

9400083

```

#DOCUMENTATION FILE NAME:Natsushima_CTD_ddf \
#NODC_ACCESSION_NUMBER: \
#NODC_REFERENCE_NUMBER: \
#NODC_DOCUMENTATION_DATE:March 31, 1994 \
#NODC_DOCUMENTOR:Brenda Humphries, Harry Iredale \
#OTHER_DOCUMENTORS: Brigitte Baeuerle of TOGA COARE Internatinal Program
Office and the principal inventigator provided most inforamtion. \
#DISTRIBUTION RESTRICTION:none \
#DATE RECEIVED: March 17, 1994 \
#SUBMISSION MEDIUM:ftp \
#SUBMITTOR_NAME:Kentaro Ando \
#SUBMITTOR_INSTITUTION:JAMSTEC,Tropical Ocean Climate Study Group - 4974
Ocean Research Department
#SUBMITTER_STREET_ADDRESS:2-15, Natsushima \
#SUBMITTER_CITY:Yokosuka, Kanagawa 237 \
#SUBMITTER_COUNTRY:JAPAN \
#SUMITTER_TELEPHONE NO:(81) 468 66 3811 \
#SUBMITTER_INTERNET:anouk@mstkid.jamstec.go.jp \
#SUBMITTER_EMAIL:jamstec.res (Omnet) \
#COLLECTION_INFORMATION:

```

The R/V Natsushima participated in the TOGA COARE Intensive Observing Period from 01 Feb 93 - 18 Feb 93 (Pohnpei to Rabaul) and from 20 Feb 93 - 07 Mar 93 (Rabaul to Guam). During the first leg, the vessel maintained a relatively stationary position at 0 156E and tended moorings at 2N 156E, 0 154E and 2S 156E. During the second leg, moorings at 0 147E, 2N 147E and 5N 147E were tended. CTD observations were performed every 6 hours while on station (0 156E) and every 1 degree of latitude along the ship's track. A total of 60 casts was made.

Filename	Date	Time	Latitude	Longitude
N9301C01_1M_V7.DAT	04 FEB 1993	08:10	01 39.80 S	155 52.80 E
N9301C02_1M_V7.DAT	05 FEB 1993	00:30	00 00.13 S	156 00.43 E
N9301C03_1M_V7.DAT	05 FEB 1993	07:15	00 00.01 N	156 00.00 E
N9301C04_1M_V7.DAT	05 FEB 1993	11:39	00 00.37 S	156 00.14 E
N9301C05_1M_V7.DAT	05 FEB 1993	17:32	00 00.08 S	155 59.80 E
N9301C06_1M_V7.DAT	05 FEB 1993	23:10	00 00.08 S	156 00.17 E
N9301C07_1M_V7.DAT	06 FEB 1993	05:31	00 00.07 N	156 00.21 E
N9301C08_1M_V7.DAT	06 FEB 1993	11:33	00 00.12 S	156 00.10 E
N9301C09_1M_V7.DAT	06 FEB 1993	17:25	00 00.05 N	155 59.94 E
N9301C10_1M_V7.DAT	06 FEB 1993	23:32	00 00.06 S	156 00.02 E
N9301C11_1M_V7.DAT	07 FEB 1993	05:25	00 00.03 S	156 00.09 E
N9301C12_1M_V7.DAT	07 FEB 1993	11:29	00 00.11 S	156 00.06 E
N9301C13_1M_V7.DAT	07 FEB 1993	17:21	00 00.20 N	156 00.05 E
N9301C14_1M_V7.DAT	07 FEB 1993	23:00	00 00.02 S	155 56.14 E
N9301C15_1M_V7.DAT	08 FEB 1993	05:31	00 00.01 S	155 56.09 E
N9301C16_1M_V7.DAT	08 FEB 1993	11:54	00 00.00 N	155 55.99 E
N9301C17_1M_V7.DAT	08 FEB 1993	17:41	00 00.10 N	155 59.04 E
N9301C18_1M_V7.DAT	08 FEB 1993	23:26	00 00.07 N	155 59.03 E
N9301C19_1M_V7.DAT	09 FEB 1993	05:25	00 00.00 N	155 59.00 E
N9301C20_1M_V7.DAT	09 FEB 1993	11:22	00 00.00 S	155 58.85 E
N9301C21_1M_V7.DAT	09 FEB 1993	17:25	00 00.11 N	155 58.87 E
N9301C22_1M_V7.DAT	09 FEB 1993	23:28	00 00.05 N	155 58.94 E
N9301C23_1M_V7.DAT	10 FEB 1993	05:32	00 00.00 N	155 59.32 E
N9301C24_1M_V7.DAT	10 FEB 1993	11:26	00 00.01 S	155 59.01 E
N9301C25_1M_V7.DAT	10 FEB 1993	17:24	00 00.03 N	155 59.13 E
N9301C26_1M_V7.DAT	10 FEB 1993	22:55	00 00.05 N	155 58.89 E

N9301C27_1M_V7.DAT	11	FEB	1993	05:25	00	00.09	S	155	58.89	E
N9301C28_1M_V7.DAT	11	FEB	1993	11:26	00	00.30	N	155	58.82	E
N9301C29_1M_V7.DAT	11	FEB	1993	17:25	00	00.20	N	155	58.95	E
N9301C30_1M_V7.DAT	11	FEB	1993	23:25	00	00.02	N	155	58.79	E
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N9301C33_1M_V7.DAT	12	FEB	1993	17:25	00	00.01	N	155	58.87	E
N9301C34_1M_V7.DAT	12	FEB	1993	23:25	00	00.10	N	155	58.87	E
N9301C35_1M_V7.DAT	13	FEB	1993	05:26	00	00.10	N	155	58.78	E
N9301C36_1M_V7.DAT	13	FEB	1993	11:30	00	00.06	N	155	59.05	E
N9301C37_1M_V7.DAT	13	FEB	1993	17:21	00	00.04	N	155	58.97	E
N9301C38_1M_V7.DAT	13	FEB	1993	23:26	00	00.05	S	155	58.80	E
N9301C39_1M_V7.DAT	14	FEB	1993	05:05	00	00.08	N	155	59.12	E
N9301C40_1M_V7.DAT	15	FEB	1993	00:05	01	59.92	N	155	56.94	E
N9301C41_1M_V7.DAT	15	FEB	1993	23:19	00	01.40	S	154	06.77	E
N9301C42_1M_V7.DAT	16	FEB	1993	22:42	01	59.86	S	156	00.05	E
N9301C43_1M_V7.DAT	17	FEB	1993	05:52	03	00.05	S	155	28.21	E
N9301C44_1M_V7.DAT	17	FEB	1993	12:40	03	59.93	S	154	54.25	E
N9301C45_1M_V7.DAT	17	FEB	1993	21:08	04	59.90	S	153	59.95	E
N9301C46_1M_V7.DAT	18	FEB	1993	02:14	05	00.10	S	153	10.88	E
N9301C47_1M_V7.DAT	22	FEB	1993	18:45	03	59.98	S	145	59.88	E
N9301C48_1M_V7.DAT	23	FEB	1993	01:01	03	00.11	S	146	00.08	E
N9301C49_1M_V7.DAT	23	FEB	1993	09:56	01	45.00	S	145	42.12	E
N9301C50_1M_V7.DAT	26	FEB	1993	13:13	01	00.07	S	147	00.09	E
N9301C51_1M_V7.DAT	26	FEB	1993	17:04	00	30.13	S	146	59.95	E
N9301C52_1M_V7.DAT	26	FEB	1993	20:54	00	00.11	S	147	00.01	E
N9301C53_1M_V7.DAT	27	FEB	1993	00:50	00	29.85	N	146	59.86	E
N9301C54_1M_V7.DAT	27	FEB	1993	04:40	00	59.92	N	146	59.93	E
N9301C55_1M_V7.DAT	27	FEB	1993	11:51	02	00.13	N	146	59.90	E
N9301C56_1M_V7.DAT	27	FEB	1993	18:54	02	59.93	N	146	59.88	E
N9301C57_1M_V7.DAT	28	FEB	1993	02:09	03	59.95	N	146	59.97	E
N9301C58_1M_V7.DAT	28	FEB	1993	09:15	04	59.97	N	147	00.10	E
N9301C59_1M_V7.DAT	28	FEB	1993	16:04	05	59.88	N	147	00.01	E
N9301C60_1M_V7.DAT	28	FEB	1993	22:44	07	00.04	N	146	59.95	E

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 #PRINCIPAL\_INVESTIGATOR\_NAME:Kentaro Ando \
   
 #PI\_INSTITUTION:JAMSTEC, Tropical Ocean Research Group
   
 Ocean Research Department \
   
 #PI\_STREET-ADDRESS:2-15, Natsushima \
   
 #PI\_CITY:Yokosuka, Kanagawa 237 \
   
 #PI\_COUNTRY:JAPAN \
   
 #PI\_TELEPHONE\_NO:(81) 468 66 3811 \
   
 #PI\_INTERNET:andouk@mstkid.jamstec.go.jp \
   
 #PI\_EMAIL:jamstec.res (Omnet) \
   
 #PROJECT:TOGA COARE - JAPACS (Japanese Pacific Climate Study) \
   
 #FUNDING\_AGENCY:Japan Science and Technology Agency \
   
 #GRANT/CONTRACT-NO: \
   
 #PLATFORM\_TYPE:research vessel \
   
 #PLATFORM\_NAME:R/V Natsushima \
   
 #COLLECTION\_METHODS:

CTD profiles were made down to a depth of 1,000 meters, with the CTD being operated from the left deck of the R/V Natsushima. The data were collected at 24 Hz and averaged to 6 Hz. Data were recorded on an IBM computer (IBM/Think Pad) using Seasoft software version 3, provided by SBE.

On some stations, ten Nansen bottles were attached to the wire to sample water for comparison with the CTD data. \

#### #ANALYSIS\_METHODS:

The CTD sensors were calibrated before and after the cruise by SBE.

The drift of the sensors was small. The data were averaged into 1 meter

intervals, rejecting noise. The data set contains noisy salinity data in the surface layer (0-5 meters). Salinity and temperature CTD data were checked with data obtained from bottle samples. Their precision is within 0.01 psu and 0.01 degree. Oxygen data were not checked and are the original values from CTD/DO. \

#INSTRUMENTS:SBE9/17 Sea-Bird Electronics, Seattle WA  
#PUBLICATIONS:Annual report of Japanese Pacific Climate Study edited by Japan Sc and Technology Agency in 1994 (in preparation) \  
#ASSOCIATED\_DATASETS: \  
#ASSOCIATED\_VERSIONS: \  
##DATA\_SET\_INFORMATION: \  
#DATA\_SET\_NAME:Natsushima CTD \  
#DATA\_SET\_VOLUME: 4179150 \  
#SOURCE\_COMPUTER:Digital VAX \  
#SOURCE\_COMPUTER\_OPERATING\_SYSTEM:VMS \  
#SOURCE\_LANGUAGE: \  
#COMPUTER\_CODE:ASCII \  
#ORIGINATOR\_DATASET\_IDENTIFIER:N9301 TOGA COARE \  
#DATA\_DATES: 1 Nov 92 - 28 Nov 93 \  
#LEFT\_GEOGRAPHIC\_UPPER\_BOUND: 10N 140E \  
#RIGHT\_GEOGRAPHIC\_LOWER\_BOUND: 10S 180 \  
#GEOGRAPHIC\_REGION: Equatorial Pacific, north of Australia, TOGA COARE Large Scale Domain, Western Pacific warm pool  
#DATA\_TYPE: CTD data, 60 profiles \  
#PARAMETERS\_DEPENDENT:  
    temperature, salinity, potential temp., density, potential density, dynamic height, dissolved oxygen  
#PARAMETERS\_INDEPENDENT: date, latitude, longitude, depth  
#FORMAT\_DESCRIPTION:

ALL DATA ARE IN ASCII:

depth (m)  
temp (C)  
salinity (PSU)  
potential temperature (C)  
density (kg/m3)  
potential density (kg/m3)  
dynamic height (m2/s2)  
Dissolved Oxygen (ml/l)

#PARAMETER\_1:depth \  
#UNITS\_1:meters w/decimal \  
#RESOLUTION\_1:10-0 \  
#PARAMETER\_2:temperature \  
#UNITS\_2:degrees \  
#SCALE\_2: Centigrade \  
#RESOLUTION\_2:10-3 \  
#PARAMETER\_3: salinity \  
#UNITS\_3: PSU \  
#RESOLUTION\_3: 10-3 \  
#PARAMETER\_4: potential temperature \  
#UNITS\_4:degrees \  
#SCALE\_4:Centigrade \  
#RESOLUTION\_4:10-3 \  
#PARAMETER\_5: density \  
#UNITS\_5: kg/m3 \  
#RESOLUTION\_5:10-4 \  
#PARAMETER\_6:potential density \  
#UNITS: kg/m3 \

#RESOLUTION: 10-4 \  
 #PARAMETER 7:dynamic height \  
 #UNITS 7: m<sup>2</sup>/s<sup>2</sup> \  
 #RESOLUTION 7:10-3 \  
 #PARAMETER 8:dissolved oxygen \  
 #UNITS 8:ml/l \  
 #RESOLUTION 8:10-2 \  
 #FORMAT PUBLICATION: \  
 #SUBMITTOR DOCUMENTATION: \  
 #SAMPLE DATA:

27 FEB 1993 04:40 00 59.92 N 146 59.93 E

depth (m)	temp. (C)	sal. (PSU)	p-tem (C)	density (Kg/m <sup>3</sup> )	pot-den (Kg/m <sup>3</sup> )	dy-ht (m <sup>2</sup> /s <sup>2</sup> )	DO (ml/l)
1.	28.838	33.935	28.838	21.3251	21.3209	0.065	4.39
2.	28.830	33.852	28.830	21.2697	21.2614	0.131	3.90
3.	28.846	33.831	28.845	21.2529	21.2404	0.197	5.37
4.	28.844	34.224	28.843	21.5529	21.5361	0.260	4.42
5.	28.842	34.174	28.841	21.5203	21.4993	0.323	4.38
6.	28.844	34.203	28.843	21.5457	21.5205	0.386	4.25
7.	28.846	34.209	28.844	21.5538	21.5243	0.449	4.57
8.	28.847	34.209	28.845	21.5577	21.5242	0.513	4.62
9.	28.840	34.210	28.838	21.5651	21.5273	0.576	4.56
10.	28.827	34.213	28.825	21.5759	21.5339	0.639	4.56
11.	28.844	34.208	28.841	21.5709	21.5247	0.702	4.63
12.	28.817	34.217	28.814	21.5909	21.5405	0.765	4.43
13.	28.834	34.210	28.831	21.5842	21.5296	0.828	4.66
14.	28.829	34.214	28.826	21.5933	21.5344	0.891	4.42
15.	28.818	34.217	28.814	21.6034	21.5404	0.954	4.42
16.	28.786	34.225	28.782	21.6242	21.5570	1.017	4.42
17.	28.786	34.224	28.782	21.6279	21.5563	1.080	4.44
18.	28.778	34.227	28.774	21.6370	21.5613	1.143	4.43

\

CTD data were collected during the JAPACS (Japanese Pacific Climate Study) COARE cruise in February 1993 by the R/V Natsushima with a Seabird SBE 9/17 CTD (Seabird Electronics, Seattle).

CTD observations were performed every 6 hours while on station (156E 0N) and every 1 degree of latitude along the ship's track.

The sensors were calibrated before and after this cruise by SBE. The drift of the sensors was small.

Although data processing was performed to reject noise, the surface data (0-5 meters) contain noisy salinity data.

For more information contact:

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3/17/94

9400083

##NODC INFORMATION: \  
#DOCUMENTATION\_FILE\_NAME:Natsushima\_XBT\_ddf \  
#NODC\_ACCESSION\_NUMBER: \  
#NODC\_REFERENCE\_NUMBER: \  
#NODC\_DOCUMENTATION\_DATE:March 25, 1994 \  
#NODC\_DOCUMENTOR:Brenda Humphries \  
#DISTRIBUTION RESTRICTION: \  
#DATE\_RECEIVED:March 17, 1994 \  
#SUBMITTOR\_NAME:Kentaro Ando \  
#SUBMITTOR\_INSTITUTION:JAMSTEC \  
#SUBMITTER\_STREET\_ADDRESS:2-15 Natsushima \  
#SUBMITTER\_DISTRICT:Yokosuka \  
#SUBMITTER\_CITY:Kanagawa \  
#SUBMITTER\_COUNTRY:Japan \  
#SUBMITTER\_ZIP\_CODE: \  
#SUBMITTER\_TELEPHONE\_NO:(81) 468-66-3811 \  
#SUBMITTER\_INTERNET:anouk@mstkid.jamstec.go.jp \  
#SUBMITTER\_EMAIL: \  
#SUBMITTER\_MEDIA: FTP \  
#COLLECTION\_INFORMATION: \  
#PRINCIPAL\_INVESTIGATOR\_NAME:Kentaro Ando \  
#PI\_INSTITUTION:JAMSTEC \  
#PI\_STREET-ADDRESS:2-15 Natsushima \  
#PI\_DISTRICT:Yokosuka \  
#PI\_CITY: Kanagawa \  
#PI\_COUNTRY:Japan \  
#PI\_ZIP\_CODE:\  
#PI\_TELEPHONE\_NO:(81) 468-66-3811 \  
#PI\_INTERNET:anouk@mstkid.jamstec.go.jp \  
#PI\_EMAIL: \  
#PROJECT:TOGA ~~COARE~~ - JAPACS (Japanese Pacific Climate Study) \  
#FUNDING\_AGENCY:Unknown \  
#GRANT/CONTRACT-NO:\  
#PLATFORM\_TYPE:Ship \  
#PLATFORM\_NAME:R/V Natsushima \  
#COLLECTION\_METHODS:XBT were launched every 3 hours while the ship was on station (156E ON). During transits they were launched every 30 minutes of latitude along the ships's track. The data are compiled at intervals of 1 meter. \  
#ANALYSIS\_METHODS: \  
#INSTRUMENTS:XBT - Model T-7 made by Tsurumi SEiki Co. LTD \  
#PUBLICATIONS: \  
#ASSOCIATED\_DATASETS: \  
#ASSOCIATED\_VERSIONS: \  
#DATA\_SET\_INFORMATION:Name convention of files, example - N9301x\_020112.dat contains data taken at 02 (Feb) 01 (1st) 12 (noon) by R/V Natsushima. \  
#DATA\_SET\_NAME: Natsushima XBT Profiles \  
#DATA\_SET\_VOLUME: \  
#SOURCE\_COMPUTER: \  
#SOURCE\_COMPUTER\_OPERATING\_SYSTEM: \  
#SOURCE\_LANGUAGE: \  
#COMPUTER\_CODE:ASCII \  
#ORIGINATOR\_DATASET\_IDENTIFIER:\  
#DATA\_DATES:4 - 28 February 1993 \  
#LEFT\_GEOGRAPHIC\_UPPER\_BOUND:04 -15 Feb 93 on station at 156E ON.

Various  
sites in COARE region from 16 to 28 Feb to tend moorings. \  
174 OBS  
— 4974

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#RIGHT GEOGRAPHIC LOWER_BOUND: \
#GEOGRAPHIC_REGION: \
#DATA_TYPE: XBT data, 174 profiles \
#SPHERE: Ocean \
#PARAMETERS_DEPENDENT: Depth (m), temp (c). \
#PARAMETERS_INDEPENDENT: \
##FORMAT_DESCRIPTION: \
#FORMAT_PUBLICATION: \
#PARAMETER_1: depth \
#UNITS_1: meters \
#RESOLUTION_1: 10-0 \
#COMMENTS_1: \
#PARAMETER_2: temperature \
#UNITS_2: degrees \
#SCALE_2: centigrade \
#RESOLUTION_2: 10-2 \
#FORMAT_COMMENTS: There are five (5) depth, temperature pairs per
record (line of text) \
##MISC_DOCUMENTATION: \
##SUBMITTOR_DOCUMENTATION: \
#SAMPLE_DATA:

```

```

XBT N9301-T7 11 MAR 199307:30 34 14.47N      139 54.71E      9999
  dep.  temp.  dep.  temp.  dep.  temp.  dep.  temp.  dep.  temp.
    1   18.83    2   18.83    3   18.83    4   18.83    5   18.83
    6   18.84    7   18.84    8   18.85    9   18.86   10   18.78
   11   18.71   12   18.65   13   18.61   14   18.56   15   18.53
   16   18.47   17   18.38   18   18.34   19   18.30   20   18.27
   21   18.29   22   18.26   23   18.24   24   18.24   25   18.24
   26   18.22   27   18.24   28   18.34   29   18.35   30   18.29
   31   18.19   32   18.17   33   18.16   34   18.13   35   18.11
   36   18.10   37   18.10   38   18.10   39   18.10   40   18.10
   41   18.09   42   18.09   43   18.07   44   18.07   45   18.04
   46   18.03   47   18.02   48   18.00   49   18.00   50   17.99
   51   17.97   52   17.95   53   17.92   54   17.91   55   17.90
   56   17.89   57   17.89   58   17.89   59   17.87   60   17.86
   61   17.86   62   17.83   63   17.82   64   17.82   65   17.83
   66   17.82   67   17.80   68   17.78   69   17.73   70   17.72
   71   17.71   72   17.70   73   17.69   74   17.68   75   17.66
   76   17.65   77   17.64   78   17.64   79   17.62   80   17.62
   81   17.60   82   17.58   83   17.57   84   17.55   85   17.54
   86   17.55   87   17.54   88   17.54   89   17.55   90   17.54
   91   17.56   92   17.56   93   17.54   94   17.54   95   17.54
   96   17.54   97   17.53   98   17.53   99   17.53  100   17.51

```

```

$ ls
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N9301X_012407.dat  N9301X_020711.dat  N9301X_021223.dat  N9301X_022619.dat
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N9301X_020305.dat  N9301X_021005.dat  N9301X_021616.dat  N9301X_022813.dat
N9301X_020413.dat  N9301X_021008.dat  N9301X_021702.dat  N9301X_022816.dat
N9301X_020423.dat  N9301X_021011.dat  N9301X_021705.dat  N9301X_022819.dat
N9301X_020503.dat  N9301X_021014.dat  N9301X_021709.dat  N9301X_022822.dat
N9301X_020505.dat  N9301X_021017.dat  N9301X_021712.dat  N9301X_030105.dat
N9301X_020509.dat  N9301X_021021.dat  N9301X_021717.dat  N9301X_030112.dat
N9301X_020511.dat  N9301X_021023.dat  N9301X_021720.dat  N9301X_030118.dat
N9301X_020514.dat  N9301X_021103.dat  N9301X_021802.dat  N9301X_030200.dat
N9301X_020517.dat  N9301X_021105.dat  N9301X_022218.dat  N9301X_030206.dat
N9301X_020520.dat  N9301X_021108.dat  N9301X_022222.dat  N9301X_030621.dat
N9301X_020600.dat  N9301X_021111.dat  N9301X_022301.dat  N9301X_030706.dat
N9301X_020603.dat  N9301X_021114.dat  N9301X_022305.dat  N9301X_030721.dat
N9301X_020605.dat  N9301X_021117.dat  N9301X_022309.dat  N9301X_030806.dat
N9301X_020608.dat  N9301X_021121.dat  N9301X_022312.dat  N9301X_030821.dat
N9301X_020611.dat  N9301X_021123.dat  N9301X_022316.dat  N9301X_030906.dat
N9301X_020614.dat  N9301X_021202.dat  N9301X_022319.dat  N9301X_030922.dat
N9301X_020617.dat  N9301X_021205.dat  N9301X_022608.dat  N9301X_031007.dat
N9301X_020620.dat  N9301X_021209.dat  N9301X_022610.dat  N9301X_031022.dat
N9301X_020623.dat  N9301X_021211.dat  N9301X_022611.dat  N9301X_031107.dat
N9301X_020702.dat  N9301X_021214.dat  N9301X_022613.dat  readme
N9301X_020705.dat  N9301X_021218.dat  N9301X_022615.dat

```

```
$ pg N9301X_020705.dat
```

```

N9301-T7 07 FEB 199305:44 00 00.10S      156 00.10E      9999
dep.   temp. dep.   temp. dep.   temp. dep.   temp. dep.   temp.
  1  29.58   2  29.58   3  29.58   4  29.58   5  29.58
  6  29.39   7  29.25   8  29.22   9  29.19  10  29.17
 11  29.14  12  29.14  13  29.14  14  29.14  15  29.13
 16  29.12  17  29.12  18  29.12  19  29.12  20  29.10
 21  29.12  22  29.10  23  29.10  24  29.10  25  29.11
 26  29.10  27  29.10  28  29.10  29  29.10  30  29.10
 31  29.10  32  29.10  33  29.12  34  29.10  35  29.10
 36  29.10  37  29.10  38  29.10  39  29.10  40  29.07
 41  29.10  42  29.07  43  29.10  44  29.10  45  29.10
 46  29.07  47  29.10  48  29.10  49  29.07  50  29.07
 51  29.32  52  29.34  53  29.34  54  29.36  55  29.36
 56  29.34  57  29.23  58  29.08  59  29.05  60  29.05
 61  29.02  62  29.02  63  29.01  64  29.00  65  28.96
 66  28.93  67  28.90  68  28.87  69  28.80  70  28.75
 71  28.63  72  28.43  73  27.96  74  27.44  75  26.99
 76  26.58  77  26.17  78  25.80  79  25.27  80  24.83
 81  24.69  82  24.61  83  24.52  84  24.35  85  24.06
 86  23.81  87  23.58  88  23.37  89  23.27  90  23.24
      23.15  91  22.96  92  22.81  93  22.72  94  22.72  95  22.61
      22.15  96  22.96  97  22.81  98  22.72  99  22.72 100  22.21

```



\$ pg readme

~~\*\*\*~~ data were collected during the JAPACS (Japanese Pacific Climate Study) ~~Cruise~~ cruise in February 1993 by the R/V Natsushima. Model T-7 XBTs made by Tsurumi Seiko Co. LTD were used.

During the R/V ~~Natsushima~~ cruise, XBTs were launched every 3 hours while the ship was on station (156E 0N). During transits they were launched every 30 minutes of latitude along the ship's track. The data are in ASCII format and compiled at intervals of 1 meter.

Naming convention:

N9301X\_020112.dat contains data taken on 02 (Feb.) 01(1st) 12(noon) by R/V Natsushima.

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