

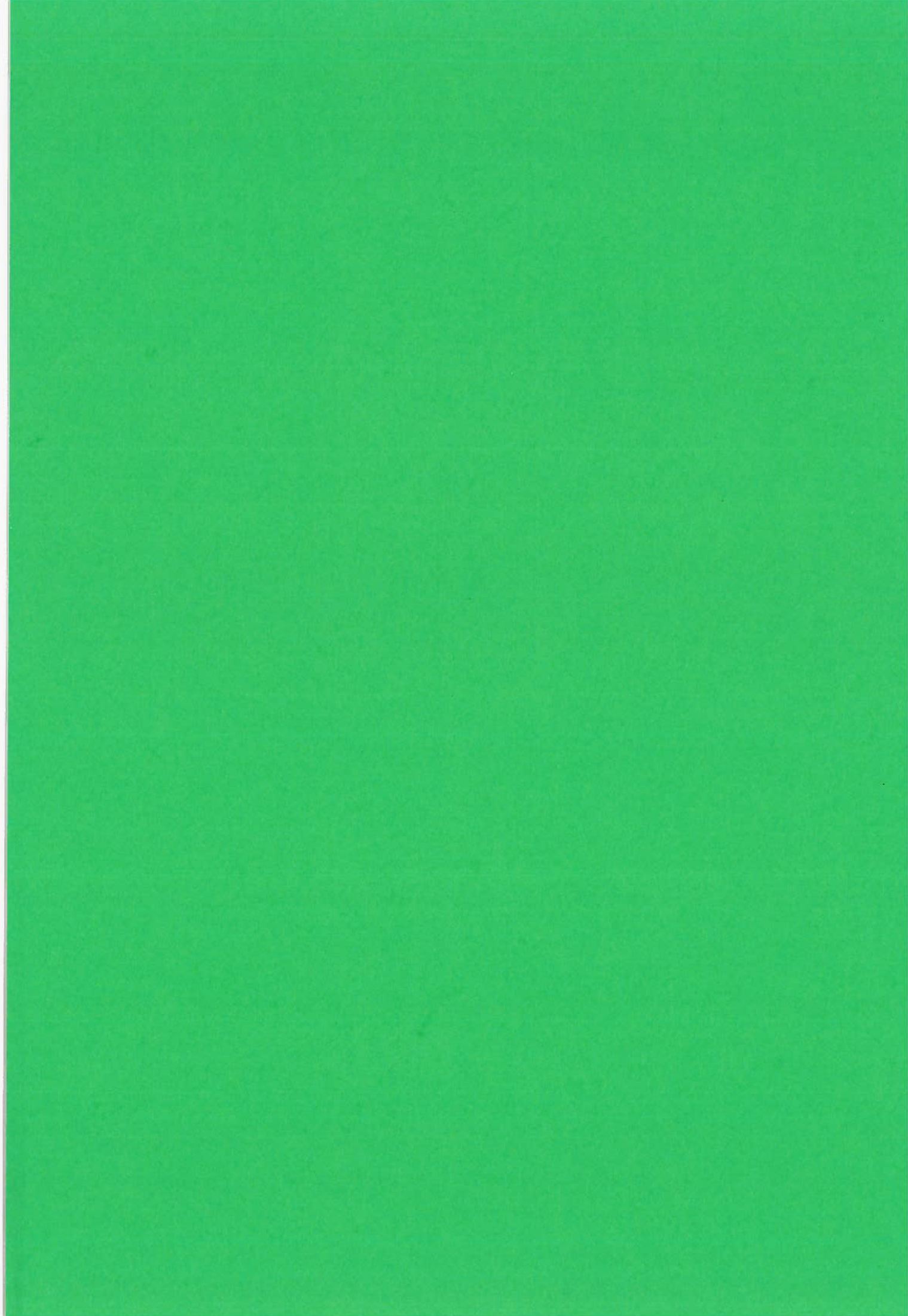
THE AURORAL OBSERVATORY

TROMSØ

NORWAY

**MAGNETIC OBSERVATIONS
1992**



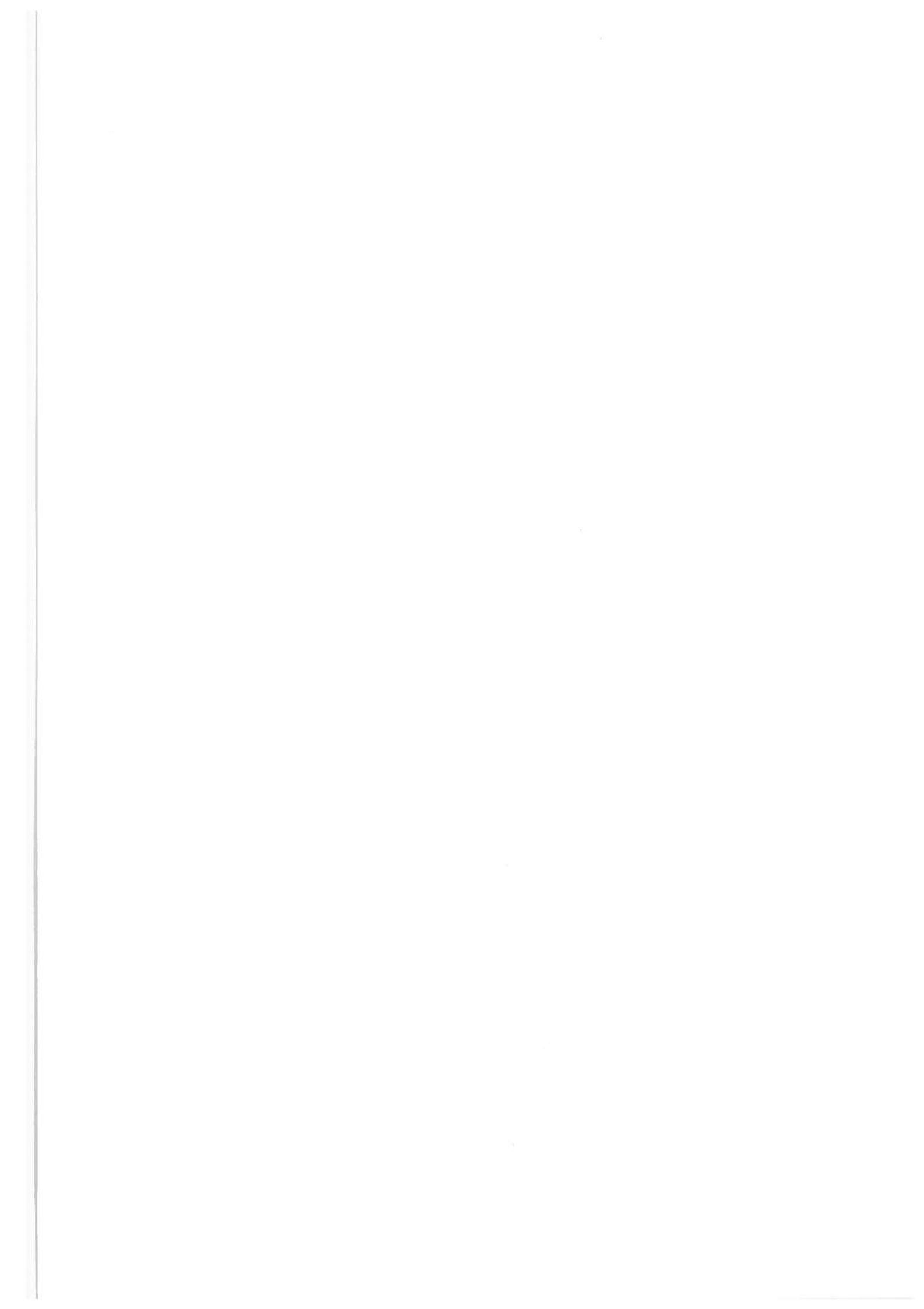


Foreword

In 1992 the geomagnetic observatory in Tromsø took the final step into the age of digital recording. A transition periode of nearly five years came to an end when the classical variometers were halted on January 1. 1992, and our second generation fluxgate magnetometers took over alone. Thus the present yearbook is the first one based exclusively on digital instruments.

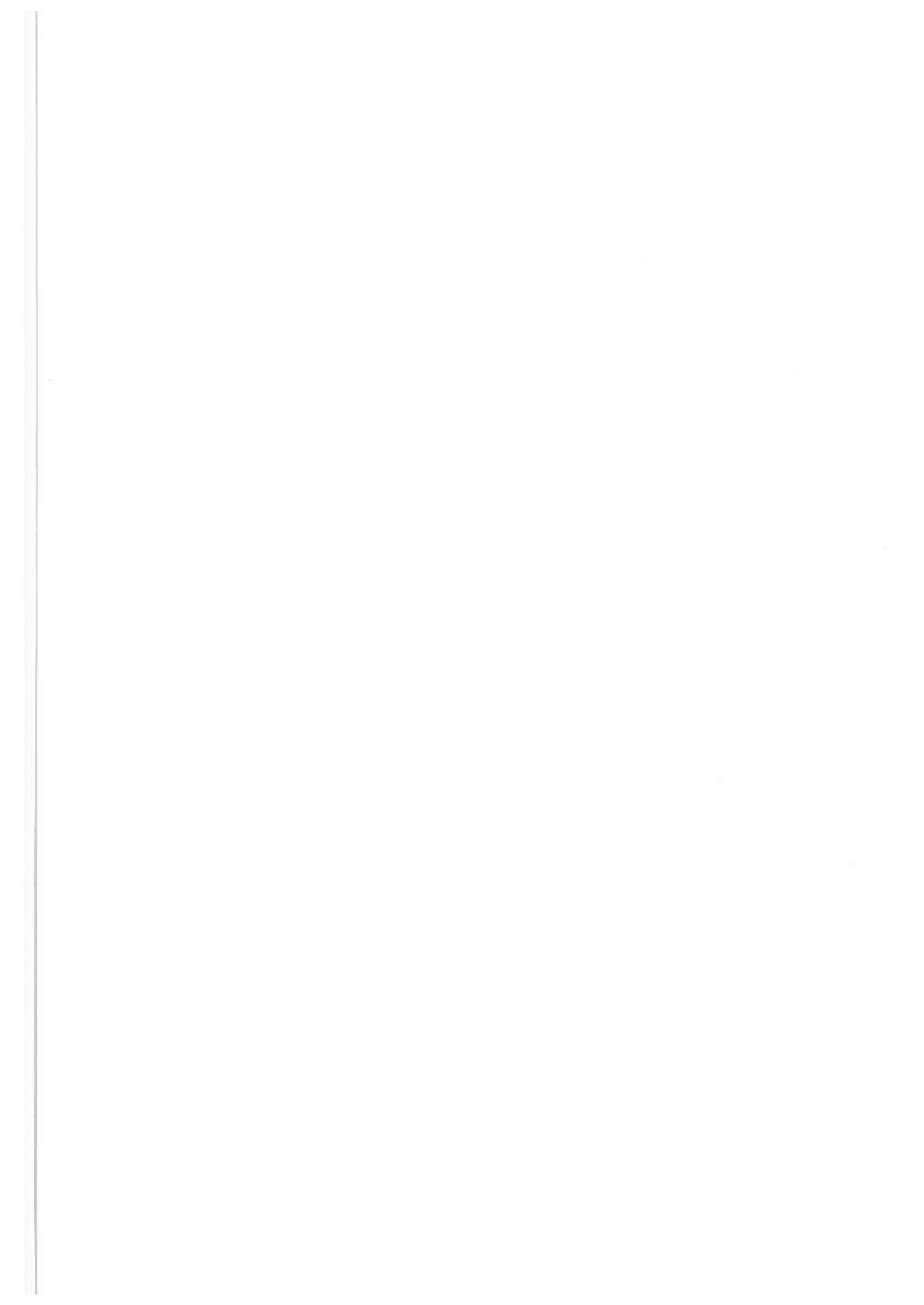
Since 1966 the Tromsø yearbook has contained tables of sudden commencements and sudden impulses. Through this periode of 26 years these tables have been prepared by one single observer, Steinar Berger. Adding that the variometers have been kept unchanged in the period, we believe that this series of tables has a high degree of internal consistency. With the retirement of Steinar Berger as well as the variometers, we have decided to terminate the series. This decision is also influened by the fact that our high resolution data now are available in digital form to anyone who would like to perform systematic investigations of phenomena like Sc and Si.

Truls Lynne Hansen



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Introduction

This yearbook presents the results of the geomagnetic measurements carried out in 1992 at The Auroral Observatory, University of Tromsø, Norway. The observatory is situated 2 km NW from the center of Tromsø, and the geographical coordinates are:

Latitude 69 39'.7 N
Longitude 18 56'.4 E
Altitude 105 m above sea level

Instruments

The values presented are based on digital recording with an orthogonal 3-axis fluxgate system of local design. The instrument has a range of +/- 8000 nT and a resolution of 0.25 nT on each axis. Absolute calibrations have been performed with a D/I fluxgate theodolite (Zeiss 010B) for D and I measurements and an Elsec 820 protonmagnetometer for F.

Data availability

The hourly mean values as well as 1 minute values and the original 10 s data, are available in digital form on IBM-compatible diskettes. Analog representation in form of plots may also be provided. Requests should be addressed to

The Auroral Observatory
University of Tromsø
N-9037 TROMSØ
Norway

In analog form the records are also found in WDC-C1 for geomagnetism, Copenhagen, and the 1 min digital data may also be obtained from WDC-C2 for geomagnetism, Kyoto.

Notes for the tables

1. The range of hourly mean values is -999 to 9999 inclusive. Values outside this range are marked with ***.
2. Universal time is used.
3. Hours are numbered from 1 to 24; hour 1 means 0000-0059 UT, hour 2 is 0100-0159 etc.
4. Declination is positive towards East. Horizontal intensity is positive North. Vertical intensity is positive down.
5. Quiet mean values are calculated from periods with K-indice less than 2.

Tromsø, May 1995

Tor Holmboe

Børre Holmeslet

Bjørnar Hansen

Truls Lynne Hansen

Tromsø Declination. D = 1° + Tabular quantities expressed in tenths of minutes East. Hourly mean values (All day)

March 1992

Table with 25 columns (Day 1-24, MEAN) and 31 rows. Contains hourly mean values for March 1992. Values range from approximately 200 to 700.

Tromsø Declination. D = 1° + Tabular quantities expressed in tenths of minutes East. Hourly mean values (All day)

April 1992

Table with 25 columns (Day 1-24, MEAN) and 31 rows. Contains hourly mean values for April 1992. Values range from approximately 200 to 600.

Tronsø Declination. D = 1° + Tabular quantities expressed in tenths of minutes East.
Hourly mean values (All day)

September 1992

Table with 25 columns (Day 1-24, MEAN) and 30 rows of data for September 1992. Values range from approximately 206 to 999.

Tronsø Declination. D = 1° + Tabular quantities expressed in tenths of minutes East.
Hourly mean values (All day)

October 1992

Table with 25 columns (Day 1-24, MEAN) and 31 rows of data for October 1992. Values range from approximately 206 to 999.

Tromsø Horizontal intensity. H = 11000 nT + Tabular quantities expressed in nT. Hourly mean values (All day)

March 1992

Table with 25 columns (Day 1-24) and 1 Mean column. Rows 1-31 show daily data for March 1992, including values like 116, 88, 85, 98, 82, 36, 43, 116, 88, 112, 98, 90, 102, 110, 121, 145, 133, 152, 180, 122, 26, 82, 31, -119, 89.

Tromsø Horizontal intensity. H = 11000 nT + Tabular quantities expressed in nT. Hourly mean values (All day)

April 1992

Table with 25 columns (Day 1-24) and 1 Mean column. Rows 1-30 show daily data for April 1992, including values like 64, 138, 106, 124, 96, 16, 42, 84, 89, 102, 122, 134, 129, 124, 130, 161, 144, 142, 141, 138, 138, 137, 141, 135, 115.

Tromsø Horizontal intensity. H = 11000 nT + Tabular quantities expressed in nT. Hourly mean values (All day)

July 1992

Table with 25 columns (1-24) and rows for each day of the month (1-31) plus a MEAN row at the bottom. Values are integers ranging from -126 to 328.

Tromsø Horizontal intensity. H = 11000 nT + Tabular quantities expressed in nT. Hourly mean values (All day)

August 1992

Table with 25 columns (1-24) and rows for each day of the month (1-31) plus a MEAN row at the bottom. Values are integers ranging from -342 to 328.

Tromsø Vertical intensity. Z = 51400 nT + Tabular quantities expressed in nT. Hourly mean values (All day)

March 1992

Table with 25 columns (Day 1-24) and 1 extra column (MEAN). Rows represent days of the month from 1 to 31, with hourly mean values and a final MEAN row.

Tromsø Vertical intensity. Z = 51400 nT + Tabular quantities expressed in nT. Hourly mean values (All day)

April 1992

Table with 25 columns (Day 1-24) and 1 extra column (MEAN). Rows represent days of the month from 1 to 30, with hourly mean values and a final MEAN row.

Tronsø Vertical intensity. Z = 51400 nT + Tabular quantities expressed in nT.
Hourly mean values (All day)

July 1992

Table with columns: Day, 1-24, MEAN. Rows 1-31. Data values for July 1992.

Tronsø Vertical intensity. Z = 51400 nT + Tabular quantities expressed in nT.
Hourly mean values (All day)

August 1992

Table with columns: Day, 1-24, MEAN. Rows 1-31. Data values for August 1992.

Tromsø Vertical intensity. $Z = 51400 nT + \text{Tabular quantities expressed in nT.}$
 Hourly mean values (All day)

September 1992

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	MEAN
1	211	194	213	233	241	241	240	238	240	236	234	234	234	247	252	251	254	253	250	247	247	246	244	243	238
2	241	238	243	243	232	231	227	223	221	214	215	225	241	274	274	195	206	130	236	241	377	535	254	347	252
3	389	307	261	226	187	223	313	299	317	277	267	289	271	253	96	83	67	162	222	264	215	408	477	302	257
4	420	588	374	216	166	216	246	226	265	252	270	198	236	293	274	294	290	267	252	194	289	559	879	883	339
5	397	323	223	234	139	205	233	253	267	267	268	303	286	305	298	269	286	246	220	222	399	208	203	232	261
6	249	280	289	216	222	220	246	252	257	248	247	261	296	315	313	294	238	222	284	293	248	421	374	314	274
7	327	224	210	194	216	232	234	244	226	251	288	294	289	301	297	295	220	212	264	154	248	325	339	332	259
8	383	250	203	220	129	163	176	232	255	282	314	331	314	273	268	160	198	276	193	233	251	241	290	311	247
9	210	226	470	353	210	240	207	213	254	257	219	-69	-202	-233	-124	129	158	224	230	551	482	504	547	568	234
10	733	746	469	454	164	216	312	390	345	286	260	72	90	-32	-27	-7	23	72	208	568	435	575	623	541	313
11	598	397	311	383	238	130	165	213	229	265	242	251	214	274	319	287	148	43	143	223	290	214	229	251	252
12	281	305	262	263	260	250	250	257	263	261	261	264	263	264	269	269	274	282	271	236	187	220	244	250	258
13	252	269	267	263	261	256	253	250	247	246	248	247	251	254	254	260	261	262	257	255	240	297	339	252	260
14	252	262	253	246	237	238	225	234	240	249	252	256	270	266	267	270	251	267	249	232	202	295	231	250	249
15	255	266	240	167	140	197	224	227	250	254	253	266	264	290	317	289	278	232	256	257	279	308	297	276	253
16	232	210	200	215	214	231	242	251	251	262	262	261	264	271	334	300	278	241	193	265	284	341	338	339	261
17	267	505	362	104	268	292	267	314	421	361	248	222	155	120	128	202	118	135	202	284	547	335	451	430	280
18	366	322	455	332	222	195	263	253	259	266	278	251	295	277	301	274	284	261	232	243	246	227	293	463	285
19	431	285	232	236	249	251	263	264	262	258	264	279	282	278	277	271	280	284	253	298	230	220	262	267	269
20	249	257	257	257	257	262	261	262	263	264	256	268	274	269	294	278	272	261	265	258	215	330	258	237	263
21	255	254	252	254	256	257	258	256	256	254	252	251	254	250	254	253	258	264	256	250	213	261	409	435	267
22	463	464	500	266	178	235	267	267	274	272	269	272	267	267	277	268	270	259	256	245	291	300	235	241	287
23	267	284	231	244	210	201	203	236	257	258	250	278	286	274	269	278	276	268	259	255	197	224	257	262	251
24	259	257	258	256	253	253	250	248	250	248	247	246	246	252	258	258	253	255	252	258	255	252	284	263	254
25	253	213	208	234	246	248	242	241	241	243	245	255	264	268	305	296	267	253	258	238	232	253	262	253	250
26	303	294	172	224	241	249	251	254	255	257	257	257	258	261	259	272	240	270	276	254	197	232	243	247	250
27	248	251	250	252	250	251	251	251	252	255	256	259	267	265	268	266	259	259	257	252	251	237	240	246	253
28	249	250	251	249	244	241	241	245	244	243	245	234	241	270	293	274	279	226	221	245	376	505	415	432	279
29	315	306	391	495	484	361	365	186	211	209	77	139	114	142	107	175	165	129	252	624	339	336	638	368	288
30	429	368	196	155	176	205	225	251	279	272	259	276	277	282	169	75	75	178	248	233	386	576	603	499	278
MEAN	326	313	283	256	226	233	246	251	261	258	250	239	235	236	238	235	224	223	240	279	288	332	358	344	265

Tromsø Vertical intensity. $Z = 51400 nT + \text{Tabular quantities expressed in nT.}$
 Hourly mean values (All day)

October 1992

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	MEAN
1	236	135	161	170	186	189	203	249	249	250	250	256	248	225	224	274	186	194	261	217	270	198	177	210	217
2	191	238	150	172	198	195	200	218	235	250	254	246	269	285	273	269	273	273	252	278	254	259	293	197	238
3	221	226	211	205	209	207	221	237	246	247	270	283	295	288	280	274	281	252	233	197	211	228	218	263	241
4	220	183	177	168	172	204	228	238	240	242	247	244	249	243	246	246	242	240	239	240	238	238	234	238	227
5	226	219	226	230	235	238	240	237	235	236	238	240	240	240	241	240	233	239	199	256	242	259	217	177	232
6	200	158	201	92	90	196	229	232	229	238	247	246	243	237	269	284	287	272	251	246	249	249	244	266	227
7	235	217	253	230	215	201	225	235	246	261	277	264	218	229	249	261	258	251	243	166	232	244	242	239	237
8	261	254	207	199	202	221	233	215	237	235	232	234	236	237	239	241	243	236	234	207	162	208	236	241	227
9	232	244	234	229	228	226	226	224	220	221	230	241	167	66	-110	-169	119	316	327	281	366	325	423	267	213
10	238	243	248	251	245	244	244	247	256	259	274	271	286	267	295	288	261	257	242	227	242	250	369	165	257
11	194	217	212	206	199	220	226	233	233	237	244	238	144	181	156	-60	-29	129	302	393	483	393	234	239	217
12	292	364	237	191	234	166	167	225	274	274	216	164	-128	100	206	257	169	124	202	238	261	299	227	232	207
13	307	339	104	144	198	235	239	241	239	237	242	239	233	253	284	231	142	112	178	297	378	268	274	402	242
14	458	311	225	249	239	244	246	244	242	251	256	249	248	258	264	257	256	258	237	228	341	350	304	509	280
15	240	232	112	52	206	234	230	250	258	270	257	217	244	247	256	221	238	243	170	142	219	250	341	595	238
16	421	157	292	222	264	201	232	251	268	261	253	249	258	262	270	267	241	256	244	257	251	269	262	126	251
17	189	223	208	226	233	237	243	240	247	242	253	275	278	265	243	288	275	269	166	215	210	297	285	227	243
18	245	112	175	210	222	232	247	255	257	258	259	258	262	286	289	292	279	231	220	189	309	259	121	215	236
19	264	314	234	173	224	240	244	248	245	243	243	241	260	269	192	157	221	194	192	201	185	231	300	263	232
20	84	202	295	163	196	216	237	241	243	244	248	249	256	256	247	252	245	253	255	251	239	224	245	281	234
21	250	217	230	239	240	238	237	235	235	233	235	240	239	242	246	247	255	246	243	208	215	339	207	97	233
22	118	203	233	237	228	234	238	236	232	233	233	233	238	240	239	258	276	257	245	244	233	218	240	265	233
23	281	210	215	222	231	237	239	240	238	242	239	237	238	240	240	239	237	241	243	241	180	212	220	209	232
24	223	233	232	235	234	234	234	236	235	234	235	236	242	242	241	240	247	241	237	234	234	233	233	254	236
25	267	165																							

Tromsø

Vertical intensity. Z = 51400 nT + Tabular quantities expressed in nT.
Hourly mean values (All day)

November 1992

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	MEAN	
1	212	205																		206	254	402	586	391	322	
2	308	397	381	236	131	177	155	187	227	234	247	260	265	279	265	262	253	253	249	188	274	279	232	325	252	
3	391	269	166	238	245	279	216	256	219	277	299	271	248	266	265	258	273	264	253	214	312	272	390	175	263	
4	177	192	202	206	185	190	203	233	251	279	249	247	280	200	64	11	72	225	226	217	347	357	359	609	232	
5	315	256	205	235	236	245	237	247	246	250	250	261	258	251	185	262	281	243	156	238	231	285	283	311	248	
6	305	239	219	199	181	194	223	245	237	249	255	257	270	219	31	80	81	187	194	243	253	284	286	333	219	
7	203	205	185	199	234	221	233	245	244	252	259	261	263	282	289	234	134	173	226	237	245	207	312	394	239	
8	225	180	223	245	248	233	229	236	235	241	249	251	256	258	277	271	258	254	243	208	166	224	212	158	232	
9	209	222	239	191	157	81	106	219	249	217	194	-28	-15	109	54	147	285	254	247	264	282	437	453	317	203	
10	309	289	219	239	242	252	242	249	240	243	249	240	259	259	256	240	193	184	144	196	239	294	292	271	243	
11	267	264	284	289	185	181	206	235	250	244	241	251	253	237	243	263	226	245	212	184	196	232	248	266	237	
12	261	217	237	232	223	207	236	244	239	245	247	245	249	279	270	259	252	251	219	161	169	215	258	136	231	
13	184	224	231	237	239	242	239	241	245	247	243	248	282	284	253	251	270	248	243	208	213	241	83	152	231	
14	219	246	242	241	204	229	246	250	255	252	254	271	258	274	256	252	242	199	254	218	177	252	252	201	239	
15	190	177	227	244	236	239	259	259	251	249	244	241	268	287	142	35	171	241	177	139	201	356	302	283	225	
16	340	169	184	233	243	242	250	245	244	244	242	241	240	240	237	247	263	260	256	245	166	151	221	239	235	
17	201	228	222	244	233	227	219	243	243	243	242	246	248	238	240	244	242	241	206	190	238	253	304	235	236	
18	263	190	211	229	238	239	241	236	235	236	234	234	239	233	233	240	230	145	137	191	164	233	257	252	222	
19	246	245	242	233	230	221	237	236	240	243	243	246	254	260	258	273	255	253	257	254	236	239	230	232	244	
20	236	237	239	237	236	225	235	232	231	238	240	239	240	237	239	242	242	248	249	233	167	199	211	239	232	
21	257	294	281	189	147	197	218	246	248	244	242	243	243	242	242	239	240	241	242	243	240	243	240	238	239	237
22	238	234	239	236	235	233	227	227	227	226	228	241	234	67	201	203	224	172	221	295	392	596	305	295	249	
23	272	292	386	401	305	267	215	226	237	266	241	237	242	252	253	151	33	86	203	273	362	281	358	214	252	
24	224	240	243	242	249	247	241	244	247	256	269	270	253	269	296	274	256	187	145	185	207	239	311	305	245	
25	282	223	145	212	231	243	244	246	243	246	248	244	195	254	256	248	246	233	227	242	242	278	178	216	234	
26	251	268	212	194	189	199	224	230	241	243	252	248	244	291	287	269	251	240	243	250	225	211	206	222	237	
27	215	230	242	238	232	236	235	234	238	237	237	239	238	239	247	253	249	261	254	256	236	232	233	221	238	
28	178	171	205	241	253	238	233	239	242	247	254	261	250	246	245	244	254	175	152	201	214	235	222	231	226	
29	233	229	247	246	239	236	239	242	240	239	242	242	254	270	271	296	266	247	234	246	243	237	225	216	244	
30	221	228	228	231	234	234	234	235	235	234	235	239	258	258	230	38	32	123	264	409	273	219	245	365	229	
MEAN	247	235	234	235	222	222	224	238	240	245	245	239	242	244	227	216	216	218	218	227	238	272	276	268	237	

Tromsø

Vertical intensity. Z = 51400 nT + Tabular quantities expressed in nT.
Hourly mean values (All day)

December 1992

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	MEAN
1	412	241	130	113	159	184	223	238	269	285	241	233	262	259	192	168	167	187	219	236	343	243	294	361	235
2	338	185	216	234	207	176	205	229	236	242	238	239	244	246	274	256	248	246	205	205	309	301	270	287	243
3	222	201	177	176	194	177	195	231	233	234	253	249	277	280	292	270	186	70	194	247	384	398	285	324	239
4	290	236	239	193	167	217	237	237	242	254	250	255	256	285	284	299	265	216	157	223	294	263	290	361	250
5	282	189	201	198	230	234	235	239	246	248	252	254	253	255	260	262	258	256	259	252	242	239	237	228	242
6	200	181	203	227	232	235	235	237	239	240	241	242	243	246	258	216	221	216	249	237	251	243	243	243	232
7	242	242	241	234	223	220	223	226	229	229	230	232	245	259	242	242	247	247	230	167	145	209	267	392	235
8	251	255	235	232	215	231	214	232	242	234	238	241	242	238	251	261	239	199	139	147	168	-44	105	223	207
9	308	253	216	236	236	227	220	245	235	243	248	245	280	252	154	162	201	160	193	200	222	169	274	234	225
10	141	262	247	247	247	253	250	239	254	269	267	245	246	251	250	157	92	85	204	238	212	239	288	225	225
11	234	258	219	245	248	228	248	236	233	237	243	239	242	241	252	283	280	261	255	234	214	196	185	208	237
12	231	235	244	243	255	249	241	238	237	237	235	236	238	261	262	243	241	263	232	220	234	246	175	178	236
13	64	157	194	243	238	231	242	239	241	236	233	238	241	242	242	258	256	258	251	242	190	203	229	232	225
14	261	145	193	209	207	223	232	231	231	235	233	233	232	232	234	261	249	266	276	185	192	284	212	230	228
15	241	281	174	177	214	223	235	234	234	231	232	231	230	236	253	263	255	250	238	229	233	105	210	225	226
16	235	234	235	218	213	190	205	229	236	233	237	243	239	236	235	237	235	237	245	246	242	215	224	241	230
17	244	240	237	235	233	232	227	221	224	230	228	244	255	265	253	220	174	223	104	341	207	212	252	201	229
18	271	253	255	247	240	241	246	246	242	241	241	240	242	244	242	240	245	152	-29	200	288	77	196	243	220
19	262	255	242	245	247	242	234	232	237	236	239	239	248	254	264	259	275	258	164	116	175	258	329	298	242
20	209	231	220	213	213	222	219	229	250	263	259	263	261	275	258	282	280	219	174	213	225	232	239	240	237
21	248	244	240	237	234	233	236	232	236	244	250	265	272	249	256	253	244	188	97	206	250	280	195	203	233
22	254	236	237	227	239	241	243	240	238	245	255	261	277	265	245	244	248	239	157	200	234	246	239	233	239
23	232	240	240	235	223	233	228	230	238	246	252	255	250	256	278	261	243	252	249	237	237	223	228	231	241
24	234	221	218	229	218	208	218	224	229	236	245	257	257	266	268	256	253	242	197	168	243	240	229</		

Tromsø Declination. $D = 1^\circ +$ Tabular quantities expressed in tenths of minutes East.
Hourly mean values (All day)

Summary 1992

Mnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
Jan.	503	522	528	513	460	449	414	404	398	396	388	372	353	344	345	320	318	320	318	347	378	392	445	486	404
Feb.	549	580	637	597	633	543	496	476	476	453	426	389	356	336	317	319	261	259	275	307	362	418	480	489	434
Mar.	506	513	521	532	496	464	448	442	437	410	372	339	312	299	290	303	318	318	323	341	364	424	455	485	404
Apr.	483	482	501	520	527	498	487	474	451	406	370	328	309	314	310	323	317	323	325	335	352	386	408	441	402
May.	569	605	630	609	588	561	544	519	507	465	436	387	338	301	295	282	270	278	283	296	336	364	434	497	433
Jun.	535	636	658	629	615	566	529	486	455	415	383	350	338	334	295	263	293	292	281	303	320	369	431	485	427
Jul.	530	547	568	581	562	537	514	503	484	439	405	377	354	335	330	316	326	313	318	313	351	386	441	475	429
Aug.	547	568	576	608	597	562	520	495	453	428	399	371	362	357	361	352	336	356	364	364	387	439	488	513	450
Sep.	623	677	669	664	576	556	525	498	487	459	439	422	406	361	353	325	315	319	341	403	434	497	564	598	479
Oct.	621	640	624	554	507	480	474	480	472	451	429	404	388	380	381	377	394	390	421	448	465	522	548	591	476
Nov.	607	572	539	536	532	497	479	481	475	461	447	418	407	402	385	397	398	405	421	462	466	509	598	621	479
Dec.	550	554	525	499	487	472	468	462	462	454	445	425	417	424	411	401	411	420	445	441	478	539	546	567	470
MEAN	551	574	581	570	548	515	491	476	463	436	411	381	361	348	339	331	329	332	342	363	391	437	486	520	441

Tromsø Horizontal intensity. $H = 11000$ nT + Tabular quantities expressed in nT.
Hourly mean values (All day)

Summary 1992

Mnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
Jan.	51	46	33	64	93	111	128	136	132	132	137	144	151	162	174	174	173	168	166	128	99	82	69	51	116
Feb.	17	19	-9	16	6	48	102	104	114	134	142	155	166	192	204	191	175	146	121	85	57	41	34	56	96
Mar.	49	62	72	77	107	120	129	128	122	118	117	129	148	177	204	222	206	187	158	121	77	55	51	49	120
Apr.	65	84	96	98	106	121	125	116	104	103	114	137	160	180	201	193	201	186	168	132	113	96	70	81	127
May.	18	24	17	48	71	74	93	102	103	113	119	151	178	193	213	225	220	207	172	128	92	69	48	42	113
Jun.	48	0	9	34	75	99	116	115	116	113	127	149	184	233	252	249	229	212	187	140	118	80	51	32	123
Jul.	58	86	94	85	103	112	119	114	110	110	115	133	158	174	203	222	218	221	192	165	134	106	80	69	132
Aug.	31	31	47	56	68	78	100	108	109	110	120	151	179	199	208	216	210	189	158	130	95	55	28	35	112
Sep.	13	-2	-8	13	54	73	81	110	120	128	143	174	199	202	205	196	183	160	118	49	39	3	-34	-26	91
Oct.	-30	-9	12	72	114	129	133	128	125	126	135	147	169	194	200	188	165	138	126	79	38	34	-5	-12	99
Nov.	10	44	79	78	79	109	117	124	127	128	132	143	157	175	175	158	160	152	138	100	66	27	-34	-19	101
Dec.	30	52	79	107	103	108	115	115	117	118	122	137	143	155	162	160	155	129	132	116	51	17	29	12	102
MEAN	30	36	43	62	81	98	113	116	116	119	126	145	166	186	200	199	191	174	153	114	81	55	32	30	111

Tromsø Vertical intensity. $Z = 51400$ nT + Tabular quantities expressed in nT.
Hourly mean values (All day)

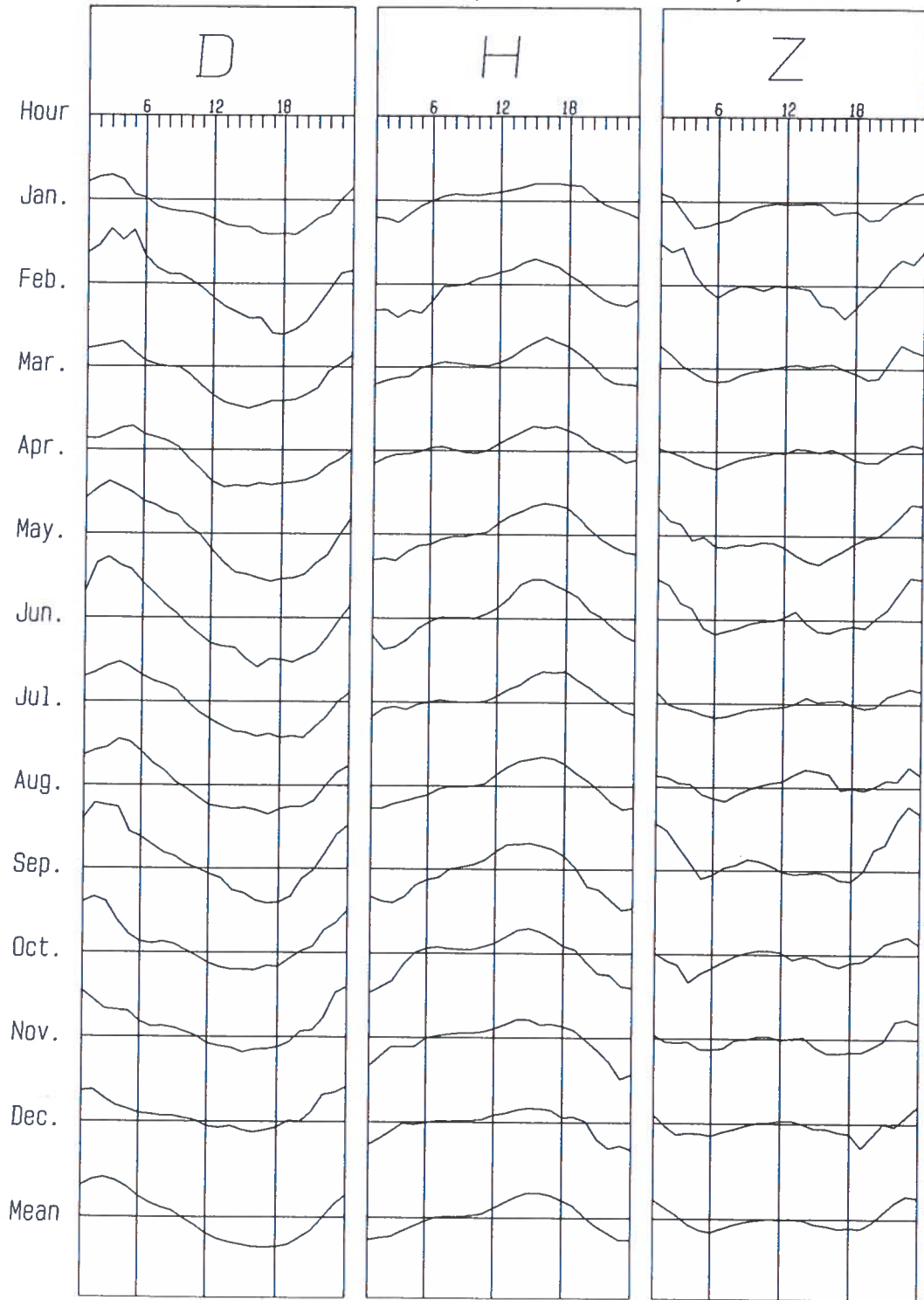
Summary 1992

Mnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
Jan.	255	248	220	194	197	204	209	222	230	235	238	237	237	238	237	219	223	224	209	210	229	240	253	259	227
Feb.	315	300	309	261	235	219	232	240	238	232	240	239	237	234	206	203	182	202	225	242	269	289	281	304	247
Mar.	281	265	245	233	220	217	219	229	235	238	242	246	248	244	247	249	240	232	222	224	253	285	274	267	243
Apr.	246	240	233	223	215	210	219	227	232	235	239	239	247	245	240	246	238	227	223	223	236	247	255	250	234
May.	290	267	261	232	238	221	220	225	224	229	228	220	206	195	190	203	214	227	237	239	254	275	297	296	237
Jun.	312	302	270	261	226	215	221	226	234	238	239	245	256	234	220	219	227	230	227	245	259	289	317	314	251
Jul.	261	239	232	229	221	216	218	224	230	232	234	235	241	252	244	246	247	238	233	236	254	261	268	263	239
Aug.	261	258	248	247	228	221	216	228	237	244	249	252	264	273	270	265	237	240	236	243	254	253	278	263	248
Sep.	326	313	283	256	226	233	246	251	261	258	250	239	235	236	238	235	224	223	240	279	288	332	358	344	265
Oct.	243	230	222	191	207	217	228	238	244	248	248	245	232	238	234	224	219	227	229	242	260	267	273	259	236
Nov.	247	235	234	235	222	222	224	238	240	245	245	239	242	244	227	216	216	218	218	227	238	272	276	268	237
Dec.	256	236	221	224	223	219	226	231	237	242	243	246	246	240	232	232	226	223	197	219	241	236	254	272	234
MEAN	274	261	248	232	221	217	223	231	236	239	241	240	240	239	232	229	224	225	224	235	252	270	282	279	241

Tromso 1992

(All Day)

Hourly mean values.



Scale = 2 min./mm
Baseline = 104.2min.

Scale = 20 nT./mm
Baseline = 11111nT

Scale = 10 nT./mm
Baseline = 51641nT

Tronsø Declination. $D = 1^\circ +$ Tabular quantities expressed in tenths of minutes East.
Hourly mean values (Quiet mean)

Summary 1992

Mnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
Jan.	402	399	398	396	395	405	405	403	400	397	388	373	365	369	368	368	367	370	379	390	394	411	411	403	389
Feb.	422	418	416	425	426	427	430	435	440	418	404	379	390	382	391	385	379	377	373	384	398	411	422	420	406
Mar.	413	417	424	432	436	441	449	455	445	412	378	351	340	343	355	371	380	377	383	379	380	391	397	405	398
Apr.	402	416	430	451	461	471	472	455	437	419	375	342	344	348	362	368	378	372	380	378	380	377	384	390	399
May.	443	455	474	496	507	509	500	480	446	401	359	339	353	361	385	396	400	394	386	379	373	400	410	416	419
Jun.	455	468	488	517	524	530	516	489	457	412	366	333	285	320	357	365	388	382	374	373	373	400	419	432	417
Jul.	471	489	497	528	533	529	519	501	476	451	412	373	363	356	367	381	382	386	371	370	372	401	427	442	433
Aug.	463	472	497	516	523	520	508	492	462	429	387	359	347	353	377	400	416	409	437	435	445	437	450	470	441
Sep.	471	472	475	496	498	502	495	479	459	437	414	396	384	382	403	410	417	419	415	424	423	450	451	453	442
Oct.	465	462	462	491	485	477	475	473	467	452	430	414	410	417	428	434	440	430	451	451	449	441	448	445	449
Nov.	477	466	469	464	469	471	469	472	465	460	448	430	432	428	429	436	435	437	451	466	466	475	474	475	456
Dec.	462	462	465	468	467	464	465	460	464	452	440	429	435	438	430	455	441	440	450	464	471	476	473	464	455
MEAN	445	449	457	473	477	478	475	466	451	428	400	376	370	374	387	397	401	399	404	407	410	422	430	434	425

Tronsø Horizontal intensity. $H = 11000 \text{ nT} +$ Tabular quantities expressed in nT.
Hourly mean values (Quiet mean)

Summary 1992

Mnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
Jan.	129	130	128	136	137	137	139	139	134	131	127	127	128	131	136	138	139	141	140	139	141	124	122	123	133
Feb.	125	127	130	128	132	135	132	129	124	121	113	112	111	119	127	126	128	131	136	137	136	127	121	123	126
Mar.	135	134	133	136	138	137	135	130	122	111	107	110	112	118	127	127	129	136	136	137	134	134	133	132	128
Apr.	140	140	144	147	145	140	127	116	106	89	89	97	109	119	131	138	141	145	146	144	143	139	139	140	129
May.	137	137	137	135	132	125	116	110	103	102	102	112	128	137	142	139	144	145	141	143	142	133	132	137	129
Jun.	141	145	142	148	144	135	124	114	106	98	103	110	110	117	131	158	166	158	152	151	148	131	128	130	132
Jul.	137	141	141	138	134	126	123	115	110	98	93	94	114	129	139	151	158	160	159	156	153	130	128	131	131
Aug.	124	130	137	135	133	128	123	115	106	101	96	106	118	123	130	129	134	146	136	137	137	117	115	113	123
Sep.	124	125	126	124	126	126	120	113	107	97	93	97	104	112	115	127	131	133	137	143	143	129	132	134	121
Oct.	120	123	121	131	132	130	133	124	116	109	105	107	115	121	123	131	133	136	128	127	128	120	125	118	123
Nov.	111	118	119	127	124	124	122	120	116	113	111	115	115	116	121	121	121	128	122	123	120	111	109	107	118
Dec.	117	115	114	119	120	121	119	117	114	114	115	119	116	117	121	124	121	128	128	120	114	108	107	110	117
MEAN	128	130	131	133	133	130	126	120	113	107	104	108	115	121	128	134	137	140	138	138	136	125	124	124	126

Tronsø Vertical intensity. $Z = 51400 \text{ nT} +$ Tabular quantities expressed in nT.
Hourly mean values (Quiet mean)

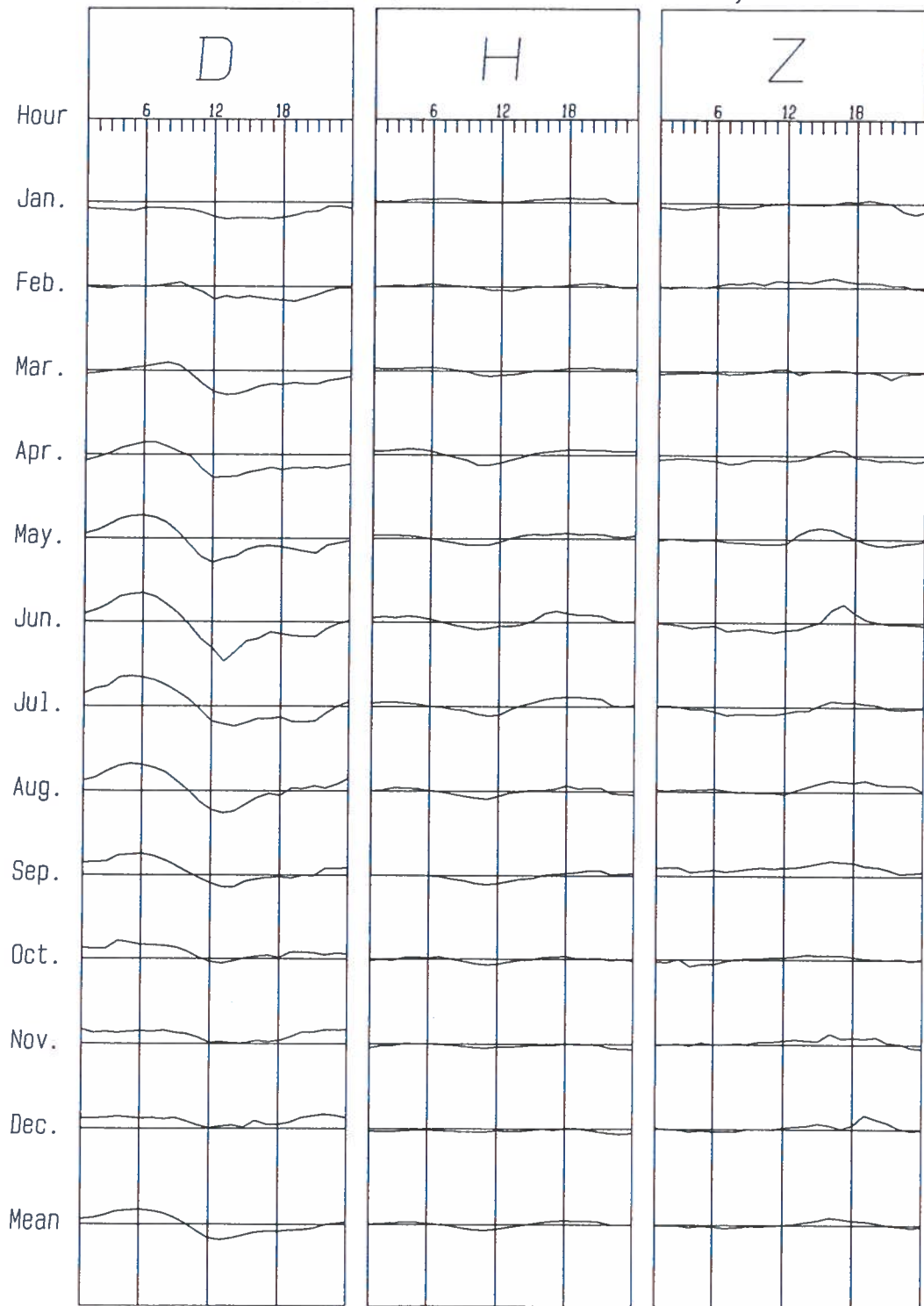
Summary 1992

Mnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
Jan.	228	227	225	226	229	231	229	229	229	234	235	236	234	234	234	236	240	239	242	239	236	222	217	222	231
Feb.	236	234	237	236	236	239	243	242	245	241	248	247	247	245	250	253	248	245	245	244	240	240	234	233	242
Mar.	231	232	233	233	234	233	231	232	233	236	240	240	231	236	236	239	238	234	236	232	223	232	233	234	233
Apr.	228	229	231	230	228	226	221	222	228	228	228	227	228	233	241	246	244	232	231	227	228	228	225	227	229
May.	233	236	235	233	234	234	231	230	229	227	227	228	244	253	256	253	244	237	229	225	224	228	230	233	234
Jun.	234	233	231	226	229	230	221	223	225	222	219	223	224	231	237	259	269	253	241	237	234	234	233	231	233
Jul.	238	238	236	232	232	228	222	224	224	233	223	226	230	230	239	247	245	245	242	240	233	232	233	235	233
Aug.	239	238	240	239	240	241	238	235	235	234	234	232	239	245	251	256	254	253	256	250	248	248	247	237	242
Sep.	250	251	251	243	245	247	244	246	249	251	250	251	252	255	259	263	261	260	254	253	248	241	242	244	250
Oct.	232	231	237	224	228	228	233	237	238	238	240	240	242	245	244	244	244	241	238	237	236	238	234	238	236
Nov.	235	236	237	234	239	236	236	238	237	241	241	243	245	243	242	255	247	248	247	249	239	238	231	229	240
Dec.	238	236	235	232	234	232	232	232	236	236	236	239	241	242	246	243	237	243	261	254	248	238	234	235	239
MEAN	235	235	235	232	234	233	231	232	234	234	235	236	238	241	244	249	247	244	243	240	236	234	232	233	237

Tromso 1992

(Quiet mean)

Hourly mean values.



Scale = 2 min./mm
Baseline = 102.6min.

Scale = 20 nT./mm
Baseline = 11125nT

Scale = 10 nT./mm
Baseline = 51636nT

K-Indices for three-hour interval
Tromsø 1992
Range 2000 nT. for K = 9

Day	January	Sum	February	Sum	March	Sum	April	Sum
1	1 3 3 2 3		2 3 4 2 5 6 4 7	33	2 4 4 2 2 2 5 5	26	3 3 3 3 2 2 0 1	17
2	6 6 4 3 2 3 2 3	29	6 5 5 5 4 3 6 6	40	4 4 1 2 3 2 5 3	24	1 0 2 1 2 3 5 3	17
3	4 4 2 2 3 2 4 5	26	7 7 5 4 4 4 5 6	42	4 3 2 1 2 3 3 3	21	1 1 2 5 5 4 4 4	26
4	4 4 3 1 1 3 3 4	23	4 5 4 2 3 3 6 6	33	1 1 1 1 3 4 5 4	20	2 2 2 3 3 3 4 2	21
5	4 3 2 1 2 3 3 2	20	3 1 1 1 2 1 1 1	11	4 4 3 2 2 4 3 5	27	4 2 2 3 4 3 2 6	26
6	3 3 2 1 2 3 6 6	26	0 1 1 1 3 2 2 3	13	4 1 2 1 0 2 2 3	15	5 5 4 3 3 4 3 3	30
7	3 2 0 0 2 3 4 2	16	5 5 2 4 4 4 2 3	29	3 1 1 2 2 4 4 5	22	3 4 3 4 4 5 4 3	30
8	3 3 3 3 4 4 4 3	27	5 5 4 4 7 6 4 4	39	4 3 1 1 3 3 2 1	18	5 4 3 3 3 3 5 2	28
9	4 2 1 0 0 0 0 2	9	6 7 4 4 5 5 6 5	42	3 2 2 3 3 4 5 3	25	2 2 2 1 2 2 2 4	17
10	5 4 1 2 2 4 3 6	27	4 5 3 2 4 4 3 3	28	3 3 3 2 2 3 5 5	26	3 1 1 1 1 1 1 2	11
11	4 4 3 4 5 6 4 4	34	3 1 0 1 1 2 2 3	13	5 4 4 4 3 5 6 3	34	2 0 1 0 1 0 0 0	4
12	5 4 3 3 2 3 4 4	28	4 4 3 1 5 3 1 5	26	3 3 4 3 3 3 2 2	23	0 0 2 0 2 1 0 0	5
13	4 5 4 3 3 5 3 6	33	5 3 3 2 0 0 1 3	17	1 2 2 2 1 1 1 0	10	1 0 1 3 3 1 1 1	11
14	5 3 3 1 3 4 5 5	29	1 2 2 2 3 3 4 3	20	0 0 1 1 1 1 3 3	10	0 0 1 1 1 2 3 2	10
15	3 3 3 3 4 3 5 3	27	0 1 0 1 1 0 0 0	3	0 0 1 2 2 2 3 2	12	4 1 2 1 2 2 3 2	17
16	2 3 3 3 3 3 7 7	31	0 1 0 1 0 0 0 3	5	0 0 1 1 5 5 4 4	20	0 0 1 1 2 2 0 0	6
17	4 2 2 2 2 2 4 5	23	3 1 1 2 4 1 1 2	15	3 3 2 3 5 4 4 3	27	1 0 1 0 1 2 0 0	5
18	3 2 2 2 2 1 1 0	13	6 5 3 2 3 4 2 4	29	4 3 3 2 2 1 0 1	16	0 1 2 3 5 3 4 5	23
19	1 2 2 1 1 1 2 1	11	5 3 3 1 2 3 4 5	26	0 0 1 0 1 1 0 1	4	5 3 2 2 4 3 5 5	29
20	4 3 3 3 3 4 5 4	29	6 6 3 3 5 6 6 5	40	0 0 1 0 1 1 0 0	3	5 5 2 3 5 3 4 5	32
21	4 0 0 0 2 3 3 5	17	7 7 5 5 5 2 2 4	37	0 1 2 2 5 5 4 5	24	4 4 2 2 4 3 2 0	21
22	4 2 1 1 3 3 1 0	15	6 6 4 3 3 3 6 5	36	5 4 3 2 4 3 5 4	30	5 5 2 3 3 3 5 4	30
23	0 0 0 0 0 0 1 2	3	4 4 3 2 3 3 4 6	29	5 5 3 4 4 3 5 5	34	3 1 1 0 3 4 4 5	21
24	2 0 0 0 0 0 0 1	3	4 4 4 3 5 4 4 6	34	5 5 2 3 4 5 5 4	33	2 2 3 3 3 4 4 4	23
25	3 2 0 0 0 0 0 3	8	7 6 4 4 3 5 5 5	39	5 5 3 3 4 3 5 4	32	5 4 2 3 3 3 2 4	26
26	0 0 0 0 0 2 3 3	8	4 4 4 3 3 7 6 5	36	3 4 1 3 4 4 6 4	29	3 3 2 2 2 1 5 2	20
27	6 6 3 3 1 3 4 6	32	6 4 5 6 4 6 6 4	41	4 3 2 1 3 2 6 6	27	3 1 1 1 4 2 5 3	20
28	4 4 2 1 2 2 4 4		3 2 1 2 2 1 3 4	18	4 3 3 2 4 3 4 5	28	5 2 1 4 3 3 2 1	21
29	5 4 3 2 3 2 5 4	28	4 3 1 5 6 7 5 3	34	5 4 3 3 4 4 5		2 3 1 2 2 2 3 3	18
30	5 4 4 1 2 4 5 5	30			1 3 2 4 4		4 2 1 3 2 1 1 1	15
31	5 4 3 2 2 2 5 3	26			6 4 1 2 4 4 4 4	29		

K-Indices for three-hour interval
Tromsø 1992
Range 2000 nT. for K = 9

Day	May	Sum	June	Sum	July	Sum	August	Sum
1	2 2 2 2 3 3 5 3	22	4 4 2 2 3 2 1 1	19	5 4 3 2 4 4 5 3	30	5 2 2 3 3 3 2 4	24
2	4 3 4 2 2 3 3 1	22	3 1 1 1 2 3 2 4	17	3 4 3 3 2 2 2 4	23	3 1 0 1 1 3 3 4	16
3	1 1 1 2 3 2 3 5	18	3 0 1 1 3 3 3 2	16	4 1 1 2 2 1 2 1	14	2 0 1 1 2 2 2 1	11
4	5 5 2 3 4 4 3 3	29	1 0 1 1 2 1 0 4	10	1 2 1 1 1 2 2 1	11	1 0 0 2 3 4 5 4	19
5	2 3 1 2 1 1 0 1	11	4 0 1 3 3 3 2 0	16	4 4 1 2 2 3 3 1	20	7 6 5 4 3 3 3 3	34
6	0 0 2 1 2 1 1 2	9	0 0 1 2 2 3 3 2	13	2 3 1 2 2 2 3 2	17	3 3 2 3 5 4 5 4	29
7	1 1 1 2 3 4 6 6	24	1 2 1 2 2 4 5 4	21	0 0 0 1 2 1 1 3	8	6 6 3 5 5 4 5 4	38
8	4 5 5 5 4 5 5 5	38	6 6 4 5 4 5 4 6	40	2 0 1 1 3 3 3 2	15	3 4 5 3 4 3 5 4	31
9	4 3 1 4 4 4 7 6	33	5 5 3 3 3 3 4 3	29	1 0 1 1 2 2 2 2	11	6 2 2 3 4 3 4 2	26
10	6 5 6 7 6 6 7 6	49	3 4 3 4 3 2 3 2	24	1 1 1 1 2 3 4 2	15	4 2 1 3 4 4 3 2	23
11	7 7 6 4 5 4 6 5	44	3 4 1 3 5 5 6 6	33	3 0 1 1 2 1 0 1	9	5 3 2 3 3 4 5 5	30
12	4 5 1 3 3 3 5 4	28	6 4 3 2 6 6 3 2	32	1 3 2 4 4 3 3 4	24	5 4 3 2 3 2 0 2	21
13	4 5 5 5 5 4 4 5	37	2 3 2 2 3 3 5 5	25	3 5 2		0 1 2 2 4 4 4 6	23
14	3 2 1 3 2 1 0 1	13	5 1 1 3 3 2 2 4	21	3 3 3 2 3 3		6 3 1 3 5 5 3 1	27
15	0 1 1 2 2 3 3 2	14	4 4 1 1 2		4 4 1 2 3 1 1 3	19	2 2 3 2 1 2 5 4	21
16	0 1 1 2 2 2 1 1	10	3 1 1 0 1		3 1 3 5 4 3 5 4	28	2 2 2 3 2 1 2 3	17
17	0 0 0 1 0 0 2 4	7	1 1 1 1 3 4 3 1	15	5 1 1 2 4 4 1 1	19	3 1 1 0 1 1 2 3	12
18	4 2 1 1 2 3 4 6	23	2 2 1 3 5 4 6 6	29	1 2 1 1 2 1 1 2	11	2 1 1 2 3 3 2 4	18
19	5 5 2 2 4 5 4 3	30	5 3 3 2 2 4 4 2	25	3 0 0 1 1 2 2 4	13	2 1 0 0 3 3 3 4	16
20	5 2 1 3 3 2 3 5	24	1 1 2 2 5 2 2 3	18	3 2 0 3 3 3 4 4	22	5 5 5 5 5 2 1 1	29
21	5 1 1 2 2 3 5 4	23	5 1 1 1 2 3 2 3	18	1 1 1 3 6 5 4 3	24	1 1 1 3 3 5 4 2	20
22	4 5 4 5 6 5 5 4	38	5 4 1 2 2 2 0 4	20	3 4 3 6 5 4 5 4	34	2 2 3 3 5 6 6 7	34
23	2 2 2 1 3 4 7 3	24	4 5 3 2 2 2 5 5	28	5 6 3 3 3 3 6 5	34	7 7 6 2 3 2 5 7	39
24	5 4 2 2 1 3 2 3	22	4 6 4 4 3 4 5 4	34	4 2 1 3 3 3 3 4	23	4 3 2 1 1 3 5 5	24
25	4 2 2 2 4 3 4 3	24	6 5 2 2 4 4 3 4	30	4 1 2 2 4 3 4 2	22	2 2 0 1 2 2 3 3	15
26	1 0 1 2 3 1 3 5	16	3 2 3 3 3 2 3 5	24	1 1 1 2 2 1 2 0	10	4 3 3 3 4 3 4 3	27
27	3 3 2 3 5 4 2 3	25	5 2 1 3 3 3 4 4	25	1 0 1 2 1 3 2 6	16	3 2 1 3 3 4 5 3	24
28	3 2 3 3 4 4 3 3	25	3 3 3 4 4 3 2 5	27	5 5 4 2 4 4 2 4	30	3 1 1 1 1 2 3 4	16
29	3 3 3 2 4 4 5 4	28	6 6 4 3 5 5 5 6	40	2 2 1 1 1 1 1 4	13	5 5 2 3 3 1 3 4	26
30	3 4 3 3 3 3 4 4	27	7 7 5 3 4 4 1 5	36	4 3 1 2 3 3 4 4	24	3 1 1 2 3 2 3 2	17
31	6 3 2 2 2 3 3 2	23			3 2 2 2 2 4 4 6	25	2 1 0 1 1 2 2 2	11

K-Indices for three-hour interval
Tromsø 1992
Range 2000 nT. for K = 9

Day	September	Sum	October	Sum	November	Sum	December	Sum
1	3 1 1 0 1 0 0 0	6	6 5 3 3 4 4 6 4	35	2		6 4 3 4 4 4 5 4	34
2	0 1 2 3 5 5 5 5	26	5 1 2 2 2 3 4 4	23	4 5 4 4 3 2 6 5	33	4 3 2 1 3 3 4 4	24
3	3 4 4 5 5 7 6 6	40	2 2 1 2 2 2 4 3	18	6 4 5 4 2 2 5 5	33	3 3 2 3 2 5 4 4	26
4	5 5 5 5 5 4 5 6	40	5 5 4 1 1 0 0 0	16	3 3 2 3 4 5 5 6	31	4 4 2 2 3 4 5 6	30
5	6 6 5 4 3 3 6 6	39	1 2 1 0 1 2 3 3	13	5 2 3 2 4 3 4 3	26	6 2 1 0 1 2 1 2	15
6	4 4 3 3 3 4 6 5	32	5 5 2 1 3 3 4 3	26	4 3 2 2 4 4 3 5	27	3 0 0 0 2 4 4 1	14
7	5 4 3 4 4 4 6 4	34	3 3 1 3 3 1 4 2	20	4 2 3 2 3 4 5 5	28	0 1 2 1 3 2 3 6	18
8	4 4 4 3 4 5 4 5	33	4 2 3 1 1 1 4 3	19	5 1 1 1 2 2 3 6	21	4 4 4 3 4 4 6 6	35
9	7 7 4 6 6 4 5 3	42	2 0 1 4 4 5 5 4	25	3 4 5 4 5 5 4 5	35	4 4 4 3 4 4 5 6	34
10	7 7 5 5 5 7 7 5	48	1 2 2 3 2 2 3 5	20	4 2 2 2 1 3 3 4	21	4 2 3 3 2 4 6 5	29
11	6 4 4 4 4 4 5 4	35	4 3 1 3 5 5 6 6	33	4 5 4 4 3 4 5 4	33	4 3 2 2 3 3 5 4	26
12	3 2 1 0 0 2 4 3	15	5 4 4 5 4 5 5 5	37	4 4 4 3 3 2 5 5	30	3 2 0 0 3 2 3 5	18
13	2 0 1 1 1 1 1 4	11	6 4 2 1 3 4 6 5	31	4 2 3 2 3 3 3 4	24	5 3 3 1 1 2 3 4	22
14	2 2 1 2 2 2 4 5	20	4 4 5 3 3 2 6 7	34	3 3 2 2 3 4 4 4	25	5 2 1 0 1 3 5 5	22
15	4 4 1 2 3 3 3 3	23	6 5 5 4 4 4 6 6	40	4 2 2 1 4 5 3 6	27	5 3 2 1 3 3 3 5	25
16	3 1 2 2 3 3 6 3	23	6 5 3 3 3 3 3 5	31	5 3 2 1 1 2 4 5	23	1 2 2 1 1 0 1 3	11
17	7 7 6 5 5 5 4 4	43	3 3 2 3 5 4 5 4	29	4 3 2 0 2 2 3 4	20	0 0 1 1 4 7 5 4	22
18	4 4 4 4 4 3 5 5	33	5 2 1 1 4 3 6 5	27	4 0 0 1 1 3 5 2	16	2 2 2 1 1 3 6 5	22
19	5 3 2 3 2 3 5 3	26	5 3 2 3 5 4 3 4	29	1 2 2 2 2 1 2 1	13	2 1 1 1 1 2 4 5	17
20	1 1 1 2 3 1 4 4	17	4 5 1 2 1 2 2 3	20	0 0 0 0 0 0 4 3	7	3 4 4 3 3 3 3 2	25
21	1 0 2 1 0 1 3 5	13	3 1 1 1 1 3 3 5	18	3 4 2 0 0 0 0 1	10	1 2 1 3 3 4 5 4	23
22	5 6 3 2 2 3 5 5	31	4 1 0 1 2 3 2 3	16	1 1 2 2 5 5 5 5	26	3 2 2 2 2 3 4 1	19
23	3 3 2 2 2 1 3 2	18	3 1 1 0 1 0 3 3	12	5 6 4 3 3 5 5 5	36	0 3 2 2 2 1 2 1	13
24	0 0 0 1 1 1 1 4	8	2 0 0 0 0 0 0 5	7	2 2 2 2 3 3 5 3	22	1 2 1 2 2 2 3 1	14
25	3 0 0 3 3 2 3 3	17	5 0 1 1 0 0 2 3	12	4 1 1 4 4 2 4 4	24	0 0 0 0 0	
26	5 1 1 1 2 3 3 2	18	5 3 2 1 1 2 6 5	25	4 4 2 2 2 1 3 3	21		
27	0 0 0 1 1 0 1 1	4	6 5 3 3 3 6 3 6	35	3 2 2 1 2 1 1 3	15		0 5 5
28	0 0 1 2 3 3 7 7	23	6 3 3 3 3 4 4 5	31	3 1 0 1 1 3 4 4	17	3 1 2 2 5 7 6 6	32
29	4 6 6 4 4 5 7 6	42	4 5 3 3 3 6 6 6	36	2 1 1 0 3 2 3 1	13	5 6 5 3 4 7 5 4	39
30	6 4 4 3 4 6 6 6	39	3 3 3 3 4 4 4 6	30	1 0 0 0 4 4 6 4	19	5 3 2 2 3 3 2 4	24
31			3 2 3 3 4 3 4 4	26			5 1 1 2 4 3 1	

Annual quiet means 1930-1992

Year	D(deg. min.)	H(nT)	Z(nT)
1930	-004 09.5	11595	
1931	-004 01.0	11563	50201
1932	-003 50.6	11520	50198
1933	-003 38.0	11488	50205
1934	-003 26.0	11452	50226
1935	-003 15.0	11420	50248
1936	-003 05.6	11389	50274
1937	-002 53.6	11368	50302
1938	-002 45.2	11338	50333
1939	-002 36.2	11319	50358
1940	-002 28.2	11294	50383
1941	-002 19.1	11279	50419
1942	-002 11.5	11262	50423
1943	-002 03.9	11245	50446
1944	-001 55.8	11229	50468
1945	-001 47.9	11211	50505
1946	-001 35.2	11193	50551
1947	-001 27.2	11179	50574
1948	-001 19.1	11166	50590
1949	-001 11.5	11164	50608
1950	-001 04.9	11170	50627
1951	-000 56.1	11166	50691
1952	-000 46.2	11174	50711
1953	-000 38.0	11177	50733
1954	-000 30.0	11177	50743
1955	-000 24.3	11184	50774
1956	-000 19.9	11186	50818
1957	-000 16.7	11189	50865
1958	-000 13.0	11200	50896
1959	-000 08.5	11213	50927
1960	-000 05.5	11213	50971
1961	-000 03.2	11226	51003
1962	-000 00.8	11230	51036
1963	000 03.0	11238	51066
1964	000 02.5	11251	51088
1965	000 04.0	11258	51095
1966	000 03.3	11270	51135
1967	000 03.2	11272	51159
1968	000 01.5	11286	51195
1969	-000 02.8	11291	51235
1970	-000 05.6	11306	51276
1971	-000 07.3	11350	51294
1972	-000 06.9	11377	51320
1973	-000 06.2	11391	51366
1974	-000 03.7	11399	51410
1975	-000 01.1	11410	51450
1976	000 05.2	11413	51470

1977	000 10.4	11413	51499
1978	000 18.1	11405	51538
1979	000 25.9	11393	51558
1980	000 31.3	11382	51561
1981	000 36.9	11366	51578
1982	000 43.5	11346	51591
1983	000 51.0	11322	51588
1984	000 56.7	11301	51588
1985	001 03.2	11271	51585
1986	001 10.3	11244	51591
1987	001 15.8	11225	51609
1988	001 21.7	11190	51605
1989	001 26.3	11178	51618
1990	001 31.1	11160	51618
1991	001 37.1	11140	51626
1992	001 42.4	11126	51636

...the first of these is the fact that the ...

...the second of these is the fact that the ...

...the third of these is the fact that the ...

...the fourth of these is the fact that the ...

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...the sixth of these is the fact that the ...

...the seventh of these is the fact that the ...

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...the eleventh of these is the fact that the ...

...the twelfth of these is the fact that the ...

...the thirteenth of these is the fact that the ...

...the fourteenth of these is the fact that the ...

...the fifteenth of these is the fact that the ...

...the sixteenth of these is the fact that the ...

...the seventeenth of these is the fact that the ...

...the eighteenth of these is the fact that the ...

