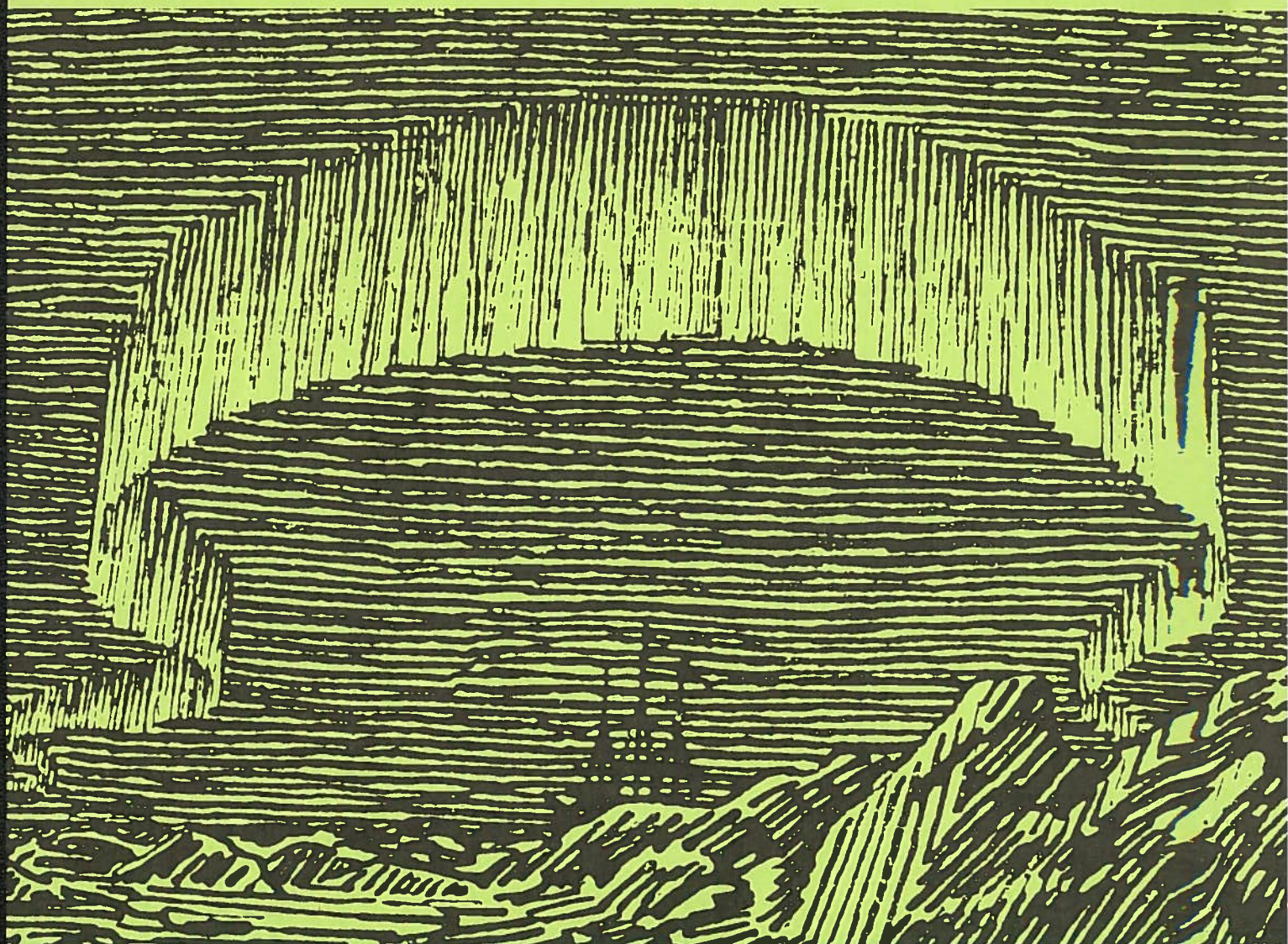


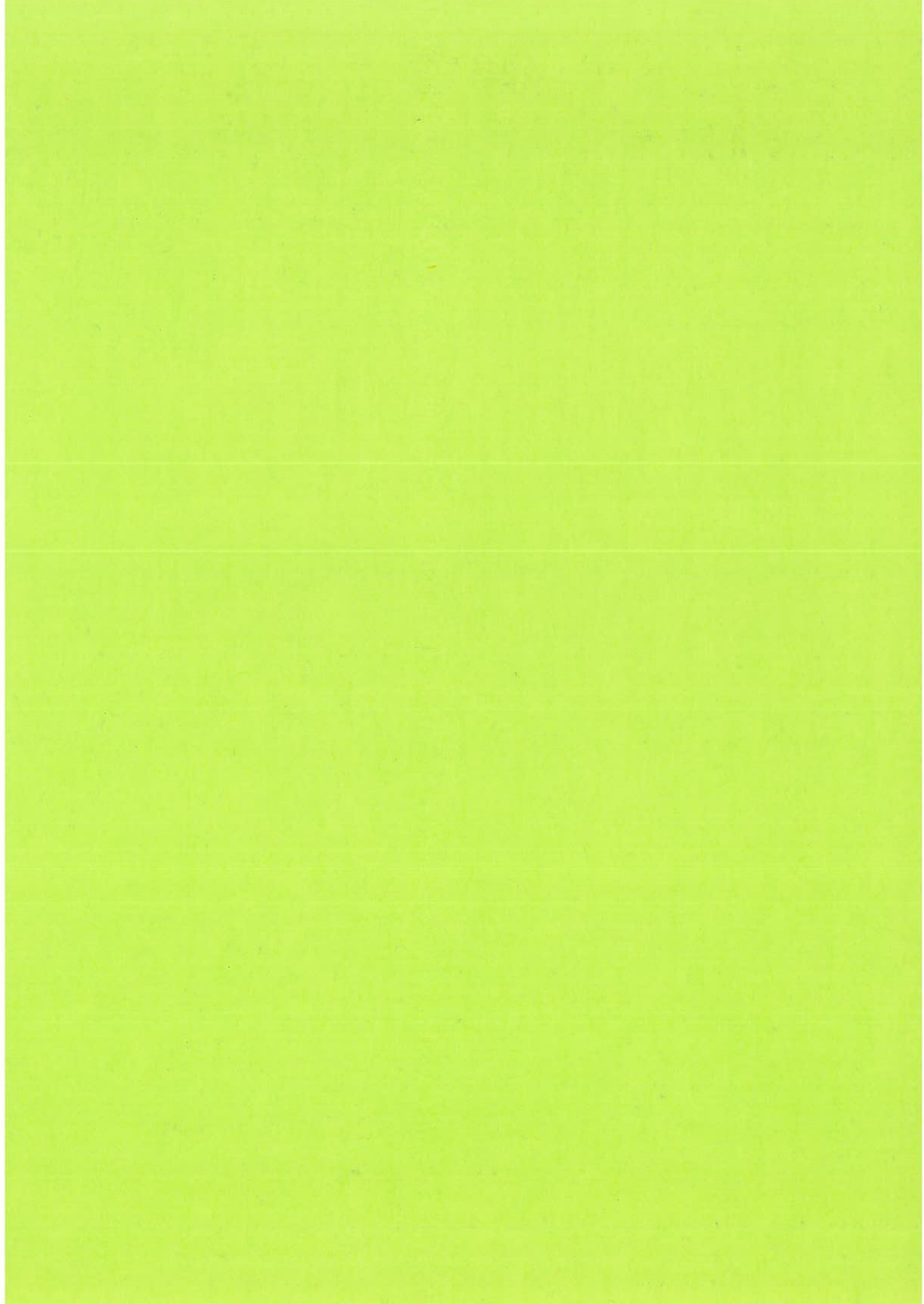
THE AURORAL OBSERVATORY

TROMSØ

NORWAY

MAGNETIC OBSERVATIONS 1973





INTRODUCTION

This yearbook presents the results of the geomagnetic measurements carried out at The Auroral Observatory, Tromsø, Norway. The Observatory is now an institute at The University of Tromsø. Inquiries can be adressed to:

The Auroral Observatory
P.O. Box 953
N-9001 TROMSØ, Norway.

The Observatory is situated 2 km NW from the centre of the town. The geographical coordinates are:

Latitude: $69^{\circ}39'.7$ N Longitude: $18^{\circ}56'.4$ E

Altitude: 105 m above sea level.

Instrument Equipment

The values of hourly means etc. are based on photographic records from the following three variometers: D and H of the Askania-Bamberg type and a Z-variometer of the type La Cour.

Insensitive recordings of the three elements are obtained by a modified La Cour system.

Pulsations recordings are obtained by a Grenet system.

The following instruments have been used for base-line controll: Askania theodolit and a double magnet suspended in a silk-thread for D-measurements, for H-measurements QHM 123 and QHM 164, and for Z-measurements BMZ 39 and BMZ 57. From 1975 will a GeoMetric G 826 protomagnetometer be used for Z-base line controll.

Scale value determinations

The scale value of the variometers are determined by means of Helmholtz coils. The values are as follows expressed in

units pr. mm:

	D	H	Z
Normal:	1',45	5,28γ	6,57γ
Storm:	3',0	22,2γ	24.0γ

Notes to the tables

The hourly mean values are centered on the half hours. The quiet mean values are estimated from selected quiet hours only.

Universal time is used everywhere in this yearbook, and the declination is reckoned positive towards west.

Stars in the tables indicates that the values are greater than - 999.

ANNUAL MEANS OF THE MAGNETIC ELEMENTS

Year	D	H	Z	Year	D	H	Z
1930	4°07',7 W	11567 γ		1957	0°15',9 W	11182 γ	50868 γ
31	3°59,6	49	50198 γ	58	12',7	94	902
32	49,0	499	95	59	08,1	96	35
33	37,3	72	50203	60	03,9	97	80
34	25,9	41	23	61	02,1	214	51004
35	14,3	07	47	62	00,1 E	17	37
36	04,8	379	76	63	03,9 E	22	65
37	2°53,7	50	308	64	03,7 E	39	88
38	44,1	25	40	65	04,6 E	51	94
39	35,0	297	62	66	04,5 E	60	130
40	26,6	78	81	67	04,0 E	65	60
41	16,6	56	417	68	02,0 E	68	96
42	10,6	44	24	69	01,5 W	79	235
43	02,5	22	49	70	04,2 W	95	78
44	1°54,3	13	67	71	05,5 W	333	303
45	45,7	199	503	72	05,5 W	64	19
46	34,6	79	54	73	03,5 W	70	65
47	26,5	74	85				
48	18,4	56	94				
49	10,5	53	612				
50	03,6	52	47				
51	0°54,1	43	93				
52	43,9	44	711				
53	36,0	53	24				
54	29,1	65	44				
55	24,0	72	76				
56	18,1	73	825				

Date	Description	Amount	Balance
1912			
1913			
1914			
1915			
1916			
1917			
1918			
1919			
1920			
1921			
1922			
1923			
1924			
1925			
1926			
1927			
1928			
1929			
1930			
1931			
1932			
1933			
1934			
1935			
1936			
1937			
1938			
1939			
1940			
1941			
1942			
1943			
1944			
1945			
1946			
1947			
1948			
1949			
1950			
1951			
1952			
1953			
1954			
1955			
1956			
1957			
1958			
1959			
1960			
1961			
1962			
1963			
1964			
1965			
1966			
1967			
1968			
1969			
1970			
1971			
1972			
1973			
1974			
1975			
1976			
1977			
1978			
1979			
1980			
1981			
1982			
1983			
1984			
1985			
1986			
1987			
1988			
1989			
1990			
1991			
1992			
1993			
1994			
1995			
1996			
1997			
1998			
1999			
2000			
2001			
2002			
2003			
2004			
2005			
2006			
2007			
2008			
2009			
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
2027			
2028			
2029			
2030			
2031			
2032			
2033			
2034			
2035			
2036			
2037			
2038			
2039			
2040			
2041			
2042			
2043			
2044			
2045			
2046			
2047			
2048			
2049			
2050			
2051			
2052			
2053			
2054			
2055			
2056			
2057			
2058			
2059			
2060			
2061			
2062			
2063			
2064			
2065			
2066			
2067			
2068			
2069			
2070			
2071			
2072			
2073			
2074			
2075			
2076			
2077			
2078			
2079			
2080			
2081			
2082			
2083			
2084			
2085			
2086			
2087			
2088			
2089			
2090			
2091			
2092			
2093			
2094			
2095			
2096			
2097			
2098			
2099			
2100			

TROMSO, DECLINATION, D=0 DEG. W + TABULAR QUANTITIES EXPRESSED IN TENTH OF MINUTES, HOURLY MEAN VALUES

JANUARY 1973

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	-129	-42	-42	-13	-27	74	74	74	45	74	74	88	74	74	88	74	59	45	45	45	45	30	30	30	37						
	45	45	45	45	45	45	45	45	45	45	59	59	59	59	59	59	59	59	59	59	59	59	59	50							
	59	59	59	45	45	45	59	59	59	59	59	59	59	74	74	74	74	74	74	74	74	74	59	45	60						
	-27	-42	30	59	74	74	59	59	59	59	74	88	117	132	132	117	204	291	407	190	117	117	103	30	105						
	-56	-85	-129	-27	88	74	59	45	59	74	103	74	88	74	88	103	146	-42	88	146	219	88	103	335	71						
	-56	30	-216	-201	-85	-27	16	45	45	45	59	45	59	45	59	59	74	59	190	-42	45	-42	16	11							
	45	30	45	45	45	59	45	45	30	59	59	74	59	45	103	88	45	132	103	74	45	-42	-216	1	42						
	45	30	45	45	16	45	59	59	45	59	45	88	103	103	161	146	132	103	74	45	-56	30	30	30	61						
	16	-71	-71	-13	30	59	59	59	59	74	74	74	88	88	88	88	88	74	59	103	-100	-288	-230	16	17						
	-129	-13	-27	-172	-13	45	117	88	103	74	88	132	103	103	88	59	59	-13	-332	-56	161	16	-56	-158	11						
	-187	-129	-13	-230	-13	16	117	88	88	103	103	88	132	-13	132	117	1	-71	-13	45	-288	-85	-27	-27	-2						
	16	-42	-114	-56	-13	74	88	117	74	59	88	88	-13	161	88	132	132	-317	-129	30	88	88	-27	-172	18						
	1	-143	-27	45	74	74	88	74	74	88	103	45	146	117	103	117	74	45	59	45	59	16	-27	55							
	-13	-100	-42	-27	16	74	74	74	88	103	103	88	74	74	45	88	74	45	59	45	30	59	16	45	45						
	16	1	59	30	30	74	103	88	74	74	74	88	88	88	59	74	59	103	45	74	45	-27	-187	-143	41						
	-27	16	45	16	45	103	103	74	74	74	74	74	88	74	59	59	59	59	45	-13	74	1	45	45	51						
	45	74	88	74	59	59	45	45	45	45	59	74	74	103	59	74	74	74	30	16	30	45	45	45	57						
	45	59	59	59	45	45	45	45	45	45	59	59	59	59	59	74	74	74	59	59	59	45	45	59	55						
	59	59	74	74	74	74	74	59	59	59	74	74	88	74	117	132	175	45	175	117	88	74	219	-100	84						
	-143	-607	-680	-419	-42	59	88	88	74	74	103	132	132	103	117	45	74	74	103	88	45	-245	-607	-419	-73						
	-390	-535	-390	-274	-317	-216	-13	45	88	59	132	103	88	74	74	74	103	1	16	74	59	59	30	-42	-45						
	-27	1	16	16	30	30	45	45	45	88	88	74	88	117	74	45	74	59	59	59	45	1	1	-27	43						
	-13	-13	16	16	45	30	59	59	59	88	103	74	117	190	175	146	103	88	117	132	146	59	-13	-42	72						
	-13	-230	-274	16	-27	16	30	74	74	103	117	132	117	88	175	45	117	291	175	146	-71	-129	-13	45	41						
	74	-13	-56	45	74	74	59	74	74	88	74	88	88	161	132	74	117	59	59	59	88	59	-56	16	62						
	-187	-390	-317	1	-100	30	45	74	45	103	88	132	146	161	103	103	103	204	59	132	-143	1	30	1	17						
	16	-27	-27	-42	-254	-27	74	16	45	59	88	132	117	132	204	-230	-56	190	45	-593	204	30	-303	-42	-10						
	-158	-13	-71	-100	-172	-27	117	117	103	74	103	88	117	88	175	16	103	117	16	74	1	16	-71	-56	27						
	-216	-201	-129	-42	1	30	59	103	117	74	74	74	74	103	1	-143	30	16	88	-187	-346	-158	146	-129	-23						
	-42	-230	-317	-158	1	74	59	74	88	59	88	103	88	88	45	30	117	88	45	74	45	45	88	-42	21						
	-143	-42	-27	-27	-13	30	30	45	74	59	59	59	74	59	59	59	74	88	59	74	-27	16	-27	-71	22						
MEAN	-47	-82	-77	-37	-7	38	63	66	66	70	81	87	86	94	96	64	85	69	58	45	22	3	-26	-22	33						

TROMSO, DECLINATION, D=0 DEG. W + TABULAR QUANTITIES EXPRESSED IN TENTH OF MINUTES, HOURLY MEAN VALUES

FEBRUARY 1973

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
	-129	-491	-13	-71	-172	16	103	88	117	88	103	74	103	132	146	233	248	132	291	204	117	16	-27	-71	51			
	1	-100	-201	-129	-42	45	74	117	88	88	74	88	103	88	146	161	262	117	146	88	103	30	-201	59	50			
	45	-42	45	-42	-42	16	59	88	74	59	88	117	103	59	88	88	-13	146	-27	1	74	59	1	-42	41			
	45	16	45	30	16	45	74	74	45	59	74	59	59	59	74	88	45	-27	-42	16	88	1	46					
	30	59	1	-27	30	59	88	74	74	88	59	74	74	74	59	45	45	45	59	45	45	16	-42	-71	41			
	59	-27	-27	16	59	74	74	74	74	88	103	132	132	103	45	132	88	88	88	-27	-27	45	16	16	58			
	-13	1	-13	16	59	74	117	146	103	103	88	74	88	88	103	103	103	88	-259	117	88	45	-129	-100	45			
	-230	-27	-71	1	1	16	117	161	103	117	59	103	146	117	117	-42	-100	103	-27	74	190	45	30	-100	37			
	-201	-317	-100	16	16	59	88	190	233	175	146	88	132	74	88	-71	-27	1	30	117	-27	45	30	-85	29			
	-13	45	45	16	45	88	103	88	117	88	132	88	88	88	74	74	16	59	1	-172	-201	-71	16	37				
	1	-13	-100	-27	16	45	74	74	74	88	88	88	74	103	59	74	88	88	88	74	-42	16	30	30	45			
	59	45	45	74	59	59	132	59	74	103	74	74	88	74	88	74	88	74	74	74	45	-13	1	59	65			
	74	59	59	59	59	59	59	74	59	74	74	74	74	74	74	74	74	74	74	74	59	59	45	74	67			
	59	45	45	74	74	74	88	88	74	117	74	88	74	88	88	74	74	74	74	74	88	74	-27	-13	-158	58		
	-143	-100	-129	-85	-27	16	59	88	74	88	103	132	146	161	146	103	103	117	88	45	30	1	1	59	44			
	59	59	59	59	59	59	59	74	74	74	88	103	88	88	88	88	117	146	146	161	103	88	-100	-143	69			
	-129	-143	-622	-56	-27	16	16	59	88	74	74	88	132	117	175	161	88	146	117	74	88	45	59	30	27			
	-27	-114	-100	1	30	45	74	74	88	103	88	88	103	146	132	161	146	-27	262	132	59	-13	-462	-245	31			
	-158	-201	-56	59	74	88	74	88	74	74	103	88	103	88	132	146	161	190	132	88	88	-56	-42	-13	55			
	45	74	45	45	45	59	74	74	74	74	74	103	117	103	88	117	59	146	277	291	30	-27	1	-27	81			
	-27	-56	-143	-158	59	74	88	74	88	103	103	103	103	103	132	103	219	30	291	117	161	-56	-346	-317	35			
	-332	-433	88	-13	16	16	30	30	132	88	175	248	175	248	262	364	248	407	-187	16	-85	1	64					
	-85	-404	-187	-477	-230	-100	16	117	16	45	74	103	117	132	233	117	1	45	103	-129	-100	-245	-245	-143	-51			
	1	-143	-216	-245	-230	-27	-27	16	45	103	88	88	45	103	262	161	74	190	45	-143	-100	262	-100	59	12			
	-71	30	-172	-129	-42	16	45	30	45	-56	-71	-56	-42	-13	-56	-56	-42	117	-114	16	-42	132	-172	-303	-41			
	-491	-506	-259	-172	-100	74	117	-71	-56	117	103	146	132	117	117	132	30	117	-42	175	103	-390	-100	-56	-31			
	-100	-158	-317	-448	-100	-56	30	146	117	88	103	132	103	88	103	88	103	117	-100	-172	1	-42	-100	-56	-17			
	-259	-288	-114	-42	16	59	88	74	45	117	132	117	88	132	59	30	1	-56	-56	-71	-13	88	74	-56	6			
MEAN																												

TROMSO. DECLINATION, D=0 DEG. W + TABULAR QUANTITIES EXPRESSED IN TENTH OF MINUTES.
HOURLY MEAN VALUES

MAY 1973

DAY

Table with 31 rows (DAY 1-31) and 36 columns of numerical values, representing hourly mean values for Tromsø in May 1973.

TROMSO. DECLINATION, D=0 DEG. W + TABULAR QUANTITIES EXPRESSED IN TENTH OF MINUTES.
HOURLY MEAN VALUES

JUNE 1973

DAY

Table with 31 rows (DAY 1-31) and 36 columns of numerical values, representing hourly mean values for Tromsø in June 1973.

TROMSØ, DECLINATION, D=0 DEG, W + TABULAR QUANTITIES EXPRESSED IN TENTH OF MINUTES.
HOURLY MEAN VALUES

JULY 1973

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	MEAN																																					
	-269-196-254-167	-66 -22 6 21 35	35 50 108 137 151 166 137 195 238 238 195 122 50 -51 -51	33	-109-124-312-167	-66 -37 -22 -8 21 50 79 93 151 137 137 108 122 195 137 122 108 79 -22 -8	27	-22 -8 -51 -51 -51 -8 6 21 21 21 35 93 137 166 166 122 151 93 93 93 64 50 21 -8	48	-109-80-22 -8 -37 -51 -37 -22 6 21 79 108 137 122 93 79 64 64 93 108 93 64 35 6	33	-8 6 6 -8 -8 -8 -8 6 6 21 64 79 108 122 108 93 93 93 93 93 79 64 50 50	49	35 6 -8 -8 -22 -22 -22 -8 21 50 64 137 122 108 108 108 122 122 108 122 122 122 93 50	63	35 6 -22 -22 -22 -8 -8 -8 35 64 79 93 108 108 93 79 93 108 122 122 137 93 79 50	38	6 6 -8 -22 6 6 -8 6 -8 93 122 166 166 224 282 267 311 267 166 166 151 151-109 -22	99	6 -22 -37 -66 -37 -22 -51 -8 6 79 79 151 195 224 151 195 180 224 180 195 195 122 64 21	84	-37-167-124 -22 -8 -8 -22 -22 6 50 79 108 122 108 93 108 93 108 93 93 64 21 21	35	-22 -51 -51 -51 -22 -22 -8 -8 21 35 93 122 122 108 93 108 122 108 137 151 108	6-153 -66	36	-211-124 -80 -66 -37 -66 -22 -22 -22 35 79 122 137 137 122 122 108 122 151 180 93 79 35 -66	33	-223 -95 -66 -66 -37 6 50 79 108 108 151 166 180 195 209 253 195 151 137 137 137 35 6 50	77	21 -37 -66 -80 -80 -51 -37 -8 21 108 122 151 166 151 151 122 108 122 137 122 108 79 21 -22	55	-167-269-211-370-196 -51 -8 -8 21 137 166 137 166 267 151 180 238 253 209 267-153 -22 -51 282	40	-211-530-269-124 -80 -66 -37 -66 -8 21 64 79 93 108 137 122 93 108 166 166 108 64 35 35	0	-66-153 -66 -80 -37 -8 -8 6 35 93 122 137 151 137 108 108 93 108 151 108 79 79 6 -51	43	-80-124 -95 -37 -51 -22 6 6 35 93 122 151 166 137 108 122 108 93 151 122 108 79 21 6	51	6 -22 -22 -22 -51 -51 6 -8 -8 21 108 137 151 166 166 137 108 122 137 122 166	-37-109-124	45	-51 -95 -66 -22 6 6 6 35 50 79 108 151 166 180 151 137 224 209 195 151	70	-66 -51 6 -8 -8 -22 -51 -8 6 35 64 122 122 122 93 93 93 79 79 79 79 50 6 -8	37	-254 -37 21 6 -22 -37 -37 -22 79 64 93 122 137 137 108 108 108 122 166 151 108 93 79 50	55	35 -51 -95 -66 -80 -95 21 64 35 50 108 137 166 166 151 151 166 180 180 195 180	-95-138 6	57	-66 21 6 -8 -8 6 -22 6 21 50 79 108 122 137 137 122 93 108 108 108 93 79 6 -51	52	-124-182 -37 -80 -8 21 35 21 93 64 79 108 151 151 108 108 108 151 137 151 151 35 21 35	54	-8 6 -95-138 -37 6 35 21 64 64 50 21 21 224 282 543 630 427 398 340 137 35 -37-530	102	-965-269-443-269-167 -8 -8 -8 6 93 79 -8 79 180 151 166 238 224 296 21 35 6 -80 -80	-30	-240-138 -66 -22 6 6 21 21 21 108 93 122 137 137 151 137 151 195 209 166 35 64 6 6	55	-80 -22 -124-240-182 6 21 6 64 79 79 137 151 180 151 122 108 93 137 137 35	-80-153-167	19	-124-211 -95 -37 6 21 35 6 35 64 79 93 151 166 108 224 195 166 180 122 35 21 35 -95	49	-95-356-211-457-182 -22 -22 6 50 35 50 50 137 122 180 267 195 195 137 108 79 21 6 -22	11

TROMSØ, DECLINATION, D=0 DEG, W + TABULAR QUANTITIES EXPRESSED IN TENTH OF MINUTES.
HOURLY MEAN VALUES

AUGUST 1973

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	MEAN																														
	-283 -95 -8 -37 -51 6 50 6 -22 35 64 50 122 137 137 151 151 137 122 137 79 64 -22 -66	36	-109-109-225-167 -66 -22 -22 -37 50 79 108 122 137 267 224 195 224 209 137 108 79 50 21 21	53	6 -22 -8 -51 -66 -66 -22 -22 21 64 93 93 108 122 151 151 137 122 137 122 93 93 -37-196	42	-167 -37 -8 6 6 -8 6 35 35 64 93 108 137 151 122 93 79 79 79 93 122 64 50 -22	49	-37 -8 6 6 -8 -22 -22 -22 64 108 122 137 151 108 108 93 137 122 151 64 6 93 -22	54	-37-124 -95 -51 6 50 21 35 64 79 79 93 79 151 209 151 151 137 122 108 79 93 64 35	62	21 21 6 6 -8 -22 -22 -8 6 50 79 108 93 122 195 180 122 151 180 137 35 50 50 35	66	6 -66-182-153 -80 -37 -8 50 93 108 93 137 122 137 93 79 79 93 50 35 -66	34	-167-254-138 -37 -22 -37 6 21 21 79 93 122 108 122 93 93 79 93 93 108 93 79 79 50	32	6 -66 -37 -51 -37 6 35 64 79 108 122 122 122 108 93 93 79 93 93 64 50 21 35	53	35 35 21 6 -22 -8 6 21 35 79 108 137 137 151 122 79 93 93 137 79 108 108 64 35	69	21 21 6 -8 -8 -8 -8 6 21 50 79 108 108 122 122 137 151 122 108 137 137 93 -8 6	63	21 6 -8 -22 -8 -51 -51 50 64 108 108 108 122 137 108 151 180 195 195 122 79 21-283 -95	52	-283 -66 -51 -22 21 6 6 -8 64 93 108 137 137 137 122 122 79 108 137 151 137 35 -37 -8	46	6 -8 6 6 -22 -22 -8 6 50 93 93 122 137 137 122 108 79 79 79 64 64 50 21 -22	51	-12 2 -12 -12 2 2 2 2 45 89 118 132 132 118 89 89 89 89 89 89 31 16 31	54	4 4 -10 -10 -10 -24 -24 -10 33 77 106 120 135 120 106 91 106 91 91 91 62 19 33	55	33 19 19 4 -10 -10 4 4 33 77 106 135 149 164 120 106 106 91 91 106 91 77 62 77	68	77 -53-140 -82 -24 -24 -10 19 33 68 77 106 120 135 135 135 120 106 149 135 106 91 33 33	55	33 33 19 4 -24 -10 19 33 62 91 135 149 207 207 178 149 120 149 135 135 106 91 -39 33	83	33 19 4 4 -10 19 33 19 33 77 91 120 149 193 135 120 106 91 91 91 77 33 19 33	65	33 19 19 4 4 -10 -24 -10 33 48 91 149 149 164 149 222 178 222 251 178 106 91-271-329	61	-401-155 -82 -53 19 33 19 33 91 106 106 135 149 193 236 294 338 323 280-111 4 19 19-126	61	-111-459-604-184-169 -10 -24 48 33 -97 48 48 -24 178 164 207 178 120 193 178 91 -53-169-155	-23	-198-416-445-358-155 48 33 33 4 33 48 91 120 135 135 178 135 164 106 19 -24-155 -68 -39	-24	-97-387-604-314-126 -68 -10 4 48 33 91 -10 135 120 149 135 77 135 149 120 -68 -93 -53 -24	-25	-97-155-285 -10 -53 -24 4 -10 4 91 120 135 149 164 178 193 120 222 120 62 91 62 19 -97	41	-184 -97-169-111 -68 19 4 4 77 106 120 164 149 164 149 193 193 178 149 120 106 33-198-227	36	-532-213-169 -53 4 19 4 91 135 106 106 149 164 120 106 77 77 33 120-140 77 77 19 -10	15	-24 -68 -68 -53 4 33 33 19 33 106 135 135 164 149 106 62 48 48 62 62 -53 -53 68 4	38	-53 19 -10 4 4 4 -10 19 33 77 106 135 164 120 149 106 91 33 48 48 62 48 48 33	53

TROMSØ, HORIZONTAL INTENSITY, H=11200 + TABULAR QUANTITIES EXPRESSED IN GAMMA,
HOURLY MEAN VALUES

JANUARY 1973

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	117	143	170	170	143	244	217	201	185	185	201	201	201	196	196	191	196	201	196	185	180	185	164	170	184						
2	164	180	180	185	185	185	185	185	185	180	180	180	185	185	185	185	185	185	185	185	185	185	180	182							
3	179	179	179	185	185	185	190	185	185	185	179	179	179	185	185	185	185	190	190	190	190	190	190	179	184						
4	111	95	190	195	195	195	195	195	190	190	185	185	200	206	206	227	301	369	280	269	253	243	232	158	211						
5	84	74	0	169	211	195	190	190	190	185	185	174	179	185	190	206	274	137	-10	10	243	190	206	-279	140						
6	11	222	80	27	38	185	201	196	185	170	207	222	212	185	180	191	185	196	222	233	69	106	127	159	158						
7	196	185	180	180	185	191	191	185	185	185	180	185	185	185	201	249	291	302	275	233	196	133	59	127	194						
8	180	180	180	143	138	185	191	185	180	170	175	196	291	249	281	339	265	275	191	175	149	154	175	180	201						
9	127	16	121	174	174	190	195	185	190	174	179	179	206	200	222	227	200	200	185	179	37	-111	-75	31	141						
10	26	169	163	68	42	111	222	195	211	237	301	248	216	206	200	195	211	116	10	274	269	100	-41	-20	155						
11	-94	68	153	-15	79	179	190	211	227	216	243	232	301	285	274	301	206	153	211	195	63	169	84	63	166						
12	-109	27	90	127	170	249	222	180	196	222	217	228	407	423	207	244	244	117	233	217	217	164	22	-9	179						
13	117	64	127	170	196	196	191	191	185	191	185	191	170	275	349	270	270	222	180	90	180	185	163	117	185						
14	149	64	127	159	180	212	196	196	191	201	196	185	191	196	191	201	196	185	191	191	185	180	159	180	179						
15	149	154	185	191	185	191	191	207	191	185	180	196	196	196	207	201	228	244	222	117	180	117	-4	-25	170						
16	142	185	190	185	185	195	200	195	190	185	185	185	190	190	200	190	190	190	206	169	148	84	127	153	177						
17	190	185	200	195	190	195	190	185	185	185	179	179	190	195	195	195	190	206	200	195	190	185	179	174	189						
18	185	185	179	185	195	195	195	190	190	185	185	185	185	190	190	190	190	190	190	190	190	190	190	190	188						
19	189	189	189	189	194	194	194	194	194	194	194	189	189	189	200	247	300	221	390	263	205	136	-95	-90	185						
20	15	-280	-391	-201	178	231	226	210	205	200	200	210	242	247	268	231	237	210	175	68	20	-554	-412	-380	48						
21	-195	-243	-253	-248	-185	-121	105	226	242	168	221	210	194	184	194	205	242	258	221	242	205	189	168	94	96						
22	89	168	178	178	189	189	189	189	189	189	184	178	184	205	205	205	194	189	194	200	210	168	136	15	175						
23	115	120	152	200	189	189	194	194	194	189	205	200	273	353	300	247	221	237	231	221	231	194	94	99	201						
24	56	-138	-70	209	188	199	167	209	209	199	199	220	209	209	257	325	273	352	246	195	61	-27	67	156	165						
25	205	168	115	200	215	210	194	194	189	189	189	242	200	231	321	215	221	184	189	205	46	-11	78	147	180						
26	-105	-126	-41	185	163	227	227	211	190	200	179	190	200	200	200	190	200	248	243	274	116	105	195	137	158						
27	53	10	127	158	63	0	195	206	200	216	206	237	243	232	295	301	84	216	-226	-279	216	10	-163	10	108						
28	-42	-137	52	89	46	221	263	221	194	205	215	242	273	200	279	353	221	242	141	110	94	115	-21	52	131						
29	-90	-100	68	161	189	184	126	178	210	194	189	189	184	205	237	221	258	268	126	168	-26	141	231	120	150						
30	51	-43	-149	61	193	230	209	215	209	199	209	204	215	215	220	225	236	236	246	257	273	209	220	-6	172						
31	46	163	168	168	163	163	189	189	194	184	184	184	184	184	184	189	200	226	242	205	10	184	184	120	171						
MEAN	74	68	92	130	150	180	195	197	196	192	197	201	215	219	226	230	222	218	186	175	154	112	90	71	166						

TROMSØ, HORIZONTAL INTENSITY, H=11200 + TABULAR QUANTITIES EXPRESSED IN GAMMA,
HOURLY MEAN VALUES

FEBRUARY 1973

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	25	-137	200	157	68	131	152	173	210	194	210	210	226	215	226	305	326	305	300	258	194	173	168	141	184			
2	194	120	0	89	173	189	189	194	200	194	189	200	210	205	221	263	405	289	268	268	231	-16	36	226	189			
3	216	153	190	153	63	132	211	195	190	163	169	222	237	216	200	211	222	253	10	137	222	190	137	116	175			
4	185	206	216	206	206	195	195	185	179	190	185	190	190	195	195	190	200	211	216	158	68	169	185	132	185			
5	226	221	200	210	205	200	205	194	189	178	189	200	205	210	210	210	205	210	215	210	194	184	115	147	197			
6	150	134	187	202	208	213	208	208	208	197	197	223	234	223	392	350	208	213	218	218	155	197	181	160	211			
7	137	131	137	163	189	195	184	184	184	174	179	184	195	195	189	200	226	247	158	247	232	-42	-16	57	164			
8	41	62	93	188	188	162	241	183	204	210	204	220	220	204	268	236	315	257	173	109	-228	-69	9	-16	144			
9	-81	-170	114	193	193	198	203	256	225	230	209	214	235	225	240	283	261	209	209	34	40	103	103	40	156			
10	161	209	198	188	182	177	193	219	209	203	214	193	193	198	203	193	203	219	219	140	-112	-97	61	161	163			
11	156	145	19	161	198	198	198	193	203	198	193	188	182	209	193	203	193	198	203	203	177	135	166	161	178			
12	182	182	188	193	188	182	172	188	193	193	182	177	193	198	188	193	209	230	203	203	98	108	165	188	182			
13	188	188	188	188	188	188	188	188	188	183	183	183	183	183	188	188	188	188	188	188	194	199	183	188	187			
14	188	167	183	183	199	199	199	188	183	188	183	188	188	188	194	194	194	194	204	210	157	120	62	-159	166			
15	-43	109	78	115	167	194	204	199	199	204	194	199	204	231	236	231	241	220	199	173	146	151	146	183	174			
16	188	188	188	188	194	194	194	188	188	183	183	188	188	188	199	199	220	294	252	104	130	146	104	-53	176			
17	67	72	-138	204	194	199	178	220	199	194	188	183	199	215	299	305	273	268	231	167	215	194	188	167	186			
18	120	72	83	162	178	194	194	194	194	194	178	188	231	236	225	326	379	273	289	273	183	35	-191	-1	175			
19	-69	4	120	204	220	199	199	194	188	185	183	183	183	188	220	273	247	326	278	273	225	-16	88	130	175			
20	199	215	194	194	188	188	194	194	188	188	188	188	199	188	194	220	257	299	305	146	125	88	104	115	189			
21	146	109	19	120	220	210	199	199	194	185	183	183	188	188	215	204	268	35	-122	-96	-106	236	-96	-11	119			
22	-360	-43	252	215	210	204	188	199	183	178	215	188	315	320	352	283	379	299	56	9	-207	-32	-96	-148	131			
23	-69	-122	-16	-117	-69	88	199	257	247	220	247	283	363	357	389	305	62	141	141	-228	-307	-254	-53	19				

TROMSØ, HORIZONTAL INTENSITY, H=11200 + TABULAR QUANTITIES EXPRESSED IN GAMMA
HOURLY MEAN VALUES

JULY 1973

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	MEAN
	-158 -63 47 136 147 162 163 173 163 215 226 231 210 242 311 332 337 295 152 252 184 147 105 99 170	22-125 1 90 207 201 186 175 164 191 201 233 270 344 265 207 228 281 275 207 180 139 27 112 170	92 166 145 161 177 171 171 187 177 171 171 187 187 245 272 314 240 219 198 187 187 182 156 98 185	51 141 199 193 188 188 178 162 151 167 156 193 188 193 193 193 204 204 220 225 209 156 178 225 181	228 238 244 233 249 249 244 228 228 180 186 186 175 201 201 207 212 233 212 201 207 201 201 201 214	188 188 193 199 193 188 178 172 167 157 157 193 209 188 188 199 209 209 215 225 188 204 188 188 190	184 184 194 205 200 194 184 179 168 163 168 179 184 189 200 205 210 226 231 215 210 200 189 173 193	196 201 191 185 180 180 175 164 164 159 185 254 275 281 370 391 460 460 376 233 217 217 112 22 235	189 189 173 168 162 162 173 162 173 162 215 231 284 279 194 236 273 279 242 236 194 199 178 126 203	82 -75 72 199 204 199 188 177 183 183 193 199 199 204 199 209 225 246 257 230 214 204 172 172 180	154 164 175 180 201 191 201 191 180 180 191 196 180 185 196 201 222 222 238 244 212 101 64 69 180	-6 109 172 199 215 204 188 183 183 167 157 157 178 188 220 215 220 257 241 241 199 172 125 -6 174	-18 140 182 193 182 182 166 156 166 193 171 193 208 245 288 309 319 235 193 171 177 76 61 171 181	200 168 141 173 184 194 189 189 178 168 173 178 189 200 210 215 210 215 215 231 201 205 178 126 115 185	78 -74 41 58 120 157 200 184 157 163 147 194 200 316 411 295 263 316 289 -85 -63 104 83-327 134	52-248 -37 152 215 205 200 210 210 231 210 189 236 247 258 231 221 226 242 184 52 83 126 173 161	105 -63 79 153 195 185 185 179 174 179 185 195 206 206 216 222 216 227 248 237 216 174 132 237 178	216 211 222 237 232 243 253 258 269 179 185 169 179 185 190 211 227 232 237 232 227 190 174 153 212	174 190 200 200 190 185 185 190 190 163 148 169 222 280 227 216 222 222 248 237 227 79 -63 105 183	164 101 133 185 196 185 191 185 180 180 164 180 191 217 243 270 275 307 296 233 164 159 175 127 195	143 148 196 201 196 185 185 185 185 180 180 191 159 170 191 201 217 217 217 201 191 170 133 106 181	-71 155 213 207 207 197 192 181 170 170 181 202 197 192 202 218 255 281 250 192 213 202 202 202 192	182 129 113 198 214 182 145 150 182 208 208 219 229 229 266 261 261 287 293 198 219 -71 -7 182 186	150 214 198 198 198 198 198 192 182 177 177 203 208 235 224 224 208 203 203 214 224 192 87 124 192	45 -7 192 155 187 192 171 166 145 182 198 187 245 287 256 198 208 235 256 245 203 155 150 203 185	181 197 149 118 181 186 181 155 181 186 192 361 572 413 434 493 376 276 276 133 207 -61 44-404 209	-431 16 -35 69 96 148 159 207 191 254 196 333 333 365 423 344 333 228 175 32 64 43 11 16 148	42 137 185 190 200 179 190 185 190 190 195 185 280 253 232 253 369 343 280 84 79 190 148 137 196	95 174 137 16 26 163 137 185 169 227 243 227 258 327 306 269 237 258 258 272 142-115 31 10 166	-36 -63 158 142 132 142 158 216 200 185 169 237 227 306 406 385 390 306 232 42 105 185 163-195 174	-327-168 42-247 68 190 158 137 200 185 227 290 332 449 544 406 339 269 211 174 179 137 121 90 167	

TROMSØ, HORIZONTAL INTENSITY, H=11200 + TABULAR QUANTITIES EXPRESSED IN GAMMA,
HOURLY MEAN VALUES

AUGUST 1973

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	MEAN
	-126 111 190 169 74 84 132 153 148 158 200 274 280 253 280 295 269 258 243 248 216 116 158 116 179	113 -2 161 187 193 187 161 171 166 161 171 177 182 282 251 261 288 303 266 219 198 182 161 166 191	98 166 177 177 177 182 182 182 177 171 171 171 182 203 251 261 251 230 224 214 198 182 39-150 171	-5 185 200 200 200 190 185 179 179 169 169 163 169 185 190 195 195 200 200 216 227 190 163 47 174	94 184 200 200 200 200 194 194 189 178 178 184 200 242 221 221 215 236 252 247 141 152 205 25 189	15 73 104 120 141 189 168 157 168 184 200 194 247 273 363 368 305 236 242 215 194 189 178 178 195	185 185 164 180 185 191 180 175 175 175 170 175 191 228 339 344 249 243 249 201 159 175 175 180 203	122 -56 -35 80 175 196 170 164 159 175 196 185 196 233 212 207 212 217 217 212 201 180 175 16 158	-41 -9 43 154 201 201 207 196 185 175 185 180 191 207 238 233 212 217 238 222 201 201 185 175 174	132 116 185 190 185 179 179 174 190 185 185 179 195 200 206 200 200 211 206 195 195 185 200 185	200 195 200 200 195 195 185 179 174 179 190 195 200 237 222 195 206 216 237 222 200 190 179 190 199	190 190 195 195 200 195 190 185 179 179 174 185 190 200 206 206 216 216 216 222 222 179 137 179 193	195 195 195 195 185 179 169 169 174 211 174 179 185 237 206 258 290 295 280 121 195 58-100 -31 175	-36 100 169 206 206 200 190 190 174 169 174 179 211 216 222 253 269 222 232 237 190 63 121 185 180	190 190 195 195 190 190 185 174 179 179 190 190 195 222 211 211 216 200 195 195 190 174 169 153 190	163 185 185 190 195 195 185 174 169 169 169 185 211 206 190 195 200 200 206 211 206 206 195 190 190	194 194 194 194 194 183 178 173 167 173 173 183 194 199 210 215 215 215 215 210 210 204 194 194 194	198 198 193 193 193 188 188 182 166 161 161 193 193 235 219 203 219 230 235 214 198 198 198 193 197	124 56 108 188 203 198 188 172 172 166 177 182 209 230 246 267 267 298 256 219 203 193 156 172 193	204 204 199 199 194 183 178 183 178 173 204 194 194 252 247 225 225 252 262 231 215 146 93 178 200	188 183 188 167 162 183 194 188 183 173 162 183 194 241 204 220 215 236 231 231 215 183 183 194 195	183 194 194 199 199 199 199 194 188 183 173 199 173 199 257 373 363 310 273 225 199 141-275-101 185	-97 -12 93 151 145 166 166 182 182 166 182 188 198 267 341 515 409 346 66-118 77 156 182 56 166	-170-328 -64 56 120 225 215 162 199 305 357 415 595 505 410 305 299 199 241 115 35 -90-381-249 144	-65 -38-197-144 -12 156 172 209 193 177 209 198 193 219 261 383 357 298 198 93 -12 -81 66 -49 116	2-198-383 -97 65 144 224 181 171 224 203 329 303 266 218 261 324 266 234 -13-103 76 134 118 122	-102-197 56 209 135 145 209 177 172 240 219 267 298 383 399 362 277 172 145 209 203 172 140 77 181	-12 93 87 93 -17 66 198 182 198 188 182 219 214 261 436 415 346 172 240 145 119 40-408-382 128	-449 -90 109 210 204 194 141 146 125 199 257 188 204 225 225 231 225 241 146 41 173 151 115-101 129	25 146 167 146 188 194 162 183 173 183 183 225 268 268 215 210 204 225 199 115 4 120 194 99 170	-5 63 168 179 200 195 200 210 179 200 210 226 263 342 247 221 232 263 216 210 195 186 179 216 199	

TROMSO, HORIZONTAL INTENSITY, H=11200 + TABULAR QUANTITIES EXPRESSED IN GAMMA, HOURLY MEAN VALUES

SEPTEMBER 1973

Table for September 1973 with columns DAY (1-30) and rows of numerical data. Each row contains 30 data points. Includes a MEAN row at the bottom.

TROMSO, HORIZONTAL INTENSITY, H=11200 + TABULAR QUANTITIES EXPRESSED IN GAMMA, HOURLY MEAN VALUES

OCTOBER 1973

Table for October 1973 with columns DAY (1-31) and rows of numerical data. Each row contains 30 data points. Includes a MEAN row at the bottom.

TROMSØ. VERTICAL INTENSITY, Z=51300 + TABULAR QUANTITIES EXPRESSED IN GAMMA,
HOURLY MEAN VALUES

JANUARY 1973

Table with columns labeled DAY (1-31) and rows of numerical data. The data represents vertical intensity measurements in gamma, with values ranging from approximately -101 to 181. A mean row at the bottom shows values like 66, 25, 16, etc.

TROMSØ. VERTICAL INTENSITY, Z=51300 + TABULAR QUANTITIES EXPRESSED IN GAMMA,
HOURLY MEAN VALUES

FEBRUARY 1973

Table with columns labeled DAY (1-28) and rows of numerical data. The data represents vertical intensity measurements in gamma, with values ranging from approximately -100 to 320. A mean row at the bottom shows values like 67, 66, 59, etc.

TROMSØ, VERTICAL INTENSITY, Z=51300 + TABULAR QUANTITIES EXPRESSED IN GAMMA, HOURLY MEAN VALUES

NOVEMBER 1973

Table with columns: DAY, 1-30, MEAN. Rows contain hourly mean values for November 1973, showing values ranging from approximately 33 to 320.

TROMSØ, VERTICAL INTENSITY, Z=51300 + TABULAR QUANTITIES EXPRESSED IN GAMMA, HOURLY MEAN VALUES

DECEMBER 1973

Table with columns: DAY, 1-31, MEAN. Rows contain hourly mean values for December 1973, showing values ranging from approximately -102 to 258.

TROMSØ, DECLINATION, D=0 DEG. W + TABULAR QUANTITIES EXPRESSED IN TENTH OF MINUTES,
HOURLY MEAN VALUES

JANUARY 1973	-47	-82	-77	-37	-7	38	63	66	66	70	81	87	86	94	96	64	85	69	58	45	22	3	-26	-22	33
FEBRUARY 1973	-68	-111	-84	-59	-9	38	70	80	75	84	86	90	98	101	108	95	85	99	75	67	25	-1	-66	-36	34
MARCH 1973	-97	-100	-70	-78	0	35	57	46	48	66	78	113	138	150	148	139	123	108	110	111	41	24	-53	-84	43
APRIL 1973	-107	-163	-189	-170	-81	-30	-9	17	19	63	84	127	131	143	139	142	134	155	111	108	45	-6	-50	-74	23
MAY 1973	-76	-186	-143	-97	-53	-23	-17	-14	24	63	87	121	148	151	130	131	137	144	154	129	106	29	-9	-58	36
JUNE 1973	-122	-131	-136	-137	-80	-38	-20	-13	29	63	95	110	129	158	158	164	189	195	188	160	100	35	-7	-60	42
JULY 1973	-111	-108	-95	-89	-51	-20	-6	2	28	61	86	111	137	153	143	153	155	157	159	144	98	50	-7	-24	47
AUGUST 1973	-79	-89	-105	-57	-31	-7	0	16	41	71	98	115	129	148	159	137	124	127	127	92	73	42	-12	-32	44
SEPTEMBER 1973	-82	-76	-58	-58	-25	0	11	28	46	78	97	108	129	128	134	127	115	113	111	76	40	-10	-41	-75	38
OCTOBER 1973	-116	-122	-84	-49	2	25	44	46	39	63	78	97	113	99	74	86	78	61	74	56	-2	-41	-51	-104	19
NOVEMBER 1973	-53	-33	-30	-1	35	46	47	42	41	56	77	80	85	88	72	85	86	79	22	25	-36	-25	-52	-72	27
DECEMBER 1973	-63	-41	1	17	39	55	64	60	56	59	69	74	75	77	71	82	71	56	72	52	20	-4	-60	-36	36
MEAN 1973	-85	-103	-89	-68	-22	9	23	31	42	66	85	103	117	125	118	117	115	113	106	89	45	8	-36	-58	35

TROMSØ, HORIZONTAL INTENSITY, H=11200 + TABULAR QUANTITIES EXPRESSED IN GAMMA,
HOURLY MEAN VALUES

JANUARY 1973	74	68	92	130	150	180	195	197	196	192	197	201	215	219	226	230	222	218	186	175	154	112	90	71	166
FEBRUARY 1973	60	76	107	148	167	178	192	203	198	198	201	210	227	223	239	249	241	219	173	121	63	80	66	62	163
MARCH 1973	37	88	110	116	160	165	166	181	188	198	208	224	251	259	260	254	247	193	143	106	45	34	16	10	153
APRIL 1973	37	-4	20	51	117	141	164	176	190	201	218	245	265	300	278	268	244	222	170	143	80	99	29	33	153
MAY 1973	50	49	86	128	158	177	173	168	172	196	212	224	233	248	250	248	242	250	233	207	135	116	88	89	172
JUNE 1973	61	84	78	110	148	176	183	173	179	188	192	223	252	281	304	292	282	256	229	179	149	109	79	55	178
JULY 1973	70	86	139	153	179	186	183	183	181	184	186	211	233	254	269	262	265	258	241	190	175	136	116	87	184
AUGUST 1973	55	79	117	156	164	180	183	179	175	185	192	206	223	249	256	268	257	239	222	178	163	143	100	78	177
SEPTEMBER 1973	105	117	136	146	173	183	184	178	175	179	197	212	227	258	265	267	262	238	192	135	121	94	36	90	174
OCTOBER 1973	34	72	109	128	170	184	189	194	188	193	203	217	226	230	226	252	242	223	178	138	80	60	57	23	159
NOVEMBER 1973	111	131	146	178	199	207	206	200	198	194	199	198	203	211	220	233	237	234	186	142	111	102	102	85	176
DECEMBER 1973	106	140	173	191	195	205	203	201	200	199	201	206	214	230	221	232	215	207	213	207	160	130	87	104	185
MEAN 1973	66	82	109	136	165	180	185	186	187	192	201	215	231	247	251	255	246	230	197	161	120	101	72	66	170

TROMSØ. VERTICAL INTENSITY, Z=51300 + TABULAR QUANTITIES EXPRESSED IN GAMMA,
HOURLY MEAN VALUES

JANUARY 1973	66	25	16	9	10	15	27	34	40	48	49	54	56	52	56	53	49	19	-9	3	15	28	36	47	33
FEBRUARY 1973	67	66	59	29	23	20	22	38	50	59	63	63	64	67	61	58	37	11	9	23	42	57	67	58	46
MARCH 1973	85	75	58	45	27	31	37	53	59	63	60	64	61	47	42	37	34	21	30	58	85	102	139	94	59
APRIL 1973	155	171	117	52	10	34	55	62	75	80	77	70	66	40	42	51	39	40	59	76	107	106	122	139	77
MAY 1973	105	103	73	38	32	43	60	65	65	61	62	65	67	74	81	84	75	70	66	61	64	78	110	110	71
JUNE 1973	102	85	69	27	20	32	48	60	62	70	72	72	80	78	66	72	62	51	53	60	79	92	108	109	68
JULY 1973	71	64	32	35	35	41	50	53	58	61	68	72	76	75	74	69	64	58	55	63	59	58	48	70	59
AUGUST 1973	55	37	32	26	38	40	49	57	60	61	61	66	63	73	78	72	66	60	61	54	55	66	80	78	58
SEPTEMBER 1973	87	72	58	60	46	50	60	65	68	74	66	72	77	81	82	80	88	76	68	62	83	103	88	86	73
OCTOBER 1973	102	70	38	29	45	56	63	73	81	87	87	84	88	83	87	70	59	51	54	73	96	97	119	122	76
NOVEMBER 1973	68	75	60	61	69	76	82	84	90	89	89	92	98	100	98	87	83	81	73	51	66	93	97	94	81
DECEMBER 1973	63	60	66	72	74	79	87	88	89	94	95	96	99	94	93	94	74	77	60	69	78	90	86	81	82
MEAN 1973	85	74	56	40	36	43	53	61	66	71	71	72	75	72	72	69	61	52	48	54	69	80	91	90	65

TROMSØ. DECLINATION, D=0 DEG. W + TABULAR QUANTITIES EXPRESSED IN TENTH OF MINUTES,
QUIET MEAN VALUES.

JANUARY 1973	50	50	61	49	48	53	62	58	57	67	72	72	78	75	72	67	70	63	61	45	49	53	42	42	62
FEBRUARY 1973	64	54	52	59	55	59	66	74	72	81	84	81	83	84	76	76	71	74	78	74	59				73
MARCH 1973	56	45	40	37	40	42	45	45	45	70	83	98	105	106	90	75	74	79	64	66	45	45	58	63	62
APRIL 1973	39	33	25	17	16	19	7	0	21	57	76	94	100	102	87	72	69	61	71	75	59	59	41	35	59
MAY 1973	24	8	4	-3	-1	6	11	1	42	86	106	130	134	119	110	99	92	101	106	100	82	60	51	46	79
JUNE 1973				0	-7	-12	-20	-7	21	57	64	112	124	122	106	96	99	106	108	110	97	79	75	75	85
JULY 1973					-7	-7	-15	-10	6	93	100	117	125	120	103	103	100	105	110	106	96	89	74	50	88
AUGUST 1973	24	14	7	0	-8	-13	-10	4	23	71	96	120	127	125	106	102	93	92	94	91	81	67	44	38	59
SEPTEMBER 1973	14	14	10	8	2	4	9	18	36	82	102	119	126	109	93	72	75	72	73	69	57	40	20	27	53
OCTOBER 1973	15	21	26	22	20	28	33	37	43	65	77	79	92	81	80	80	77	72	69	48	48	29	25	31	53
NOVEMBER 1973	34	38	39	38	38	38	38	43	43	56	72	77	75	78	74	78	68	60	43	38	33	20	19	26	53
DECEMBER 1973	44	42	43	42	48	51	53	51	52	59	62	65	65	66	58	61	59	60	49	39	35	27	24	35	53
MEAN 1973	34	29	29	28	26	29	33	35	44	67	81	92	98	94	85	81	78	79	79	74	66	52	41	40	62

TROMSØ, HORIZONTAL INTENSITY, H=11200 + TABULAR QUANTITIES EXPRESSED IN GAMMA,
QUIET MEAN VALUES.

JANUARY 1973	183	183	181	184	191	187	191	190	189	185	185	185	186	188	186	189	189	188	188	188	187	186	183	187	
FEBRUARY 1973	187	186	190	190	190	191	194	192	190	186	183	187	188	192	197	196	197	197	188	188			188	191	
MARCH 1973	190	190	191	191	192	191	188	186	180	173	172	176	180	184	188	189	189	191	191	190	190	189	188	192	187
APRIL 1973	186	188	189	192	191	188	186	181	174	167	163	163	164		189	187	184	189	195	193	194	181	178	184	186
MAY 1973	194	194	193	196	194	190	186	178	175	163	168	167	175					195	195	195	191	189	193	186	
JUNE 1973	202	202	195	196	193	185	183	178	176	176			179	188	193	202	204	204	204	204		203	202	196	191
JULY 1973	186	186	196	200	198	193	186	177	183		186	186		197	197	193	208	203	203	201	207	211	206	197	193
AUGUST 1973	195	194	194	196	193	190	188	182	177	175	177	180	191	199	206	206	208	213	212	212	198	195	188	193	193
SEPTEMBER 1973	193	193	191	192	191	187	182	178	175	171	170	176	184	190	190	196	195	200	200	192	191	188	175	176	186
OCTOBER 1973	182	188	193	196	195	198	194	191	184	180	181	182	187	188	192	197	198	198	196	202	196	192	192	192	191
NOVEMBER 1973	190	190	193	195	197	199	198	195	193	189	190	193	194	197	197	196	196	196	199	203		176	182	182	194
DECEMBER 1973	192	192	193	197	200	202	200	199	198	197	195	197	197	196	197	199	202	200	198	199	196	195	192	190	197
MEAN 1973	190	190	192	194	194	194	191	188	186	183	184	187	191	193	195	196	198	199	198	198	195	193	189	189	191

TROMSØ, VERTICAL INTENSITY, Z=51300 + TABULAR QUANTITIES EXPRESSED IN GAMMA,
QUIET MEAN VALUES.

JANUARY 1973	37	39	36	37	39	39	39	37	38	40	43	45	44	45	47	52	52	50	47	44	45	42	37	36	42
FEBRUARY 1973	47	52	49	50	43	40	40	40	42	47	52	52	53	55	56	55	57	53	52	39	50		37	37	49
MARCH 1973	57	55	56	52	52	53	52	51	51	55	57	59	60	60	60	67	62	57	55	54	57	52	50	55	55
APRIL 1973	66	68	68	67	64	64	62	61	61	62	60	60	63	65	68	70	69	68	68	70	67	63	58	65	65
MAY 1973	69	67	68	65	58	60	61	61	63	65	67	66	64	66		66	81	83	73	70	68	64	61	67	65
JUNE 1973	59	59	58	57	59	60	59	61	62	57	55	61	60	56	66	68	71	69	70	63	68	68	62	65	62
JULY 1973	55	56	54	55	58	55	53	53	54	58	55	58	57	53	53	63	61	64	65	66	57	58	61	57	57
AUGUST 1973	55	56	57	58	59	57	55	53	52	50	51	49	53	57	67	61	63	67	62	59	60	55	53	56	56
SEPTEMBER 1973	58	69	73	74	72	72	70	69	69	69	70	71	73	79	79	76	76	73	75	76	70	68	68	70	71
OCTOBER 1973	73	73	71	64	64	67	68	69	72	75	76	78	81	82	82	81	81	80	76	77	76	73	69	69	73
NOVEMBER 1973	83	82	84	83	82	82	81	82	83	85	86	87	88	90	90	93	98	90	89	89	87	65	61	72	84
DECEMBER 1973	81	86	81	82	82	84	86	85	84	86	88	89	90	93	91	92	93	93	94	95	94	87	81	79	87
MEAN 1973	62	65	64	64	64	64	64	63	64	65	67	68	68	71	72	72	72	70	69	68	66	63	60	62	66

TROMSO.

K=INDICES FOR THREE-HOUR INTERVAL
RANGE 2000 GAMMA FOR K=9, SCALE VALUES D=4,77 GAMMA H=5,28 GAMMA Z=6,57 GAMMA

JANUARY 1973

Table with 10 columns representing data for January 1973, rows 1-31.

FEBRUARY 1973

Table with 10 columns representing data for February 1973, rows 1-28.

MARCH 1973

Table with 10 columns representing data for March 1973, rows 1-31.

APRIL 1973

Table with 10 columns representing data for April 1973, rows 1-30.

TROMSO.

K=INDICES FOR THREE-HOUR INTERVAL
RANGE 2000 GAMMA FOR K=9, SCALE VALUES D=4,77 GAMMA H=5,28 GAMMA Z=6,57 GAMMA

MAY 1973

Table with 10 columns representing data for May 1973, rows 1-31.

JUNE 1973

Table with 10 columns representing data for June 1973, rows 1-30.

JULY 1973

Table with 10 columns representing data for July 1973, rows 1-31.

AUGUST 1973

Table with 10 columns representing data for August 1973, rows 1-31.

TROMSO.

K=INDICES FOR THREE-HOUR INTERVAL
RANGE 2000 GAMMA FOR K=9, SCALE VALUES D=4.77 GAMMA H=5.28 GAMMA Z=6.57 GAMMA

SEPTEMBER 1973

Table with 3 columns: Day (1-30), Index 1, Index 2. Values range from 0 to 19.

OCTOBER 1973

Table with 3 columns: Day (1-31), Index 1, Index 2. Values range from 0 to 31.

NOVEMBER 1973

Table with 3 columns: Day (1-30), Index 1, Index 2. Values range from 0 to 30.

DECEMBER 1973

Table with 3 columns: Day (1-31), Index 1, Index 2. Values range from 0 to 32.

JANUARY 1973

SUDDEN COMMENCEMENTS

Table with 3 columns: Date, SSC, and Rating (A, B, C).

JANUARY 1973

BAYS

NONE

JANUARY 1973

SUDDEN IMPULSES

Table with 3 columns: Date, SI, and Rating (A).

FEBRUARY 1973

SUDDEN COMMENCEMENTS

Table with 3 columns: Date, SSC, and Rating (A, B, C).

FEBRUARY 1973

BAYS

NONE

FEBRUARY 1973

SUDDEN IMPULSES

Table with 3 columns: Date, SI, and Rating (A).

MARCH 1973

SUDDEN COMMENCEMENTS

Table with 3 columns: Date, SSC, and Rating (A).

MARCH 1973

BAYS

NONE

MARCH 1973

SUDDEN IMPULSES

Table with 3 columns: Date, SI, and Rating (A, B).

APRIL 1973

SUDDEN COMMENCEMENTS

Table with 3 columns: Date, SSC, and Rating (A, B).

APRIL 1973

BAYS

NONE

APRIL 1973

SUDDEN IMPULSES

Table with 3 columns: Date, SI, and Rating (A).

MAY 1973
SUDDEN COMMENCEMENTS

2 1850 SSC	+ -	C
6 1339 SSC*	++ **	A
7 2021 SSC*	- ++	B
9 2034 SSC*	** **	B
15 1967 SSC*	** +	B
19 1644 SSC	- =	A
21 2042 SSC	+ +	B

JUNE 1973
SUDDEN COMMENCEMENTS

17 2156 SSC	= +	B
24 0004 SSC*	- ++	B
28 2227 SSC*	- **	A

JUNE 1973
BAYS
NONE

JULY 1973
SUDDEN COMMENCEMENTS

2 2154 SSC*	- **	C
14 2121 SSC	+ =	B
29 2020 SSC	= +	A

JULY 1973
BAYS
NONE

AUGUST 1973
SUDDEN COMMENCEMENTS

2 1249 SSC*	++ **	A
3 2203 SSC*	= **	B
4 2114 SSC	+ =	B
5 2300 SSC	= +	B
8 2247 SSC	= +	A
29 2216 SSC	= +	B

MAY 1973
BAYS

5 1245 B	+ -	B
----------	-----	---

JUNE 1973
SUDDEN IMPULSES
NONE

JULY 1973
SUDDEN IMPULSES

12 1955 SI	= =	H
21 2355 SI*	= **	A

AUGUST 1973
BAYS
NONE

MAY 1973
SUDDEN IMPULSES

3 1957 SI	= =	B
14 1930 SI	= +	B
19 1713 SI	= =	B
19 1810 SI	+ =	B

AUGUST 1973
SUDDEN IMPULSES

2 2018 SI*	++ +	A
3 0011 SI	= =	A
5 2015 SI	= =	A
14 2100 SI*	= **	B
20 2136 SI	= =	A

SEPTEMBER 1973
SUDDEN COMMENCEMENTS

10 2354 SSC	= +	B
11 1803 SSC*	+ **	A
15 2037 SSC	= +	A
22 1844 SSC*	= **	A
30 1848 SSC*	= **	A

OCTOBER 1973
SUDDEN COMMENCEMENTS

1 2026 SSC	+ +	A
9 2003 SSC	= =	B
11 1951 SSC	= =	B
16 0519 SSC*	** **	A

NOVEMBER 1973
SUDDEN COMMENCEMENTS

8 2111 SSC*	= **	B
12 2014 SSC*	** +	A
16 1823 SSC*	** +	A

DECEMBER 1973
SUDDEN COMMENCEMENTS

6 2102 SSC	= +	B
7 2021 SSC	= =	A
23 1627 SSC*	** **	A

SEPTEMBER 1973
BAYS
NONE

OCTOBER 1973
BAYS
NONE

NOVEMBER 1973
BAYS
NONE

DECEMBER 1973
BAYS
NONE

SEPTEMBER 1973
SUDDEN IMPULSES

4 1956 SI*	= **	A
23 1835 SI*	= **	B
23 2148 SI*	= **	B

OCTOBER 1973
SUDDEN IMPULSES

21 1924 SI*	** **	A
22 2042 SI*	** =	A

NOVEMBER 1973
SUDDEN IMPULSES

1 2334 SI*	= **	C
10 2235 SI*	= **	A
21 0021 SI*	** **	B
25 1230 SI*	** **	A
27 1812 SI*	+ **	A

DECEMBER 1973
SUDDEN IMPULSES

7 2058 SI	= =	B
9 1151 SI	= =	B
9 1957 SI	= +	B
9 2048 SI*	= **	B

the 1990s, the number of people in the world who are undernourished has increased from 600 million to 800 million.

There are a number of reasons for this. One is that the world population has increased from 5 billion to 6 billion. Another is that the world population is becoming more urban.

There are a number of reasons for this. One is that the world population is becoming more urban. Another is that the world population is becoming more urban.

There are a number of reasons for this. One is that the world population is becoming more urban. Another is that the world population is becoming more urban.

There are a number of reasons for this. One is that the world population is becoming more urban. Another is that the world population is becoming more urban.

There are a number of reasons for this. One is that the world population is becoming more urban. Another is that the world population is becoming more urban.

There are a number of reasons for this. One is that the world population is becoming more urban. Another is that the world population is becoming more urban.

There are a number of reasons for this. One is that the world population is becoming more urban. Another is that the world population is becoming more urban.

There are a number of reasons for this. One is that the world population is becoming more urban. Another is that the world population is becoming more urban.

There are a number of reasons for this. One is that the world population is becoming more urban. Another is that the world population is becoming more urban.

There are a number of reasons for this. One is that the world population is becoming more urban. Another is that the world population is becoming more urban.

There are a number of reasons for this. One is that the world population is becoming more urban. Another is that the world population is becoming more urban.

There are a number of reasons for this. One is that the world population is becoming more urban. Another is that the world population is becoming more urban.

There are a number of reasons for this. One is that the world population is becoming more urban. Another is that the world population is becoming more urban.

There are a number of reasons for this. One is that the world population is becoming more urban. Another is that the world population is becoming more urban.

There are a number of reasons for this. One is that the world population is becoming more urban. Another is that the world population is becoming more urban.

