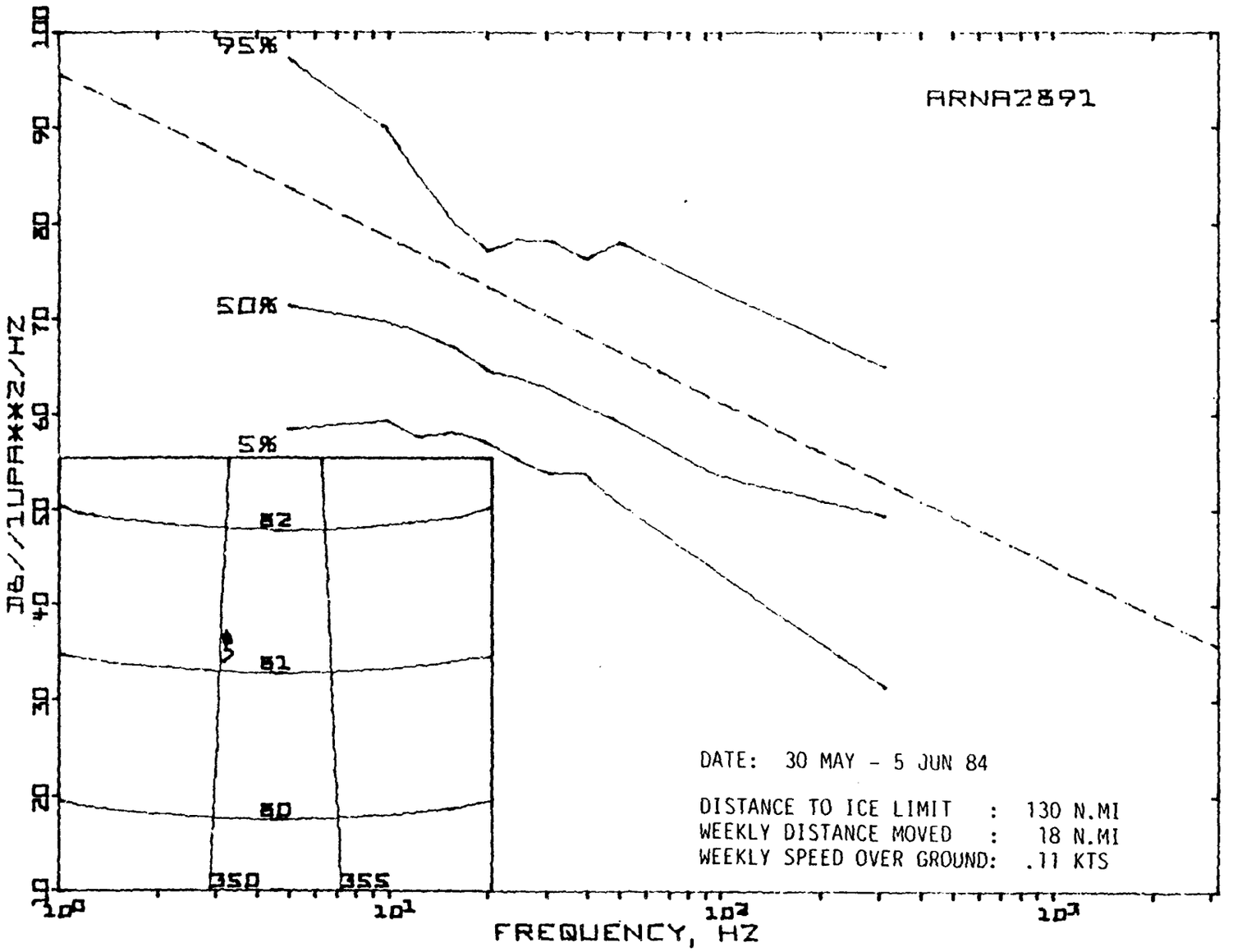
OUTPUT IN FILE ARNA2891

DISPLACEMENT (N. MI.): 17.626 NORTH: -16.380 EAST: -6.509
DIRECTION (TRUE): 201.693

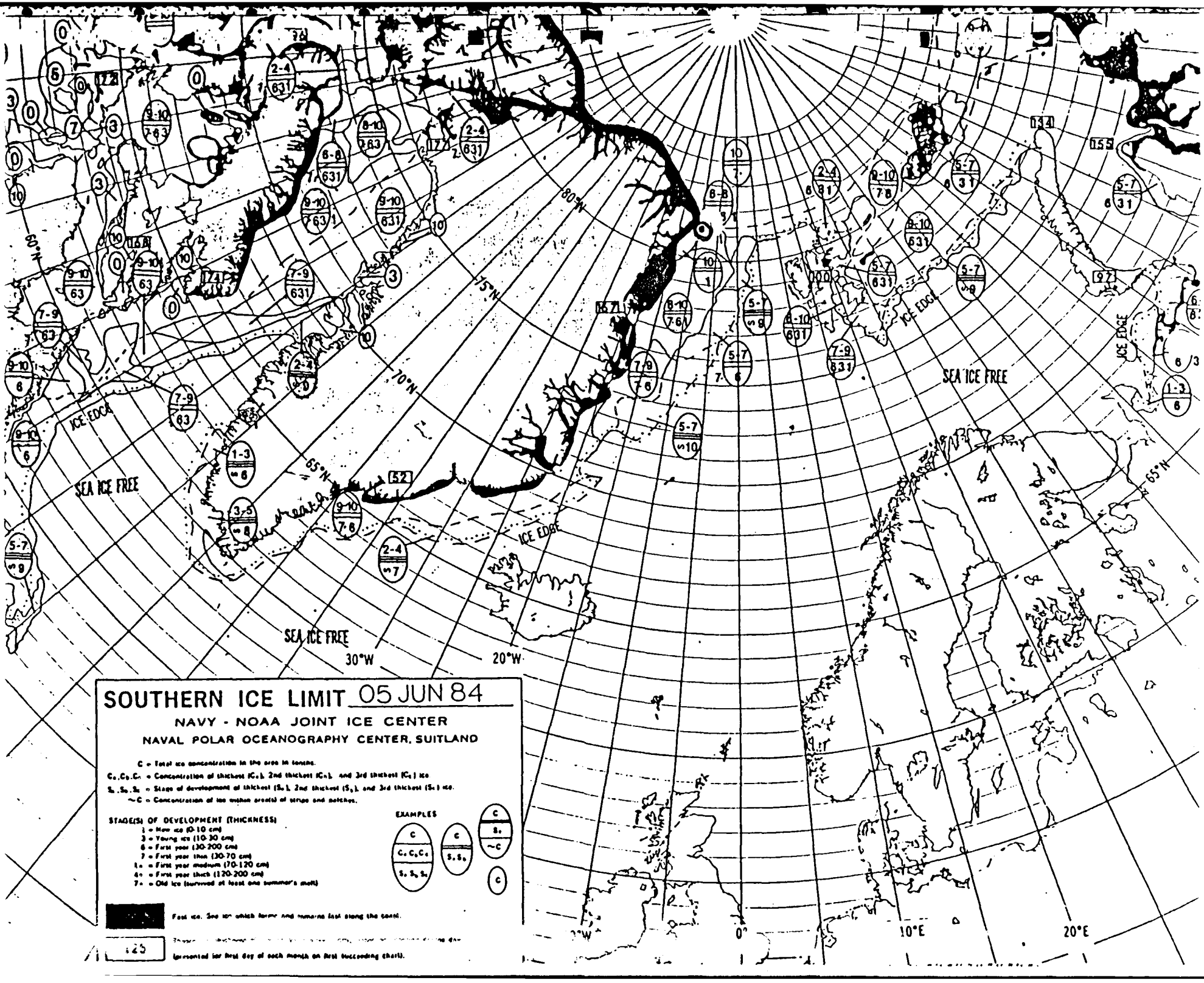
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	72.5	11.2	56.4	58.3	59.1	63.4	71.4	77.4	86.6	97.2	102.4	55
10.0	70.5	8.8	56.5	59.3	60.1	64.5	69.6	74.0	78.5	89.6	98.1	56
12.5	69.6	7.4	56.4	57.5	61.3	64.4	68.6	73.9	77.5	84.4	88.5	55
16.0	67.5	7.3	58.1	58.1	59.0	61.9	66.9	70.4	74.5	79.8	92.6	56
20.0	66.0	7.2	57.1	57.1	58.2	60.7	64.5	69.3	73.0	77.1	91.1	56
25.0	65.7	8.0	54.3	55.1	57.2	60.3	63.8	71.2	74.3	78.4	91.4	56
31.5	64.1	8.4	50.8	53.7	55.4	57.5	62.5	67.6	72.6	78.1	90.1	56
40.0	63.2	8.6	50.9	53.7	54.6	56.9	60.7	66.7	72.7	76.2	91.8	56
50.0	61.8	9.2	48.8	50.6	53.2	55.2	59.3	65.3	71.3	78.0	91.9	56
100.0	56.1	10.5	40.8	43.3	44.1	49.3	53.5	62.4	67.4	72.8	87.4	56
315.0	49.6	11.1	30.4	31.4	36.3	42.5	49.4	56.5	61.5	65.0	81.5	56

STOP



BUOY 2891 30MAY-5 JUN 84



SOUTHERN ICE LIMIT 05 JUN 84

NAVY - NOAA JOINT ICE CENTER

NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths.

C_a, C_b, C_c = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice

S_a, S_b, S_c = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

~C = Concentration of ice within areas of strips and patches.

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
4 = First year (30-200 cm)
7 = First year thin (30-70 cm)
8 = First year medium (70-120 cm)
9 = First year thick (120-200 cm)
7+ = Old ice (survived at least one summer's melt)

EXAMPLES

C / $C_a C_b C_c$ / $S_a S_b S_c$

C / $S_a S_b$

C / S_a / ~C

C

Fast ice. See ice which forms and remains fast along the coast.

125

(presented for first day of each month on first succeeding chart).

MONTH: 6-12 JUN 84 BUOY: 2891

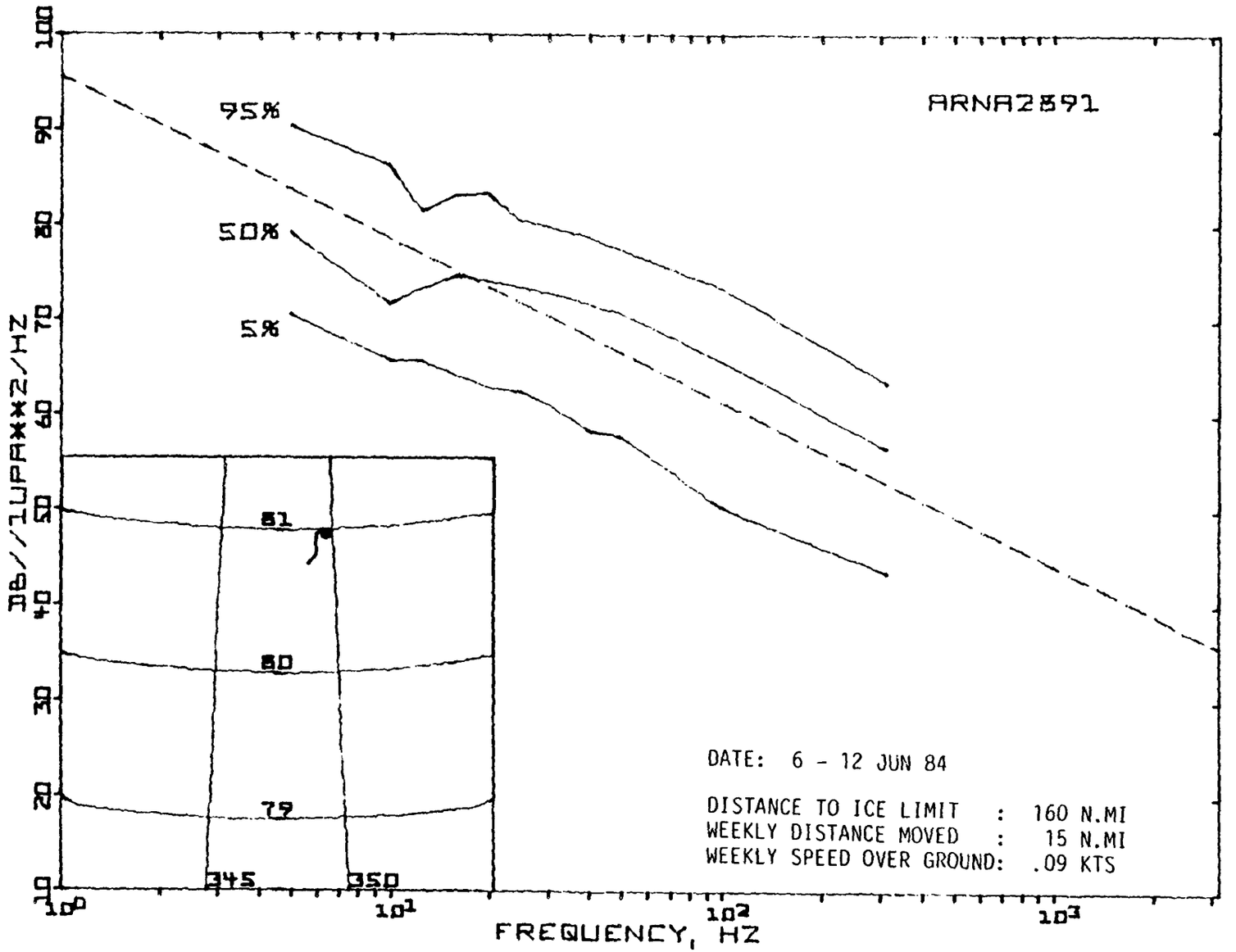
OUTPUT IN FILE ARN92891

DISPLACEMENT (N. MI.): 14.804 NORTH: -11.160 EAST: -9.727
DIRECTION (TRUE): 221.100

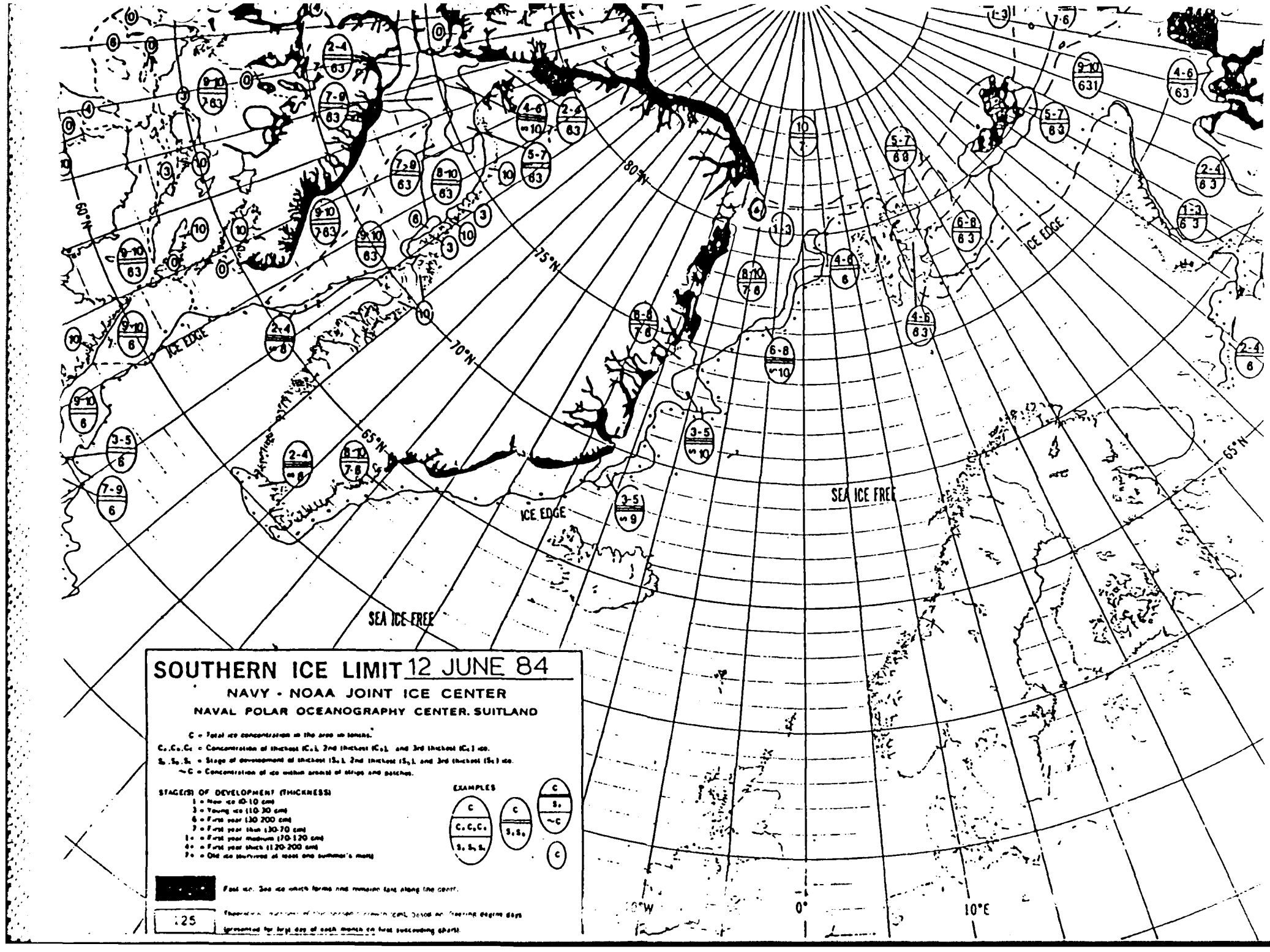
THE NUMBER OF DATA SAMPLES IS 52

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	79.1	6.7	67.8	70.3	71.2	73.9	79.1	83.4	87.2	90.3	96.4	52
10.0	73.7	5.9	64.5	65.5	67.3	69.9	71.5	77.6	82.6	86.1	87.4	52
12.5	73.7	5.5	64.4	65.4	67.9	69.2	73.2	76.4	80.6	81.3	92.7	52
16.0	73.5	6.4	59.8	63.8	66.0	67.9	74.5	78.1	81.2	83.1	93.9	52
20.0	72.7	6.3	59.9	62.6	63.9	67.9	73.9	77.1	80.7	83.2	87.4	52
25.0	72.8	6.0	60.3	62.2	63.1	67.3	73.4	77.2	79.4	80.3	87.1	52
31.5	71.7	6.3	59.4	60.6	62.9	66.6	72.6	76.2	78.7	79.7	85.7	52
40.0	70.1	7.2	56.2	58.2	58.7	64.2	71.5	75.5	78.7	78.7	82.9	52
50.0	69.5	6.8	56.6	57.7	59.3	62.8	70.6	74.8	76.6	77.3	83.4	52
100.0	63.7	7.6	48.4	50.2	51.6	57.3	65.6	70.2	72.2	73.4	76.2	50
315.0	55.5	6.8	38.2	43.4	45.3	50.4	56.5	60.9	62.5	63.4	67.5	52

STOP



BUOY 2891 6-12 JUN 84


SOUTHERN ICE LIMIT 12 JUNE 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths.
C_t, C_2, C_3 = Concentration of thickest (C_t), 2nd thickest (C_2), and 3rd thickest (C_3) ice.
S_t, S_2, S_3 = Stage of development of thickest (S_t), 2nd thickest (S_2), and 3rd thickest (S_3) ice.
~C = Concentration of ice within areas of strips and patches.
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
4 = First year (30-200 cm)
5 = First year thin (30-70 cm)
6 = First year medium (70-120 cm)
7 = First year thick (120-200 cm)
8 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. See ice charts for more detail.
.25
Theoretical limit of ice based on freezing degree days
Generated for first day of each month as first succeeding chart.
ICE EDGE
SEA ICE FREE
80°N
75°N
70°N
65°N
10°W
0°
10°E

MONTH: 13-19 JUN 84 BUOY: 2891

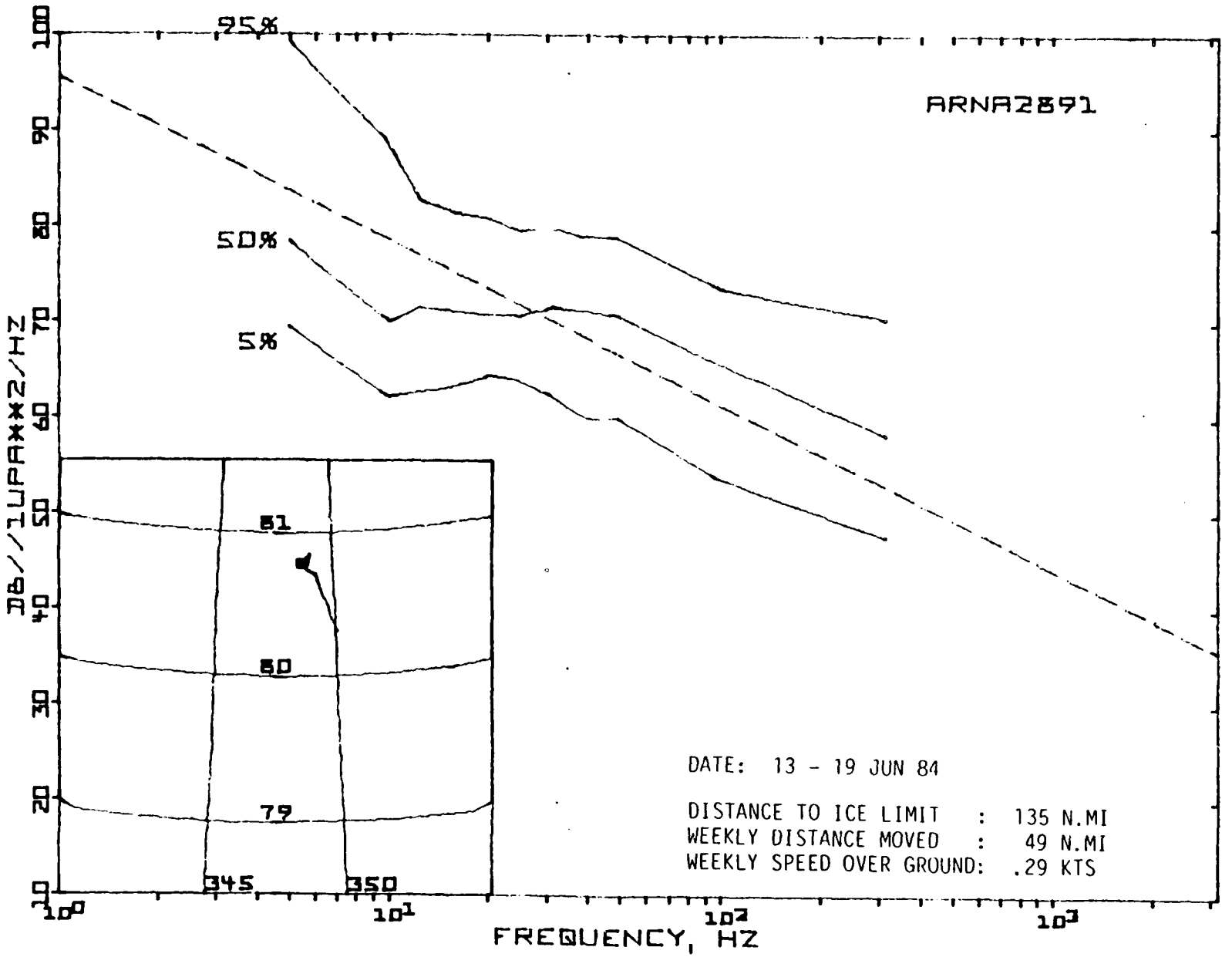
OUTPUT IN FILE ARNA2891

DISPLACEMENT (N. MI.): 48.660 NORTH: -41.700 EAST: 25.078
DIRECTION (TRUE): 148.988

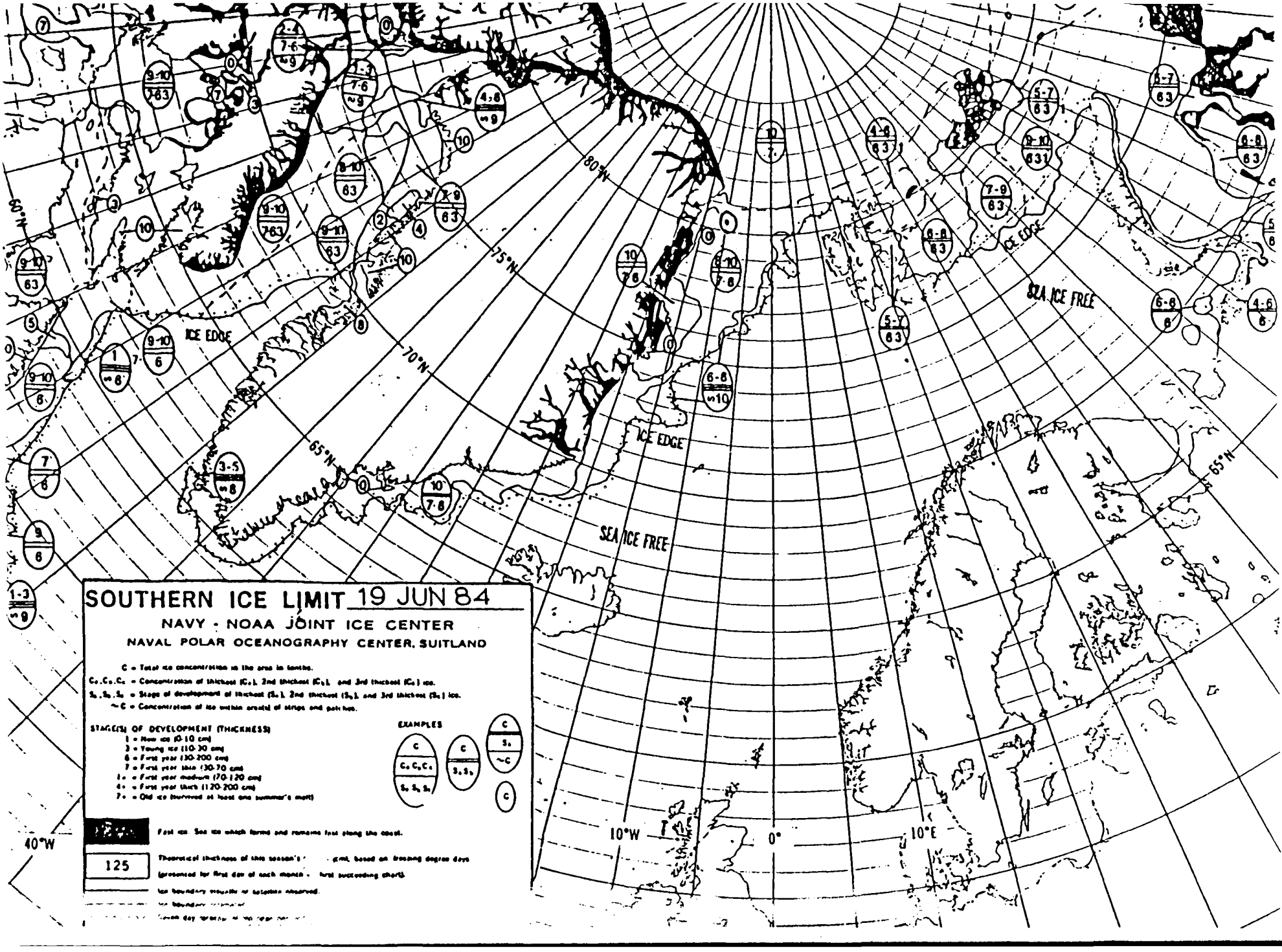
THE NUMBER OF DATA SAMPLES IS 52

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	79.7	10.1	60.6	69.2	70.3	73.9	78.3	81.2	91.9	99.3	119.3	51
10.0	71.0	8.4	44.5	62.0	63.3	66.4	69.9	74.0	80.1	88.6	92.1	51
12.5	71.5	5.9	58.4	62.6	63.5	67.9	71.4	73.9	77.5	82.5	88.5	50
16.0	71.7	6.2	58.1	63.1	65.0	67.8	71.0	74.5	79.0	81.2	95.9	50
20.0	71.4	5.2	62.6	64.2	65.1	67.9	70.5	74.6	78.2	80.7	85.1	50
25.0	71.0	5.1	61.9	63.8	64.5	67.3	70.5	74.3	78.4	79.4	84.4	50
31.5	71.4	6.5	59.7	62.2	63.4	67.6	71.5	73.7	78.7	79.7	93.0	51
40.0	70.1	7.6	38.2	59.8	60.7	66.1	70.9	74.6	78.7	78.7	83.6	51
50.0	70.5	5.7	59.3	60.0	61.2	67.2	70.6	74.8	76.6	78.7	82.6	50
100.0	65.5	6.1	52.1	53.5	55.3	62.4	65.6	68.4	73.4	73.4	78.3	51
315.0	59.7	10.3	46.2	47.5	48.3	55.4	58.2	62.5	68.5	70.3	117.2	52

STOP



BUOY 2891 13-19 JUN 84


SOUTHERN ICE LIMIT 19 JUN 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths.
$C_1 C_2 C_3$ = Concentration of thickest (C_1), 2nd thickest (C_2), and 3rd thickest (C_3) ice.
$S_1 S_2 S_3$ = Stage of development of thickest (S_1), 2nd thickest (S_2), and 3rd thickest (S_3) ice.
~C = Concentration of ice within areas of strips and patches.
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
6 = First year (30-200 cm)
7 = First year thin (30-70 cm)
8 = First year medium (70-120 cm)
9 = First year thick (120-200 cm)
7 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. See ice which forms and remains fast along the coast.
125
Theoretical thickness of this season's [illegible] grid, based on freezing degree days (presented for first day of each month - first succeeding chart).
Ice boundary usually at location observed.
Ice boundary [illegible]
[illegible] day [illegible]
ICE EDGE
SEA ICE FREE
80°N
75°N
70°N
65°N
60°N
40°W
10°W
0°
10°E

MONTH: 20-26 JUN 84 BUOY: 2891

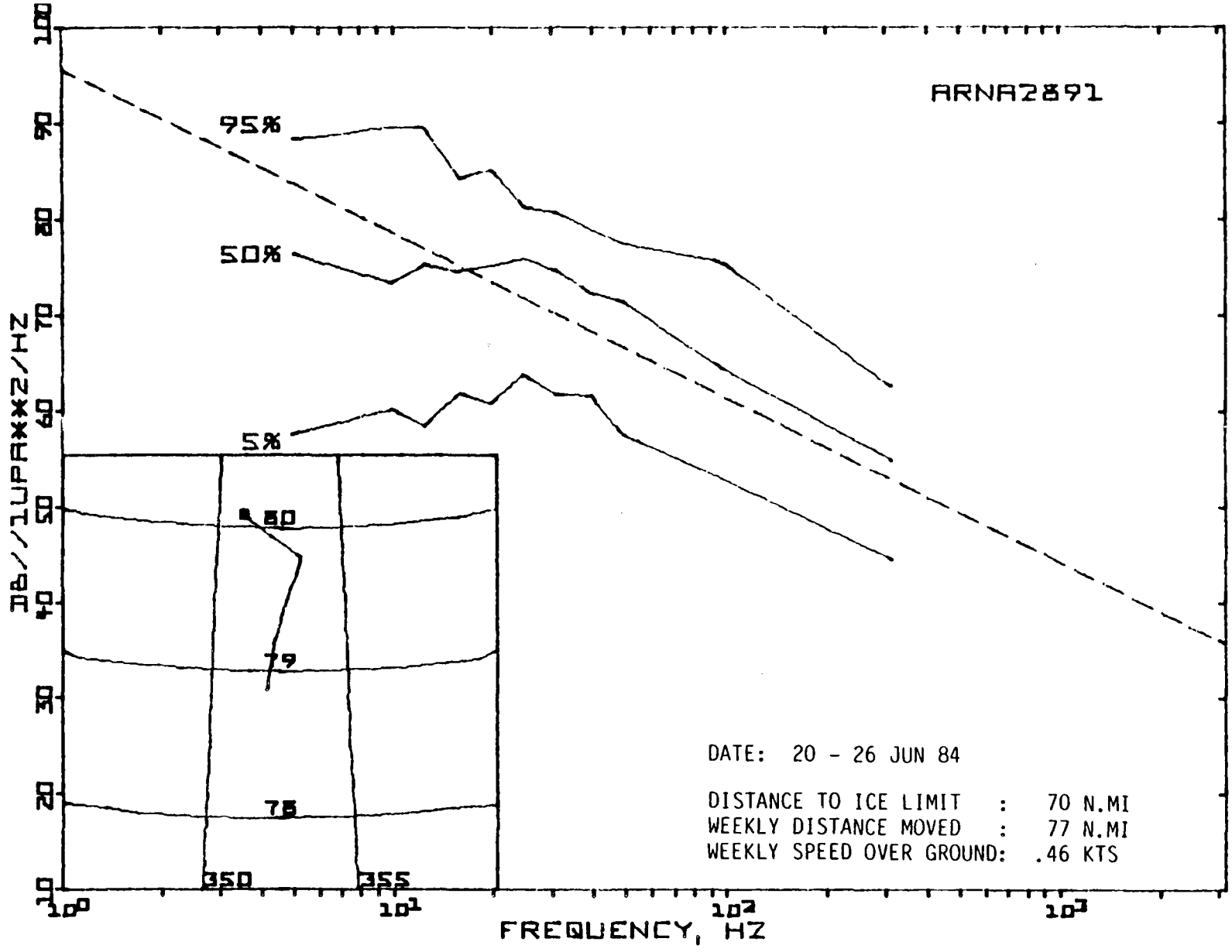
OUTPUT IN FILE ARNA2891

DISPLACEMENT (N. MI.): 77.138 NORTH: -76.200 EAST: 11.993
DIRECTION (TRUE): 171.071

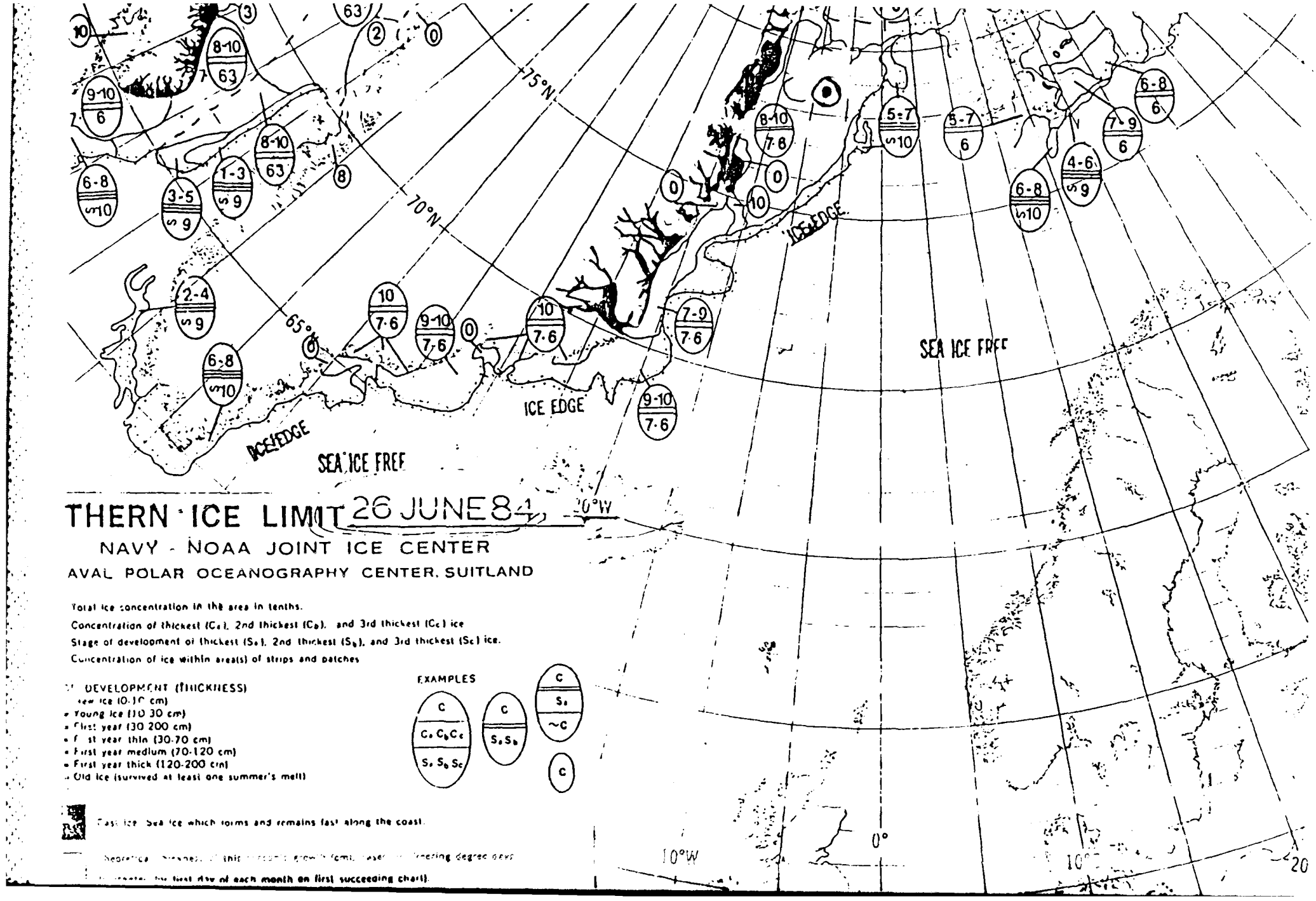
THE NUMBER OF DATA SAMPLES IS 54

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	77.2	8.0	56.4	57.4	63.4	75.2	76.4	81.8	87.2	88.4	93.9	54
10.0	74.9	9.4	57.6	60.1	62.6	66.4	73.3	82.6	88.6	89.6	90.5	53
12.5	75.0	9.5	53.2	58.4	61.9	67.2	75.3	82.5	87.9	89.5	90.4	54
16.0	74.2	7.5	52.9	61.9	63.1	69.8	74.5	79.8	82.5	84.1	89.1	54
20.0	74.2	7.5	57.1	60.7	61.3	69.9	75.3	80.7	82.0	85.1	85.9	54
25.0	74.4	5.7	59.4	63.8	64.5	71.2	75.9	78.4	80.3	81.1	83.2	54
31.5	72.7	6.0	58.1	61.6	62.9	67.6	74.6	76.8	78.7	80.6	83.5	53
40.0	71.0	5.8	59.8	61.5	61.7	66.1	72.1	74.6	77.6	78.7	86.7	54
50.0	70.1	6.4	57.3	57.3	59.8	66.6	71.3	73.8	77.3	77.3	85.9	54
100.0	63.3	7.0	51.6	52.8	53.4	56.9	64.1	67.4	68.4	75.3	81.4	53
315.0	54.0	5.9	40.9	44.4	45.3	50.4	54.9	57.4	60.3	62.5	71.0	54

STOP



BUOY 2891 20-26 JUN 84



THERN ICE LIMIT 26 JUNE 8-1

NAVY - NOAA JOINT ICE CENTER

AVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

Total ice concentration in the area in tenths.

Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice

Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

Concentration of ice within area(s) of strips and patches

DEVELOPMENT (THICKNESS)

- New ice (0-10 cm)
- Young ice (10-30 cm)
- First year (30-200 cm)
- First year thin (30-70 cm)
- First year medium (70-120 cm)
- First year thick (120-200 cm)
- Old ice (survived at least one summer's melt)

EXAMPLES

Fast ice: Sea ice which forms and remains fast along the coast.

[illegible] freezing degree days

[illegible] the first day of each month on first succeeding chart).

MONTH: 27JUN-3 JUL 84 BUOY: 2891

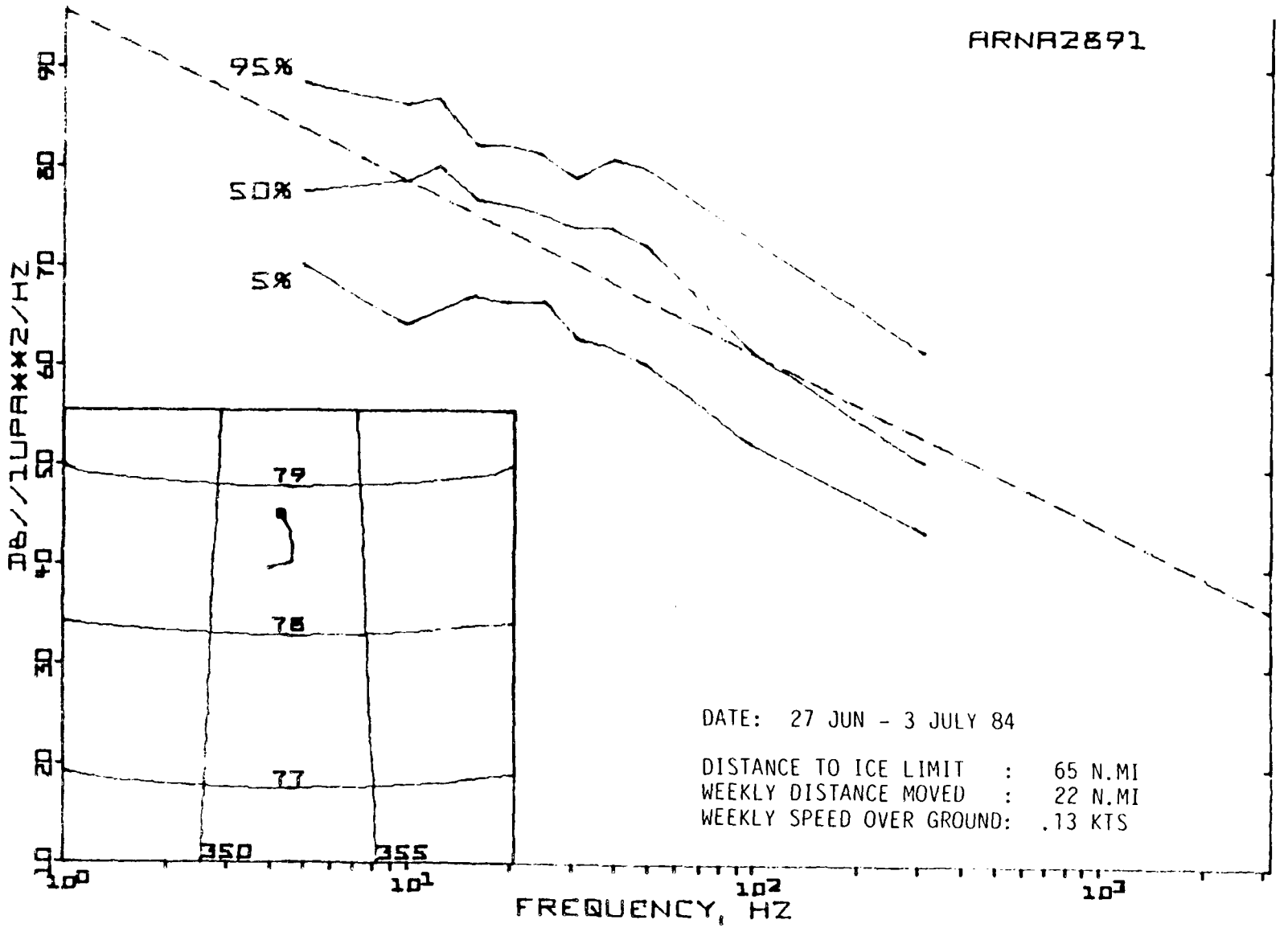
OUTPUT IN FILE ARNA2891

DISPLACEMENT (N. MI.): 22.052 NORTH: -21.660 EAST: -4.143
DIRECTION (TRUE): 190.848

THE NUMBER OF DATA SAMPLES IS 54

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	78.0	6.5	68.5	69.8	71.4	73.1	77.4	79.9	88.4	88.4	100.4	54
10.0	76.5	7.8	63.3	63.9	64.5	69.9	78.5	82.6	85.3	86.1	91.3	54
12.5	77.8	7.5	64.4	65.4	66.3	71.4	80.0	83.5	86.0	86.7	91.2	54
16.0	75.6	4.9	66.0	66.9	67.8	72.0	76.5	79.8	81.7	81.9	84.1	54
20.0	74.8	5.2	65.1	66.1	66.1	71.1	76.0	78.2	80.7	82.0	84.2	54
25.0	74.9	5.2	65.1	66.3	66.3	70.5	75.1	78.4	81.1	81.1	84.4	52
31.5	72.6	5.0	61.6	62.5	64.8	70.1	73.7	76.8	78.7	78.7	81.4	54
40.0	72.9	6.0	60.7	61.7	62.6	67.7	73.7	76.9	79.8	80.7	84.2	52
50.0	70.9	6.8	59.3	60.0	60.6	65.3	72.0	74.8	79.3	79.8	84.7	54
100.0	61.8	7.5	46.8	52.1	52.8	55.3	61.4	69.3	71.6	72.8	76.2	54
315.0	51.5	6.3	43.4	43.4	44.4	45.3	50.4	57.4	59.7	61.5	65.0	54

STOP



BUOY 2891 27JUN-3 JUL 84

MONTH: 1-7 AUG 84 BUOY: 2891

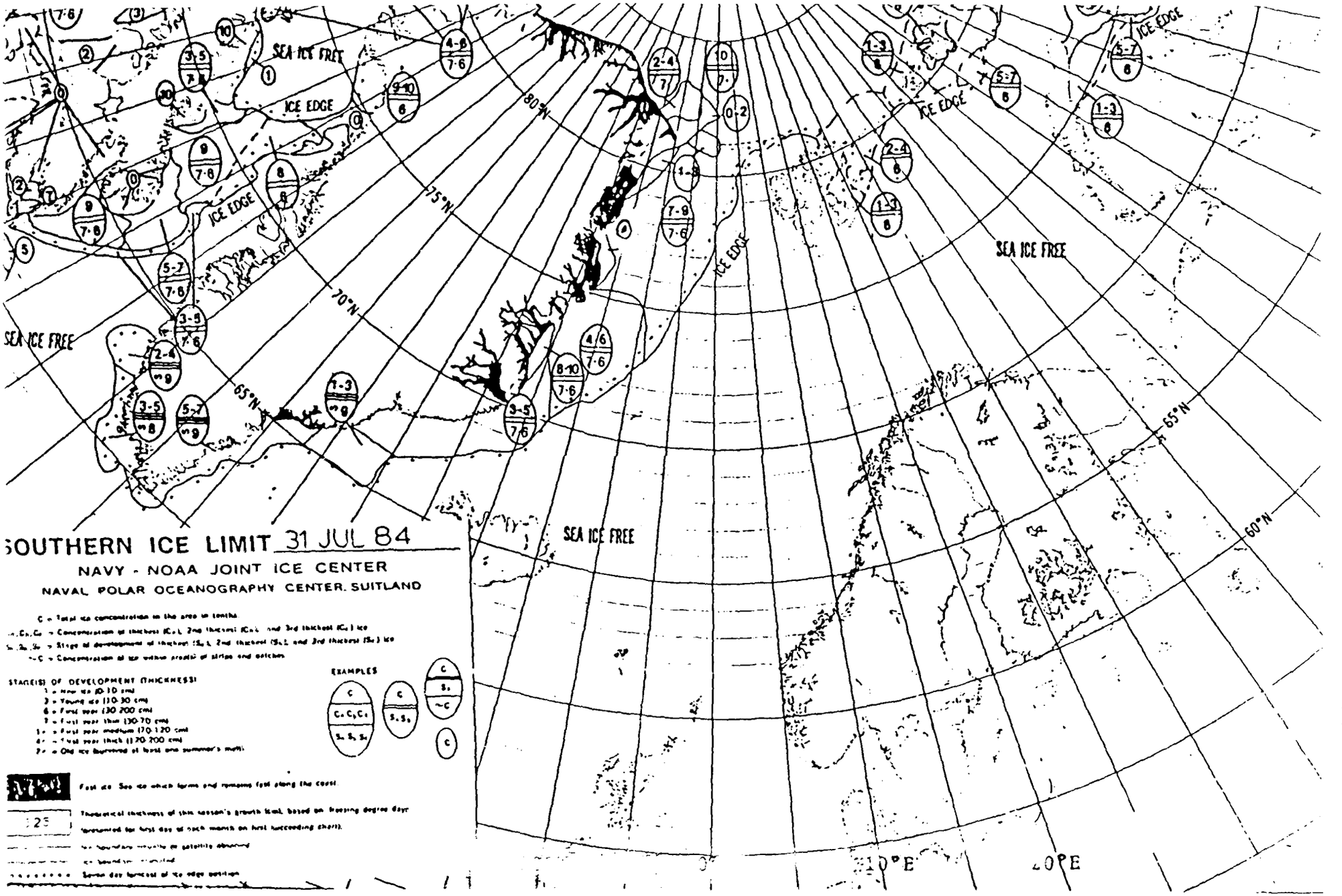
OUTPUT IN FILE ARNA2891

DISPLACEMENT (N. MI.): 49.651 NORTH: -15.481 EAST: 47.176
DIRECTION (TRUE): 108.170

THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY HZ	AVG	STD DEV	MIN	5%	10%	25%	MEDIAN 50%	75%	90%	95%	MAX	N
5.0	81.8	6.9	71.4	73.9	74.5	76.4	80.6	84.3	88.4	97.2	102.4	55
10.0	75.1	6.1	64.5	66.4	67.3	70.5	74.7	77.6	83.6	86.1	94.0	56
12.5	76.8	5.1	67.2	69.8	69.8	73.9	76.4	80.0	82.5	85.2	92.0	56
16.0	77.3	4.5	67.8	71.0	72.0	73.8	76.5	79.8	83.1	85.0	87.3	56
20.0	78.6	4.7	70.5	71.1	72.1	75.3	78.2	81.3	85.1	85.9	91.9	56
25.0	79.4	4.4	70.5	72.3	74.3	76.5	78.4	82.6	86.3	86.3	89.2	56
31.5	79.2	4.4	70.1	70.8	72.6	76.2	78.7	82.9	84.7	85.7	87.4	56
40.0	78.7	4.9	66.1	68.6	72.7	75.5	78.7	82.3	84.8	84.8	86.7	56
50.0	78.3	4.8	66.0	70.6	72.6	74.8	78.7	81.8	84.0	84.7	88.6	56
100.0	70.3	5.6	52.1	59.6	64.1	67.4	69.3	73.4	77.6	78.3	79.4	56
315.0	58.7	6.5	43.4	47.6	51.4	54.9	58.2	64.2	68.5	69.4	71.7	56

STOP



SOUTHERN ICE LIMIT 31 JUL 84

NAVY - NOAA JOINT ICE CENTER

NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths

C_1, C_2, C_3 = Concentration of thickness (C_1), 2nd thickest (C_2), and 3rd thickest (C_3) ice

S_1, S_2, S_3 = Stage of development of thickest (S_1), 2nd thickest (S_2), and 3rd thickest (S_3) ice

~C = Concentration of ice within areas of strips and patches

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0-10 cm)
2 = Young ice (10-30 cm)
4 = First year (30-200 cm)
7 = First year thin (30-70 cm)
1. = First year medium (70-120 cm)
4. = First year thick (120-200 cm)
7. = Old ice (survived at least one summer's melt)

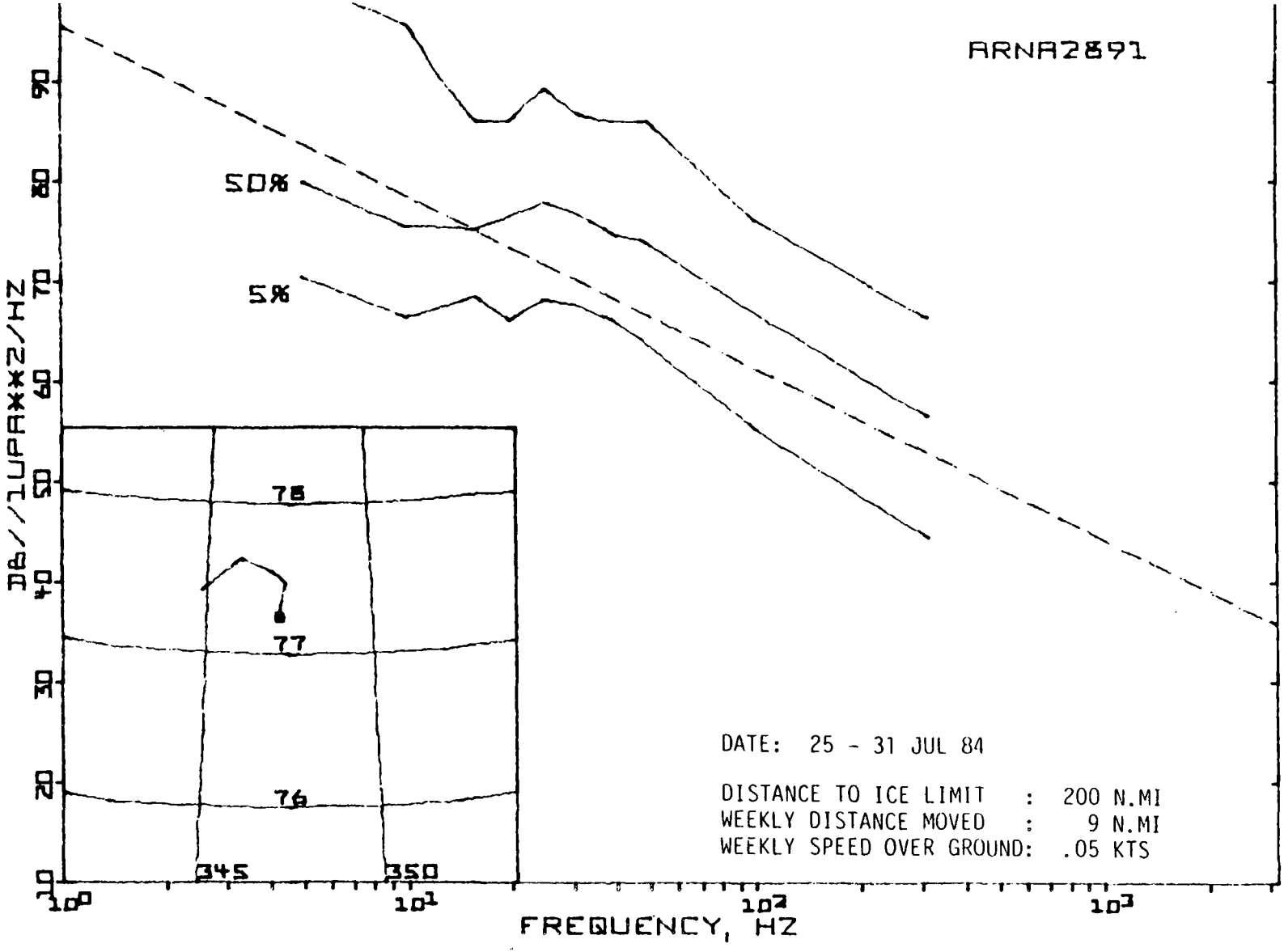
EXAMPLES

Fast ice. Sea ice which forms and remains fast along the coast

Theoretical thickness of this season's growth limit, based on freezing degree days accumulated for first day of each month on first succeeding chart.

Ice boundary inferred

Seven day forecast of ice edge position



BUOY 2891 25-31 JUL 84

MONTH: 25-31 JUL 84 BUOY: 2891

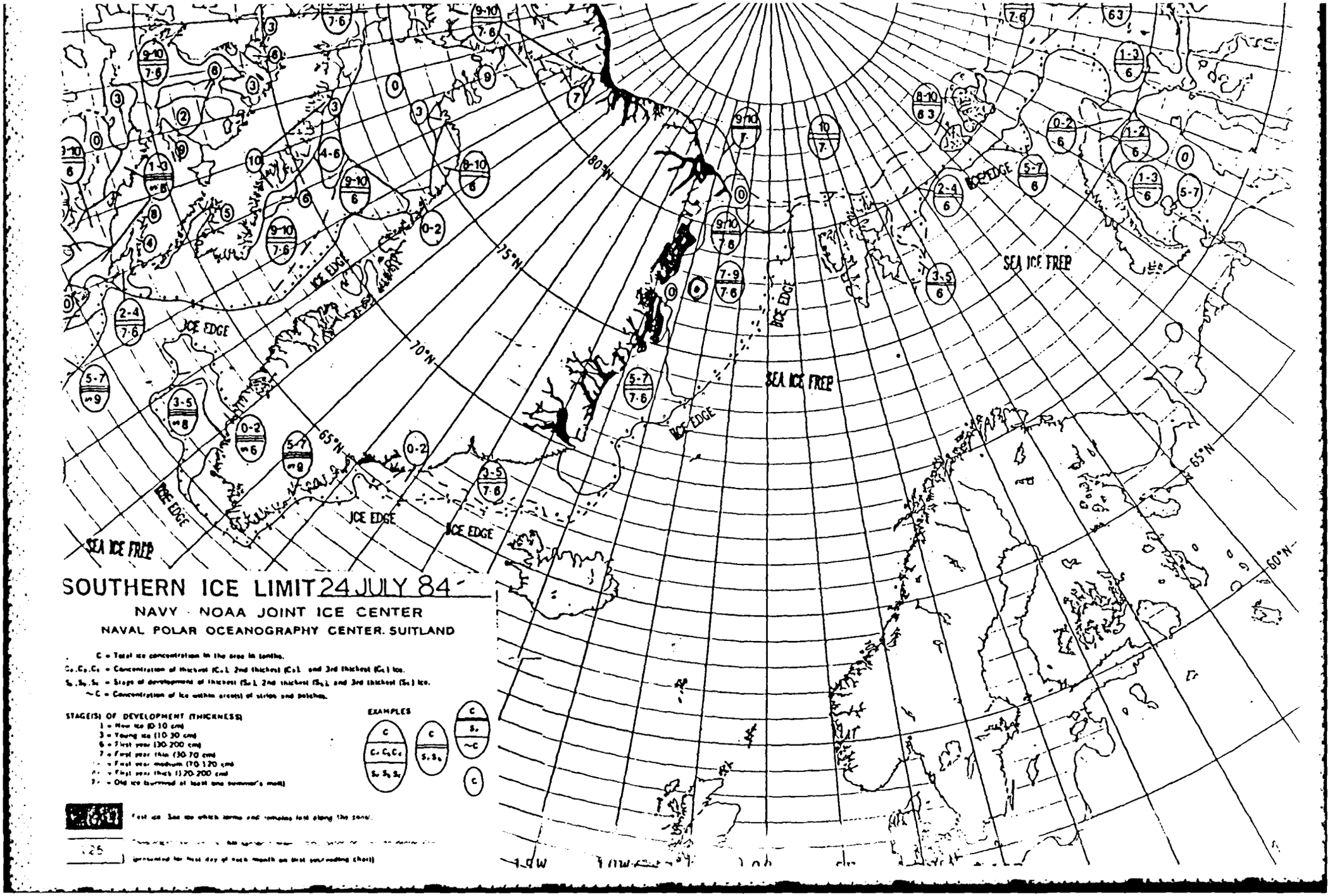
OUTPUT IN FILE ARNA2891

DISPLACEMENT (N. MI.): 8.849 NORTH: -2.879 EAST: -8.368
DIRECTION (TRUE): 251.042

THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	82.8	9.9	69.8	70.3	71.4	75.2	79.9	89.4	93.3	103.2	106.5	56
10.0	76.6	8.4	64.5	66.4	67.3	71.5	75.4	78.5	85.3	95.6	103.4	56
12.5	76.2	7.2	64.4	67.2	68.6	71.4	75.3	77.5	83.5	90.4	98.7	56
16.0	76.4	6.5	66.0	68.5	69.8	72.0	75.2	79.8	82.5	85.8	96.1	56
20.0	76.8	6.0	64.5	66.1	68.6	73.0	76.4	80.7	82.6	85.9	92.7	56
25.0	77.5	6.3	65.1	68.2	69.8	72.3	77.8	80.3	83.8	89.2	98.4	56
31.5	76.7	5.7	66.6	67.6	69.4	72.1	76.8	80.6	82.9	86.6	89.5	56
40.0	75.3	6.4	61.7	66.1	66.7	70.2	74.6	79.8	82.9	85.8	90.8	56
50.0	73.6	6.5	61.2	63.7	64.5	68.8	73.8	78.0	80.9	85.9	87.8	56
100.0	65.7	7.4	52.1	55.3	56.4	58.9	64.8	70.9	73.4	76.2	83.0	56
315.0	54.6	7.9	42.8	44.4	44.4	46.9	56.5	60.3	63.4	66.3	71.7	56

STOP



SOUTHERN ICE LIMIT 24 JULY 84

NAVY - NOAA JOINT ICE CENTER

NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths.

C_1, C_2, C_3 = Concentration of thickest (C_1), 2nd thickest (C_2) and 3rd thickest (C_3) ice.

S_1, S_2, S_3 = Stage of development of thickest (S_1), 2nd thickest (S_2) and 3rd thickest (S_3) ice.

~C = Concentration of ice within areas of strips and patches.

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
6 = First year (30-200 cm)
7 = First year thin (30-70 cm)
- = First year medium (70-120 cm)
^ = First year thick (120-200 cm)
9 = Old ice (survived at least one summer's melt)

EXAMPLES

C
$C_1 C_2 C_3$
$S_1 S_2 S_3$

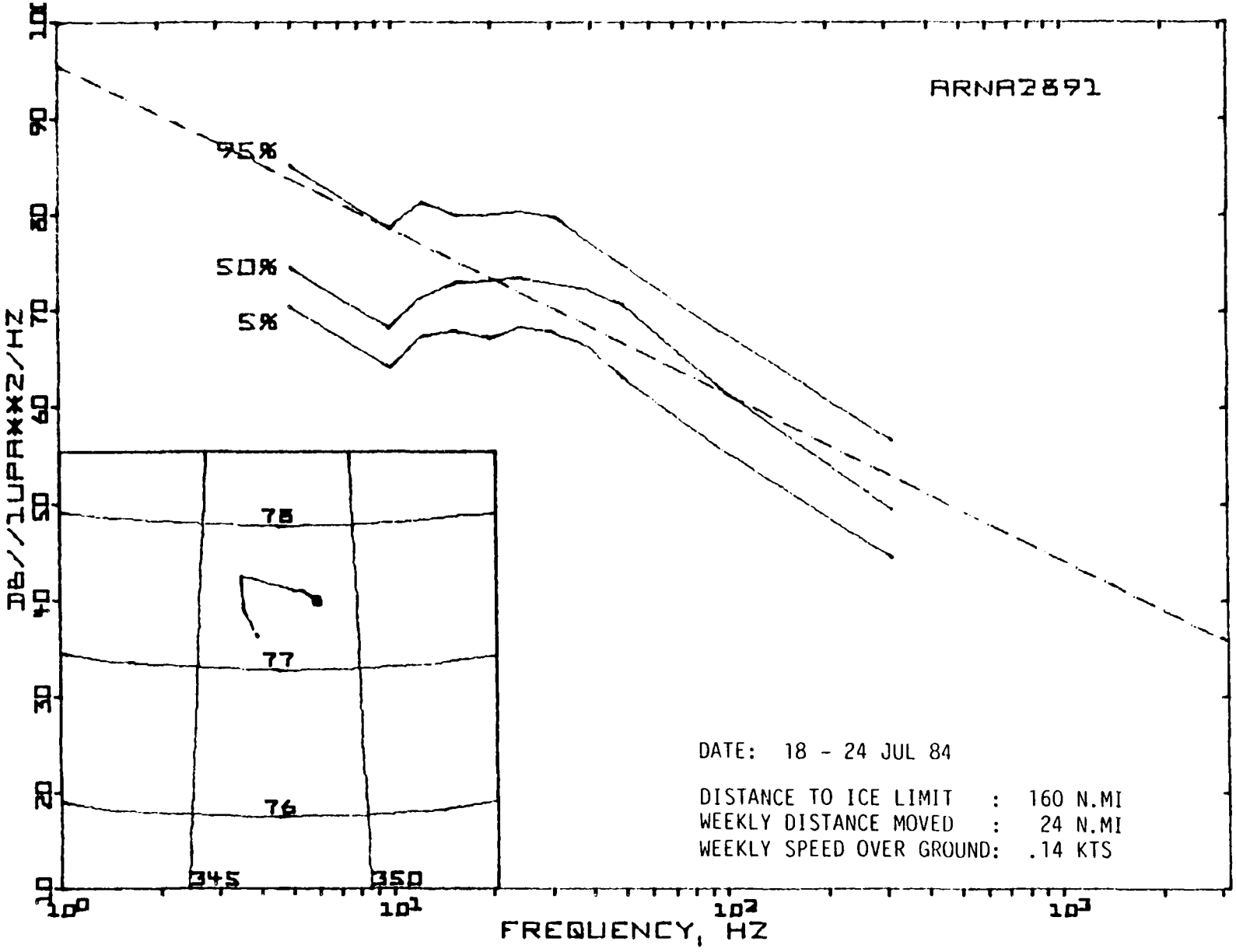
C
$S_1 S_2$

C
S_1
~C

C

6-7 Past ice edge which forms and remains fast along the coast.

25 Ice edge as forecast for first day of each month on first polar reading chart.



BUOY 2891 18-24 JUL 84

MONTH: 18-24 JUL 84 BUOY: 2891

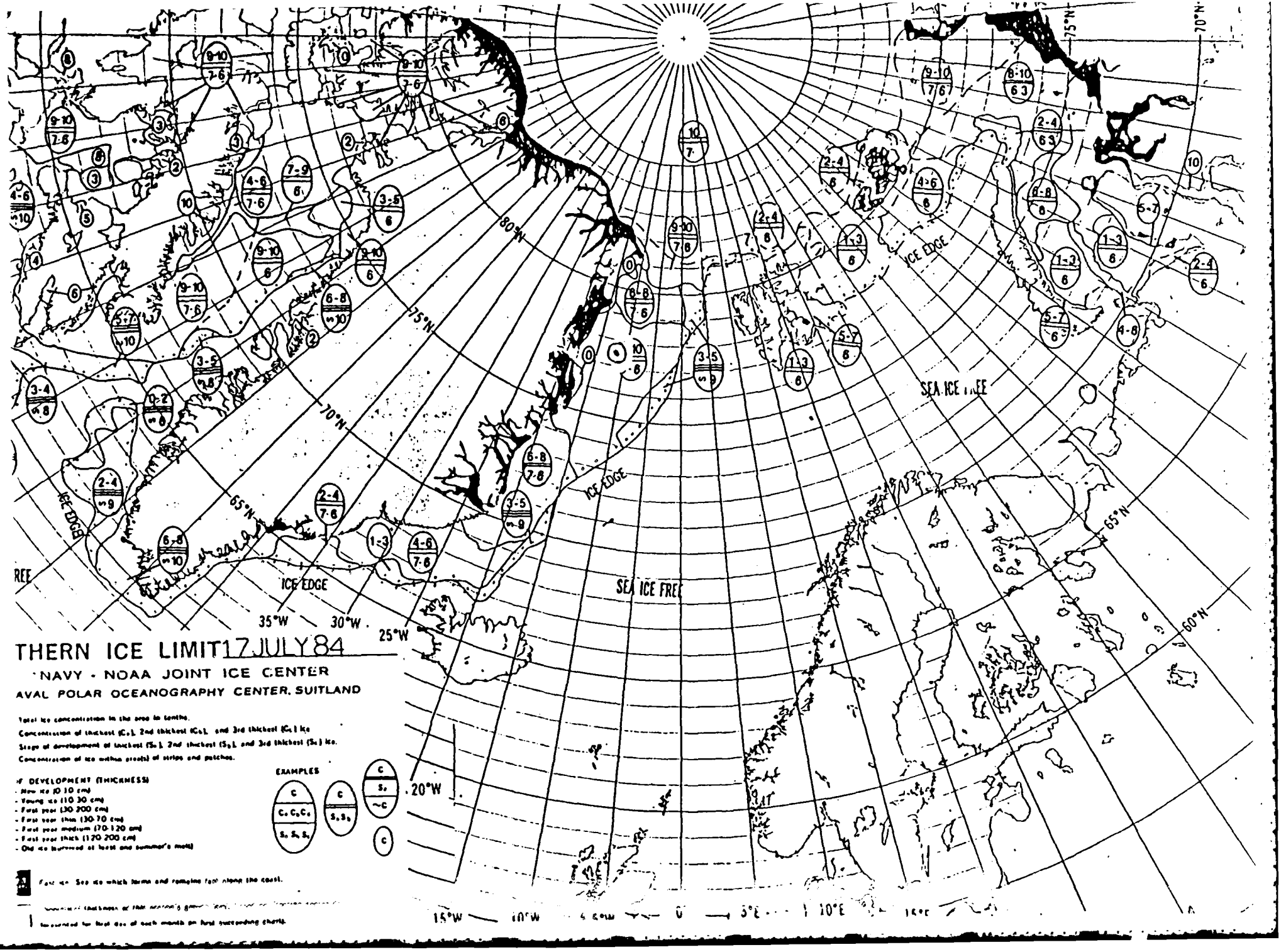
OUTPUT IN FILE ARNA2891

DISPLACEMENT (N. MI.): 24.030 NORTH: -13.740 EAST: -19.714
DIRECTION (TRUE): 235.152

THE NUMBER OF DATA SAMPLES IS 54

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	76.1	5.4	69.8	70.3	70.3	72.3	74.5	77.4	80.6	85.1	100.4	55
10.0	69.7	5.6	62.7	63.9	65.5	66.4	68.0	71.5	74.0	78.5	98.8	55
12.5	72.3	5.5	63.8	67.2	67.9	69.2	71.4	73.2	78.4	81.3	98.0	55
16.0	73.1	4.3	65.0	67.8	67.8	69.8	72.9	75.9	79.0	79.8	84.6	56
20.0	73.2	4.2	65.1	67.0	67.9	70.5	73.0	74.6	77.1	79.9	91.1	54
25.0	74.2	3.9	67.3	68.2	69.1	71.8	73.4	76.5	79.4	80.3	84.4	55
31.5	73.2	3.8	66.6	67.6	68.5	70.1	72.6	74.6	77.5	79.7	84.1	55
40.0	72.0	4.5	64.9	66.1	66.1	68.6	72.1	74.6	76.2	76.9	89.6	54
50.0	70.6	4.3	62.8	62.8	66.0	67.8	70.6	73.2	73.8	74.8	86.9	56
100.0	62.1	4.9	55.3	55.3	56.4	59.6	61.4	63.3	66.2	67.4	83.0	56
315.0	50.8	5.8	43.4	44.4	45.3	47.6	49.4	53.6	55.4	56.5	75.4	55

STOP



THERN ICE LIMIT 17 JULY 84

NAVY - NOAA JOINT ICE CENTER

AVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

Total ice concentration in the area in tenths.

Concentration of thickest (C_1), 2nd thickest (C_2), and 3rd thickest (C_3) ice

Stage of development of thickest (S_1), 2nd thickest (S_2), and 3rd thickest (S_3) ice.

Concentration of ice within areas of strips and patches.

EXAMPLES

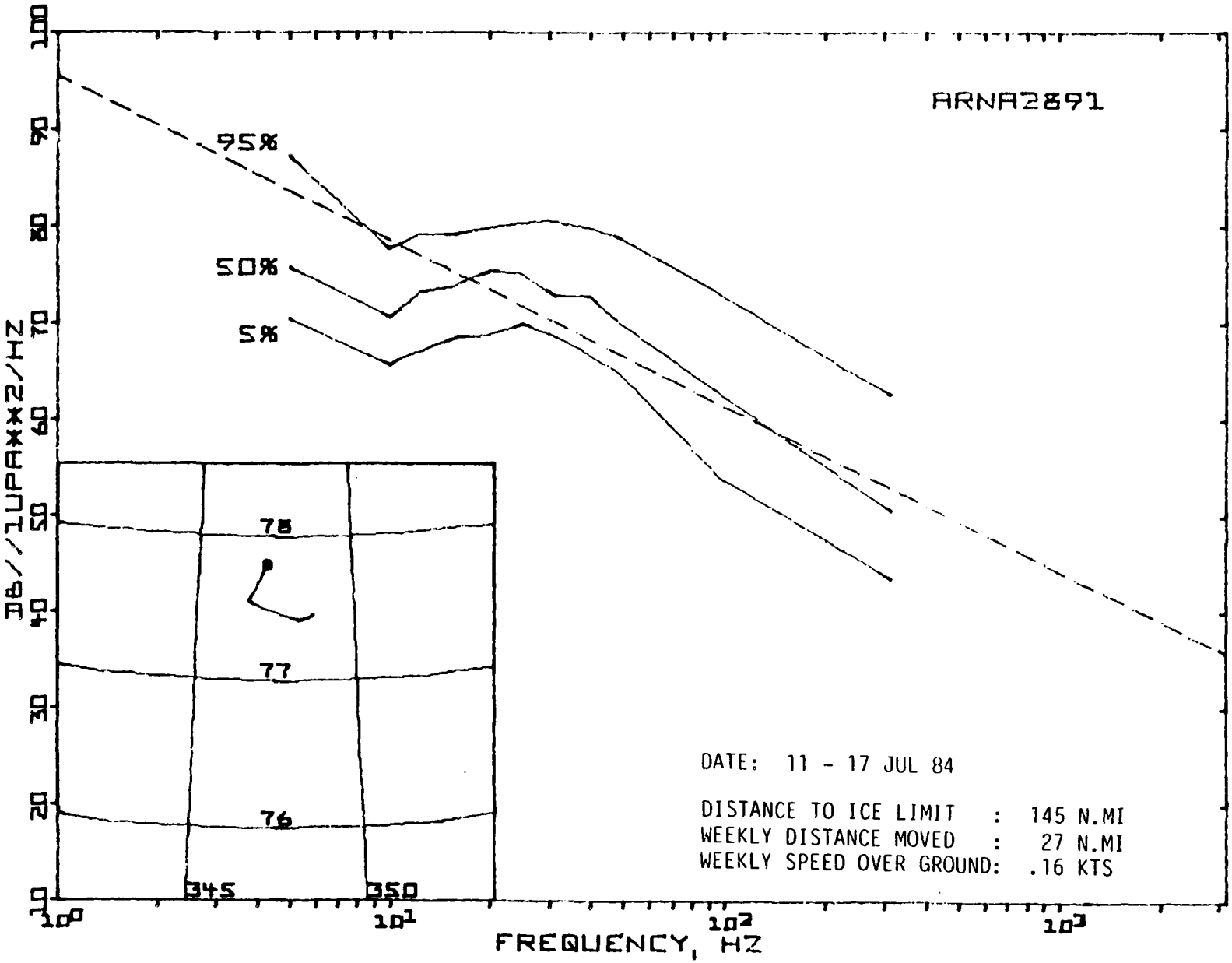
F DEVELOPMENT (THICKNESS)

- New ice (0-10 cm)
- Young ice (10-30 cm)
- First year (30-200 cm)
- First year thin (30-70 cm)
- First year medium (70-120 cm)
- First year thick (120-200 cm)
- Old ice (survived at least one summer's melt)

Fast ice. Sea ice which forms and remains fast along the coast.

Concentration, thickness of that remaining generic form, type or stage of development

Forecasted for first day of each month on first succeeding charts.



BUOY 2891 11-17 JUL 84

MONTH: 11-17 JUL 84 BUOY: 2891

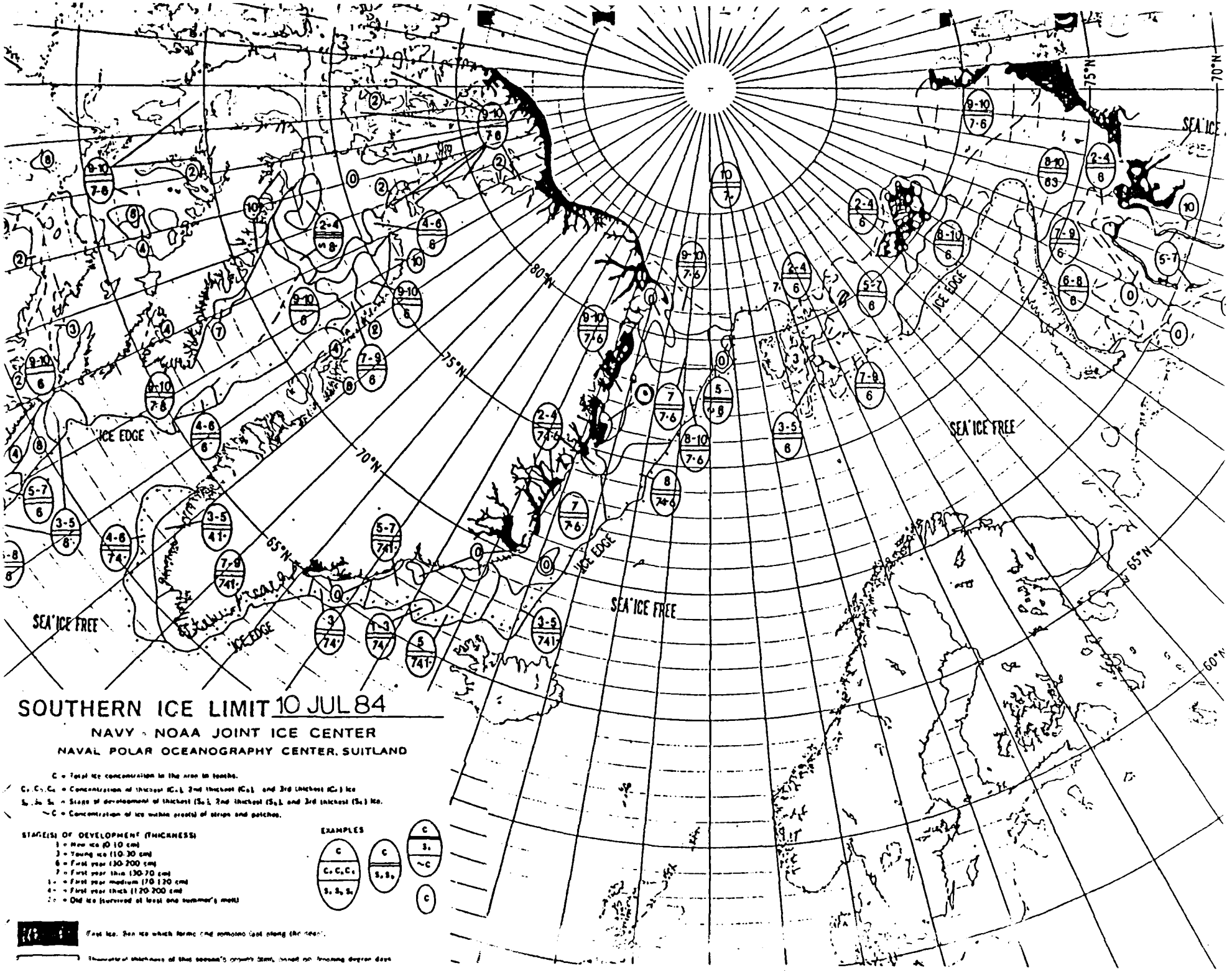
OUTPUT IN FILE ARNA2891

DISPLACEMENT (N. MI.): 27.116 NORTH: -19.440 EAST: 18.904
DIRECTION (TRUE): 135.810

THE NUMBER OF DATA SAMPLES IS 55

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	76.3	5.2	67.8	70.3	70.3	73.1	75.8	78.3	83.4	87.2	94.4	54
10.0	71.4	4.2	64.5	65.5	65.5	68.7	70.5	73.3	76.5	77.6	83.6	55
12.5	73.7	3.7	66.3	67.2	69.2	71.4	73.2	76.4	78.4	79.2	82.5	55
16.0	74.0	3.5	65.0	68.5	69.8	72.0	73.8	76.5	79.0	79.0	80.6	55
20.0	75.0	3.6	66.1	68.6	70.5	72.1	75.3	77.1	79.1	79.9	83.2	54
25.0	75.2	3.3	69.1	69.8	70.5	72.3	75.1	77.8	80.3	80.3	82.6	54
31.5	73.7	3.6	67.6	68.5	69.4	70.8	72.6	75.4	79.7	80.6	81.4	55
40.0	72.8	4.1	64.2	66.7	66.7	70.2	72.7	75.5	78.7	79.8	81.5	54
50.0	70.9	4.5	62.8	64.5	66.0	67.2	69.7	73.8	77.3	78.7	79.8	54
100.0	62.5	6.4	53.5	53.5	54.2	56.4	62.4	67.4	70.2	72.8	79.4	55
315.0	51.6	6.2	43.4	43.4	44.4	45.3	50.4	54.9	59.7	62.5	68.5	54

STOP



SOUTHERN ICE LIMIT 10 JUL 84

NAVY - NOAA JOINT ICE CENTER

NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths.

C_1, C_2, C_3 = Concentration of thickest (C_1), 2nd thickest (C_2), and 3rd thickest (C_3) ice

S_1, S_2, S_3 = Stage of development of thickest (S_1), 2nd thickest (S_2), and 3rd thickest (S_3) ice.

~C = Concentration of ice within pack(s) of strips and patches.

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
6 = First year (30-200 cm)
7 = First year thin (30-70 cm)
8 = First year medium (70-120 cm)
9 = First year thick (120-200 cm)
10 = Old ice (survived at least one summer's melt)

EXAMPLES

C
$C_1 C_2 C_3$
$S_1 S_2 S_3$

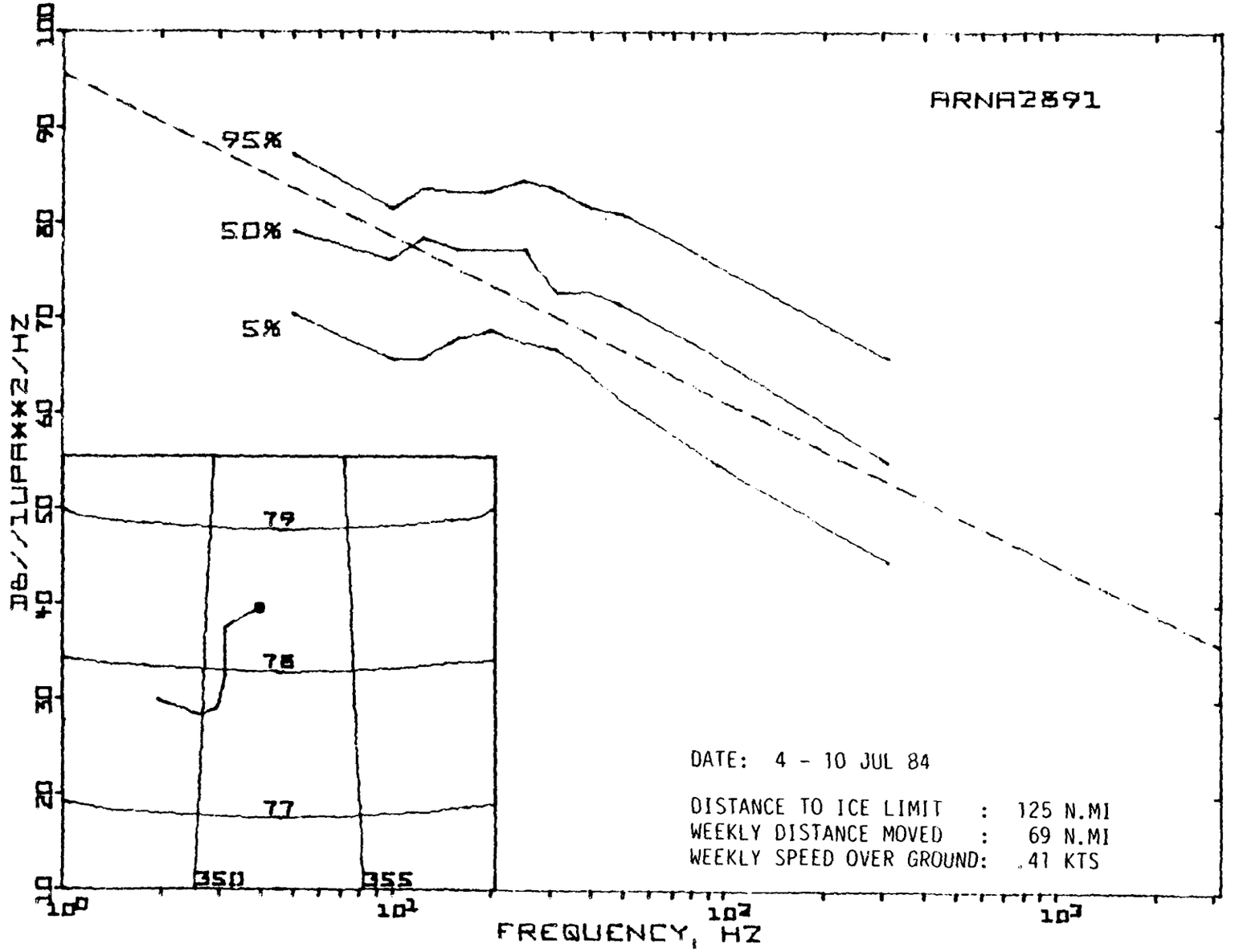
C
$S_1 S_2$

C
S_1
~C

C

Fast ice. Sea ice which forms and remains fast along the coast.

Thousands of kilometers of this season's growth (sum, based on freezing degree days



BUOY 2891 4-10 JUL 84

MONTH: 4--10 JUL 84 BUOY: 2891

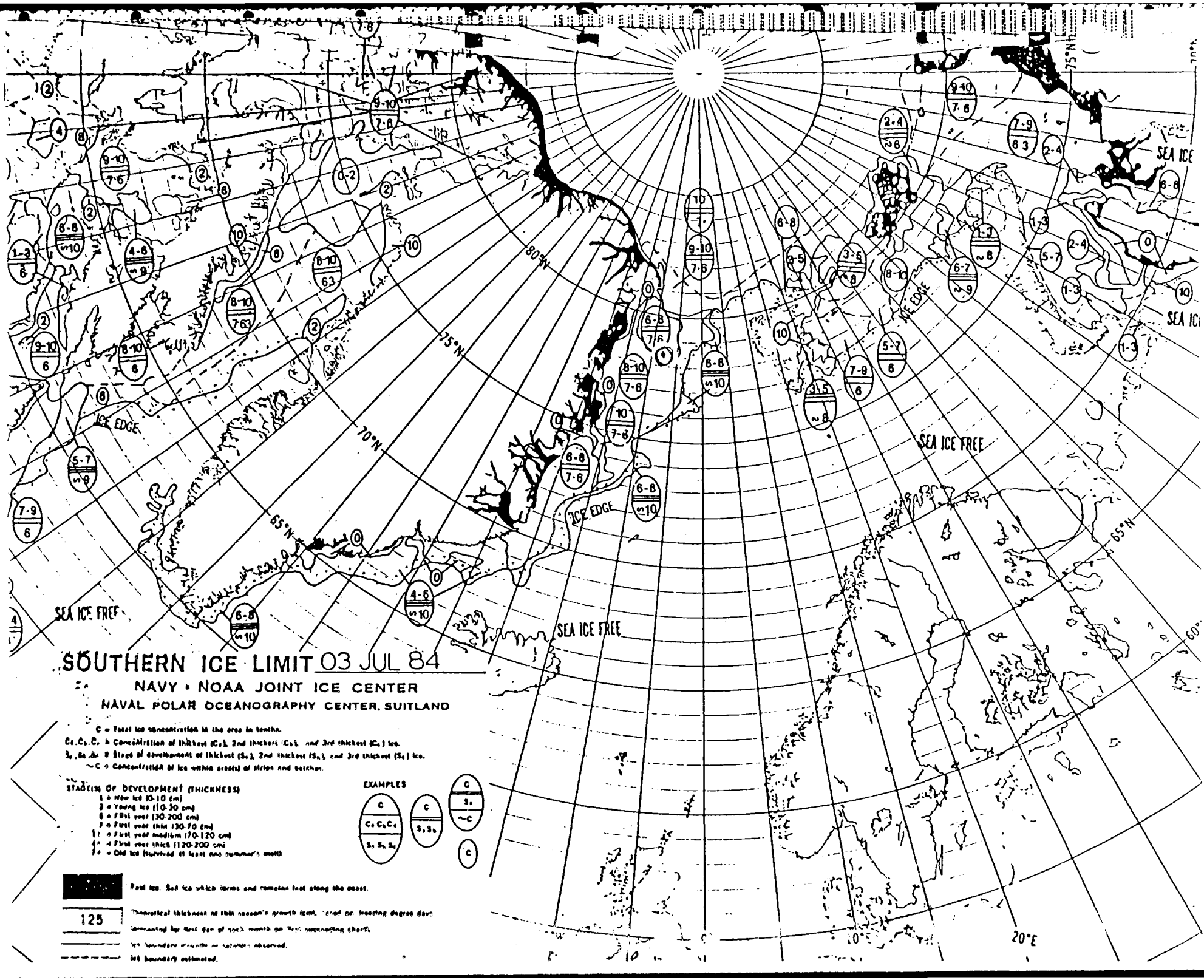
OUTPUT IN FILE ARNA2891

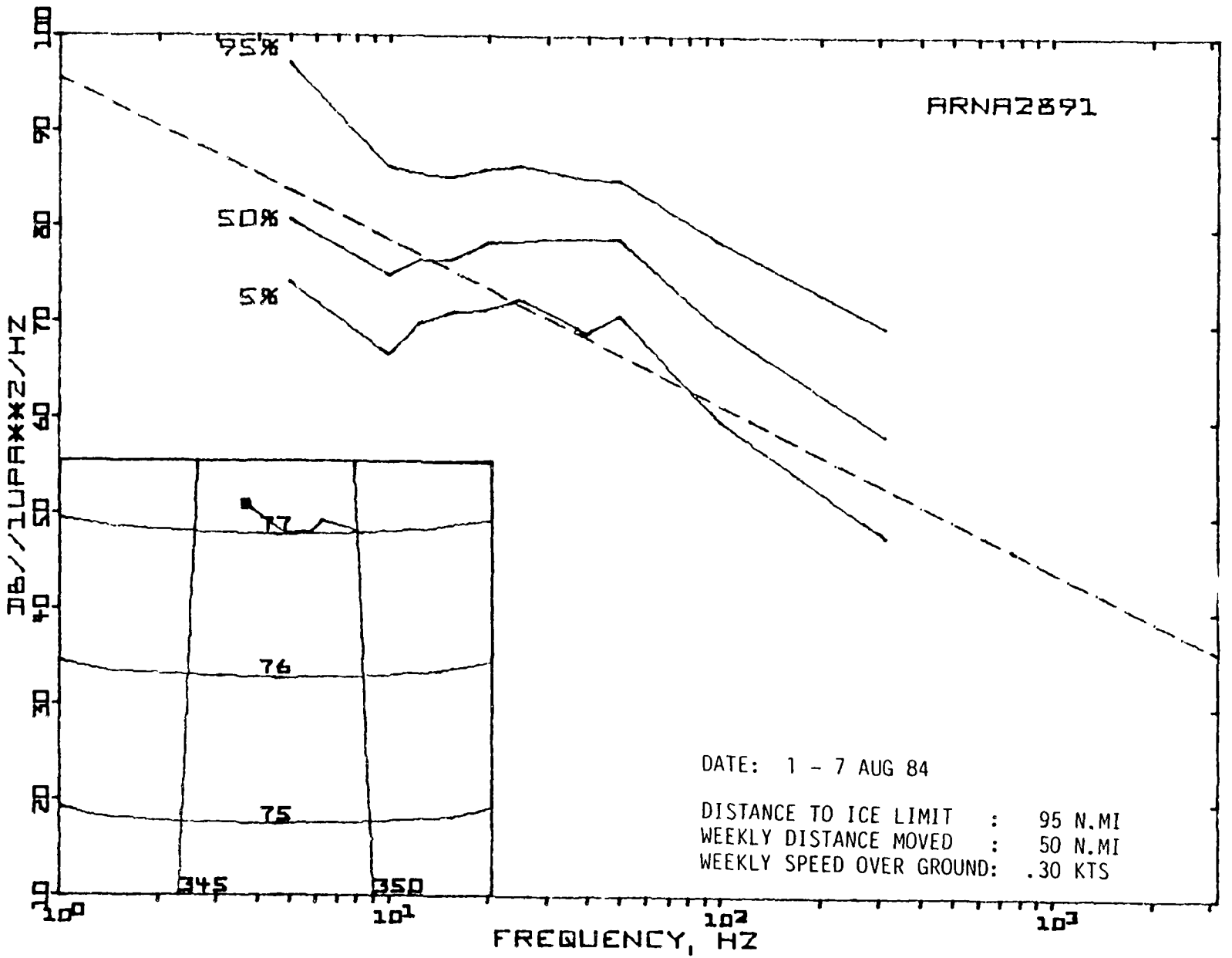
DISPLACEMENT (N. MI.): 68.986 NORTH: -39.060 EAST: -56.863
DIRECTION (TRUE): 235.542

THE NUMBER OF DATA SAMPLES IS 52

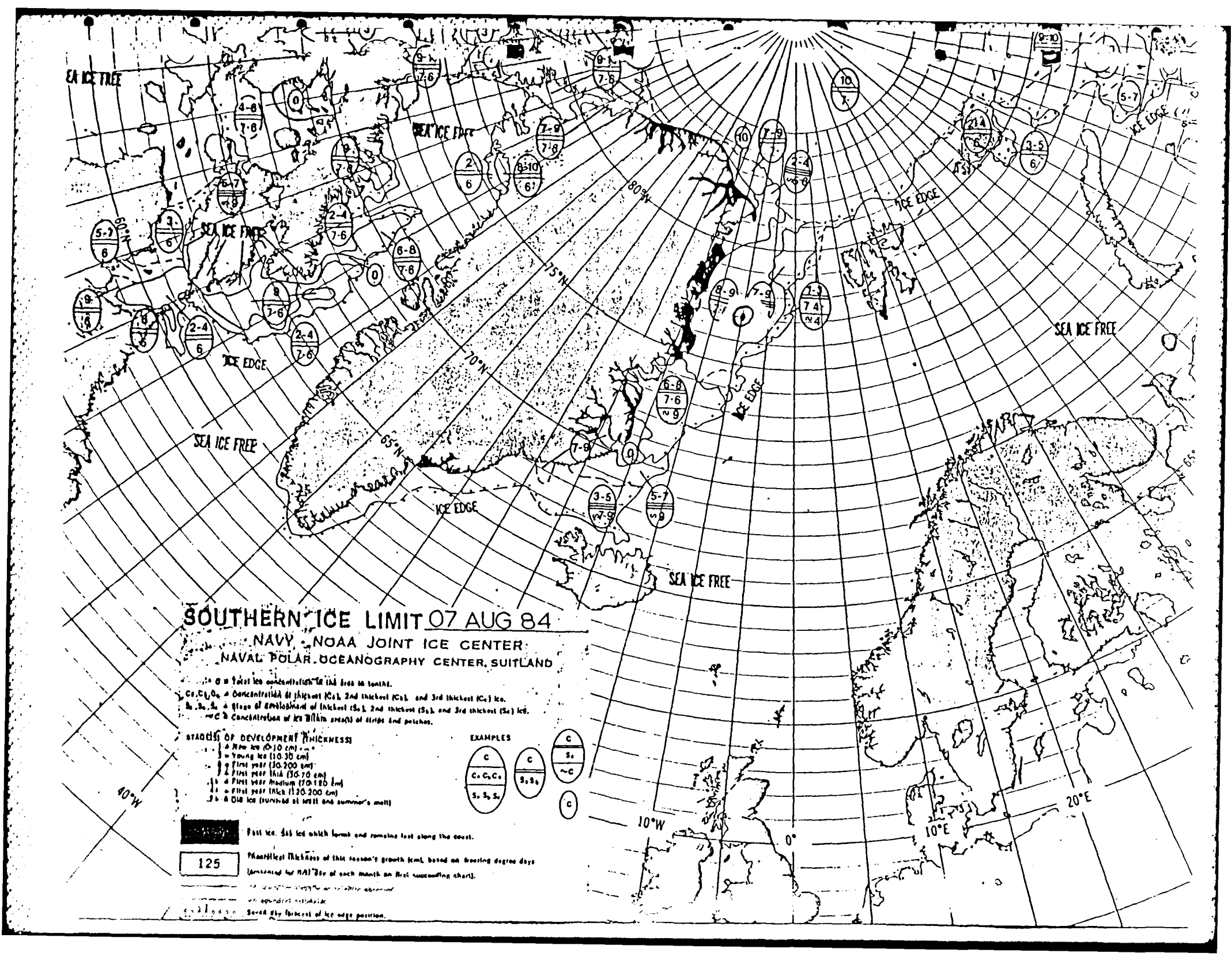
FREQUENCY	STR						MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	79.0	5.5	67.1	70.3	71.4	74.5	79.1	82.4	85.1	87.2	92.6	52
10.0	75.0	5.2	62.7	65.5	65.5	72.4	76.0	78.5	80.7	81.4	83.6	52
12.5	77.7	5.1	65.4	65.4	69.8	75.3	78.4	80.6	82.5	83.5	87.3	52
16.0	77.2	4.4	67.8	67.8	71.0	74.5	77.0	79.8	82.5	83.1	89.1	52
20.0	76.8	4.7	66.1	68.6	71.1	73.9	77.1	78.2	83.2	83.2	89.2	52
25.0	76.6	5.0	66.3	67.3	68.2	73.4	77.2	79.4	81.1	84.4	88.6	52
31.5	74.1	5.1	64.8	66.6	67.6	70.1	72.6	78.1	80.6	83.5	85.7	52
40.0	73.1	5.4	60.1	64.2	65.5	69.5	72.7	76.9	78.7	81.5	86.7	52
50.0	71.3	5.7	60.0	61.2	63.7	67.8	71.3	75.7	78.7	80.9	84.7	52
100.0	64.6	6.8	53.5	54.2	54.8	58.9	65.6	69.3	73.4	75.3	79.4	52
315.0	53.8	7.0	43.4	44.4	44.4	46.9	54.9	59.0	61.5	65.7	70.3	52

STOP


SOUTHERN ICE LIMIT 03 JUL 84
NAVY • NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths.
$C_1 C_2 C_3$ = Concentration of thickest (C_1), 2nd thickest (C_2), and 3rd thickest (C_3) ice.
S_1, S_2, S_3 = Stage of development of thickest (S_1), 2nd thickest (S_2), and 3rd thickest (S_3) ice.
~C = Concentration of ice within area(s) of strips and patches.
STAGES OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
2 = Young ice (10-30 cm)
3 = First year (30-200 cm)
4 = First year thin (30-70 cm)
5 = First year medium (70-120 cm)
6 = First year thick (120-200 cm)
7 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast.
Theoretical thickness of thin nascent growth (cm), based on freezing degree days accumulated for first day of each month on the succeeding chart.
Ice boundary analyzed or satellite observed.
Ice boundary estimated.
ICE EDGE
SEA ICE FREE
SEA ICE
80°N
75°N
70°N
65°N
60°
20°E



BUOY 2891 1-7 AUG 84


SEA ICE FREE
ICE EDGE
80°N
75°N
70°N
65°N
60°N
40°W
10°W
0°
10°E
20°E
SOUTHERN ICE LIMIT 07 AUG 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
EXAMPLES
STAGES OF DEVELOPMENT (THICKNESS)
125

MONTH: 8-14 AUG 84 BUOY: 2891

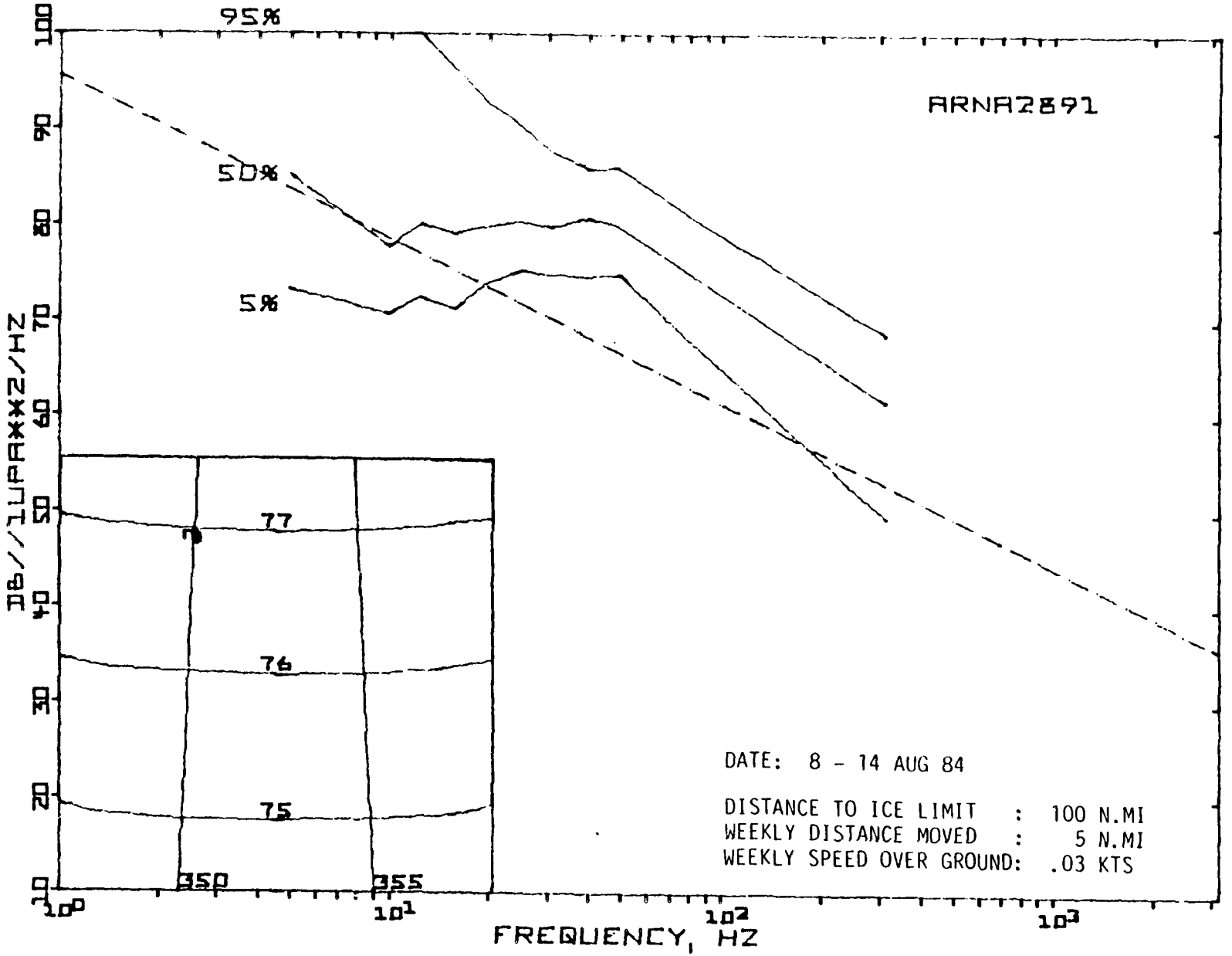
OUTPUT IN FILE ARNA2891

DISPLACEMENT (N. MI.): 4.932 NORTH: -4.020 EAST: -2.857
DIRECTION (TRUE): 215.422

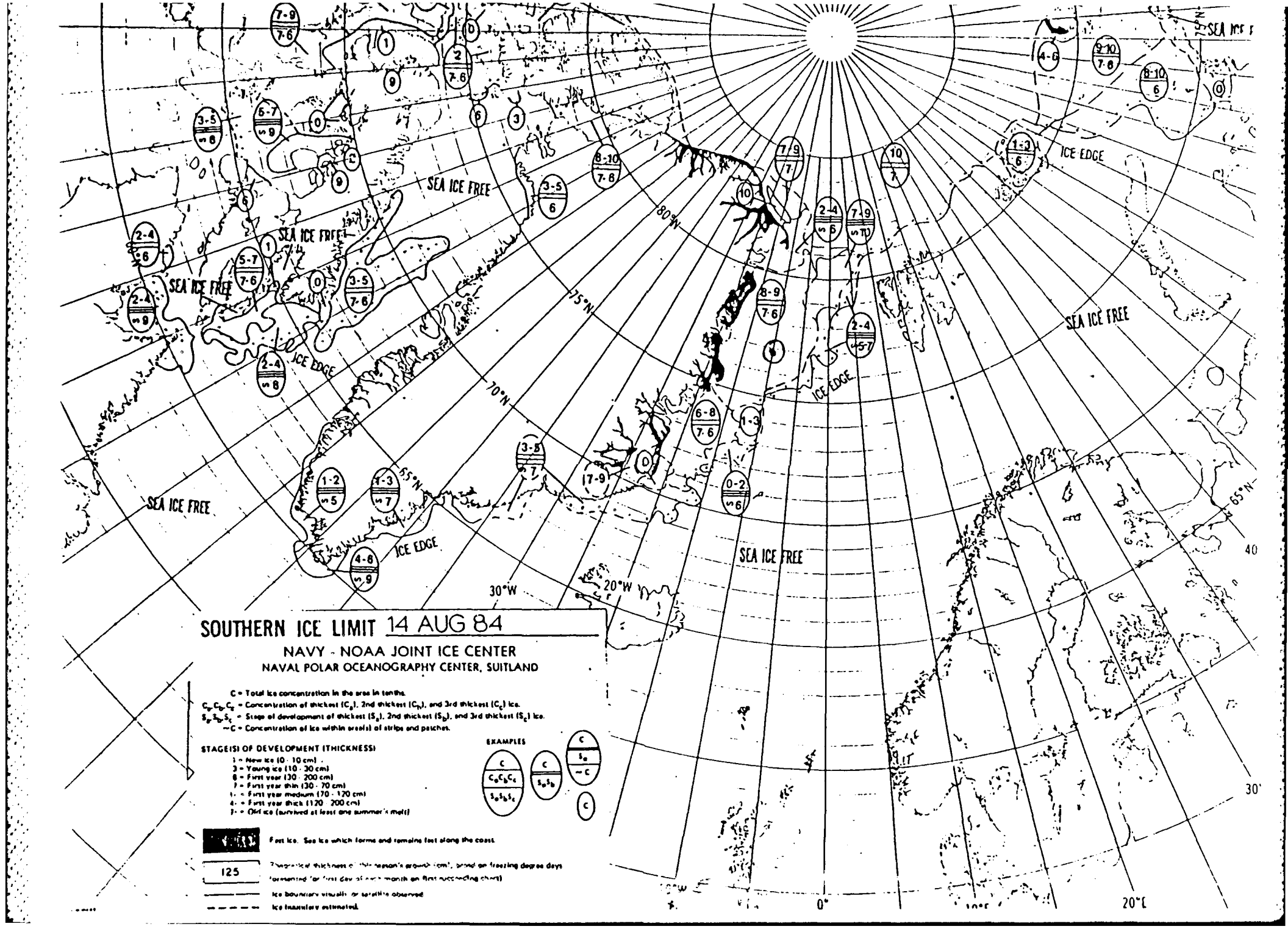
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	87.4	10.5	72.3	73.1	75.8	78.3	85.1	93.9	106.5	106.5	106.5	56
10.0	81.8	9.9	69.9	70.5	73.3	74.7	77.6	85.3	101.6	102.6	104.8	56
12.5	81.8	8.2	71.4	72.3	73.9	75.9	80.0	83.5	97.3	100.0	101.5	56
16.0	80.7	7.5	69.8	71.0	72.9	75.2	79.0	83.1	93.3	96.1	99.3	56
20.0	81.3	5.9	71.1	73.9	73.9	77.1	79.9	83.2	91.1	92.7	96.2	56
25.0	81.2	4.8	69.8	75.1	75.9	77.8	80.3	83.2	87.9	90.4	93.2	56
31.5	80.6	4.1	72.6	74.6	75.4	77.5	79.7	83.5	85.7	87.4	90.7	56
40.0	80.8	3.8	72.7	74.6	76.2	78.2	80.7	83.6	84.8	85.8	91.8	56
50.0	80.2	3.3	73.2	74.8	76.6	78.0	79.8	81.8	83.4	85.9	89.4	56
100.0	72.4	4.5	62.4	64.9	66.8	68.4	72.8	75.3	78.3	78.9	84.3	56
315.0	60.5	6.4	44.4	49.4	52.2	56.5	61.5	65.0	66.9	68.5	75.4	56

STOP



BUOY 2891 8-14 AUG 84


SEA ICE FREE
ICE EDGE
80°N
75°N
70°N
65°N
30°W
20°W
0°
20°E
SOUTHERN ICE LIMIT 14 AUG 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths.
$C_a C_b C_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_a S_b S_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
—C = Concentration of ice within areal(s) of strips and patches.
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
3 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
5 = First year medium (70 - 120 cm)
4 = First year thick (120 - 200 cm)
8 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast.
125
Ice boundary visually or satellite observed
Ice boundary estimated

MONTH: 15-21 AUG 84 BUOY: 2891

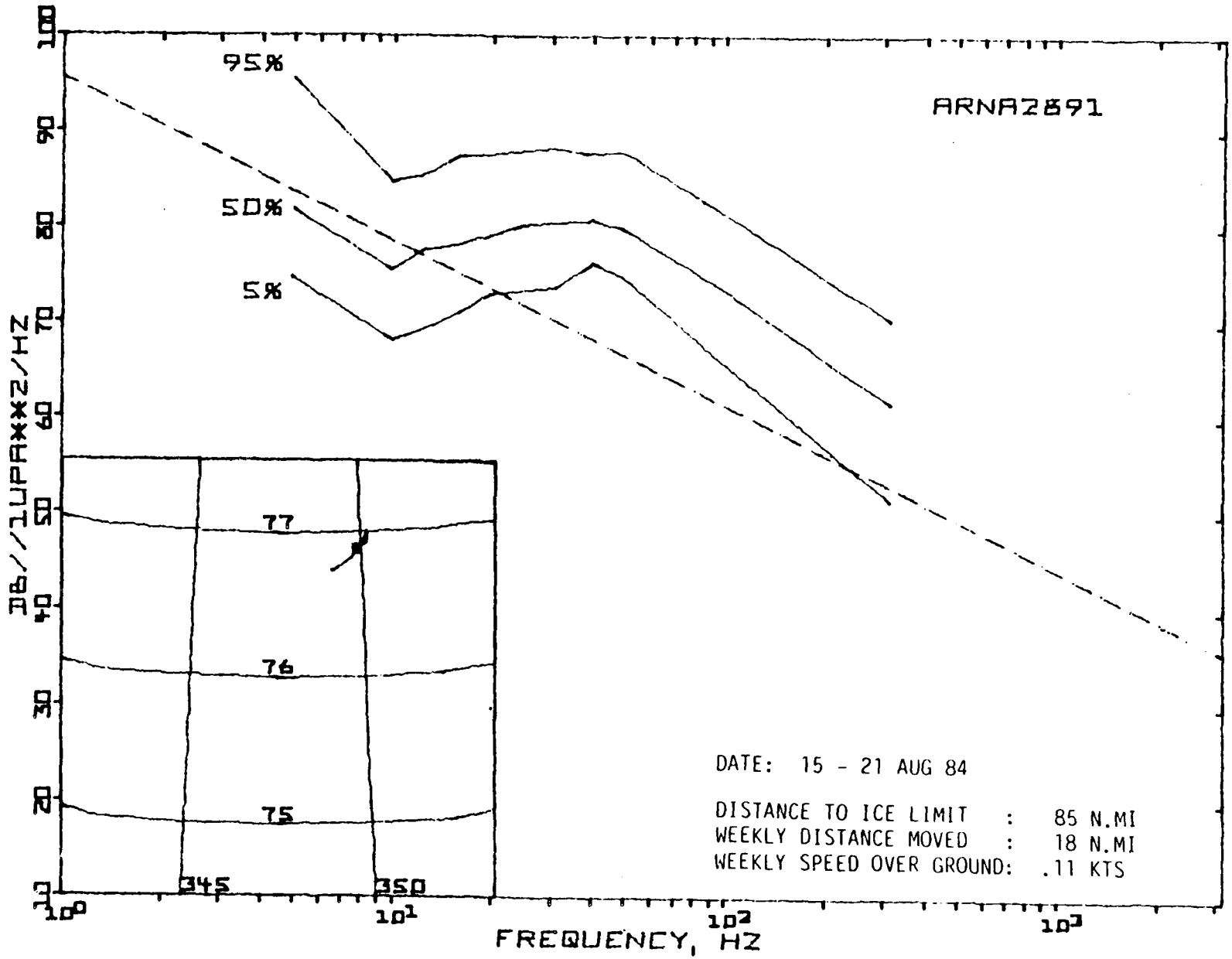
OUTPUT IN FILE ARNA2891

DISPLACEMENT (N. MI.): 17.594 NORTH: -11.640 EAST: -13.193
DIRECTION (TRUE): 228.604

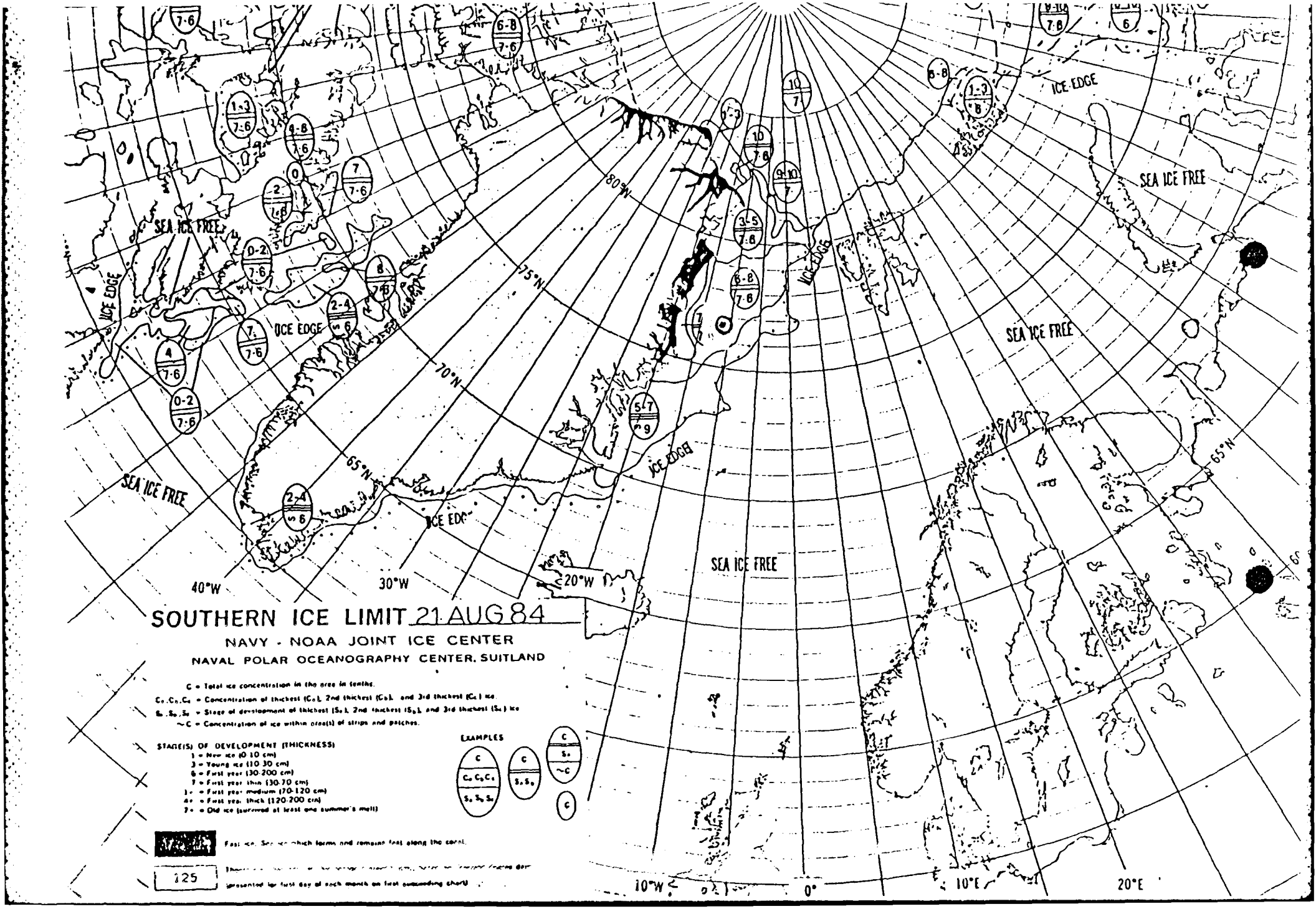
THE NUMBER OF DATA SAMPLES IS 56

FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	82.8	6.9	69.2	74.5	75.2	78.3	81.8	87.2	91.9	95.4	101.5	56
10.0	76.2	5.3	63.9	68.0	70.5	72.4	75.4	79.3	82.6	84.5	89.6	56
12.5	77.7	4.8	66.3	69.2	71.4	74.6	77.5	80.6	82.5	85.2	88.5	56
16.0	78.3	4.7	67.8	71.0	72.0	75.2	78.1	80.6	83.1	87.3	89.1	56
20.0	79.8	4.3	70.5	73.0	75.3	77.1	79.1	81.3	86.7	87.4	89.2	55
25.0	80.5	4.4	71.8	73.4	75.1	77.8	80.3	82.6	84.3	87.9	90.4	56
31.5	80.7	4.5	71.5	73.7	75.4	78.1	80.6	82.9	87.4	88.2	90.7	56
40.0	81.3	3.4	75.5	76.2	76.9	79.8	80.7	83.6	85.8	87.5	89.0	56
50.0	80.6	3.8	73.8	74.8	76.6	78.0	79.8	82.6	85.9	87.8	90.7	55
100.0	73.5	4.4	62.4	65.6	68.4	70.9	73.4	74.4	79.4	81.4	83.0	56
315.0	61.9	6.0	48.3	51.4	53.6	58.2	61.5	66.3	70.3	70.3	76.3	56

STOP



BUOY 2891 15-21 AUG 84


SEA ICE FREE
ICE EDGE
80°N
75°N
70°N
65°N
40°W
30°W
20°W
10°W
0°
10°E
20°E
SOUTHERN ICE LIMIT 21 AUG 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths.
C_a, C_b, C_c = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice
S_a, S_b, S_c = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice
~C = Concentration of ice within area(s) of strips and patches.
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
3 = Young ice (10-30 cm)
4 = First year (30-200 cm)
7 = First year thin (30-70 cm)
8 = First year medium (70-120 cm)
9 = First year thick (120-200 cm)
7+ = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast.
125

MONTH: 22-28 AUG 84 BUOY: 2891

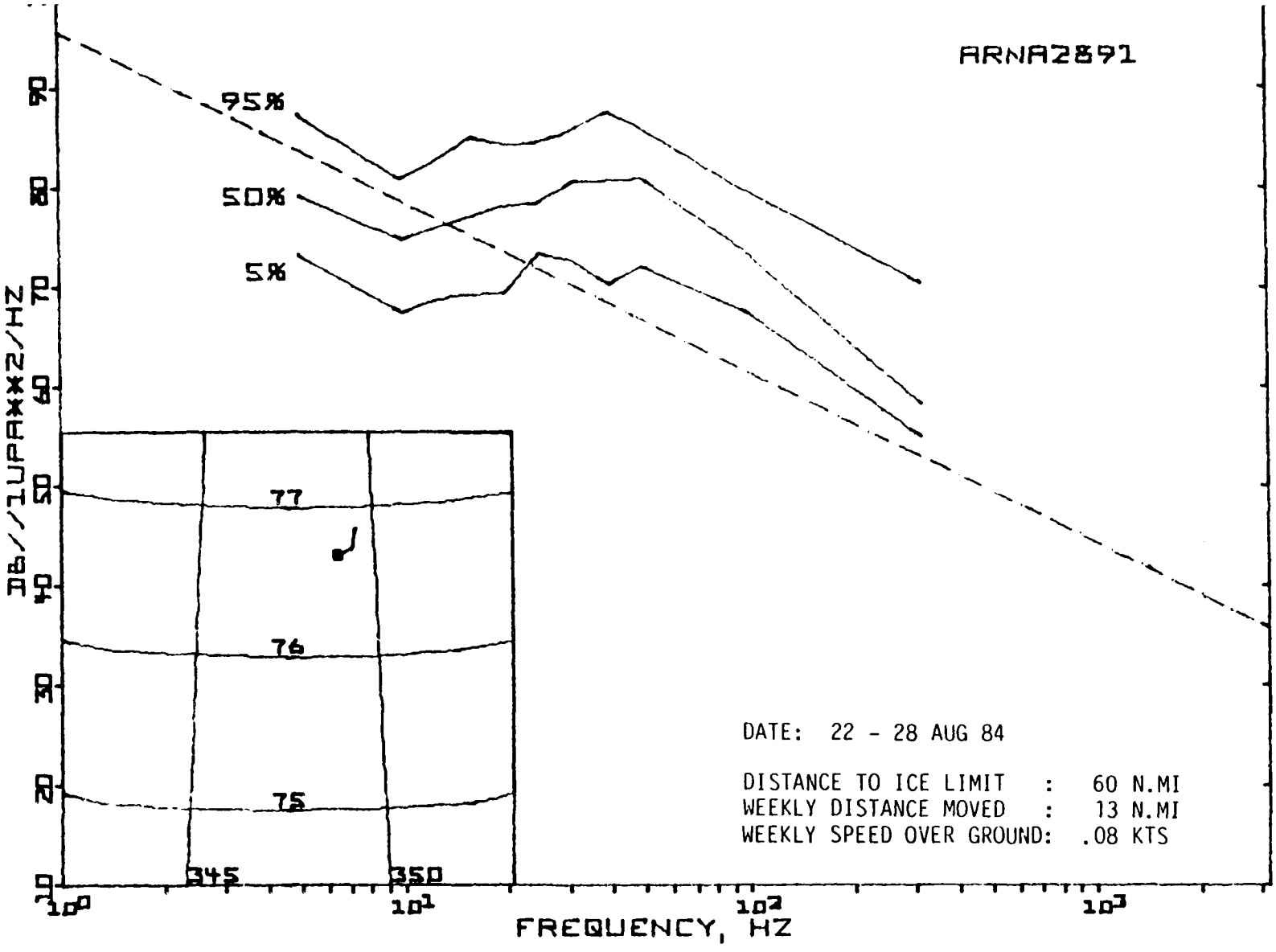
OUTPUT IN FILE ARNA2891

DISPLACEMENT (N. MI.): 13.128 NORTH: 10.321 EAST: 8.114
DIRECTION (TRUE): 38.164

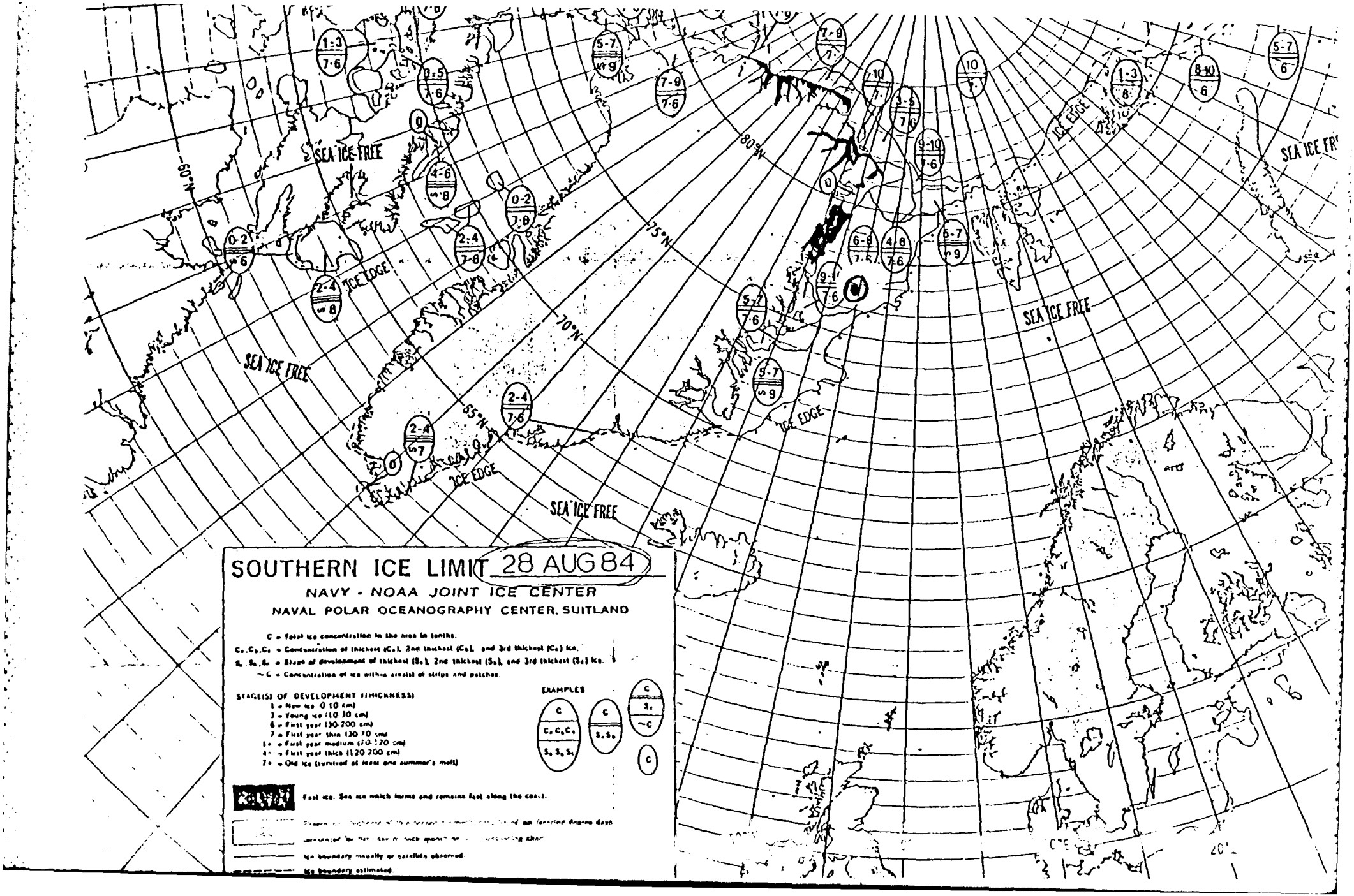
THE NUMBER OF DATA SAMPLES IS 26

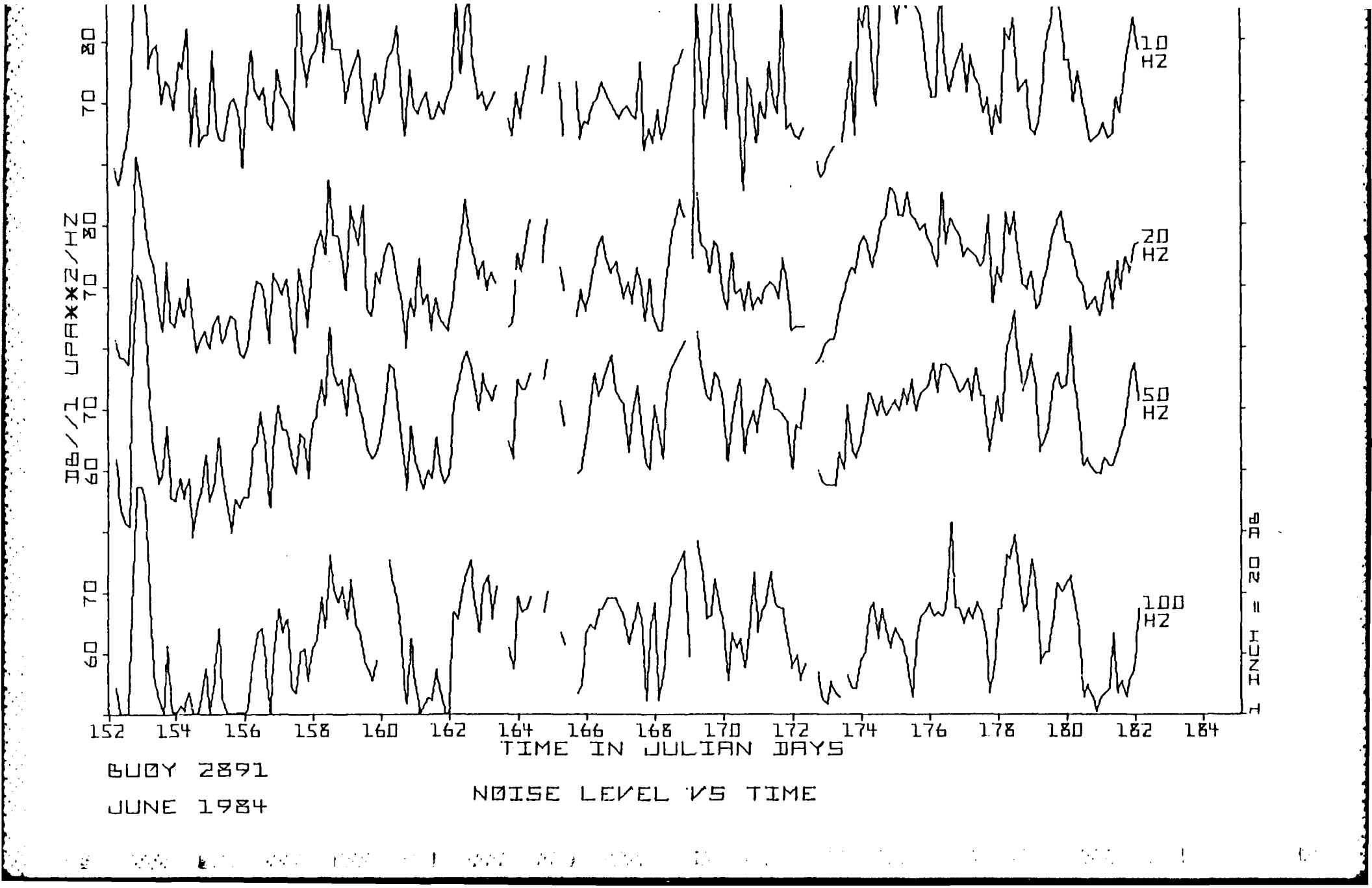
FREQUENCY		STD					MEDIAN					
HZ	AVG	DEV	MIN	5%	10%	25%	50%	75%	90%	95%	MAX	N
5.0	79.6	4.8	73.1	73.1	74.5	76.4	79.1	80.6	82.4	87.2	96.4	26
10.0	74.4	5.0	67.3	67.3	67.3	69.9	74.7	77.6	79.3	80.7	88.0	26
12.5	76.0	4.4	68.6	68.6	69.2	73.2	75.9	79.2	81.9	82.5	83.5	26
16.0	77.4	4.1	69.2	69.2	72.0	75.2	77.0	79.0	81.9	85.0	86.6	26
20.0	77.8	3.6	69.3	69.3	73.0	75.3	78.2	80.7	81.3	84.2	85.1	25
25.0	79.0	3.3	73.4	73.4	74.3	76.5	78.4	81.1	83.8	84.4	85.4	26
31.5	80.8	3.5	72.6	72.6	75.4	79.7	80.6	82.9	84.1	85.7	87.4	26
40.0	80.4	4.1	70.2	70.2	75.5	77.6	80.7	82.9	84.2	87.5	88.3	26
50.0	80.5	4.0	72.0	72.0	74.8	77.3	80.9	82.6	85.9	85.9	86.9	26
100.0	73.3	3.6	67.4	67.4	67.4	70.2	73.4	76.2	76.9	79.4	80.5	26
315.0	60.9	4.7	54.9	54.9	56.5	57.4	58.2	64.2	66.3	70.3	71.7	26

STOP



BUOY 2891 22-28 AUG 84

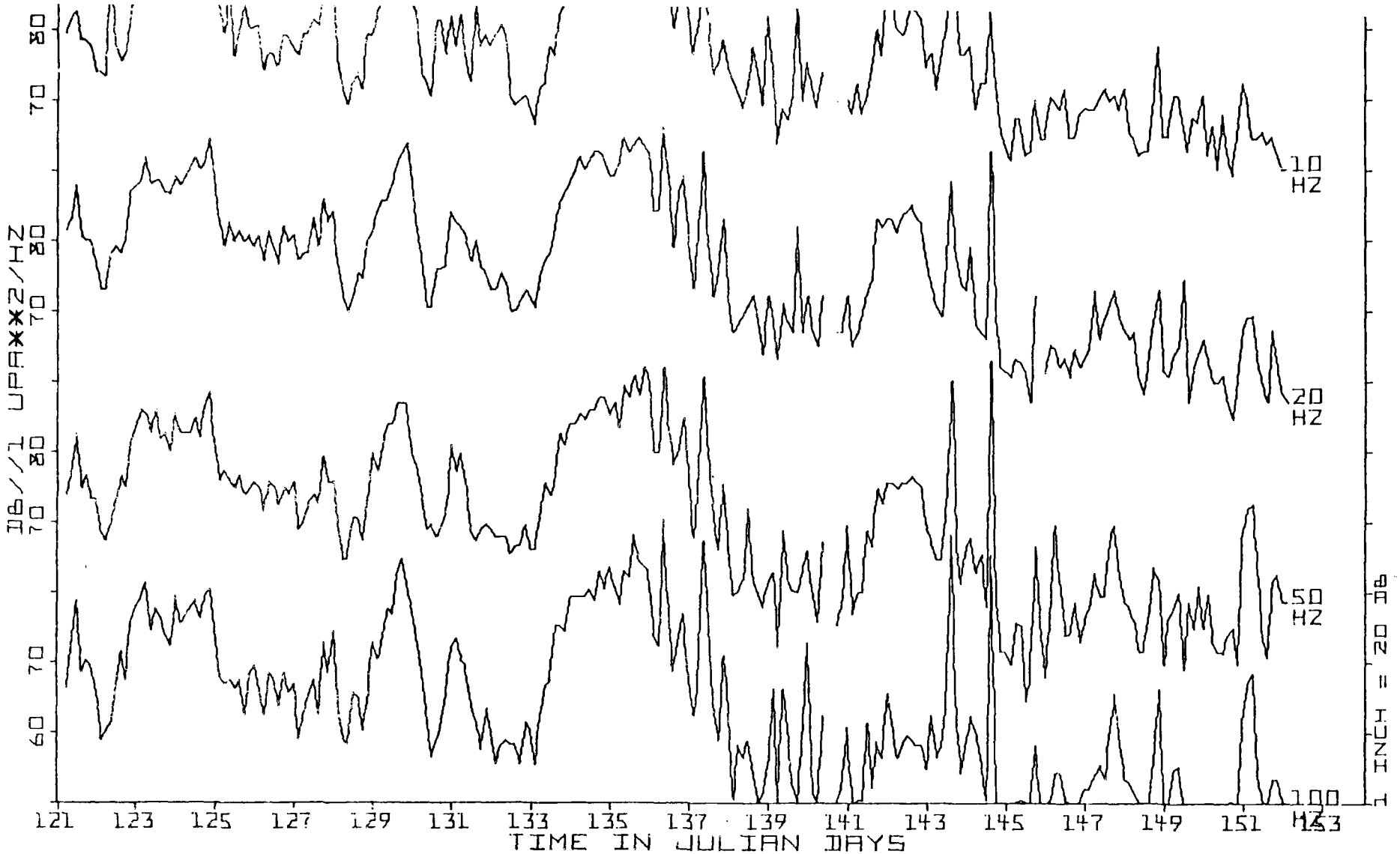

SEA ICE FREE
ICE EDGE
80°N
75°N
70°N
65°N
SEA ICE FREE
ICE EDGE
SEA ICE FREE
ICE EDGE
SEA ICE FREE
SOUTHERN ICE LIMIT 28 AUG 84
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
C = Total ice concentration in the area in tenths.
Ca, Cb, Cc = Concentration of thickest (Ca), 2nd thickest (Cb), and 3rd thickest (Cc) ice.
Sa, Sb, Sc = Stage of development of thickest (Sa), 2nd thickest (Sb), and 3rd thickest (Sc) ice.
~C = Concentration of ice within areas of strips and patches.
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0-10 cm)
2 = Young ice (10-30 cm)
3 = First year (30-200 cm)
7 = First year thin (30-70 cm)
8 = First year medium (70-120 cm)
9 = First year thick (120-200 cm)
4 = Old ice (survived at least one summer's melt)
EXAMPLES
Fast ice. Sea ice which forms and remains fast along the coast.
Ice boundary visually or satellite observed.
Ice boundary estimated.



BUOY 2891

JUNE 1984

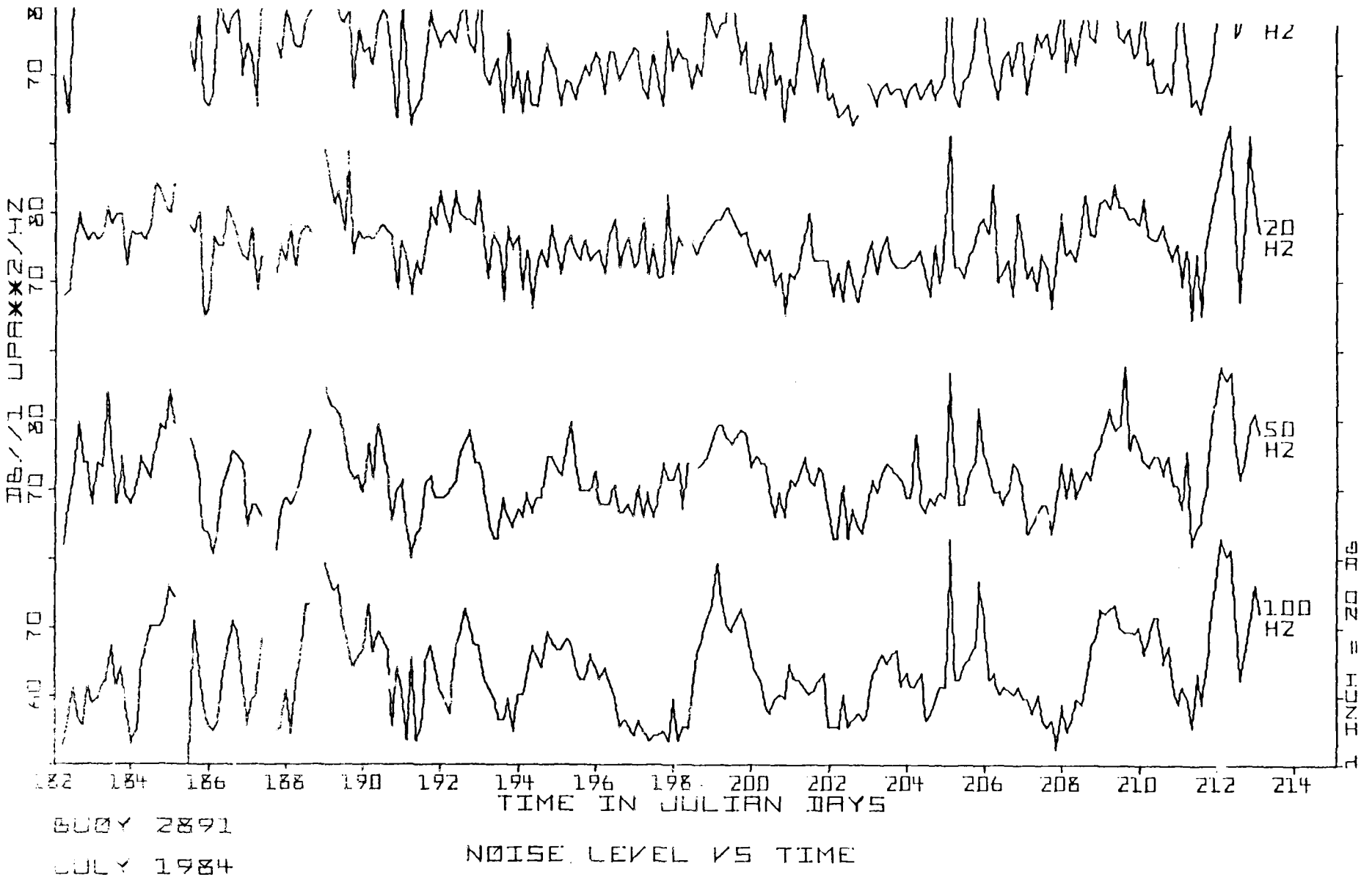
NOISE LEVEL VS TIME



BUOY 2891

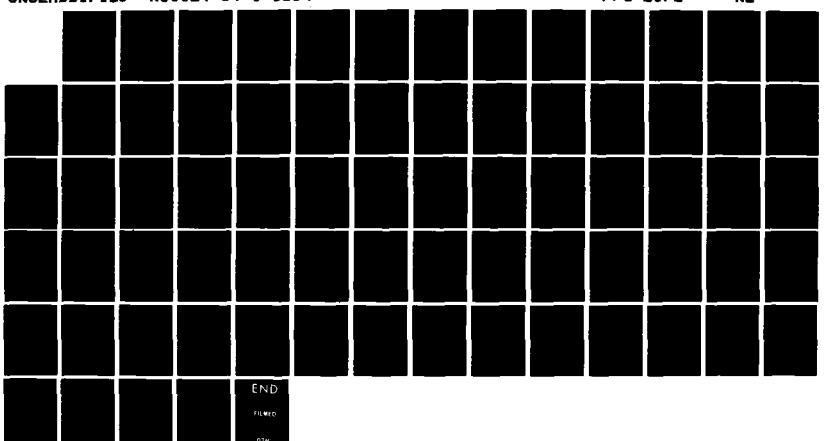
MAY 1984

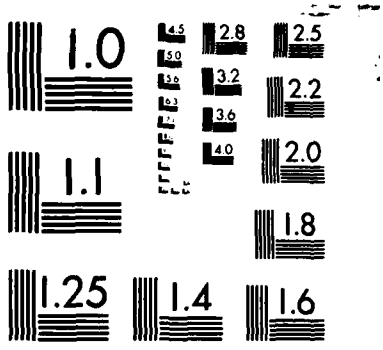
NOISE LEVEL VS TIME


DB//1 UPA**2/HZ
80
70
80
70
80
70
80
70
HZ
20
HZ
50
HZ
100
HZ
1 INCH = 20 DB
182
184
186
188
190
192
194
196
198
200
202
204
206
208
210
212
214
TIME IN JULIAN DAYS
BUOY 2891
JULY 1984
NOISE LEVEL VS TIME

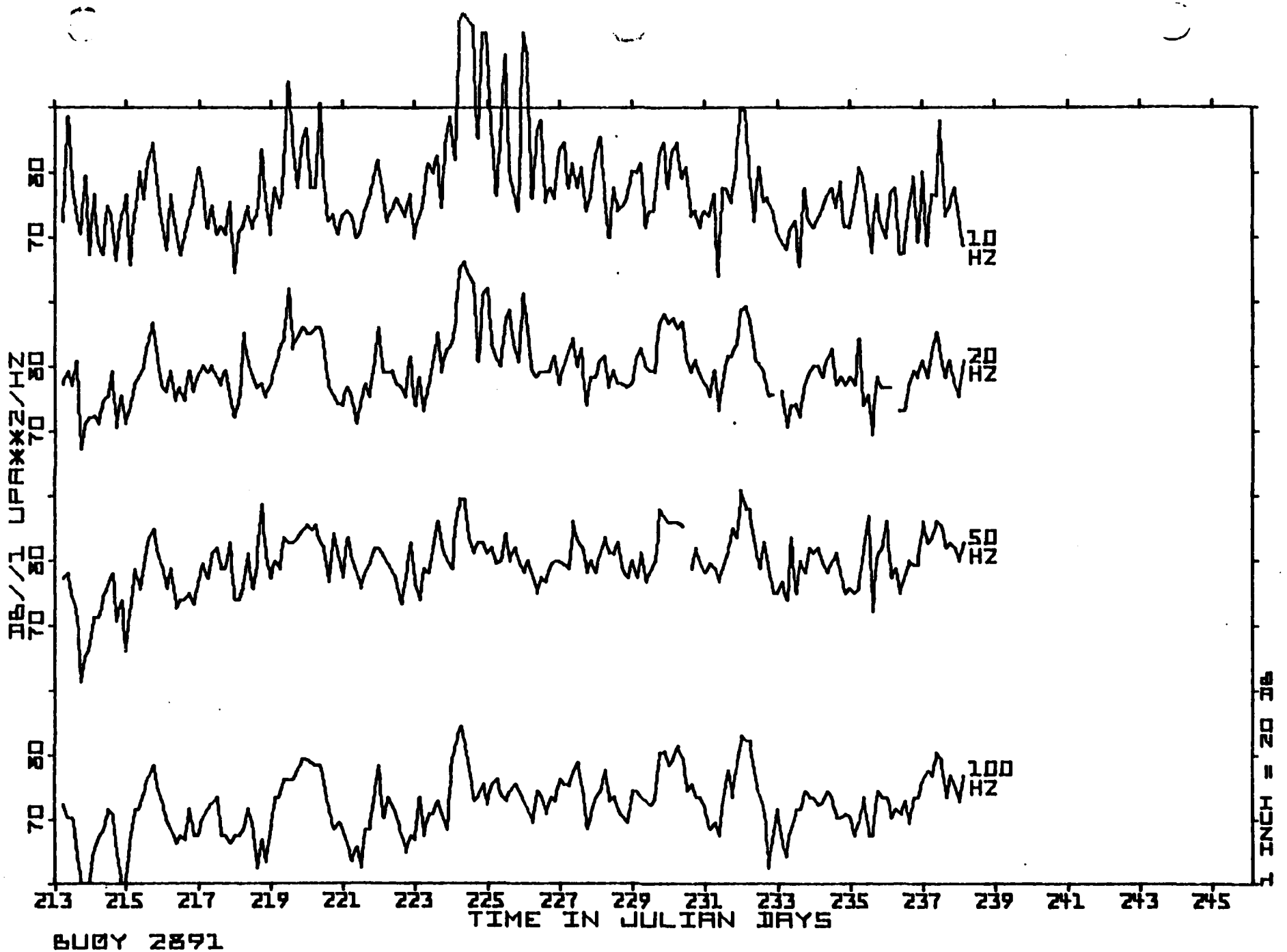
AD-A156 818 LONG TERM STATISTICAL MEASUREMENTS OF ENVIRONMENTAL ACOUSTICS PARAMETERS I..(U) POLAR RESEARCH LAB INC CARPINTERIA CA B M BUCK ET AL. 13 DEC 84 PRL-TR-53 7/7

UNCLASSIFIED N00014-84-C-0394 F/G 20/1 NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A



BUOY 2891

AUG 1984

NOISE LEVEL VS TIME

APPENDIX 9

Date Buoy I.D. 0622

Life in Reporting Area 2 (West Greenland Sea)

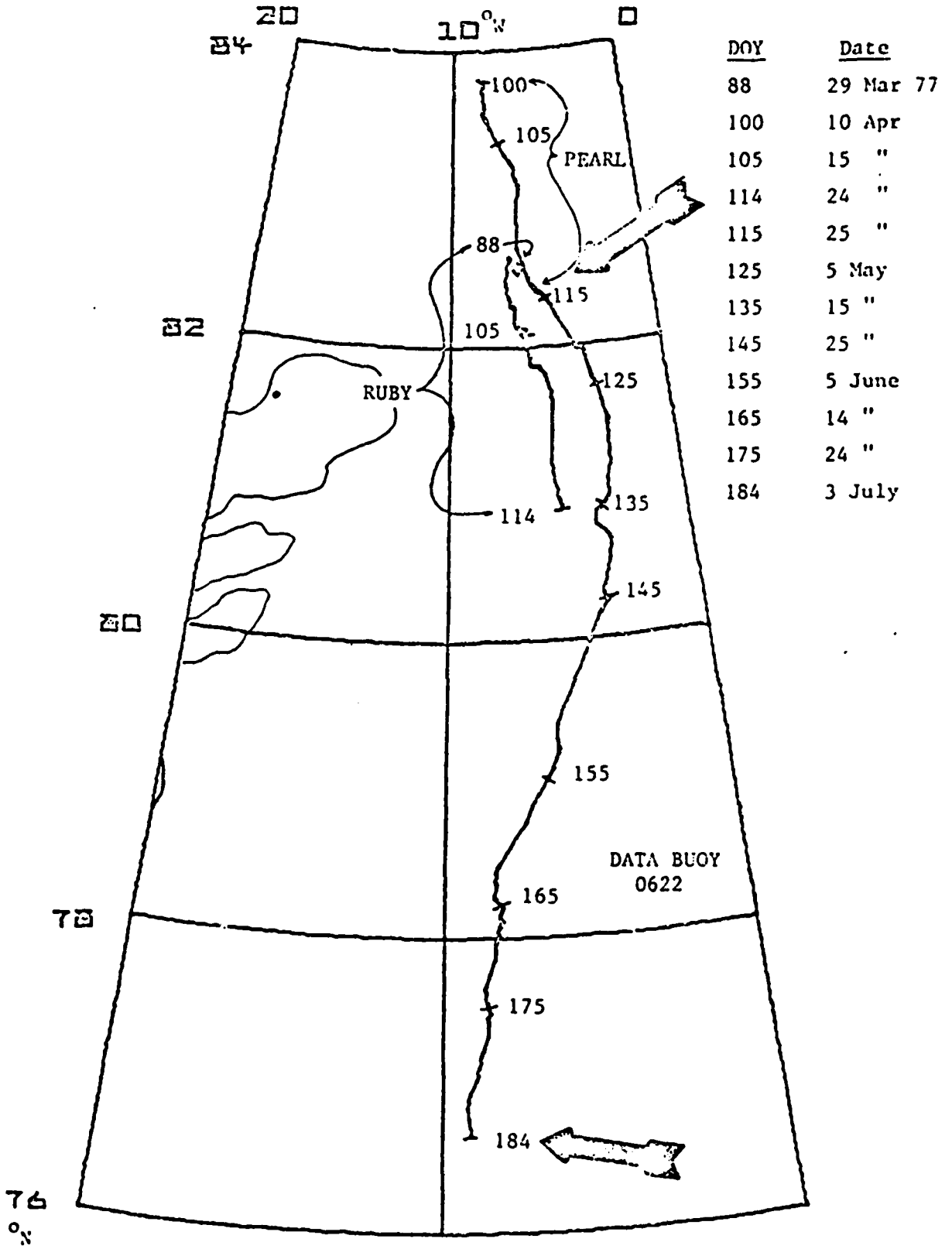
29 March 1977 - 3 July 1977

Type: ANRAMS (NIMBUS 6) (3.2 - 1000 Hz)

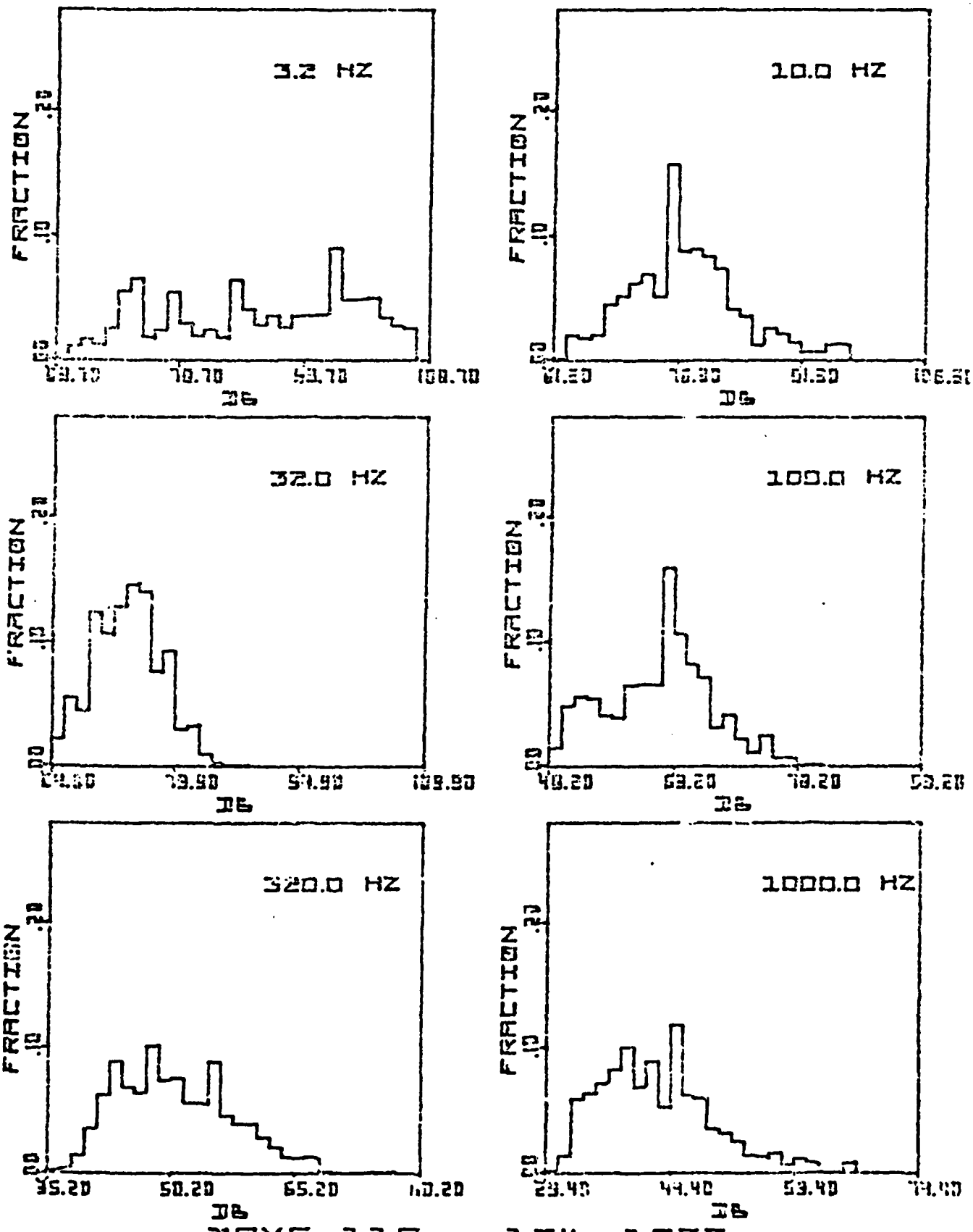
Ambient Noise Data from ANRAMS Data Buoy 0622

Total-Life (DOY 115-184, 24 Apr - 3 Jul, 1977)

Track, Histograms and Statistical Data



FLOE DRIFT, DAYS 88-184



DAYS 115 - 184, 1977

Statistical Data on Total Buoy Life (DOY 115-184)

FREQUENCY= 3.2 HZ
NUMBER OF SAMPLES= 697

MIN	5%	10%	25%	50%	75%	90%	95%	MAX
63.7	69.7	71.2	77.2	87.7	96.7	101.2	102.7	105.7

AVERAGE= 87.12
STANDARD DEVIATION= 11.49

FREQUENCY= 10.0 HZ
NUMBER OF SAMPLES= 697

MIN	5%	10%	25%	50%	75%	90%	95%	MAX
61.3	65.8	67.3	71.3	76.3	80.8	85.3	88.3	95.8

AVERAGE= 76.38
STANDARD DEVIATION= 6.75

FREQUENCY= 32.0 HZ
NUMBER OF SAMPLES= 697

MIN	5%	10%	25%	50%	75%	90%	95%	MAX
64.9	66.4	67.9	70.9	73.9	75.4	78.4	79.9	87.4

AVERAGE= 73.35
STANDARD DEVIATION= 4.11

FREQUENCY= 100.0 HZ
NUMBER OF SAMPLES= 697

MIN	5%	10%	25%	50%	75%	90%	95%	MAX
48.2	49.7	51.2	55.7	61.7	64.7	69.2	70.7	79.7

AVERAGE= 60.73
STANDARD DEVIATION= 6.32

FREQUENCY= 320.0 HZ
NUMBER OF SAMPLES= 697

MIN	5%	10%	25%	50%	75%	90%	95%	MAX
35.2	39.7	41.2	44.2	48.7	54.7	59.2	62.2	75.7

AVERAGE= 49.95
STANDARD DEVIATION= 6.92

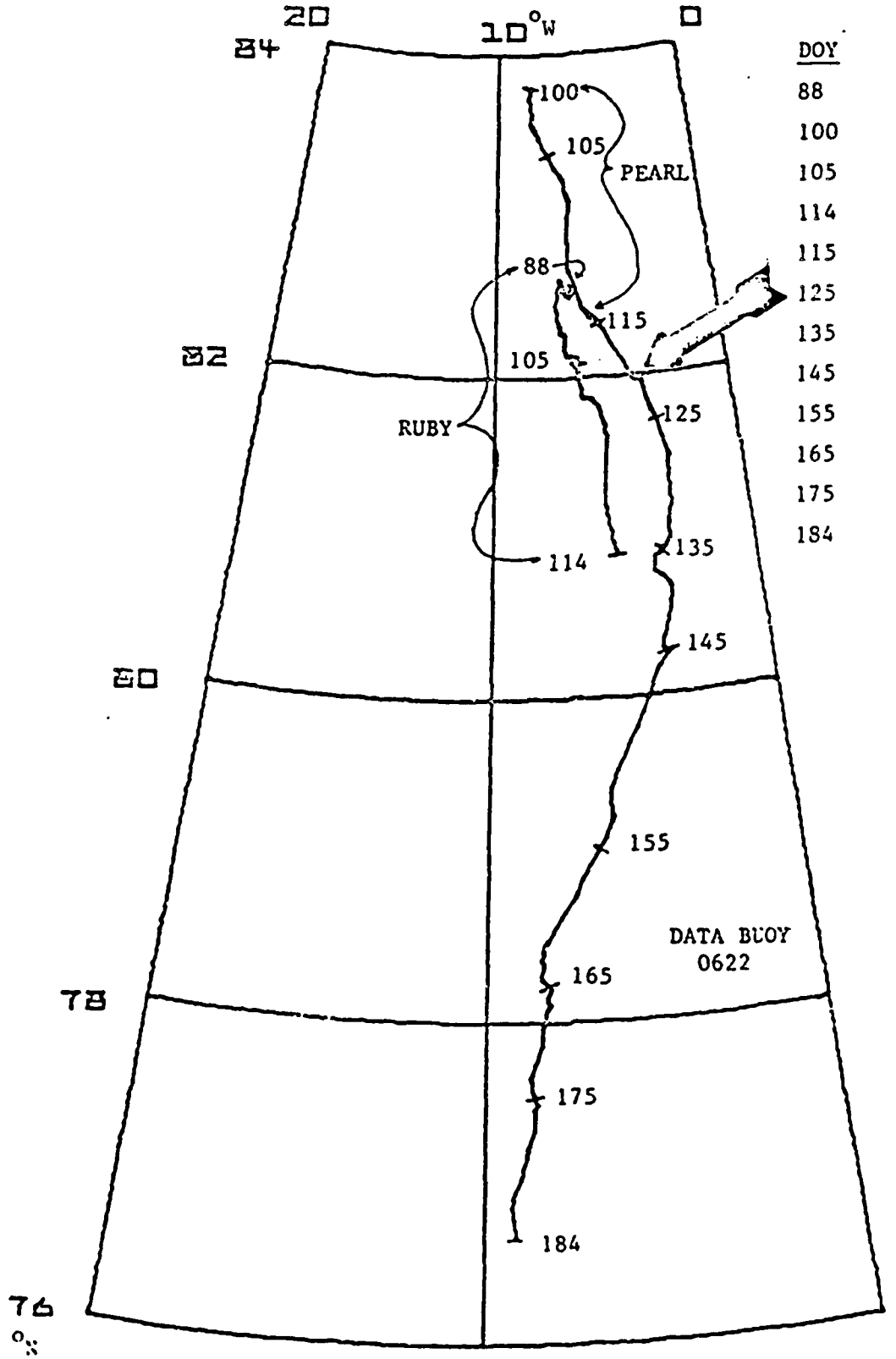
FREQUENCY= 1000.0 HZ
NUMBER OF SAMPLES= 697

MIN	5%	10%	25%	50%	75%	90%	95%	MAX
29.4	32.4	33.9	36.9	41.4	45.9	50.4	54.9	65.4

AVERAGE= 42.07
STANDARD DEVIATION= 6.88

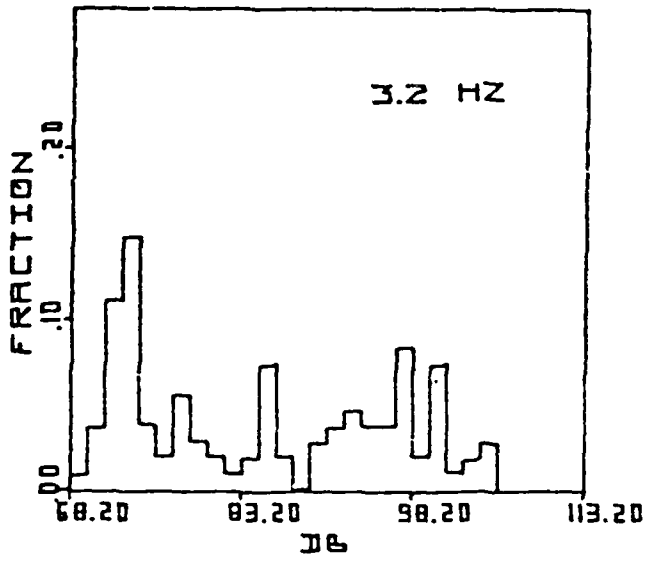
DOY 115-124 (25 Apr - 4 May, 1977)

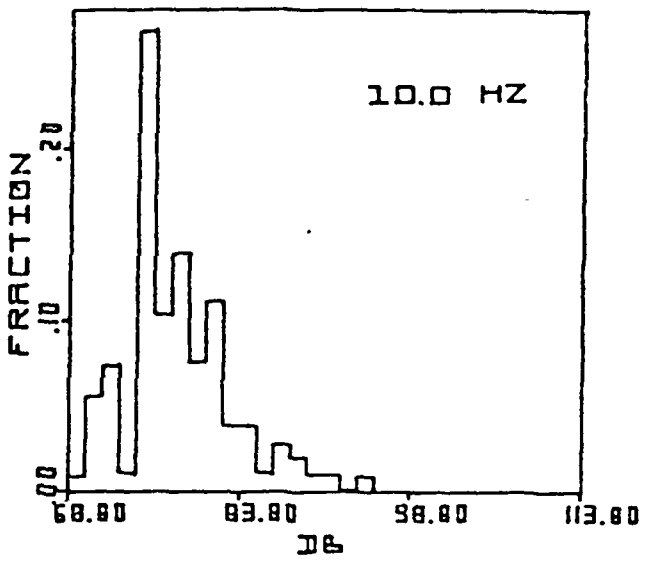
Time Histories, Histograms and Statistical Data

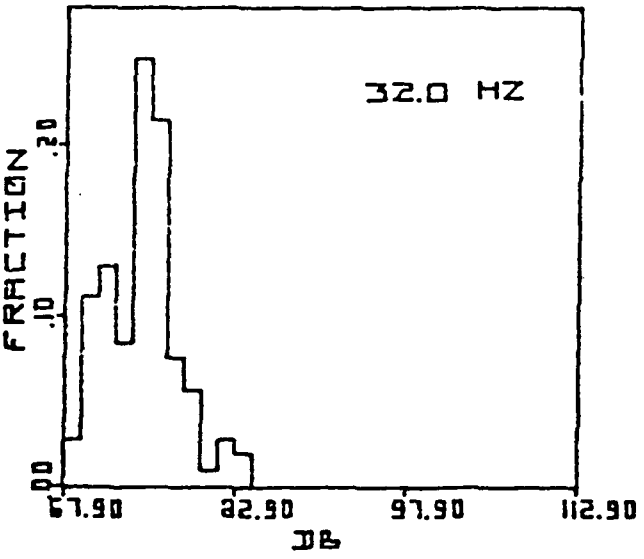


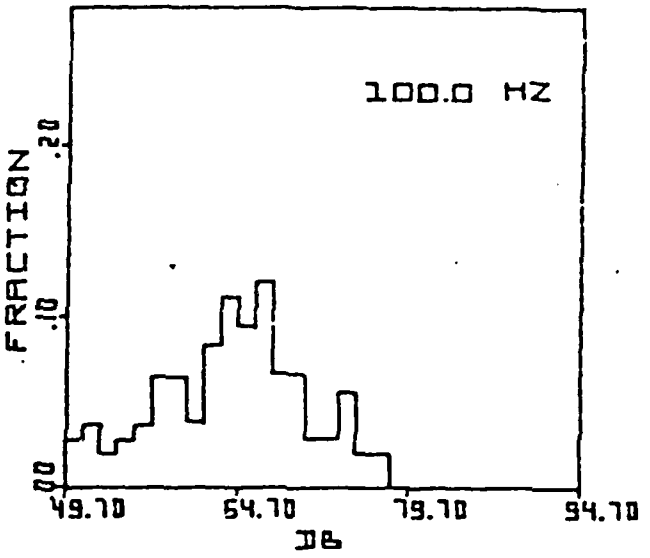
DOY	Date
88	29 Mar 77
100	10 Apr
105	15 "
114	24 "
115	25 "
125	5 May
135	15 "
145	25 "
155	5 June
165	14 "
175	24 "
184	3 July

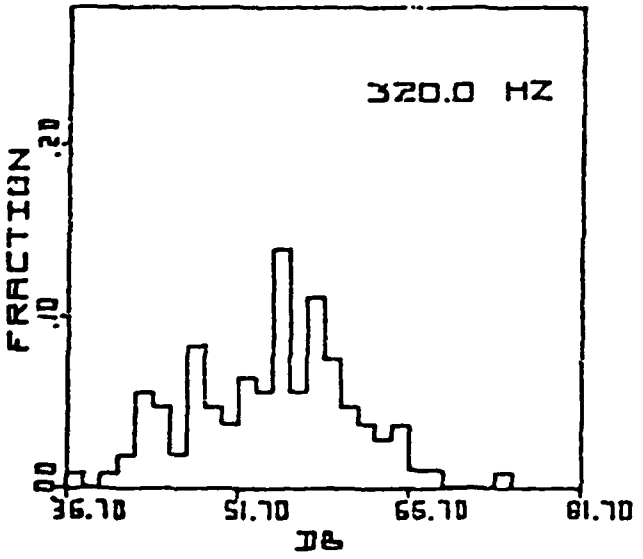
FLOE DRIFT, DAYS 115 - 125

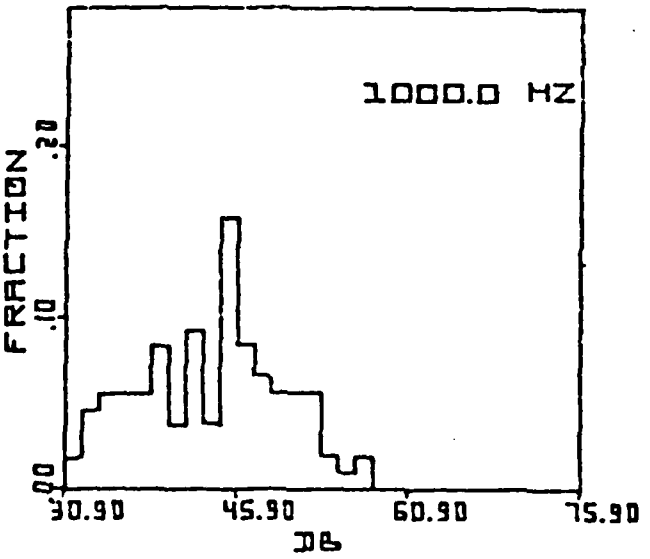




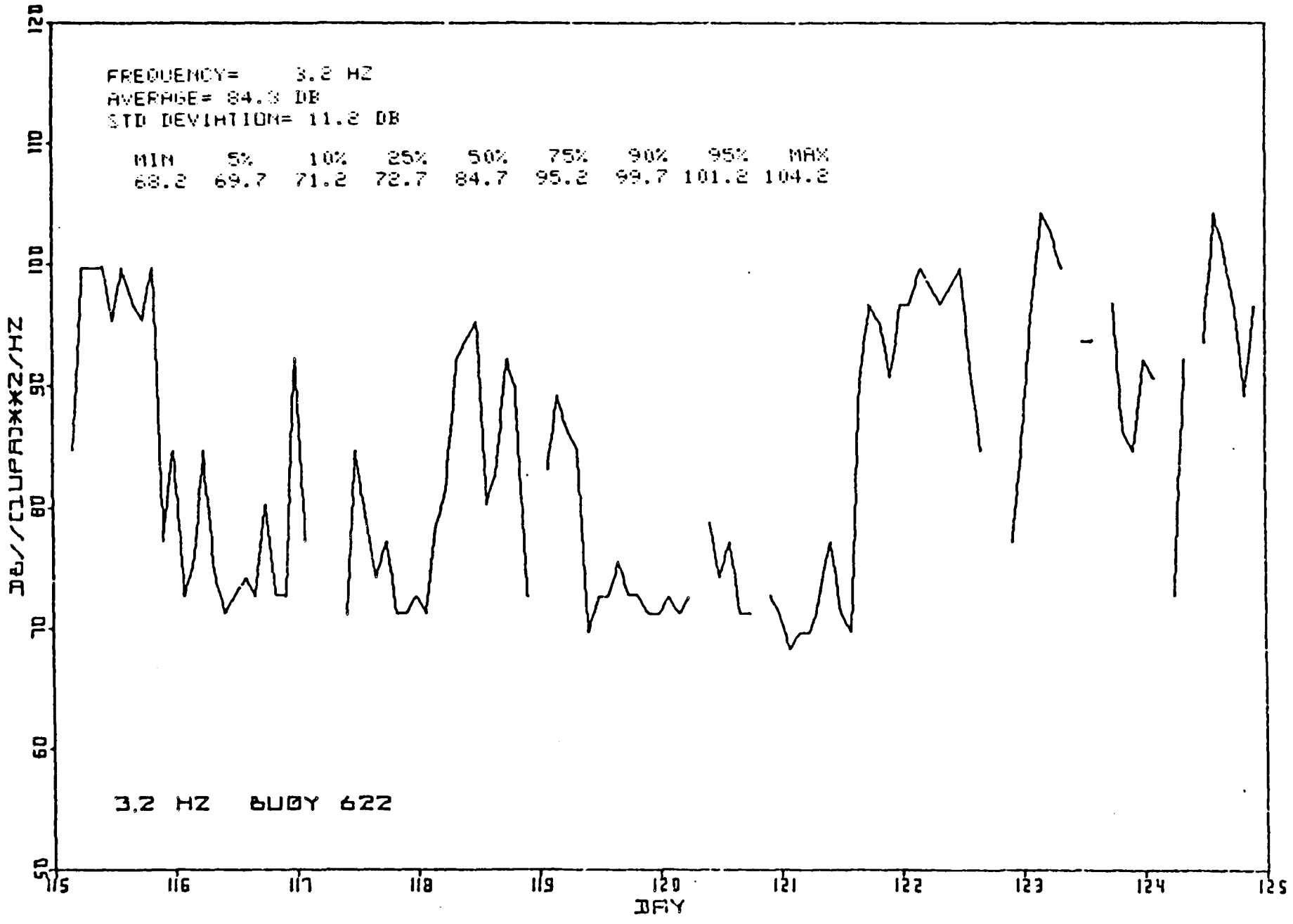


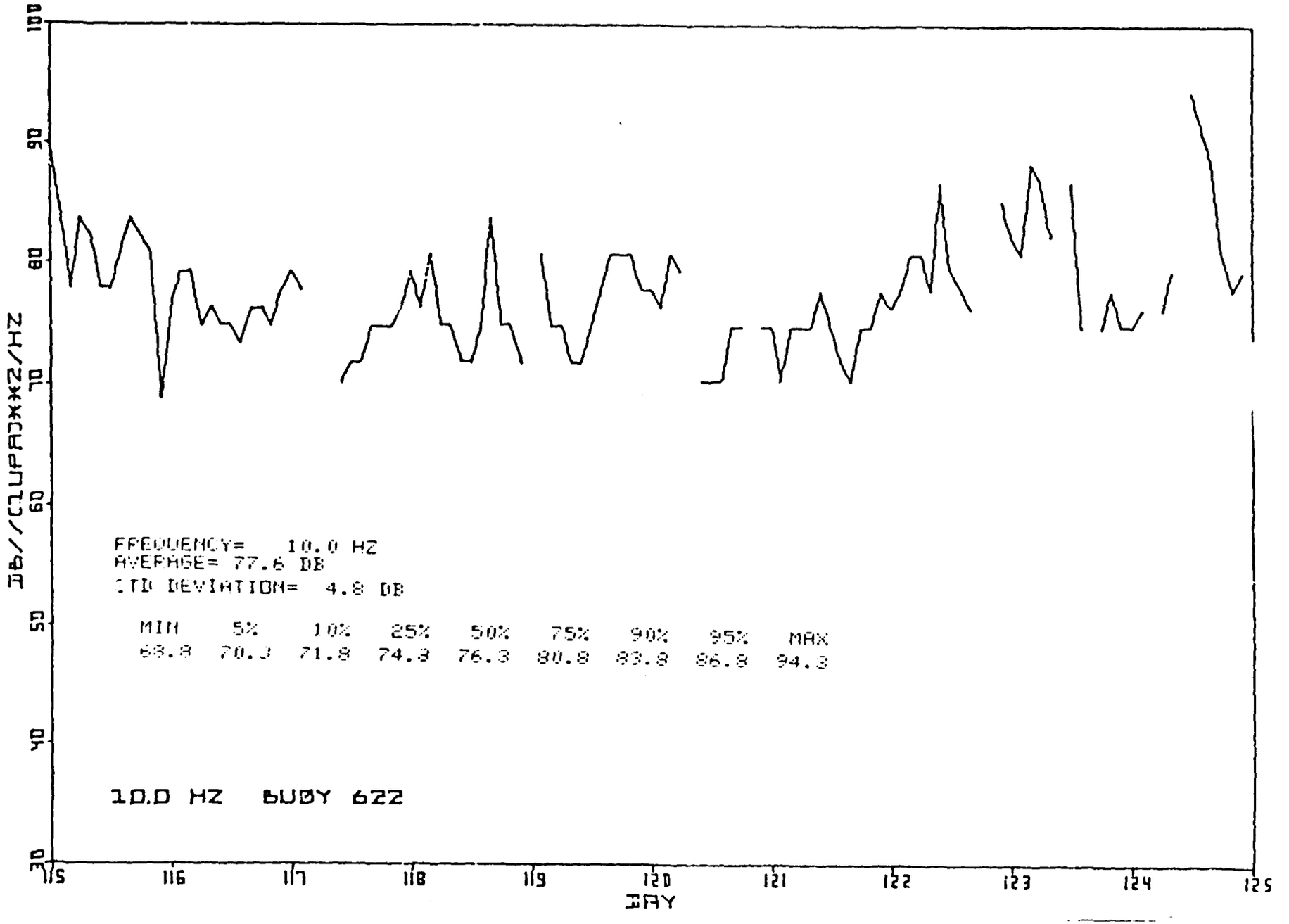






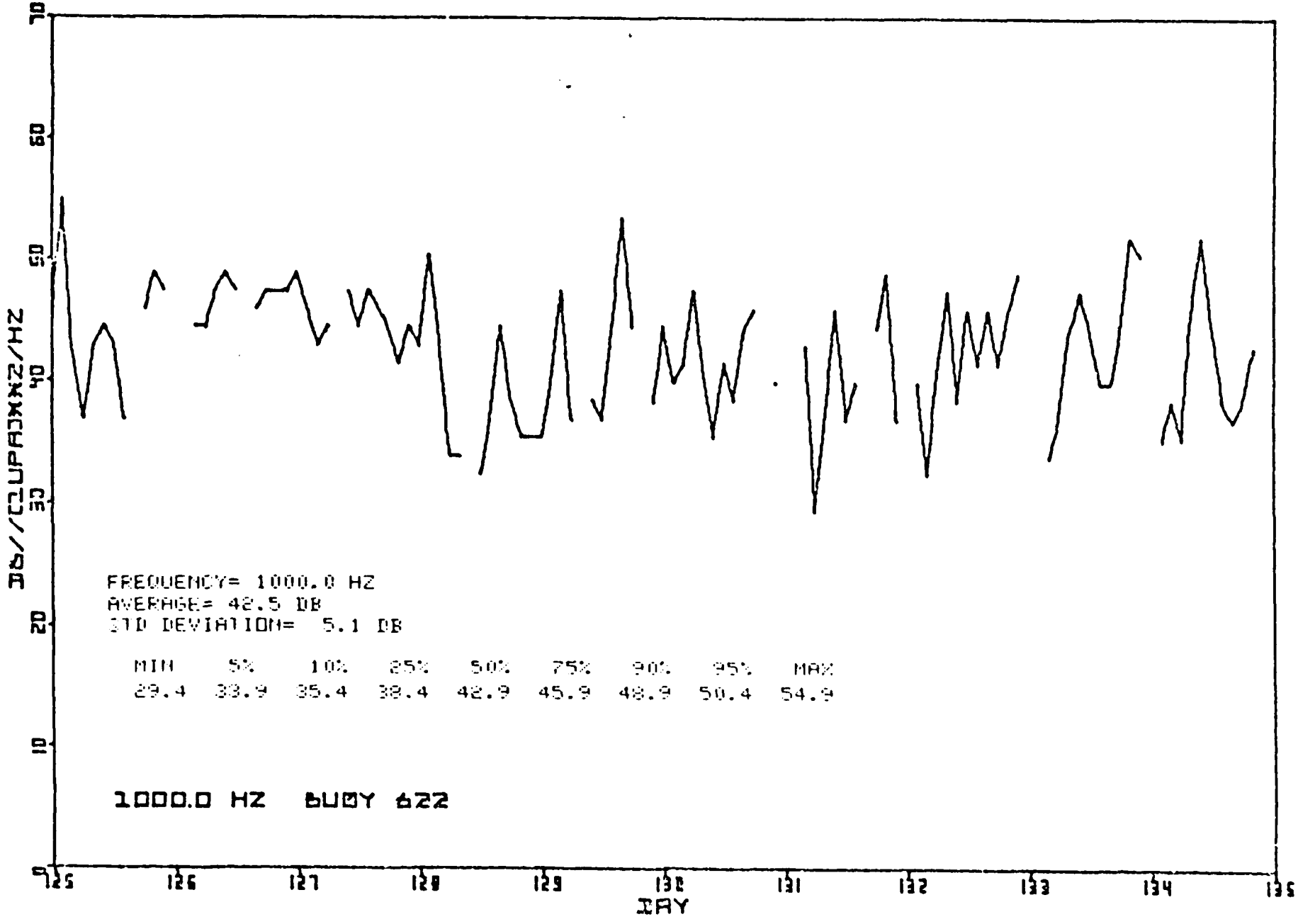
DAYS 115 - 124, 1977

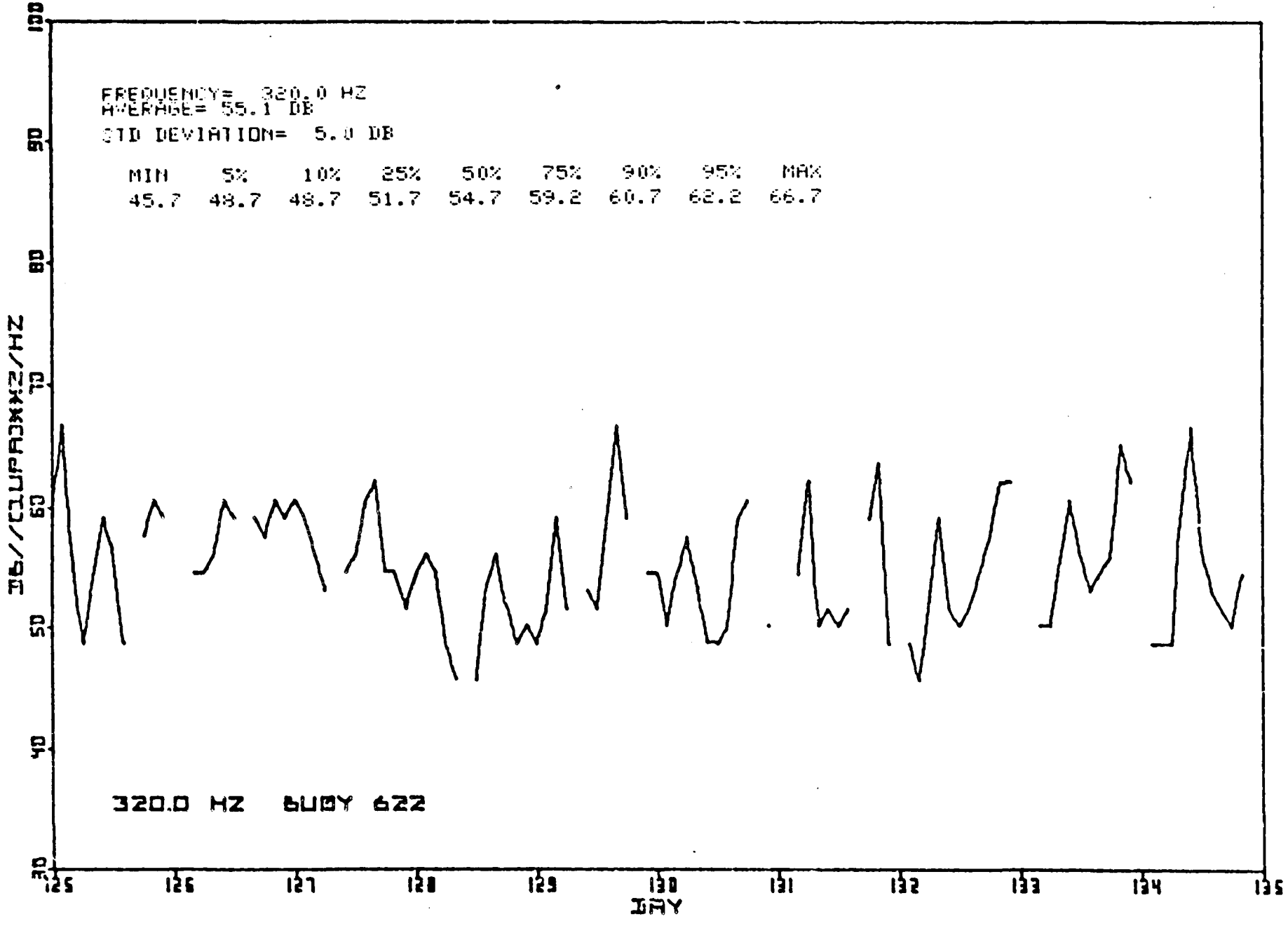

FREQUENCY= 3.2 HZ
AVERAGE= 84.3 DB
STD DEVIATION= 11.2 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
68.2 69.7 71.2 72.7 84.7 95.2 99.7 101.2 104.2
DB//(1UPA)**2/HZ
120
110
100
90
80
70
60
50
3.2 HZ BUOY 622
115
116
117
118
119
120
121
122
123
124
125
DAY

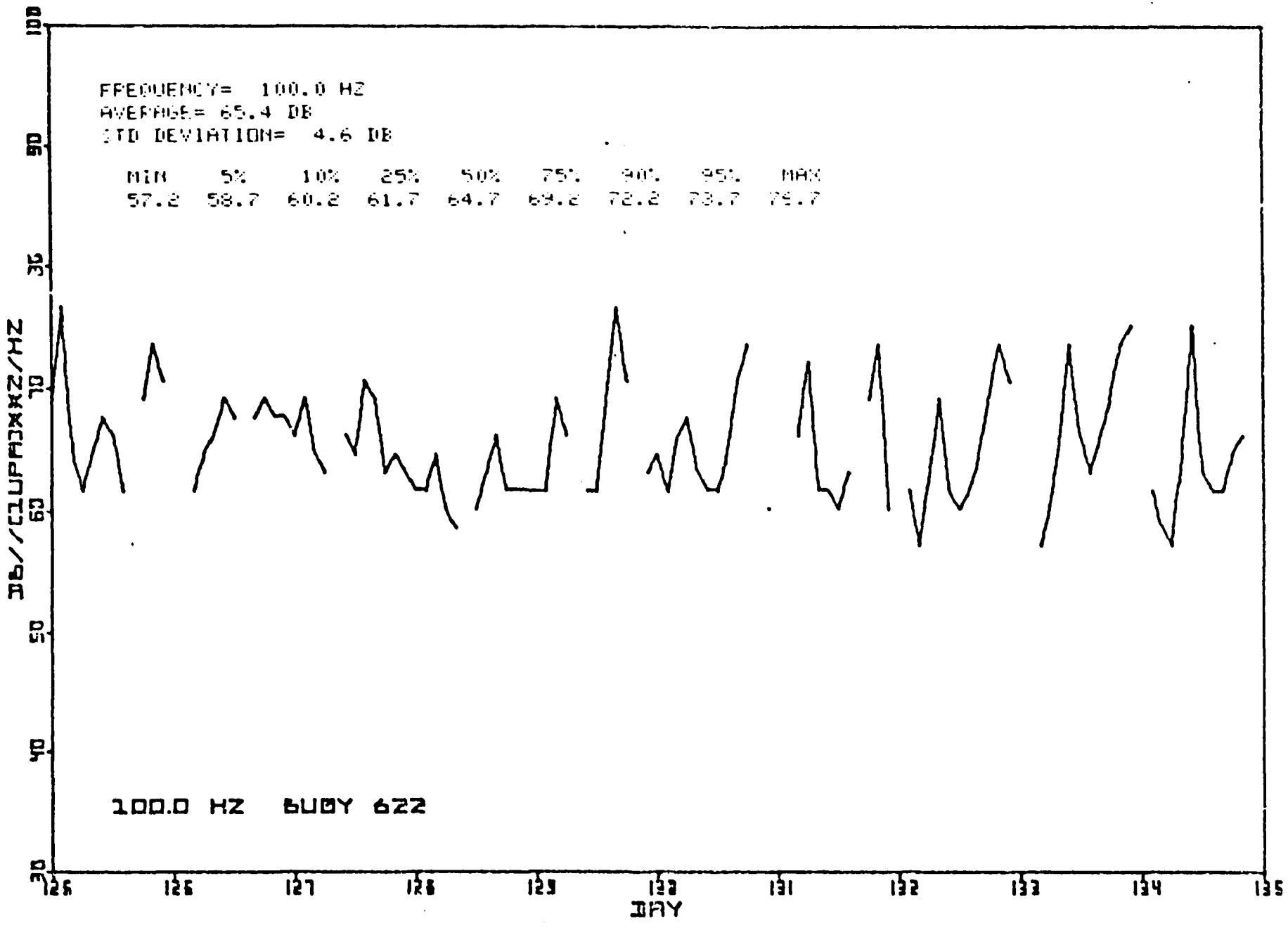

FREQUENCY= 10.0 HZ
AVERAGE= 77.6 DB
STD DEVIATION= 4.8 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
68.8 70.3 71.8 74.8 76.3 80.8 83.8 86.8 94.3
10.0 HZ BUOY 622
DB//CLUPA3**2/HZ
DAY

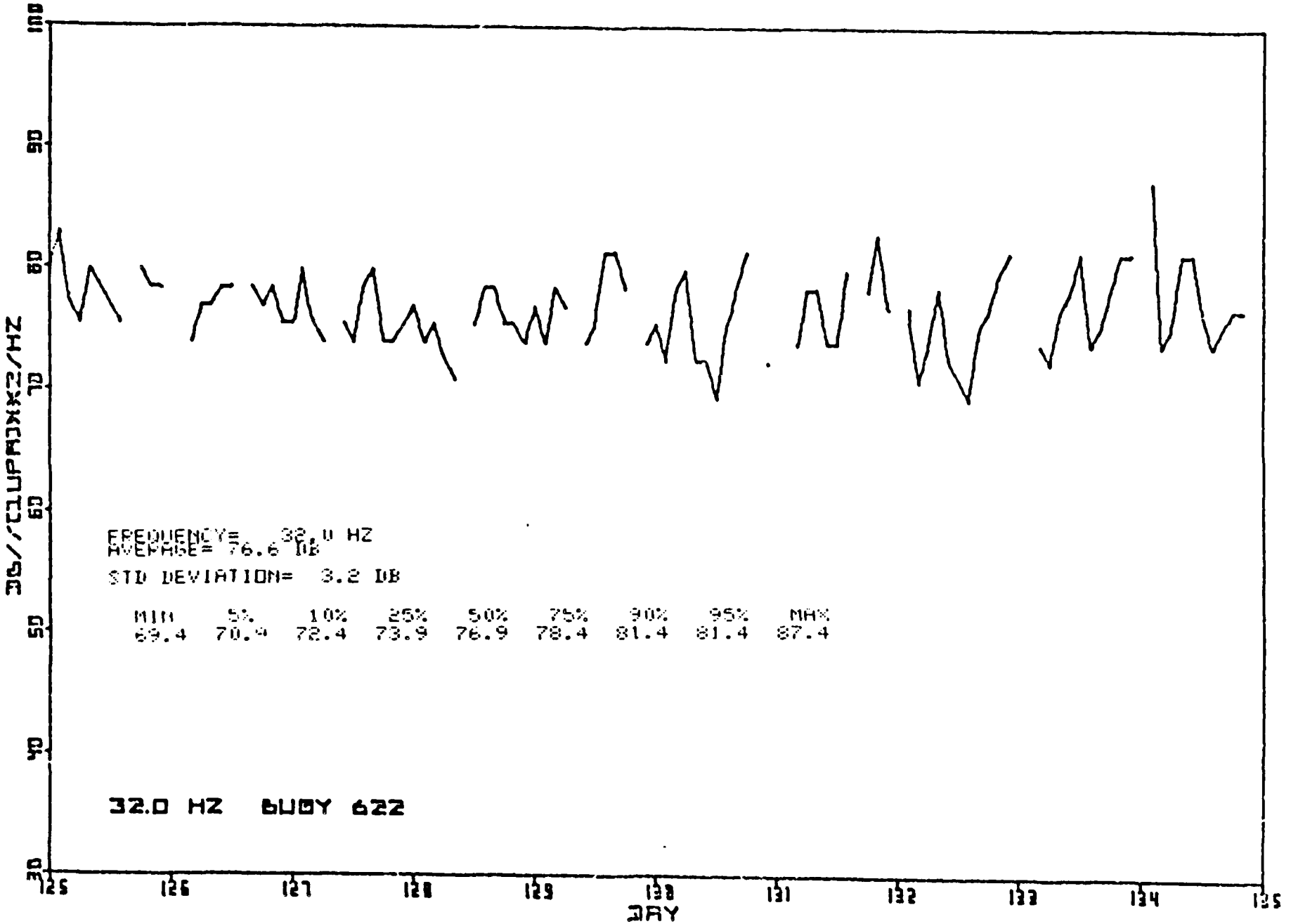
DOY 135-144 (15 May - 24 May, 1977)

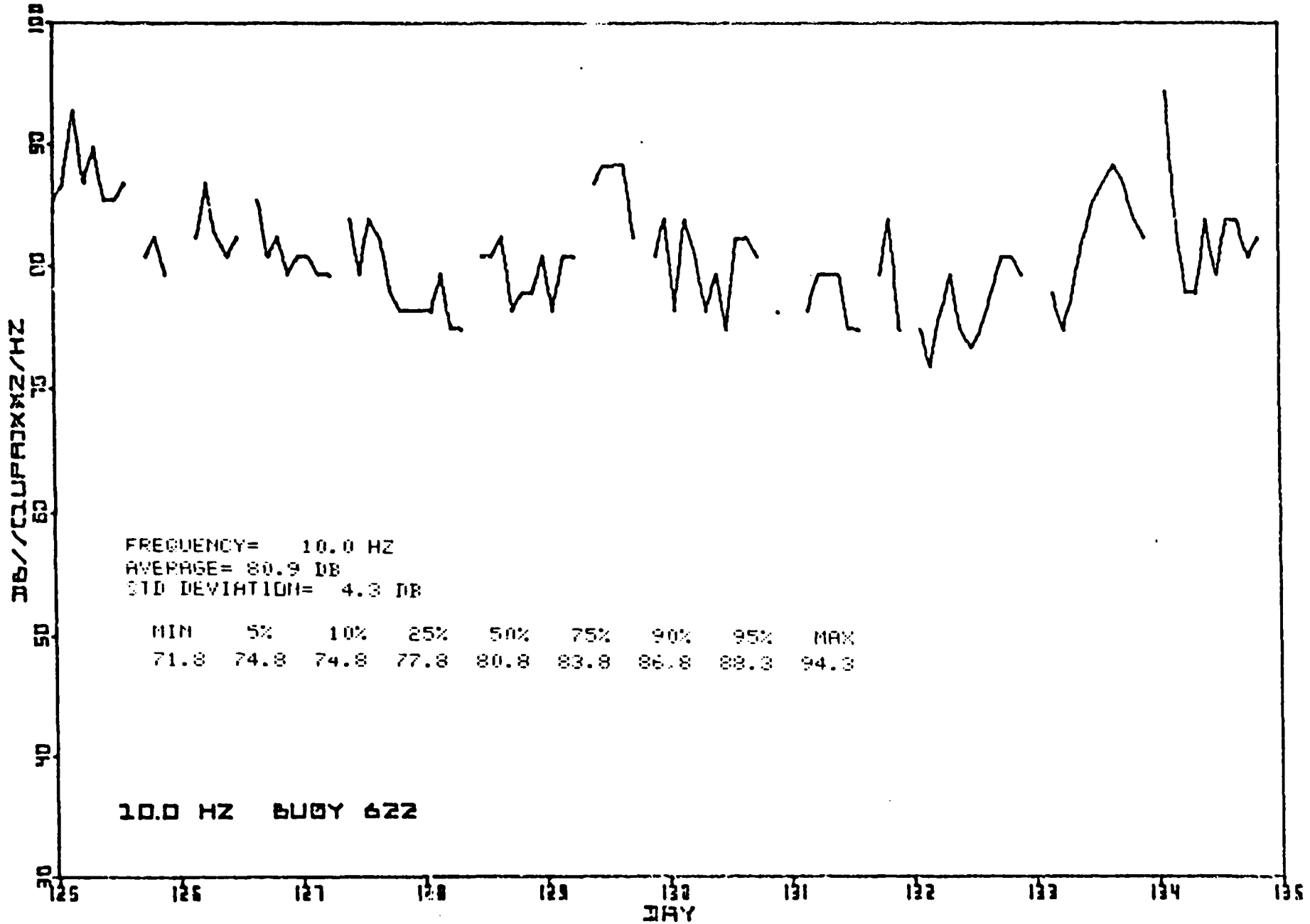
Time Histories, Histograms and Statistical Data

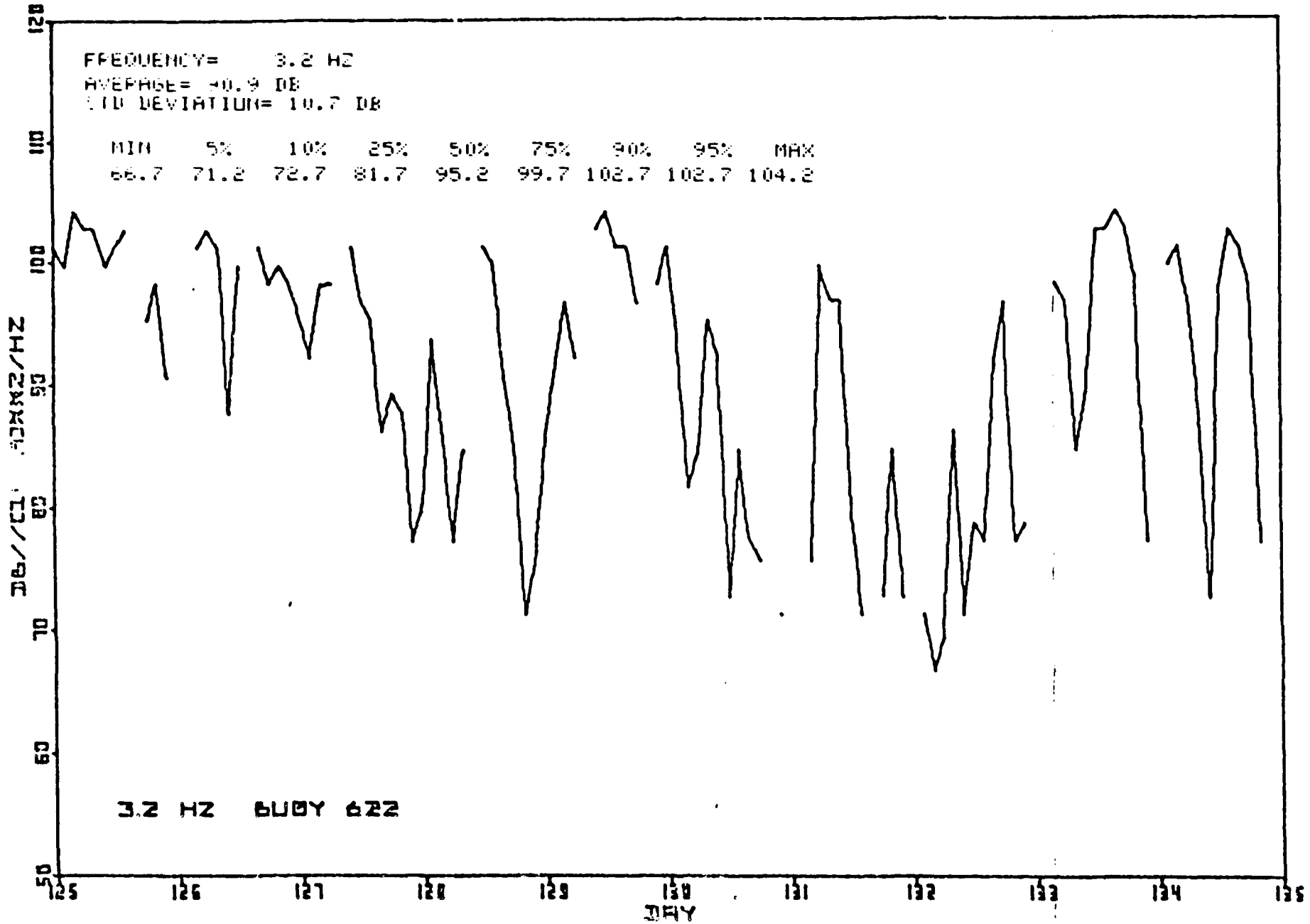

FREQUENCY= 1000.0 HZ
AVERAGE= 42.5 DB
STD DEVIATION= 5.1 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
29.4 33.9 35.4 38.4 42.9 45.9 48.9 50.4 54.9
1000.0 HZ BUOY 622
DB//CLUPA3KHZ/HZ
DAY

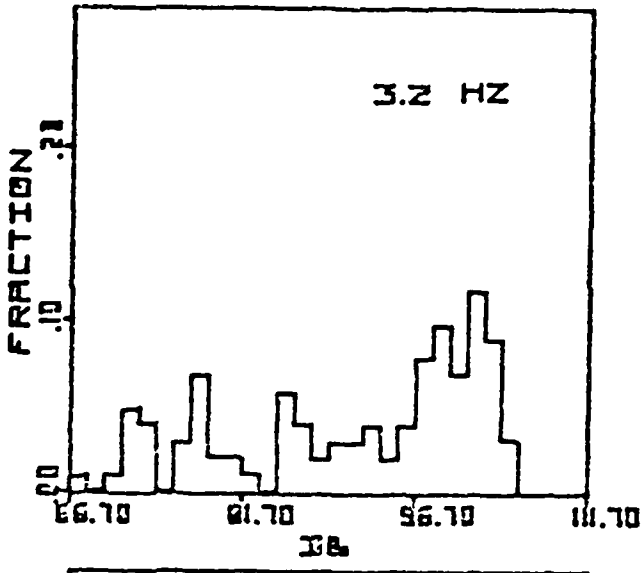

FREQUENCY= 320.0 HZ
AVERAGE= 55.1 DB
STD DEVIATION= 5.0 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
45.7 48.7 48.7 51.7 54.7 59.2 60.7 62.2 66.7
320.0 HZ BUOY 622
DB//CLUPA3M**2/HZ
DAY
100
90
80
70
60
50
40
30
125
126
127
128
129
130
131
132
133
134
135

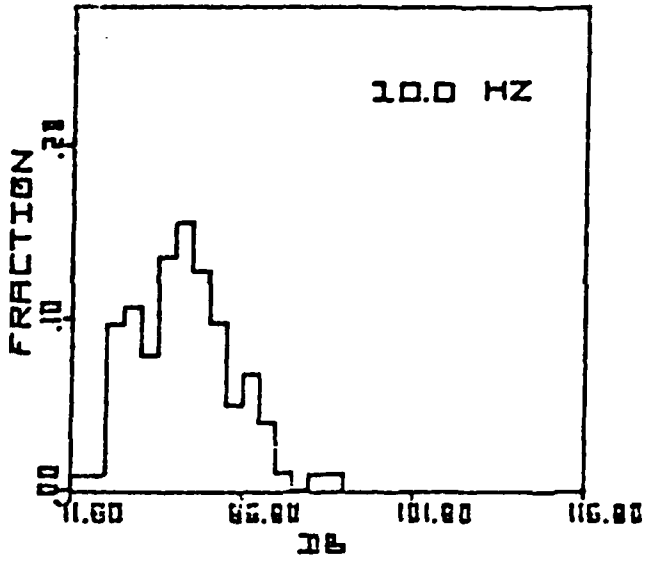

FREQUENCY= 100.0 HZ
AVERAGE= 65.4 DB
STD DEVIATION= 4.6 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
57.2 58.7 60.2 61.7 64.7 69.2 72.2 73.7 75.7
100.0 HZ BUOY 622
DB//CLUPACKZ/HZ
DAY
100
90
80
70
60
50
40
30
125
126
127
128
129
130
131
132
133
134
135

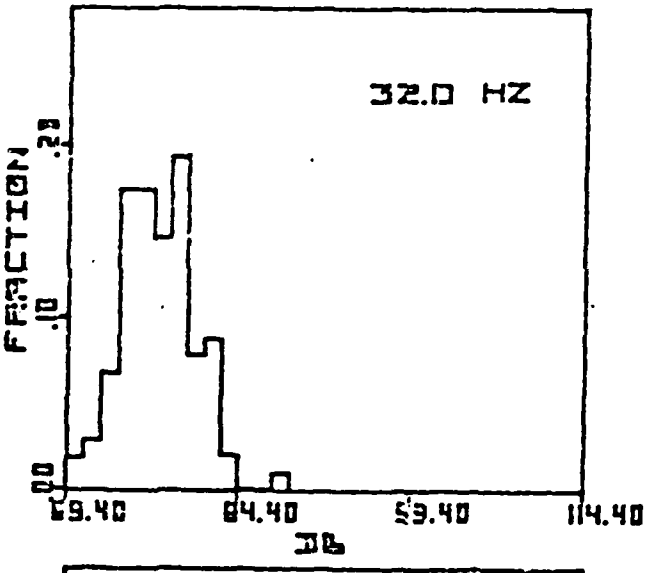

100
90
80
70
60
50
40
30
DB//1CLUPACKK2/HZ
FREQUENCY= 32.0 HZ
AVERAGE= 76.6 DB
STD DEVIATION= 3.2 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
69.4 70.4 72.4 73.9 76.9 78.4 81.4 81.4 87.4
32.0 HZ BUOY 622
125
126
127
128
129
130
131
132
133
134
135
DAY

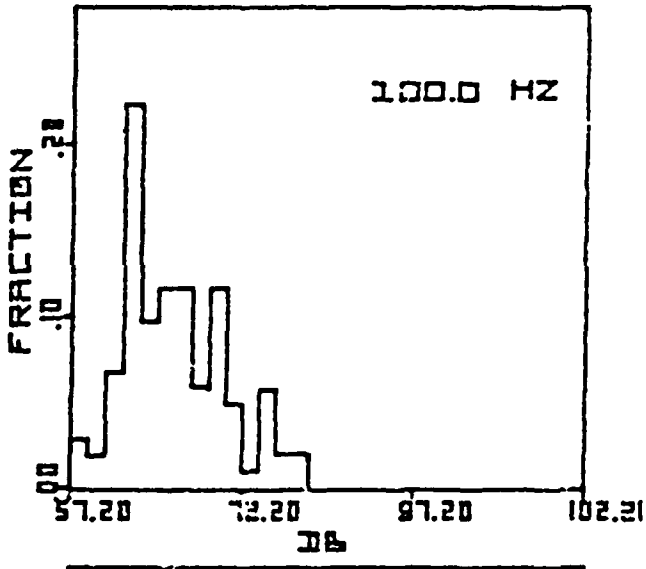

FREQUENCY= 10.0 HZ
AVERAGE= 80.9 DB
STD DEVIATION= 4.3 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
71.8 74.8 74.8 77.8 80.8 83.8 86.8 88.8 94.8
10.0 HZ BUOY 622
DB//(1UPA2)X2/HZ
DAY

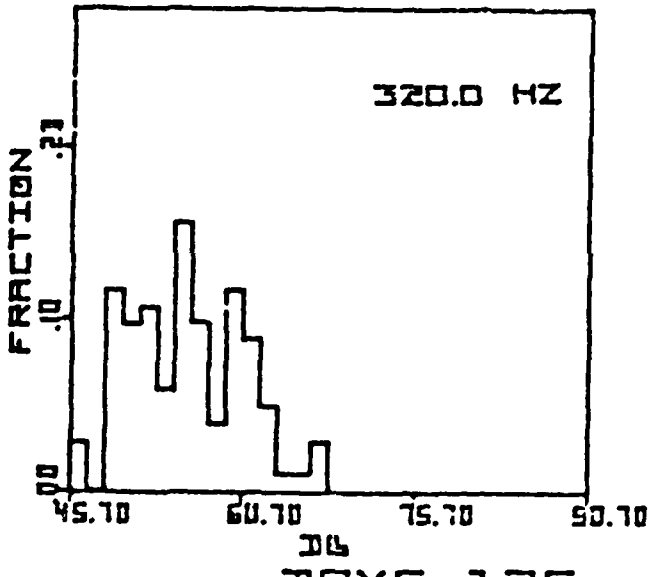

FREQUENCY= 3.2 HZ
AVERAGE= 90.9 DB
STD DEVIATION= 10.7 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
66.7 71.2 72.7 81.7 95.2 99.7 102.7 102.7 104.2
3.2 HZ BUOY 622
DB//(1 UPA2/HZ)
DAY
120
110
100
90
80
70
60
50
125
126
127
128
129
130
131
132
133
134
135

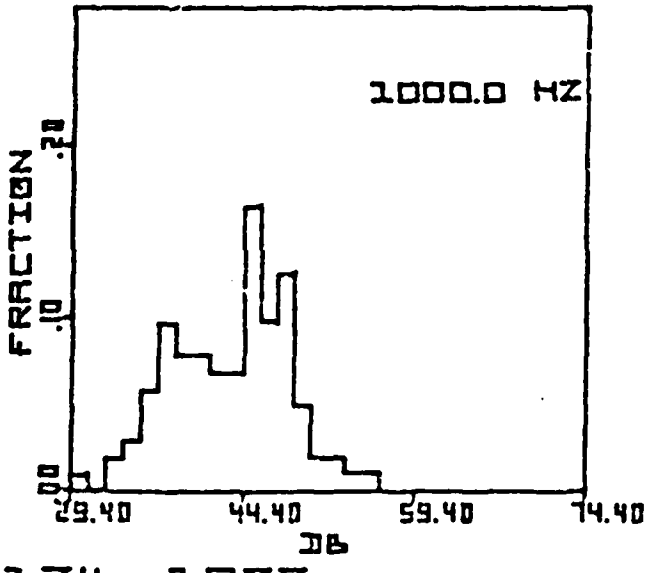




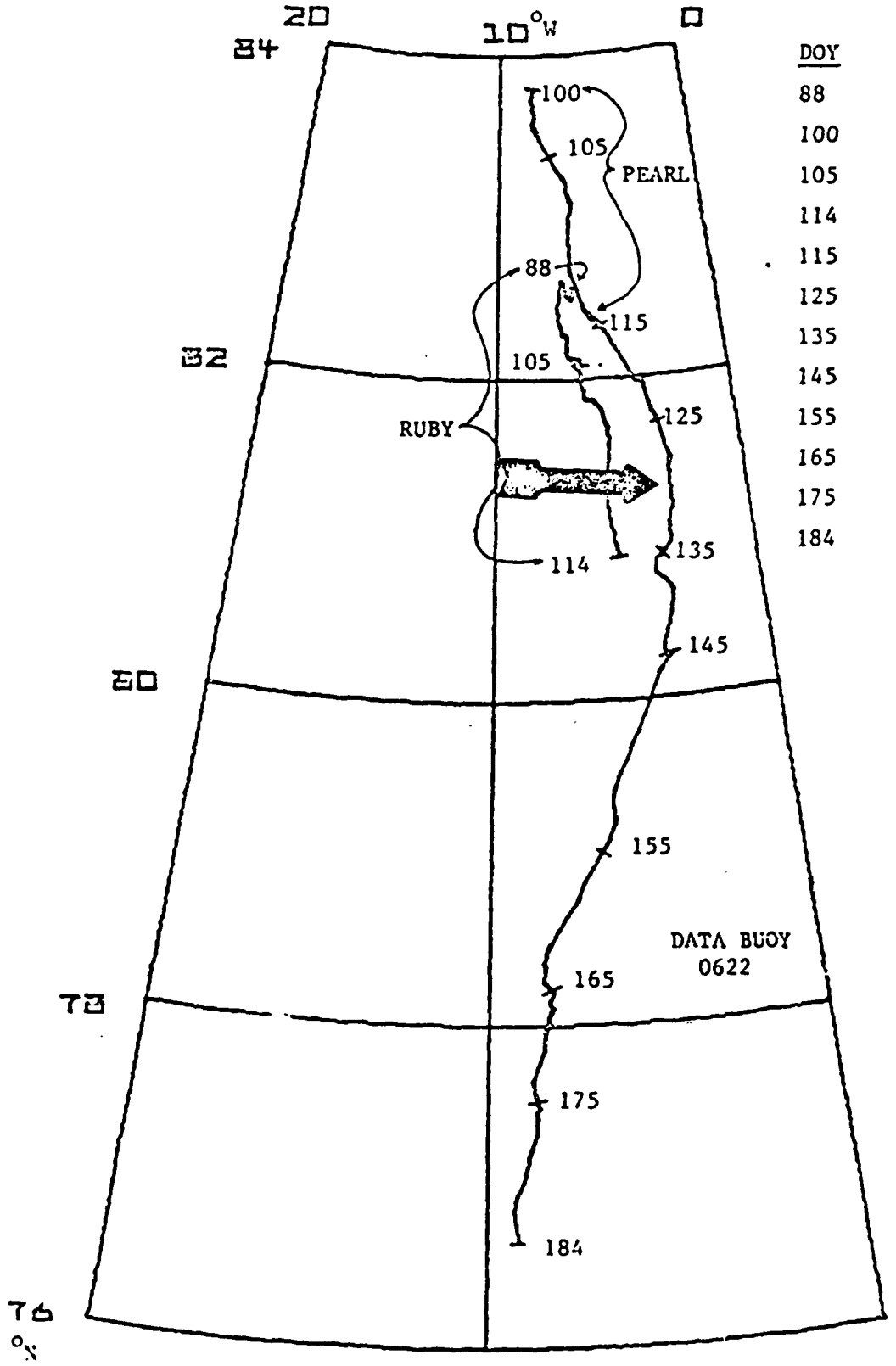








DAYS 125 - 134, 1977

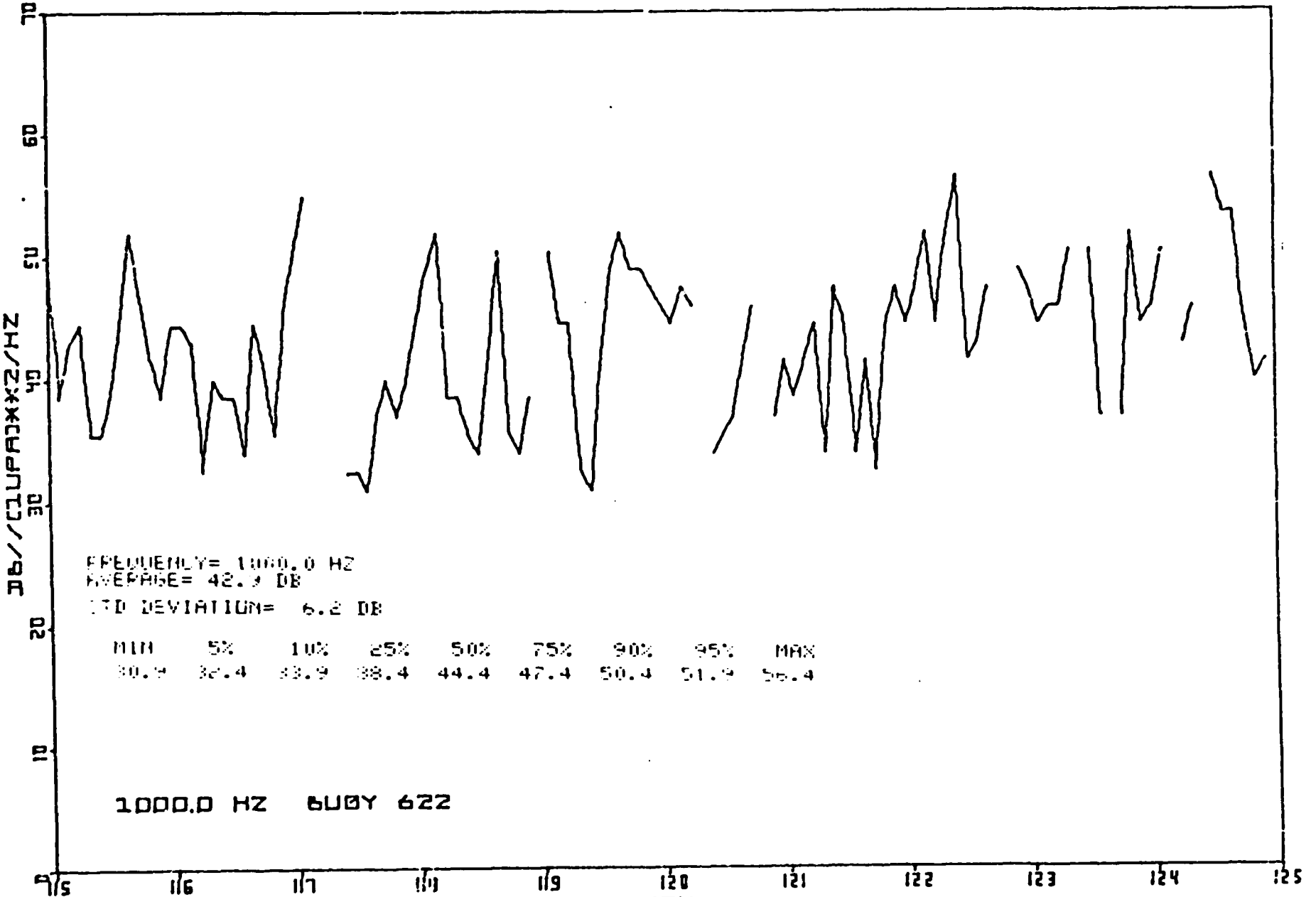


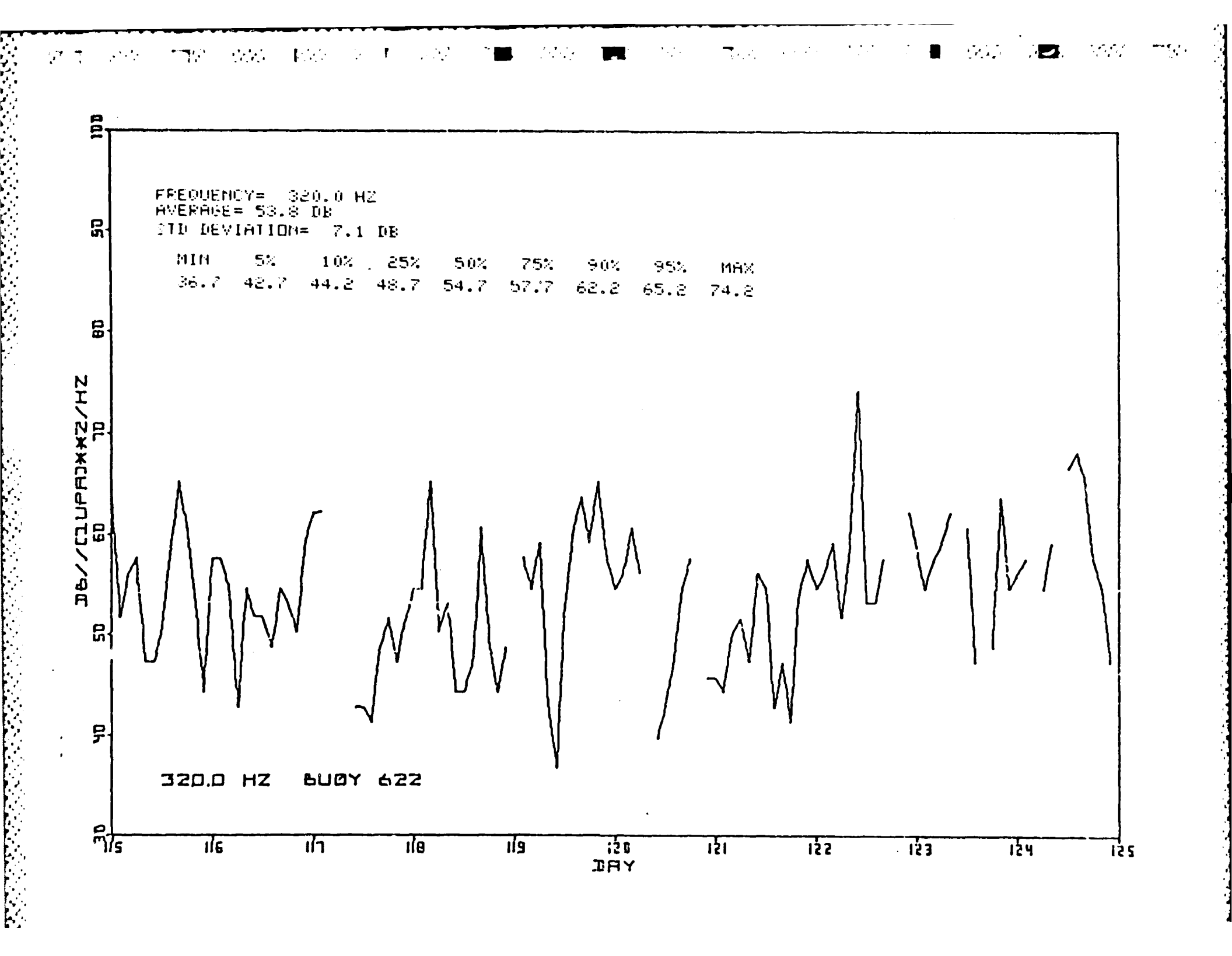
DOY	Date
88	29 Mar 77
100	10 Apr
105	15 "
114	24 "
115	25 "
125	5 May
135	15 "
145	25 "
155	5 June
165	14 "
175	24 "
184	3 July

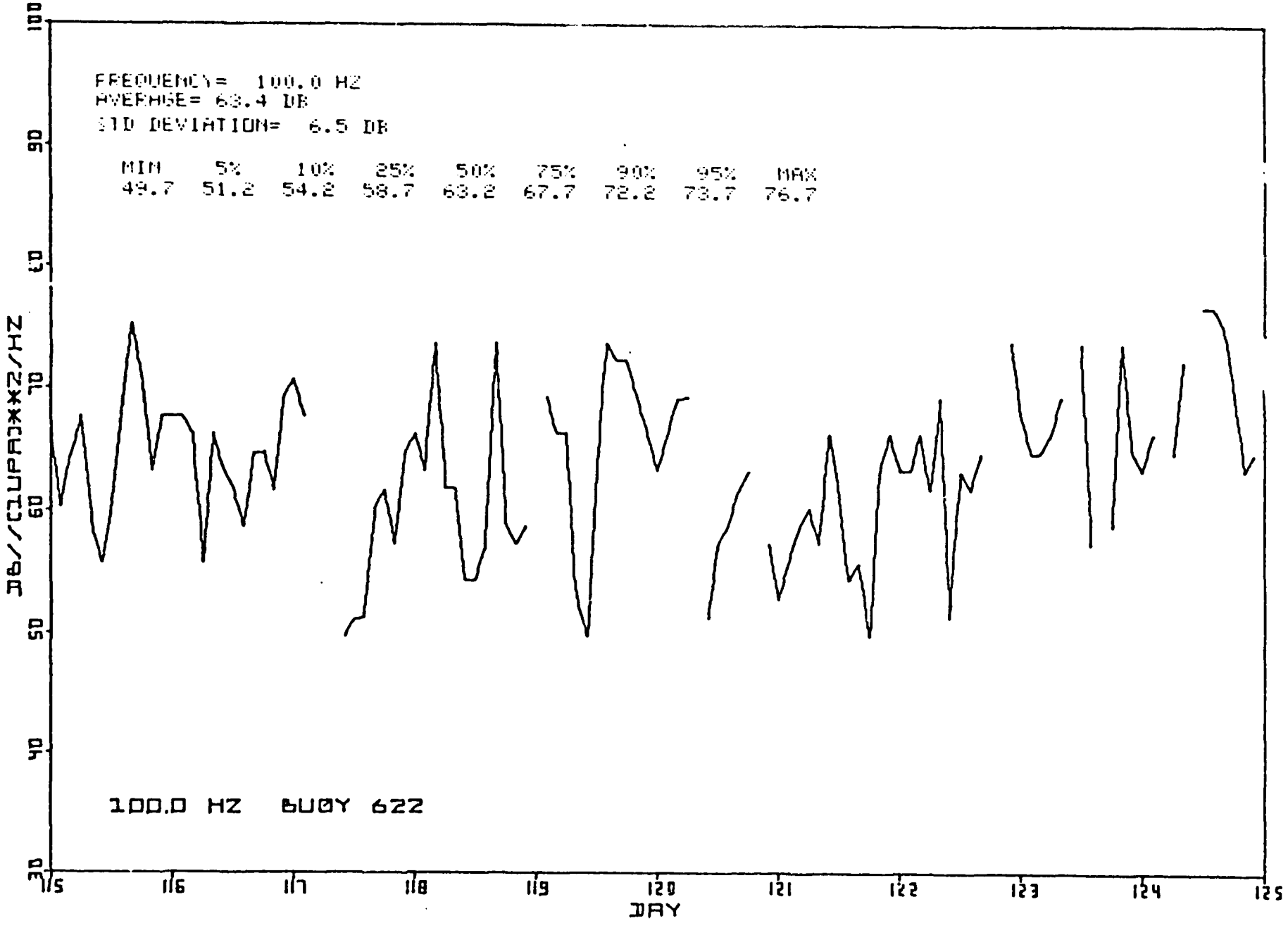
FLOE DRIFT, DAYS 125 - 135

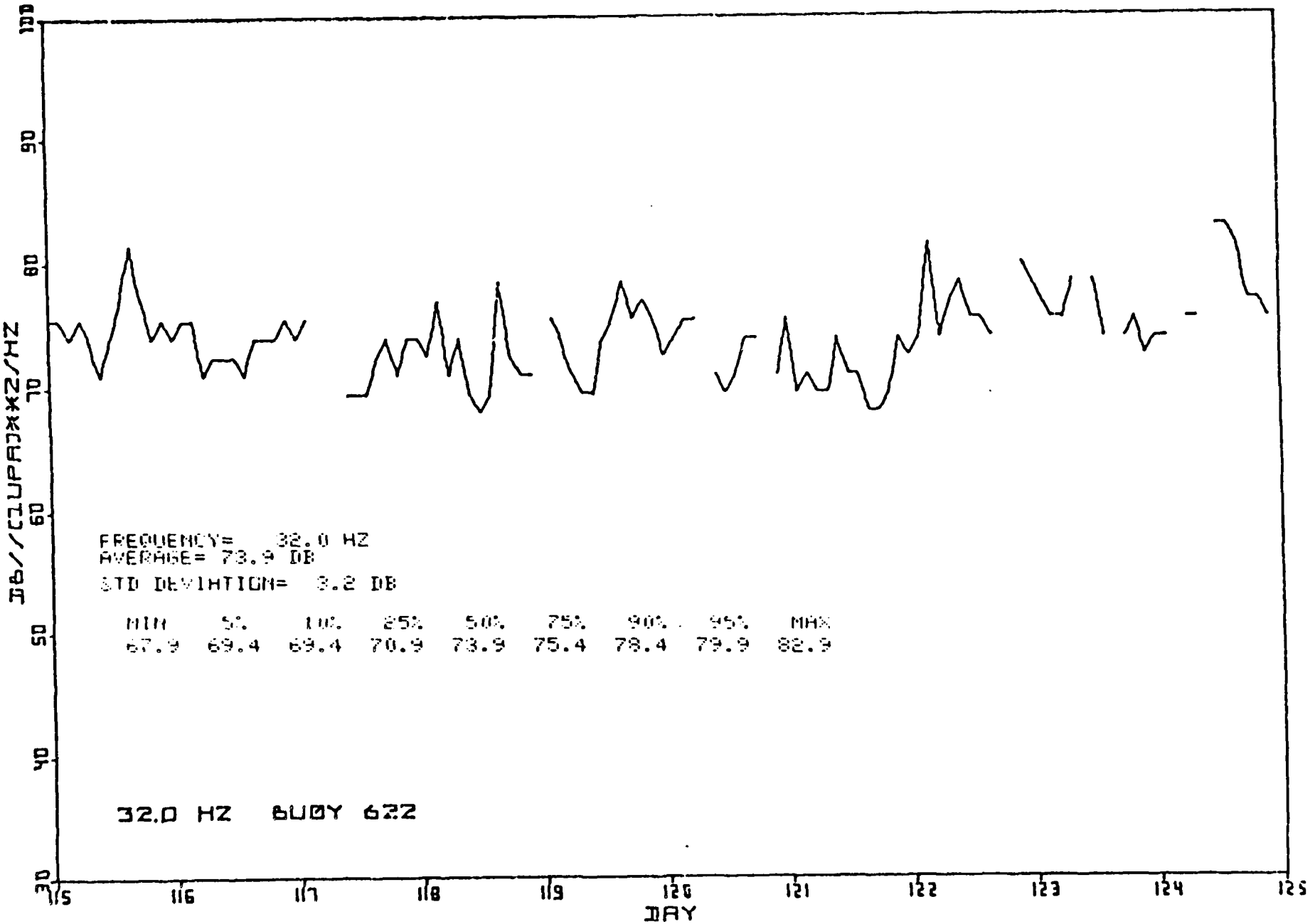
DOY 125-134 (5 May - 14 May, 1977)

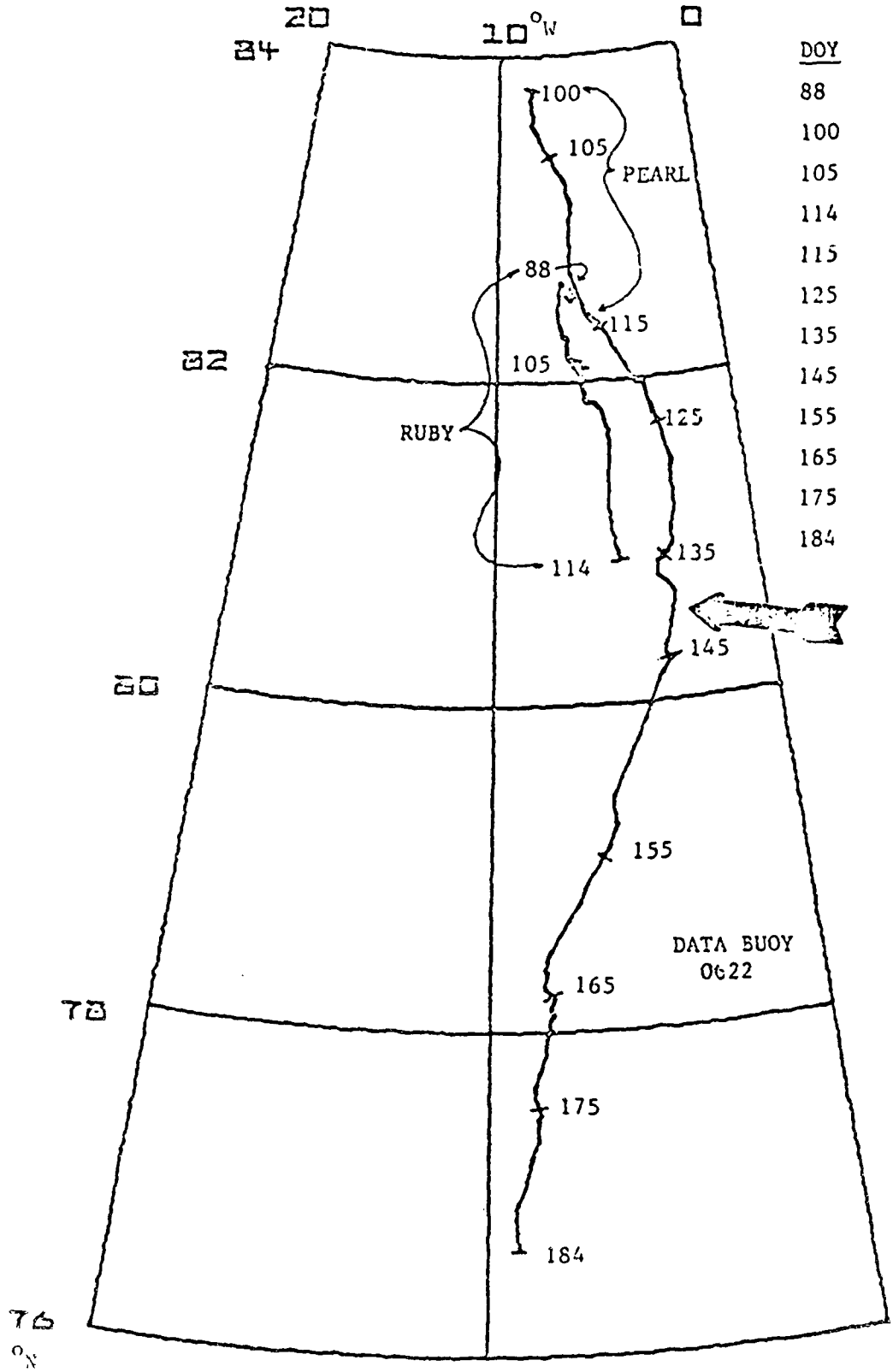
Time Histories, Histograms and Statistical Data


DB//(1UPA)**2/HZ
70
60
50
40
30
20
10
0
FREQUENCY= 1000.0 HZ
AVERAGE= 42.9 DB
STD DEVIATION= 6.2 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
30.9 32.4 33.9 38.4 44.4 47.4 50.4 51.9 56.4
1000.0 HZ BUOY 622
115 116 117 118 119 120 121 122 123 124 125
MAY


FREQUENCY= 320.0 HZ
AVERAGE= 53.8 DB
STD DEVIATION= 7.1 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
36.7 42.7 44.2 48.7 54.7 57.7 62.2 65.2 74.2
320.0 HZ BUOY 622
DB//(1UPA)**2/HZ
DAY
30
40
50
60
70
80
90
115
116
117
118
119
120
121
122
123
124
125

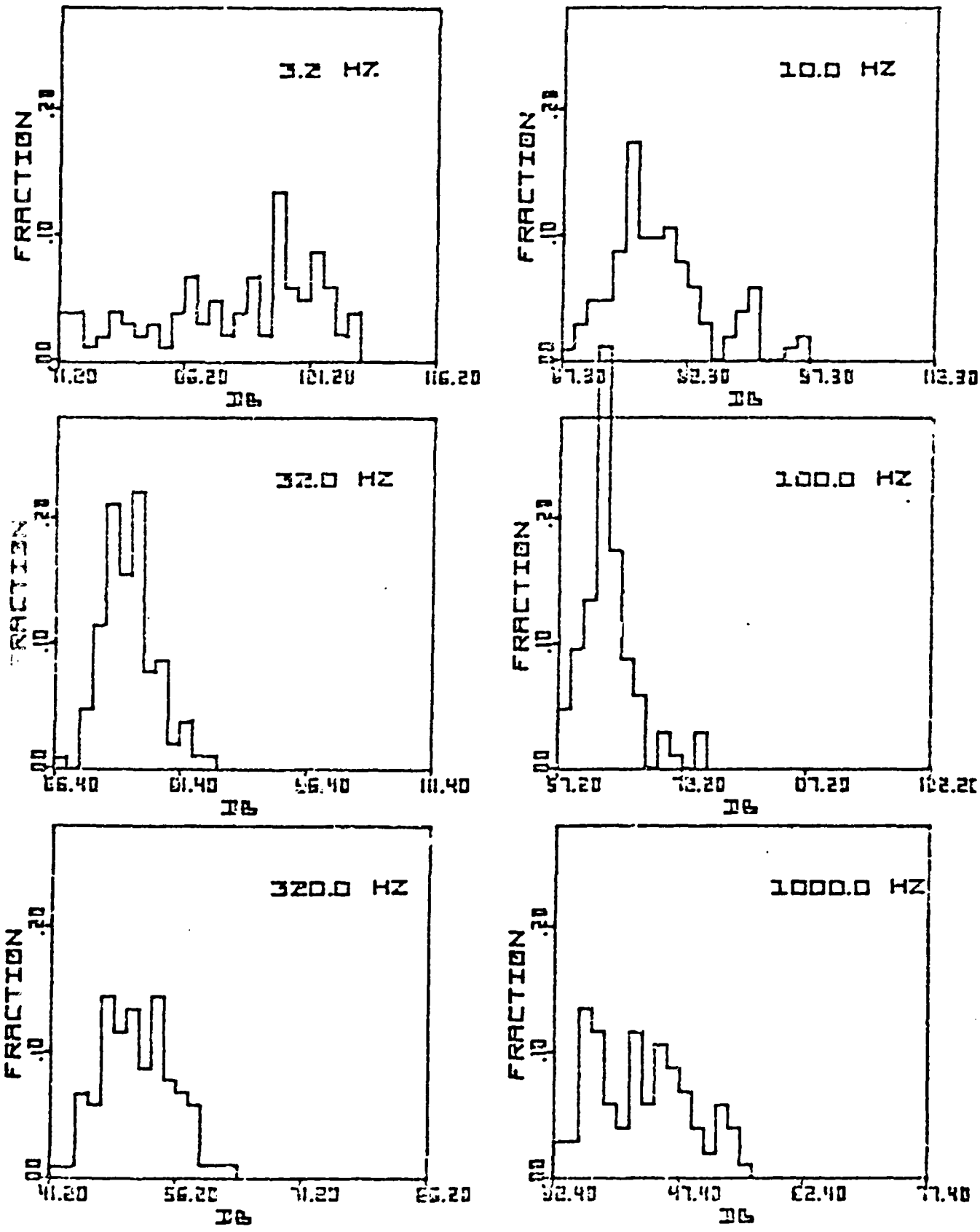

FREQUENCY= 100.0 HZ
AVERAGE= 63.4 DB
STD DEVIATION= 6.5 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
49.7 51.2 54.2 58.7 63.2 67.7 72.2 73.7 76.7
DB//(1UPA)**2/HZ
100
90
80
70
60
50
40
30
115
116
117
118
119
120
121
122
123
124
125
DAY
100.0 HZ BUOY 622


DB//CLUPAJ**2/HZ
100
90
80
70
60
50
40
30
FREQUENCY= 32.0 HZ
AVERAGE= 73.9 DB
STD DEVIATION= 3.2 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
67.9 69.4 69.4 70.9 73.9 75.4 78.4 79.9 82.9
32.0 HZ BUOY 622
115
116
117
118
119
120
121
122
123
124
125
DAY

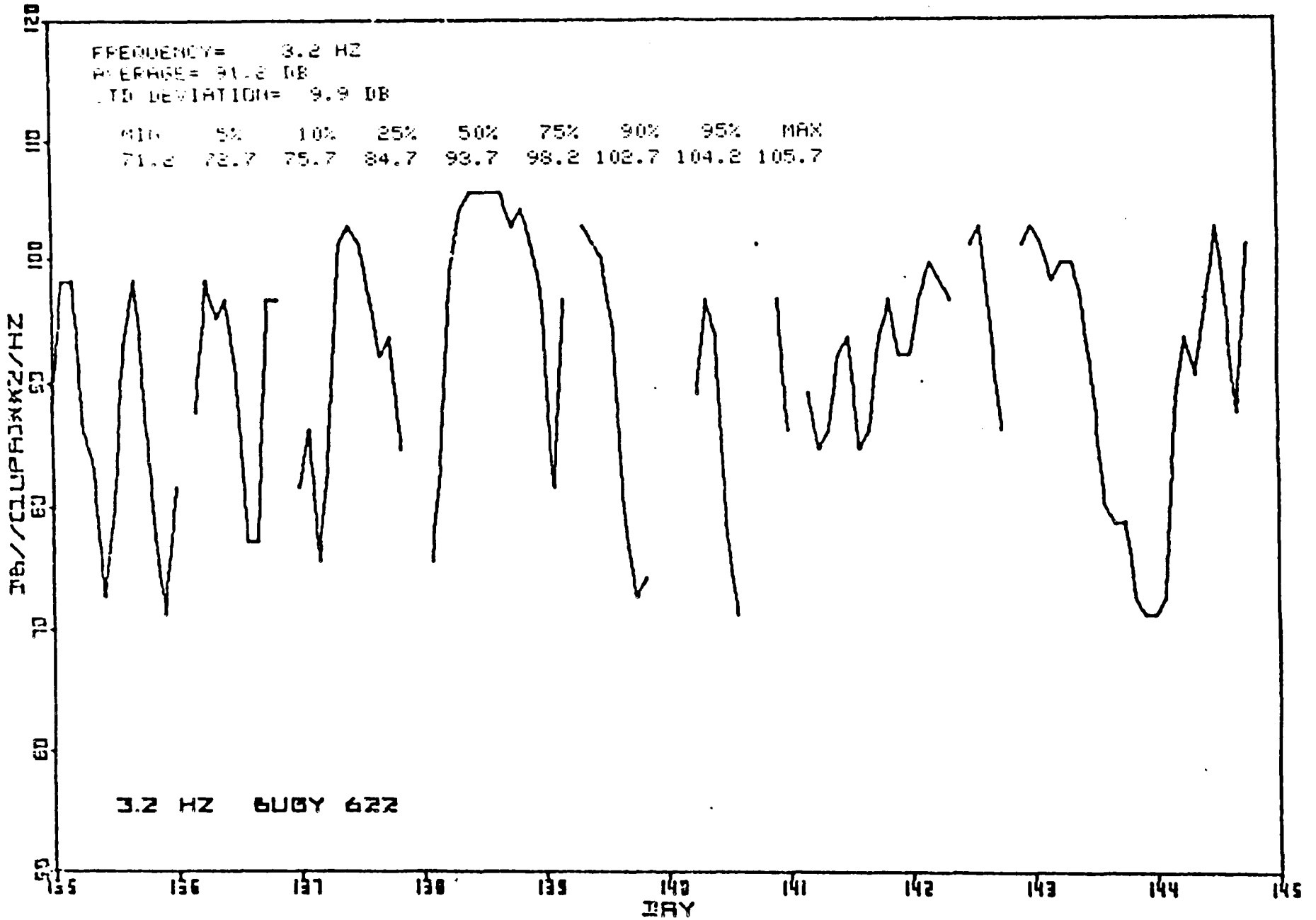


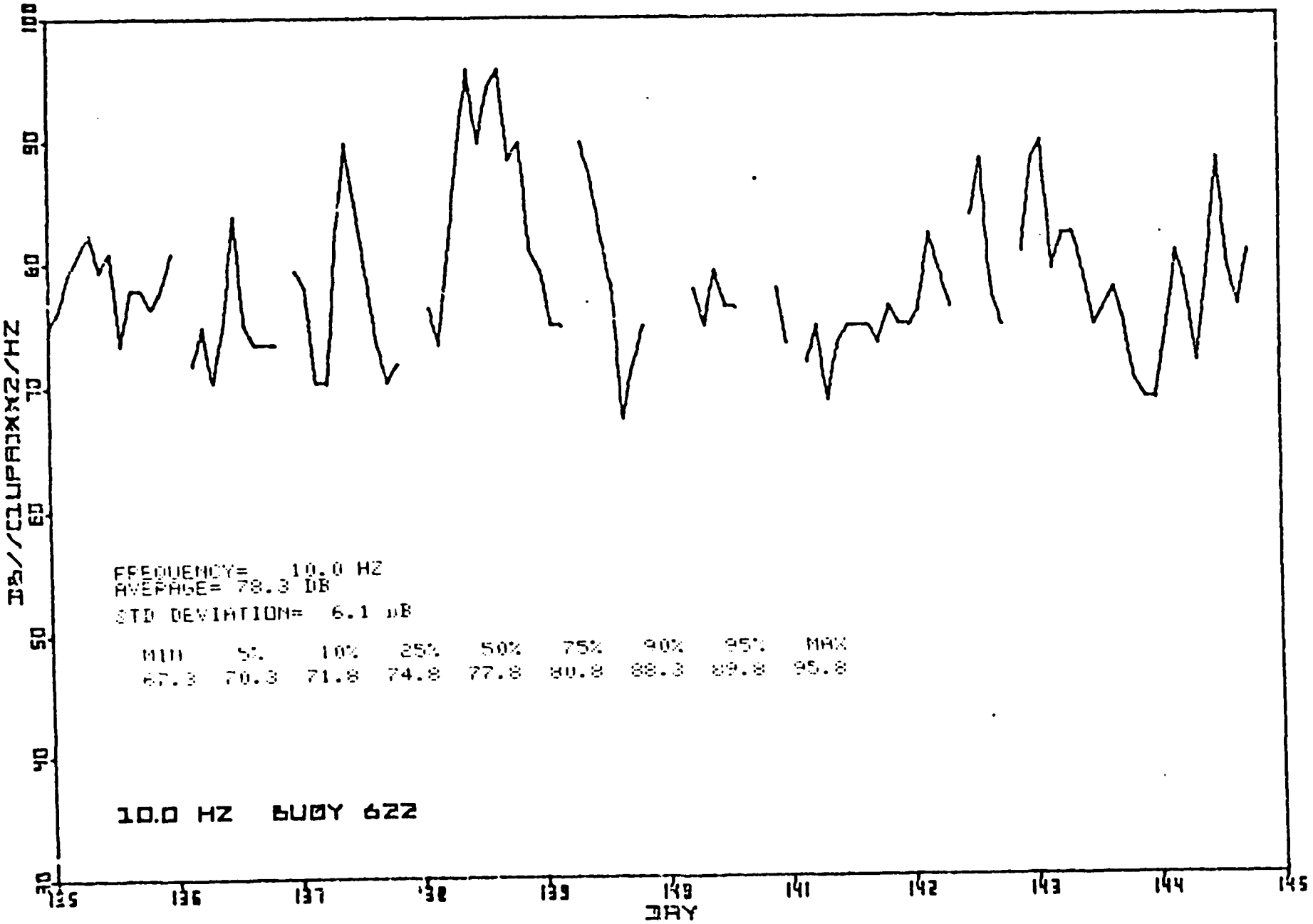
DOY	Date
88	29 Mar 77
100	10 Apr
105	15 "
114	24 "
115	25 "
125	5 May
135	15 "
145	25 "
155	5 June
165	14 "
175	24 "
184	3 July

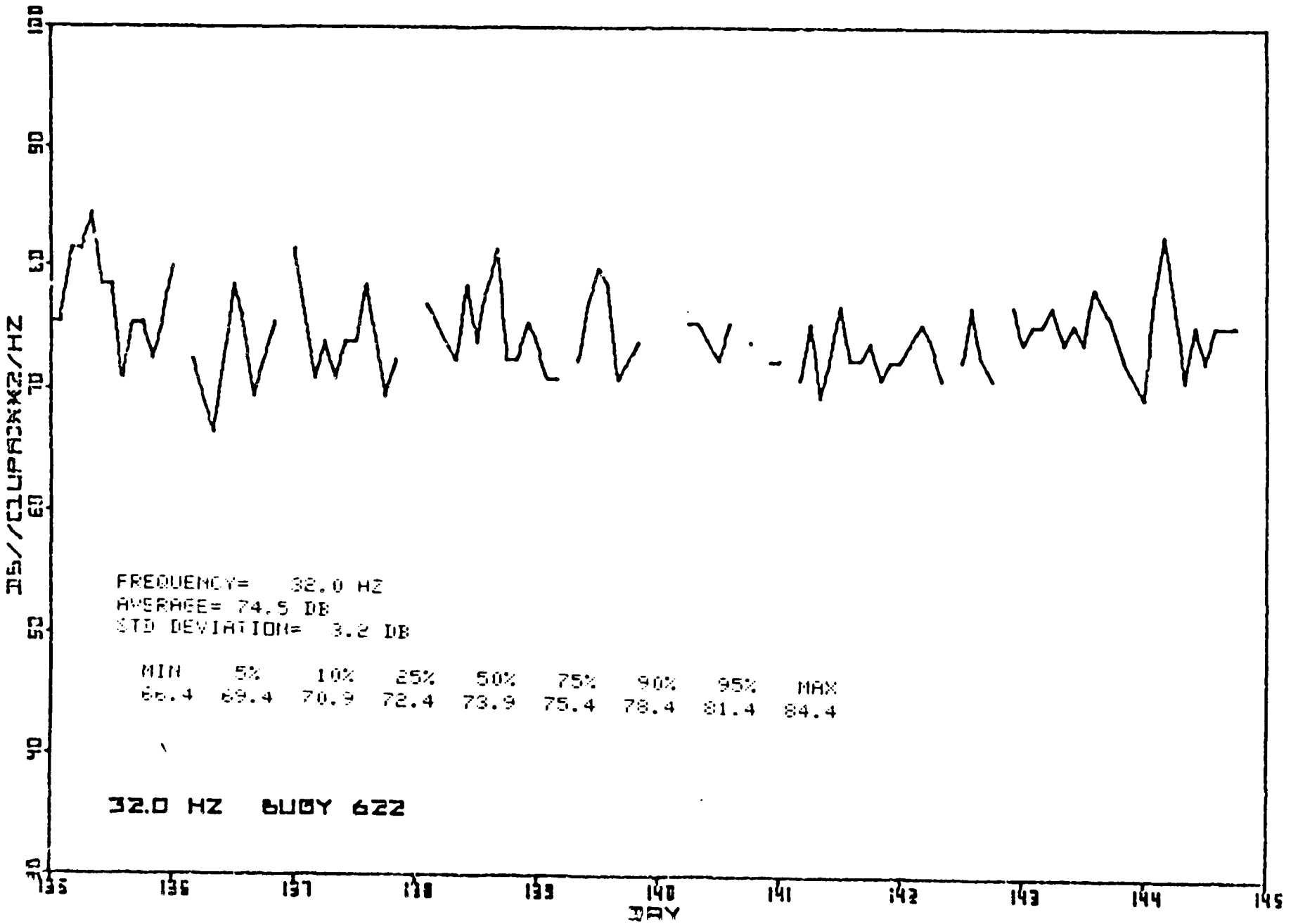
FLOE DRIFT, DAYS 135 - 145

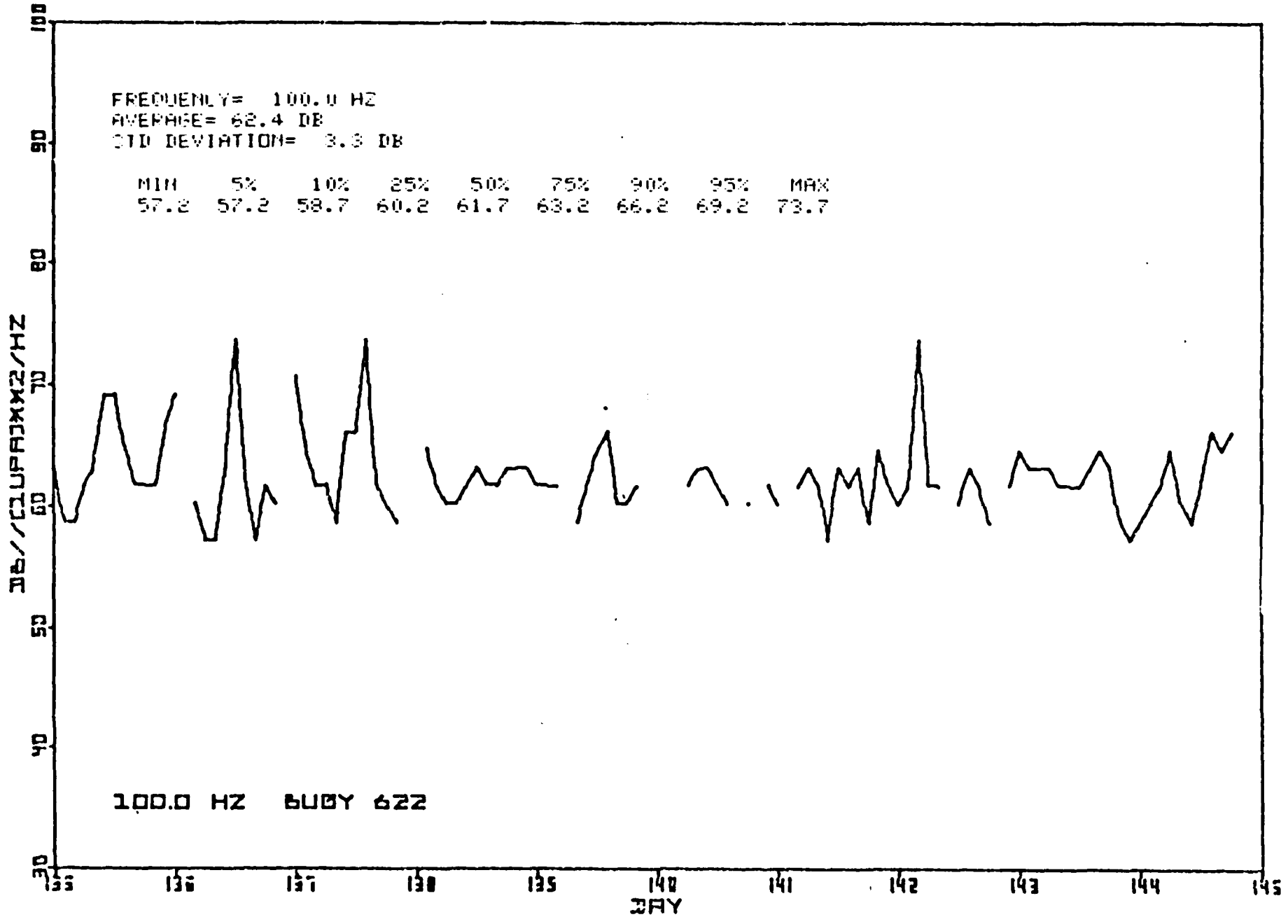


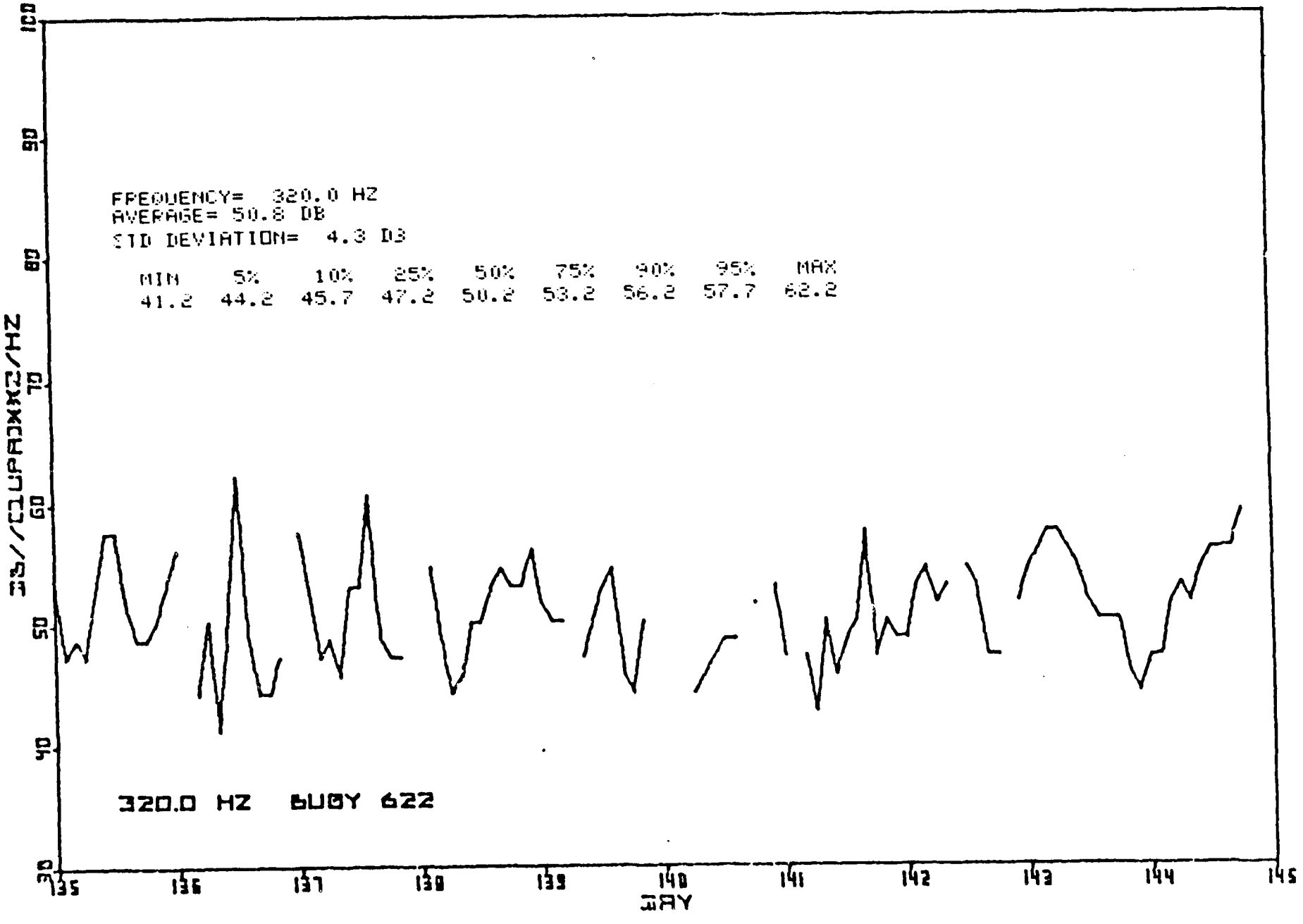
DAYS 135 - 144, 1977

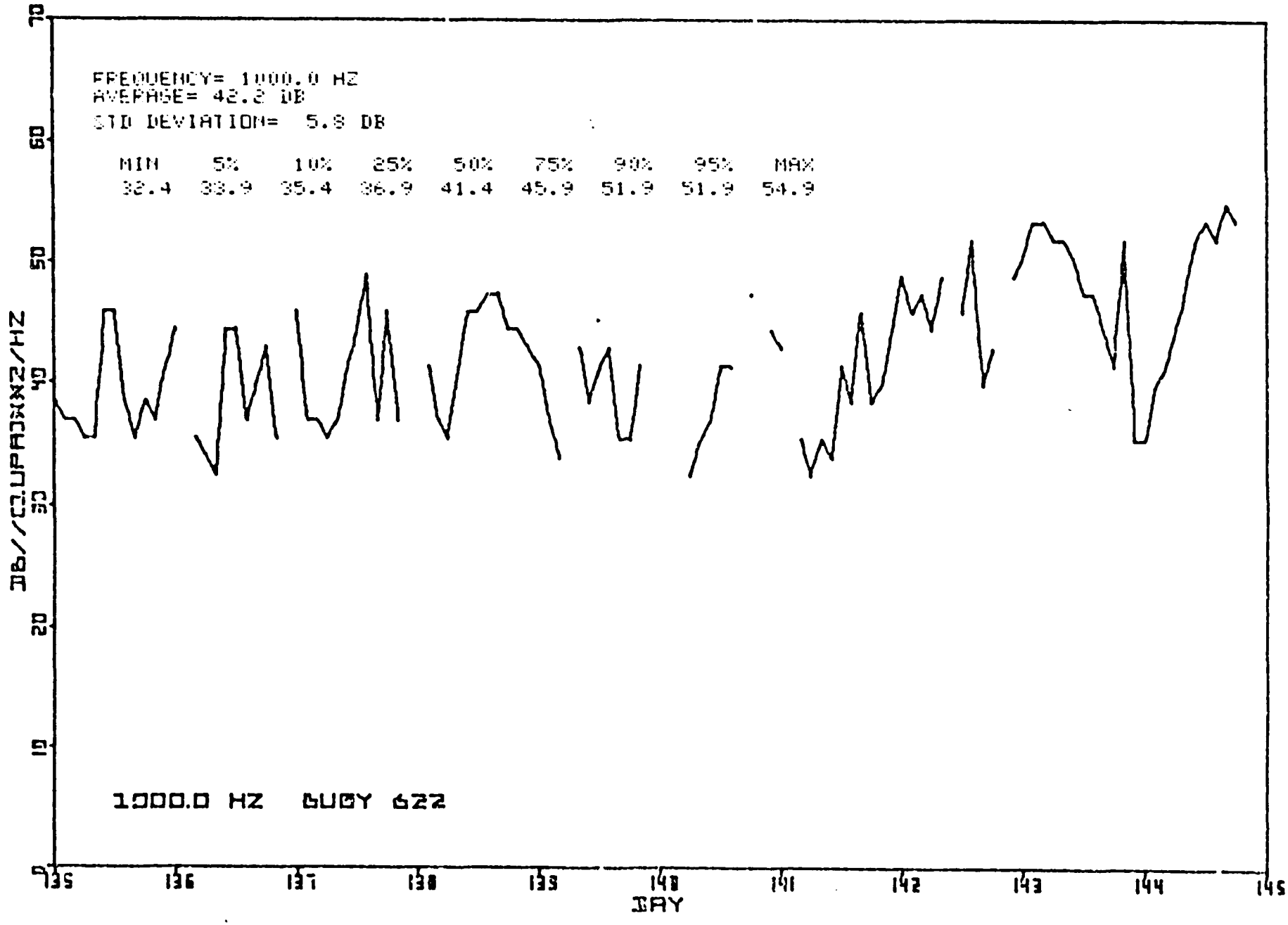

FREQUENCY= 3.2 HZ
AVERAGE= 91.2 DB
STD DEVIATION= 9.9 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
71.2 78.7 75.7 84.7 93.7 98.2 102.7 104.2 105.7
DB//CLUPASK2/HZ
DAY
3.2 HZ BUOY 622


DB//1 MICROPA/M2/HZ
100
90
80
70
60
50
40
30
125
126
127
128
129
130
131
132
133
134
135
DAY
FREQUENCY= 10.0 HZ
AVERAGE= 78.3 DB
STD DEVIATION= 6.1 dB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
67.3 70.3 71.8 74.8 77.8 80.8 88.3 89.8 95.8
10.0 HZ BUOY 622


DB//CLUPACM2/HZ
100
90
80
70
60
50
40
30
135
136
137
138
139
140
141
142
143
144
145
DAY
FREQUENCY= 32.0 HZ
AVERAGE= 74.5 DB
STD DEVIATION= 3.2 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
66.4 69.4 70.9 72.4 73.9 75.4 78.4 81.4 84.4
32.0 HZ BUOY 622

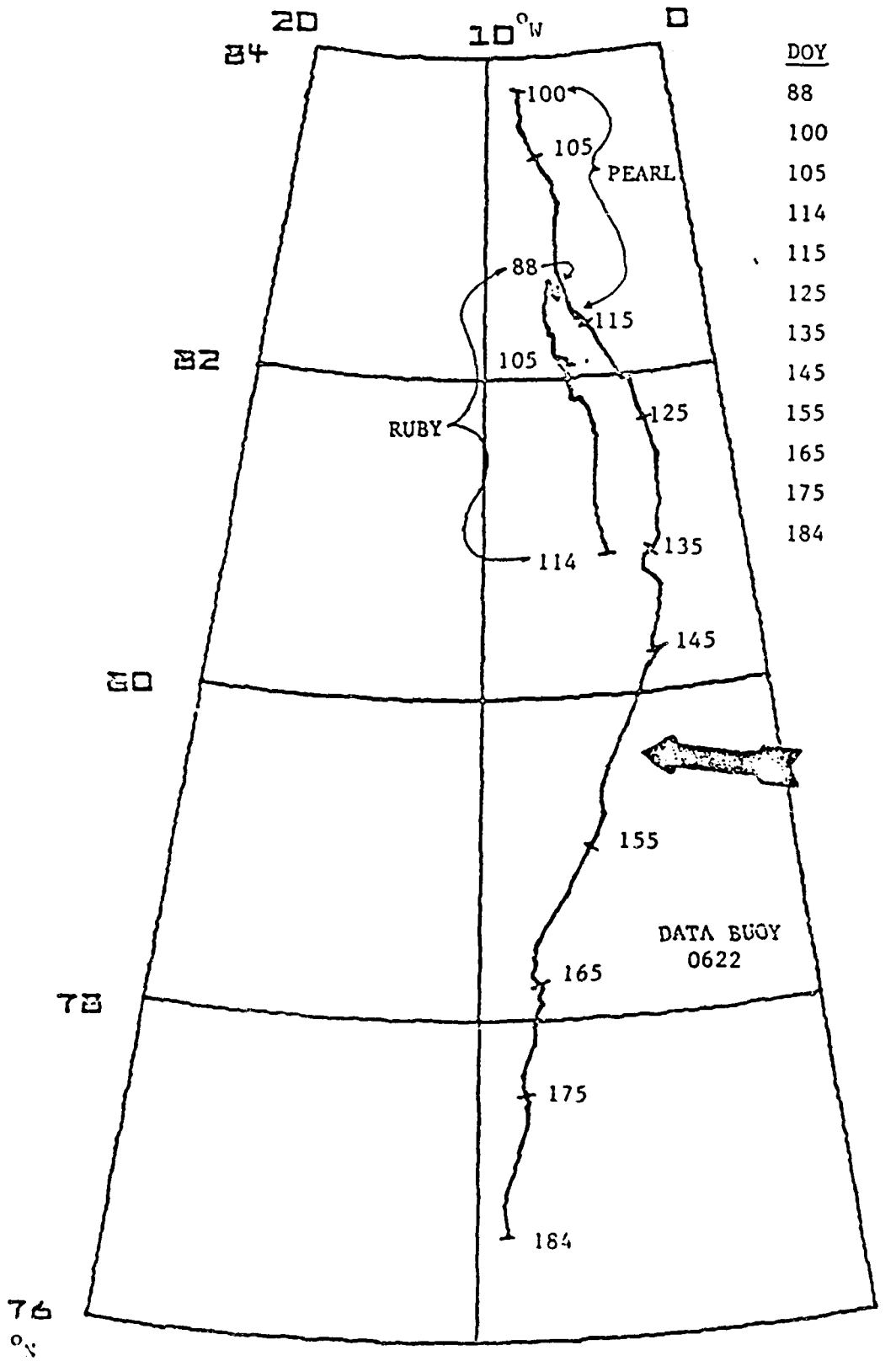

FREQUENCY= 100.0 HZ
AVERAGE= 62.4 DB
STD DEVIATION= 3.3 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
57.2 57.2 58.7 60.2 61.7 63.2 66.2 69.2 73.7
DB//(1UPA)**2/HZ
100
90
80
70
60
50
40
30
100.0 HZ BUOY 622
135
136
137
138
139
140
141
142
143
144
145
DAY


FREQUENCY= 320.0 HZ
AVERAGE= 50.8 DB
STD DEVIATION= 4.3 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
41.2 44.2 45.7 47.2 50.2 53.2 56.2 57.7 62.2
320.0 HZ BUOY 622
DB/CLUPANKZ/HZ
DAY
100
90
80
70
60
50
40
30
135
136
137
138
139
140
141
142
143
144
145


FREQUENCY= 1000.0 HZ
AVERAGE= 42.2 DB
STD DEVIATION= 5.8 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
32.4 33.9 35.4 36.9 41.4 45.9 51.9 51.9 54.9
DB//(0.UPA)**2/HZ
70
60
50
40
30
20
10
0
1000.0 HZ BUOY 622
135 136 137 138 139 140 141 142 143 144 145
JAY

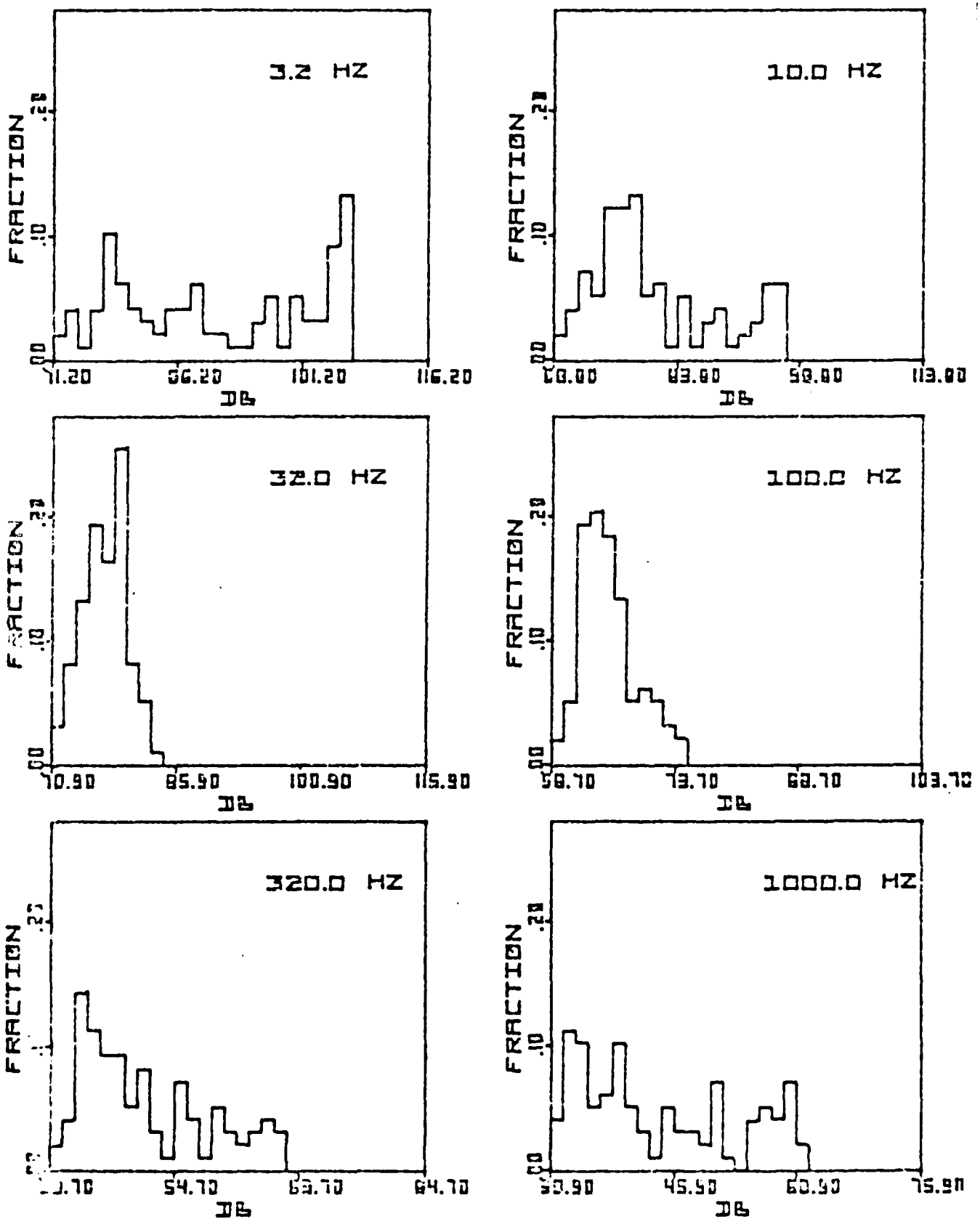
DOY 145-154 (25 May - 3 Jun, 1977)

Time Histories, Histograms and Statistical Data

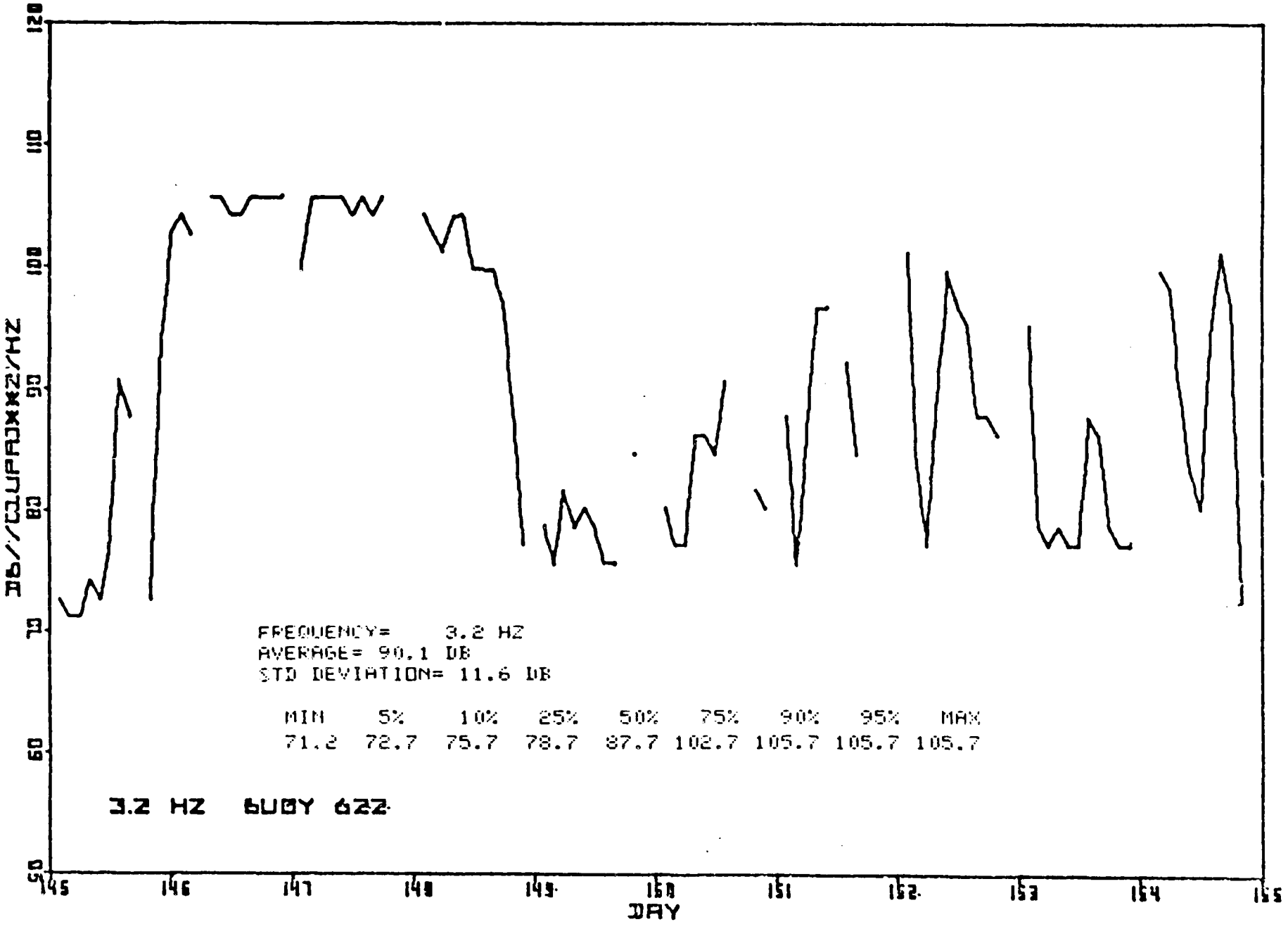


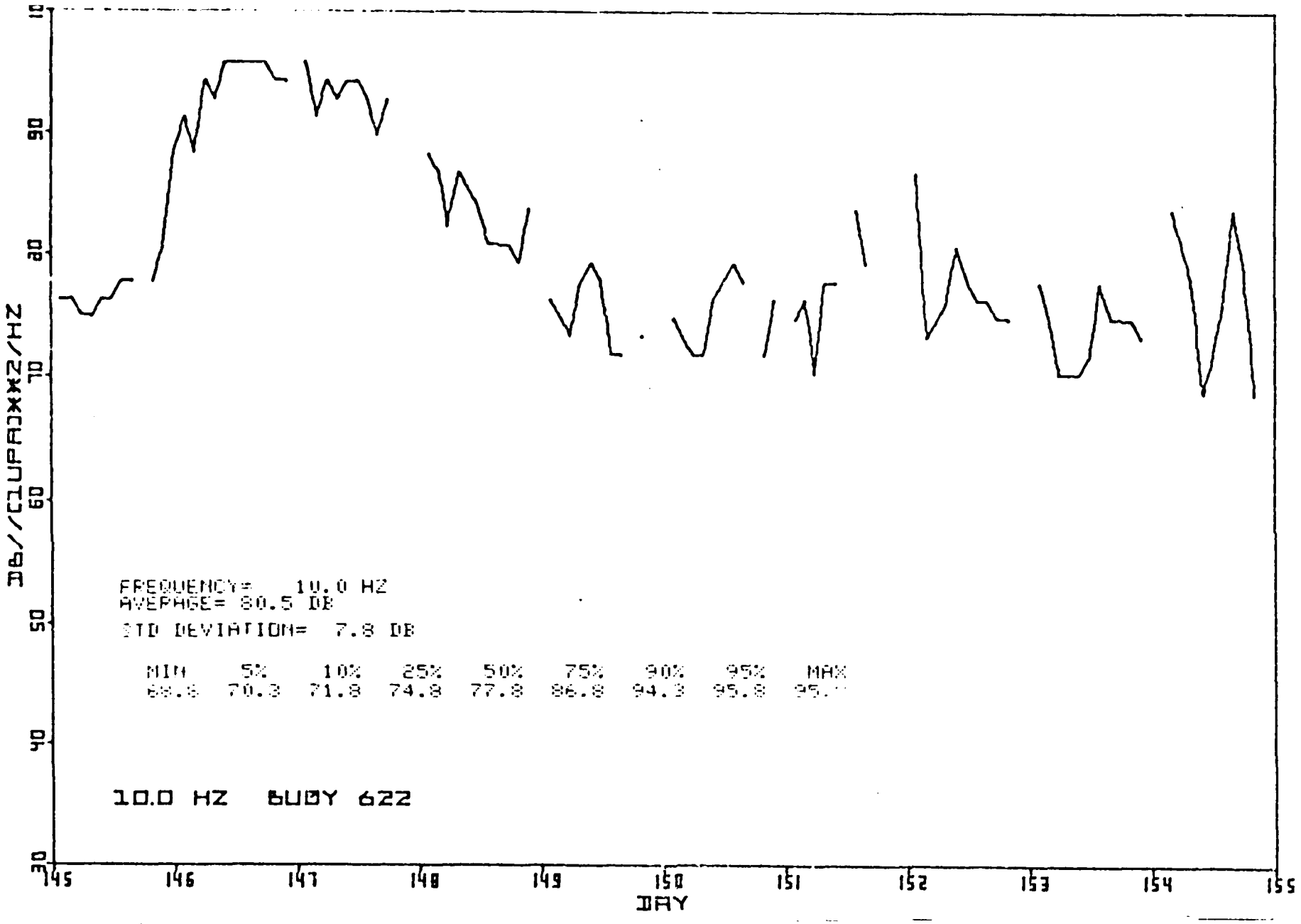
DOY	Date
88	29 Mar 77
100	10 Apr
105	15 "
114	24 "
115	25 "
125	5 May
135	15 "
145	25 "
155	5 June
165	14 "
175	24 "
184	3 July

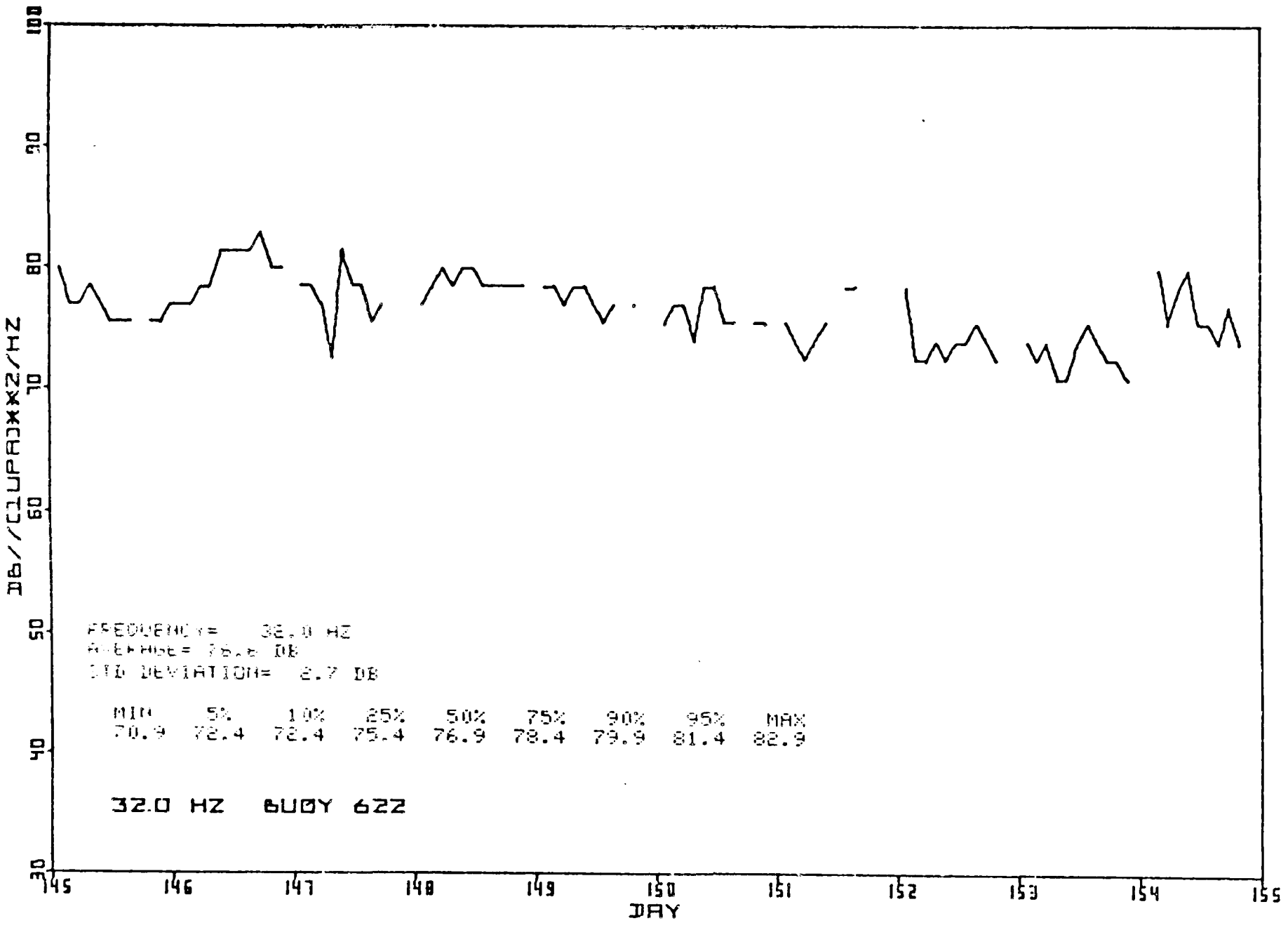
FLOE DRIFT, DAYS 145 - 155

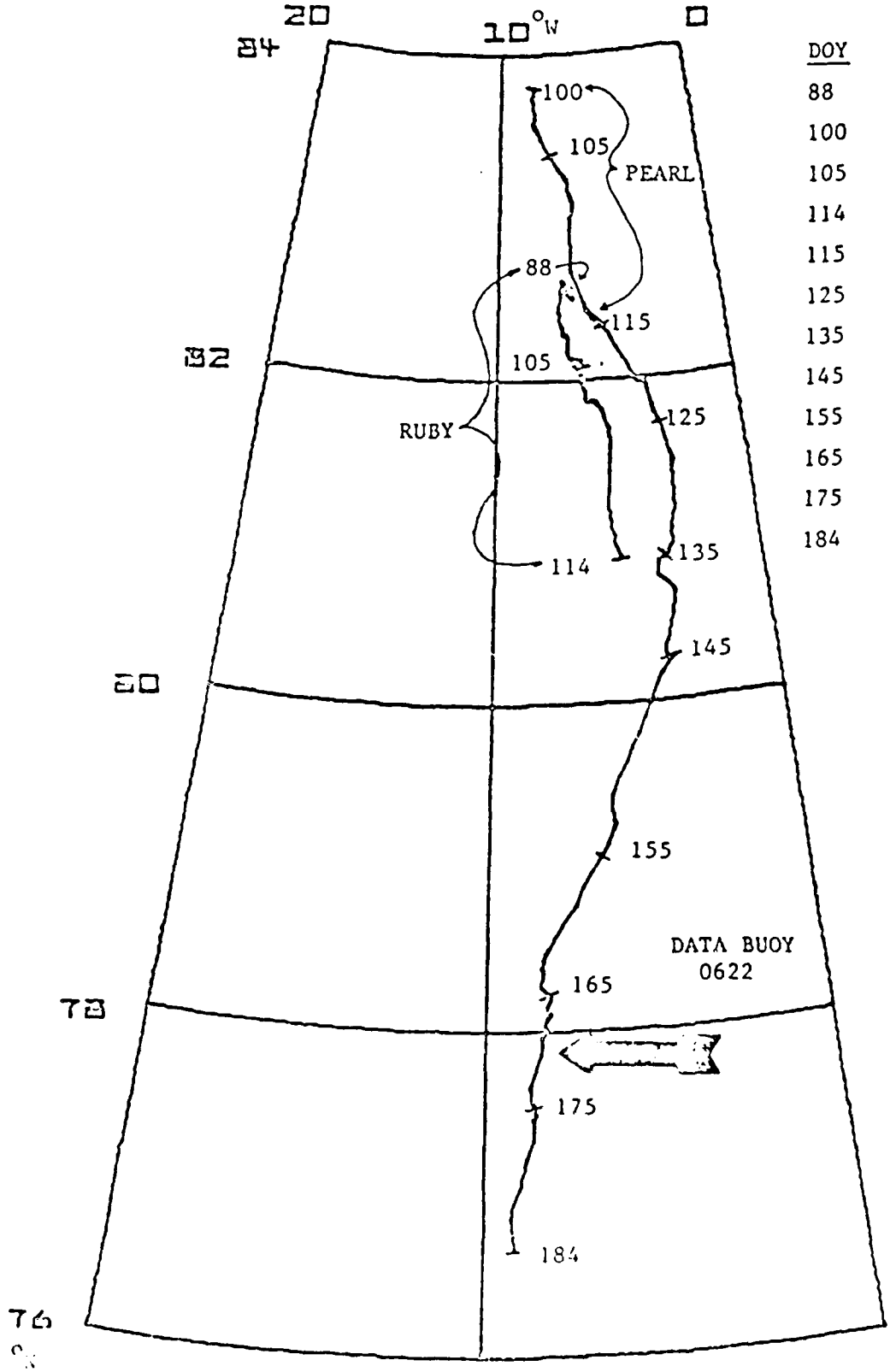


DAYS 145 - 154, 1977


DB//SQUARE ROOT HZ
120
110
100
90
80
70
60
50
145
146
147
148
149
150
151
152
153
154
155
DAY
FREQUENCY= 3.2 HZ
AVERAGE= 90.1 DB
STD DEVIATION= 11.6 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
71.2 72.7 75.7 78.7 87.7 102.7 105.7 105.7 105.7
3.2 HZ BUOY 622


DB//CLUPADXX2/HZ
90
80
70
60
50
40
30
145
146
147
148
149
150
151
152
153
154
155
DAY
FREQUENCY= 10.0 HZ
AVERAGE= 80.5 DB
STD DEVIATION= 7.8 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
68.8 70.3 71.8 74.8 77.8 86.8 94.3 95.8 95.
10.0 HZ BUOY 622


DB//(1UPAD**2/HZ
100
90
80
70
60
50
40
30
145
146
147
148
149
150
151
152
153
154
155
DAY
FREQUENCY= 32.0 HZ
MEAN= 76.6 DB
STD DEVIATION= 2.7 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
70.9 72.4 72.4 75.4 76.9 78.4 79.9 81.4 82.9
32.0 HZ BUOY 622

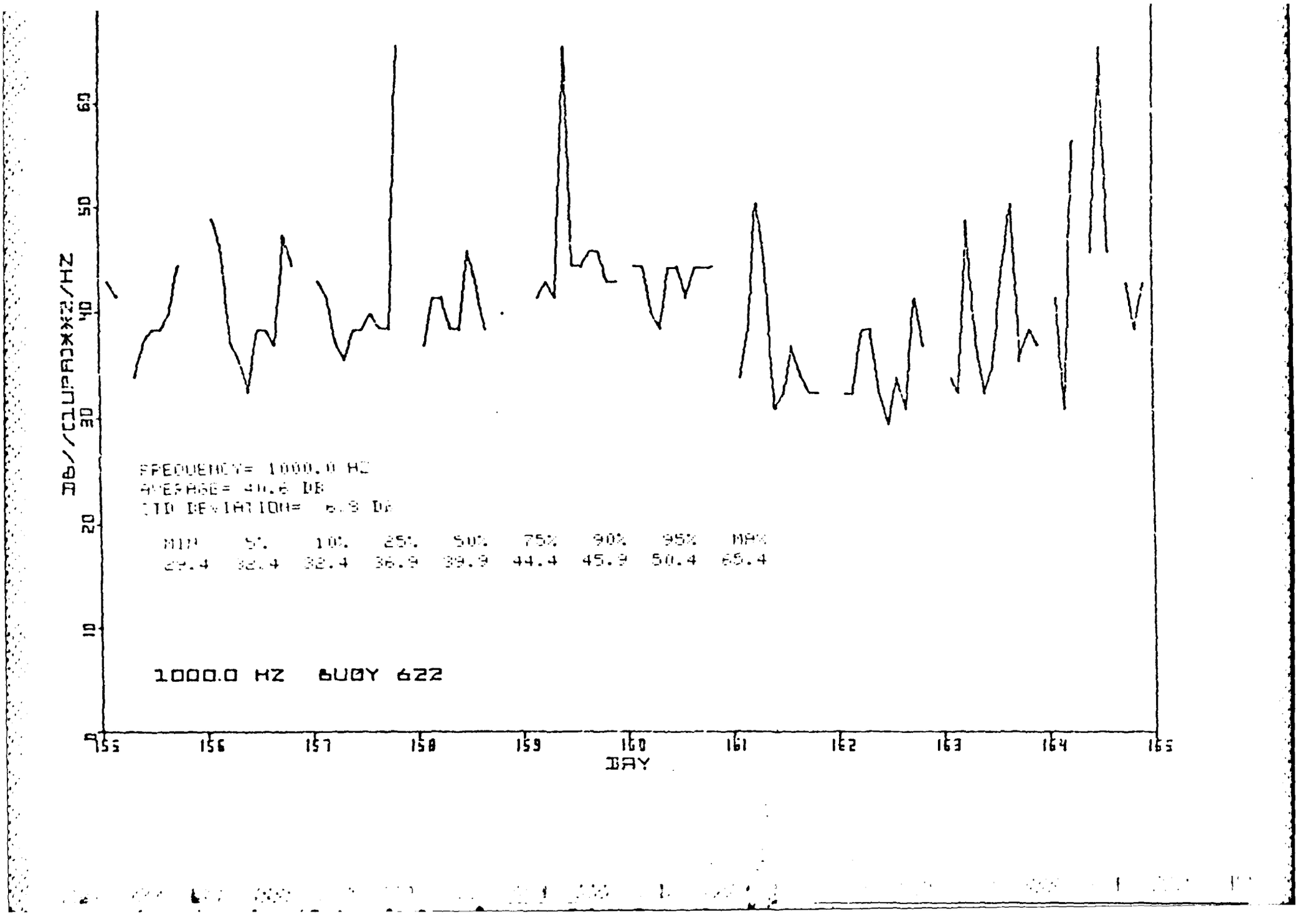


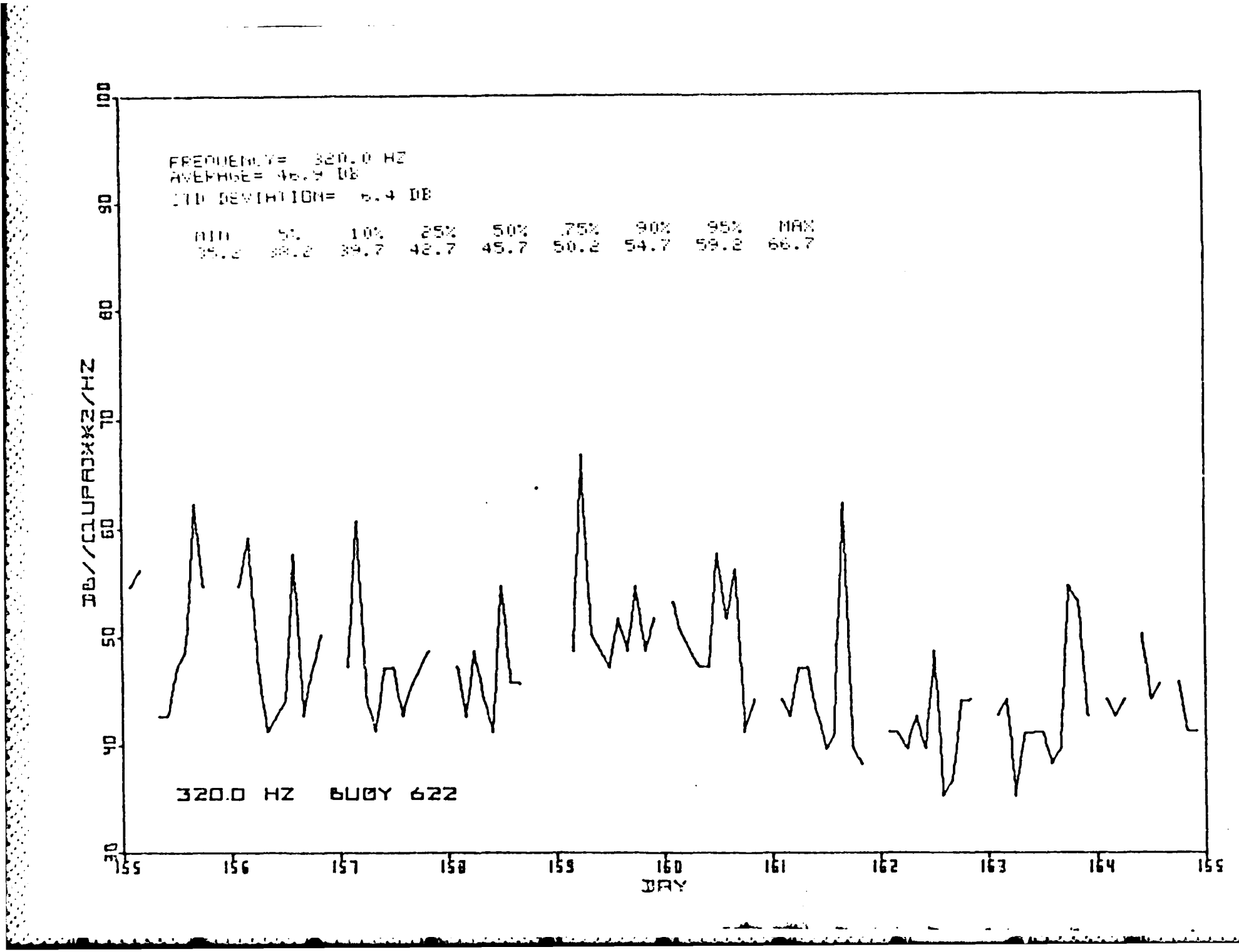
DOY	Date
88	29 Mar 77
100	10 Apr
105	15 "
114	24 "
115	25 "
125	5 May
135	15 "
145	25 "
155	5 June
165	14 "
175	24 "
184	3 July

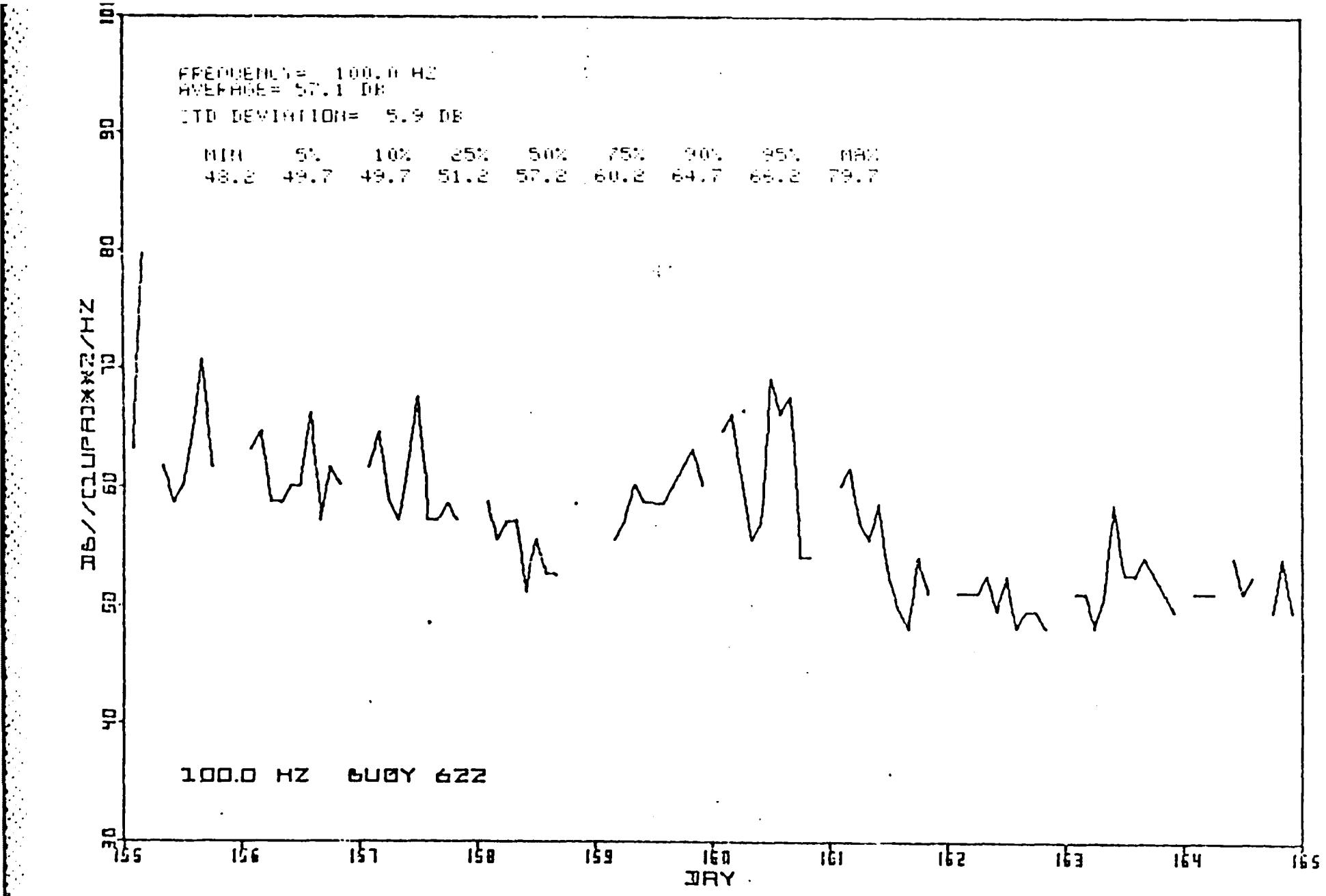
FLOE DRIFT, DAYS 165 - 175

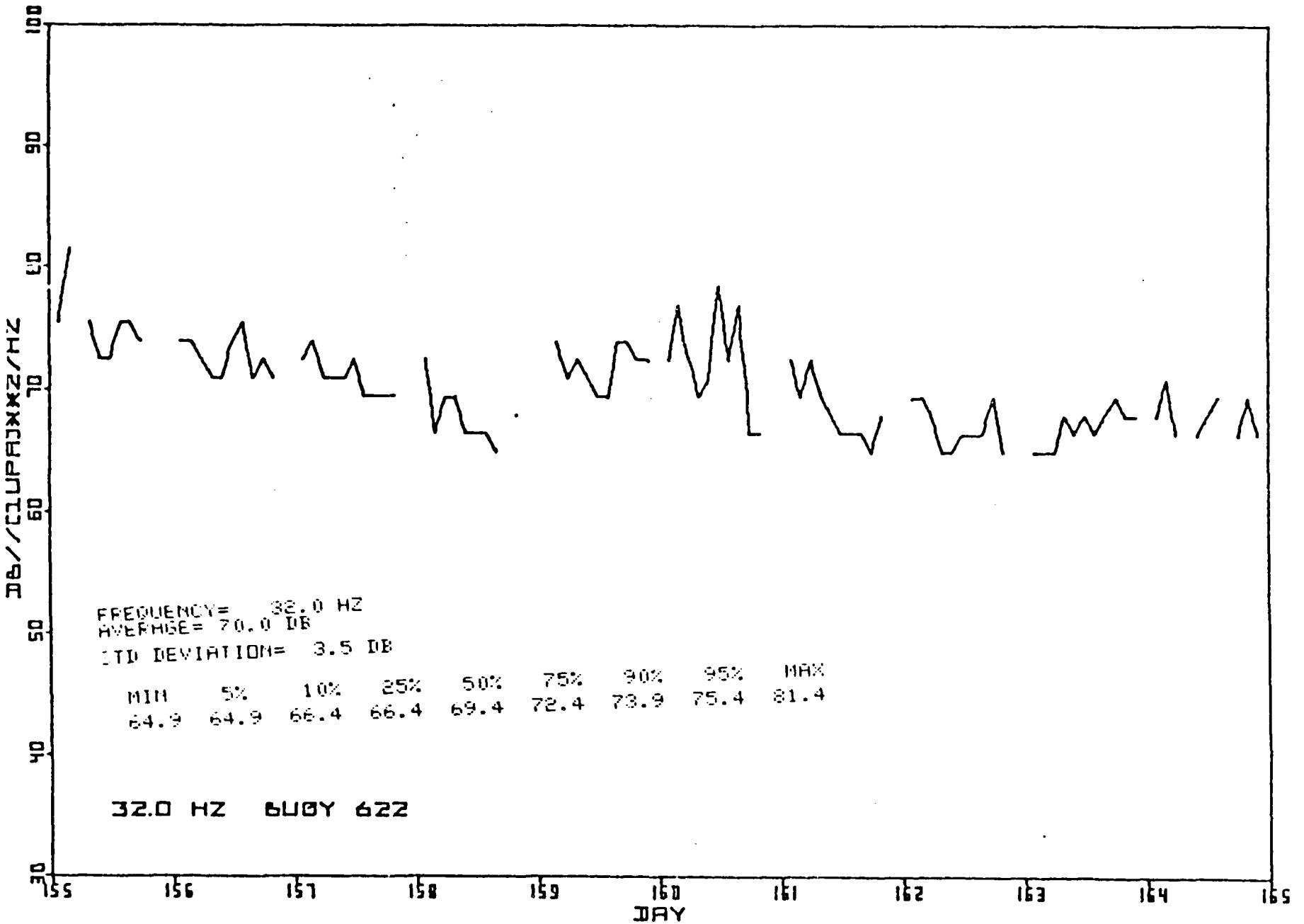
DOY 165-174 (14 Jun - 23 Jun, 1977)

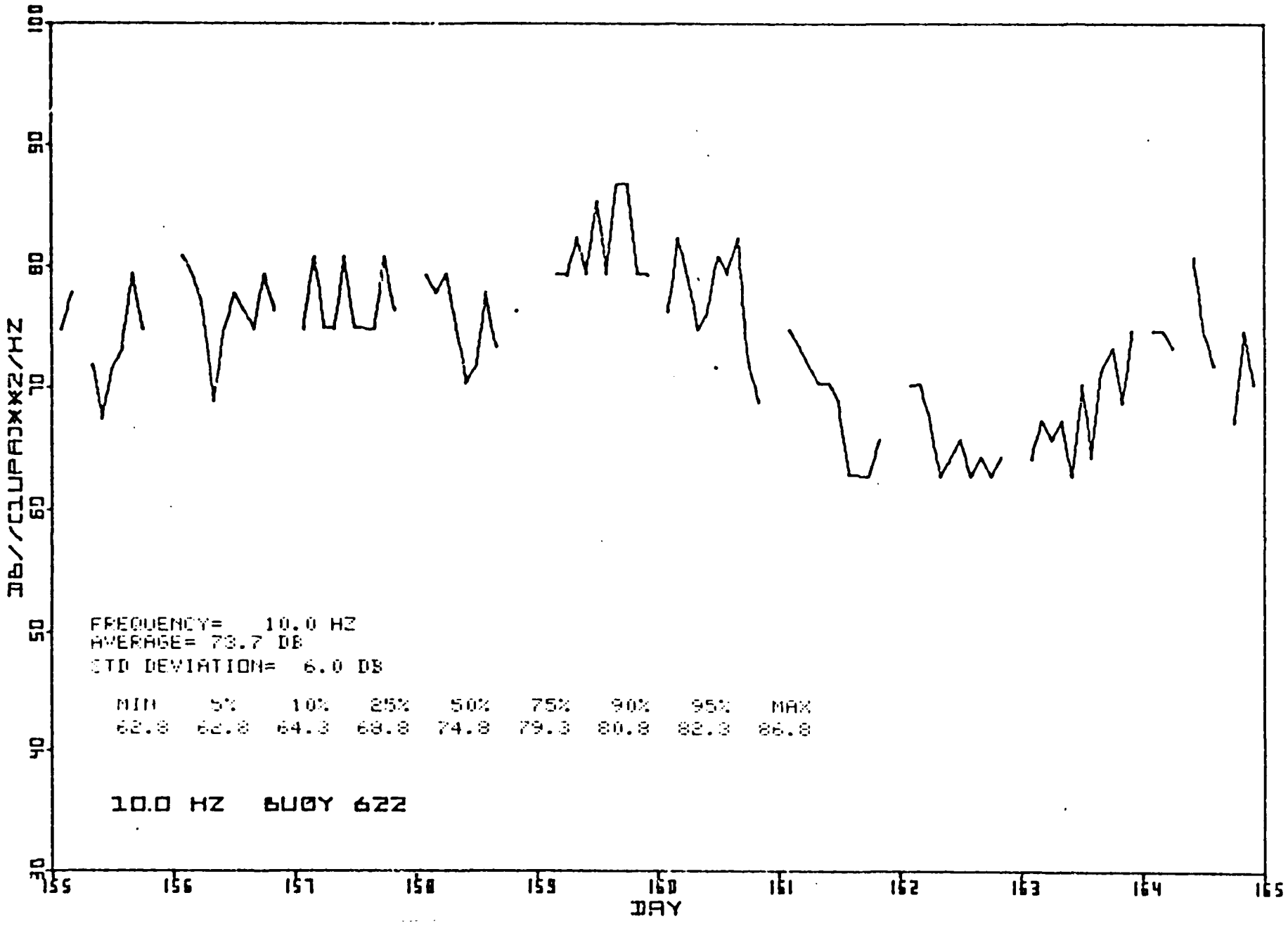
Time Histories, Histograms and Statistical Data

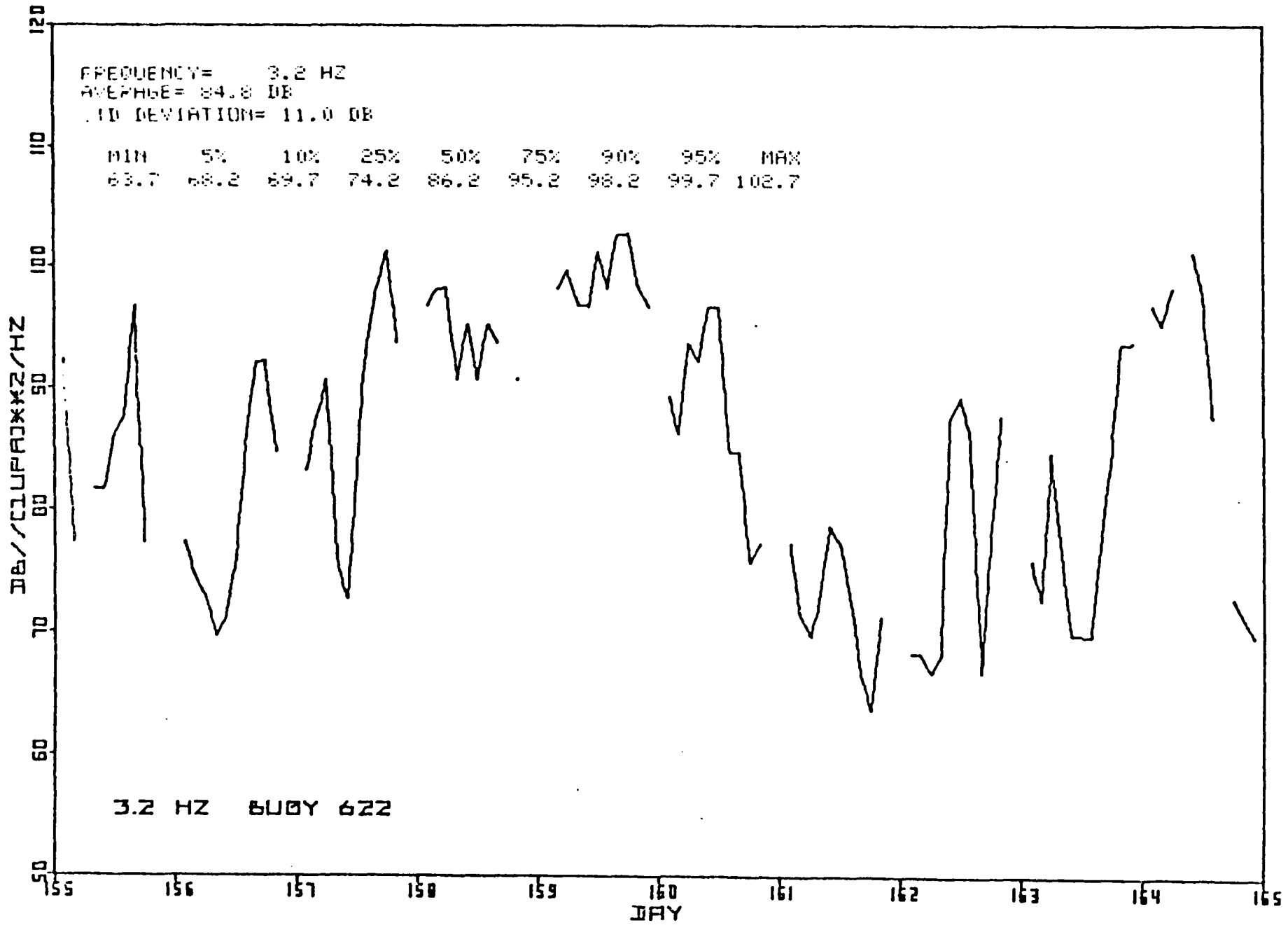

DB//(1 UPA)**2/HZ
60
50
40
30
20
10
0
155
156
157
158
159
160
161
162
163
164
165
DAY
FREQUENCY= 1000.0 HZ
AVERAGE= 40.6 DB
STD DEVIATION= 6.9 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
29.4 32.4 32.4 36.9 39.9 44.4 45.9 50.4 69.4
1000.0 HZ BUOY 622

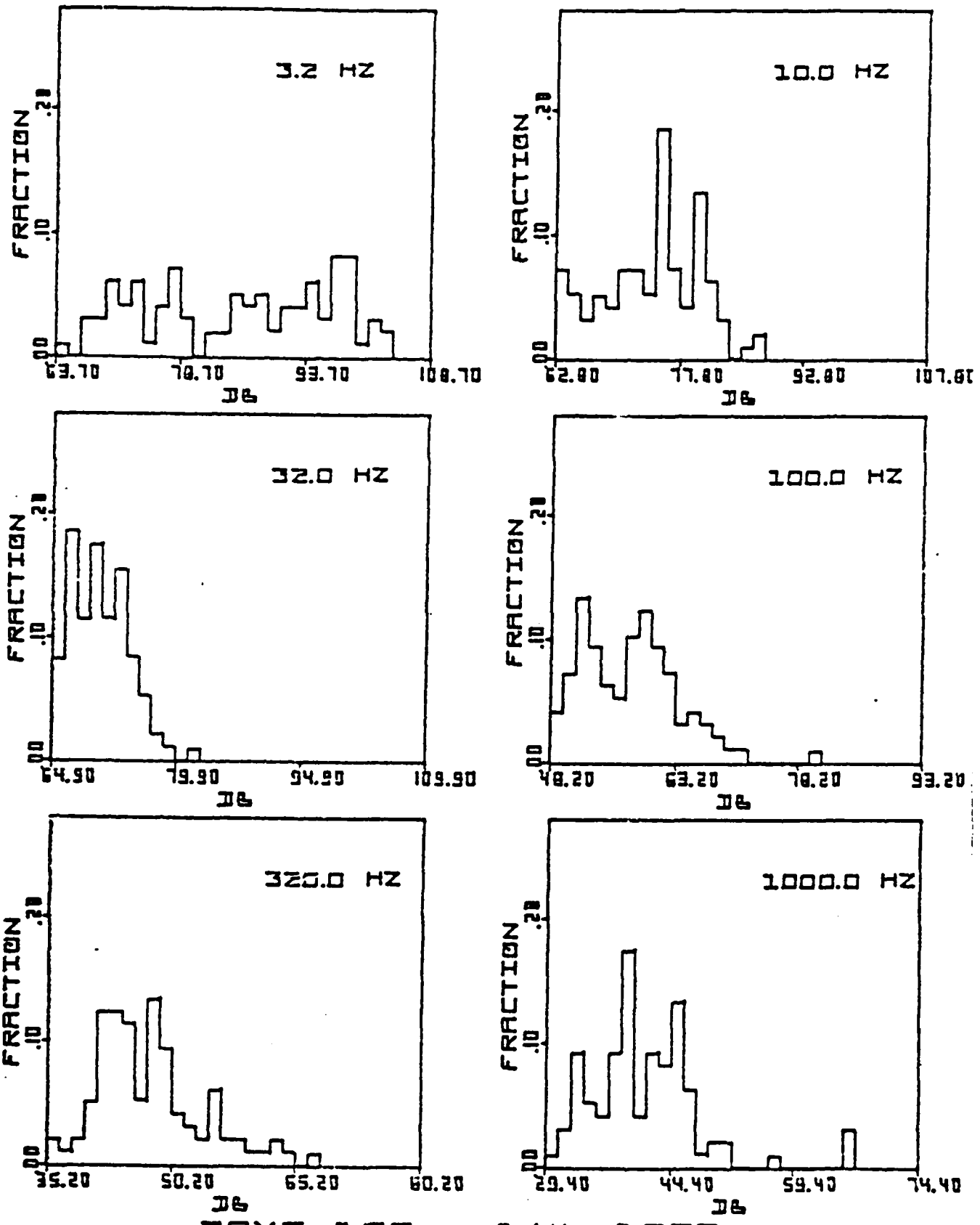

FREQUENCY= 320.0 HZ
AVERAGE= 46.9 DB
STD DEVIATION= 6.4 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
35.2 38.2 39.7 42.7 45.7 50.2 54.7 59.2 66.7
DB//CLUPADX*X2/HZ
100
90
80
70
60
50
40
30
155
156
157
158
159
160
161
162
163
164
165
DAY
320.0 HZ BUOY 622


FREQUENCY= 100.0 HZ
AVERAGE= 57.1 DB
STD DEVIATION= 5.9 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
48.2 49.7 49.7 51.2 57.2 60.2 64.7 66.2 79.7
DB//(1UPA**2/HZ
100.0 HZ BUOY 622
DAY

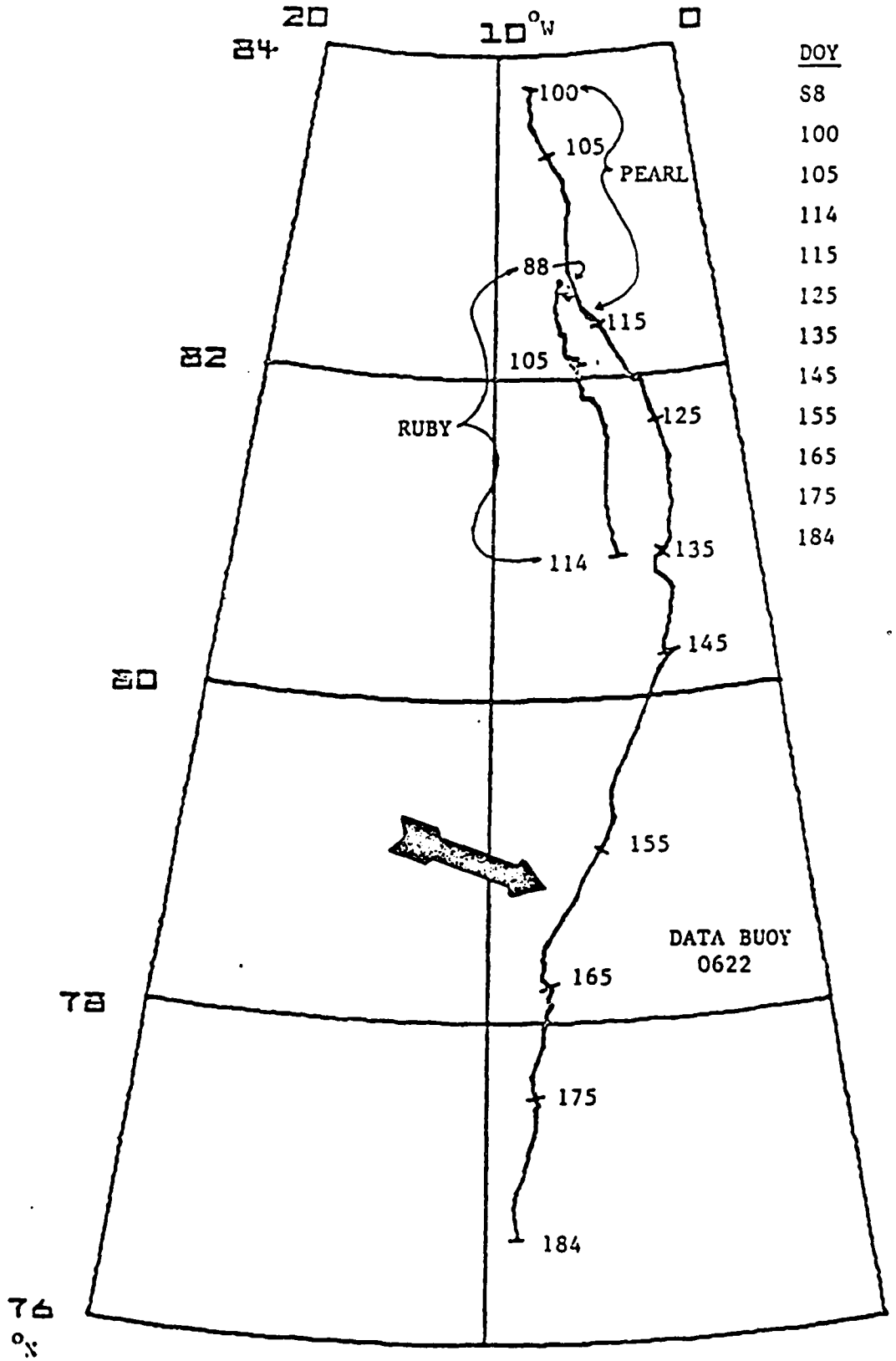

DB//C1UPAJ**Z/HZ
100
90
80
70
60
50
40
30
155
156
157
158
159
160
161
162
163
164
165
DAY
FREQUENCY= 32.0 HZ
AVERAGE= 70.0 DB
STD DEVIATION= 3.5 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
64.9 64.9 66.4 66.4 69.4 72.4 73.9 75.4 81.4
32.0 HZ BUOY 622


DB//(1UPA)**2/HZ
100
90
80
70
60
50
40
30
155
156
157
158
159
160
161
162
163
164
165
DAY
FREQUENCY= 10.0 HZ
AVERAGE= 73.7 DB
STD DEVIATION= 6.0 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
62.8 62.8 64.3 68.8 74.8 79.3 80.8 82.3 86.8
10.0 HZ BUOY 622


FREQUENCY= 3.2 HZ
AVERAGE= 84.8 DB
STD DEVIATION= 11.0 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
63.7 68.2 69.7 74.2 86.2 95.2 98.2 99.7 102.7
DB//CLUPAJ*HZ/HZ
120
110
100
90
80
70
60
50
155
156
157
158
159
160
161
162
163
164
165
DAY
3.2 HZ BUOY 622



DAYS 155 - 164, 1977

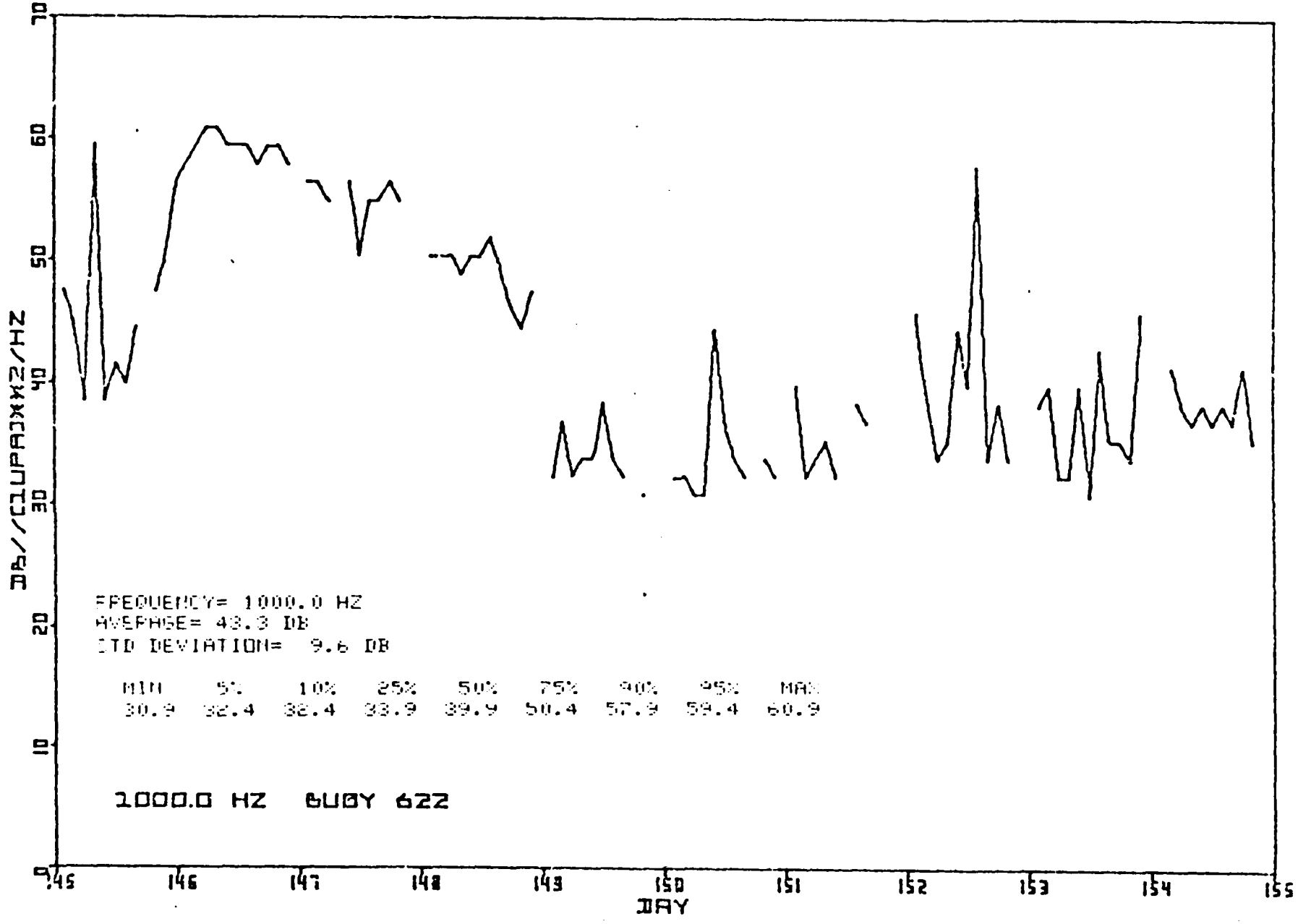


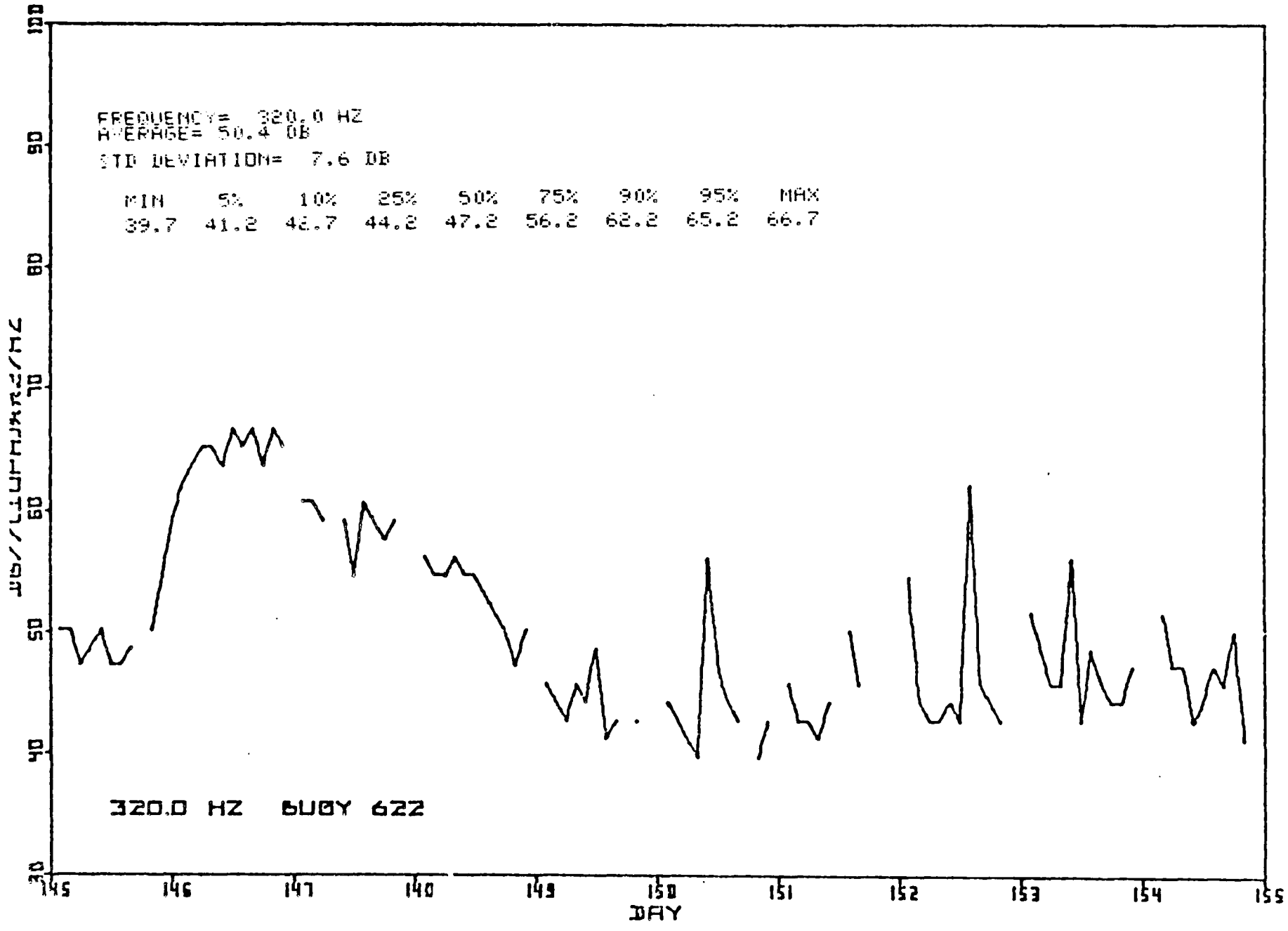
DOY	Date
S8	29 Mar 77
100	10 Apr
105	15 "
114	24 "
115	25 "
125	5 May
135	15 "
145	25 "
155	5 June
165	14 "
175	24 "
184	3 July

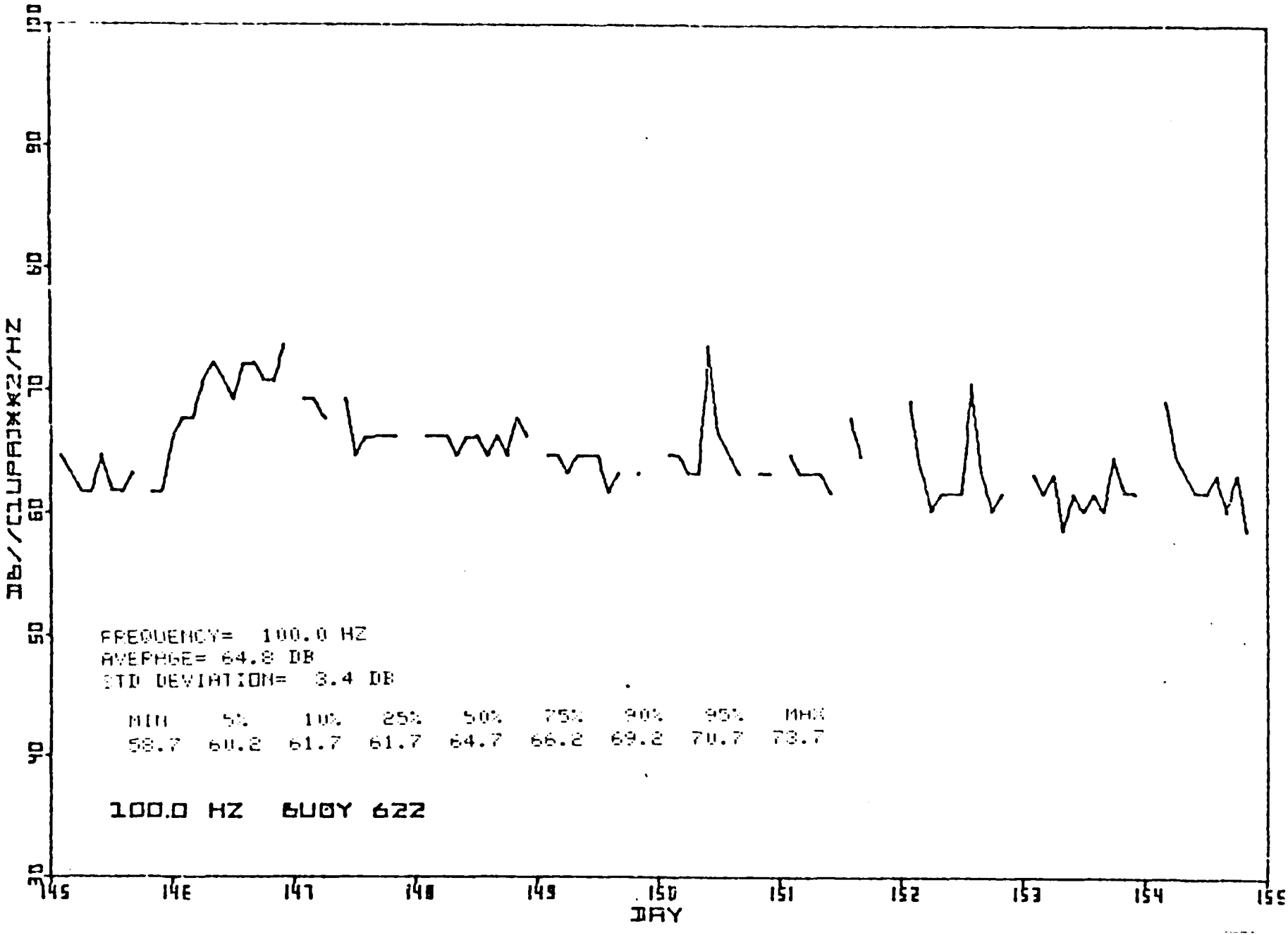
FLOE DRIFT, DAYS 155 - 165

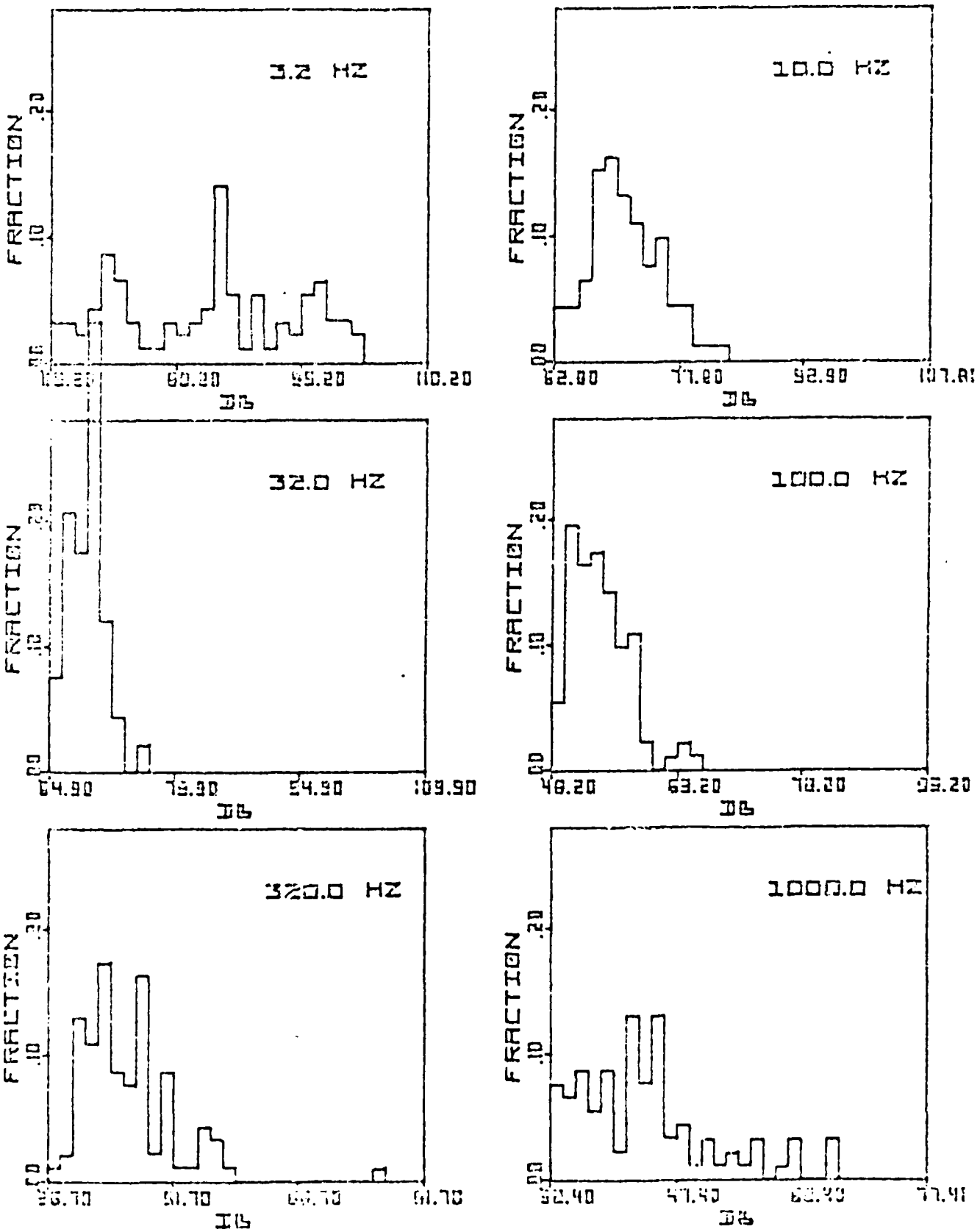
DOY 155-165 (4 Jun - 13 Jun, 1977)

Time Histories, Histograms and Statistical Data

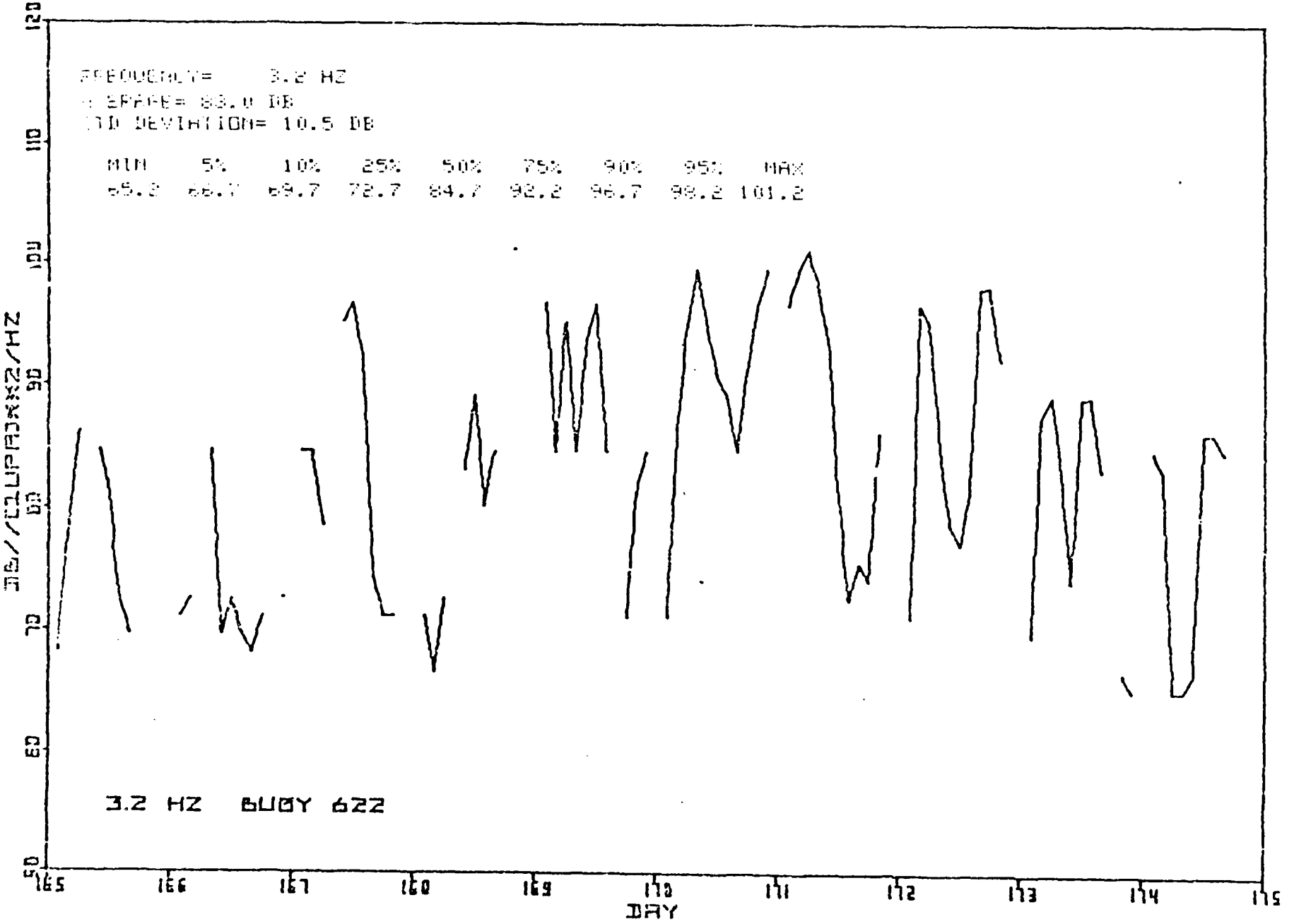

DB//(1UPA)**2/HZ
70
60
50
40
30
20
10
0
145
146
147
148
149
150
151
152
153
154
155
DAY
FREQUENCY= 1000.0 HZ
AVERAGE= 43.3 DB
STD DEVIATION= 9.6 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
30.9 32.4 32.4 33.9 39.9 50.4 57.9 59.4 60.9
1000.0 HZ BUOY 622

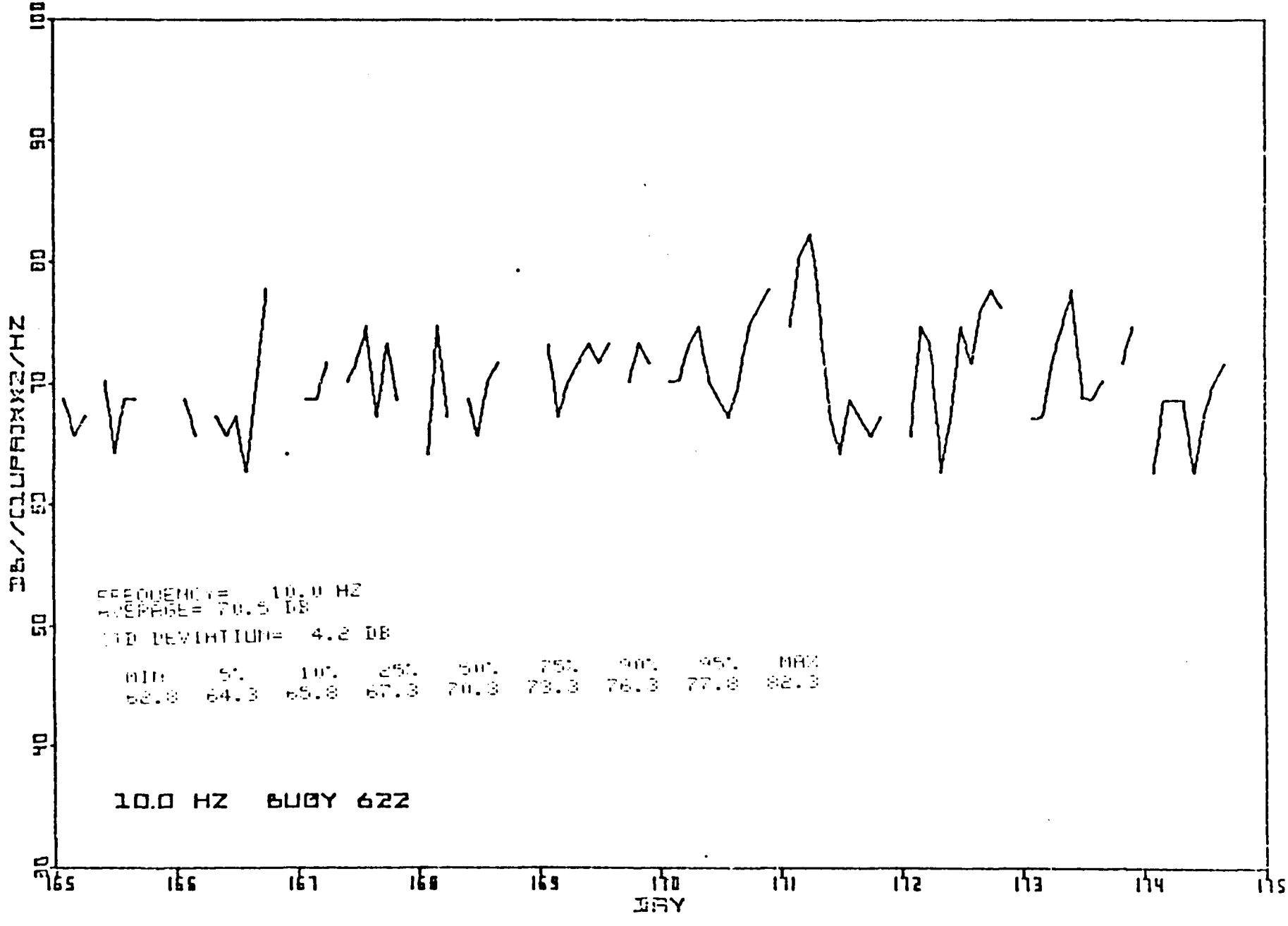

FREQUENCY= 320.0 HZ
AVERAGE= 50.4 DB
STD DEVIATION= 7.6 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
39.7 41.2 42.7 44.2 47.2 56.2 62.2 65.2 66.7
320.0 HZ BUOY 622
DB//1.0UHZ/HZ
DAY
100
90
80
70
60
50
40
30
145
146
147
148
149
150
151
152
153
154
155

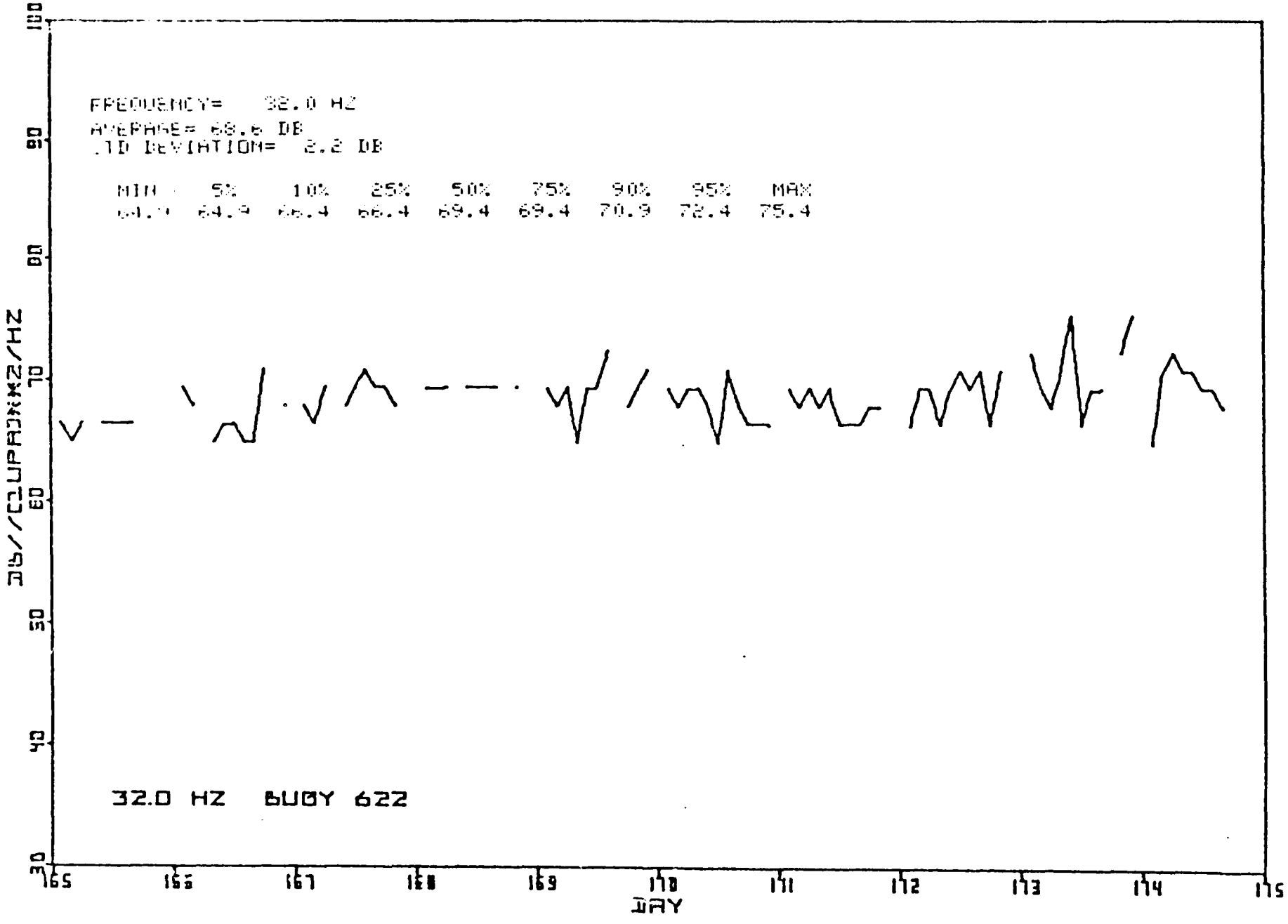

DB//(1UPA)**2/HZ
100
90
80
70
60
50
40
30
145
146
147
148
149
150
151
152
153
154
155
DAY
FREQUENCY= 100.0 HZ
AVERAGE= 64.8 DB
STD DEVIATION= 3.4 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
58.7 60.2 61.7 61.7 64.7 66.2 69.2 70.7 73.7
100.0 HZ BUOY 622

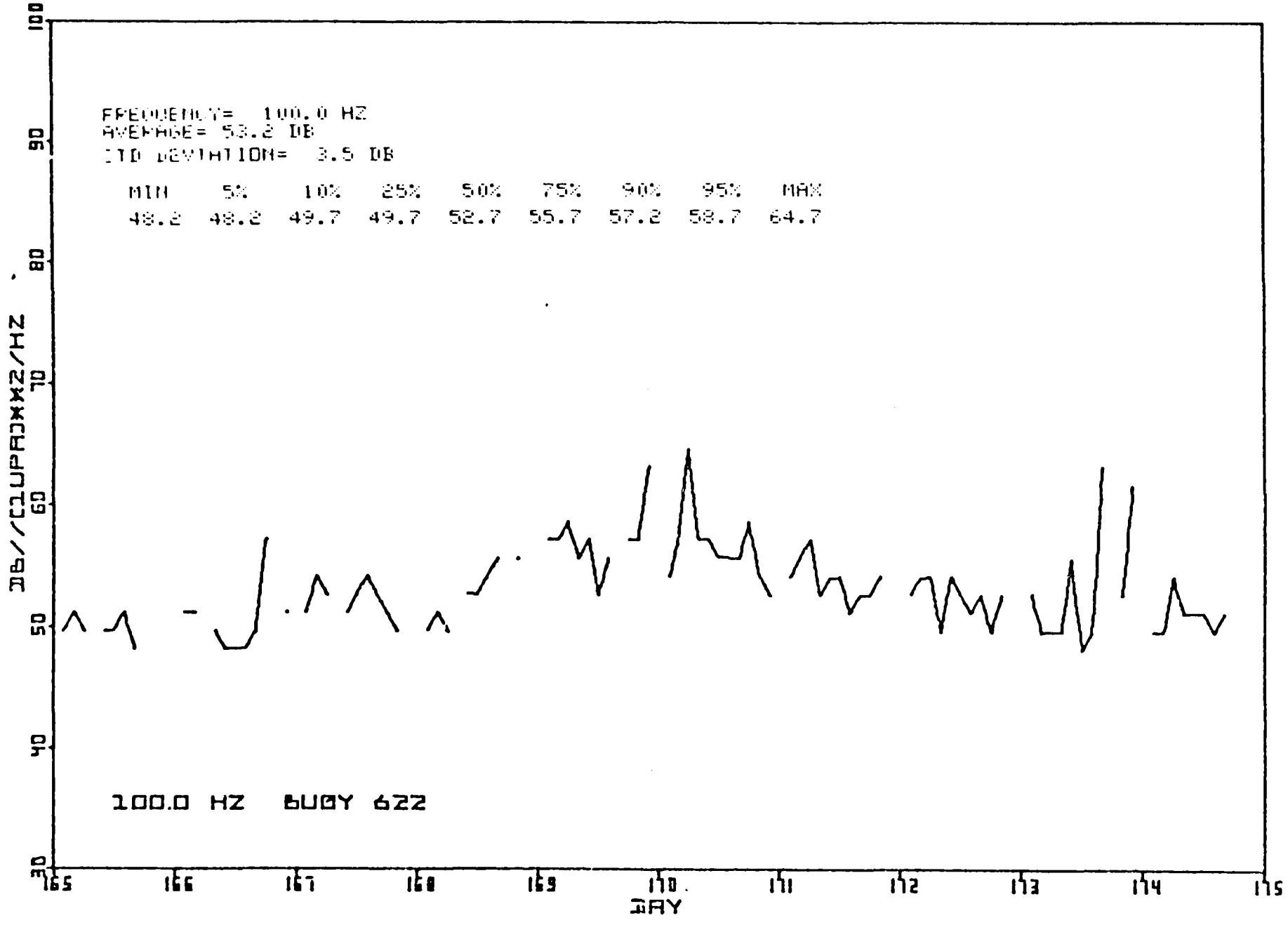


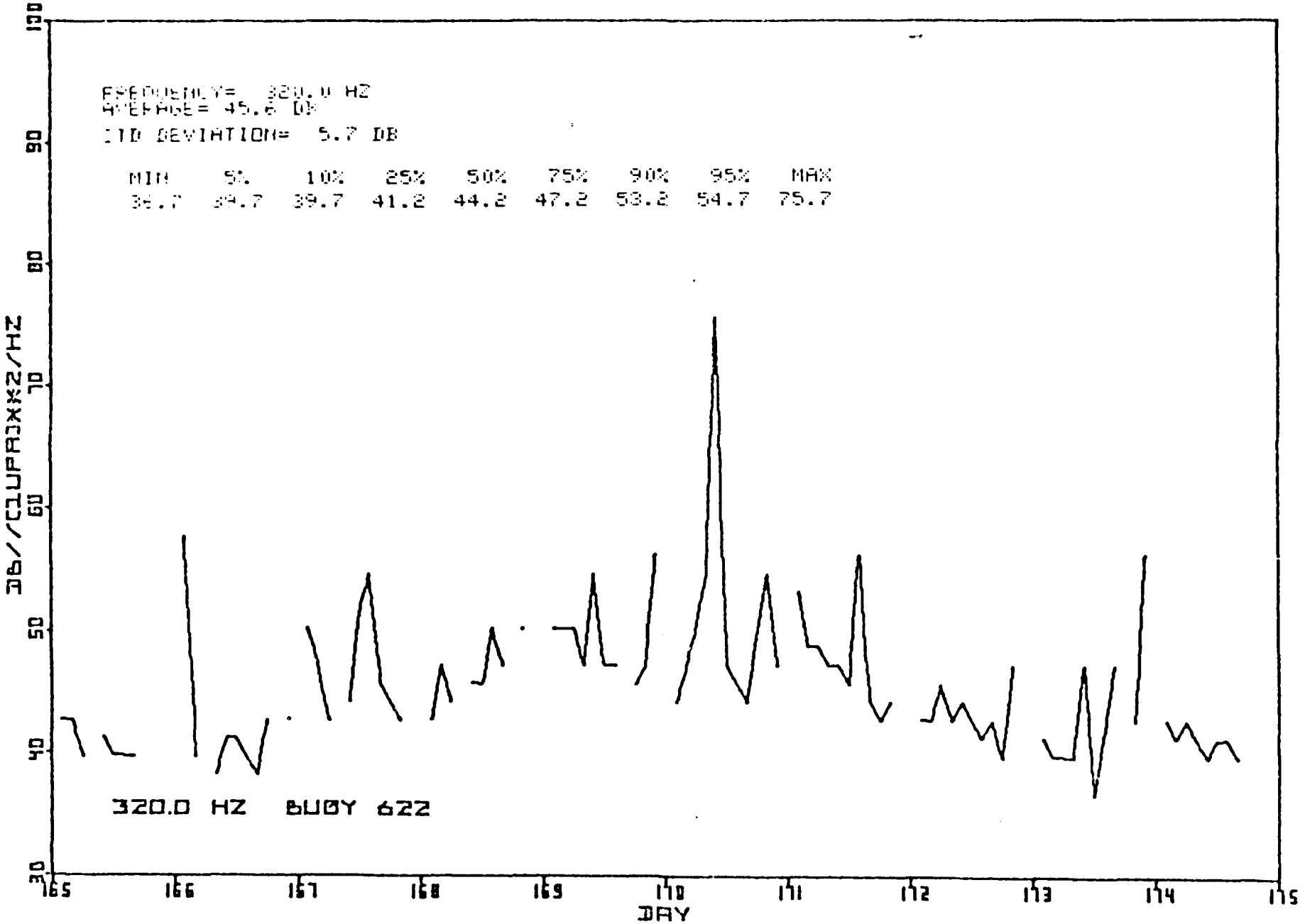
DAYS 165 - 174, 1977

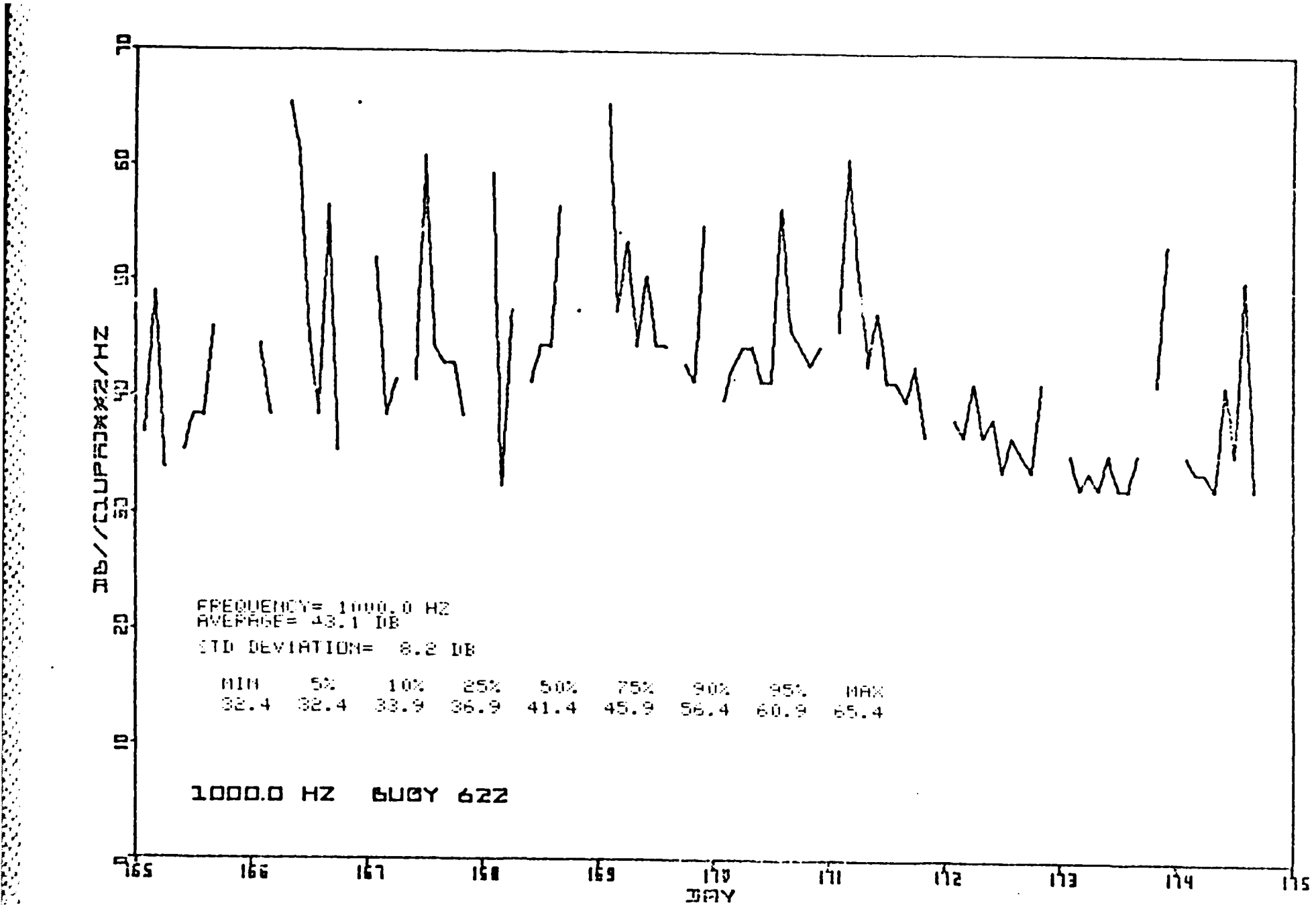

FREQUENCY= 3.2 HZ
MEAN= 83.0 DB
STD DEVIATION= 10.5 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
65.2 66.7 69.7 72.7 84.7 92.2 96.7 98.2 101.2
DB/(CLUPEA)**2/HZ
120
110
100
90
80
70
60
50
165 166 167 168 169 170 171 172 173 174 175
DAY
3.2 HZ BUOY 622


dB//CLUPADAK2/HZ
100
90
80
70
60
50
40
30
FREQUENCY= 10.0 HZ
MEDIAN= 70.5 DB
STD DEVIATION= 4.2 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
62.8 64.3 65.8 67.3 70.3 73.3 76.3 77.8 82.3
10.0 HZ BUOY 622
165
166
167
168
169
170
171
172
173
174
175
DAY


FREQUENCY= 32.0 HZ
AVERAGE= 68.6 DB
STD DEVIATION= 2.2 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
64.9 66.4 66.4 69.4 69.4 70.9 72.4 75.4
32.0 HZ BUOY 622
DB//CLUPARKHZ/HZ
DAY
100
90
80
70
60
50
40
30
165
166
167
168
169
170
171
172
173
174
175

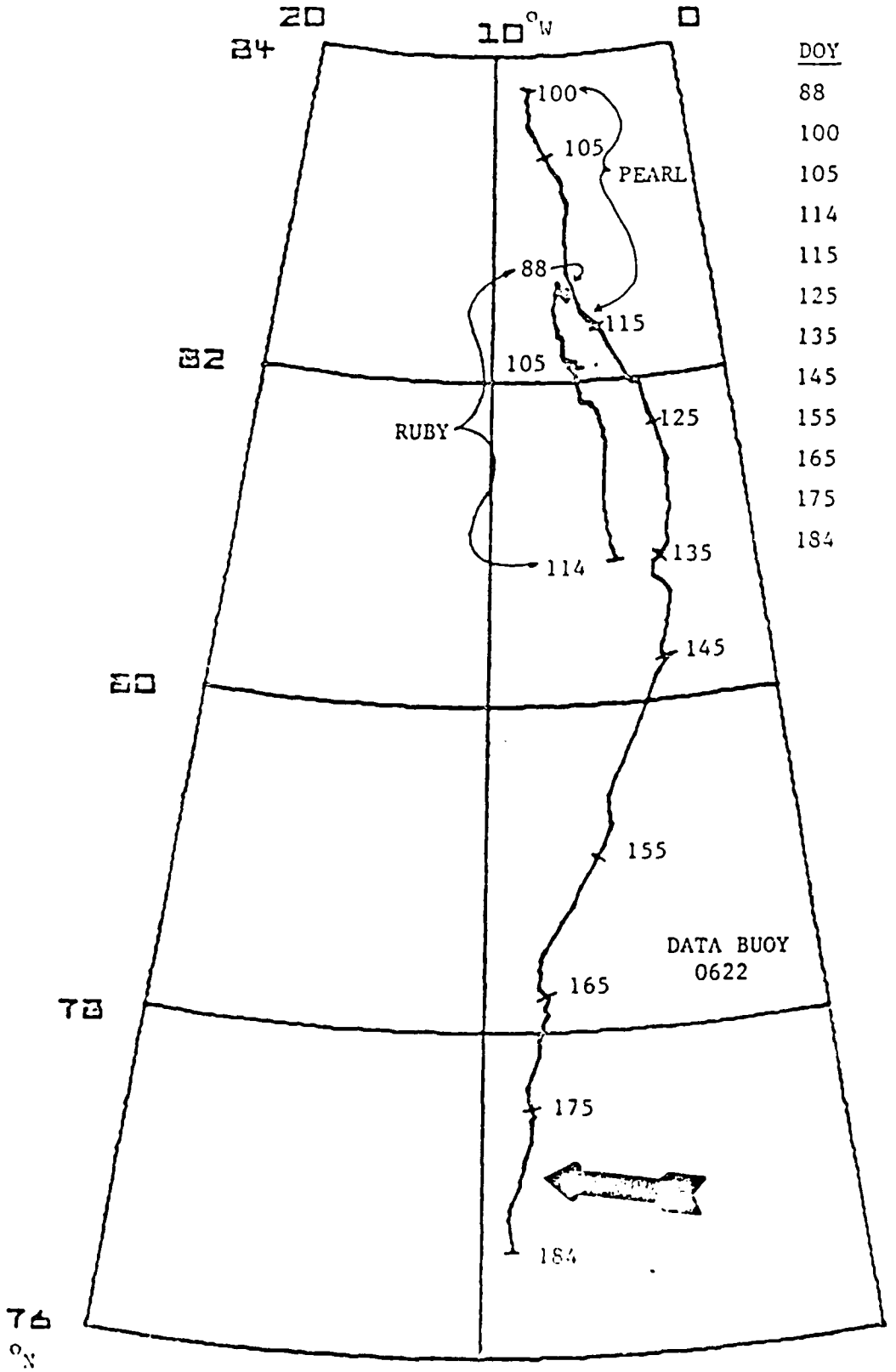

FREQUENCY= 100.0 HZ
AVERAGE= 53.2 DB
STD DEVIATION= 3.5 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
48.2 48.2 49.7 49.7 52.7 55.7 57.2 58.7 64.7
DB//(1UPRJ**2/HZ
100
90
80
70
60
50
40
30
165
166
167
168
169
170
171
172
173
174
175
DAY
100.0 HZ BUOY 622


FREQUENCY= 320.0 HZ
AVERAGE= 45.6 DB
STD DEVIATION= 5.7 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
34.7 39.7 39.7 41.2 44.2 47.2 53.2 54.7 75.7
DB//CLUPAJXK2/HZ
100
90
80
70
60
50
40
30
320.0 HZ BUOY 622
165 166 167 168 169 170 171 172 173 174 175
DAY


FREQUENCY= 1000.0 HZ
AVERAGE= 43.1 DB
STD DEVIATION= 8.2 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
32.4 32.4 33.9 36.9 41.4 45.9 56.4 60.9 65.4
1000.0 HZ BUOY 622
DB//(1UPA3**2/HZ
DAY

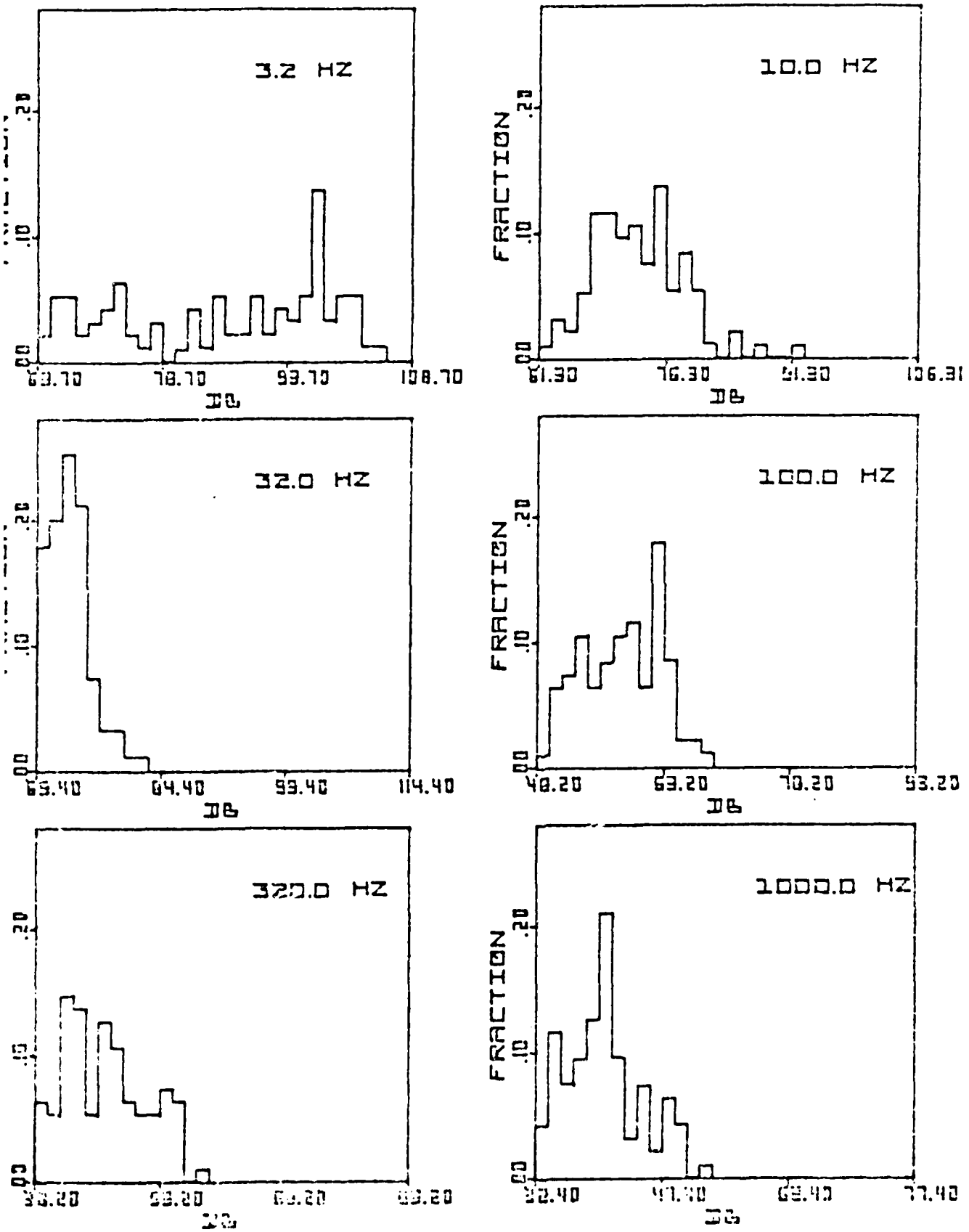
DOY 175-184 (24 Jun - 3 Jul, 1977)

Time Histories, Histograms and Statistical Data

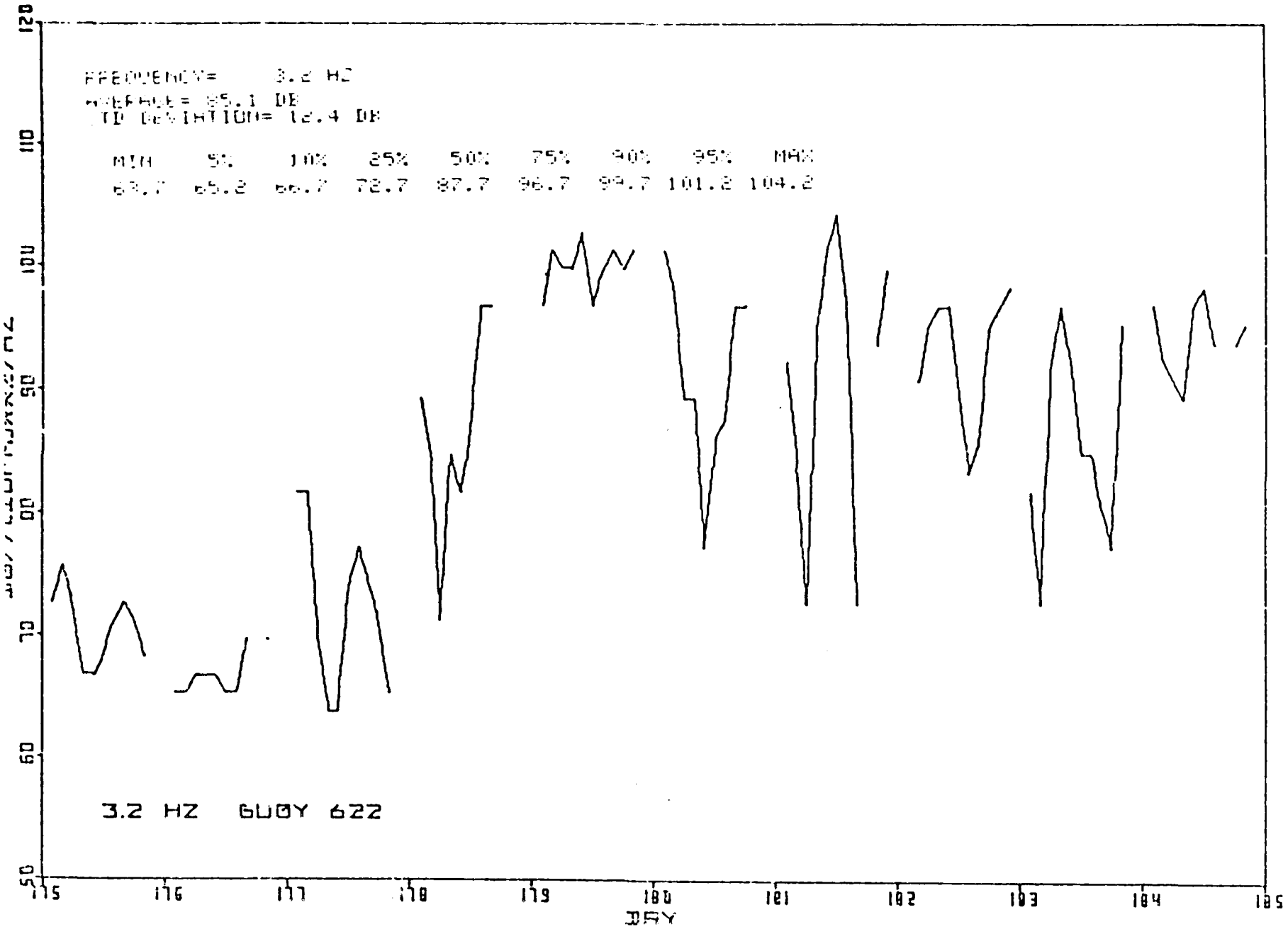


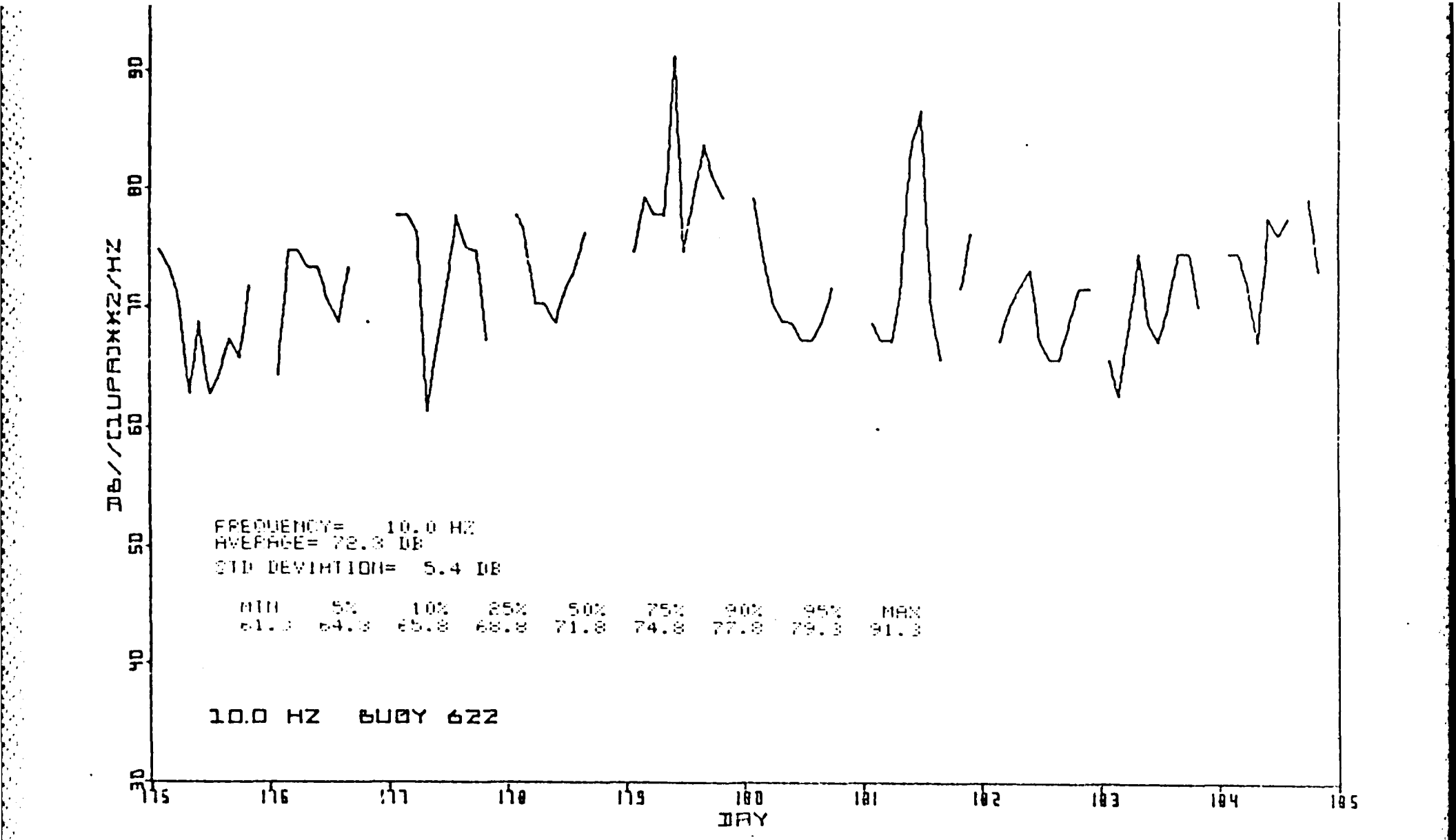
DOY	Date
88	29 Mar 77
100	10 Apr
105	15 "
114	24 "
115	25 "
125	5 May
135	15 "
145	25 "
155	5 June
165	14 "
175	24 "
184	3 July

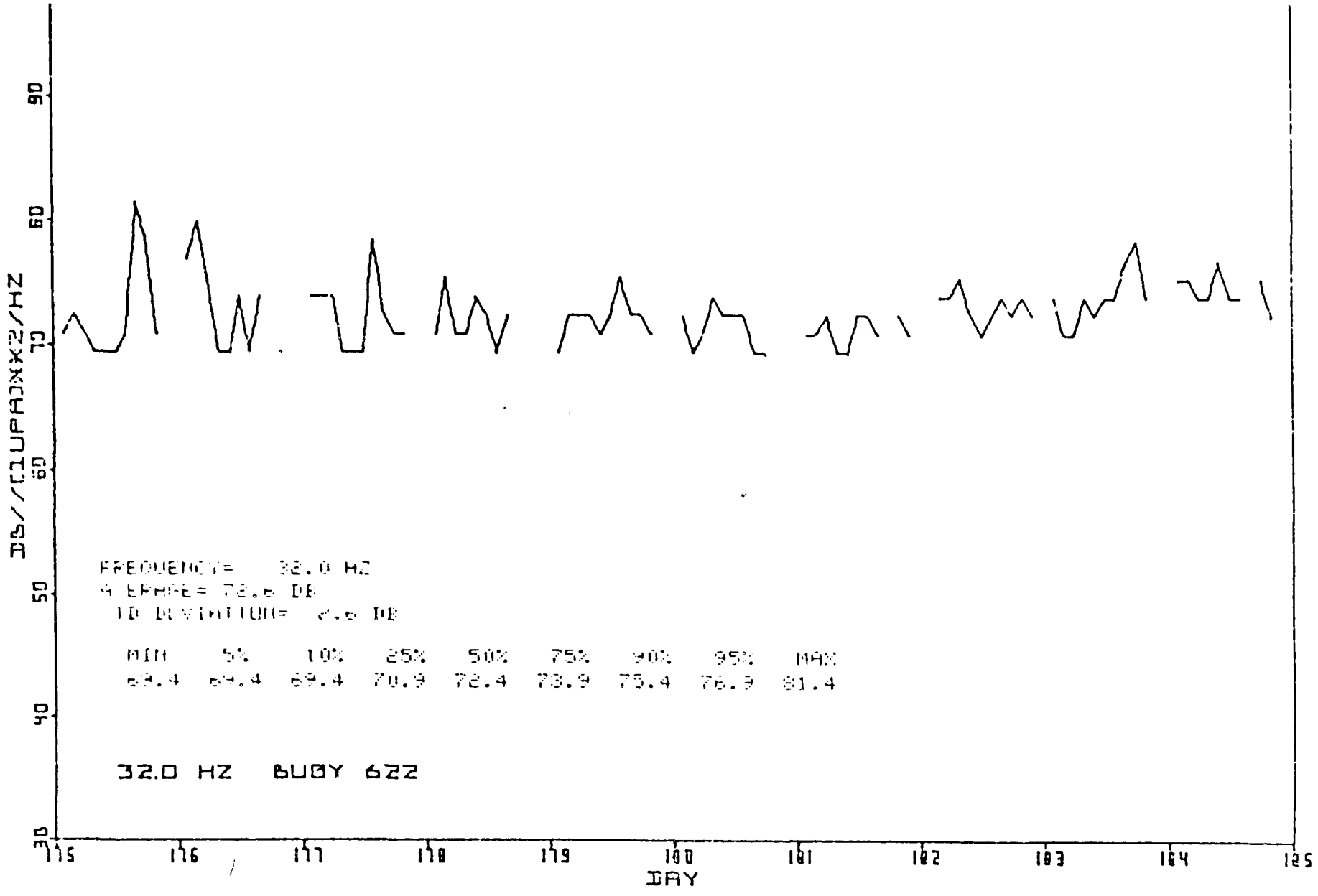
FLOE DRIFT, DAYS 175 - 184

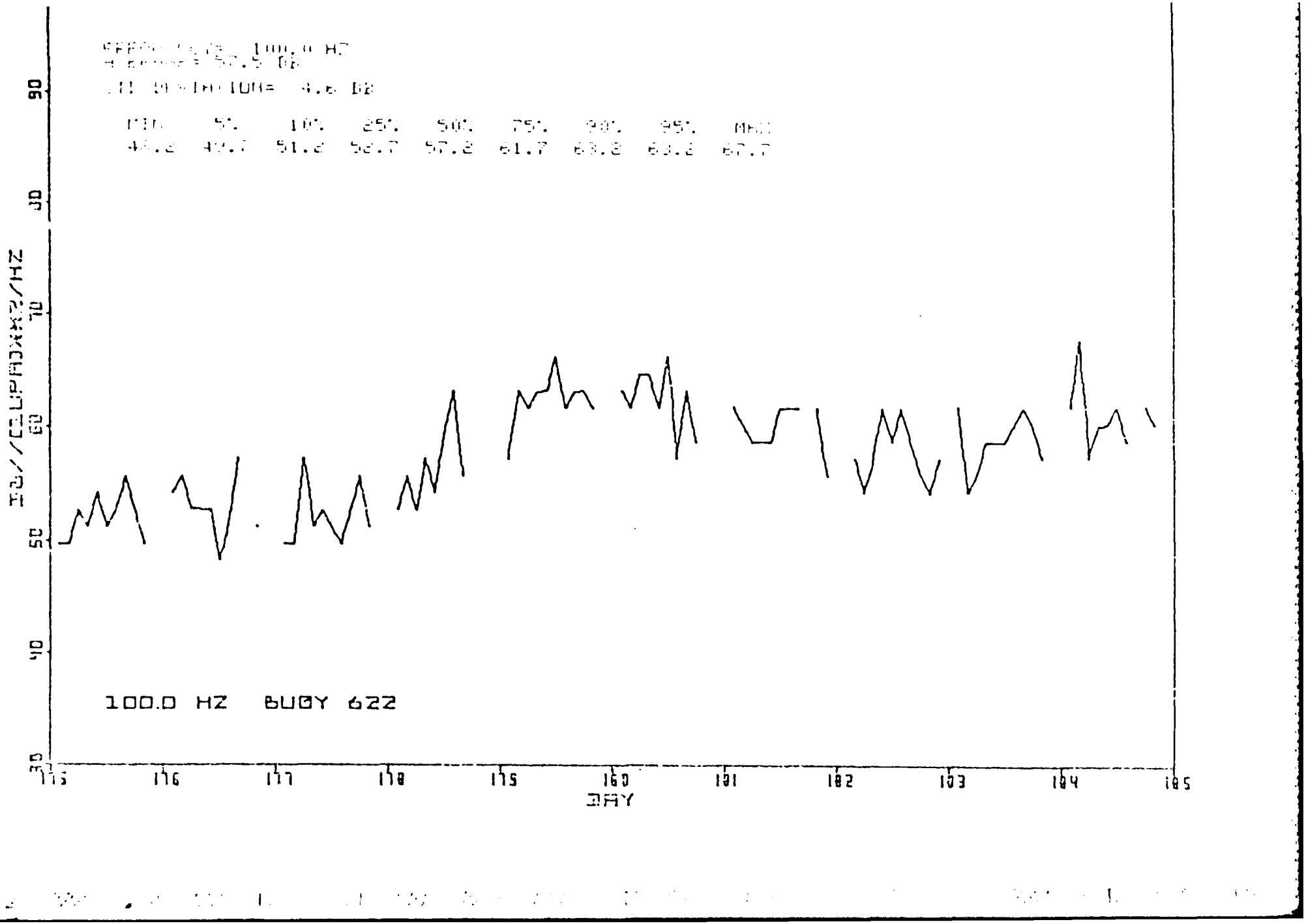


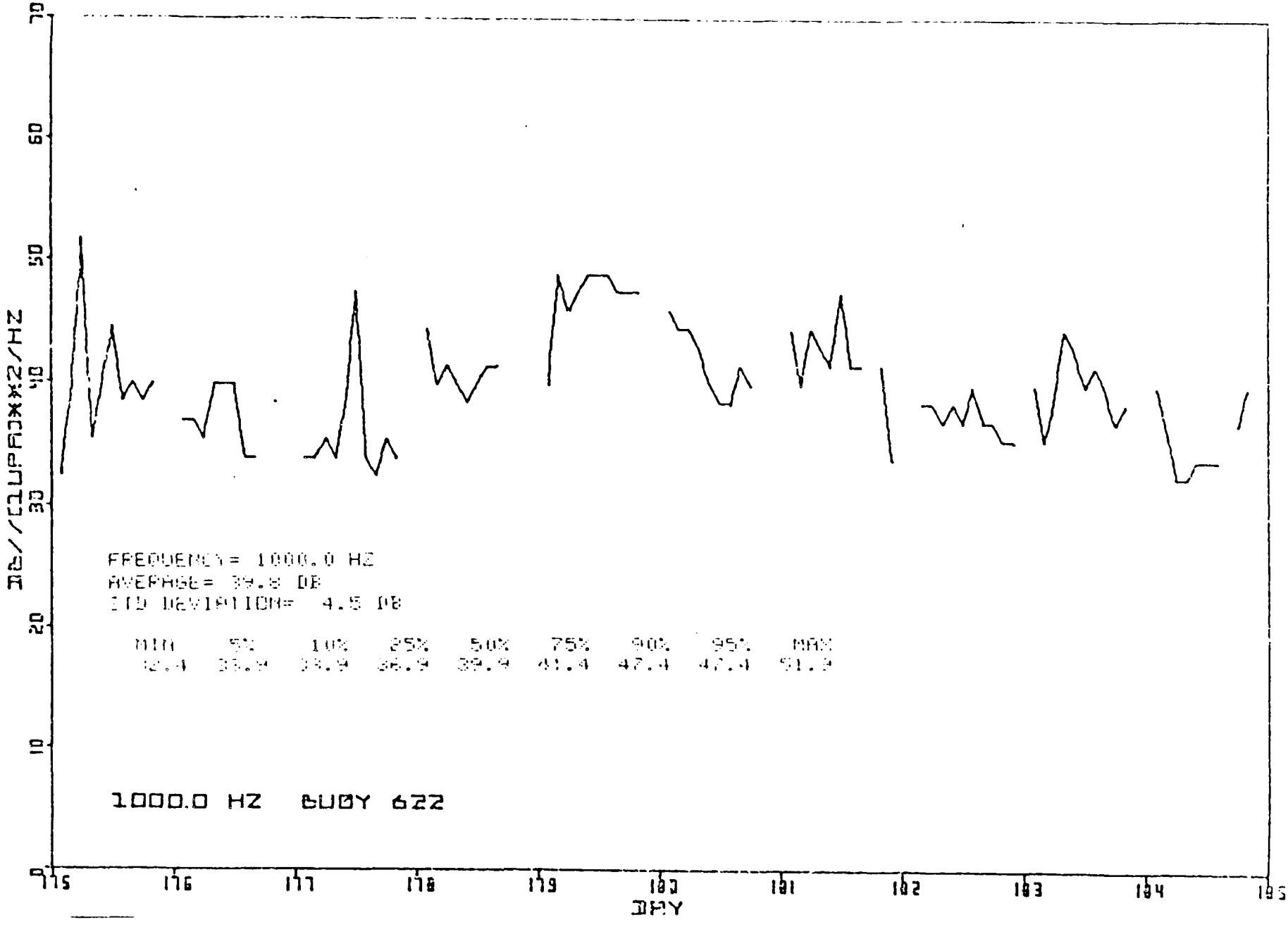
DAYS 175 - 184, 1977

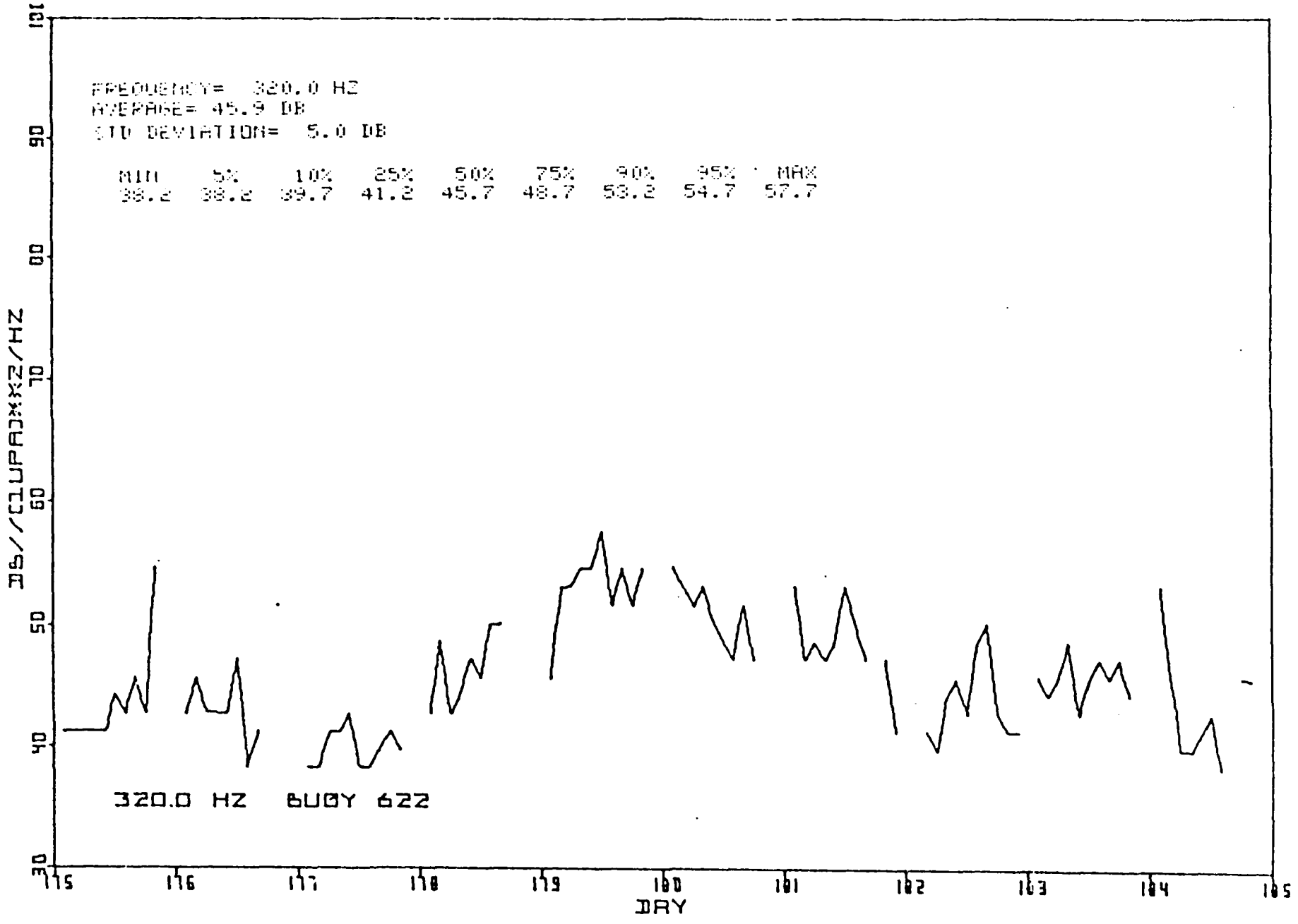

FREQUENCY= 3.2 HZ
MEAN= 85.1 DB
STANDARD DEVIATION= 12.4 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
69.7 65.2 66.7 78.7 87.7 96.7 99.7 101.2 104.2
3.2 HZ GUOY 622
DAY


DB//(1UPA)**2/HZ
90
80
70
60
50
40
30
FREQUENCY= 10.0 HZ
AVERAGE= 72.3 DB
STD DEVIATION= 5.4 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
61.3 64.3 65.8 68.8 71.8 74.8 77.8 79.3 91.3
10.0 HZ BUOY 622
175 176 177 178 179 180 181 182 183 184 185
DAY


DB//(1UPA)X*2/HZ
90
80
70
60
50
40
30
FREQUENCY= 32.0 HZ
MIN 5% 10% 25% 50% 75% 90% 95% MAX
68.4 69.4 69.4 70.9 72.4 73.9 75.4 76.9 81.4
32.0 HZ BUOY 622
115
116
117
118
119
120
121
122
123
124
125
DAY


90
80
70
60
50
40
30
100.0 HZ BUOY 622
175
176
177
178
179
180
181
182
183
184
185
DAY


FREQUENCY= 1000.0 HZ
AVERAGE= 39.8 DB
STD DEVIATION= 4.5 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
32.4 33.9 34.9 36.9 39.9 41.4 47.4 47.4 51.9
1000.0 HZ BUOY 622
DAY


FREQUENCY= 320.0 HZ
AVERAGE= 45.9 DB
STD DEVIATION= 5.0 DB
MIN 5% 10% 25% 50% 75% 90% 95% MAX
38.2 38.2 39.7 41.2 45.7 48.7 53.2 54.7 57.7
DB//CLUPADKKZ/HZ
101
90
80
70
60
50
40
30
320.0 HZ BUOY 622
115
116
117
118
119
120
121
122
123
124
125
DAY

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