

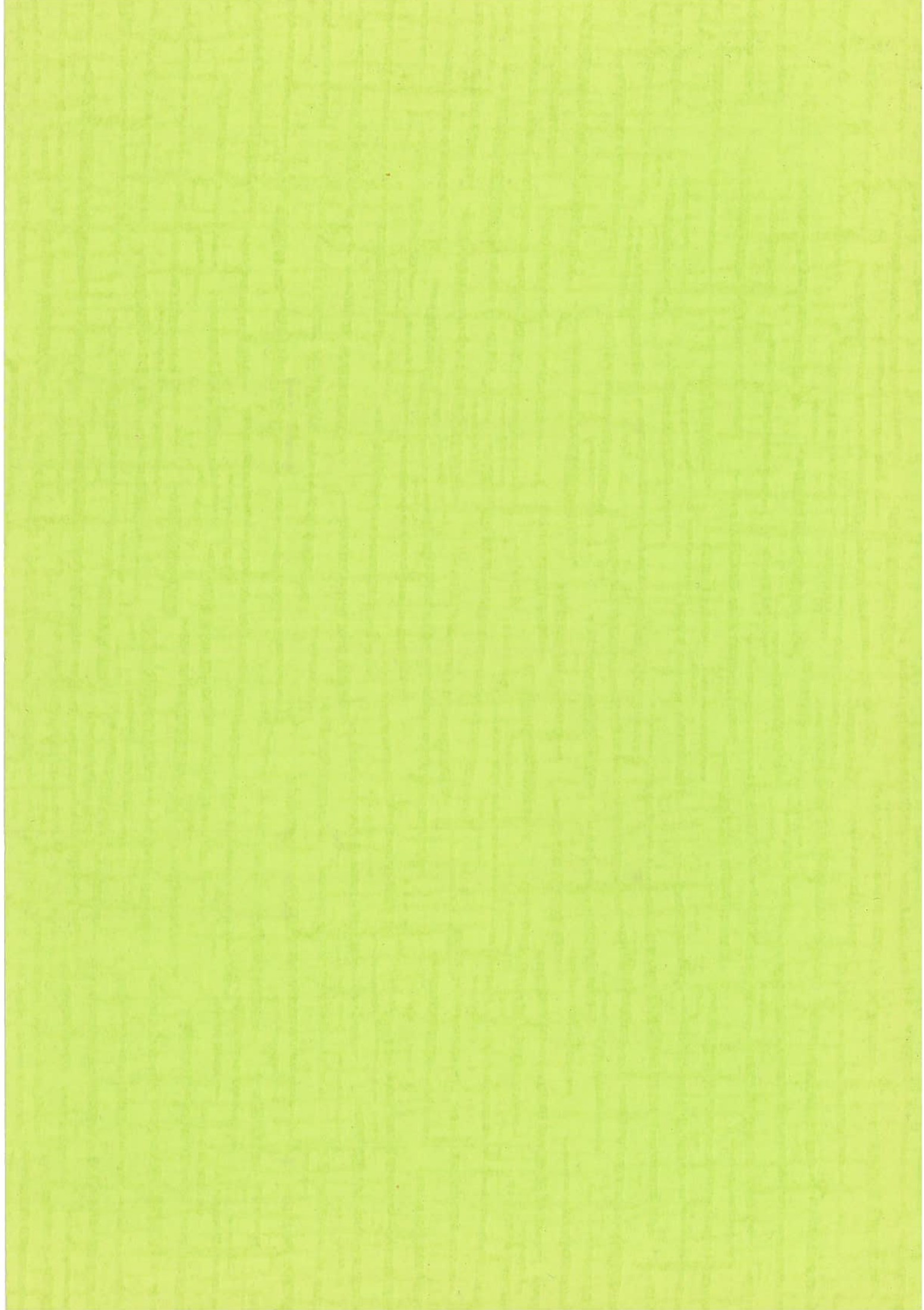
THE AURORAL OBSERVATORY

TROMSØ

NORWAY

**MAGNETIC OBSERVATIONS
1976**





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 addressed 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	5,28 nT	6,57 nT
Storm:	3',0	22,2' nT	24.0 nT

Notes to the tables

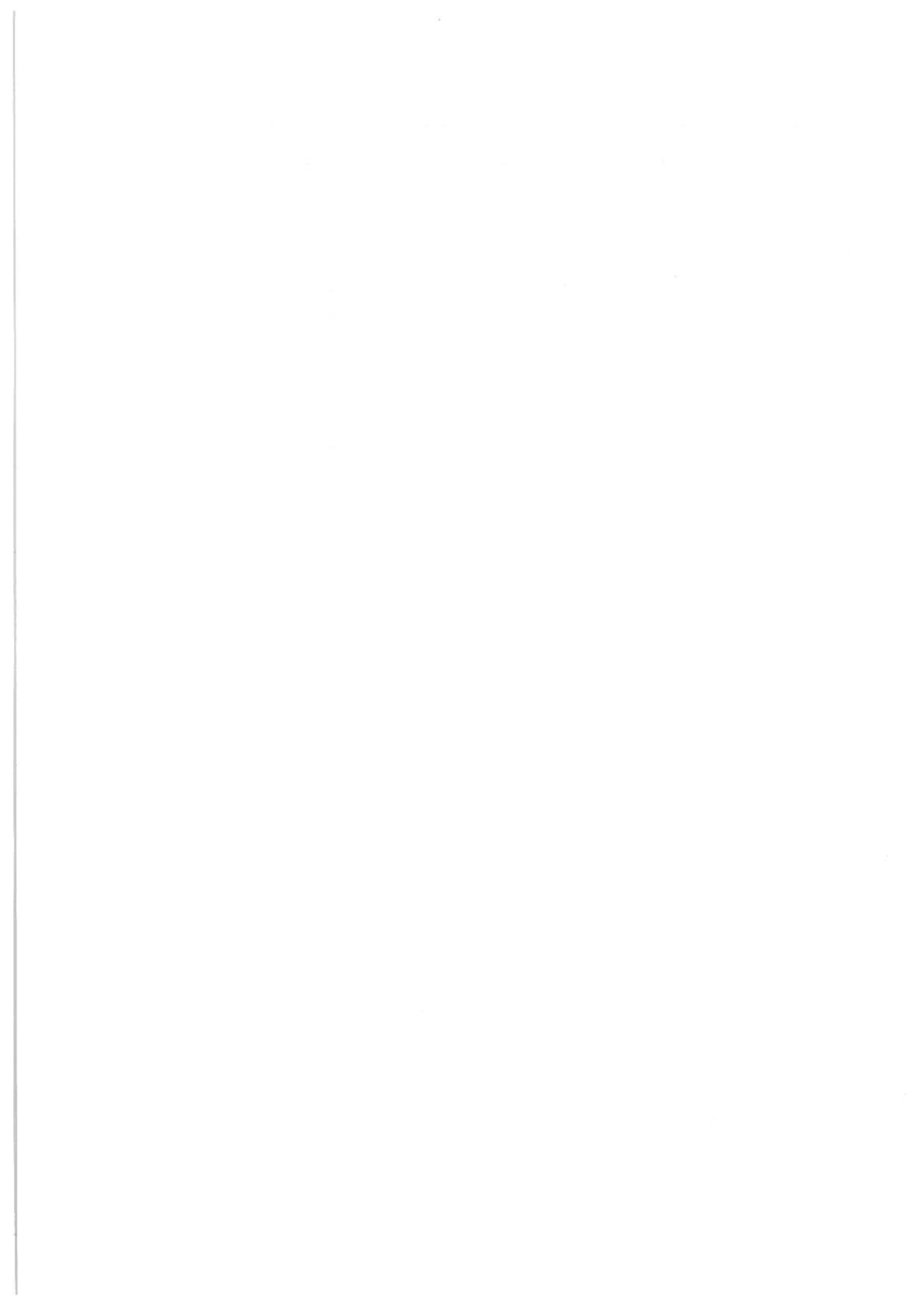
The hourly mean values are centered on the half hours. The quiet mean values are estimated from selected quiet hours only.

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

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 nT		1957	0°15',9 W	11182 nT	50868 nT
31	3°59,6	49	50198 nT	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	74	00,3 E	73	415
48	18,4	56	94	75	02,4 E	84	46
49	10,5	53	612	76	07,0 E	94	66
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				



TROMSO. DECLINATION. D=0 DFG. F + TABULAR QUANTITIES EXPRESSED IN TENTH OF MINUTES.
HOURLY MEAN VALUES

JULY 1976

Table with 31 rows (DAY 1-31) and 30 columns of data values. Includes a MEAN row at the bottom.

TROMSO. DECLINATION. D=0 DFG. F + TABULAR QUANTITIES EXPRESSED IN TENTH OF MINUTES.
HOURLY MEAN VALUES

AUGUST 1976

Table with 31 rows (DAY 1-31) and 30 columns of data values. Includes a MEAN row at the bottom.

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

SEPTEMBER 1976

DAY

Table with 30 rows (Days 1-30) and 30 columns of numerical data values representing tabular quantities.

MEAN row containing 30 numerical values representing the mean for each day.

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

OCTOBER 1976

DAY

Table with 31 rows (Days 1-31) and 30 columns of numerical data values representing tabular quantities.

MEAN row containing 30 numerical values representing the mean for each day.

TROMSO. HORIZONTAL INTENSITY. H=11300 + TABULAR QUANTITIES EXPRESSED IN GAMMA.
HOURLY MEAN VALUES

MARCH 1976

Table with columns labeled 'DAY' and rows 1-31. Each row contains 28 numerical values representing hourly mean values for horizontal intensity. The values range from approximately -140 to 181. A 'MEAN' row at the bottom summarizes the data for each day.

TROMSO. HORIZONTAL INTENSITY. H=11300 + TABULAR QUANTITIES EXPRESSED IN GAMMA.
HOURLY MEAN VALUES

APRIL 1976

Table with columns labeled 'DAY' and rows 1-30. Each row contains 28 numerical values representing hourly mean values for horizontal intensity. The values range from approximately -18 to 330. A 'MEAN' row at the bottom summarizes the data for each day.

TROMSØ. HORIZONTAL INTENSITY. H=11300 + TABULAR QUANTITIES EXPRESSED IN GAMMA.
HOURLY MEAN VALUES

SEPTEMBER 1976

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	MEAN
	-49 30 56 98 109 109 103 93 88 88 93 109 135 140 241 304 209 193 109 -6 51 109 82 -50 101	-265 24 109 135 114 40 -22 3 103 114 93 125 172 241 262 241 177 172 156 87 -22-133-228 73	35 109 103 103 82 66 103 109 103 103 119 156 135 109 109 135 146 130 156 14 35-207-144 88 79	39 -13 18 44 66 92 124 113 118 92 103 113 108 161 213 192 118 118 124 124 81 -13 -60 13 87	-314 -45 102 86 133 123 112 102 96 75 86 133 160 128 155 133 149 155 170 149 75 86 70 -24 87	8 -23 -60 55 108 118 113 108 108 103 97 129 155 161 103 140 140 129 118 108 113 103 108 71 96	50-145 -50 81 108 118 108 103 92 103 92 108 129 129 124 134 155 150 150 124 113 103 55-145 -50 75	-271 -60 108 118 118 118 108 97 92 92 108 124 118 118 124 118 145 176 134 -23 113 113 108 87 86	17 86 96 81 102 102 102 91 96 107 123 133 202 239 181 144 144 118 128 123 118 107 107 107 118	107 81 86 102 102 102 96 96 102 86 107 107 107 123 139 170 181 165 186 144 123 17 75 117 113	112 107 112 112 107 102 102 102 96 91 91 107 128 133 144 165 155 144 112 91 49 54 54 -24 101	-24 44 107 86 102 107 86 96 96 102 112 107 107 133 170 186 207 181 186 149 75 -13 44 107 106	113 103 103 97 113 113 108 103 97 97 97 103 108 108 108 108 108 124 134 124 124 124 118 -2 71 104	92 108 118 113 103 97 92 92 108 108 108 140 171 198 213 198 171 150 140 145 155 140 134 129 134	123 123 118 107 7 12 54 70 102 75 91 128 149 133 123 112 118 112 118 123 91 65 28 96 94	96 69 80 106 111 106 106 111 101 106 117 111 111 117 148 159 138 138 154 90 48 111 111 117 110	112 102 70 81 102 118 118 107 102 91 86 91 107 107 118 107 118 133 165 133-114-103 -29 -35 78	55 92 8 -50-102 -60 34 134 266 229 240 277 303 266 108 118 118 129 118 103 50 87 108 114	107 107 107 107 107 96 91 91 91 91 102 160 165 165 213 197 260 250 149 -135 12 -24 114	-209-262 -24-209-209 1 75 133 107 160 213 265 408 360 292 207 186 81 -77 28 -50-182-182-341 32	-113 2 97 44 81 97 108 108 108 103 103 161 213 203 187 187 118 166 171 44-129 -97 -7 -23 80	-70 61 103 109 125 82 109 98 109 93 119 156 167 204 183 119 151 130 130 -86 3 -91 -27 86	19 93 109 109 109 109 109 103 72 93 119 204 162 198 220 172 146 130 109 61 -6 -33 -49 72 101	81 54 65 112 112 107 107 102 91 86 91 102 112 107 117 107 118 133 133 118 107 91 81 75 100	17-299 -93 28 96 123 112 107 102 91 128 144 213 302 392 260 265 207 23-103 -61 49 70 -24 89	-263 52 132 105 121 121 111 105 95 95 105 126 137 121 116 132 158 158 132 142 116 105 79 74 98	47 -10 47 100 116 121 116 95 100 95 95 116 132 142 174 174 179 158 116 105 105 105 10 -70-116 89	-42 47 116 116 121 111 105 100 89 89 89 100 100 111 111 111 116 116 121 126 63-105 52 111 86	116 111 111 111 116 105 111 111 100 95 95 105 105 105 105 105 111 121 137 163 116 63 10 15 31 98	42 95 95 79 111 116 111 105 111 95 100 100 105 100 116 116 124 142 137 132 -68 -89-110 -36 76	

TROMSØ. HORIZONTAL INTENSITY. H=11300 + TABULAR QUANTITIES EXPRESSED IN GAMMA.
HOURLY MEAN VALUES

OCTOBER 1976

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
	0 78 125 120 115 115 110 104 83 83 178 141 104 152 136 120 104 104 120 141 115 25-217 0 90	41-127-106 -43 -69 67 120 104 110 136 157 178 173 199 173 205 173 131 104 94 -6 -27 25 25 76	-11 46 83 99 94 110 115 110 104 104 104 99 115 104 125 141 131 120 120 115 115 110 104 99 78 101	89 110 110 110 110 110 110 100 105 100 100 100 105 116 116 105 121 116 132 132 121 73 52 36 68 101	63-105-221 -5 89 110 121 105 110 100 100 79 100 105 116 132 137 168 163 68 68 89 84 89 77	95 84 105 116 105 79 89 79 132 205 153 126 105 110 116 105 105 110 116 126 52 58 21 15 100	26 100 121 121 116 116 105 105 100 100 100 100 121 116 126 126 168 216 105 116 126 110 116 110 115	110 110 110 110 116 110 105 105 95 89 95 105 116 116 126 132 142 147 137 26 31 -26 95 105 100	110 110 94 73 104 115 115 104 99 99 99 104 120 152 162 110 115 152 131 125 88 41 62 46 105	9 62 99 104 115 115 115 115 104 99 99 99 104 115 131 141 157 157 131 136 115 83 -16 -264 88	-108 -2 50 108 124 118 118 108 103 97 97 103 118 129 150 203 187 203 166 103 81 -81 -81 -13 86	-14 54 81 112 107 112 112 117 107 102 102 102 107 112 112 117 123 144 59-146-124-293 44 61	100 116 110 110 105 110 121 121 121 110 95 95 105 126 132 132 132 132 132 116 126 126 26 52 105 100 108	110 110 110 110 116 116 110 110 105 95 95 105 100 105 110 116 116 126 142 163 63-184-174-200 73	-36 95 132 121 116 84 84 84 95 126 132 174 269 316 316 227 52 184 68 63-327-290-475-369 51	-253-137-168-211 132 121 116 132 132 147 132 126 158 163 163 195 137 147 153 36-200 21-105-253 36	-105 10 79 126 95 0 89 147 132 227 211 179 269 264 147 121 132 126 26-184-116 10-121-153 71	-88-109 -62 -25 58 101 111 106 132 137 154 190 159 132 117 111 148 132 111 27-131 64 101 111 74	107 107 107 107 107 112 112 107 102 96 102 117 144 139 165 212 239 223 212 154 107 54 54 70 127	-14 -82 91 123 117 117 112 107 102 96 107 107 123 117 128 128 149 160 133 123 91 -66 -72 -51 81	80 117 117 112 107 107 107 112 107 107 107 96 107 123 112 117 117 123 128 139 154 139 112 80 113	33 38 96 117 128 128 123 112 102 107 102 107 128 139 133 117 144 149 123 123 123 107 107 102 96 110	95 106 111 106 122 127 127 111 106 95 90 101 106 117 127 154 122 201 148 106 101 90 0 43 108	106 117 117 117 117 117 117 106 101 106 111 117 117 122 154 175 180 180 169 0 117 117 106 120	85 -14 64 117 117 117 117 111 106 101 95 101 106 111 111 111 106 117 117 117 117 117 106 80 101	74 95 111 122 122 127 122 117 106 101 101 106 106 111 117 117 122 122 122 132 132 127 95 117 113	117 117 117 122 122 117 111 106 106 106 111 111 127 127 148 196 217 190 148 64-104 -9 -14 43 103	67 110 115 115 115 115 110 110 104 99 99 110 110 125 141 189 210 183 131 120 110 83 30 57 114	110 116 116 110 110 105 116 110 110 105 105 105 110 116 116 116 116 121 126 132 121 110 110 105 113	110 110 110 110 116 116 121 121 110 100 105 116 126 264 211 168 221 163 153 105 -36 -52-580-485 66	-52 63 132 126 121 73 0 68 168 179 153 116 126 269 221 184 237 132 105 184 26-248-237-316 76	

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

MARCH 1976

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 197 177 132 127 120 128 134 155 161 168 166 170 165 177 178 159 149 133 130 138 146 187 203 147 156

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

APRIL 1976

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
MEAN 189 185 152 148 139 165 165 167 174 168 164 168 172 165 170 174 167 162 157 162 176 194 210 185 170

TROMSØ. VERTICAL INTENSITY. $\gamma=51300$ + TABULAR QUANTITIES EXPRESSED IN GAMMA.
HOURLY MEAN VALUES

SEPTEMBER 1976

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
MEAN	174	139	139	144	146	147	156	163	170	175	180	185	188	191	191	187	180	173	168	165	170	167	167	179	168					

TROMSØ. VERTICAL INTENSITY. $\gamma=51300$ + TABULAR QUANTITIES EXPRESSED IN GAMMA.
HOURLY MEAN VALUES

OCTOBER 1976

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	155	157	156	149	154	161	168	175	179	182	185	189	187	190	198	197	186	184	173	180	193	176	179	168	176						

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

JANUARY 1976	98	109	84	70	68	49	40	34	43	41	21	15	12	26	13	12	7	21	23	53	132	91	92	130	54
FEBRUARY 1976	136	159	127	97	85	60	44	30	34	22	14	6	-8	-4	-3	0	26	25	25	61	43	107	174	198	60
MARCH 1976	291	305	304	259	159	106	70	57	58	45	25	2	-20	-22	-15	-1	17	28	69	28	61	81	201	169	95
APRIL 1976	209	215	194	156	130	117	110	100	88	67	17	-4	-27	-40	-34	-43	-40	-20	0	26	40	139	167	192	73
MAY 1976	194	217	200	211	170	142	108	96	66	18	-4	-19	-40	-52	-39	-26	-32	-34	-16	-12	21	87	121	153	63
JUNE 1976	175	153	173	187	144	126	119	106	73	44	26	-7	-24	-26	-17	-22	-28	-35	-38	-21	13	74	106	128	60
JULY 1976	164	183	190	172	153	119	108	86	69	38	20	-3	-17	-20	-13	-19	-15	-17	-14	-14	19	52	97	111	60
AUGUST 1976	147	141	163	126	116	111	106	92	68	34	6	-8	-21	-10	6	-3	5	-4	14	26	41	68	107	134	62
SEPTEMBER 1976	159	169	149	145	109	88	75	62	54	28	12	-6	-9	-13	-6	17	36	34	25	43	91	123	151	151	70
OCTOBER 1976	175	143	128	109	81	70	65	65	64	44	33	12	7	15	55	61	30	47	45	58	124	147	156	190	80
NOVEMBER 1976	158	154	117	100	82	68	67	72	73	67	54	42	38	36	33	51	55	53	70	84	119	140	146	131	84
DECEMBER 1976	142	135	120	110	95	81	71	65	69	67	58	48	45	39	34	52	59	64	67	79	95	110	139	151	83
MEAN 1976	171	175	163	145	116	95	82	72	64	43	24	6	-5	-6	1	6	10	13	22	34	67	101	138	153	70

TROMSØ. HORIZONTAL INTENSITY. H=11300 + TABULAR QUANTITIES EXPRESSED IN GAMMA.
HOURLY MEAN VALUES

JANUARY 1976	44	69	83	97	109	116	118	116	117	113	117	119	132	134	149	147	145	140	132	78	14	-4	16	41	98
FEBRUARY 1976	-35	-44	29	71	82	101	106	111	109	111	117	128	142	147	155	147	151	153	112	61	-23	-114	-67	-72	70
MARCH 1976	-81	-90	6	-7	56	98	107	111	112	112	125	133	142	159	168	165	152	134	106	39	12	-69	-48	-46	67
APRIL 1976	-20	-23	11	50	86	86	96	95	91	102	110	112	131	164	173	172	172	162	128	84	50	-28	-52	-22	81
MAY 1976	-3	21	41	55	90	92	98	95	93	98	114	138	151	158	172	181	184	174	142	109	58	41	7	-3	96
JUNE 1976	45	58	60	81	100	102	100	98	96	101	109	125	138	148	159	166	181	177	167	138	102	53	48	40	108
JULY 1976	28	32	65	90	101	101	101	101	98	98	103	115	138	151	156	164	176	170	158	122	84	53	38	39	104
AUGUST 1976	43	53	74	96	103	104	98	93	90	99	109	121	133	151	157	170	171	157	132	101	100	49	47	39	104
SEPTEMBER 1976	-9	26	74	81	88	91	94	96	101	103	110	133	153	163	172	159	155	147	128	86	44	15	5	25	94
OCTOBER 1976	34	51	73	89	105	106	108	109	110	114	115	117	129	147	143	146	146	149	130	100	29	14	-29	-16	93
NOVEMBER 1976	21	51	87	99	111	116	116	117	114	110	112	117	127	138	146	147	143	124	113	102	49	47	49	52	100
DECEMBER 1976	60	63	76	92	105	109	118	117	119	118	121	126	142	145	149	148	149	134	125	121	102	69	42	57	109
MEAN 1976	11	23	57	74	95	102	105	105	104	107	114	124	138	150	158	159	160	152	131	95	52	12	5	11	94

TROMSØ. VERTICAL INTENSITY. $\gamma=51300 + \text{TABULAR QUANTITIES EXPRESSED IN GAMMA.}$
HOURLY MEAN VALUES

JANUARY 1976	156	136	140	141	144	145	148	155	159	163	163	164	171	169	157	154	154	155	140	150	126	123	153	143	150
FEBRUARY 1976	156	165	138	137	141	147	145	153	160	165	171	176	178	179	171	170	144	130	104	124	170	149	138	186	154
MARCH 1976	197	177	132	127	120	128	134	155	161	168	166	170	165	177	178	159	149	133	130	138	146	187	203	147	156
APRIL 1976	189	185	152	148	139	165	165	167	174	168	164	168	172	165	170	174	167	162	157	162	176	194	210	185	170
MAY 1976	195	177	147	129	140	157	160	165	166	167	167	165	166	173	190	191	162	169	159	163	187	187	191	197	170
JUNE 1976	157	165	151	140	137	144	157	164	165	166	171	169	175	170	172	180	176	167	169	164	164	161	152	165	162
JULY 1976	173	158	140	141	144	156	160	164	169	168	168	175	176	182	185	181	185	169	156	152	142	172	175	162	165
AUGUST 1976	128	150	158	158	162	166	169	170	168	170	174	178	180	189	196	178	169	172	168	166	167	170	153	142	167
SEPTEMBER 1976	174	139	139	144	146	147	156	163	170	175	180	185	188	191	191	187	180	173	168	165	170	167	162	179	168
OCTOBER 1976	155	157	156	149	154	161	168	175	179	182	185	189	187	190	198	197	186	184	173	180	193	176	179	168	176
NOVEMBER 1976	175	153	156	160	161	172	177	181	183	183	184	187	191	190	193	198	186	176	169	176	201	181	175	174	179
DECEMBER 1976	162	171	167	163	162	170	175	181	184	185	179	181	180	193	193	191	188	191	184	173	173	179	179	166	178
MEAN 1976	168	161	148	145	146	155	160	166	170	172	173	176	177	181	183	180	171	165	157	160	168	171	173	168	166

TROMSØ. DECLINATION. $D=0$ DEG. $F + \text{TABULAR QUANTITIES EXPRESSED IN TENTH OF MINUTES.}$
HOURLY MEAN VALUES.

JANUARY 1976	78	81	76	78	72	72	70	67	65	41	34	27	23	27	33	36	40	46	44	48	55	66	71	37	53
FEBRUARY 1976	59	63	56	57	62	66	64	62	58	41	31	22	11	12	18	30	25	37	44	45	58	61	51	44	45
MARCH 1976	68	64	64	67	72	70	88	82	68	43	21	4	-1	6	25	26	28	21	37	32	35	49	44	44	46
APRIL 1976	46	53	67	82	93	103	108	95	81	47	12	-9	-7	-1	9	21	27	25	26	30	27	34	45	48	42
MAY 1976	63	75	92	106	91	116	111	91	65	28	3	-9	-17	-9	0	12	9	8	11	19	24	37	43	51	37
JUNE 1976	69	85	98	117	124	124					19	6	-4	-1	2	9	15	10	26	31	20	35		72	
JULY 1976									60	42	18	2	-11	-4	2	5	12	10	12	30	31	44	58	44	15
AUGUST 1976	83	93	98	106	118	112	110	97	72	40	15	4	-5	3	17	22	29	27	27	23	46	53	64	70	51
SEPTEMBER 1976	79	80	79	103	112	112	96	61	37	26	22	18	18	24	41	50	47	40	42						45
OCTOBER 1976	76	75	74	74	77	78	80	77	73	50	37	23	25	28	34	44	47	48	59	59	76	81	78	75	59
NOVEMBER 1976	83	87	86	83	84	79	76	76	72	63	54	49	48	54	55	55	60	69	71	79	79	83	80	79	69
DECEMBER 1976	89	84	82	84	80	77	77	72	71	62	55	56	49	61	66	67	72	76	78	88	93	97	96	83	72
MEAN 1976	73	77	78	81	82	84	84	77	67	46	32	23	15	21	30	34	35	36	42	45	51	57	62	61	52

TROMSØ. HORIZONTAL INTENSITY. $H=11300 + T$ TABULAR QUANTITIES EXPRESSED IN GAMMA.
DAILY MEAN VALUES.

JANUARY 1976	112	110	112	116	118	118	118	115	115	114	116	116	119	121	122	123	120	124	120	122	120	123	131	112	118		
FEBRUARY 1976	90	91	101	101	109	108	105	103	100	86	89	97	99	102	106	109	102	103	125	117	118	113	115	119	103		
MARCH 1976	112	116	112	113	113	113	114	106	105																111		
APRIL 1976	121	119	120	118	114	111												126	127	127	124	122	120	122	123	121	
MAY 1976																											
JUNE 1976	122	124	124	119	116													125	125	127	126	126	127	131	130	125	124
JULY 1976	117				112	104	97	90	88	93				118	119	125	125	126	127	129	131	124	120	120	116		
AUGUST 1976	115	115	113	100	100	99	94	89	97	97	97	101	112	121	124			119	126	125	124	122	114	113	112	105	
SEPTEMBER 1976	111	107	109	104	104	102	97	99					97	98	99	102	107	109	107							104	
OCTOBER 1976	111	113	113	115	117	117	115	110	105	100	112	103	106	110	113	116	117	119	119	118	117	112	113	109	112		
NOVEMBER 1976	110	110	112	113	115	118	117	115	110	108	108	108	109	111	115	118	118	117	117	117	116	115	114	112	113		
DECEMBER 1976	109	110	109	111	113	114	116	115	115	113	114	115	115	114	114	116	117	117	118	112	112	110	109	111	114		
MEAN 1976	111	111	112	111	112	113	111	109	108	107	109	109	112	114	116	117	117	119	121	120	120	119	118	115	113		

TROMSØ. VERTICAL INTENSITY. $Z=51300 + T$ TABULAR QUANTITIES EXPRESSED IN GAMMA.
DAILY MEAN VALUES.

JANUARY 1976	144	152	155	153	153	158	157	160	158	159	161	162	168	172	174	179	188	184	180	172	171	158	146	144	163	
FEBRUARY 1976	155	152	158	161	162	161	159	163	163	163	165	168	171	173	172	182	184	187	178	178	178	168	148	154	165	
MARCH 1976	155	155	155	155	153	155	156	155	154	156	153	155	157	157	158	155	159	159	159	161	159	157	152		156	
APRIL 1976	167	167	167	166	167	167	167	168	168	170	168	169	171	175	180	182	184	176	174	168	162	164	165	165	170	
MAY 1976	167	168	171	172	167	165	166	166	165	166	165	166	176	178	177	183	182	174	174	169	168	169	160	164	166	
JUNE 1976	164	162	165	164	162	162	164	165	162	162	161	159	161	160	173	172	175	175	173	171	168	167	163	162	165	
JULY 1976	165	164	165	167	165	164	165	164	162	159	159	162	157	161	169	169	176	175	167	169	168	163	166	168	165	
AUGUST 1976	169	169	165	164	165	167	167	165	163	163	164	167	168	169	161			171	170	170	168	169	171	168	166	166
SEPTEMBER 1976	178	178	177	176	166	173	170	166	169	175	175	170	168	169	173	176	175	182			163	160	165	164	172	
OCTOBER 1976	178	175	177	177	177	176	179	176	177	176	176	177	177	180	174	179	180	186	173	188	179		182	179	177	
NOVEMBER 1976	178	180	180	181	181	181	180	180	180	179	179	180	181	183	187	189	190	189	186	185	183	182	179	181	182	
DECEMBER 1976	180	181	182	181	180	180	180	179	178	179	179	183	186	189	188	188	187	188	189	189	188	186	187	182	183	
MEAN 1976	165	166	167	168	167	168	168	169	168	164	168	170	172	175	177	180	182	181	178	174	172	168	164	166	170	

TRMSO.

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

SEPTEMBER 1976

Table with 30 rows and 10 columns of numerical data for September 1976.

OCTOBER 1976

Table with 31 rows and 10 columns of numerical data for October 1976.

NOVEMBER 1976

Table with 30 rows and 10 columns of numerical data for November 1976.

DECEMBER 1976

Table with 31 rows and 10 columns of numerical data for December 1976.

JANUARY 1976
SUDDEN COMMENCEMENTS

10 0621 SSC + - A

JANUARY 1976
RAYS

19 1515 R + R
27 2200 RPS - - A
27 2238 RPS - - A
27 2311 RPS - - A

JANUARY 1976
SUDDEN IMPULSES

3 2001 SI - + A
24 2011 SI - + R

FEBRUARY 1976
SUDDEN COMMENCEMENTS

7 0928 SSC* ** ** R

FEBRUARY 1976
RAYS

12 1533 R + R

FEBRUARY 1976
SUDDEN IMPULSES

12 2054 SI* - ** R
28 1716 SI* + ** R

MARCH 1976
SUDDEN COMMENCEMENTS

1 1942 SSC - + R
3 2000 SSC - + A
20 0000 SSC - + A
31 2346 SSC* ** ** R

MARCH 1976
RAYS

30 1154 RSC + R

MARCH 1976
SUDDEN IMPULSES

10 2215 SI - + A
17 2216 SI - - R
20 1956 SI* ** + A
28 1800 SIC - + R
30 2359 SI - + R

APRIL 1976
SUDDEN COMMENCEMENTS

8 1951 SSC - ** R
11 2035 SSC - - R
26 2133 SSC + - A
26 2208 SSC* - ** A

APRIL 1976
RAYS

11 1328 RS + R

APRIL 1976
SUDDEN IMPULSES

7 2016 SI* - ** ** R

MAY 1976
SUDDEN COMMENCEMENTS

1 1932 SSC* ** + A

MAY 1976
RAYS

10 1520 RS + C
13 1409 R + R
13 2227 RS - A
17 2112 RS + + A
21 1357 R + - R

MAY 1976

SUDDEN IMPULSES
15 2000 SI - + R
31 2055 SI + R

JUNE 1976
SUDDEN COMMENCEMENTS

16 2105 SSC - = A
24 1633 SSC + - A
27 1802 SSC + + A
28 1847 SSC* ** ** A

JUNE 1976

RAYS
NONE

JUNE 1976

SUDDEN IMPULSES
1 2055 SI - = A
7 2212 SI - + A
26 1934 SI + - A
26 2020 SI* -+ * A

JULY 1976
SUDDEN COMMENCEMENTS

3 2044 SSC + + R

JULY 1976

RAYS
2 1208 RS + R
11 2235 RS - A

JULY 1976

SUDDEN IMPULSES
4 1843 SI - + A
9 1931 SI + + R
16 1909 SI* -+ ** A
25 2058 SI - ** A

AUGUST 1976
SUDDEN COMMENCEMENTS

23 0441 SSC* - ** R
2 1941 SSC* - ** A
3 1832 SSC* ** ** A
7 2051 SSC* ** - R
13 2104 SSC* - ** R
15 1905 SSC* ** + A
29 2018 SSC* -+ ** R
30 1933 SSC* - = A

AUGUST 1976

RAYS
2 2215 RS + - R
2 2311 HPS - R
7 1255 R + R
8 1018 R + = R

AUGUST 1976

SUDDEN IMPULSES
20 1931 SI + + A
23 2111 SI - + A
29 2051 SI - = A
29 2114 SI - + A
10 2115 SI* - ** A
24 1708 SI* -+ ** R
29 2115 SI - + A

SEPTEMBER 1976
SUDDEN COMMENCEMENTS

NONE

SEPTEMBER 1976

RAYS
NONE

SEPTEMBER 1976

SUDDEN IMPULSES
NONE

OCTOBER 1976
SUDDEN COMMENCEMENTS

12 1924 SSC - = A
24 1951 SSC* ** ** A
25 2125 SSC* ** ** A

OCTOBER 1976

RAYS
NONE

OCTOBER 1976

SUDDEN IMPULSES
16 2128 SI* - ** A

NOVEMBER 1976
SUDDEN COMMENCEMENTS

1 1953 SSC - ** A
8 2011 SSC - + C
9 2131 SSC - + A
18 1914 SSC* + ** A
22 1849 SSC + + A
23 1915 SSC + - C
27 2043 SSC - = R
29 2257 SSC - + R

NOVEMBER 1976

RAYS
8 1530 R + - A
21 2233 RS - A

NOVEMBER 1976

SUDDEN IMPULSES
17 2138 SIC - + A
18 1953 SI - + A
18 2006 SI* ** + A
20 2009 SI - + A

DECEMBER 1976
SUDDEN COMMENCEMENTS

1 2029 SSC* ** ** R
3 0624 SSC* ** ** A
10 2004 SSC* ** ** A
16 1107 SSC* ** ** A
26 2130 SSC* ** ** A

DECEMBER 1976

RAYS
NONE

DECEMBER 1976

SUDDEN IMPULSES
9 2131 SI* - ** A
14 2106 SI - ** A



