Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) (Month) , 19

(Institution)

Observed at Wash. Lat. — mag, Long. — mag

Mean Time

Scaled by: ,

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1					[10.7]	7.3 W	[5.6]	6.9	8.7					11.8 W	11.4 W	6.0	8.3	7 8.3	7.6	[6.5]	D	< 8.3	12.1 W	< 10.5
2		12.8 W	12.6 W		9.1	8.0	[5.6]	[5.5]	C	[9.8]	13.0 W			7 9.2	7 7.9 2	7.1	6.2	[5.4]	[5.4]	8.0 W	D			< 10.5
3					[8.7]	6.4	[6.6]	7.1 W	9.2					7 9.2	7 7.9 2	6.7	5.6 W	(5.4]	[< 5.7]	(7.5]	[7.7]	< 8.3		[10.5]
4					6.2 W	7.3	C	7 5.1	9.4				11.1 W	7 9.2	[10.2]	7.5	7.8 3	5.4	7.5	(7.1)	[8.3]	12.4 W		[10.5]
5	11.1 W				8.2	7.0	C	5.7	[9.2]	11.6 W				7 7.9 2	7 7.9 2	10.2 W	7.8 3	[5.6]	< 4.7 W	(6.7)	D	10.8 W		[10.4]
6				11.2 W	8.2	7.8	7.3 W	[6.6]	[10.1]					8.2	7 7.9 2	6.9	[< 6.2]	7 8.3	[5.4]	7.9	6 8 W	[12.2]	[10.5]	10.1 W
7					7.9	6.2	C	6.9	10.2 W	[5.4]		12.4 W		7 9.2	7 7.9 2	[8.1]	5.5	9.0 W	7.0	7.5	[8.4]			[10.1]
8					9.1	5.4 W	C	8.1	9.1					12.6 W	11.0 W	[9.7]	6.0	8.2	7.6	7.4	[8.1]		12.0 W	< 10.2
9		13.7 W	12.0 W		9.4	[6.9]	C	[9.3]	[9.8]		14.4 W				7 7.9 2	7 8.3	7.1	[7.8]	8.3	8.6 W	D	8.6 W		< 10.2
10					6.8	7.7	C	7.0 W	(10.0]						7 7.9 2	7 8.3	9.4 W	7 8.3	7.7	7.8	D	10.7 W		[10.3]
11					9.4 W	7.9	C	[5.2]	[9.2-10.0]		F. 1 140		11.8 W		7 7.9 2	7 9.2	[8.5]	7.6	8.0	D	D	10.8 W		[10.3]
12	10.6 W				< 5.0 W	5.5	7.9	8.1	7 9.2	11.6 W	1600			9.2	7 7.9 2	9.0 W	7.8	6.9	7.2 W	6.3	[8.2]	[11.8]?		[10.4]
13				12.0 W	8.6	[7.0]	7.1 W	8.0	7 10.0						[9.6]	7 8.3	6.2	7.9	8.1	6.0	9.8 W	[12.6]?	9.4	10.8 W
14		9.6 W		~~7.3~~	5.6	7.4 W	5.6	7.9	9.0 W			12.7			9.3	7 9.2	7 8.3	< 4.8 W	[5.1]	6.2	[8.6] D	7 10.2 D		10.2
15				8.7	7.1	8.0	5.7	6.9	< 5.3					11.7 W	7.7 W	7 8.3	7.7	[6.0]	6.4	8.0	[8.7] D	8.3	12.4 W	7 10.5
16		12.8 W	12.5 W	< 5.0 W	8.4	7.6	< 5.2	8.3	7.8		13.8 W				8.8	7 8.3	7.3	[5.6] W	[5.8]	6.0 W	8.3	10.9 W		10.4
17	7.0 W			[8.1]	7.6	6.4	5.4	8.2 W	9.1						[10.1]	[< 5.4]	9.8 W	7.9	[5.6]	6.5	[8.3]	11.2 W		7 10.5
18					7.2 W	7.0	7.2	8.4	8.3		[13.2]		11.3 W		9.2	7 8.3	7.7	6.4	[6.2]	7.8	D	13.3 W		10.3
19	12.6 W				C	5.9	7.7	8.4	8.4	13.2 W					[10.2]	11.4 W	6.4	6.9	6.2 W	8.0	7.9	12.2 W		10.2
20				8.9 W	C	7.6	8.2 W	8.7	[9.5]						[10.4]	< 4.7	[5.4]	C	[< 5.6]	6.9	6.2 W	12.2 W		9.5 W
21					C	6.7	8.0	9.1	9.8 W			13.2 W		10.8 W	8.0	6.5	6.2	5.7 W	[< 5.6]	D	D	7 10.9		7 10.5
22	5.8 W			[9.3-10.0]	8.3	6.2 W	6.9	[8.3]	[9.5]						10.4 W	5.5	7.3	6.5	5.5	< 4.6 W	D	7 9.2	10.5 W	10.2
23		12.4 W	5.8 W	< 5.0	7.6 W	8.0	6.9	[5.3]	[10.1]		13.0 W			10.6 W	[9.3]	< 4.8	6.8	C	7.2	< 11.6 W	D	12.7 W		< 10.2
24				[9.0]	8.6 W	6.8	6.9	8.5 W	[10.1]					11.5 W	7 9.2	7 8.3	5.9 W	7.2	7.2	[5.0]	D	[13.2]?		< 10.2
25			8.15	~~7.7~~	8.2 W	7.2	7.6	8.2	7 10.0				11.0 W	9.2	[10.4]	7.6	7.8	6.4	6.5	7.2	D	12.6 W	[10.4]	< 10.2
26	12.4 W				8.2 W	6.0	[7.7]	7.1	7.9	10.6 W					[9.8]	8.6 W	5.5	[6.0]	< 5.6 W	7.9	7.2	12.5 W		< 10.2
27			9.1	8.3 W	7.7	6.7	7.6 W	7.7	[9.4]					11.8 W	7 9.2	7 8.3	7.0	[6.7]	[5.5]	D	10.4 W	12.8 W		10.4 W
28				[7.9.1]	6.9	5.5	8.4	[8.6]	8.0 W			12.2 W			[10.2]	8.0	[5.8]	7.2 W	C	D	D	7 10.2		
29					5.6	7.1 W	8.2	8.2	7 10.0						11.2 W	8.3	7.5	5.6	[6.1]	D	D	7 9.2	10.4 W	
30			11.8 W		6.3	[6.8]	< 5.2	8.4	7 10.0		11.8 W				6.7	7 8.3	[5.4]	8.2	7.2	6.9 W		13.1		
31					7.1		6.5	7.8 W							9.0	7 8.3	7.4 W		7.8	(8.3)		7 10.2		
									(9.6)															
Median		(12.8)		8.9	8.0	7.0	7.0	8.0	9.4	(11)	(13.1)	(12.6)	(11.2)	(11.5)	(10.4)	7 8.3 (10)	7.1	6.8?	6 4?	7.5	7 8.3	(11.5)	11.2	(10.5)
Count		5		11 13	28	30	24	31	29	6	6	4	4	9	31	30	31	28	30	31	29	26	6	27

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

1

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit) (Month), 19__

(Institution)

Observed at Wash. noons 1936 1937

Lat. Mar, Long. May June July Aug Sept Oct Nov Dec Jan. Feb Mar Apr. May June July Aug Sept Oct Nov Dec, Mean Time

Scaled by:

Calculated by: Oct Nov Dec

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1				9.8 W		7.3 W	7.6 W												6.9		9.8 W			13.8 W
2									7.7 W			12.4 W						7.2 W	6					
3	11.7 W	9.6 W				5.2 W								13.2 W	13.0 W				6.2				14.1 W	
4			9.8 W								13.0 W									6.2 W		8.55		
5		9.7 W						7.8 W									~4.5~							
6	10.4 W				10.6 W								11.5 W					~5.5~				12.6 W		
7	(11.0) B									11.6 W						10.2 W			~5.7~ W					
8	12.3 W			[8.3] W			6.1 W											7.4 W			10.2 W			12.0 W
9			11.5 W						9.6 W			11.4 W												
10	10.2 W	9.6 W				7.0 W									12.6 W								13.0 W	
11		9.6 W	10.8 W								13.8 W									8.9 W				
12		9.5 W						7.6 W						13.6 W							9.2			
13	9.7 W				6.2 W								11.2 W									13.2 W		
14	9.2 W									11.6 W						10.0 W	9.2 W		~5.5~ W					
15	9.8 W			10.6 W			7.2 W					11.4			6.8						11.0 W			11.4 W
16	[8.5] W								8.6 W			11.2 W						7.4 W						
17	9.2 W	10.4	7.7 W	7.7 W		6.2 W								12.7 W	11.4 W								12.4 W	
18			7.9 W			7.8 W					11.8 W									8.6 W				
19		9.7 W	[9.3] W			~7.4~		8.0 W									7.0 W							
20	10.4 W		9.4 B W		7.2 W								10.2 W									13.1 W		
21		10.8 W								12.8 W						8.8 W			8.0 W					
22	10.8 W			5.7 W			6.0 W					13.3			11.4 W						11.8 W			13.2 W
23									9.3 W			11.6 W						8.0 W						
24	[10.2] W	11.3 W				7.8 W								13.7 W	12.1 W								14.2 W	
25			8.8 W		8.0 W						11.6 W									9.2 W				
26		11.0 W						5.8 W									6.6 W							
27					7.3 W								11.6 W			5.4 W						13.1 W		
28	[12.0] W									11.8 W									8.2 W					
29	11.2 W			6.8 W	6.8 W		6.7 W														11.6 W			11.2 W
30									9.9 W			[12.6] W						8.1 W						
31															8.3 W									
Median	10.4	9.7			(7.2)						12.4	(11.6)		(13.4)	(11.8)	9.4	6.8	(7.4)	6.4	(8.8)	(10.6)	(13.1)	(13.5)	(12.0)
Count	15	10									4	7		4	6		4	6	7	4	6		4	5

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Book #1 Red

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) May (Month) , 19 33

(Institution)

Observed at _____

Lat. _____ , Long. _____ _____ Mean Time

Scaled by: _____ , _____

Calculated by: _____ , _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1																								
2																								
3																								
4																								
5																								
6																								
7																								
8																				N	N	N	35+	27+
9	33 25	31 23	E	E	E	30 22	42																(36)	(39) 31
10																								
11																							36 [35]	[38]
12	[31]	(385) 35 (37) 29	(365) 285	34 26	34 26	32																		
13	31+	34 26	34 26	325 245	30 22	33 25	305+	39	425											N	N	(44) 36	31 (39)	(345) 263 345+
14	(355) 275	[26]	(32) 24	(32) 24	(305) 225	27+	355	41														(617)		
15						34 26	335+												N	N	N	(355)	(67) 27	(65) 57
16	34 26	34 26	34 26	345 26	36 28	744	744													N	N			35 27
17	31 23	32 24	E	E	E	37 29		375															34	34 26
18	(31) 23	[24]	335 285	[23]	[21]	(33) 25	355 355													N	N	34	345 263	(33) 25
19	(33) 25	[E]	E	E	E	29+																	28	31 23
20	30 22	29 21	E	E	E	295	(35)																	38 30
21	265+	325 245	[24]	(315) 235	635 255	288	[67]	435																
22	358	32+	28+	34 26	30 22	33																		
23	33	29 25	[28]	[26]	(32) 24	29																	405	343
24	30+	333	298 272	278 250	(275) 250	323+																		
25	L	(34) 26	(335) 285	[35] 27	348 37																		N	38
26	34	28	33 325	[23]	[32]	(34)																	35	30
27	28	273+	33 25	313 23	[21]	283	348	416																
28																								
29																								
30																								
31																								
Median	275	26	25	23	22	29	355	(41)															35	28
Count	15	16	16	16	16	16	9	5															10	14

Have shifted 04, 05 & 06 on May 27 ahead one hour

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

_____ (Characteristic), _____ (Unit), June (Month), 1933

_____ (Institution)

Observed at _____

Lat._____, Long._____ _____ Mean Time

Scaled by: _____, _____

Calculated by: _____, _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1																										
2																										
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										
11																										
12																										
13																										
14																										
15																										
16																										
17																										
18																										
19																										
20																										
21	37 27					37 29	40 32									45	425							32+		
22	(39) 385 5	27 35	255 (335)	245 (325)	265 (345)	32 x	[36]	(405)											N	N				365		
23	[32]	37 29	[27]	(33) 25																			N	38		
24	[34]	305 x	(35) 27	30 22	E-17	27 x	34 x														N		(43)	(43) 35		
25	(41) 33	(37) 29				32 x	38														N		385	33		
26	32 x	29 x	255 x	32 24	295 25																		(345) (425)	[33]		
27																										
28	40 32	345 26 5	32 24																				415	35+		
29	(39) 31																						45	365 285		
30	33 25	34 26	33 25	[22]	27 19	[27]	(34)																			
31																										
Median	32	29	255	24	20	29	34																40	34		
Count	9	7	6	5	4	5	5																6	8		

Sweep_____Mc to_____Mc in_____min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

IONOSPHERIC DATA

(Characteristic), (Unit), July (Month), 19 33

(Institution)

Observed at _____

Lat. _____, Long. _____ _____ Mean Time

Scaled by: _____, _____

Calculated by: _____, _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	33 25	33 25	27 19	34 26	32 24	32 x																	(34)	(33)
2	[30]	(26 25 345)	(34) 26	[22]	E 19	E 17																		
3																							N	N
4	✓	31 23	(335)	[24]	[23]	30 x	345 x																	335
5	305 x	285 x	[24]	19 27	E 17	27 35	(35)			(44)											(37)			
6																			44					
7																								
8																								
9																								
10																				N	N			
11																	N							
12																								
13																							N	N
14	345 x	27 35	27 (35)	22 30	[18]	27 x	35 x																	
15																								
16																								
17	34			25																				375
18	42	28 x	28 x	33	31 23	30	38	41												44+	N	365	27	3426
19	32 24	[23]	30 22	28 20	27 19	27 x	385	42	42											N				
20				30 22	28 20	33 25																		
21																			425	N	N	N		
22							(34) x													N				
23							(36) x																	
24																				415	38	325		✓
25	✓		245 325	[22]	[9]	26 34	35 x	36 x	40															325 405
26							(42)																-	36 x
27	30 38	25 33	245 325	22 30	19 27	23 31	315 x																335 x	27 35
28	235 (315)	23 (31)	[22]	20 (275)	[18]	245 325	335 x	405												(42)	41	[37]	33	325 405
29	[29]	34 26	235 315	275 355	(25)	[34]	385																(365)	275 355
30	265 345	33 25	32 24	E 17	E 17	26 34	36 x	43															37 (39) 39	36 x
31																								
Median	30	25	24	22	19	26	35	41															34	33
Count	10	11	12	13	13	13	13																6	10

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) Aug. (Month), 1933

(Institution)

Observed at _____

Lat. _____, Long. _____

all parens = ? F° with ⊕ indicate F¹ tabulated also

_____ Mean Time

Scaled by: _____,

Calculated by: _____,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	306x	E 325	[24]	[23]	[21]	34	385																30x	✓
2																								
3																								
4					32	34	345x	435																
5	✓	33	325	315	[22]	32	[33]	38														315x	335x	325
6																								
7																								
8																								
9																								
10	31	295	E 417	E 417	E 417	32	356x																	
11							337x	41																
12	(32)	[23]	(29)	(31)	(32)	[26]	38	40																
13	(32)	310	265	E 417	E 417	E 417	335x	[39]	(42)															
14	263x	(34)	35	315	265	32	35x	[41]	(44)															
15	(34)	(275)	256	275	E	(28)	35x	38																
16	275x	(29)	E [20]	265	(295)	[23]	[35]	383x																
17							316	38x																
18	292	288	284	28	272	295	345x	41 (42)																
19	298	[20] E	255	268	[17]	262	29x	(33)																
20	[25]	[24]	32	32	317	343	326x	353x																
21	✓	285	261	E	E	E	313	335	365															
22				275																				
23				287	E	E	30																	
24																								
25	265																							
26							313																	
27	313	276	271	278	27	29	37	415																
28	316	30																						
29	33	(28)	(32)	(28)	325	32	325x	40	437															
30	315	32	315	317	325	322	34x																	
31	277x	335	32	3123	3022	3123	363	436																
Median	24	22	22	20	20	24	34	40													74.1	35	305	27
Count	16	17	16	18	18	18	21	16													11	14	19	18

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit), Sept. (Month), 1933

(Institution)

Observed at _____

Lat. _____, Long. _____ _____ Mean Time

Scaled by: _____, _____

Calculated by: _____, _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1																								
2																								
3																	40	405	41	N	N		33+	26+
4	33 25	34 26	27+	265+	34 26	36 28	37	43											N	N	N	44+	35	275+
5	38 30	33 25	335 25	34 26	(33) 25	(33) 25	375	41	44											N	N	N	38	30+
6	335 25	(34) 26	(35) 27	(365) 285	(35) 27	(35) 27	345	N					56	55	49	55	5143	425	435	5N59	N57	N46	(43) 51	(39) 31	X—O
7	(395) 315	(39) 31	(39) 31	(365) 285	(355) 275	(37) 29															C			
8				C															N	N				
9																								
10																								
11																			N	N	N	33	(35) 27	335 34
12	(24)	(32) 24	(31) 23	26 18	E417	E417	(31)+	N												N	N	(315)+	(34) 26	325 245
13	325 245	(30) 22	(29) 21	[22]	[22]	(30) 22	(38)	N				62	68	50	59		53	49	5648	6052	44—	46 38		
14	E417	27 19	28 20	315 235	315 235	26 18	N	N											N	N	40	33+	(35)+ 27	07 19
15	255 175	[18]	27 19	27 19	255 175	25 17	32+	38	41	41	43		41	41	41	42	40	40	41	(40)	35	36 28	(31) 23	26 18
16	255 175	[18]	27 19	27 19	26 18	E417	325+	415											N	N		(35)	355 275	335 245
17	32 24	28 20	28 20	28 20	27 19	27 19	(32)	44+										N		N	42	36	32	29
18	35 27	33 25	29 21	E417	E417	417	AE417											N		(39)	35+	[28]	30 22	27 19
19	[19]	27 19	27 19	[18]	26 18	04 18	32												N	N	(405)	(38)	356 355	345 26
20	32 24	32 24	52 24	30 22	27 19	28 20	34+	44+	N						50	50	5547	44+	44	43	36	33+	28	33 25
21	32 24	335 245	31 23	53 25	28 20	417	32+	N											N	N	36+	335	29	33 25
22	31 23	29 21	28 20	29 21	E417	E417	E417	N										N	N	42	33	32	30	L
23	33	26+	32	32	335	32	(38)	N											44+	41	255+	(355)	33 25	26+
24	35 27	26+	32 24	32 24	255 335	32 24	(38)	N										N	N	38	31	31	29+	285+
25	27+	255+	33 25	315 235	32 24	30 22	33+	445										N	N	N	N	38	33	31
26	27+	32 24	26 18	417	417	32 24	34 26	36+											N	N	35	33	28	[24]
27	29 21	26 18	27 19	[20]	308 22	32 24	295+	[37]	43				59	53		51	6052	58	53	445	38—	34	[32]	295+
28	28+	34 26	33 25	32 24	315 235	[22]	31+	39	44										44+		38	30+	27+	32 24
29	33 25	32 24	325 245	31 23	31 23	30 22	305+	41											N	42	35+	29	34 26	31 23
30	295 215	28 20	29 21	29 21	305 225	30 22	32+	44+										N				32+	30+	27+
31																								
Median	24	24	22	22	22	22	32	44+													39	33	29	25
Count	22	22	22	22	22	22	20	19													22	23	23	22

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

IONOSPHERIC DATA

foF2 (Characteristic), Mc/s (Unit), October (Month), 1933

Observed at Washington

Lat. _____, Long. _____

_____ Mean Time

NBS (Institution)

Scaled by: SMO

Calculated by: _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	2.3 J	2.3 J	2.4 JF	2.4 J	2.6 F	[2.6] C	3.2	D ←				D			→ D	C	D	D	D	F3.9 C	3.5	2.8 F	2.6	2.5 J	
2	2.5 J	2.5 J	2.5 J	2.5 J	2.6	2.2 JF	3.3 V	D	C	D	C	D	C	D	C	D	D	D	D	D	3.3 F	3.0 F	2.9 F	2.7 F	
3	2.6 J	2.5 J	2.6 J	[2.5] C	2.5 J	C [2.3]	C [3.6]	D	D	D	D	C	C	C	D	D	D	C	D	4.3	[3.6] C	3.1	3.0	2.8	
4	2.8	2.8	2.7	2.6	2.6	2.7	C [3.2]	D ←							→ D	C	D	D	D	4.3	3.5	[3.1] C	2.9	2.8	
5	[2.6] C	[2.3] C	(2.1) JF	(2.0) JF	(1.8) JF	(1.7) JF	2.6	3.9	D	D	D	C	D ←					→ D	C	4.2 P*	(3.8) PF	(3.1) JF	(3.0) JF	2.7 F	*read from multiple
6	[2.7] C	(2.8) JF	[2.5] C	2.2 JF	2.0 JF	1.8 JF	3.0	4.2 V	D	D	C	D	D	C	C	D	D	D	4.4	3.5 F	2.8 F	2.5 JF	2.4 JF	2.6 JF	
7	2.6	2.7	2.7 JF	2.6 J	2.4 J	2.0 JF	2.6 J	4.2	4.2	D	D	D	D	C	C	C	C	C	C	C	C	C	2.3 J	(2.0) JF	
8	2.5 JF	2.4 J	2.4 JF	2.5 JF	2.6 JF	2.5 JF	2.9 JF	4.1 F	D ←				D					→ D	3.9	3.0 F	(2.6) F	(2.7) JF	2.7 JF	(2.9) F	
9	(3.0) F	3.0 F	3.1	2.9 F	2.2 JF	2.4 JF	3.1	4.3	D ←				D					→ D	4.4	3.6	3.2	C	C	C	
10	C	C	(<2.5)+ C	(<2.5)+ C	<2.5 C	(2.5)+	C	C	C	C	C	C	D	D	C	C	D	D	4.1	(2.7) F	2.3 J	[2.3] A	(2.3) JF	2.4 JF	*Est from fxed f2.5
11	2.4 JF	2.4 JF	2.2 JF	(2.0) JF	2.3 JF	2.2 JF	2.6 JF	(4.3) PF	D ←				D					→ D	(4.7) P	(4.7) P	3.4	C	C	C	*read from multiple
12	C	(2.9) F	2.7 F	2.7	2.2 JF	2.0 JF	2.6 J	(4.5) P	D ←				D					→ D	(4.2) F	(3.3) F*	(2.9) F*	2.8 JF	(2.7) F	(2.7) JF	*read from multiple
13	(2.7) JF	(2.6) JF	(2.4) JF	2.4 JF	(1.9) JF	(<1.7) JF	2.4 JF	3.8	D	(4.5) JPF	D ←		D					→ D	(4.8) PF	(3.9) F	(3.8) PF	3.3 F	3.0 F	2.9 F	
14	2.7	2.6	2.3 JF	2.0 JF	2.0 JF	1.8 J	2.1 J	3.5	4.0	4.4	D ←		D					→ D	(4.8) P	(4.1) P	[3.6] A	[3.3] A	2.9 F	(2.5) JF	
15	2.5 JF	2.5 JF	2.5 JF	2.4 J	2.2 JF	1.9 J	2.6 JF	D ←					D					→ D	(4.8) P	(4.2) P	3.1	2.8	2.6	[2.4] A	
16	(2.3) JF	(2.3) JA F	(2.4) JF	2.7	2.8	2.6	2.7 V	D ←					D				→ D	A	A	3.5	3.0	2.7	2.7	(2.4) JA	
17	[2.4] A	[2.5] A	2.7	(2.5) JA F	2.6	2.6 F	2.7 F	(4.8) P	D ←				D					→ D	4.4	3.7	3.5	3.0	2.8	3.0 V	
18	2.9	2.7	2.0	<1.7 J	<1.7 J	<1.7 J	2.0 J	(4.1) P	(4.7) P	D ←			D					→ D	(3.9) PF	2.9 F	2.5 JF	2.6 JF	(2.3) JF	(2.3) JF	
19	(1.9) JF	<1.7 JF	(1.9) JF	[1.9] A	(1.9) JF	[1.8] A	(3.0) AF	(4.2) PF	(4.8) P	D ←			D					→ D	3.8	(2.7) F	2.4 JF	2.1 JF	(2.0) JF	(2.0) JF	
20	<1.7 JF	(2.0) JF	(2.2) JF	(2.1) JA F	(2.2) JF	2.6 JF	2.7 JF	4.2 F	D ←				D				→ D	→ D	3.9 F	3.3 F	2.9 F	2.7 F	2.8 F	2.8 F	
21	(2.4) JA	(2.4) JA	(2.4) JF	2.6 JF	2.7 F	2.7	2.8	4.4 V	D ←				D					→ D	(4.4) P	3.4	2.6 F	[2.4] C	2.7 F	2.9 F	
22	(3.0) F	(2.9) F	3.0 F	3.0 F	(2.6) F	3.0 V	[4.0] C	(4.5) P	(4.7) P	D ←			D				→ D	→ D	3.8	3.1	2.7 F	2.5 J	(2.2) JA F	[2.3] A	
23	2.7 V F	2.6 F	2.6 F	3.8 V F	2.8 F	2.7	[3.4] C	(4.8) P	D ←				D					→ D	4.6 P	3.3	(2.4) JB	2.0 J	2.0 J	2.1 JF	
24	2.1 JF	(2.2) JF	2.6 JF	2.9 F	3.2	C	C	C	D ←				D					→ D	→ D	3.6	2.9	2.6	2.8	3.1	
25	3.3	3.1	3.0 F	2.2 JF	<1.7 JF	<1.7 JF	1.9 JF	(4.6) P	D ←				D					→ D	(4.7) P	(3.8) P	3.0 F	2.6 F	2.7 F	[2.7] A	
26	[2.6] A	2.6	2.3 J	2.2 JF	2.4 J	2.6 JF	2.5 JF	(4.7) P	(4.9) P*	D ←			D					→ D	(4.7) P	3.3	2.2 J	2.1 J	2.1 J	2.1 J	*read from multiple
27	2.2 J	2.5	2.5	2.6	2.3 J	2.2 J	2.5 J	D ←					D					→ D	4.1	3.7 J	2.7	2.3 J	2.2 JF	2.3 J	
28	2.2 JF	2.3 J	2.4 J	2.6	2.7	2.7	2.7	D ←					D					→ D	3.6	2.8	2.3 J	(2.1) JB	2.1 JF	2.2 JF	
29	2.1 JF	2.3 JF	2.5 J	2.4 J	2.5 J	2.5 J	2.6 JF	(4.8) P	D ←				D				→ D	(4.9) P	3.5	3.0	(2.2) JB	2.1 J	2.1 JF	2.4 JF	
30	2.6	2.7	3.0 F	2.8 F	2.8 F	2.6 J	2.8	D ←					D				→ D	(4.8) P	3.6	3.3	2.7	(2.5) J	(2.6) J	3.0	*read from multiple
31	2.9	2.8	2.8	2.6	2.7	(2.5) J	2.7	(4.9) P*	D ←				D				→ D	D	(3.9) P	3.5	2.8	2.8	3.0	2.7	*read from multiple
Median	2.6	2.5	2.5	2.5 2.4	2.4	2.4	2.7 2.6	4.6 4.4											4.4 4.2	3.5 3.4	2.9 2.8	2.6	2.9 2.6	2.6 2.5	
Count	29	30	30 31	30 31	30	29 30	29	29											28	30	30	28	29	29	

Sweep 2.5 Mc to 4.2 Mc in _____ min

Manual ☐ Automatic ☑

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) Oct. (Month) , 1933

(Institution)

Observed at _____

Lat. _____ , Long. _____ _____ Mean Time

Scaled by: _____ , _____

Calculated by: _____ , _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	23	235	24	24	25		335																	
2																								
3																								
4																								
5																								
6												66	56											
7																								
8																								
9																								
10																								
11																								
12																								
13													57	55	52	52	52	50	54		46	51		
14																								
15																								
16																								
17																								
18																								
19																								
20													63	66	73	69	62							
21																								
22																								
23																								
24																								
25																								
26													70	78			70	65	58	48				
27																								
28																								
29																								
30																								
31																								
Median																								
Count																								

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

(Characteristic) , (Unit) , Nov. (Month) , 1933

IONOSPHERIC DATA

Book #1 Red

Observed at _____

Lat._____, Long._____

_____ Mean Time

_____ (Institution)

Scaled by: _____, _____

Calculated by: _____, _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	323	324	314	325	(32)	322	253*	744									N	N	(383)	31*	316	305	322	333
2	27*	302*	301*	301*	314*	258*	255*	(411)									N	N	44	348*	312	30	303	320
3	278	295*	304*	32*	328	26*						68	79	68	68	78	N	N	N	36*	29	304	293	28
4	[24]	273*	282*	29*	292*	336	353	N	N									N	438	[39]	344*	264*	324	(315)
5	27*	32*	312*	324*	33*	299*	271*	N	N								N	N	(385)	(335)*	332	276	268*	271*
6	30	335*	[34]	34	(35)*	262*	322	N									N	N	43	[38]	334*	326	(30)	(29)
7	326*	33*	313*	276*	[24]	(285)	281	N									N	N	N	(37)*	(265)	(26)	—	—
8	—	—	(37)	[34]	(325)*								C											
9																								
10													C/64	70	56		64 N	427	385	365*	332	(32)	(29)35	(30)*
11	(317)*	(35)*	(34)*	345*	385	259*	327	N	N	N							N	N	363	256*	316	313	256*	[25]
12	326	338	27*	(345)	343	(353)	26*	385	N	N								N	(335)*	(30)	33	[22]	(273)	[22]
13	(32)	(29)*	(27)*	(325)	[24] F	[24] F	(335)	438	N	N							N		(407)				(283)	277
14	(268)	F	F	F	F	(32)	255*	412	N										34*	(31)*	285*	251*	26*	30
15	276	(28)	(34)	27	304*								74				54			347	28	264	(265)	(27)
16	[21]	313											€											
17	282*				378	39	39	N	N								N	44	357	32*	264*	26*	333	33
18	32	[28]	325	35	(37)	408	37	N									N	408	32	33	257*	(31)	(283)	(333)
19	307	34*	33*	345*	337*	313*	27*	427	N								N	N	43	303	278	261*	275	315
20	35	383	38	343	347*	343*	332*	44	N								N	N	443	357*	333*	303	28	284
21	307	30	(375)	[29]	358	335	(32)	397	N							N	N	N	N	365	(413)	337	(35)	(35)
22	277*	397	297*	32*	(32)*	29*	28*	417	N	N							N	N	337	278	345	32	283	313
23	34	28*	[30]	41	39	(40)	335	354	N								N	N		388	31	275	325	338
24	345	278	281	367	353	27*	313	N	N	N		58	70	6	68	56	66	55	335	33	(30)	(295)	273	27
25	27	278	(31)	313	313	317	327	384	N	N							N	N	414	305	322	28	263	269
26	264	278	(318)	265*	(342)	287	313	(42)	N								N	425	349*	273*	(316)	296	284	314
27	26	233	28*	313*	323	28*	318	38	N								N	N	N	(383)	[31]	332	346	(384)
28	373	(366)	(333)	(336)	363	(36)	314	339	45				70	60	62	66		(417)	335	(30)	314	313	34	312
29	(345)	361	(351)	42	365	(32)	(275)	397*	N								N	426	364	28*	27*	(286)	31	(287)
30	332	265*	258*	28	267*	313	24	35	N	N						N	N		324*	(279)*	[25]	303	28	275
31																								
Median	265	28	30	30	30	26	25	42											38	31	216	24	24	245
Count	27	25	25	25	26	25	24	24											25	26	26	26	26	26

Sweep_____Mc to_____Mc in_____min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) , Dec. (Month) , 1933

(Institution)

Observed at _____

Lat. _____ , Long. _____

_____ Mean Time

Scaled by: _____ ,

Calculated by: _____ ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	27 19	27 19	[20]	(30) 22	33	[33]	41 33	34										44	31	27 27	26+	30 22	E 17	235 235
2	E 17	28 20	(31) 23	26+	(36) 28	(31) 23	32 24	42 34									N	415	33	E 25	E 25	27 19	E 17	17
3	E 17	27 19	315 235	34 26	26+	27+	25+	34+	N								N	N	N	38	27+	315 235	(31) 23	(315) 235
4	R	R	R	R		35+	38 30	33+	N								N	N	37	33	315+	31 23	(31) 23	(32) 24
5	(32) 24	[24]	[25]	(33) 25	(32) 24	(305) 235	[22]	36 28	40	43							N	(41)	(305)	(35) 27	31 27	30 22	29 21	31 23
6	(325) 245	(39) 31	F	F	F	(33) 25	37 29	N	N		14	70	70		64	60	N64	42 (54)	36+	34+	26+	30 22	26 18	26 18
7	30 22	26+	34 26	36 28	(30)	34 26	30 22	31+	N								N	42	42	(32)+	265+	29 21	27 19	26 18
8	27 19	27 19	(315) 235	(37) 29	(39) 31	385 305	30 22	(41) 33	(44)								N	38	31	30 22	30 22	28 20	(30) 22	[22]
9	(225) (305)	(33) 25	(345) 265	(42) 34	(43) 35	355+	36 28	34	N								N	N	(385)	(265)+	28 20	28 20	(32) 24	(33) 25
10	33 25	33 25	35 27	365 345 0	31 39 0	31 39 0	34 26	(35)	N								N	N	(40)	(295)	[26]	[22]	26 18	[20]
11	[22]	32 24	33 25	28+	(36) 28	355 275	305 225	29+	N								N	44	35	36 28	33 25	30 22	26 18	25 17
12	25 17	27 19	27 19	(315) 235	39 31	30	32 24	34+	N								N	34+	(28)	34 26	32 24	28 20	29 21	265 185
13	E 17	26 18	(28) 20	315 235	28+	(315)	27+	32+	N				68				N	N	415	32	30	33 25	[22]	26 18
14	[18]	(26) 18	(39) 31	31+	30+	29+	27+	32	N								N	42	32	27+	30 22	29 21	29 21	28 20
15	E [20]	29 21	E [24]	28+	27+	26+	26+	35+									N	N	34+	355+	31 23	30 22	28 20	28 20
16	29 21	(32) 24	(31) 23	32 24	27+	31+	315 235	30+	N								N	N	37+	31 23	32 24	28 20	26 18	25 17
17	26 18	27 19	29 21	35 27	315+	33	40 32	28	43	N							N	45	35+	34+	31+	35 27	34 26	35 27
18	35 27	I [31]	35	39	40	35	26+					C												
19												C												
20													60				44	345+	32+	27+	31 23	28 20	30 22	33 25
21	26+	33 25	35 27	29+	27+	33 25	32 24	30+	43								N	35+	285	27	(31) 23	275 195	29 21	29 21
22	31 23	335 235	305+	30+	32+	32+	28+	[36]	43	(46)							N	34+	28	345 245	255 175	265 185	33 25	32 24
23	(32) 24																N	(39)	(35)	(325)	33 25	31 23	(325) 245	(325) 245
24	(33) 25	[26]	(35) 27	(35) 27	(375) 295	305+	36 28	31	43								N	34+	33 25	32 24	30 22	26 18	17 E	E 17
25	26 18	285 205	255+	(36) 28	33	39 31	295 215	34 26	42								N	36	30	32 24	31 23	31 23	32 24	32 24
26	315 235	32 24	345	(415) 335	34+	37	30+	27+	42								N	35+	29+	33 25	30 22	27 19	27 19	28 20
27	32 24	25+	315+	33+	34+	33+	31+	29+	39				66	65	65	53	N54	(44) (52)	285+	315 235	31 23	31 23	32 24	32 24
28	28 20	28 20	26+	33+	33+	35 27	31 23	27+	40								N	355	(381	(33)	28+	(30) 22	29 21	[22]
29	(32) 24					(31)	35 27	33 25	38	415							N	41	(34)+	34 26	(285)	305 225	(31) 23	(32) 24
30	(32) 24	(32) 24	[28]	34 [30]	35+	30+	29+	27+	405								N	(30)	[30]	28 325 245	31 23	27 19	25 17	E 17
31	E 17	26 18	25+	26+	31+	315+	27+	26+	41	43							N	35+	36	27+	33 25	29 21	27 19	28 20
Median	22	24	255	28	31	30	26	31	(44)									(42)	34	27	24	22	21	20
Count	28	26	25	25	25	28	28	27	24									29	29	29	29	29	29	29

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) , (Month) Jan. , 1934

(Institution)

Observed at _____

Lat. _____ , Long. _____

_____ Mean Time

Scaled by: _____ , _____

Calculated by: _____ , _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	32	27	32	32	30	315	34	36	405									[N]	412	30	295	31	295	293
2	34	31	345	35	33	26	285	32	42									[40]	[38]	[30]	305	26	26	26
3	28	28	31	28	[23]	(34)	[28]	30	365	43			52				N	(39)	(305)	(32)	27	27	[23]	(27)
4	315	315	33	35	345	305	28	27	425									(36)	345	27	295	E	255	E
5	(26)	(313)	(275)	(278)	31	305	(265)	32	N									44	44	(32)	27	E	E	E
6	E	255	E	(27)	325	325	(275)	(315)	403								N	(37)	28	32	26	[18]	251	(251)
7	E	(286)	28	31	333	315	315	31	41	42							N	(47)	33	328	29	254	257	E
8	[22]	(27)	(31)	[32]	(331)	38	(32)	(261)	(415)	42							N	N	345	(255)	(805)	A	279	365
9	A[E]	E	E	(35)	325	335	27	365	(433)								N	(41)	32	(29)	(64)	278	265	E
10	(28)	34	277	335	26	(26)	275	(32)	(44)	N			65		60	60 58	N	438	35	(37)	328	298	268	26
11	258	258	317	288	28	307	(274)	(26)	419								N		(331)	272	276	279	265	(37)
12	255	26	26	325	(333)	33	(28)	39	(41)									(38)	277	29	27	333	32	31
13	(285)	[23]	(256)	275	274	(27)	(26)	29	(435)									(305)	345	(425)	335	305	30	305
14	345	325	[36]	[36]	(363)	(34)	[32]	(33)	N								N	N	N	35	35	328	341	27
15	(33)	(35)	[30]	33	(35)	335	308	297	N								N	44	N[42]	(37)	279	257	(26)	258
16	28	(325)	(405)	(38)	276	275	352	308	(378)	438							N	44	[33]	295	28	279	308	[23]
17	32	313	313	[26]	(36)	35	325	367	N	54	57	67	67		62	63 61	N	(355)	297	274	30	279	(28)	32
18	325	26	[26]	(335)	(33)	26	268	29	(395)								N	445	402	347	284	30	297	(32)
19	(26)	265	(35)	34	34	26	256	33	(38)									427	33	295	273	27	257	267
20	(275)	(325)	32	32	[24]	312	312	(257)	(46)	43							N	N	(34)	315	27	253	313	315
21	32	325	265	27	264	26	253	253	425								N	N	36	287	267	265	261	27
22	28	27	265	(31)	(385)	363	27	(325)	405								N	N	(375)	(37)	32	293	325	33
23	(275)	(34)	(36)	348	318	308	(305)	298	40	435								433	(38)	318	(24)	[24]	(315)	A
24	A[24]	(25)	33	(25)	(257)	27	(29)	33	N				61					426	(39)	34	282	275	(255)	E
25	257	313	318	[25]	[26]	(275)	285	(28)	445								N	41	(36)	(31)	(276)	(325)	A	A
26	—	—	—	—	335	(31)	(245)	(255)	41	445							N	44	(385)	32	(31)	[20]	E	E
27	258	(278)	325	(26)	(285)	27	31	35	405									40	34	314	315	266	272	258
28	256	E	E	(258)	[20]	(315)	(31)	37	418	432								N	N	N	282	322	(27)	(26)
29	(26)	[23]	(35)	[30]	(335)	37	27	265	35	403							42	39	(32)	328	28	28	275	(273)
30	(27)	275	[95]	275	26	275	265	365	(38)									42 [40]	(38)	[36]	[33]	(35)	[31]	[26]	[22]	[21]	26
31	[20]	(278)	[22]	[31]	[24]	[25]	[22]	(273)	[19]	[27]	[20]	[22]	60		60	56	N46	(405)	29	252	353	30	[21]	284
Median	2.0	24	27	27	285	275	26	27	4.1									4.3	345	2.9	235	20	20	19
Count	30	30	30	30	31	31	31	31	30									28	29	30	31	31	30	30

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

(Characteristic), (Unit), Feb. (Month), 1934

IONOSPHERIC DATA

Book # 1 Red

Observed at _____ (Institution)

Lat. _____, Long. _____ Mean Time

Scaled by: _____, _____

Calculated by: _____, _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	285 20	29 21	27 19	29 21	315 235	323 24	32 24	297 *	44								N	(40)	31 *	28 *	26 *	E 25	E 25	E 25
2	E 205	30 22	315 235	32 24	28 20	305 225	26 *	31 *	435								N	N	N	417	[34] (36)	[26]	(185) (165)	27 19
3	265 185	27 19	[24]	28 *	30 *	28 *	245 325	31 *	413									438	(38)	32 *	245 325	235 315	24 32	25 *
4	245 325	(26) *	27 *	(28) *	27 *	31 23	225 305	30 *	(445)								N	N	42	(37) *	22 30	20 275	20 28	20 (28)
5	265 185	27 19	285 205	31 23	31 23	28 20	28 20	(29) *										N	N	(395)	316	305	266	E 25
6	[25]	(34) 26	(385) 305	(36) 28	(36) 28	(335) 235	(31) 23	(28)									45	415	[37]	32 *	27 *	25 *	26 *	26 *
7	26 *	30 *	31 *	32 *	30 *	295 *	275 *	355 *	45			64					N	415	35 *	31 *	265 *	245 325	23 31	245 325
8	(33) 25	(32) 24	(32) 24	33 25	27 *	28 *	29 *	(39)	N								N	N	N	325 *	27 *	(33) 25	245 325	27 *
9	305 *	325 *	32 *	(31) *	30 22	27 19	28 20	(30)											(33)	27 *	24 32	27 (35)	(27) 19	27 19
10	26 18	A	A	A	A		(175 (205)	(257) *	40									437	355 *	31 *	28 *	26 *	29 37	23 31
11	33 25	355 275	26 *	265 *	26 *	315 235	315 235	333 *	43									423	(46)	(405)	345 *	(30) *	(26) *	24 32
12	(285) 205	26 18	(27) 19	33 25	27 *	275 *	315 235	35 *										44	(45)	(38)	34 *	275 *	24 32	21 29
13	(28) 20	(32) 24	255 *	(26) *	(37) 29	(29) *	26 *	35 *	N									N 44	[42] 39	(36) 37	305 *	265 *	25 *	232 315
14	33 25	32 24	325 245	32 24	E							62	62	58				(46)	43	(38)	295 *	(22) *	25 *	(27) *
15	(315) 235	30 22	[21]	28 20	(315) 235	28 20	(29) 21	345	45									N	N	(385)	29 *	32	32 *	31 *
16	285 *	[26]	255 *	(255) *	26 *	(25) *	26 *	38									N	N	(435)	35 *	(33)	(30)	(34) 26	(27) *
17	32 24	255 175	26 18	(25) 17	265 185	(29) 21	315 235	37									N	N	N	36 *	32 *	27 *	26 *	(31) 23
18	(29) 21	(27) 19	(32) 24	(315) 235	E	E	E	(33) *	N									N	N	N	(38) *	315 *	28 *	27 *
19	325 245	315 235	32 24	325 245	335 255	32 24	(31) 23	36	N								N	N	N	42	36 *	(31) *	26 *	(31) 23
20	[20]	(25) 17	26 18	(32) 24	(34) 26	(35) 27	315 235	(35) *	N									N	435	(37)	(38) *	26 *	29 21	29 21
21	27 19	27 19	27 19	32 24	26 *	26 *	25 *	(39)	N				68			66	63	N 56	(46) 50	(42) 46	38	(32) *	345 265	(35) 27
22	(355) 275	34 26	(375) 290	(285) 205	255 175	E 175	255 175	39 31											N	(36) *	315 *	29 *	27 *	(25) *
23	31 23	[24]	[24]	335 255	(365) 285	(35) 27	(345) 265	40	N									N	46	(43)	(40)	[35]	(30) *	(32) *
24	33 25	255 *	25 *	33 25	(335) 255	(38) 30	(385) 295	425	N									N	N	435	(375)	34 *	(32)	[28]
25	(33) 25	(33) 25	(33) 25	32 24	36 28	35 27	(32) 24	34 *										N	40	44 36	30 *	[30]	295	28 *
26	(34) 26	[28]	(385) 305	(385) 305	34 *	(43) 35	[34]	N	N									C						
27	C																		N	N	415	305 *	26 *	33 25
28	31 23	32 24	32 24	(34) 26	(25) *	(28) *	(28)	N	N				71		76	58			N	(45)	375 *	30 *	28 *	28 *
29																								
30																								
31																								
Median	24	24	24	25	26	255	24	35											(4.5)	37	3.2	275	26	25
Count	27	26	26	26	25	25	26	26											27	27	27	27	27	27

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) , Mar. (Month) , 1934

(Institution)

Observed at _____

Lat. _____ , Long. _____

_____ Mean Time

Scaled by: _____ ,

Calculated by: _____ ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	27*	34 26	335 255	33 25	33 25	345 265	38 30	44	N									N	N	N	44	(36)*	33*	32*
2	(30)*	(35) 27	34 26	35 27	26*	26*	35 27	43	N									N	N			(365)	33*	(32)
3	E 25	33 25	32 24	32 24	(42) 34	(325) 245	(36) 28	445	N									N	N		(36)	(35)	(32)	31
4	[30]	[28]	34 26	34 26	(36) 28	(35) 27	36 28	43													[N]	41	34*	34*
5	325	30*	30*	245 325	E 17	E 17	E 17	(36)*	43										N	(39)	28*	315 235	(30) 22	(315) (295)
6	E 17	E 17	E 17	E 17	E 17	E 17	E 17	368											N	425	35*	28	33 25	33 25
7	32 24	(385) 305	26*	[26]	34 26	(31) 23	(325) 245	38	48	5446	46	4856	54	6759	[57]	6254	6254	6254	6254	N58	N 58	423 [39]	355 435 33	28	(30) 22
8	(27) 19	(26) 18	(27) 19	(28) 20	(30)	(275) 230	(31) 23	(39)	N										N	415	(35)	29*	(35) 27	(35) 27
9	(33) 25	26*	27*	27*	275*	26*	28*	44	N									N	N	(45)	[39]	33*	30	26+
10	26*	26*	26*	[27]	(28)*	33 25	(27)*	N	N									N	N	N		33+	29+	32 24
11	32 24	(32) 24	(325) 245	25*	255*	[26]	26*	45	N											N	(40)	32+	27+	31 23
12	31 23	32 24	28*	28*	27*	27*	31+	N										N	N	N	(40)	36*	[32]	27+
13	32 24	31 23	31 23	31 23	32 24	25*	30*	44	N									N	N	N	(435)	(39)	35*	305+
14	27*	255*	255*	255*	255*	26*	30*	45	N				62						N	(43)	(45)	39	36+	32+
15	30*	29	29*	28*	26*	23*	25*	44	N									N	N	44	[40]	35	33	32
16	(36) 28	(35) 27	(35) 27	26*	(25)*	255*	(27)*	41										N	N			355*	32	31
17	29	30*	295*	26*	32 24	32 24	255*	N										N	N		427	[40]	36	345+
18	30*	30*	(28)*	(25)*	255*	26*	30*	38	42									N	N	N	415	34*	32	28+
19	32 24	32 24	32 24	26*	27*	27*	31+	N										N	N	(46)	[42]	(37)*	31+	285+
20	27*	[29]	31	30*	27*	26*	31+	42	N									C						
21	C											5951	6052	55	61	62	6153	6153	61N	62N	46N	42V	35*	33+
22	30*	31+	29*	295*	27	26*	28*	N											N	N	N	N	N	(35)
23	(32)*	28*	27*	27*	27*	275*	33*	43											N	N		(355)	28*	32 24
24	28 20	27 19	[25]	[25]	27*	27*	32*	N										N	N	N	N	40	35*	29
25	27*	(325) 245	(32) 24	28 20	(29) 21	(315) 235	27*	36+											N	42	36*	(43) 35	(33) 25	(32) 24
26	(365) 285	(32) 24	33 25	26*	(335) 255	(33) 25	32*	N											N	N	(41)	(345)*	(32)+	(25)*
27	(29)	30 22	29 21	29 21	305 225	325 245	37	N											N	N	(43)	35	28	265+
28	27*	26*	25*	32 24	32 24	32 24	36	N					58				60		N	N	N	N	42	34+
29	28	33 25	32 24	30 22	28 20	28 20	26*	35*									42	41	41	37	(36)	(35)	275*	(325) 245
30	255*	(29) 21	27 19	26 18	27 19	28 20	30*	44										1	N	N	N	42	35*	32
31	28	(25)*	32 24	27 19	E 17	[17]	25*												N	N	445	(39)	31	
Median	27	26	255	25	255	25	28	44					58								42	355	32	285
Count	30	30	30	30	30	30	30	29					4								26	30	30	29

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

foF2 (Characteristic), Mc (Unit), April (Month), 1934

Observed at Washington

Lat. ____, Long. ____ Mean Time

NBS (Institution)

Scaled by: SMO, ____

Calculated by: ____, ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	2.9F	(2.4)JF	<1.7JF	<1.7JF	<1.7JF	<1.7JF	(2.7)F	3.6	3.6	(4.3)P	(4.6)P	D<								>D	(4.8)P	4.1F	3.5F	3.5F	
2	3.2F	3.0F	2.9	2.5	2.5JF	2.4JF	3.0	3.8	4.1	4.5	(4.6)PV	D<							>D	(4.7)P	4.8	3.8	3.1F	2.6F	
3	2.7	(2.4)JF	2.5	2.4JF	2.4JF	(2.0)JF	3.1F	4.1F	(4.4)F	D<			D					>D	(4.8)P	D	(4.8)P	4.7	(3.4)J	(2.7)JF	
4	(2.4)J	(2.6)JF	2.6JF	2.6JF	(2.4)JF	2.4JF	3.2V	4.0	(4.4)PF	4.7	(4.4)B	4.4	D<			D	(4.8)P	D	(4.7)P	D	4.5	3.4F	3.1F	2.7F	
5	2.5J	2.2JF	2.2JF	2.1JF	2.1JF	2.3JF	3.2	(3.8)P	(4.0)PB	(4.2)PB	4.2	(4.7)P	D<			D	(4.8)P	(4.8)P*	4.5	4.2	(4.2)S	3.8	3.3	3.0	*read from multiple
6	2.5J	2.3J	2.2JF	2.1JF	(1.9)JF	(1.8)JF	3.6	4.4	(4.6)PV	D<			D							>D	(4.3)F	2.7F	2.5J	2.4JF	
7	2.2JF	(1.9)JF	(1.8)JF	<1.7JF	<1.7JF	<1.7JF	3.4	4.1	4.5	D<			D							>D	4.0F	3.1	2.6J	2.2JF	
8	2.0JF	1.9JF	(1.9)JF	(1.9)JF	(1.9)JF	(1.8)JF	3.6	(4.8)P	D<				D							>D	(4.8)P	(3.9)P	3.1F	2.8F	
9	2.6F	2.5JF	2.5JF	2.2JF	1.9JF	1.9JF	3.5	4.3	4.4	D<			D						>D	(4.8)P	4.1F	3.5	2.8	2.5JF	
10	2.6	2.5	2.4J	2.4JF	2.3JF	2.5JF	(3.8)P	4.5	(4.6)P	D<			D							>D	(4.6)P	(4.3)S	3.4F	3.0	*Red from multiple
11	2.6	(2.2)JF	(1.8)JF	2.4JF	2.4J	2.6JF	3.9	4.2	(4.7)P	D<			D								>D	(4.6)P	3.6JS	3.7	
12	3.0	(2.8)F	2.6F	2.6	2.3JF	2.4J	3.7	D<					D								>D	(4.6)P	(4.1)S	3.4	
13	3.0	2.4J	2.3J	2.1JF	2.0JF	(2.2)JF	4.2	D<					D								>D	(4.8)P*	(4.6)P	(4.0)S	*Read from multiple
14	(3.8)PJ	3.2F	2.6JF	2.5J	2.5J	2.5J	(4.2)S	D<													>D	(4.8)P	4.3	4.1	
15	3.6	3.3	3.0F	2.9	2.8	2.5J	4.2	(4.8)P*	D<	(4.7)P	D<		D								>D	(4.8)P	4.2	3.4	*read from multiple
16	2.8	(2.0)JF	(2.2)JF	2.1JF	(1.9)JF	(1.9)JF	(4.1)P	D<					D								>D	4.2	3.5	3.1	
17	2.9	2.6J	2.3J	2.1JF	(1.7)J	2.7JF	4.0	D<					D								>D	(4.6)P	(4.1)S	3.4	
18	3.0	2.6	(2.2)JF	2.3J	(<1.7)J	(2.4)JB	(4.7)P	D<			>D	(4.6)P	D<							>D	(4.8)P	3.8	3.3	3.1F	
19	3.0F	2.5JF	2.4JF	2.6J	2.6	2.6	4.4	D<					D								>D	(4.8)P	4.4	3.9	
20	3.8	3.5	3.3	3.2	3.0J	2.6	4.0	D<					D								>D	3.9	3.3	3.0	
21	2.8	2.7	2.4J	2.2JF	2.2JF	2.5J	4.4	D<					D								>D	4.3	3.4	2.9	
22	2.8	2.6	2.6	2.4J	2.2J	2.7	D<						D								>D	4.1	3.5	3.3	
23	3.0	2.7	2.4J	2.4J	2.3J	2.7	(4.5)P	D<					D								>D	(4.8)P	(4.0)S	3.0	
24	2.7	2.6	2.6J	2.5J	2.7J	2.4J	3.7J	4.0	4.4	D<			D							>D	(4.8)P	3.8	3.0	2.7	
25	2.6	2.6J	2.6	2.6J	2.1JF	2.4J	3.7	4.5	D	(4.7)P	D	D	D	D							D	(4.6)P	(3.8)P	3.2	
26	2.7	2.5J	2.3J	2.1J	2.0J	2.5J	3.5	<3.7G	4.2	<4.0G	D<		D								>D	4.5	3.3	2.6	
27	2.3J	2.2J	2.0JF	1.9J	(1.8)JA	2.2	3.7	4.4	D				D							D	D	3.7	3.0	2.6	
28	2.5J	2.3J	2.1JF	1.9J	<1.7J	2.4J	(4.1)P	4.4#	D<				D								>D	(4.8)P	4.0	3.5	
29	3.0	2.6	2.3J	1.9J	1.9J	2.6	4.2	(4.9)P	D<				D									>D	4.5	3.5	
30	3.1	2.8F	2.6F	2.4J	2.0J	2.5J	3.9	4.1	4.5	D	(4.7)P	D<						>D	.4.5	(4.7)P	(4.8)P*	4.2	3.7	3.4	*read from multiple
31																									
Median	2.8	2.5	2.4	2.4	2.1	2.4	3.8	>4.4														4.2	3.4	3.0	
Count	30	30	30	30	30	30	30	30	30													30	30	30	

Sweep 2.5 Mc to 4.7 Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) , (Month) Apr. , 1934

(Institution)

Observed at _____

Lat. _____ , Long. _____ _____ Mean Time

Scaled by: _____ , _____

Calculated by: _____ , _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1																								
2																								
3																								
4															52	48	54	49	55	55	47			
5																								
6																								
7																								
8																								
9																								
10																								
11								51	54	54	60	53	62		64	55	61	62	53	59	56	46		
12																								
13																								
14																								
15																								
16																								
17													51											
18													51		66									
19																								
20																								
21																								
22																								
23																								
24																								
25											47	55	56		59	57	56	52	57		54	50		
26																								
27																								
28																								
29																								
30																								
31																								
Median																								
Count																								

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit), May (Month), 1934

Observed at _____

Lat. _____, Long. 046 E.T.

_____ Mean Time

_____ (Institution)

Scaled by: _____, _____

Calculated by: _____, _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	30*	325 245	30 22	29 21	29 21	33 25	325*	35*	435		45									48	47	44	(395)	35*
2	29*	32 24	305 235	28 20	29 21	26*	(40)	43					55	55	57	62	76				N	48	46	31*
3	27*	30 22	30 22	29 21	255 175	30 22	32*	335*												41	35*	275*	295 215	27 19
4	26 18	25 17	E 17	E 17	E 17	(325 245)	(33)													N	N	345*	27*	(25)*
5	32 24	(315 235)	N 24	(32) 24	35 24	29*	345*													N	(435)	344*	35 27	35 27
6	345 265	34 26	345 265	26*	32 24	35 27	36 36	N													N	34	(34)*	31*
7	26*	26*	32 24	30 22	285 205	285	35*													N	N	N	415	345*
8	30*	255	315 235	295 215	285 205	265*	365*	44												N	N	N	345*	31*
9	29*	255*	33 25	32 24	31 23	305 225	(34)*						53	54	62	54	59			N	N	N	44+	405
10	365*	32*	255*	30 22	26 18	28*	40													N	N	N	36*	33*
11	31*	28*	32 24	27 19	26 18	(28)	(40)	(39)	N											N	N	415	34*	31*
12	26*	29 21	275 195	26 18	255 175	(30) 22	(28)	35*												N	N	44+	37*	34*
13	33*	30*	27*	25*	31 23	29*	(36)													N	N	N	43	37*
14	35*	325*	295*	265*	315 235	29*	37*	(375)*													N	N	44	365*
15	345*	295*	28*	26*	25*	33*	N													N	N	N	N	(36)*
16	37*	34*	30*	25*	32 24	295*	39														N	N	43	385
17	38	36*	29*	25*	32 24	355*														N	N	N	N	42
18	36*	34*	31*	29*	32 24	31*	(365)*													N	N	44+	(385)	32*
19	305	26 26	(25) 25	E 25	(25) 25	30*	36*	41												N	N	44+	355*	A
20	A	A 41	A	A 375		31*	435	N												N	N	44+	41	37*
21	365*	35*	30*	285*	36*	34*	N													A	A	A	A	A
22	33*	285*	255*	28 20	29 21	33*	38*													N	N	44+	365*	325*
23	31*	27*	31 23	305 225	30 22	345*	435													N	N	42	34*	335*
24	(34)*	(31)*	275*	285*	26*	36*														D	D	D	D	D
25	(36)*	345*	28*	26*	31 23	32*														D	D	D	D	D
26	44	42	39	35*	29*	32*	41													N	N	N	43	36*
27	335*	305*	265*	25*	26*	35*	42													A	A	A	D	42
28	41	37*	29*	27*	27*	39	44													N	N	N	44+	415
29	35*	34*	28*	275 195	29 29	40	N													A	→			
30	A	44+	A 42	38*	315*	365*	44													A	A	A	(425)	33*
31	315*	29*	(32) 24	(31) 23	(335 255)	33*														A	A	A	44	(385)
Median	33	29	26	25	24	30	38																415	35
Count	29	30	30	30	30	31	27																29	28

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit) June (Month), 1954

Observed at _____

Lat. _____, Long. _____

_____ Mean Time

_____ (Institution)

Scaled by: _____,

Calculated by: _____,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	365*	34*	(315)*	285 205	275 195	36*	44	44+											A	A	A	A	(44)	(44)
2	35*	325*	285*	27*	32 24	32*	(43)													A	A	(44)	36*	(325)*
3	30*	265*	26*	32 24	32 24	355*	40	43													A	N	44+	36*
4	325*	32*	[28]	(315 235)	N [22]	(34)	43	N													N	N	N	40
5	35*	33*	32*	28*	305 225	30*	375	435												N	N	N	N	(44)
6	375	345*	295*	305 225	27 19	265*	34*	3.8													N	N	N	44+
7	42	41	A	A	A	30*														N	A	N	(41)	31*
8	265*	265*	25*	32 24	32 24	35*	41													A	A	A	44	35*
9	34*	27*	32 24	29 21	27 19	295*	345*															N	A	335*
10	315*	305*	28*	255*	25*	325*	365*													N	N	N	(42)	(385)
11	355*	32*	30*	275*	315 235	33*	405													N	N	N	42 N	31+
12	30*	30*	305*	27*	265*	33*	385														N	N	N	(325)*
13	A	A	A	N	305 225	315*	40	435													A	A	N A	(44)+
14	(405)	315*	(30) 22	[22]	295 215	345*	44+													A	N	N	N	
15	(44)	40	35*	315*	26*	28*	325*	36												A	N	N	44+	41
16	385	36*	33*	285*	26*	385	44+														N	N	N	(42)
17	38	345*	32*	29*	26*	335*	415														N	N	44+	42
18	39	35*	N [34]	32*	N [30]	33*	425														N			
19	✓	33*	305*	315 235	285 215	295*	365*														N	N	N	355*
20	35*	34*	315*	315*	[315]	385	N (47)														A	A	385 405	38
21	385*	33*	(335)*	315*	315 235	345 425															NA	NA	40	[37] NA
22	345*	[30] NA	[26] NA	305 225	30 22	31*	43													NA	N	(43)	425	415
23	41	35*	32*	265*	275*	375															N	N	(365)*	36+
24	NA	NA	NA	28	C															NA	NA	NA	NA	33*
25	32*	33*	325*	(325)*	(33)*	33*	42													NA	NA	NA	(38)	345*
26	(325)*	32*	(30)*	305*	(30)*	38	38	44													NA	N	42	(37)
27	35*	34*	31*	(25)*	(25)*	(35)*	41														NA	N	N	435
28	395	375*	35*	305*	28*	315*	33*														N	N	(42)	365*
29	35*	315*	27*	285 305	29 21	31 31	395														NA	43	395	38
30	NA [35]	315*	305*	245*	275 175	31*	405														NA	NA	NA 42	[40] 39
31	July 1 35*	315*	31*	NA	285	34*	36														N	N	37	315*
Median	35	33	305	27	24	33	405																744	38
Count	27	28	27	27	28	29	26																28	29

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) July (Month), 1934

(Institution)

Observed at _____

Lat._____, Long._____ _____ Mean Time

Scaled by: _____, _____

Calculated by: _____, _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	[37]	[33]	[31] 31	[30] NA	[28] 285	[31] 34	[35] 36														N	N	37	315+
2	33+	30+	265+	31 23	28 20	30+	37														N	N	(415)	37
3	35+	295+	315 235	265 185	NE	315+	(39)														N	38	(31)+	265+
4	25+	30 22	295 215	265 185	(265) 185	285+	38										44				NA	44	33+	255+
5	28+	26+	305 225	305 225	(245) (325)	28+	31+														NA	415	35+	(315)+
6	(285)+	NA	NA	NA	NA	(295)+	(37)														NA	NA	315+	285 295
7	NA	NA	NA	NA	NA	34+															NA	NA	38	335+
8	NA [30]	27 27	25+	(265)+	NA [24]	31+	355+														NA	NA	N	42
9	335+	29+	C																		→	NA	NA	(43)
10	39	(35)+	335+	31+	26+	305+	41														NA	→		
11	(34)+	29+	27+	27+	35 27	305+	41														NA	→		44 (1½)
12	(43)	38	37	355+	265+	265+	32+														NA	NA	42	30+
13	295+	30+	[27] NA	(245)+	32 24	29+	(335)														NA	→		405
14	38	NA [34]	305+	29+	(25)+	32+															N	→		44
15	N44	41	395	34+	365 285	28+	41														N	N	(43)	385+
16	365	345+	295+	285+	27+	31+	39														N	N	(44)	(395)
17	NA [37]	NA [35]	325+	N [30]	(27)+	31+	NA														N	→		375
18	295+	30+	25+	[221] 365	185 265	30+	365+	42													NA	NA	38+	325+
19	295+	285+	29+	26+	285 295	29+	385														NA	415	32+	33+
20	33+	28+	275+	32 24	305 225	33+															N	N	NA	NA
21	NA	NA	NA	→																	N	N	(46)	38
22	365+	28+	32 24	295 215	E 47	295+	415														N	N	44	365
23	33+	28+	27+	32 24	29 21	285+	375	(415)													N	N	NA	NA
24	NA	30+	275+	32 24	E 47	28+	40														N	N	(44)	405
25	35	305+	275+	32 24	295 215	275+	34+														N	N	(365)+	32+
26	31+	30+	27+	32 24	30 22	28+	(40)														N	N	N	(44)
27	37+	315+	31+	[27] NA	31 23	28+	385															(44)	345+	33+
28	29+	275+	305 225	29 21	255 175	275+	38	(415)													NA	NA	(43)	(39)
29	(35)+	33+	(29)+	29 21	27 19	(26)+	345+													N	(44)	(365)+	30+	26+
30	275 195	E 47	E 47	E 47	E 47	[20]	[29]	365+													N	NA	35	29+
31	29	(31)+	(305)+	(31)+	(30)+	315+	NA													N	(44)	42	34+	(30)
Median	33	30	275	24	225	295	38																42	37
Count	28	28	27	27	27	29	26																31	31

Sweep_____Mc to_____Mc in_____min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) , Aug. (Month) , 19 34

Observed at _____ (Institution)

Lat. _____ , Long. _____ Mean Time

Scaled by: _____ ,

Calculated by: _____ ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	A	A	A	A	31 23	335 255	37	39											425	40	40	345+	30+	25+
2	295+	315 235	28 20	275 20	265 185	323 24	40													N	(425)	(32)+	265+	32 24
3	295 215	285 205	285 204	28 20	29 21	33 25	37													N	N	355	AN	AN
4	AN	325 245	295 215	27 19	25 17	285 205	295+	(35)?												N	N	41	395+	375+
5	325 245	275 195	E 217	E 217	E 217	417	35												425	AN	AN	AN	305+	315+
6	295+	27+	29 21	26 18	25 17	32 24	(385)	NA											AN	AN	NA	AN	40	31+
7	27+	33 25	33 25	29 21	25 17	325 245	27+													A	N	N	(1425 34)	(29)+
8	30+	285+	27+	323 24	32 24	335 255	373	N												N				D
9	335+	285+	255+	312 23	313 23	27 19	N												N			→	35	38
10	27+	29+	27+	315 235	315 235	315 235	?355												N			→	41	36+
11	276+	273+	30 22	30 22	275 195	32 24	38												N				→	335+
12	295+	275+	26+	325 245	29 21	34 26	?(40)													A		N	43	36+
13	30+	(31)+	[26]N	[30] 22	29 21	315 235	35+	(41)										N						D
14					N	335 255	365												N					D
15	29+	275 195	255 195	N 177	N (27)	(30)? 22	35	405										N	44				→	405
16	37	325+	285+	30 23	28 20	34 24	38	425											N				→	38
17	345+	329+	31+	27+	26+	335 255+	35 35												N	N	N	43	40	N[35]
18	(30)?+	N[26]	37 29	N[27]	N[25]	31 23	?34													N	N	N	385	375
19	345+	315+	305+	295+	265+	335 255	36+	415											N	N	N	42	(30)+	29+
20	27+	265+	32 24	295 225	N[20]	(345 265)	C																	
21																								
22											C								435	(43)?	(43)?	(43)?	(36) 43?	(305) 285
23	N[24]	N[23]	21 29	(218) 295?	(20) (278)?	(20) 285	(34)+												N	N	N	N	?416 33	30+
24	22 30	20 28	[22] N	245 325	26+	265+	(37)?	42											?44	N	N	N	N	325+
25	265+	N[265]	265+	(233)? 315?	(26)?+	255+	335	(41)	44										42	41	(41) N	405	385	36
26	345+	325+	285+	26+	225 305	24 32	332+	39												N	N	N	41	40
27	315+	31+	(30)+	265+	22 30	205 285	34+	42												N	N	34+	29	(201
28	195 275	215 295	29 21	29 21	17 25	17 25	265+													41	365+	335+	N	N
29	17 N	17	17	17			20	25	28										N	N	40	30+	38	385+
30	265+	255+	275+	265+	33 25	31 23	N	N																
31																								
Median	28	27	255	23	22	24	36																40	325
Count	24	25	25	25	26	27	26															11	25	25

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

IONOSPHERIC DATA

(Characteristic), (Unit), Sept (Month), 1934

(Institution)

Observed at _____

Lat. _____, Long. _____ _____ Mean Time

Scaled by: _____, _____

Calculated by: _____, _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1																						435	(32)*	(28)*
2	275*	27*	33 25	32 24	30 22	295 215	N[36]	[41.6]	[5.0]	5.1	5.1	5.4	5.8	5.8	5.6	5.1	4.8	4.8	4.9	N[48]	N[46]	N[43]	35*	38 [30]
3	30*	30 22	295 215	275 195	47 NE	47 NE	325*	(405)												N	N	405	35*	(33)*
4	(275)*	30 22	N	N	N	N	36*													N	N	N	31 31*	
5	30*	295*	26*	27*	305 225	27 19	365*	[4.8]	[5.4]	[5.6]	[5.7]	5.7	5.3	5.5	5.6	5.7	5.7	5.5	[5.6]	[5.5] N	[5.1] N	[4.4] N	35*	28*
6	27*	255*	25*	25*	295 215	215 295	36*	44												N	N	425	375	(325)*
7	32*	28*	325 245	315 235	295 215	285 205	31*	40												N	N	36	(31)*	295*
8	26*	30 22	295 215	285 205	28 20	315 235	42	N												N	N	43	(34)*	295*
9	295*	28*	255*	33 25	30 22	29 21	38													N	N	425	335*	295*
10	29*	29*	295*	32 24	28 20	275 195	38													N	N	44	40	33*
11	28*	285*	29*	27*	25*	25*	35*	(425)												N	N	N	44	36
12	315*	335 255	295 215	27 19	27 19	275 195	31*	415	[4.9]	[5.3]	5.5	5.6	5.7	5.2	5.3	5.4	5.2	5.6	6.4	6.2 N	5.2 N	44 48	395	345*
13	30*	29*	275*	315 235	29 21	30 22	395	N												N	N	(43)	385	355*
14	295*	285*	26*	275 195	255*	335 255	385	N												N	N	44	395	38
15	33*	28*	265*	255*	315 235	32 24	38													N	N	405	35*	325*
16	30*	28*	275*	25*	325 245	31 23	33*	N												N	N	39	38	35*
17	33*	28*	26*	30 22	255 175	425 17	39	39												N	(38)	35*	295*	28*
18	295*	29*	26*	27*	(68)*	31 23	385	N												N	N	38	29*	28*
19	275*	27 285*	27 29*	28*	275*	255*	37	N[44]	4.8	5.0	5.1	5.2	5.2	5.7	5.8	6.2	5.8	[5.7]	[5.7]	[5.7] N	[5.8] N	44	35*	30*
20	295*	28*	33 25	28 20	275 195	29 21	345*	N												N	(425)	(395)	34 36*	30 32*
21	265*	32 24	315 235	30 22	305 225	295 215	325*	40												N	N	N	415	365
22	35*	28*	325 245	29 21	275 195	28 20	305*	40												N	38	33*	275*	25*
23	305 225	27 19	275 195	27 19	27 19	28 20	(35)*	N												N	N	365*	30*	295*
24	36 28	(29)*	335 255	295 215	25 17	E 17	275*	385												N	405	N[39]	N[37]	43 35
25	30*	29*	34 26	33 25	27 19	25 17	(315)*	N												36*	255*	29 21	275 195	NA [20]
26	285 205	28 20	285 205	33 25	30 22	325 245	(36)*	[4.7]	5.2	5.7	5.6	5.4	5.6	5.8	5.8	6.2	6.2	[6.2]	[5.6]	N[49]	415	35*	29*	365 295
27	26*	28*	295*	26*	255*	335 255	30*	365												425	32*	28*	32 24	32 24
28	31 23	33 25	315 235	32 24	31 23	305 225	33*	425												N	(33)*	28*	265*	255*
29	34 26	33 25	325 245	33 25	34 26	255*	38	N												N	43	375	33*	28*
30	295*	285*	295*	27*	275*	26*	325*	425												N	38	33*	265*	31 23
31																								
Median	295	28	255	245	22	315	355	(44)	5.0	5.3	5.5	5.4	5.6	5.7	5.6	5.7	5.7	5.6	5.6			405	34	3.0
Count	29	29	28	28	28	28	28	23														30	29	30

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) Oct. (Month) , 1934

(Institution)

Observed at _____

Lat. _____ , Long. _____ Mean Time

Scaled by: _____ ,

Calculated by: _____ ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	30 22	305 225	315 235	32 24	315 235	32 24	325*	43											N	N	34*	285*	275*	265*
2	265*	27*	265*	265*	27*	325 245	335*	44	N										N	435	355*	30*	295*	265*
3	265*	255*	24*	26*	265*	245*	325*	[44]	N [54]	[58]	[61]	5.9	6.0	6.5	6.5	5.8	5.9	6.2	[54]	(43)	345*	(30)+	59+	375*
4	27*	275*	255*	26*	275*	285*	38	N	N										N	N	(365)*	315*	325*	28*
5	275*	36 28	34 26	35 27	28*	28*	365	N											N	N	415	365	35*	29*
6	355 275	36 28	365 285	365 285	40 32	39 31	N	N											N	N	35*	33*	315*	(305)*
7	29*	29*	29*	31*	305*	29*	37	N											N	N	415	345*	335*	34*
8	31*	26*	27*	255*	24	25*	35*	N											N	N	38	305*	29*	27*
9	255*	315 235	325 245	31 23	326 245	33 25	34*	N											N	39	32*	29*	29*	295*
10	28*	275*	28*	275*	27*	275*	35*	[46] N	[53]	[58]	[62]	6.5	6.6	6.4	6.1	6.2	6.5	5.8	N 53	355	315*	295*	275*	28*
11	275*	265*	265*	275*	28*	26*	33*	N											N	335	295*	26*	26*	26*
12	26*	265*	265*	33 25	32 24	28 20	28*	N											N	42	355*	32*	31*	29*
13	28*	30*	285*	275*	255*	25*	33*	N											N	38	35*	32*	305*	28
14	245 325	26*	245 325	24 32	31 23	30 22	35 27	425											44	37	32*	27*	N [28]	N [24]
15	30 22	225 305	24 32	N [25]	33 25	33 25	305*	N											N	405	305*	255*	N [24]	N [22]
16	28 20	195 275	33 25	265*	26*	225	26*	N											N	(335)*	275*	26*	28*	31*
17	31*	32*	325*	335*	32*	29*	33*	N [51]	[60]	6.3	6.3	6.4	6.4	6.2	6.5	6.4	6.6	[60]	N [60]	41	335*	335*	325*	30*
18	31*	32*	32	33	29*	265*	31*	N											425	315*	255*	24	255*	255*
19	255*	26*	275*	28*	275*	26*	295*	N											44	32*	27*	27*	295*	32*
20	315*	31*	315*	325*	315*	28*	31*	N											N	N	N	(44)	35*	30*
21	345*	34*	345*	345*	32	24	255*	425											N	(40)	33*	315*	305*	28*
22	27*	275*	265*	32 24	30 22	28 20	32 24	N											39	36*	34*	31*	295*	275*
23	26*	26*	26*	26*	24	23	26*	N											355*	31*	29*	26*	265*	285*
24	28*	23	275*	27*	28 20	N [17] E	28 20	37	42	44	47	5.1	6.2	5.2	5.2	5.1	5.0	[44]	34*	34 26	275 195	295 215	32 24	27*
25	315 235	30 22	285 205	N [21]	(24) [21]	N [21]	30 22	41											425	32*	34 26	31 23	32 24	33 25
26	26*	26*	305*	305*	29*	23	245	N											N	415	295*	31 23	305 225	31 23
27	325 245	275*	(27)*	28*	31*	325 245	32 24	N											N	44	275*			
28	N	285*	31*	29*	29*	23	31*	N											32 32	295 295	315 235	NA 225	25*	265*
29	325 245	(285) 205	33 25	32 24	335 245	286 202	305*	N											34*	275*	315 235	N [23]	N	N
30	N	N	295 215	30 22	N [19]	205 E [47]	E [35]	43											385	34*	N [27]	(31) 33	305 225	N [20]
31	(29) 21	30 22	29 21	27 19	28*	275*	26*	N [45]	[55]	[61]	[64]	6.5	6.6	7.3	7.0	6.5	[5.4]	[4.6]	365*	365 285	28 20	25 17	35 25	32 24
								(46) 44											(5.0) 4.4					
Median	27	27	265	27	27	245	31		5.4	5.8	6.2	6.4	6.4	6.4	6.5	6.2	5.9	5.8		39	315	29	28	275
Count	29	30	31	31	31	31	31												31	31	31	36	29	29

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

IONOSPHERIC DATA

(Characteristic) , (Unit) Nov. (Month) , 1934

(Institution)

Observed at _____

Lat. _____ , Long. _____ _____ Mean Time

Scaled by: _____ ,

Calculated by: _____ ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	32 N(31)	N(30)295	N(30)30	N[34]	(265)255	32 25	28+	N	N								N	N	39	335+	265+	N[26]	25+	265+
2	28+	305+	285+	305+	285+	305+	31+	N	N								N	N	N	36+	31+	3426	3325	315+
3	325+	305+	4234	(345)+	355+	34+	305+	(40)	N								N	N	35+	275+	335255	26+	26+	28+
4	26+	29+	30+	305+	315+	30+	26+	N									N	N	36+	(33)+	31+	27+	25+	25+
5	265+	255+	26	28+	29+	28+	27+	N	N								N	N	N	355+	31+	305+	31+	295+
6	30+	31+	33+	305+	295+	295+	28+	N	N									N	41	35+	28+	25+	285+	305+
7	30+	32+	30+	305+	30+	255+	(25)+	44	N									N	N	44	385	255+	25+	26+
8	295+	30+	28+	27+	235315	2820	2719	44	N									N	N	365	285+	325245	25+	29+
9	4335	4234	3931	3931	305385	29+	3729	N	N									N	355	(315)+	3729	3729	385	3740
10	415335	3729	295+	4032	4234	325+	31+	N	N									N	345+	265+	3123	2820	285265	2921
11	2921	(27)+	31+	335+	375	375	345	N	N									N	35+	27+	335235	2820	3022	3224
12	325245	27+	275+	30+	31+	315+	305+	395	N									N	39	325+	27+	26+	25+	265+
13	27+	29+	28+	29+	32+	285+	26+	N										N	N	375	30+	27+	265+	30+
14	345+	36+	335+	4[34]	34+	29+	2719	435										N	34+	29+	26+	213426	2820	47NA
15	47NE	255+	28+	295+	31+	28+	3022	43	N									N	37+	36+	27+	3123	335315	3224
16	3224	275+	275+	285+	29+	255+	305225	N										N	44	31+	235315	3223	39 N[31]	20 17 N 275
17	2820	305225	315235	3123	29+	27+	25+	44	N									N	415	34+	33+	26+	3224	305225
18	3022	26+	28+	29+	265+	26+	26+	N										N	44 [41] 345	28+	235315	195275	2517	1725
19	2719	3123	25+	26+	27+	27+	305225	N										N	335+	32+	28+	2921	47NA	47NA
20	285205	2921	N[32]	3022	3224	25+	305225	40										N	33+	235315	27	18 26	47NE	17 27
21	2719	275195	3123	275+	285+	25+	285305	38										N	345+	28+	3023	195275	275195	1727
22	2719	2820	255+	28+	28+	255+	295215	39										N	34	27+	2820	2719	NA	185265
23	2719	2921	3123	27+	305+	31+	315	(405)										N	315+	295245	265185	NE 47	NE 47	NE 47
24	47NE	2517	2820	265+	29+	29+	3123	38	N									N	385	27+	2921	2820	2719	285205
25	2432	285+	355+	385	38	335+	255+	385	N									44	(37)	33+	285+	255+	27+	26+
26	275+	285+	31+	31+	30+	255+	3325	(435)										435	285+	265+	3123	3022	2820	3022
27	26+	285+	38+	355+	37	325+	375295	43										44	33+	29+	3123	3022	2820	285205
28	2921	275195	325245	305+	34+	275+	275+	415										N	37	(33)+	2820	2820	2820	2820
29	2820	2820	3224	295+	32+	305+	3822	36										N	N	33+	3224	3123	2921	305225
30	3325	32+	355+	295+	295+	30+	3123	37										N	N[34]	285+	295215	285205	2820	2820
31																								
Median	24	27	28	295	30	28	25	44											37	32	26	23	22	225
Count	30	30	30	30	30	30	30	30											30	30	30	30	30	30

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit) Dec. (Month), 1934

(Institution)

Observed at _____

Lat._____, Long._____ _____ Mean Time

Scaled by: _____, _____

Calculated by: _____, _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	38 30	305*	35 J	35*	34 J	(32)*	335	41										N	N	35*	27*	27*	37 29	39 31
2	(435) 355	36	39	N [41]	43	34*	335*	43	N									405	345*	295*	26*	255*	325 245	325 245
3	31 23	30 22	(305)*	31*	315*	32*	30*	44	N										N 44	315 395	[28] N	245 325	[29] N	34*
4	34*	325*			(28)	C												C						
5																		N	33*	245 325	23 31	195 275	[21] NA E	[23] NA E
6	325 215	295*	32*	30*	315 235	32 24	315 235	34*										C	31*	255*	32 24	31 23	275 195	N [18]
7	265 185	32 24	32 24	26*	32*	33*	315 235	36*	N									43	33*	275*	305 225	275 195	27 19	N [20]
8	28 20	275*	30*	295*	315*	31*	28*	41	N									N	335*	31 23	285 205	28 20	26 18	28 20
9	285 205	25*	31*	315*	325*	305*	275*	34*	N									N	335*	31 23	305 225	27 19	28 20	295 215
10	28*	32*	33*	335*	33*	31*	315*	(405)	N									43	305	25*	31 23	285 205	295 215	28 20
11	31 23	275*	31*	32*	305*	31*	295*	355	N									44	335*	345*	32 24	30 22	305 225	30 22
12	25*	285*	29*	305*	30*	275*	235 J	315*	N									N (37)	285*	26*	295 215	29 21	29 21	285 205
13	29 21	31 23	26*	29*	29*	285*	255*	31*										N	32*	305 225	279	28 20	29 21	29 21
14	29 21	31 23	31 23	25*	275*	26*	20 J	265*	N									N	(37)	27*	305 225	27 19	25 17	NE 17
15	NE 17	27 19	25*	275*	29*	30*	245 J	31*	N									44	32*	30 22	285 205	305 225	305 225	285 215
16	28 20	25*	33*	365*	36*	35*	33*	38	N									415	31*	30*	315 235	31 23	30 22	305 225
17	295 215	25*	305*	335*	335 J	335*	305*	[325]*	N									N	42	31 23	[22] NA	215 245	N [21]	21 19	295 215
18	NA [24]	27*	325*	335*	325*	315*	31*	345*	N									N	C					
19	305*	33	C [36]	395	395	NA	N	N										N 46	35*	31 23	235 315	225 305	235 315	265*
20	33*	35*	34*	365	335*	345*	305*	[34] 43	N									N	42	345* [30]	N 33	[24] N 31	[22] N 30	30 23 31 26*
21	34*	335*	385	41	35*	26 J	25*	33*	N									N	43	34*	32*	315 235	32 24	(36) 28 335*
22	35*	40	[40]	40	40	40	35*	34	N									C						
23	C																							C
24	C																							C
25	C																							C
26										C								N	425	38 30	235 315	E N [21]	19 27	215 295
27	215 295	30 22	31 23	25*	29*	27*	16*	31*	N									N	42	33*	27*	32 24	30 22	28 20
28	235 305	(30)* 25	395	415	405	38	35*	345*	N									N	N	365	(285)	245 355	26*	27*
29	26*	27*	[26] 325	265*	27*	29*	25*	31*	N									N	N	N	425	35*	26*	(33) [29]
30	325*	35*	335*	34*	335*	31*	30*	335*	N									N	N	N	415	36*	335*	27*
31	275*	305*	34*	35*	31*	325 245	29 21	265*	N									N	42	395	305*	295 215	275 195	29 21
Median	24	28	32	335	325	31	29	34											345	295	235	22	22	22
Count	26	26	25	25	25	24	24	25											25	25	25	25	25	25

Sweep_____Mc to_____Mc in_____min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit), Jan. (Month), 1936

Observed at Wash., D.C.

Lat. ____, Long. ____ 0 X

(Institution)

Scaled by: ____, ____

Mean Time

Calculated by: ____, ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	[305]	(30)?	(31)?	[32]?	(29)?	[29]	305	335	N	4.4?								N	375	31	315	26	315	305
2	305	26	31	33	32	26	315	31	[54]N	[64]	[74]	[80]	8.2W	7.8	7.3	70	[65]	[56]	37	258	314	30	315	27
3	[29]N	28	[30]N	31	25	26	255	(315)?										N	39	34	34	31	32	313
4	255	33	[335]N	[375]N	415	325	317	42	N										44	35	32	305	29	29
5	305	31	[34]N	40	[40]N	395?	[32]N	[30]N	N										34	345	285	275	(1.9)N	(1.9)N
6	283	[27]N	270	[27]N	255	27	33	315	N										33	316	335	30	28	28
7	32	32	303	255	31	315	275	31										44	375	295	27	32	278	283
8	255	28	305	34	34	305	30	315											385	30	29	31	276	28
9	28	295	30	25	28	26	25	33	[53]	[56]	59	63	7.2W	70	70	64	69	[55]	35	31	296	29	[18]	335!
10	375	31	35?	305	345	30	255	265											33	32	26	315	305	31
11	27	(28)?	33	325	305	295	28	305											N	385	28	31	28	295
12	30	31	255	28	32	335	315	31											355	34	(32)	315	303	28
13	[31]N	26	315	333	39	37	325	315										43	(405)	N[365]	28	?365	29	30
14	255	263	[30]	[56]	375	39	34	355											N	28	[28]N	—	—	—
15		297	32	305	305	34	315	355											N	395	325	295	295	28
16	30	315	32	325	315	255	265	(44)	62	64	63	70	7.6W	71	68	72	73	(64)	[55]	40	36	33	28	28
17	325	305	26	28	27	26	[25]	335	435										N	N	(43)?	(38)	35	305
18	285	38	365	385	35	33	335	35											44	[42]	33	265	275	28
19	275	[37]	327	283	285	31	32	415											44	[42]	(40)	33	325	26
20	326	32	345?	(35)?	35	34	335	35										C						
21	C																							C
22	C																							C
23	C											7.9	8.1W						N	43	375	305	(265)	255
24	32	325	34	335	345	285	31	39											N	N	34	263	26	265
25	32	315	305	31	32	32	32	39											N	425	31	27	28	285
26	265	275	305	335	35	345	305	35											N	355	27	32	255	265
27	27	265	355	365	38	40	405	425											N	N	38	355	—	—
28	—	425	42	385	32	25	31	275											N	N	36	305	35	33
29	30	30	305	255	34	37	39	424											C					
30	C											68	7.0W	69	65	65	69	64	44 425	345	272	323	30	28
31	28	305	32	305	(27)21	(28)	267	26	44										(415)	32	363	30	273	26
									(8 415 (5.3)	52	55	62		62	61	60	61	(60)						
Median	23	24	26	295	31	295	275	315		60	63	70	7.6 68	70	69	685	69	(56)	(44)	35	29	295	225	215
Count	25	27	27	27	27	27	27	27	5	4	3	6	5	4	4	4	4	6	27	27	27	26	25	25

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) Feb. (Month) , 1935

(Institution)

Observed at _____

Lat. _____ , Long. _____ _____ Mean Time

Scaled by: _____ ,

Calculated by: _____ ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	N	N	N	N	N	38	N	(28)*	N				W		5.3			N	N	N	335*	335*	33*	325*
2	265*	325	(36)	33	33	26*	245	27*	41				5.5W		5.2			N	(405)	285*	32	305	28	26
3	N	17	17	17	E	17	N	30	405	42			4.4		5.4			N	42	355*	255*	295	N	N
4	N	17	17	17	E	17	N	(265)*	44	435			5.9 W		C			N	38	35	25*	26	NE	NE
5	26	25	27	28	32	32	31	31*	N				6.0 W		6.1			N	405	34*	305*	32	31	30
6	305	31	325	26*	26*	27*	235	325*	N				5.7 W		6.2			435	35*	(29)*	325	295	28	275
7	26	26	265	275	28	32	31	31*	N									N	N	N	365	(285)*	25	255*
8	235	(26)*	315*	315*	31*	305*	30*	335*	N									N	N	35*	295*	265*	265*	28*
9	25*	26*	255*	265*	(285)*	295*	(26)*	345*	(44)									N	43	(375)	32*	26*	265*	35
10	39	42	41	N	42	425	415	(42)										N	(40)	(365)	345*	32*	265*	(42)*
11	(425)	43	N	N	N	(35)*	33*	(44)	N									N	(395)	(375)	(32)*	275	28	315*
12	34*	35*	33*	33*	33*	325*	345*	N										N	N	N	44	(37)	(30)*	33
13	345	(35)	35	(37)	(425)	(425)	385	385	365				6.5 W		6.9			N	N	N	N	N	N	415
14	38	38	345*	35*	26*	325	30	(37)	N									N	N	N	(35)*	30*	315	295*
15	27*	33	32	29	275	285*	29	35*	N									N	N	43	345*	28*	25*	325
16	295	28	(305)	(31)	325	(33)	26	355*	N									N	N	N	40	325*	315*	(405)
17	425	425	435	435	425	N	335	35*	N									N	N	43	36*	31*	28*	255*
18	255*	27*	275*	31	30	26	265	35*	N									N	N	44	40	335*	305	27*
19	265*	275*	30*	32*	325*	315*	29*	435	N									N	N	44	42	35*	35*	33*
20	(315)*	29*	275*	27*	29*	26*	245	44	N				8.4 W		7			N	N	44	33*	34*	34*	335*
21	34*	31*	29*	29*	245	255*	25*	41										N	N	C				
22																								
23																								
24																								
25																								
26																								
27													7.1 W		7									
28																								C
29																								
30																								
31																								
Median	265	265	275	27	26	26	245	35					6.0		6.2				744 N	43	34	29	27	27
Count	20	20	19	19	19	21	21	21					8						21	20	20	20	20	20

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Book #5

Book Man. Ap. Page 46

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) Mar (Month) , 1936

(Institution)

Observed at _____

Lat. _____ , Long. _____

_____ Mean Time

Scaled by: _____ , _____

Calculated by: _____ , _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	C																							C
2	C																							
3	C																							
4	C												9.8											
5	C																							
6	C												✓8.7 W											
7	C																							
8	C																							
9	C																							
10	C																							
11	C																		N	3.9	3.5+	3.1+	2.95+	2.7+
12	2.5+	2.7+	2.6J	2.7J	2.9J	3.3J	N	N	N										N	N	N	4.3	3.9	3.5-
13	3.7	3.4+	3.4+	2.95+	2.8+	2.55+	2.4J	3.5+	4.4				✓5.8 W						N	3.9	3.2+	2.7+	2.45-	2.85-
14	2.6+	2.5J	2.4J	2.4J	(2.5J 5)	2.6+	2.5J	N											N	N	N	(4.0)	(3.35J)	2.6J-
15	2.6J	2.6J	2.55-	2.4J	N [23]	N [23]	2.7J	N											N	N	N	N	3.6+	3.3J (3.1J)
16	3.1+	2.6J	2.45J	2.35J	1.85J-	[1.6] N	2.75J	N												N	N	N	4.4	3.8
17	3.45+	3.15-	3.1+	3.6+	3.45+	3.0J	3.1J	N													N	N	4.15	3.95
18	3.45+	3.45+	3.15+	2.6+	2.6+	2.6+	3.55+														N	N	N	4.4
19	4.0	3.8	3.05+	2.57	2.4J	2.4J	2.9J	4.4													N	N	4.35	4.1
20	3.7+	3.3+	3.0J	2.65+	2.6J	2.6+	3.35+	N					✓7.3 W								N	N	N	4.2
21	3.6+	3.2+	2.6+	2.4J	2.4J	2.6+	3.35+	N													N	4.15	3.8	3.8
22	3.5+	3.3+	2.7+	2.65+	2.57+	2.55-	3.2+	N													4.1	4.15	3.65-	3.55J
23	3.5+	3.4+	3.1+	3.05+	2.67+	2.6J	3.3+	N													C	———	———	———
24	C	———	———	C	3.85+	2.2J	3.5+	N													C	———	———	———
25	C	—	2.65J	2.55J	C	———	———	———					✓7.2	———	———	———	———	———	———	———	———	———	———	———
26	C	———	———	———	———	———	———	———																C
27	C	———	———	———	———	———	———	———					✓6.7 W	———	———	———	———	———	———	N	43	3.9	3.6+	(3.15J)
28	3.4J	3.0J	3.0J	2.6-	2.7+	2.6+	3.7	N													N	4.16	3.5+	3.3+
29	3.2J	(3.1)+	(3.0)+	3.2+	3.16+	2.95+	3.7	N													N	4.3	3.6+	3.5+
30	3.35+	3.3+	3.25+	3.25+	3.1+	3.05+	4.0	N													N	N	(4.2)	(3.45)+
31	3.45+	3.45+	3.55+	3.45J	3.2+	3.15+	3.4+	4.1													N	4.15	3.75-	3.45+
Median	3.45	3.2	3.0	2.65	2.57	2.6	3.3	4.44					6.7 7.0								4.4	4.15	3.65	3.55
Count	16	16	17	17	17	17	16	16					4								17	17	17	17

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) Apr. (Month), 1935

(Institution)

Observed at _____

Lat._____, Long._____ _____ Mean Time

Scaled by: _____, _____

Calculated by: _____, _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	34+	325+	32+	32+	305+	32+	385	N												N	N	44	385	36+
2	365+	345+	345+	34+	(325)+	295+	42	N												N	N	43	(40)	(415)
3	(42)34	4234	3534+	40 32	415335	4032	415	N					6.7 W		6.8					N				N
4	N	(37)	385	37	4133	385305	39	N												N	N	44	(385)	4335
5	4335	4335	345+	34+	365335	3729	40	N													N	N	N36	(43)35+
6	4234	425345	4234	4234	4234	395315	405	441												N	(44)	(35)+	345+	35+
7	4234	405325	(315)+	315+	(385)365	(355)279	405	N													N	N	43	41
8	395	36+	35+	355+	315+	31+	441	N												N	N	435	42	41
9	33+	33+	(33)+	31+	2820	2921	355+	435											43	42	355+	425345	4234	405325
10	355275	345205	265+	275+	26+	255+	33+	40					(6.0) W		6.8					N	N	43	365	39
11	31+	315+	393	3022	[21]	2820	30+	335+												N	N	435	40	35+
12	36+	345+	34+	345+	255335	2618	34+	N												N	N	N	44	44
13	41	34+	315+	30+	3123	2820	32+	36+	37											N	N	38	32+	29+
14	335255	3123	2820	2820	2719	2820	345+	40	39											N	N	42	35+	33+
15	32+	305+	29+	275+	26+	255+	42														N	44	36+	34+
16	33+	31+	29+	26+	3426	3325	405	N													N	N	44+	35+
17	345+	31+	29+	27+	3224	315235	C	C					(5.8) W		6.9						N	N	40	37
18	35+	33+	31+	30+	3325	3224	36+														N	44	365+	(345)+
19	31+	30+	28+	27+	255+	24T	41														N	42	37	31+
20	29+	275+	27+	26+	[26]	265+	395														N	44	355+	345+
21	315+	315+	315+	29+	27+	26+	39														N	425	35+	30+
22	295+	27+	295+	30+	28+	265+	385														N	N	32+	31+
23	285+	28+	27+	27+	N[28]	285+	42	43													N			
24	N	(35)27	(275)+	275+	3224	3325	345+	44					6.1 W		6.2						N	38	365+	335+
25	30+	295+	29+	28+	275+	28+	345+														44	35+	N[32]	29
26	265+	N	N	N	N	30+	M[37]	435													N	38	(35)+	28+
27	275+	27+	265+	3426	345345	3527	N	N													N	44	35+	305+
28	275+	285	275	295	28	315	42														N	N	39	36+
29	35+	35+	325+	305+	31+	32+	441														N	N	441	405+
30	37	36+	35+	33+	32+	335+															N	N	425	365+
31																								
Median	33	315	31	30	27	27	39	744					(6.0)									44	365	35
Count	28	29	29	29	29	30	27															28	28	28

Sweep_____Mc to_____Mc in_____min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) May (Month) , 1950

Observed at _____ (Institution)

Lat. _____ , Long. _____ _____ Mean Time

Scaled by: _____ , _____

Calculated by: _____ , _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	345*	325*	325*	315*	31*	33*	43						7.5W		8.0				N	N	—	—	N	N→
2	425 345	32*	29*	29*	29*	26J	305*												A	A	A	A	A	355-
3	31*	32 24	30 32	285 205	285 205	355 275	415	42														48	46	365*
4	32*	30*	27	33 25	33 25	31*	(44)															C	C	C
5	38	35	(355)*	42 34	41 33	35	N														N	N	(48)	46
6	425	40	35*	34*	30*	37*	N															47	39	46
7	39	39	38	35	35*	41	N															47	39	43 35
8	42 34	34	34	37*	34*	345*	46			435			(5.8)3W		6.4						(NA)	(NA	(CN	(CN
9	C 36	415 335	35-	35*	33*	45 37	[N]						6.0W		A								48	42
10	39	405	35*	34	33J	39	[N]						6.4JW		(7.0)J								43	335*
11	285*	34 26	34 26	325 245	31 23	275	36						6.4.5		6.4.4					C	—	—	—	→
12	VC	33	C[30]	C[36]	295 215	27	39	415											C	—	—	—	—	→
13	C	—	—	→		36*	47	46															48	42
14	38	35-	30	29	25J	32	42																48	C[40]
15	33	32	32 24	32 24	31 23	33*	N						(5.7)JW		6.5							46	46
16	C[38]	30*	35 27	[25]	315 235	36 28	39																N	46 38
17	45 37	44 36	41 33	37 29	40 32	43 35														C	—	—	N	→[N]
18	V 36	36*	34*	29*	29*	31*	(48)																42	37
19	30*	34 26	315 235	31 23	27 19	26 20	35	42	42											C	—	—	—	→
20	C	—	—	—	—	—	→	33							C	—	—	—	—	—	—	—	—	→
21	C	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	C
22	C	—	—	—	—	—	—	—	—	→			6.4.7W		(4.7)								44	38
23	325*	325 245	30 22	28 20	27 19	27*	[36]	45	45														44	38
24	345*	31*	28*	275*	26J	33*	40																47	39
25	36*	315*	295*	28*	27*	35*	425																N	43
26	365*	34*	32*	32 24	(30) 22	31*	415						A[5-W 5-]		5.9								41	355*
27	335*	385 325	35 27	37 29	35 27	30*	38	425															C	C
28	C	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	→
29	C	—	—	—	—	—	—	—	—	→			5.3W		5.3								N	44*
30	40*	395*	32*	295*	[26]	39	N																N	41
31	335*	31*	29*	38 30	39 31	31*																	415	34
Median	3.5	325	30	29	26	32	(405)						5.7		6.2								744	40
Count	24	25	25	25	25	26	23						9		8									22

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

IONOSPHERIC DATA

(Characteristic), (Unit), June (Month), 1935

Observed at _____ (Institution)

Lat. _____, Long. _____ _____ Mean Time

Scaled by: _____, _____

Calculated by: _____, _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	31+	29+	28+	27J	235-	325+	415	41															N	46
2	39	31+	285+	27+	27+	37+	N						(5.7)W		(6.0)						N	A	A	AN
3	NA-44	N	38	32	315+	375																	N	N
4	425	385	365	33+	34+	37	45																N	42
5	385	38	35+	32+	31J	365	415						5.8W		6.5								N	47
6	415	43	375	34+	315+	40	48																N	45-
7	405	38	33+	28+	24J	29+	375																	N
8	45-37	325	315 235	31 23	E17	305+	35															N	445	405
9	37	345 265	345 265	29 21	E17	31+	425						(5.7)W		5.7								N	375
10	3527	325 245	2719	E17	E17	355 275																	C	C
11	C	→				→	43																	NA44
12	A44	425 345	A	A	A	33+	415						(5.9)WB		5.9									N
13	405	39	4032	3931	3527	E25	395																	NA44
14	N	35	3830	3729	3628	325+	42	44																N
15	38	36	A[34]	A[32]	3931	365																		N
16	42	38	3931	[30]	3729	36							5.7W		(5.4)J									NA44
17	NA44	N36	N36	4436	3830	335+	41																	N
18	NA44	395	365	425 345	4032	33+	43	45																N
19	39	365	3830	3123	[E17]	29+	36		43				W											N
20	A[36]	4436	355	A[34]	3133	295	35	42																NA44
21	NA44	41	35+	[30]	3224	3426	NA44																48	42
22	A[39]	355	4032	3628	A[25]	A[33]	44															48	4436	(43)35
23	A[35]	34	4133	32	345 265	32	41						5.3W		>									A-44
24	425	A[38]	A[35]	A[37]	295	A44	A44	A44									C	→						X
25	C	→									→													C
26	C	49	46	40	355	38+	47	43			C		6.5W		5.9									N
27	N	49	46	40+	355	38+	475	43																N
28	46	45	41	34+	29+	34+	385	43																N
29	N	46	41	4133	31+	385	[N]	43																N
30	N	4335	4234	NA[31]	A[27]	33+	385	43					W											425
31																								
Median	405	(3.8)	34	31	285	33	415						5.7		5.9									N
Count	25	26	26	26	26	26	22						8		7									

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit), July (Month), 1935

(Institution)

Observed at _____

Lat. _____, Long. _____ _____ Mean Time

Scaled by: _____,

Calculated by: _____,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	41	385	415 335	39 31	[29]	33	41																	A-44
2	N	42	40	325 J	295 +	32 +	45																N	N
3	40	355	35	29	A	A	A	A																N
4	N	N	N	275 355	265 345	34																		N
5	[N]	N	[736]	325 405	295 375	C	C																N	N
6	[N]	[N]	N	(35)	(32)	N	N																	
7	N	N	N	N736	(40) 32	(36)							6.5 W		(5.9) J									
8																								
9	736	315 395	285 365	27 35	(32 24)		no reason why this could not be F°F₂																	
10	736	(36) 38	275 355	265 345	335 255	32							6.0 J W		5.6									
11																								
12																								
13																								
14																								
15																								
16																								
17													5.8 W		6.2									
18																								
19	3.8																							
20																								
21	40																							
22	(4.2)																							
23																								
24			31 +										4.9 W		A								42	N
25	32 40	215 355	26 34	25 E	25 E	28.5 365	34																	
26																								
27	305 385	28 36	255 335	21 29	195 275	28 36	39																	N
28	40	36	27	365	35	37	315	38																N
29	40 32	36 28	27 35	285 365	35 29	37 35	315	38																N
30	35	39 31	[30]	285 365	36 28	34	325	39																N
31	385 325	36 28	335 255	335	29 21	39 31	N						5.6 W		5.7									N
	4.0																							
Median	7.38	335	3.1	285	27	31	(40)						(5.8)											
Count	14	14	15	14	13	11	8						5											

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

17

31

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) Aug. (Month) , 1935

Observed at _____

Lat. _____ , Long. _____

(Institution)

Scaled by: _____ ,

_____ Mean Time

Calculated by: _____ ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1	N	365	32	39 31	(E) 25	34 26	305*	37																		
2						355 275																				
3							365																			
4			305	35 27	30 22	35 27	38																			
5		?	32	29	35 27	E25	N	N																		
6					35 27	35 27	38																			
7			37 29	34 26	305 225	31 23	34	44					5.3 W										N	355		
8	✓36	335 415	385 305	355 275	30 22	36 28	44																45	N 417		
9	✓45 37	345*	37 29	38 30	33 25	35 27	38																48	46		
10	✓425	37 J	325	275	215 J	25 J	40																N	395		
11	✓38	44 36	39 31	36 28	33 25	34 26	38																N	445		
12	✓425 345	33	325	30	28	30	N																N	N	736	
13	N738	46 38	40 32	38 30	35 27	39 31	43																N	N		
14	✓39	39	385 305	38 30	375 295	37 29	40						(55) JW		6.0								N	N		
15																										
16																										
17																										
18																										
19																										
20	N	N	N736	38 30	35 27	34 26	37																N	N	736	
21	N736	285 365	31 23	265 185	E47	295 265	31						4.5 N C										N	N 736		
22	✓395 375	35 27	37 29	35 27	345 265	34 26	37																N	N		
23	N	N	N736	385 305	36 28	33 25	37																N	N		
24	✓37	35	38 30	365 285	31 23	32 24	375																N	N		
25	N	34	36	33	335 253	34 26	405	N															375	36		
26	✓335	31	35 27	[265]	34 26	33 25	40																N	N		
27	✓38	36	33	38 30	35 27	34 26	N																N	N 736		
28	✓41 33	41 33	36 28	35 27	35 27	345 265	36						5.2 W		5.5								N	N 736		
29	✓42 34	✓385 305	✓375 295	✓34 26	✓34 26	335 255	375	405																42 [34] N		
30	✓42 34	✓415 335	✓41 33	✓40 32	✓36 28	37 29	✓39																	40 405		
31	✓375	✓37	✓35	✓40 32	✓38 30	✓37 29	N														46	45	43	40		
Median	3.8	35	31	29	26	26	3.8						5.3 5.2											40		
Count	20	20	23	23	24	25	25						4											20		

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit), Sept. (Month), 1935

(Institution)

Observed at _____

Lat. _____, Long. _____ _____ Mean Time

Scaled by: _____, _____

Calculated by: _____, _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	38	37	33	C																				C
2	C																							C
3	C																							C
4	C										6.7	6.9	6.6 W	6.5	6.7	6.3	6.4	6.7	7.1	7.3	70 N	65 N	57 N	[57]
5	A [47]	[44] N	[41] N	[37] N	[33] N	295	N																N	35
6	335	295	34 26	31 23	28 20	295 25	N														N	N	37	33
7	33	34	33	30	32 24	30 22	N																N	365
8	35	345	33	29	35 27	35 27	N																N	N
9	N	N	36	355	31	30	N	N															N	N
10	37	36	37	37	39 31	335 255	N	N															N	35
11	31	295 215	(32 24	27 19	28 20	29 21	30	35	[3.8]	[4.2]	[4.7]	5.4	5.7 W	6.4	6.4 J	6.4	6.1	5.4	6.1	6.0	4.8	N [40]	36	35
12	34 26	35 27	345 265	34 26	335 255	25	355 255	37 29															736 N	37 29
13	35 27	(35 27	(35 27				35	N															N	35
14	35	35	35 27	35 27	34 26	332 25	35	N														N	365	36
15	355	35	375 295	37 24	345 265	35 27	38																N	36
16	36	40 32	39 31	355 275	335 255	335 255	35	365															N	365
17	345	325	30	28 *	345 265	30 22	31	37															N	N
18	N	C							5.1	5.5	5.1	4.9	5.0 W	5.0	5.1 6.0	6.2	5.3	5.3	5.4	5.3	44 435	38	32	36 28
19	345 260	32 24	29 21	E47	E47	E47	335 415	425													N	385	335 435	39 31
20	38 30	38 30	41 33	40 32	41 33	(31)	38	N														46	46	385
21	4436	415 335	42 34	40 32	375 295	36 28	425															46	[41]	36
22	345	40 32	39 31	3931	365 285	38 30	43	N														N	N	40
23	395	38	425 345	395 315	335 255	(315 235	N	N					43 W		5.2								N	N
24	33 *	305 *	385 305	(38 30	(30 22	22	48	N												47	38	33	38 30	35 27
25	[29]	[30]	39 31	41 33	33 25	345 265	355 275	345	[4.0]	[4.3]	[4.5]	[4.6]	4.7	4.9	5.3	5.2	[4.7]	[4.7]	[4.5]	435	40	365	37	40 32
26	275	35 27	31 23	27 19	E47	E47	37	N													N	405	435 355	425 345
27	40 32	40 32	41 33	395 315	38 30	30 22	42 34	N														48	42	40
28	4436	40 32	40 32	36 28	36 28	37 29	48	N														N	48	435
29	425	415	405	375	385 305	335 255	395	N														48	43	40
30	39	39	365	365	32	27 J	47	N															435	39
31																								
							395							6.4	6.4	6.7	6.1							
Median	35	32	31	30	265	255	415	N			5.5	5.6	5.8	6.0	6.1	6.0	6.0	5.8	6.2	6.2	5.4	N	74.3	36
Count	27	25 26	25 26	23 24	23 24	24	25						4										26	27

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

foF2, Mc, October, 1935
(Characteristic) (Unit) (Month)

Observed at Washington, D.C.
Lat. , Long.

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

IONOSPHERIC DATA

Rescaled Manual Records MPK

Mean Time

NBS (Institution)

Scaled by: SMO ,

Calculated by: ,

Form adopted June 1946

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	(4.6)P	(4.5)P	(3.9)P	3.6J	3.0JF	3.4J	(4.9)P																	D
2	D	D	(4.8)P	4.5P	(4.6)P	4.4	D	[58]	[68]	[70]	7.5	8.4	8.1	8.3	8.4	8.4	8.7	8.2	7.2	6.6	D60	[54] (4.5)P	[59]	D [47]
3	(4.6)P	(4.3)F	4.2F	(4.1)F	(3.8)F	3.5J	(4.4)PF	D									D	C						C
4	C												C											C
5	C												C											C
6	C												C											C
7	C												C											C
8	C												C											C
9	C										C	7.1D	7.6	7.3	8.1	8.6	8.7	8.6	8.4	7.0	D57	[50] D	(4.8)P	(4.5)P
10	(4.6)P	(4.5)P	4.3	4.3	3.7	3.0	3.9	D																D
11	(4.8)P	(4.5)P	4.3	4.12	4.0	3.6	4.2F	D															D	(4.6)P
12	(4.4)P	D	D	3.9	3.6	2.7NF	3.6	D													D	(4.8)P	(4.7)P	(4.7)P
13	(4.5)P	4.24	4.3	3.8	3.4	3.2	3.9	D															D	(4.8)P
14	4.3	4.24	4.2	4.0	3.7	3.8	3.7	[52] D	[63]	[70]	[77]	[82]	[87]	D [91]	C	C	D					D	2150 (4.8)P	2250 (4.7)P
15	2350 (4.9)P	0050 (4.8)P	0150 (4.6)P	0250 3.9	0350 3.2	0450 2.6J	0550 2.8	[45] D	[59]	[68]	[74]	[80]	[85]	[88]							D	2050 (4.2)P	2150 (4.0)P	2250 (4.0)PJ
16	2350 (3.8)PF	0050 (4.4)F	0150 (4.5)PF	0250 4.1	0350 3.9	0450 3.7	0550 3.7	[59] D	[74]	[85]	[95]	[103]	[108]	10.8	10.5	10.0	9.8	[90]	[80]	[71] D	[62]	[57]	(4.7)P	4.3
17	4.24	(4.6)P	4.24	4.2	3.7	3.1	3.5	D [54]	D [71]	D [81]	[90] C	[97]	[103]	10 D							D	(4.7)P	(4.7)P	D
18	D	D	D	(3.8)PJ	(3.9)PJ	(3.7)*	(4.9)P	D [64]	[73]	[87]	[95]	[101]	[105]	10.8									D	C
19	C	C	C	C	C	C	C	C							C									C
20	C														C									C
21	C											C	[110]	11.6						C	D	D [44]P	4.2	4.3
22	4.3	4.1	3.6	3.7	(3.4)F	(2.4)JF	(3.3)JF	[61] D	[82]	[96]	[109]	[112]	11.4	11.4	[109]	[103]	[96]	[87]	[76]	[65]	[58]	53	[47]	D [46]
23	(4.4)F	4.3F	4.2F	3.8F	(3.8)JF	3.3	3.5F	68 D	X5	93	105	106	110	111	110	111	108	95	74	[59]	65	56	D [50]	(4.6)P	(4.6)P
24	4.5	(4.3)P	(3.9)JP	3.1JF	(2.4)JF	(2.6)JF	(2.9)JF	4.0F	[40] 4.0F	[50] 4.2	[54] <4.2G	[55] (4.5)F	<4.2G	<4.2G	D [56]	[54] (4.7)P	D [57]	D [57]	[50] (4.7)P	4.24	3.7	3.4E	3.2F	2.8F
25	2.7F	2.6F	2.7F	2.7JF	2.6JF	2.4JF	(3.0)JF	[61] D	[64]	[73]	[79]	[84]	8.6	[8.0]					> D	(4.7)P	D	D	(4.7)P	4.4
26	(4.4)P	(4.4)P	4.3F	(4.3)P	C								[9.6]	9.7										C
27	C												C 9.4	[9.4]										C
28	C												C 11.0	[11.0]										C
29	C											C	10 D				D			(4.6)P	(3.9)PJ	3.6	3.3	3.0
30	2.9J	(3.3)PJ	(3.4)PJ	(3.8)PJ	(3.5)*	(2.8)J	3.5	[50] D	[63]	[72]	7.9	8.8	8.7	8.1	6.8	6.5	6.4	[6.7]	> D64	4.6 D	(3.9)PJ	(3.4)PJ	3.0J	2.9
31																								
Median	4.4 4.2	4.4 4.2	4.3 4.1	3.8	3.7 3.5	3.2 3.1	3.7 3.5	5.7	6.4	7.3	7.9	8.8	9.4	9.6				8.6	7.4	6.5		5.3	4.7 4.5	4.6 4.4
Count	18	18	18	18	17	17	17	17	11	11	11	12	17	16								19	19	18

Sweep 2.5 Mc to 4.2 Mc in ____ min
Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) Oct. (Month), 1935

(Institution)

Observed at _____

Lat. _____, Long. _____ _____ Mean Time

Scaled by: _____, _____

Calculated by: _____, _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	[39]	[39]	(39)*	42[34]	38[30]	42[34]	(48)																N	(46)
2	44† [41]	44† [42]	(48)[40]	(48)40	(47)[39]	44[36]	N	N					8.3 W		8.3								N	(48)
3	(47)	(46)	415	(40)	39	34[J]	N	N										C						C
4	C																							C
5	C																							C
6	C																							C
7	C																							C
8	C																							C
9	C												7.6 [J] W									(48)	48	45
10	45	45	42	42	36[5]*	30*	39	N															N	N748
11	(48)	46	45	43	40	37*	415	N														N	N	N748
12	N44	N44	(48)[40]	385	355*	27[J]	37*															48	48	48
13	46	44	42	375*	34*	315*	385																N	48
14	435	435	42	40	37	33*	37	N					8.6 W		10.4								N	48
15	48	47	455	395	315*	26[J]	28*	N															N	N748
16	N48	48	45	41	39	315*	32*	N					10.8 W		10.4							N	47	435
17	445	465	44	42	37*	305*	35*	N					10.6 W								47	46	48	(49)
18	5044	[45]	(415)	(35)	(32)	36	46	N					10.8 W	C										C
19	C																							C
20	C																							C
21	C												11.4 W							C	N	(50)	(41)	42
22	42	(405)	415[415]	37	42[34]	(35[27])	41[33]	N					11.4 W										N	(48)
23	(46)	425	425	39	44[36]	40[32]	42[34]	N					11.0 W		11.0						N	47	46	46
24	46	44	42	40[40]	315[315]	(385[305])	[34]	355 41					5.6 W		5.6				48	45	46[38]	42[34]	41[33]	35[25]
25	27*	35[27]	35[27]	355[275]	335[255]	325[245]	39[31]	N736					8.6 W							46	41	[44]	46	45
26	44	42	46	425	C																			C
27	C												9.4 W											C
28	C												11.0 N											C
29	C												10.4 W											C
30	C												8.0 W		6.8					(43)	38	36	325	295
31	37[29]	40[32]	40[32]	42[34]	355	355[275]	34	N													36	395[315]	37[29]	365[285]
	744																						dR	
Median	46	44	42	40	36	315	37						10.4										(48)	47
Count	18	18	18	18	17	17	17						15										18	18

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) Nov. (Month) , 1935

(Institution)

Observed at _____

Lat. _____ , Long. _____ _____ Mean Time

Scaled by: _____ ,

Calculated by: _____ ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	38	405	415	42	43	32	31	N	N												A	35	35	425
2	435	38	38	425	425	395	345	N															425	385
3	43	46	41	38	37	32+	315+	N	N											N	46		35	36
4	38	37	385	415	40	345	315															41	38	365
5	36	44	44	44	435	43	43																A	A
6	N		39	48		(36)	(36)	N												N	46	37	35	34+
7	34+	33+	33	34+	345+	35+	335+	N													45	35+5	365	36
8	355+	38	37	37	375	36	365	N													43	40	375	375
9	36	36+	385	405	43	375	32	N													N	45	43	
10	41	43	41	415	41	385	36+	N													N	40	39	(39)
11	(385)	415	365	35+	34+	305	295	N													N	435	41	C
12	N																							
13	4.8 J																							
14	30																							
15	32																							
16	N																							
17	43																							
18	39																							
19	49																							
20																								
21	34																							
22	34																							
23	36																							
24	36																							
25	41																							
26	34																							
27																								
28	38																							
29	32																							
30	35 J																							
31																								
Median	36																							
Count	25																							

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

F* F2 , _____ , Jan. , 1936
(Characteristic) (Unit) (Month)

Observed at Wash. D.C.

Lat. _____ , Long. _____ Mean Time

_____ (Institution)

Scaled by: _____ ,

Calculated by: _____ ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	51	51	52	51	52	(48)	(38)	45	N									N	N	N	56	51	48	4.8
2	50	50	48	465	48	495	428	44												N	752 N	54	54	54
3	52	53	53	54	54	53	51	43	7.2	9.2	11.4	12.2	12.4	12.4	12.6	11.9	11.1	9.9	9.3	7.3	54	43	41	42
4	42	435	48	50	50	48	46	47	N				(11.1)								54	435	43	435
5	43	44	44	435	45	48	46	(52)													56	55	50	(47)
6	44	47	48	445	[46]	[48]	50	56					(11.1)								752	49	43	44
7	46	46	50	(54)	52	54	(54)	752 E					(11.8)								54	455	43	425
8	42	417	42	39	44	49	505	N 54	[8.4]	9.6	9.9	12.4	13.2	13.5	12.8	12.5	11.4	10.9	9.9	8.5	77	752 744	752 744	752 744
9	752 744	752 744	752 744	752 744	752 744	752 744	752 744	752 744													54	43	43	415
10	415	417	44	C									(11.0)											C
11	C																				45	40	445	44
12	465	(50)	(51)	48	[49]	50	43	43												725	[58] 375	392	45	(48)
13	505	47	45	46	42	40	40	49	(725)	[84]	(9.0)	[9.7]	[10.3]	(10.5)	[10.5]	[10.4]	[10.0]	[9.3]	[8.9]	(805) 725	50	425	41	44
14	46	47	47	445	39	36	37	455	(805) 725	[91]	9.6	[10.0]	[10.0]							(725)	56	43	38	43
15	41	41	42	42	44	43	41	3.95	41 725	87 725	99	10.8	10.4	10.0	9.9	10.7	9.7	8.6 725	7.0 725	6.7	59	50	45	455
16	45	455	47	50	51	47	43	47	(725)	725			[8.5]	9.3	9.7				[7.65]	64	52	405	43	42
17	425	47	465	50	50	42	41	(50)	(725)	[9.2]	9.7	[9.9]	(9.9)						[7.65]	66	752	37	375	38
18	362	435	47	50	51	54	335	426	(725)	725											752	5.2E	52E	(44)
19	[42]	[39]	37	36	365	39	39	52E	(725)	725											465	405	43	435
20	40	38	40	43	395	365	39	47	(725)	(80) 725	[88]	[9.6]	(10.3)								54	44	42	44
21	38	38	(38)	48	51	495	48	475													757	(57)	[56] N	[54] N
22	53N	55N	54N	52N	52N	50	44	52 (50)	8.2	9.8	11.1	12.2	11.7	11.6	11.0	11.4	11.3	11.1	11.3	8.9	64 N	57 N	54 N	515
23	475	[48]	[48]	49	47	445	37	752E													752	52E	55	752E
24	752E	752E	752E	515	495	485	48	752E					[10.9]	(11.0)							752 N	NE	NE	752 N
25	752E	54	NE	NE	NE	NE	40	425						(12.8)							752	N	N	752 NE
26	752 NE	NE	NE	NE	NE	NE	41	752E													754	54	50	425
27	41	39	41	48	50	48	40	48													752	NE	NE	752 N
28	752 NE	NE	NE	NE	NE	54	51	(51)					[12.0]								752	52E	505	752 NE
29	752 N	N	N	C	C	C	C	(56)	(8.1)	10.0	11.2	11.8	12.1	11.7	12.5	12.7	11.7	11.4	10.8	10.3	80	61	56	54
30	N [54]	52	493	50	54	49	41	517													752	N 52E	N 52E	N 52E
31	(60)	N 52E	(60)	42	42	44	415						7	12.3							752	N	N 52E	N 52E
									725															
Median	46	47	4.8	495	5.0	4.8	42	5.0	(8.1)	9.6	11.1	12.2	12.1	11.9	12.5	11.9	11.3	10.9	9.9	8.05	752	752	49	46
Count	30	30	30	28	28	28	28	28	12 5	9 9	9	9	12	11	10	10	6	6	6	10	30	30	30	30

Sweep 10.8 Mc to 1.0 Mc in 6 min

Manual ☐ Automatic ☐

													12.1											
													16											
											9	9.7	9	9	9	9	6	6	6	6				
													11.8	11.6	11.2	10.4	9.6	9.2	8.4	7.3				

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

37

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

IONOSPHERIC DATA

(Characteristic), (Unit), Febr. (Month), 1936

(Institution)

Observed at _____

Lat._____, Long._____ _____ Mean Time

Scaled by: _____,

Calculated by: _____,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	35 (43)	34 (42)	C																					C
2	C										→										N	N	N	N
3	N	N	N	N	N	N	N	(42)					96 W								N	N	N	N
4	N	(43)^{35}	43^{35}	43^{35}	42^{34}	36^{28}	36^{28}																N	435^{35}
5	42^{34}	42^{34}	43^{35}	45^{37}	46^{38}	425^{345}	425^{345}						97 W										435	425
6	45^{37}	45^{37}	435^{35}	435^{355}	43^{35}	425^{345}	415^{335}	N														46	43	425^{345}
7	345	42^{34}	435^{355}	44^{36}	43^{35}	40^{32}	425^{345}															43	415	40
8	41	40	40	37^{J}	415	38	36^{+}	N															437	45
9	N[44]	(43)	N[44]	435	415	41	41	N	725												N	→		
10	N	→			→	42	35^{J}	44	725				96 W								,	44	43	415
11	415	44^{36}	43^{355}	435^{355}	44^{36}	415^{335}	41^{33}	(43)					96 W									425	40	43^{355}
12	42^{34}	41^{33}	425^{345}	425^{347}	43^{35}	435^{355}	41^{33}	N 118 125	725				95 W							725	725	44 (43)	43^{35}	43^{355}
13	425^{345}	415^{335}	38	385	38	43^{355}	41^{33}																385	44^{36}
14	44^{36}	(405)	[405]	[405]	405	40	32^{J}	725	N													N	N	N
15	N	N	N	N	46	34^{J}	35^{+}	N	N													N	N	N
16	N	N	46	43	42	41	40	N	725													40	43	42
17	42	44	39	42^{34}	39^{31}	39^{31}	38^{30}	385	44			725	(42) 43									42	44^{36}	45^{37}
18	425^{345}	40^{32}	42^{34}	415^{335}	42^{34}	42^{34}	45^{37}	N	N													46	435	415
19	41	42	[43]	46^{38}	40^{32}	40^{32}	40^{32}	N					97 W									N	N	37 45
20	40^{32}	43^{35}	41^{33}	43^{335}	43^{35}	43^{35}	435^{355}	N	N													N	43	40
21	40	41^{33}	425^{345}	43^{335}	45^{35}	42^{34}	41^{33}	N	N				10,8									N	N	N
22	N	N	N	385	40^{32}	38^{30}	395^{315}	N	N													N	N	N
23	44^{36}	44^{36}	46^{38}	46^{38}	47^{39}	44^{36}	42^{34}	N	N													N	N	N
24	N	N	45	44	405	39	40	N	N				113									N	N	N
25	N	41	45^{37}	46^{38}	42^{34}	39^{31}	38^{30}	N	N													N	N	48^{40}
26	47^{39}	46^{38}	44^{36}	42^{34}	46^{38}	425^{345}	415^{335}	N	N				110									N	N	N
27	N	N	N	39	37	405^{325}	42^{34}	N	N													N	N	N
28	N	N	46	425	42	40	38	N	N													N	N	N
29	N	N	N	435	45	39	36^{+}	N	N													N	N	N
30																								
31																								
Median	42	39	38	38	38	345	34						9.7											44
Count	28	28	27	27	27	27	27						10											28

Sweep_____Mc to_____Mc in_____min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Night hours Book 6 + 7 — FxF_2 Book 20 + 21

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C. — Form adopted June 1946

FoF_2 — Means Page 64 Man. Av.

(Characteristic), (Unit), March, 1936 (Month)

IONOSPHERIC DATA

Observed at Means Book #9 — (Institution)

Lat. ____, Long. ____ — Mean Time

Beginning with this month the upper limit of equipment appears to be 4600 — Scaled by: ____, Calculated by: ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	N747	4.7	4.6	4.6	4.6	4.5	4.4	N														N	N746	4.6
2	4.5	4.4	4.5	4.4	4.6	4.5	4.5	N														4.8	4.7	4.6
3	4.4	4.25	4.2	4.1	4.0	4.05	4.2	N														N748	4.8	4.7
4	4.6	4.4	4.2	4.25	4.15	4.1	4.15	N7.6	9.5	10.6	10.1	10.2	10.6	10.9	10.4	10.4	10.8	10.7	10.3	8.9	7.3	[49]	[50]	[54]
5	N[55]	N[53]	N[50]	4.7	4.4	4.25	4.25	N														N	N	N750
6	N750	5.0	4.8	4.7	4.6	4.4	4.5	N														N	N	N
7	4.8	4.7	4.6	4.6	4.7	4.7	4.8	N														N	N749	4.9
8	4.8	4.6	4.6	4.6	4.2	4.1	3.9	N	4.2													N	N	N
9	N746	N746	N746	N746	N746	4.6	4.7	N					118									N	N	N
10	N745	N745	N745	N745	N745	4.5	4.3	N														N	N	N
11	N							8.0	8.6	10.3	10.1	11.1	11.5	11.7	12.0	11.8	11.7	11.4	11.0	9.5	8.3[75]	7.7	7.6[68]	7.4[66]
12	N[55]	725	N	N	N	N	N	N													N	N	N	N
13	N							N													N			N
14	N							N													N			N
15	N							N													N			N
16	N							N													N			N
17	N746	N746	N746	46	4.05	3.65	395	N[54]	[61]	[67]	74	80	86	97	101	102	101	100	95	86	72 645	[67]	N[56]	N[54]
18	N[52]	N[49]	4.5	3.9	3.58	36	395	70	68	69	73	76	78	83	84	83	86	86	86	84	76[68]	68[60]	[59]	N[49]
19	N[49]	N[47]	N[46]	43	38	385	4.6	72	84	88	98	94	[101]					N	N	N	N	N	N	(40)
20	41	[40]	38	37	38	38	N[43] [51]	72	85	89	97	96	[10.2]						N	N	N	N	N	N
21	N	N	N	N	N	36	36	N										N	N	N	N	N	N	N
22	N	N	4.0	3.7	3.5	3.45	N	N										N	N	N	N	N	N	N
23	N	N	N	3.8	3.6	3.6	N	N											N	N	N	N	N	N
24	N	N	N	N	N	N	N	N											N	N	N	N	C	C
25	C	C	C	C	C	C	C	7.1	8.4	8.5	8.0	8.6	9.5	9.7	9.9	9.8	10.3	10.0	9.6	9.1	8.6[78]	7.7[69]	7.4[66]	[6.7]
26	N[57]	N[54]	N[51]	N[48]	[44]	4.1	4.2											N						N
27	N	N	N	4.4	4.2	4.0	N	N											N					N
28	N	N	N	N	C	C	C	C																C
29	C			C	C	C	C	C										N						N
30	N746	N746	N746	N746	4.6	4.2	4.2	N											N					N
31	N			N	F	F	F	N											N					N
Median	744	744	744	(47)	(46)	(43)	(45)	6.4 7.2	7.6 8.4	8.0 8.8	8.9 9.7	8.6 9.4	9.4 9.6 10.2 9.8	8.9 9.7	9.3 10.1	9.4 10.2	9.3 10.1	9.2 10.0	8.8 9.6	8.1 8.9	6.8	6.0	5.6	4.9
Count	29	29	29	29	28	28	28	7	7	7	7	7	6 8	5	5	5	5	5	5	5	5	7	7	11 0

1942 2041 1942

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) Apr. (Month) , 1936

(Institution)

Observed at _____

Lat. _____ , Long. _____ Mean Time

Scaled by: _____ ,

Calculated by: _____ ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	N	N	N	N	N	43[35]	N	N	N				9.8						N	—	N	N	N	N
2	N	N	N	N	N	N	N	N											N	—	N	N	N	N
3	N	→						→													N	→		
4	N	→						→													N	→		
5	N	→						→													N	→		
6	N	→						→													N	→		
7	N	→						→													N	→		
8	N	→						→					[8.3]								N	→		
9	C	→						→		→			→											C
10	C	→						→		→			→											C
11	C	→						→		→			→											C
12	C	→						→		→			→								N	→		N
13	N	→			→	46	N														N	→		
14	N	→	→	47	44	48	N	N													N	→		
15	N	N	N	N	(44)[36]	(44)[36]	N	N					10.6						N	—	N	→		
16	N	→	→	47	44	42	47														N	→		
17	N	→	→	→	→	→	→														N	→		
18	N	46	43	42	43[35]	44[36]	N														N	→		
19	N	N	46	44[37]	43[345]	43[35]	N														N	→		
20	N	N	46	45[38]	41[335]	40[32]	42	405													N	→		
21	N	45	405	335	[31]	[29]	42										43	41	N	N	→			
22	N	46	42[34]	30	44[36]	N[36]	N						5.7								N	→		
23	N	→	→	→	46	43[35]	N	N													N	→		
24	N	→	→	→	46	N	N														N	→		
25	N	→	→	→	→	→	→														N	→		
26	N	→	→	48	44	47	N														N	→		
27	N	→	→	48	47	48[40]	N														N	→		
28	N	→	→	→	→	→	→														N	→		
29	N	→	→	→	→	→	→						6.8								N	→		
30	N	50	48	50	48	N	N														N	→		
31																								
													8.3											
Median				42	36	36																		
Count				10	13	14							5											

13 26 28 13

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

F° F_2 (Characteristic), (Unit), May (Month), 1936

Observed at Wash.

Lat. ____, Long. ____ ____ Mean Time

(Institution)

Re Scaled by: SMO

Re Calculated by: MPK

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	>4.4																							>4.4
2	>4.4			>4.4	4.8	4.9	<4.4																	>4.4
3	>4.4																							>4.4
4	>4.4						4.4	6.4	7.2	>7.2	>	>	>	7.2	>	>				7.4	7.4	7.4	6.3	6.0
5	5.5	5.0	4.6	4.3	4.5	5.0	[5.4]	[5.7]	[5.8]	[5.9]	[5.9]	[5.9]	[5.9]	[5.9]	[5.9]	[6.0]	6.3	6.8	7.2	[7.4]	[7.4]	7.2	6.8	6.2
6	5.8	5.2	4.8	4.8	4.7	5.3	7.6	>	>	>	>	>	10.6							<		7.2	6.4	5.9
7	5.4	5.2	5.0	4.8	4.6	4.5	6.0	[7.7]	>7.2	>	>	>	>	>	>	>				>	>	>	>7.2	7.2
8	7.2	6.6	5.9	5.3	[4.8]	[4.8]	[5.6]	6.5	7.2	7.2	>7.2	>	>	>	>	>	>	>		>	>	>7.2	[7.4]	7.0
9	6.4	[6.1]	[5.6]	[5.3]	[4.9]	[5.0]	6.8	>7.2	>	>	>	>	>	>	>	>				<	<	7.2	7.1	7.0
10	6.8	6.6	6.3	[5.8]	[5.2]	[5.2]	6.1	7.3	>7.2	>	>	>	>	>	>	>	>	>		>	>	>	>7.2	7.3
11	7.0	6.6	5.6	4.8	4.5	4.4	5.0	6.8	[7.8]	>7.2	>	>	>	>	>	>	>	>		>	>	>7.2	7.2	6.9
12	6.4	6.0	5.6	5.1	4.8	[4.6]	[4.6]	4.8	[5.2]	[5.6]	[6.1]	6.4	[6.7]	[7.1]	[7.3]	>7.2				>	>7.2	[7.5]	6.8	6.2
13	[5.7]	[5.3]	5.0	4.5	4.1	4.1	[4.3]	[4.5]	[4.6]	[4.6]	(5.0)	(5.8)	6.2	6.2	6.2	6.3	6.4	[6.7]	[6.8]	[6.8]	[6.8]	[6.6]	6.2	5.9
14	[5.3]	4.8	4.5	4.2	[4.0]	4.8	[5.7]	[6.2]	6.4	6.4	6.4	6.4	6.5	6.8	7.0	7.2	7.2	7.3	7.3	7.3	7.2	6.4	6.0	5.8
15	5.5	5.3	5.0	4.5	3.4	4.1	5.0	5.7	6.0	6.3	6.4	6.7	7.1	7.2	7.2	[7.4]	[7.5]	[7.8]	[7.9]	[7.9]	[7.9]	[7.7]	6.7	6.1
16	5.9	5.7	5.5	5.2	4.8	4.7	[5.1]	5.4	5.6	5.7	5.8	5.8	5.9	6.0	6.0	6.1	6.3	6.8	7.1	7.2	7.3	6.4	6.0	5.7
17	5.4	5.1	4.8	4.5	4.1	4.4	[5.0]	5.6	6.2	6.7	7.2	[7.5]	[7.6]	>7.2	>	>	>	>		>	>	>	>7.2	7.1
18	6.1	5.7	5.2	4.3	3.4	4.0	4.5	[5.0]	[5.4]	[5.8]	[6.0]	[6.2]	[6.2]	[6.2]	[6.2]	(6.2)	(6.2)	(6.3)	6.4	[6.6]	[6.8]	[6.8]	[6.7]	6.3
19	6.0	5.6	5.2	4.6	3.5	3.2	[5.2]	[5.8]	[6.3]	6.4	6.4	6.4	(6.3)	(6.2)	[6.2]	6.3	6.5	7.2	[7.5]	[7.5]	7.3	7.0	6.7	6.3
20	5.9	5.5	5.0	4.2	2.8	4.1	(4.9)	(5.5)	<	<	<	<	>2									>	>	>
21	6.4	5.9	[5.3]	[4.8]	[4.5]	[4.7]	[5.3]	6.1	6.8	7.3	7.3	[7.4]	[7.6]	>7.2	>	>	>	>		>	>	>	>7.2	[7.5]
22	7.1	6.4	5.8	5.1	4.6	4.5	5.2	5.9	6.4	6.4	[6.3]	[6.3]	[6.3]	[6.4]	[6.7]	[7.0]	7.2	7.4	[7.5]	[7.6]	[7.6]	[7.5]	7.2	6.9
23	6.3	5.7	[5.2]	[4.7]	[4.4]	4.6	5.2	5.9	6.5	7.1	[7.6]	[7.9]	[8.1]	>7.2	>	>	>	>		>	>7.2	[7.6]	7.3	7.0
24	6.7	6.2	[5.6]	[5.1]	[4.6]	[4.7]	[5.6]	6.2	6.4	6.4	6.4	6.7	7.1	[7.4]	>7.2					>	>7.2	7.2	7.0	6.9
25	6.9	6.8	6.7	6.5	[6.0]	5.9	6.4	6.8	7.1	[7.4]	7.7	7.9	8.0	>7.2	>	>	>	>		>	>	>7.2	7.2	7.0
26	6.4	6.0	5.4	4.9	4.6	4.6	4.7	4.8	5.8	6.7	7.1	7.0	[7.5]	>	>					<	7.0	6.2	5.9	5.6
27	[5.4]	[5.1]	[4.8]	[4.4]	4.0	4.3	(5.6)	(5.9)	>	>	<	<	7.3											
28	C												C											C
29	C								<	<	<	<	6.8											C
30	C												C											C
31	6.9	6.2	5.3	[4.6]	[4.5]	5.1	[7.0]	[7.6]	[7.7]	[7.7]	[7.7]	[7.6]	[7.4]	[7.3]	[7.1]	[7.0]	[6.9]	[6.8]	[6.7]	[6.7]	[6.6]	[6.4]	[6.3]	6.2
Median	6.2	5.7	5.2	4.8	4.5	4.6	5.2	5.9	6.4	6.9	6.9	6.9	7.2	7.3	>7.3	>7.4	7.4	7.6	7.7	7.7	7.4	>7.2	6.8	6.3
Count	24	24	24	24	25	25	24	25	26	26	26		26	22	20	18	16	16		22	22	24	24	24

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit), May (Month), 1936

(Institution)

Observed at _____

Lat. _____, Long. _____ _____ Mean Time

Scaled by: _____, _____

Calculated by: _____, _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	N	→	→	→	→	→	→						C						N	→	→	→	→	→
2	N	→	→	→	48	49	N						C						N	→	→	→	→	→
3	N	→	→	→	→	→	→						C										725	N
4	N	→	→	→	→	→	→	645 725	725				[90]							7725	7725	7725	645 725	[60] 725
5	[55]	50	[46]	43	45	50	N						[64]				725		725		7725	7725	7725	645 725
6	[57]	[51]	48	48	[45]	[54]	725 7645 7725						10.6 W						7725	7725	7725	725	645 725	[59]
7	[54]	[52]	50	48	46	445	645 725	725					7.25				7725	7725	7725	7725	7725	7725	7725	725
8	725	645 725	744	744	744	744		645 725	725	725			7.25					7725	→	→	→	→	725	[70]
9	645 725	744	→	→	→	→	[70]						7.25							7725	7725	725	[61] 7725	[69] 7725
10	[61] 7725	[65] 645 725	744	744	→	→	2645 <725	725					7.25						7725	→	→	→	→	725
11	[70] 7725	[64] 7725	[56]	48	45	44	[54]	645 725 725					[90]					7725	←	→	→	→	[69]	7725
12	645 725	[62]	[59]	[54]	48	[46]	[47]	48	[51]	[55]	[61]	645 725	6.7 W						7725	→	→	→	[68]	[62]
13	[56]	[51]	48	46	41	41	N						6.2 W				725			7725	7725	7725	7725	<725
14	[51]	48	47	42	43	48	N			725			[65] 725				725		725		725	645 725	[59] 744	[56] 744
15	[53]	[54]	[49] 744	45	355	41	N				725		[7.0]	725	725				7725	←	→	→	[66]	[62] <725
16	[59] 744	← [56]	[54]	[51] →	48	47							[5.9]				725			725	725	[70] <725	[67] <725	[65] <725
17	[51] [40] 744	[53] 744	[48] 744	45	46	44	N		725	725			[7.6]						7725	←	→	→	→	[70]
18	[61] [64]	[64]	[58]	43	34	40	45						[6.3]							7725	7725	7725	7725 725	[63] 744
19	[60] [59] 744	[56]	[52]	46	35	415							[6.3]				725	725			725	[69] 7725	[66] 7725 725	[63] 744
20	[57] [59] 744	[55]	[51]	42	28	41				725			7.3 W 725					725	725	725	7725	7725	7725	7725
21	[46] 725	744	→	→	→	→	→	725		725	725		[7.6]							7725	←	→	→	645 725
22	[71] 7645 7725	645 725	744	744	46	445			725				[6.3]				725			7725	7725	7725	[72]	[67]
23	[63] 645	[69] 44	[55]	[50]	[45]	46	[52]	[59]	645 725	725			[8.6]							7725	7725	7725	7725	[68]
24	[66] [65]	744	→	→	→	→			725	725	725		7.1 725							7725	7725	7725	7725	7725
25	[67] 7645 7725	7645 7725	7645 7725	645 725	[56] 744	[55] 744	[59]	645 725	[69]	725			8.0 W						7725	7725	7725	7725	725	[65] 7725
26	[65] 725 645	744	→	→	→	46	[47]	48	[62]	725			[7.4]						7725	7725	[69]	[61]	N [57]	N [54]
27	[50] N [59]	[49]	[46]	[43]	40	425	[51]	[57]	[62]	725			7.3 W				762 ←			→	→	C	C	C
28	C	C	C	C	C	C	C	C					C											C
29	C	C	C	C	C	C	C	C					6.8 W											C
30	C	C	C	C	[50]	54	C	C					C				C	762	→	→	→	→	→	762
31	[49] 762	62	[54]	[54]	[50] 744	54 62	62						[7.4]				762	→	→	→	→	→	→	62
	60																							
Median	763				744								(7.3)											
Count	24	20	17		28								26											

28 59

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

F¹F₂ (Characteristic), (Unit), June (Month), 1936

Observed at Wash. (Institution)

Lat. _____, Long. _____ Mean Time

Re Scaled by: SMO

Re Calculated by: MPK

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	7.0	6.8	6.2	4.9	4.2	4.8	6.2	6.9	7.0	(7.0)	(7.0)	(7.0)	[7.4]	(7.1)	[7.5]	>7.0					>	>7.0	7.0	6.6
2	6.1	5.8	5.4	5.0	4.7	5.0	5.3	6.0	6.2	6.2	6.2	6.2	6.2	6.2	6.2	7.0	>7.0					>7.0	7.0	6.8
3	6.5	6.2	6.2	5.7	(5.3)	(5.1)	(5.2)	(5.7)					60											6.6
4	6.2	5.8	5.4	4.8	[4.4]	5.2	6.3	[6.8]	7.0	[7.1]	[7.3]	>7.0	>	>										>7.0
5	[7.2]	6.7	6.2	5.8	(5.6)	[5.8]	C	C	C	C	C	C	C	C	C	[6.8]	[7.2]	>7.0					>7.0	6.8
6	(6.2)	[5.9]	[5.6]	[5.4]	[5.3]	6.1	7.0	[7.4]															C	C
7	C												C											>C
8	C												C											>C
9	[5.5]C	[5.0]C	4.4	3.8	3.5	3.8	4.8	[5.6]																
10	[5.1]	[4.5]	4.0	[3.5]	[3.1]	[4.0]	(5.5)	(6.4)	<				70	<									>	>
11	[6.8]	[6.6]	6.2	5.4	(4.7)F	(4.6)F	4.9	6.2	[6.3]	6.1	[6.2]	[6.4]	[6.6]	[6.7]	[6.9]	7.2	(7.4)	[7.5]					[7.2]	6.8
12	6.5	6.2	5.9	5.5	5.1	5.1	5.9	6.4	6.6	6.6	6.7	6.7	6.9	>7.0									>7.0	7.0
13	6.6	6.2	5.3	4.8	4.6	(4.3)	6.2	6.3	6.3	6.2	6.1	6.0	6.0	6.2	[6.4]	[6.6]	[6.8]	[6.9]	(7.0)	(7.0)	(7.0)	6.7	6.2	5.8
14	5.6	5.4	4.7	4.5	4.4	4.7	5.5	6.0	6.2	6.3	6.2	6.2	6.3	6.5	6.8	7.1	[7.3]	[7.4]	[7.4]	[7.4]	7.1	7.1	7.1	7.0
15	6.6	6.2	5.2	4.6	4.0	4.8	5.7	6.2	6.3	6.3	6.3	6.3	6.2	6.2	6.9	>7.0	>7.0	>7.0	>7.0	7.0	6.4	[5.8]	[5.6]C	[5.5]C
16	[5.3]C	[5.0]C	[4.6]C	[4.2]C	(3.9)	(4.7)	C	C	C	C	C	C	C	C	C	C	>7.0	C	C		>7.0	[7.4]	7.1	6.7
17	6.3	6.0	5.7	5.3	4.9	5.7	(6.2)	(6.4)					62											>
18	7.2	6.6	5.9	5.5	5.1	5.3	[6.2]	(6.7)					78											<
19	[4.7]	[4.0]	(3.1)F	(2.8)F	(3.2)F	3.8	4.7	5.0					6											
20	5.1	4.9	4.4	3.8	3.4	3.5	5.6	C	C				C	C	C	C							>	>
21	>7.0	7<6.8	[6.4]	[6.0]	5.5	5.6	C	>	>				C	>										>C
22	>			[5.9]	5.4	5.8	C	>	>				C	>	>	>	>						>	>C
23	>				>5.2	>5.2	C	>	>				C	>	>	>	>						>	C>7.0
24	>7.0	[7.2]	[6.9]	[6.7]	(6.5)	(6.6)	(7.1)	(8.0)					78											>
25	6.8	6.5	6.3	5.7	5.0	5.5	C	C	C	C	C	C	>	>	>	>7.0	>7.0	>					>7.0	[7.3]
26	7.0	6.9	6.7	6.3	5.6	5.7	7.0	>7.0	>				>	>	>	>	>	>	>			>	>	>7.0
27	>7.0	>7.0	7.0	6.0	5.5	5.3	6.2	6.2	6.6	6.9	7.1	6.7	6.7	6.9	7.1	7.2	[7.4]	[7.7]	>7.0			>	>	>7.0
28	[7.7]	[7.2]	6.7	6.2	(5.7)	6.4	[7.2]	>7.0	>				>	>	>	>	>	>	>			>	>	>7.0
29	[7.3]	7.0	6.7	6.3	6.0	6.2	7.2	>7.0	>				>	>	>	>	>	>	>			>	>	>7.0
30	7.0	6.6	6.2	5.8	5.4	(5.6)	6.4	>7.0	>				>											>7.0
31																								
								65	68															
Median	6.6	6.2	5.9	5.4	5.0	5.2	6.2	(6.4)	70				72	71	72	72	73	75	76				>7.2	>7.0
Count	26	26	26	27	28	28	22	21 28	28				24	26	16	16	12	10	8				14	24

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) foF2, (Unit) , (Month) July, 1936

Observed at Wash.

Lat. , Long. (Institution)

Mean Time

Re Scaled by: SMO ,

Re Calculated by: MPK ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	6.9	6.4	5.9	5.5	4.9	5.3	6.4	7.1	7	7	7	7	88	7	7								7	7
2	6.5	6.2	5.7	4.8	4.0F	4.3	5.2	5.3	4.9	[4.9]	[5.1]	[5.3]	[5.4]	[5.4]	[5.5]	[6.5]	[5.5]	[5.5]	[5.5]	5.7	6.0	6.2	5.9	5.2
3	4.4	3.8	3.0	2.4	2.1	3.8	5.0	5.8	6.1	6.2	6.5	7.0	7.0	6.2	6.2	7.0	→7.0					→7.0	7.0	6.7
4	[6.5]	[6.4]	6.1	5.6	(5.0)	7	7	7	7	7	7	7	2	7	7								7	2
5	C												C						C	6.2	6.0	5.8	5.6	5.3
6	5.0	4.6	(3.8)	3.1	2.5	4.0	5.0	5.7	6.2	[6.4]	6.2	[6.3]	6.2	[6.4]C	[6.7]C	[7.0]C	[7.3]C	→7.0				→7.0	[7.6]	7.0
7	6.2	5.8	5.5	5.1	4.8	4.3	5.0	5.7	6.1	6.2	6.2	6.2	6.2	6.2	6.5	7.0	→7.0					→7.0	7.0	6.7
8	6.2	6.2	6.0	5.6	4.3F	4.4F	5.6	6.2	6.6				68	4	C								7	7
9	6.8	6.3	5.8	5.2	5.0F	5.0F	5.7	6.4	7.1	7			7						C	C	C	C	C	C
10	6.2	6.2	5.8	5.3	4.6	4.8	5.6	6.1	6.2	6.2	6.1	6.1	6.1	6.5	7.1					(7.9)	(7.9)	[7.0]	[6.2]	[5.5]
11	[5.1]	[4.7]	[4.3]	[3.9]	[3.5]	(4.3)	C	C	C	C	C	C	C	C	C				[7.5]	6.5	5.8	5.5	5.4	5.2
12	5.0	4.6	4.0	3.5	(2.7)F	3.9	5.5	6.0	6.2	[6.3]	6.2	(6.1)	6.1	(6.0)	6.4	[7.3]					C	C	2	2
13	0	0	0	2	4.4	4.7	5.5	[5.7]C	[5.8]C	[5.8]C	[5.8]C	[5.9]C	[5.9]C	[6.0]C	6.1	6.6	→7.0				→7.0	[7.2]	6.8	6.2
14	5.9	5.6	5.3	4.9	4.9	5.2	6.2	7.3	[7.6]	[7.4]	7.0	2	2	2	7							[8.1]	(7.7)	7.1
15	6.6	6.4	6.0	5.6	5.2	5.4	6.2	[6.3]	[6.5]				79	72	7								7	7
16	6.8	6.8	6.7	6.5	5.4	5.0	5.9	6.2	[6.5]	[7.3]	[7.4]	7.1	6.9	6.2	6.9	→7.0					→7.0	[7.2]	6.9	6.7
17	6.5	6.2	5.7	5.1	4.6	4.9	5.8	[6.6]	(7.0)	(7.0)	(7.0)	6.9	(7.1)	[7.2]	→7.0				→7.0		C	C	2	0
18	XC												C											C*
19	XC												C											C*
20	C											C	→7.0										7.0	[7.2]
21	6.8	6.8	6.6	6.2	5.2	5.3	6.2	7.0	[7.3]	[6.8]	[6.3]	[6.3]	[6.5]	[6.7]	(7.0)	(7.0)	[7.1]	[7.1]	[7.2]	[7.5]	[7.6]	[7.4]	6.9	6.6
22	6.5	6.4	6.1	5.5	4.8	4.9	6.0	6.6	7.0	7	7	68	67											7
23	6.5	6.3	5.8	5.1	4.8	[4.8]	5.5	6.2	6.7	7.0									C	C	C	C	C	2
24	C	C	C7	5.3	4.6	5.1	6.2	→7.0	7	7	7	7	7	7	7						→7.0	[7.4]	7.0	
25	6.5	6.2	5.9	5.6	5.2	5.3	6.8	[7.5]	[7.6]	[7.6]	[7.5]	[7.3]	[7.2]	[7.2]	→7.0						→7.0	[7.4]	7.0	
26	6.6	6.3	5.9	5.3	4.5	4.7	5.6	6.6	[7.3]	[7.3]	[7.4]	→7.0	7	7	7						→7.0	7.0	6.6	
27	6.2	6.1	5.6	5.1	4.7	5.0	6.2	7.0	→7.0	7	7	7	7	7	7						→7.0	[7.4]	7.0	
28	6.6	6.2	5.6	4.9	[4.4]4	4.7	5.7	6.5	7.0	[7.1]	[7.1]	[7.1]	[7.2]	[7.3]	→7.0						→7.0	7.0	6.6	
29	6.2	5.2	4.8	4.7	4.5	4.4F	5.4	6.2	[6.4]	66	68	71	74											7
30	5.7	5.2	4.8	4.4	4.1	4.2	5.2	[5.7]	[5.8]	[5.8]	[5.7]	[5.7]	[5.7]	[5.7]	[5.7]	[5.7]	[5.9]	6.2	[7.2]	7.0	7.0	7.0	7.0	6.2
31	5.5	4.7	4.6	4.5	4.2	4.3	5.9	7.2	[7.4]	7.0	[7.1]	→7.0	7	7	7							→7.0	7.0	6.9
			58																					
Median	6.5	6.2	5.7	5.1	4.6	4.8	5.7	6.3	67	70	70	70	70	67	71								70	69
Count	25	25	25	26	27	26	25	25	27	25	28	23	27	23									25	29

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

F¹ F₂ (Characteristic), (Unit) Aug (Month), 1936

Observed at Wash. (Institution)

Lat. ____, Long. ____ ____ Mean Time

Re Scaled by: SMO Mar, 52

Re Calculated by: MPK ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	6.6	6.4	5.9	5.0	4.5	4.6	[5.5]	[5.9]	[6.1]	6.2	[6.3]	[6.5]	7.0	>7.0								>7.0	7.0	6.6
2	6.2	5.8	5.2	[4.8]	[4.7]	4.6	[5.4]	6.3	[6.9]	[7.2]	[7.3]	(7.3)	7.1	7.1	[7.2]	>7.0						>7.0	7.0	6.6
3	6.2	6.0	5.8	5.5	5.1	4.6	[5.4]	6.2	7.0	7.0	[6.7]	[6.4]	6.2	[6.5]	>7.0							>7.0	6.9	6.3
4	6.0	5.9	5.7	5.2	4.0	4.2	[5.4]	6.2	6.9	>7.0			<										>7.0	7.0
5	6.6	6.2	5.8	5.5	5.0	4.9	6.2	(7.1)	>				8.5										<	<
6	[6.1]	[5.8]	[5.5]	5.1	4.8	4.6	5.4	[6.1]	[6.8]	7.1	7.2	[7.3]	[7.3]	[7.2]	7.0	[7.2]	>7.0	>7.0	>7.0	[7.1]	[6.7]	[6.5]	6.2	6.0
7	5.8	5.4	5.0	4.8	4.6	4.8	[5.7]	6.8	>7.0				>										>7.0	7.1
8	6.6	6.2	5.6	5.3	5.0	4.8	[5.4]	6.5	>7.0				<								>7.0	[7.4]	6.6	6.0
9	5.9	5.8	5.6	5.4	5.0	4.6	[5.3]	6.2	6.8	7.1	>7.0		<								>7.0	[7.3]	6.8	6.3
10	6.0	5.8	5.6	5.2	4.7	4.4	5.5	6.5	7.0	(7.0)	(7.0)	(7.0)	(7.0)	(7.1)	[7.4]	<7.0						>	>	>7.0
11	>7.0	6.2	5.8	(5.4)	(4.6)	4.5	5.6	6.6	7.2	[7.4]	7.2	7.1	[7.4]	>7.0								>7.0	7.0	6.6
12	6.2	6.0	5.8	5.5	5.1	5.1	6.6	7.4	>				8.3											>
13	6.6	6.3	5.7	5.2	4.8	4.8	5.7	6.5	7.0	6.9	(6.8)	(6.8)	(6.9)	7.0	(7.7	(7.2)	7.0	[7.3]	>7.0			>7.0	7.0	6.6
14	6.2	5.9	5.5	5.2	4.8	4.4	5.5	7.0	>7.0				>								>7.0	[7.2]	6.9	6.6
15	6.2	(6.1)	[5.8]	[5.5]	[5.1]	[5.3]	7.1	>7.0	>				>									>7.0	[7.5]	6.9
16	6.4	6.2	5.9	5.7	5.2	4.5	5.9	6.9	[7.5]	[7.6]	[7.5]	7.5	[7.8]	>7.0							>7.0	[7.8]	(7.4)	7.3
17	7.3	7.0	6.2	5.5	4.8	4.7	5.4	6.2	7.2	(7.4)	[7.5]	>7.0	>	>							>7.0	[7.6]	7.2	6.7
18	6.2	5.9	5.6	5.3	4.7	4.8	6.1	>7.0	>				>									>7.0	<	<
19	<	<	[5.8]	5.4	4.8	5.0	6.3	7.5	>				8.7	>									>	>
20	<	<	<	[5.5]	5.1	4.8	<		<				<											><
21	<	<	[5.6]	5.2	4.7	4.4	<		<				<											><
22	<	<	[5.4]	(4.9)	(4.9)	(5.0)	<		<				<											><
23	<	<	5.4	4.6	4.5	4.7	<		<				<											><
24	<	<	[5.6]	5.3	4.7	4.8	<	>	>				>									<	<	><
25	<	<	<	<	<	4.3	<	<	<				<											><
26	[5.2]	5.0	4.8	4.6	4.6	(4.6)	(5.9)	(6.4)					6.6											<
27	6.2	6.0	5.8	5.5	(5.1)	(4.8)	5.8	7.0	[7.2]	>7.0			>	>							>7.0	[7.5]	6.6	6.1
28	6.0	5.9	5.8	5.6	5.4	5.8	6.8	[7.6]	>7.0				>	>						>7.0	6.1	[5.8]	[5.6]	[5.2]
29	[5.0]	[4.8]	4.6	(4.4)F	(4.2)F	(3.9)F	5.8	[7.4]	>7.0				>											>7.0
30	>7.0	>7.0	7.0	6.2	5.4	4.7	5.9	7.1	>				>	>								[7.4]	7.0	6.5
31	6.0	5.5	5.0	4.4	4.1	3.9	5.3	[5.8]	[6.0]	[6.1]	[6.1]	[6.1]	(6.2	(6.8)	[7.3]	(7.0)	[7.3]	[7.4]	[7.4]	[7.3]	7.0	6.2	5.7	5.4
					47																			
Median	6.2	6.0	5.6	5.3	4.8	4.7	5.7	6.6	7.2				7.8	7.2								7.3	7.0	6.6
Count	24	24[illegible]	30	30	30	31	25	25	25				25	13								15	23	27

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

IONOSPHERIC DATA

(Characteristic) F^1F_2, (Unit) ——, (Month) Sept., 1936

Observed at Wash., D.C.

Lat. ——, Long. ——

(Institution)

Re Scaled by: S.M.O May, 1952

—— Mean Time

Re Calculated by: MPK

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	[5.0]	5.1	5.0	4.8	4.5	(4.4)F	6.1	[7.3]														7.4	6.8	6.2
2	6.3	6.4	6.2	[5.8]	5.4	4.8	5.8	(7.0)					84									(7.4)	[6.6]	[5.7]
3	(5.4)F	5.0F	(5.0)F	(4.6)F	(4.8)F	4.5	6.2	7.0														[7.5]	7.2	7.0
4	6.7	6.4	6.0	5.6	(5.2)	4.8F	5.7	6.7	[7.4]													7.0	7.0	7.0
5	7.0	7.2	6.9	6.5	5.8	5.0	5.5	6.4	7.2	(7.0)	[7.4]											6.9	6.4	6.0
6	5.8	5.7	5.5	5.3	5.1	4.8	6.0	6.8	[7.3]													[7.6]	6.8	6.1
7	5.4	(5.2)F	(5.1)F	(5.0)F	4.9F	4.6	6.2	[7.8]														7.0	7.0	[7.5]
8	6.7	6.2	5.8	5.4	5.0	(5.2)	6.0	7.1														7.0	7.0	7.0
9	[7.3]	6.7	6.2	5.7	5.3	5.1	6.2	(7.7)					103									(8.7)	(8.3)	7.0
10	6.6	6.2	5.8	5.2	4.7F	(4.1)F	6.2	[7.9]														[7.2]	6.8	6.4
11	C							C														C		C
12	C					C	6.2	[8.3]														[7.8]	7.0	6.2
13	[5.9]	[5.3]	[5.7]	(5.5)	(5.1)	(4.8)	[5.7]	[8.3]														[7.7]	7.0	6.2
14	C					C	6.2	[8.4]														C	C	C
15	C							C														7.0	[7.7]	(6.9)
16	[6.2]	[6.0]	[5.8]	[5.6]	5.3	5.2	(6.8)	(8.8)					93									(8.3)	(7.5)	7.0
17	6.4	6.0	5.7	(5.4)F	5.1F	4.7F	6.2	(8.4]														[7.4]	6.7	6.2
18	5.8	5.6	(5.4)F	5.1F	4.8	4.4	6.2	[7.7]														7.0	6.7	6.4
19	6.2	5.9	5.6	5.3	(5.1)F	4.8F	6.2	[8.2]														[7.7]	[7.3]	7.0
20	6.7	6.6	6.4	6.2	5.8	(5.4)F	6.6	[8.2]														[7.6]	7.0	6.6
21	6.3	6.1	5.9	5.5	4.8F	4.7F	6.2	[8.5]														[7.6]	7.0	6.6
22	6.2	6.1	6.0	5.8	5.6	5.4	6.9	[8.9]														7.0	[8.0]	7.0
23	6.2	6.0	5.8	5.6	5.4	4.9	5.3	6.4					100									(7.1)	(6.1)	(6.1)
24	6.0	5.9	5.8	5.5	5.2	4.7	6.0	[7.9]													7.0	6.2	6.1	6.0
25	5.9	5.8	5.5	5.4	5.2	5.0	6.2	[8.0]														7.0	[7.9]	7.2
26	6.6	6.4	6.0	5.4	4.8	4.4	5.8	[8.4]													7.0	6.2	(5.2)	(4.4)F
27	(4.2)	4.2	4.0	3.8	3.5	3.4	5.0	6.6														7.0	[7.8]	7.0
28	6.2	6.0	5.9	5.8	5.5	4.9	6.2	[8.2]														7.0	[7.3]	6.7
29	6.4	6.2	6.1	5.9	5.6	5.4	5.8	[7.1]													7.2	6.7	6.3	5.9
30	5.8	5.7	5.5	5.1	4.7	4.6	5.7	(7.8)					106									(7.2)	(7.2)	7.2
31																								
Median	6.2	6.0	5.8	5.4	5.1	4.8	6.2	(7.8)					100									(7.6)	7.0	6.6
Count	26	26	26	26	26	26	28	28														28	28	28

Sweep —— Mc to —— Mc in —— min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) foF2, (Unit), (Month) Oct., 1936

Observed at Wash., D.C.

Lat. ____, Long. ____ ____ Mean Time

(Institution)

Scaled by: SMO, Mar. 1952

Calculated by: MPK,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	6.8	6.4	6.0	5.8	5.5	5.2	5.8	7.7.0														7.7.0	[7.2]	6.7
2	6.3	6.1	5.8	5.4	5.1	4.8	5.6	7.7.0														7.7.0	[7.4]	7.0
3	6.8	6.5	6.3	6.1	[5.9]	[5.6]	6.2	7.7.0														7.7.0	7.7.0	7.7.0
4	7.0	6.7	6.4	6.1	[5.9]	[5.7]	7.0															7.7.0	7.7.0	7.7.0
5	7.0	6.8	6.6	6.4	6.2	[6.0]	6.4															7.7.0	[7.2]	6.8
6	6.5	6.2	6.0	5.9	5.8	5.6	6.4															7.7.0	[7.4]	6.9
7	6.5	6.1	5.8	5.5	5.2	4.9	7.0						123									(8.6)	(8.2)	7.2
8	7.2	7.2	7.2	6.9	6.4	6.0	6.4															7.7.0	7.7.0	7.1
9	6.9	6.7	6.5	5.9	5.2	4.7	6.3															[7.4]	7.0	6.7
10	6.4	6.2	5.9	5.4	(4.9)F	(4.6)F	5.2															6.8	6.1	[5.6]C
11	[5.4]C	[5.2]C	[5.0]C	4.7	4.5	4.3	6.4															[7.2]	[6.8]	6.3
12	6.0	5.7	5.4	5.2	4.9	(4.7)	5.6															[7.6]	7.1	6.7
13	6.2	5.9	5.7	5.4	5.2	5.0	5.6															[7.4]	7.0	6.2
14	6.0	5.9	5.8	5.6	5.3	5.1	6.0						123									(7.9)	7.4	7.1
15	7.3	7.3	7.2	7.0	6.2	5.6	5.7	[8.0]														7.7.0	[7.4]	6.8
16	6.3	6.3	6.2	6.1	5.9	5.8	6.0	[7.7]														[7.3]	6.3	5.5
17	5.0	4.9	4.6	4.3	4.0	3.8	4.8	[7.3]														7.7.0	7.2	7.0
18	6.7	6.7	6.4	5.6	4.9	4.7	5.2															[7.2]	6.9	6.6
19	6.2	6.0	5.6	5.2	4.8	4.6	5.4															7.7.0	7.7.0	[7.0]
20	7.2	6.7	6.3	5.5	4.8	4.4	5.0	7.5														7.7.0	7.7.0	7.7.0
21	[7.4]	7.1	6.5	5.9	5.6	5.4	5.8	(8.4)					135									7.3	7.0	6.8
22	6.5	6.2	6.0	5.6	5.2	4.7	5.0	[8.0]														6.8	6.2	6.0
23	6.0	6.0	6.0	5.8	5.6	5.4	5.6															7.7.0	7.7.0	[7.4]
24	7.0	7.0	6.8	6.6	5.8	4.9	4.9	[7.5]														7.7.0	[7.4]	7.1
25	6.8	6.4	6.1	5.7	5.2	4.9	4.8	[7.5]														[7.5]	7.1	6.8
26	6.4	6.2	5.9	5.6	5.2	4.8	5.0															7.0	6.4	6.0
27	5.9	5.9	5.9	5.8	5.5	5.1	4.8														[7.2]	6.8	6.3	6.0
28	5.9	5.9	5.9	5.9	5.8	5.6	5.5	(8.1)					125									6.6	6.0	5.7
29	5.5	5.3	(5.1)F	(4.9)F	(4.9)F	(5.1)F	(5.0)F															7.0	6.2	5.8
30	5.8	6.2	[6.3]	[6.3]	6.0	(5.2)F	(4.7)F														[7.4]	6.6	6.1	6.1
31	6.4	6.4	6.0	5.6	5.2	3.8	4.8	6.1	6.3	6.3	6.7										6.9	6.6	6.2	5.6
Median	6.4	6.2	6.0	5.7	5.2	5.0	5.6						124									(7.6)	7.2	6.8
Count	31	31	31	31	31	31	31															31	31	31

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) Jan. (Month) , 1937

Observed at Wash. D.C.,

Lat. , Long.

(Institution)

Scaled by: ,

Mean Time

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	56	56	54	53	51	455	42														78	63	52	495
2	50	495	505	51	485	425	433	60													76	73	66	60
3	58	62	64	65	53	485	43	56													76	66	58	56
4	64	63	66	67	60	45	46														70	60	58	58
5	56	56	54	52	51	46	49														63	56	56	505
6	47	47	52	49	49	47	46	46	80	95	110	118	123	125	123	120	113	102	96	84	56	49	54	495
7	45	505	54	48	465	425	46	54													86	78	66	44
8	435	54	54	47	425	41	45	54													72	56	48	49
9	44	46	43	46	45	41	36	47													76	73	70	68
10	64	65	63	63	56	45	40	50													72	62	515	505
11	475	46	45	45	45	46	48	50													64	56	55	51
12	44	42	43	45	39	395	43													(7.2)	62	58	58	58
13	60	63	59	58	495	46	425	46	77	94	122	121	120	117	114	112	107	104	85	68	54	50	485	425
14	415	395	445	42	375	365	385	50												(70)	58	54	49	44
15	43	42	41	43	43	43	435	54												(76)	60	45	45	435
16	45	45	49	43	46	46	48	52												(7.6)	62	54	52	53
17	50	49	50	475	44	435	43	52												(78)	60	50	46	44
18	43	437	505	54	505	485	495	55												(74)	62	47	43	425
19	44	52	54	53	50	46	46	56												(76)	62	58	56	53
20	53	505	54	48	465	455	43	52	8.3	89	108	123	110	110	116	118	116	114	102	87	65	59	56	55
21	495	55	50	53	46	42	385	52														58	55	58
22	45	425	47	475	48	495	43	49													60	54	50	465
23	44	44	435	435	42	425	42	54													72	54	515	49
24	425	415	415	42	415	425	44	52													70	54	515	47
25	417	415	435	47	485	52	505	56													71	56	52	50
26	44	415	413	428	452	47	467	60													70	58	56	49
27	455	435	452	485	465	39	375	505	92	115	119	129	124	119	118	122	120	120	119	104	96	84 (76)	71	72
28	71	71	72	68	60	48	45	64													(85)	76	68	71
29	72	73	66	60	60	58	55	66													(80)	72	62	54
30	48	515	54	54	55	53	495	62													(91)	86	84	76
31	66	56	55	53	53	52	505	63													(85)	76	74	71
Median	47	495	505	48	48	455	44	53	82	94	114	122	122	118	117	119	114	109	99	76	70	58	55	505
Count	31	31	31	31	31	31	31	26												11	30	31	31	31

Sweep Mc to Mc in min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Book #11

Book #28+29
Means #Mon. Am. Book

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

F , , March , 1947
(Characteristic) (Unit) (Month)

(Institution)

Observed at

Lat. , Long. Mean Time

Scaled by: ,

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	7.6	7.4	7.2	7.0	64	58	565																8.0	7.8
2	8.0	8.0	8.0	8.0	80	78	76																80	7.8
3	7.6	7.4	7.2	6.6	64	64	62	83	100	116	127	134	138	135	134	133	133	133	12.6	10.6	10.0	9.2	82	7.3
4	7.4	7.2	7.1	7.0	66	66	—															85	80	8.0
5	7.6	6.8	6.6	6.6	66	64	4.9													8.5	8.0	78	76	7.3
6	7.0	6.7	6.3	6.0	54	515	52															85	80	7.8
7	7.5	7.3	7.1	6.6	62	60	62															85	78	7.6
8	7.6	7.2	7.0	6.8	63	60	62															85	80	7.8
9	7.8	7.8	8.0	7.4	66	62	60															85	80	7.4
10	6.8	6.3	6.3	6.4	63	58	64	8.9	106	114	128	130	135	131	129	131	130	130	12.1 (12.3)	10.3	98	88 (89)	81 (80)	7.9
11	7.5	6.9	6.8	6.6	64	62	66															85	80	7.6
12	7.2	6.8	6.6	6.5	64	58	66																80	7.8
13	7.4	7.2	7.0	7.1	66	64	66																	
14	8.5	8.5	7.8	7.6	74	72	71														85	83	80	7.7
15	7.5	6.7	6.3	6.2	57	51	47					<	<	76	<				8.1	7.8	6.9	62	55	5.1
16	5.1	505	5.0	4.95	44	41	51															80	69	6.8
17	6.6	6.7	6.4	6.3	60	59	64	8.3	105	105	112	121	123	124	122	122	124	119	11.6	10.0	9.5	86	81	7.6
18	7.5	73	7.0	6.8	64	63	66																85	83
19	8.0	78	7.4	6.7	62	60	64															85	80	7.9
20	7.7	77	7.7	7.5	69	63	68																82	8.1
21	8.0	76	7.4	7.2	64	60	70															85	85	80
22	7.5	72	7.2	7.2	70	67	73															82	78	7.6
23	7.4	72	6.8	6.4	60		62																	7.5
24	7.2	68	6.4	6.5	64	64	7.2	90	103	111	113	122	129	132	129	124	124	123	11.9	11.0	10.0	96	87	85
25	8.0	78	7.4	6.8																				—
26																								—
27																						8.3	80	7.6
28	6.4	63	6.2	6.0	58	56	54																	
29			6.0	6.0	58	55	57																	
30																								
31						62	6.2	6.0	67	70	79	84	91	97	100	99	96	96	9.3	92	8.7	85	82	7.0
Median	7.5	7.2	7.0	6.6	64	61	6.3	8.3	10.2 / 10.3	10.8 / 11.1	11.3	12.2	12.6 / 12.9	12.9 / 13.1	12.9	12.3 / 12.4	12.4	12.1 / 12.3	11.8	10.0	9.1	8.5	8.0	7.7
Count	26	26	27	27	26	26	26	5	5	5	5	5	5	5	6	5	5	5	6	7	8	19	24	25

Sweep Mc to Mc in min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit) Jan. (Month), 1938

Observed at Wash., D.C. ft

Lat. ____, Long. ____

(Institution)

Scaled by: ____, ____

____ Mean Time

Calculated by: ____, ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	63	60	59	59	58	5.1	49	53	7.7										C	C	C	C	C	C
2	C																		C	C	C	C	C	C
3	C																—	98	87	76	62	52	54	50
4	48	49	49	48	405	37	37	455	7.0	85	10.0						—	103	95	88	77	68	52	42
5	39	[39]	385	45	57	43	36	48	7.7	9.8	10.8	12.4	11.9	12.2	11.9	11.9	10.7	95	85	74 905	51	45	455	465
6	455	455	435	435	46	495	50	53	7.4	8.9	10.5						—	104	91	78	77	71	71	71
7	72	68	64	60	61	56	57	59	8.6	9.5										85	74	68	60	50
8	38	42	435	47	39	40	42	55	7.5	9.5							9.8	90	86	77	61	60	52	43
9	385	43	49	51	54	54	50	52	7.8	8.5							10.1	91	79	70	56	54	52	52
10	52	48	47	47	415	37	38	52	7.1	8.6	9.0						10.2	94	82	765	62	52	51	48
11	42	44	43	C	C	C	C	C											100	77	62	57	56	54
12	53	51	48	47	47	47	43	56	8.0	9.6	11.3	13.0	11.2	11.6	12.3	12.0	12.8	122	104	92	82	70	55	K
13	K	K	K	K	K	K	K	K	7.8	9.5							—	99	85	70	56	46	42	42
14	435	44	45	41	40	38	39	50	7.8	9.2								100	93	85	66	53	47	425
15	415	415	43	435	415	43	42	55	8.5	9.8							7	105	98	88	68	60	55	515
16	52	54	54	53	[52]	48	48	56	9.0									100	93	86	95	85	78	73
17	65	665	72	67	54	525	52	48	5.7	5.6	5.9	6.3	6.9	7.3	8.1	8.5	8.2	84	(81)	76	76	685	64	635
18	59	55	55	54	52	50	495	58	8.4	9.8								B	103	92	82	68	65	57
19	56	49	47	38	35	35	40	52	7.9	9.8	12.3	13.0	13.4	13.1	13.6	13.2	12.9	12.3	111	104 90	79 82	76	72	70
20	66	60	58	51	51	51	51	56	8.5	9.6									103	98	93	87	83	79
21	75	72	69	62	42	31	31	62	8.4	9.9									99	92	85	60	56	58
22	64	62	K	K	K	K	K	K	<	505	<	6.4	6.5	<	<	<	8.5	8.0	68	63	60	57	55	52
23	50	49	47	46	45	435	375	45	8.4	9.7									99	92	70	59	58	61
24	63	64	62	42	38	375	39	52	8.5	10.2									103	94	84	70	60	59
25	59	62	64	64	58	47	41	52	8.5	8.5								B	K	K	K	K	K	A
26	K	K	K	K	K	25?	K	K	8.3	11.2	11.4	12.8	13.1	12.9	12.9	13.3	12.5	12.2	115	85	70	56	46	435
27	39	38	415	415	395	385	40	46	8.5	9.7									100	85	72	65	58	48
28	43	44	48	43	41	40	39	53	8.6	9.5											80	62	50	41
29	395	40	50	57	60	51	52	56	8.6	10.1									97	80	74	66	63	60
30	56	52	50	42	40	40	40	51	8.5	10.0							7	105	94	87	76	64	65	62
31	63	62	61	60	44	48	48	56	8.7	10.1											84	76	60	42
												12.6	11.6	11.9	12.1	12.0								
Median	52	49	49	47	45	435	42	53	8.4	9.6	11.3	12.8	11.9	12.2	12.3	12.0	12.5	12.2	10.4	8.5	7.4	6.3	5.6	5.2
Count	27	27	26	25	25	25	25	25	27	26	5	6	5	6	5	6	5	5	5	5	28	28	28	27

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Book #12

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) foF2 (Unit) March (Month), 1938

(Institution)

Observed at _____

Lat._____, Long._____ _____ Mean Time

Scaled by: _____, _____

Calculated by: _____, _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	67	655	64	63	625	615	575	79	995												985	825	675	63
2	56	565	57	545	50	48	56	81	1015	112	124	131	135	135	131	130	125	124	118	1045	955	85	77	70
3	65	635	635	64	64	60	60	73	100											94	85	795	74	70
4	665	64	62	61	59	56	55	77	100											965	89	865	77	72
5	70	65	59	51	52	53	58	82	95	103									975	915	85	80	74	68
6	675	665	65	60	52	56	505	82															75	71
7	675	645	62	605	58	54	535	81													97	87	81	75
8	68	655	64	64	63	58	54	78	96											102	95	875	815	77
9	695	65	63	62	63	625	60	85	985	11.1	123	129	130	130	132	131	130	128	120	113	100	92	85	75
10	70	675	66	645	63	585	555	85	100											100	955	91	85	79
11	75	73	715	70	67	595	60	85													100	96	90	81
12	685																			100	935	92	905	82
13	73	715	71	71	695	635	63	895													100		85	82
14	80	80	785	72	66	63	645	88													100	87	88	815
15	77	785	76	725	67	62	605	865													985	94	90	855
16	81	77	81	715	68	62	68	91	1075	125	135	134	134	134	136	130	127	124	1215	113	104	975	91	855
17	86	86	85	795	695	66	745														97	91	855	81
18	78	755	735	71	665	61	69	96												100	99	975	955	93
19	875	80	75	72	68	61	68	92																885
20	82	77	73	68	62	54	62	89								425?								85
21	825	805	79	745	69	605	675																	
22		77	61	64	64	60	57	545	64	71	62	66					73	745	725	64	64	65	65	61
23	55	51	48	48	475	41	395	60	66	69	675	66	67	655	65	705	72	76	915	78	69	52	485	46
24	46	465	48	48	47	475	53	65	74	815	795									945	85	815	775	735
25	70	66	625	57	505	46	495	655	70	73	795	87	895	965							94	82	78	76
26	745	725	70	62	56	54	565	72	825	90	975										915	84	785	74
27	70	64	595	55	52	51	56	705	79	865	95	985	99								92	805	73	70
28	675	66	645	635	625	605	625	85	107											96	90	845	81	785
29	755	70	66	62	59	55	62	785													100	87	84	825
30	805	805	74	69	625	59	66	88	106	118	122	121	125	126	124	125	123	121	116	108	93	90	88	85
31	85	79	725	68	62	60	65	90																90
									99	104	110	115												
Median	70	69	66	64	625	59	60	82	985	90	975	11.0	125	128	131	130	124	122	116	10.0	95	87	81	78
Count	30	30	30	30	30	30	30	28	17	11	9	8	7	6	5	5	6	6	7	15	25	25	27	30

Sweep_____Mc to_____Mc in_____min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit) Jan., 1939 (Month)

Observed at Wash., D.C.

Lat. ____, Long. ____ ____ Mean Time

(Institution)

Scaled by: ____,

Calculated by: ____,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1									77	10.0								9.5						
2									77	9.8								(10.6)						
3									72	10.0							10.1	9.9						
4								5.0	76	9.6 9.4	10.7	11.7	11.9	11.0	11.3	11.0	10.7	10.3	9.3	9.4				
5									76	8.7														
6									8.0	10.0														
7									8.2	10.3														
8									8.3	10.8														
9									9.0	(11.3)														
10									8.6	(10.8)														
11									8.6	11.3	12.3	13.5	12.6	12.4	12.9	12.5	12.1	11.9	10.8	9.1				
12									7.9	(9.9)														
13									7.3	(9.2)														
14									8.5	(10.7)														
15									8.3	10.0														
16									8.8	(11.1)														
17									7.3	10.5														
18								6.1	8.2	10.2	13.0	13.0	11.8	11.3	11.2	10.8	(9.9)	8.9	8.8	8.0				
19									7.3	9.1								9.9						
20									7.9	9.4								10.0						
21									7.7	10.0														
22									7.85	10.0														
23									7.5	9.5														
24								5.4 5.2	8.3 7.5	9.9 9.2	11.0	12.0	11.8	11.5	11.5	11.5	10.9	10.9	9.5	7.8				
25								↓	8.0	9.9	↓	↓	↓	↓	↓	↓	10.9	10.4	↓	↓				
26									8.0	9.4							7	10.3						
27									7.25	8.9							9.8	9.8						
28									7.35	9.8														
29									7.8	10.3														
30									7.5	9.2														
31									8.65	9.5														
Median									7.8	10.0	11.6	12.5	11.8	11.4	11.4	11.3	10.7	10.1						
Count									31	31							7	12						

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) Mar. (Month), 1939

(Institution)

Observed at _____

Lat. _____, Long. _____ _____ Mean Time

Scaled by: _____, _____

Calculated by: _____, _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	68	68	67	68	61	51	54	75	102	113	108	116	121	125	132	132	130	102	122	112	102.5	96	77	61.5
2	61	61	62	62	51	49	485	75	92?	99?	107?	117?	7						? 103	91	84	74	62	58.5
3	58	575	575	565	54	48	46	66	90	100	108?	118?	7						? 115	? 108	97	87	83	65
4	61	615	605	545	465	49	53	60	76	80	89	102	[109]						? 105	83	78.5	69	61	55
5	51	475	45	45	43	44	42	68	98	99?	107?	117?	7						? 97	91	84	77	69	58
6	53	495	465	435	41	35	35	65	86	94	104?	114?	7						? 106	100	84	71	61	57
7	55	53	52	53	43	385	38	70	925	99?	107?	117?	7						? 101	95	85	72	64	62
8	61	58	55	545	555	52	47	65	80	88	102	112	117	116.5	116.5	115	112	106	102	87	71	62	60	58
9	56	54	52	47	40	41	46	65	84	89	93	102?	103	104	104	104	? 104	100	102	84	77	71	69	65
10	625	59	56	53	50	467	49	675	80	86	100	110?	110	110	108	106	? 104	96	94	86	77	70	65	60
11	58	58	56	54	53	42	465	685	77	85	88	104?	104	104	104	104	? 103	? 93	? 87	? 81	? 77	? 71	? 66	62
12	61	595	58	56	51	46	45	71	85	86	90	99?	4						98	90	76	71	68	62
13	58	57	55	52	495	44	475	69	88	95	98	97	[103]						100	81	69	63	62	59
14	56	53	51	50	46	42	49	62	73	78	85	96	91	101	104?	91	89.5	90	89	85	67	61	62.5	51
15	48	48	48	485	455	415	41	595	70	78	82	85	85	91	104	86	86	83	86	77	71	65	60	58
16	565	56	52	50	42	39	405	48	64	67	75	88	96	93.5	94.5	94	95	100	89	80	72	62	57	55
17	57	56	545	50	49	44	435	60	75	77	83	98	[108]	100	100	101	101	97	89	81	75	70	65	61
18	56	54	52	495	45	44	41	66	73.5	78	87	89	100	100	99	98	96.5	98	99	81	73	67	61	59
19	58	56	52	51	495	47	545	75	88	87	90	100	[109]						102	91	83	77	71	64
20	63	635	61	575	52	475	53	71	85	89	100	110?	[111]					104	95	88	81	69	66	63
21	60	56	515	44	37	[3.2]	[3 A]	60	71	70	76	88	89	89?	89?	93?	? 102	? 99	87	90	65	62	61	59
22	58	565	55	53	43	36	41	61	74	83	92	105	112	107	107	105	104	102	99	95	84	68	58	55
23	53?	50?	47?	44?	42?	40?	515	605	725	78	89	95	102?	102	100	99	98	95	93	88	85	81	73	65
24	60	545	52	52	52	51	63	765	89	104?	112?	123?	7						? 107	98	87.5	82	75	68
25	635	61	57	555	54	53	57	725	79	86	94	106?	[111]					? 102	94	91	82	75	72	? 70
26	67?	64?	62?	58	54	48	54	70	85	97	945	98	[105]						93	89	82	78	67	60
27	60	59	58	545	47	46	56	74	83	89?	96?	105?	7						? 99	93	85	68	60	52
28	46	45	445	42	38	40	53	79	84	86	87	89	[109]					? 94	81	68	58	51	57	
29							51	67	90	92	113	119	120	122	123	109	105	135	109	93	76	60	50	38
30	35?	35?	35?	34?	40?	425?	44	55	585	59	64	69	75	77	85	85	81	81	84	87	74	56	53	47
31	53	46	455	41	395	36	50	72	84	87	90	90	97	98	100	102	104	? 106	95	87.5	78	64	63	60
													104											
Median	58	56	53	52	47	44	48	67	84	87	92	102	100	101	104	94	102	100	98	88	78	70	64	60
Count	30	30	30	30	30	27 30	30 31	31	31	31	31	31	19	9	9	9	15	19	31	31	31	31	31	30

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

foF2 (Characteristic), ____ (Unit), January (Month), 1940

Observed at Washington, D.C.

Lat. ____, Long. ____ ____ Mean Time

____ (Institution)

Scaled by: ____, ____

Calculated by: ____, ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	✓3.5	3.8	3.8	3.9	4.1	4.1	4.2	4.7	5.8	710 7.9	782 ~~8.8~~		NR 10				783 8.9	8 ~~8.0~~	6.3	5.5	4.4	4.6	4.7	4.4
2	4.4	4.4	4.1	4.0	4.1	4.1	3.6	3.2	6.0	783 8.8	~~7.9~~ 7.7		NR 10				787 9.0	8.1 8.0	5.6	4.8	4.3	3.8	3.5	3.4
3	3.6	3.7	3.4	3.2	2.5	1.7	1.4	2.9	5.5	7.0	8.7	8.6	7.8 8.0	8.9	✓8.9	8.7	7.1	6.5	4.6	4.4	4.5	4.8	4.1	4.1
4	3.9	2.9	2.9	3.0	3.0	2.6	2.6	2.8	6.0	7.4	~~8.4~~	[8.3] 8.1	[~~8.7~~]	NR 10			~~7.4~~	[9.1]	8.3	6.5	4.9	3.9	2.8	2.3
5	2.4	3.4	3.9	4.2	4.0	3.1	2.8	3.3	6.0	11 7.0	~~9.0~~			NR 10			[8.7]	7.8	7.2	6.3	4.6	4.0	4.1	4.0
6	4.0	3.7	3.8	3.5	3.2	3.1	2.6	3.3	6.3	8.0	[8.6]			NR 10			~~7.7~~	[8.9]	7.7	7.3	5.5	4.5	4.2	3.3
7	3.9	3.7	4.0	3.4	3.3	3.3	3.2	3.6	6.3	7.5	8.0			NR 10			[8.8]	7.6	7.6	5.8	4.0	3.7	3.1	2.8
8	2.5	2.7	2.8	3.4	3.1	2.7	2.6	3.5	5.8	6.6	[8.5]	[8.9]	[8.8]	8.4	✓8.4	✓8.1	✓8.3	6.9	5.3	5.4	3.1	2.6	2.5	2.4
9	2.1	2.1	2.3	2.5	2.8	2.4	<1.6	2.9	5.5	6.6	8.0	8.4	8.4	✓8.3	✓8.3	✓8.2	8.3	7.9	6.9	5.5	3.5	3.4	3.7	3.0
10	2.8	2.9	3.2	3.7	3.6	3.2	3.0	3.2	6.0	6.5	7.9	9.9	108 10.6	114 ~~10.6~~	11.2 10.3	110 ~~10.7~~	10.7	9.4	7.8	7.0	6.3	5.0	4.5	3.9
11	[3.4]	[2.9]	2.3					3.0	5.9	8.0	[8.9]		NR 10.2				? ~~9.6~~	? ~~8.8~~	7.9	7.5	5.3	4.4	3.4	3.1
12	3.0	3.1	3.5	3.8	3.9	2.6	2.1	3.4	6.0	8.7	[9.5] ~~9.3~~	10 10.3	10 ~~9.1~~	[10.4]	[10 ~~10.6~~]	✓10.2	99 7.7	[9.5]	8.0	5.6	3.9	3.2	2.8	2.8
13	2.6	2.6	2.8	2.9	2.8	2.6	2.4	3.2	[6.4]	8.0	8.9	9.2	9.2	9.1	9.0	✓8.4	8.2	6.9	6.7	5.4	3.3	2.5	2.2	2.2
14	2.1	2.2	2.2	2.2	2.5	2.6	2.0	3.0	[5 ~~6.0~~]	74 7.2	✓7.9	8.9	9.2	9.3	? 9.3	9.3	8.8	7.8	6.0	4.7	3.8	3.5	3.1	3.3
15	3.7	3.9	3.9	3.9	3.9	3.5	3.5	3.8	5.8	[8.1]	? ~~9.0~~			NR 8			? ~~8.3~~	[8.5]	7.8	5.7	3.8	3.3	3.4	3.1
16	3.0	2.9	3.1	3.0	3.5	3.8	3.7	4.0	6.6	7.8	[9.5]	10.0	[10 ~~10.3~~]	[10.4]	✓10.0	9.7	[9.5]	8.1	7.1	5.4	4.6	3.5	3.2	3.5
17	3.3	3.3	3.0	3.1	3.3	3.3	2.6	3.3	6.0	8.0	9.3	10.0	✓10.7	10.4	✓100	9.9	9.8	9.2	7.8	6.9	6.0	4.9	3.3	3.2
18	3.2	2.9	2.5	3.0	3.5	4.0	3.7	3.6	5.9	7.9	90 8.9	✓10.2	[10.0]	[10.6]	[10.6]	[10.6]	✓10.3	9.8	7.1	4.5	4.2	4.2	4.2	4.2
19	4.1				2.7	2.3	2.0	2.4	6.5	8.3	[8.6]	[8.5]	8.2	✓8.3	[9.0]	[9.4]	[9.5]	[9.2]	8.5	6.9	4.8	4.5	3.6	3.1
20	2.9	2.8	2.9	3.2	3.1	3.2	3.0	3.3	6.0	7.9	[88 8.5]	[88 8.6]	✓8.4	8.3	8.3	✓8.3	7.6	7.5	7.1	6.1	5.5	4.6	3.5	2.9
21	3.1	2.8	2.5	2.6	3.0	3.1	3.0	4.5	6.0	8.3	[8.7]	[8.6]	8.4	[8.5]	[8.6]	✓8.4	✓8.0	8.3	8.5	7.1	5.0	3.7	3.0	2.7
22	2.6	2.6	2.7	3.0	3.1	3.0	3.0	3.6	6.1	8.0	[8.7]	[8.7]	[8.7]	8.4	[8.4]	[8.6]	? [8.5]							
23	NR									7.7	~~8.6~~						~~8.4~~	✓8.0	8.0	7.1	5.2	4.2	3.6	4.4
24	4.7	4.7	4.8	4.4	4.4	3.7	3.2	3.8	5.8	8.3	~~7.8~~						~~8.4~~	7.9	7.7	7.2	6.1	4.9	4.7	4.3
25	3.8	3.9	3.9	3.9	3.8	3.8	3.8	4.3	6.0	7.3	~~7.8~~						[8.0]	6.4	6.6	6.0	4.8	4.4	4.0	2.9
26	2.4	2.1	2.1	2.5	3.0	3.3	3.2	3.8	5.5	6.5	[8.1]	[8.3]	[8.3]	✓8.0	✓7.7	✓7.8	✓7.5	✓6.9	6.3	6.3	5.0	3.7	3.5	3.4
27	3.0	3.0	3.3	3.8	3.9	3.9	3.7	4.4	6.0	[80 7.9]	~~7.8~~			?			[8.4]	6.9	7.0	5.8	4.4	3.6	3.4	3.2
28	3.2	3.4	3.3	3.3	3.2	3.9	3.7	4.0	5.9	6.7	~~7.7~~	7.9	7.8	7.7	7.8	6.0	7.9	6.6	6.6	5.5	4.3	3.5	3.3	3.3
29	3.5	3.3	3.1	3.0	3.0	2.7	2.8	3.5	6.3	7.8	~~8.1~~						~~7.3~~	[8.5]	6.5	4.9	4.0	3.8	4.1	4.1
30	4.1	4.1	3.1	3.0	3.1				5.5	7.2	7.9						~~7.1~~	? ~~8.3~~	[8.4]	7.0	5.5	4.6	4.1	3.9
31	3.9	3.9	3.9	3.5	3.9	3.9	3.9	4.5	6.0	7.0	7.9	9.7	✓9.1	8.5	9.1 9.2	9.0	9.1	8.9	7.3					
		3.1											9.2	8.7						5.8				
Median	✓3.2	~~3.2~~	3.1	3.2	3.3	3.2	3.0	3.5	6.0	7.8	8.1	8.8	8.4	8.5	9.0	8.7	8.9	8.0	7.0	~~4.9~~	4.6	3.9	3.5	3.3
Count	29 30	28 29	29	28	29	28	28	29	30	31	31	18	18 24	17 18	17	11	31	30	30	29	29	29	29	29

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

f°F2 (Characteristic), — (Unit), February (Month), 1940

Observed at Washington, D.C.

Lat. —, Long. —

— Mean Time

(Institution)

Scaled by: —, —

Calculated by: —, —

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	✓3.8	4.0	3.6	2.8	2.0	1.9	2.0	3.9	6.1	[7.4]	[8.1]	8.4	[9.8]	[9.8]	10.1	[10.3]	10.2	[9.8]	[8.9]	6.6	5.1	3.9	2.8	2.3	
2	2.1	2.1	2.3	1.9	1.5	1.9	2.2	3.9	6.2	[7.0]	8.3	9.5	9.7	9.7	9.7	9.7	9.1	7.9	7.0	6.1	5.3	4.7	3.0	2.8	
3	2.7	3.0	3.1	3.1	3.2	2.5	2.0	2.9	6.4	7.4	7.8	8.7	9.2	9.3	9.3	9.3	8.9	8.0	7.4	6.3	4.8	3.9	3.6	3.2	
4	2.8	2.6	2.3	2.2	2.2	2.2	2.1	3.8	[6.0]	6.6	7.9	8.9	9.2	9.2	9.1	9.0	8.3	7.6	7.0	5.5	5.5	3.7	3.2	3.0	
5	2.7	2.5	2.6	2.7	2.9	3.1	2.8	3.8	6.3	7.2	7.6	8.5	8.8	8.8	8.8	8.6	8.4	7.2	7.1	6.5	5.7	5.0	3.9	3.2	
6	3.1	3.5	3.4	3.3	3.6	3.5	3.4	4.8	7.1	7.9	8.2	8.3	8.3	8.3	8.6	8.8	8.9	8.6	7.4	6.3	4.9	3.9	3.8	3.9	
7	3.9	3.7	3.6	3.3	3.1	3.2	3.2	3.6	7.3	8.4	8.3	8.6	9.9	10.2	✓9.5	9.3	8.9	8.1	7.2	6.5	5.4	5.0	4.7	3.8	Wed
8	3.6	3.7	3.8	3.8	3.8	3.5	3.4	4.9	7.0	7.1	9.0	9.4	9.9	9.9	10.0	9.9	9.8	9.2	7.5	6.1	4.8	4.2	4.3	4.3	
9	4.3	4.8	4.4	4.1	3.8	3.2	3.2	4.8	6.9	7.7	9.1	9.5	9.8	9.8	9.8	9.7	9.2	8.2	7.7	5.8	5.3	4.8	3.9	3.6	
10	3.7	3.9	3.6	3.5	3.7	3.2	2.9	4.7	7.1	7.7	8.8	9.0	9.6	9.6	9.7	9.6	10.7	8.9	8.0	6.8	5.5	4.8	3.8	3.6	
11	3.5	3.5	3.5	3.5	3.4	2.7	2.2	4.5	7.3	7.8	[9.1]	[9.6]	[9.8]	[10.0]	[10.0]	[10.2]	10.3	10.1	[9.2]	7.7	6.2	5.2	4.4	3.1	
12	2.9	3.3	3.9	3.7	3.7	3.3	2.7	5.0	7.0	8.0	[9.4]	[9.9]	10.3	10.2	10.0	10.3	10.2	9.3	7.7	7.6	6.9	6.2	5.7	5.3	
13	5.3	4.9	4.5	4.2	4.0	3.7	3.3	4.5	5.8	6.6	8.0	8.9	9.5	9.6	9.4	9.4	9.5	9.1	8.3	6.8	6.2	4.1	3.8	3.5	
14	3.5	3.8	3.8	3.8	3.8	3.3	2.8	4.5	6.7	7.7	8.8	9.2	✓9.8	9.9	✓9.7	10.0	10.0	9.4	8.2	6.9	6.0	5.0	4.4	4.0	Wed
15	3.7	3.8	3.8	3.7	3.2	3.0	2.6	4.6	6.8	7.5	8.2	9.1	9.9	10.0	10.0	10.0	9.4	9.5	8.9	7.7	6.5	4.0	3.5	3.1	
16	(3.6)	4.0	4.2	4.2	4.2	3.8	3.6	5.0	7.4	[8.0]	[9.8]	[9.8]	[10.0]	[10.1]	10.2	10.2	[10.3]	[10.3]	[9.5]	7.3	5.3				
17	NG							5.5	7.0	8.2	[9.5]	[10.0]	10.3	10.2	10.2	10.1	[9.5]	7.9	6.9	6.0	5.7	4.3	4.1	3.9	
18	3.9	3.6	3.3	3.6	3.8	3.9	4.0	5.5	7.7	7.8	8.0	9.5	9.8	9.9	10.0	9.8	9.9	9.8	8.5	6.9	5.5	4.2	3.5	3.2	
19	3.1	3.2	3.2	3.2	3.2	3.5	3.8	5.3	6.7	8.0	8.1	8.6	[8.9]	[8.9]	[8.9]	8.5	8.4	[8.0]	8.2	7.0	5.9	4.7	4.4	4.4	
20	4.4	4.7	4.4	4.4	4.4	4.2	3.4				8.0	[9.2]	[9.9]	[10.1]	10.2	10.2	10.1	[9.9]	8.1	7.5	6.8	6.2	5.6	5.5	
21	5.1	5.3	5.0	5.0	4.4	3.6	3.1	4.0	7.3	7.7	8.4	9.0	✓9.7	9.2	✓9.6	9.4	9.6	9.0	8.2	7.0	6.3	5.1	5.0	4.7	Wed
22	4.4	4.3	4.5	4.3	4.1	4.1	4.3	5.2	7.8	7.6	8.1	[9.3]	[9.7]	[9.8]	[10.1]	10.3	10.3	[10.0]	8.4	7.0	6.6	5.0	4.8	4.4	
23	4.2	4.2	3.9	4.3	4.3	4.3	3.7	6.0	7.5	[8.5]	8.3	[8.9]	[9.9]	10.3	10.1	[9.8]	[10.0]	10.2	8.5	8.0	4.9	4.2	3.5	3.3	
24	3.6	3.9	3.8	3.5	3.6	3.2	2.6	4.3	5.6	6.0	6.8	7.0	7.4	7.0	7.5	7.5	7.0	6.7	5.8	5.0	4.7	4.8	4.5	4.3	
25	4.2	3.3	2.7	2.7	2.6	2.2	1.9	3.6	4.1	4.7	4.9	5.1	5.1	5.9	5.3	5.5	6.3	6.3	5.9	5.4	4.8	3.7	3.3	3.0	
26	2.5	2.2	1.9	1.8	1.8	1.8	1.8	4.8	6.3	6.9	7.5	7.9	8.7	8.7	8.3	8.6	8.8	8.7	8.2	7.4	6.3	5.1	4.4	4.3	
27	4.2	3.9	3.9	3.6	3.1	2.3	2.0	5.1	7.2	8.0	[9.0]	[9.1]	[9.6]	[8.8]	8.3	8.4	8.5	8.5	7.5	5.6	5.6	5.0	4.9	4.5	
28	4.5	4.1	4.2	4.1	3.9	3.7	3.3	5.8	7.2	8.2	7.9	8.2	9.4	9.6	✓10.1	9.9	9.3	8.5	7.8	6.4	5.1	4.8	4.7	4.7	Wed
29	(4.6)	4.6						4.9	6.5	7.7	8.5						8.4	7.6	7.5	6.2	5.2	4.8	4.7	4.6	
30																									
31																									
													9.7												
Median	✓3.7	3.8	3.8	3.6	3.6	3.2	2.9	4.8	7.0	7.7	8.2	9.0	9.6	9.6	9.7	9.8	9.5	8.7	7.8	6.6	5.5	4.8	4.3	4.0	
Count	28	28	27	27	27	27	27	28	28	28	29	28	28	28	28	28	29	29	29	29	29	28	28	28	

Sweep — Mc to — Mc in — min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

F^0F_2 (Characteristic), ____ (Unit), Mar. (Month), 19 40

Observed at Wash., D.C.

Lat. ____, Long. ____ ____ Mean Time

____ (Institution)

Scaled by: ____, ____

Calculated by: ____, ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	✓NG												[10.0]	10.2	?[10.1]	[9.9]	?[9.4]	8.0	7.4	6.6	5.9	5.8	5.1	4.8
2	4.3	4.1	3.9	3.9	3.8	3.5	3.1	5.3	7.1	7.9	[8.4]	[9.5]	[10.0]	✓10.2	[10.1]	10.0	?9.8	?9.3	(8.5)	7.7	6.5	5.6	5.3	4.9
3	4.6	4.5	4.5	4.4	4.2	3.4	3.1	6.0	7.7	8.5	?9.3	?9.8	?9.4	?9.9	?9.8	9.7	?9.7	?9.2	(8.7)	7.7	6.8	6.9	5.8	5.4
4	5.0	4.6	4.4	4.4	4.3	4.1	4.2	6.6	8.1	9.8	?[9.9]	10.1	10.3	10.3	[10.1]	[10.1]	?[9.8]	?[9.4]	(8.5)	7.4	7.1	6.4	5.6	5.3
5	5.1	4.9	4.7	4.5	4.4	3.9	3.9	6.3	8.1	?9.3	?9.5	?9.8	?9.8	?9.8	?9.8	9.6	?9.5	8.8	8.4	7.0	6.4	5.9	5.4	5.0
6	4.9	4.5	4.4	4.4	4.3	3.9	3.9	6.1	8.5	8.5	8.5	9.9	10.1	9.9	9.9	9.4	9.0	9.0	?8.5	7.4	6.5	6.5	6.3	5.8
7	5.5	5.3	5.5	5.2	5.0	4.4	4.0	5.5	7.0	7.6	?[9.2]	10.1	10.2	10.2	?[10.3]	10.2	?[10.1]	?[9.7]	?9.8	7.9	7.1	?6.4	?5.6	5.2?
8	5.1	5.0	5.2	4.8	4.6	4.6	4.5	6.3	7.3	8.0	10.0	10.2	10.2	10.3	10.4	10.3	10.2	10.2	?9.3	8.3	7.5	6.9	?6.3	6.3?
9	(4.3)	4.5	4.5	4.6	4.7	4.4	4.2	5.5	7.5	7.9	7.9	8.0	8.0	8.0	?8.4	8.3?	?8.3	?8.4	8.4	7.0	6.0	4.9	?4.0	3.6?
10	?(3.5)	?3.4	?3.2	?3.4	?3.4	3.1	3.6	5.0	6.0	7.0	7.7	?8.8	?9.2	?9.3	?9.5	9.4?	?9.2	?8.9	7.8	7.7	6.3	5.8	4.5	4.9?
11	?(3.8)	?3.6	3.5	?3.4	?3.5	3.8	3.8	6.1	6.9	7.8	8.0	[8.8]	[9.6]	[9.8]	10.0	10.2	?10.1	[9.8]	?8.8	7.5	6.2	5.7	5.3	5.2
12	4.9	4.7	?4.6	4.5	4.3	4.0	4.3	6.5	7.7	[8.0]	[9.6]	10.1	10.2	10.5	10.7	10.8?	?10.8	?10.7	?10.3	9.2	8.8	7.0	?6.0	5.5?
13	(5.3)	4.9	4.9	5.1	4.5	4.3	4.2	6.4	7.9	9.5	9.8	9.6	✓9.4	10.3	10.7	10.5	10.3	10.1	9.4	7.9	6.7	6.1	5.7	5.4
14	5.3	5.0	4.8	4.5	4.2	3.9	4.1	5.8	7.1	?[7.4]	8.8	[9.7]	10.2	10.2	10.4	10.8?	?10.7	10.4	9.1	7.7	6.8	5.9	5.4	5.2
15	5.2	5.1	4.8	4.5	4.2	3.6	4.0	6.4	8.0	8.1	[9.4]	[9.5]	[9.9]	?10.0	10.3	10.3	10.2	10.2	9.5	8.0	7.7	6.9	6.2	5.5
16	5.2	5.0	4.9	4.7	4.5	4.4	5.0	7.0	7.7	8.0	8.7	8.5	?[9.4]	10.0	10.9	10.9?	?10.9	?10	?10.7	9.2	7.9	7.1	6.0	5.5
17	5.3	5.2	5.1	4.7	4.5	4.4	4.9	6.9	8.4	8.5	8.5	?[9.9]	?[9.8]	10.2	10.9	[10.7]	?10.9	?10.8	10.6	8.3	7.3	6.5	5.9	4.9
18	4.9	4.7	4.5	4.5	4.4	4.0	4.8	6.9	8.1	7.9	7.7	8.7	?9.2	?9.5	?9.5	9.7	?9.7	?9.8	?9.5	8.5	6.9	?6.1	5.4	5.1
19	5.1	4.9	4.8	4.7	4.4	4.2	4.7	5.7	6.9	7.4	6.8	6.9	7.7	8.2	8.6	[8.9]	?[8.7]	7.9	7.9	6.8	6.4	6.0	5.6	4.9
20	4.7	4.6	4.5	4.3	3.9	3.5	3.5	5.0	5.7	5.6	5.6	5.9	✓6.4	6.4	63 6.4	6.3	7.0	7.4	7.3	6.6	?5.5	4.7	?4.4	4.2?
21	4.0	3.7	3.5	3.2	2.8	2.7	3.8	6.1	7.1	7.4	7.5	7.8	8.3	[8.6]	[8.4]	8.3	[8.4]	[8.8]	8.5	7.6	7.1	6.1	5.3	5.3
22	5.3	5.2	5.1	4.8	4.4	3.9	4.5	6.8	7.4	8.2	8.3	8.1	8.4	?[8.6]	?[8.9]	[9.2]	?[9.3]	?[9.5]	?[7.2]	?[8.8]	7.8	6.9	7.1	5.3
23	4.9	4.6	4.3	4.3	3.5	2.6	3.9	6.4	7.9	[8.8]	[9.3]	10.1	[11.0]	?11.4	?11.4	10.9?	10.3	[9.8]	?9.6	[9.4]	[9.2]	8.5	7.3	6.5?
24	?(5.0)	?3.1	?2.9	?2.9	?2.9	[2.9]	3.9	5.0	6.7	7.6	7.9	5.5	[6.0]	8.0	10.1	7? 7.2	B							
25	K												5.5	6.2	7.3	8.1	[8.8]	?8.9	?8.3					
26	3.6	[2.9]	2.2	2.3	2.0	1.6	2.5	4.5	5.1	5.5	?[6.4]	[7.3]	8.4	?[9.1]	?[9.6]	[10.7]	10.3	10.1	?9.3	8.4	6.3	5.9	?4.5	—
27	FZ		?3.2	?2.7	2.0	?<1.6	2.0	5.1	5.5	6.0	6.2	6.4	?[6.6]	6.9	7? 6.9	7.7	7.9	7.6	8.2	7.3	6.3	5.7	5.4	5.2
28	5.1	4.9	4.3	3.5	3.2	3.4	3.1	5.0	?5.5	5.5	?5.5	?5.5	?[5.7]	?5.9	?6.0	6.2?	6.3	6.4	6.4	6.3	5.5	5.4	5.4	5.2
29	5.0	4.8	4.7	4.5	4.0	3.3	3.4	?5.4	5.6	5.3	?5.3	?5.4	✓5.6	?5.5	?6.6	[5.6]	[5.5]	<5.5						
30	K								?<3.5	<4.0?	?<4.2	?<4.3	✓<4.3	<4.4	?<4.9	<5.3?	?5.6	?6.5	7.0	6.9	3.5			
31	FZ								<3.7	<4.2	?<4.3	<4.3	✓<4.6	<4.3	<4.3	<4.4?	?<4.3	[<4.1]	[<4.0]	3.9	?3.6	3.8/	?3.2	3.3?
Median	✓5.0	4.7	4.5	4.5	4.2	3.9	3.9	6.1	7.1	7.9	8.3	8.8	✓9.4	9.8	9.8	9.7	9.6 9.7	9.2 9.3	8.5 8.6	7.1	6.6	6.1	5.4	5.2
Count	26	25	27	27	27	26	27	27	29	29	29	29	30 31	31	31	30 31	29 30	29 30	28 29	28	28	27	27	26

4.8 26 27 3.9

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

foF2 (Characteristic), — (Unit), April (Month), 1940

Observed at Washington, D.C.

Lat. —, Long. —

— Mean Time

— (Institution)

Scaled by: —, —

Calculated by: —, —

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	✓FZ						3.4	4.6	5.1	6.1	6.4	6.4	6.5	6.6	7.3	8.2	8.5	8.5	8.4	7.7	6.1	5.1	4.5	4.3	
2	3.9	3.8	3.7	3.3	3.0	2.7	4.1	4.9	5.1	5.2	5.3	5.4	5.9	6.5	6.9	7.7	8.5	8.7	8.5	5.5					
3	FZ		2.3	3.1	3.2	3.3	4.0	4.5	5.1	5.2	5.6	5.6	✓5.7	5.7	✓5.6	5.9	5.9	5.8	5.6	4.6	3.9	3.1	2.7	2.1	Med
4	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	2.5	3.9	4.7	5.7	6.4	6.5	6.4	6.3	6.6	6.6	6.6	6.5	6.3	6.0	5.7	5.4	5.1	4.8	
5	4.6	4.5	4.4	4.1	3.7	3.3	4.5	6.3	7.1	7.4	7.8	8.0	✓8.3	8.4	8.4	8.6	8.4	8.3	8.7	8.5	7.2	6.5	6.1	5.7	
6	5.1	5.0	4.8	4.5	4.4	4.2	4.6	6.7	6.7	7.8	7.8	~~8.7~~	783 ~~8.9~~	~~8.9~~	~~9.0~~	~~8.9~~	~~8.8~~	~~8.8~~	~~8.7~~	8.5	7.7	6.9	6.4	6.0	
7	5.8	5.6	5.3	5.0	4.7	4.2	5.1	6.8	6.9	8.0	8.6	8.8	9.4	9.4	9.6	10.0	10.1	9.7	9.2	9.3	7.4	6.4	6.1	5.8	
8	5.6	5.3	5.4	4.6	4.3	3.9	4.6	7.3	7.7	8.1	8.7	9.4	✓9.9	10.2	10.3	10.3	10.6	10.6	10.2	9.3	7.8	6.8	6.5	6.3	
9	6.1	5.8	5.2	5.0	4.4	4.1	5.1	7.0	7.9	9.0	9.5	9.9	✓10.0	10.3	10.5	10.6	10.6	10.3	9.7	8.8	7.8	7.1	6.7	6.4	
10	6.2	5.8	5.5	5.1	4.6	4.3	5.5	7.3	8.5	9.2	9.4	9.5	✓9.8	9.8	100 9.9	9.8	9.4	8.9	8.7	8.5	8.3	7.5	6.8	6.9	Med
11	5.7	5.4	5.2	5.0	4.9	4.8	5.7	7.0	7.8	8.0	8.3										7.6	6.8	6.1	5.6	
12	5.5	5.4	5.2	4.9	4.1	3.9	5.7	7.5	7.7	7.9										7.9	7.1	6.7	6.4	6.0	
13	(5.7)	5.5	5.1	4.6	4.8	3.9	4.7	4.5	6.3	6.9	7.3	7.8	7.9	7.8	7.7	7.8	7.9	8.1	8.4	8.4	7.5	6.6	5.8	5.3	
14	(4.8)	5.6	4.9	4.6	4.6	4.8	4.5	4.7	6.2	6.9	7.3	7.7	7.7	7.8	8.1	8.2	8.0	7.7	7.3	7.0	6.5	5.8	5.3	4.9	
15	4.7	4.5	4.3	4.3	4.3	3.9	4.8	5.8	6.7	7.3	7.8	8.1	8.5	8.5	8.1	8.0	7.9	8.0	8.0	8.0	7.6	7.0	6.7	6.4	
16	6.4	6.4	6.0	5.3	4.6	4.0	5.0	5.5	6.1	6.5	6.8	7.1	7.6	7.7	7.9	7.9	7.9	7.9	7.6	7.7	6.7	6.3	6.0	5.8	
17	5.6	5.4	4.9	4.2	4.0	3.9	5.5	6.2	6.4	6.6	6.6	6.8	123 7.0	7.3	125 7.3	7.2	7.0	7.2	6.9	6.9	6.6	6.1	5.5	5.5	Med
18	(5.3)	5.2	4.8	4.5	4.0	3.9	5.1	5.7	5.7	5.9	6.1	6.1	6.4	6.7	6.7	6.7	6.7	6.8	6.7	6.9	6.6	5.9	5.6	5.5	
19	(5.4)	5.2	5.0	4.8	4.5	4.1	5.0	6.6	7.2	7.5	7.5	7.6	8.2	8.8	9.0	9.2	9.5	9.4	9.4	9.2	8.9	7.1	6.1	5.4	
20	4.9	4.8	4.8	4.5	4.5	4.6	6.6	7.8	7.9	7.9	7.9	8.2	783 ~~8.9~~	~~9.0~~	~~9.2~~	~~9.4~~	~~9.7~~	~~9.7~~	~~9.6~~	~~9.4~~	8.3	6.3	4.9	4.8	
21	4.6	4.3	3.8	3.4	3.1	2.8	4.1	4.6	5.0								~~5.4~~			7.7	7.2	5.9	4.9	4.7	
22	4.8	4.6	4.4	3.6	3.1	3.3	4.6	5.1									5.4	5.7	5.8	5.8	5.6	4.8	4.5	4.4	
23	4.1	3.8	3.4	3.4	3.2	[3.0]	4.6	6.1						7.7	7.7	8.1	8.0	8.4	8.8	8.8	8.7	7.8	6.9	5.9	
24	5.1	5.1	4.4	4.0	3.9	3.7	5.4	6.7	6.9	6.8	7.3	7.8	85 8.2	8.7	90 9.1	9.3	9.2	9.0	8.9	~~8.8~~	8.1	7.3	6.2	4.7	Med
25	3.6	[3.6]	3.7	3.9	3.3	3.1	4.4	5.2	6.2	6.8	7.7	7.7	7.7	7.7	7.9	8.1	8.2	8.0	7.8	7.7	4.0	3.5	3.2	2.8	
26	3.0	2.4	2.1				4.1	4.8	4.9	4.8	4.6	4.6	4.6	4.7	4.8	4.6	4.8	5.6	6.0	6.0	6.6	5.8	5.5	4.5	
27	3.8	3.5	3.5	2.8	2.6	3.0	4.3	4.9	5.0	5.2	5.5	5.7	6.3	6.4	6.4	6.5	6.5	6.4	6.2	6.3	6.0	5.5	4.9	4.7	
28	4.6	4.1	3.7	3.5	3.6	3.1	4.6	5.3						6.3	6.3	6.3	6.5	6.8	6.5	6.7	6.7	6.4	6.2	5.8	
29	6.6	5.3	5.1	4.9	4.7	4.5	5.5	6.3	6.4	6.9	7.3	7.9	7.7	7.9	7.9	7.8	8.2	8.0	7.9	7.8	7.3	6.9	5.4	5.0	
30	5.0	4.9	4.5	4.3	4.2	4.4	5.7	6.9	6.9	7.1	7.7	7.9	8.0	8.3	8.4										
31																									
	50	5.0											17												
Median	✓5.1	~~5.2~~	4.8	4.4	4.2	3.9	4.6	6.0	6.4	6.9	7.3	7.8	7.8	7.8	7.9	8.1	8.1	8.0	8.2	7.8	7.2	6.4	5.9	5.4	
Count	28	~~27~~ 28	29	28	28	~~27~~ 28	30	30	27	26	25	24	24	26	26	25	26	26	26	~~28~~	28	28	28	28	

Sweep — Mc to — Mc in — min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

F°f (Characteristic), ____ (Unit), May (Month), 1940

Observed at Washington, D.C.

Lat. ____, Long. ____

(Institution)

Scaled by: ____, ____

Calculated by: ____, ____

____ Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	N.G.							5.3	5.7	6.3	6.7	6.8	7.4	7.8	7.5	7.6	8.2	8.2	7.9	7.3	6.6	6.0	5.5	5.5
2	5.0	4.7	4.6	4.3	3.9	3.5	4.9	6.3	7.0	7.3	7.7	[8.0]	[8.3]	[8.4]	[8.3]	[8.2]	[8.2]	8.0	7.9	7.7	6.7	5.9	5.4	5.2
3	5.0	4.9	4.8	4.4	3.9	4.3	4.6	6.7	7.4															5.0
4	4.9	4.8	4.4	4.2	3.8	4.3	5.5						7.8	7.9	8.2	[8.5]	[8.4]	8.0	7.9	7.9	7.8	7.3	6.8	6.3
5	6.0	5.5	5.2	4.8	4.5	4.3	[5.4]	6.8	7.7	7.8	7.7	7.7	8.1	8.7	8.8	8.8	8.8	8.8	8.7	8.5	[7.9]	7.3	6.7	6.2
6	5.8	5.5	5.3	5.0	4.4	4.4	5.9	6.3	6.9	7.3	7.6	[7.9]	[8.0]	[8.1]	[8.2]	[8.3]	[8.3]	[8.3]	[8.3]	[8.2]	7.9	7.4	6.9	6.6
7	6.2	5.6	5.3	4.8	4.1	4.9	5.5	6.3	6.3	6.5	6.6	6.6	6.7	6.9	6.9	6.8	6.9	7.0	7.0	7.0	7.0	6.8	6.5	6.1
8	5.8	5.5	5.1	4.7	3.9	3.8	5.2	5.5	5.9	7.0	7.3	7.4	7.8	8.3	8.2	7.9	8.1	8.3	8.7	8.8	8.1	7.2	6.6	6.0
9	5.7	5.6	5.4	5.5	4.8	4.5	4.7	6.4	6.7	7.1	6.9	6.8	6.7	6.5	6.7	6.8	6.8	6.9	7.2	7.7	7.8	6.3	5.0	4.8
10	4.4	4.3	4.3	3.9	3.9	3.8	5.8	7.1	7.0	6.8												5.7	4.8	4.5
11	4.3	4.3	4.1	3.9	3.3	?3.2	6.4										6.3	6.5	6.7	6.7	6.3	5.3	4.6	4.6
12	4.5	4.3	3.5	3.8	3.7	?3.7	4.5	4.5	4.9	4.8	5.0	5.9	[6.4]	[6.7]	[6.8]	6.6	6.4	6.5	6.7	7.0	6.9	6.3	5.8	5.3
13	5.6	4.9	4.7	4.2	3.9	3.7	3.9									6.2	6.3	6.6	6.7	6.7	6.4	5.9	5.5	5.1
14	4.8	4.2	3.5	3.9	2.7	?3.6	4.5							5.4	5.6	5.8	5.9	6.0	6.4	6.2	5.8	5.6	5.4	4.9
15	4.4	4.4	4.6	4.3	4.0	?4.2	4.8	5.5	6.8	6.6	6.6	6.1	6.3	6.8	6.8	6.6	7.2	7.8	7.9	8.7	7.1	5.8	5.4	5.3
16	4.7	4.5	4.3	3.6	3.0	3.8	4.6	5.3	6.5	5.7	6.0	6.4	6.4	6.4	6.5	6.5	6.5	6.5	6.7	6.9	7.0	6.2	5.4	5.1
17	4.8	4.4	4.2	4.2	4.2	?4.7	4.6	5.9	6.3	6.2	6.3	6.4	6.5	6.8	7.0	7.3	7.5	8.5	8.8	8.7	7.7	6.4	5.7	5.6
18	5.5	5.3	4.9	3.5		?3.5	5.2	4.5	<4.4	<4.5	<4.6	<4.6	<4.6	<4.6	<4.6	<4.5	4.6	5.0	5.5	5.4				
19	A	4.5	3.9	3.1	2.7	?2.6	4.1	6.1	6.6	6.8	6.9	7.1	7.4	7.8	7.8	8.1	7.7	7.7	8.0	8.0	7.7	6.4	6.3	5.8
20	5.5	5.1	5.0	4.4	3.7	4.3	5.0	5.9	6.2	6.4	7.4	7.9	[8.1]	8.2	8.4	8.3	7.7	7.7	7.8	7.9	7.7	6.9	6.1	5.5
21	5.2	5.1	5.0	4.6	4.1	5.0	5.2	5.9						7.3	7.4	7.5	7.6	8.0	8.3	8.3	7.7	6.4	5.7	5.3
22						? 3.9	5.1	4.5	4.4	5.1	5.2	5.4	5.7	5.9	6.2	6.2	6.5	6.7	7.1	6.7	6.3	5.9	5.5	
23	N.G.						4.8																	
24																								
25																								
26																								
27																								
28																								
29	C				3.0	3.9	4.8	5.3	5.2	5.7	6.1	6.3	6.4	6.6	6.7	6.6	6.7	7.0	6.5	6.5	6.3	6.0	5.7	5.3
30	5.5	4.9	4.4	3.4	3.0	4.0	5.1	6.4	5.8	6.1	6.2	6.5	6.6	6.9	6.5	6.9	7.0	7.1	7.2	7.2	7.0	6.6	6.0	5.8
31	5.1	5.1	4.9	4.7	4.4	4.4	5.1	5.8	5.8	5.9												6.7	6.2	5.8
													6.6											
Median	5.0 5.1	4.9	4.6	4.2	3.9	4.0	5.0	5.9	6.0	6.5	6.6	6.6	6.7	6.9	7.0	6.9	7.1	7.4	7.5	7.5	7.0	6.3	5.7	5.3
Count	21	22	22	22	22	24	24 23	21	20	19	17	17	18	20	20	21	22	23	22	22	21	23	23	23

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

foF2, ____, June, 1940
(Characteristic) (Unit) (Month)

Observed at Washington, D.C.
Lat. ____, Long. ____ ____ Mean Time

____
(Institution)

Scaled by: ____, ____

Calculated by: ____, ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	[5.6]	[5.3]	5.0	4.7	4.2	4.4	6.6	7.1									8.3	8.5	8.5	8.7	8.6	8.0	6.0	5.7
2	5.5	5.3	5.1	4.9	4.8	4.7	5.2	6.1	6.4													6.2	5.5	4.9
3	4.4	3.9	3.5	3.3	3.4	4.0	4.8	5.4	5.8	6.2	6.4	6.7	6.9					7.3						6.6
4	6.1	5.9	5.8	[5.3]	4.8	4.9	5.8	6.6														6.7	6.9	6.1
5	5.8	5.8	5.2	4.5	3.7	3.9	5.3	5.7	6.4	6.5	7.0	6.6	7.2	7.6	7.5	7.4	7.4	7.95	9.2	8.85	9.1	8.3	7.5	6.6
6	5.8	5.5	4.6	4.6	3.3	3.6	3.7	5.0	5.3	5.1	6.2	6.1	6.4	6.2	6.6	7.1	7.8	8.30	9.0	9.8	9.2	7.8	7.0	6.6
7	5.9	6.0	5.3	4.3	3.0	3.5	3.7	4.5	<4.3	4.6	<4.5	<4.6	[4.1]	4.8	5.1	5.1	5.8	6.0	6.1	5.7	6.6	6.0	6.2	4.9
8	4.3	4.1	3.6	3.0	2.9	3.7	4.4	4.6	4.9	5.1	6.3	5.9	6.3	6.9	6.8	6.7	7.1	7.6	7.3	7.5	7.0	6.8	6.2	5.8
9	5.0	5.0	5.0	4.6	4.6	3.7	4.3	5.0	5.3	5.4	5.8	6.0	6.1	6.1	6.1	6.7	7.3	7.3	7.3	7.3	7.1	6.8	6.5	6.0
10	5.8	5.4	5.1	3.5	3.3	3.8	4.8	5.5	5.6	5.8	6.8	5.8	5.8	6.0	5.8	6.0	6.0	6.0	6.6	6.7	6.7	6.5	6.0	6.0
11	5.4	5.1	4.4	3.9	3.7	4.1	5.0	5.5	6.7	6.4	7.0	[7.6]	7.1	7.0	[7.0]	7.1	7.1	7.2	7.5	7.4	7.5	7.2	6.9	6.8
12	5.9	5.5	5.0	4.3	4.4	4.4	5.6	6.8	6.2	7.0	6.6	7.1	7.2	[7.5]	7.9	7.9	7.8	8.0	8.0	8.1	7.6	7.4	6.7	6.7
13	5.9	5.9	5.1	4.8	3.9	4.6	5.7	5.9	6.4	7.0	6.2	6.5	6.7	6.8	6.7	6.9	6.9	7.2	[7.1]	6.9	7.1	6.9	6.5	6.3
14	5.9	5.7	4.8	4.2	3.2	3.7	5.0	4.7	5.4	6.3	4.9	5.5	6.2	6.2	7.2	8.0	9.4	10.9	9.9	9.0	8.7	7.4	6.0	5.9
15	5.5	5.2	4.5	3.7	3.0	3.5	4.2	4.7	<4.2	<4.4	6.7	5.0	4.8	<4.6	5.0	5.0	5.1	5.2	5.4	5.4	5.7	5.5	5.3	5.3
16	5.0	4.9	9.2	3.9	2.9	3.7	4.8	5.4	5.7	5.8	6.9	6.3	6.0	6.1	6.0	6.4	6.4	6.7	7.1	7.2	6.9	7.2	6.4	6.3
17	6.1	5.5	5.2	4.2	3.8	4.3	5.4	5.8	5.7	5.9	<4.8	7.1	7.1	6.8	6.6	7.1	6.8	6.6	7.0	7.0	7.2	6.9	6.2	5.5
18	5.0	4.9	3.8	3.7	3.6	3.7	4.5	5.1	5.1	5.1	5.9	5.5	5.7	5.7	5.5	5.6	5.6	5.6	5.7	5.8	6.2	6.2	5.7	5.3
19	5.2	5.2	4.2	4.1	3.2	3.7	4.4	<4.3	5.6	5.5	7.4	5.7	6.3	6.1	[4.3]	6.4	6.6	7.8	7.1	7.4	7.9	7.2	5.7	6.0
20	5.7	5.2	4.7	5.2	3.8	4.1	5.1	5.9	6.2	6.9	7.2	6.6	7.3	7.1	7.3	7.4	7.7	7.4	6.8	7.0	7.1	7.2	6.7	6.0
21	6.0	5.7	5.6	5.4	5.3	4.6	5.7	6.8	7.2	6.8	7.1	7.2	7.2	6.5	6.5	6.5	6.5	6.5	6.5	6.9	7.5	[6.9]	6.3	5.5
22	4.9	4.8	4.3	4.2	3.9	4.2	5.0	5.7	5.7	6.6	[6.7]	6.8	6.8	6.6	6.5	6.5	6.7	7.0	7.5	7.5	7.4	7.2	6.3	6.0
23	5.9	5.7	4.6	4.1														7.0						5.5
24	NR																							
25	NR																							
26	NR	5.0											?5.6	5.5			5.8	6.0	6.1	5.9	6.1	6.3	5.9	5.8
27	4.9	5.0	3.9	3.4		3.9	5.1	5.5	5.9	6.5	7.3	7.5	7.2	6.9	6.9	7.0	6.7	7.0	7.5	7.1	6.9	6.8	6.6	6.5
28	6.8	5.6	5.0	4.6	4.9	4.3	5.5						6.8	6.8	7.3	[7.4]	7.5	8.0	7.8	8.3		7.4	6.5	
29	NG			4.8								7.6	7.6	7.4	7.7	7.6	7.8	7.8	8.5	8.4	8.1	7.8	7.2	6.6
30	6.6	7.0	5.5	4.2	3.6	4.5	4.6	5.4	5.9	6.2	5.8	6.0	6.0	6.2	5.9	6.1	6.3	6.6	6.3	6.3	5.7	6.2	6.0	5.4
31																								
Median	5.8	5.3	5.0	4.2	3.7	4.0	5.0	5.5	5.7	6.2	6.5	6.3	6.5	6.4	6.6	6.7	6.8	7.2	7.2	7.2	7.2	6.9	6.2	6.0
Count	26	25	26	27	24	25	25	24	22	21	21	22	24	23	22	22	24	25	24	24	23	26	26	27

Sweep ____ Mc to ____ Mc in ____ min
Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

f^0F_2 (Characteristic), — (Unit), July (Month), 1940

Observed at Washington, D.C.

Lat. ——, Long. ——

—— Mean Time

—— (Institution)

Scaled by: ——, ——

Calculated by: ——, ——

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	✓5.8	5.8	4.9	4.0	3.7	3.8							C											
2													C						7.3	7.8	7.8	7.1	6.2	6.0
3	5.6	5.1	4.7	4.3	4.2	4.5	5.0	6.0	6.5	6.3	(5.5)	5.3	✓5.8	(5.8)	(5.7)	(6.0)	6.8	7.3	8.0	8.5	9.0	8.9	7.5	6.9
4	6.4	5.7	4.9	4.5	3.4	3.7	4.5	5.0	5.1	5.7	5.9	5.7	✓5.9	6.2	6.8	7.9	7.8	8.5						
5	C												C									6.0	5.5	5.4
6	5.0	4.5	4.1	4.0	3.5	3.7	4.6	4.8	6.1	5.4	5.9	5.7	✓6.2	6.2	6.2	6.6	6.8	7.4	8.1	7.7	7.0	6.6	6.3	6.1
7	5.3	4.8	4.4	4.1	4.1	4.2	5.4	5.3	5.9	5.5	5.8	6.3	✓6.4	6.5	6.5	6.4	6.3	6.6	6.8	7.0	7.0	6.9	6.5	5.4
8	5.3	5.0	4.7	4.2	3.9	4.2	4.7	5.4	6.2	6.7	6.8	7.7	✓7.2	7.4	7.0	7.2	7.2	7.0	7.3	7.8	7.1	7.0	6.8	6.1
9	6.1	6.6	5.1	3.9	<3.3	3.6	4.5	5.2	5.1	5.4	(5.6)	5.8	✓[6.0]	6.2	(5.8)	5.9	6.2	6.2	6.2	6.5	7.8	6.1	5.6	5.4
10	5.6	5.0	4.2	3.7	3.1	3.3	3.9	<4.2	<4.4	<4.9	5.4	5.5	✓5.2	(5.4)	(5.6)	(5.8)	(6.1)	6.3	6.5	6.4	6.9	6.0	5.6	5.8
11	4.5	(4.2)	(4.4)	(3.7)	3.7	3.7	4.0	4.5					✓	5.8							6.5			4.7
12	(4.1)					3.4							C											
13	(3.6)	[3.4]	3.2			3.2						<4.8	C		~~5.2~~						6.6			
14	NG												C											
15	NG												✓6.1	(6.1)	5.8	(5.7)	5.7	6.3	7.6	8.1	7.2	6.3	5.6	
16	(5.0)												C			7.8	7.8	7.6	7.8	7.7	7.5	6.8	6.1	5.7
17	5.6	5.3	4.6	4.7	4.0	3.8	4.6	5.0	5.8	6.8	6.1	5.8	✓5.9	6.0	6.3	(6.5)	6.6	6.6	6.6	6.6	6.6	6.1	5.7	5.4
18	4.9	4.9	4.7	4.2	3.3	3.9	4.9	5.8	6.6	7.0	6.7	6.8	✓7.3	7.3	7.0	7.5	7.2	7.2	7.4	8.0	7.4	6.8	6.3	5.6
19	5.4	5.3	5.0	4.1	4.2	4.2	5.0	5.7	6.6	6.5	6.3	6.5	✓6.3	6.7	6.4	6.8	6.8	6.9	7.6	7.9	7.8	7.1	5.9	5.3
20	5.0	4.4	4.1	4.1	3.6	4.0	5.1	6.1	6.1	6.5	6.6	6.3	✓6.8	6.8	7.3	7.1	7.8	7.0	6.9	7.9	8.1	7.2	6.4	5.9
21	5.1	4.9	4.2	3.8	3.5	3.5	4.1	5.6	5.6	5.6	5.5	6.0	✓6.2	6.3	6.3	6.8	6.8	7.5	8.0	7.6	5.7	5.5	5.3	4.7
22	4.2	4.0	3.8	3.4	3.4	3.5	4.3	4.4	4.5	5.0	(5.4)	5.5	✓5.5	5.5	5.7	5.7	5.8	6.0	6.0	6.3	6.7	6.0	6.1	4.7
23	4.1	4.1	(3.9)	3.0	3.0	3.3	4.4	4.6	5.0	(5.6)	6.2	6.0	✓6.2	6.0	(6.1)	(6.5)	6.8	6.9	6.8	6.9	7.3	6.6	5.7	5.7
24	5.2	4.9	4.6	4.7	4.1	3.4	4.3	4.7	5.9	6.2	(6.8)	(5.8)	✓6.0	6.3	(6.1)	(6.1)	6.4	6.4	6.5	6.7	7.0	6.4	6.1	5.6
25	6.3	5.0	4.6	4.5	3.6	3.7	4.2	4.6	5.2	5.1	5.6	5.6	✓5.6	5.6	5.4	6.1	6.0	(6.0)	5.7	5.9	6.0	6.7	6.2	5.6
26	5.1	4.9	4.1	3.4	3.1	3.6	5.0	4.7	5.6	5.6	5.8	6.0	✓5.9	6.4	6.5	6.4	6.7	6.5	6.6	6.5	6.3	5.9	5.3	4.6
27	4.7	4.4	3.5	3.4	3.4	4.3	4.6	5.0	5.9	6.9	6.8	6.9	✓7.5	7.1	6.9	7.0	7.0	7.3	7.4	7.8	6.9	6.2	5.7	5.9
28	5.0	4.8	4.5	4.2	4.2	4.0	4.4	5.0	5.6	7.3	7.3	7.3	✓7.0	6.5	6.5	6.8	6.7	6.6	7.1	7.2	7.2	6.6	5.8	5.7
29	5.2	4.9	4.8	4.6	4.1	3.6	5.0	5.6	7.0	8.3	8.4	7.7	✓6.9	7.0	6.1	6.2	6.3	7.0	7.4	7.7	7.9	6.0	5.9	4.7
30	4.1	4.1	4.1	4.1	4.0	3.7	4.2	5.1	4.9	5.3	5.6	6.2	✓5.9	6.0	6.2	(6.0)	6.9	7.0	7.7	7.2	7.0	5.8	5.6	5.1
31	4.9	4.4	3.8	4.0	3.5	3.6	4.9	4.5	4.6	4.6	5.2	5.4	✓5.4	5.2	5.5	5.3	6.1	6.1	6.1	6.5	6.1	5.2	4.7	4.4
Median	✓5.1	4.9	4.4	4.1	3.6	3.7	4.5	5.0	5.7	5.6	5.8	6.0	✓6.1	6.2	6.2	6.5	6.8	6.9	7.3	7.4	7.0	6.3	5.7	5.4
Count	27	~~24~~ 25	25	24	24	26	23	23	22	22	22	23	23	24	24	24	24	24	24	24	26	25	25	25

Sweep —— Mc to —— Mc in —— min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

$f^{\circ}f_2$ (Characteristic); ____ (Unit); August (Month), 1951

Observed at Washington, D.C.

Lat. ____, Long. ____

____ (Institution)

Scaled by: ____, ____

____ Mean Time

Calculated by: ____, ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	5.0	5.1	3.8	3.5	3.0	3.4	4.5	5.8	6.9	7.1	6.7	6.7	6.7	7.0	7.4	7.0	7.9	7.2	7.0	7.1	7.4	6.5	5.8	5.1
2	4.5	4.1	3.4	3.1	2.7	3.2	4.7	5.6	6.8	7.4	7.1	7.2	6.8	7.0	7.1	7.4	7.8	6.8	7.4	7.1	7.2	6.7	5.4	5.0
3	4.9	4.6	3.9	3.4	3.0	3.1	3.5	<3.6	<4.2	4.7	5.2	5.1	5.8	5.2	5.3	4.7	5.2	5.0	5.2	5.4	5.7	5.6	(5.1)	(4.6)
4	(4.4)	(4.0)	3.9	3.2	2.8	2.7	3.4	3.8	4.5	<4.5	4.9	5.3	5.9	5.4	5.1	5.5	5.8	5.8	5.9	5.8	6.3	5.9	5.5	5.1
5	5.6	4.5	4.2	3.9	3.4	3.4	4.4	4.9	5.6	5.7	6.2	6.4	6.3	5.7	6.2	6.2	6.0	6.4	6.6	6.7	6.6	6.0	5.5	5.1
6	4.6	4.3	4.3	4.0	3.2	3.2	4.3	4.5	5.2	5.2	<4.4	5.2	5.1	5.4	5.3	5.5	5.5	5.4	5.9	6.3	6.7	6.1	4.7	3.8
7	3.7	3.4	2.8	2.6	2.7	3.0	3.5	4.3	4.7	5.6	5.5	4.8	5.5	5.5	(5.8)	(5.9)	(6.0)	(6.1)	6.2	6.3	6.4	5.2	4.5	4.7
8	5.0	4.7	4.2	3.8	3.5	3.0	4.4	4.0	5.1	5.4	6.2	5.3	5.5	6.0	6.2	(6.4)	6.5	6.7	6.8	6.3	5.9	5.8	5.2	4.8
9	4.5	4.3	3.6	3.2	3.0	2.7	<3.9	<4.3	<4.1	<4.2	<4.2	<4.5	<4.5	4.8	4.9	5.0	5.9	6.5	7.6	6.8	5.6	4.3	3.4	(2.8)
10	3.0	2.9	2.8	2.5	2.0	2.6	3.4	<4.0	4.6	<4.5	<4.5	<4.6	4.8	5.2	5.7	5.8	5.9	6.6	6.5	5.9	5.8	5.4	5.0	4.9
11	4.7	4.5	3.8	3.6	3.5	3.0	4.3	5.0	5.9	5.7	5.7	5.7	5.6	6.1	6.0	5.8	5.7	5.9	6.4	6.5	6.1	5.9	5.1	4.5
12	4.8	4.6	3.8	3.6	3.5	3.3	4.4	4.7	4.9	4.8	5.2	<4.8	5.8	5.3	5.6	5.3	5.4	5.8	5.7	5.5	5.5	5.2	4.6	(4.1)
13	4.1	4.0	3.7	3.6	3.4	3.0	4.4	4.7	5.1	4.9	(4.8)	5.2	5.2	5.8	5.7	(5.7)	5.8	6.1	5.8	5.7	5.6	5.4	5.3	4.8
14	5.0	4.8	4.9	4.1	3.6	3.2	4.6	5.7	7.0	7.6	6.9	6.7	6.5	6.8	(6.7)	(6.8)	7.4	7.7	8.0	7.8	7.7	6.1	5.6	5.4
15	5.1	4.9	4.6	4.3	3.8	3.8	5.1	6.4	6.9	7.2	6.9	6.8	7.0	7.4	7.6	7.8	7.6	7.6	7.6	7.8	7.8	6.5	6.5	5.9
16	5.4	5.3	4.9	4.4	4.2	3.9	5.2	6.1	6.1	6.4	6.4	7.2	6.9	7.1	6.9	6.8	6.9	7.3	7.2	7.2	7.1	6.3	5.4	5.3
17	5.4	5.0	4.7	4.2	4.0	3.3	4.9	6.3	6.5	7.0	7.1	7.2	7.2	7.4	7.5	7.4	7.4	7.3	7.3	7.4	7.1	6.7	6.3	5.6
18	5.1	4.8	4.6	4.3	4.2	3.9	5.2	6.7	7.1	7.1	7.5	7.4	7.6	7.8	8.1	8.3	8.1	8.1	8.0	7.4	6.9	6.2	6.2	5.6
19	4.8	4.0	3.4	3.9	3.6	3.5	4.4	6.4	7.5	7.9	7.6	8.2	7.9	8.4	8.1	7.5	7.6	7.8	8.5	9.0	8.9	7.8	6.9	6.1
20	5.3	5.0	5.1	4.9	4.1	3.5	4.5	5.3	5.6	6.9	7.1	7.5	7.6	7.4	7.5	7.0	7.0	7.0	7.1	7.4	7.0	6.6	5.7	5.2
21	4.9	4.8	4.2	3.6	3.0	3.0	4.2	4.9	5.6	6.2	6.9	7.0	7.5	7.7	(7.6)	(7.6)	7.6	7.6	7.7	8.3	7.6	6.1	5.0	4.5
22	4.3	4.1	3.8	3.5	3.3	3.1	4.6	5.1	5.1	5.4	5.5	5.6	5.5	6.0	6.2	6.1	5.7	5.7	5.9	5.8	6.6	5.7	5.2	4.8
23	4.5	4.4	4.1	3.6	3.3	3.2	4.6	5.5	5.8	5.7	6.0	6.0	6.5	6.7	6.9	6.6	6.7	7.0	6.9	7.2	6.7	5.8	5.3	4.7
24	5.0	4.9	4.8	4.3	3.8	4.1	5.0	6.0	6.7	7.1	7.4	7.5	7.7	8.1	7.9	7.9	8.1	7.8	7.5	7.7	7.2	6.3	6.0	5.3
25	5.3	5.8	5.0	4.7	4.0	3.6	5.5	6.7	7.1	7.3	7.7	7.8	7.6	7.8	7.9	8.3	8.3	8.3	8.3	8.1	7.8	7.0	6.5	6.2
26	5.6	5.3	5.1	4.7	4.1	3.6	4.6	5.6	5.6	6.0	(6.7)	6.6	7.1	7.1	7.0	7.1	7.2	7.3	9.1	9.0	8.2	7.3	5.7	4.4
27	4.1	3.8	3.6	3.5	3.1	3.1	4.5	5.0	5.2	5.3	5.2	5.0	5.4	5.6	6.5	5.6	5.6	5.8	5.8	6.1	(5.8)	5.5	4.6	4.4
28	4.2	4.5	4.4	3.8	3.4	3.5	4.6	(5.5)	6.6	6.2	(6.4)	6.6	6.9	7.0	7.3	7.1	7.0	7.0	7.1	7.7	7.0	6.0	5.5	5.2
29	4.9	4.9	4.6	4.3	4.0	3.8	4.6	5.7	7.2	8.0	7.6	7.9	[8.3]	(8.3)	(8.4)	(8.4)	8.6	8.5	8.4	8.9	(7.9)	(7.8)	5.0	4.7
30	4.8	4.8	4.5	4.2	3.8	3.7	5.3	6.7	7.9	8.4	8.6	8.6	8.7	8.9	8.6	8.4	8.7	8.7	8.8	8.6	8.2	7.5	6.6	5.9
31	5.7	5.3	4.9	4.6	4.3	4.1	5.0	6.0	6.5	7.1	7.6	8.0	8.0	8.0	8.1	7.9	7.6	7.6	7.8	8.0	7.3	7.0	7.1	6.8
Median	4.9	4.6	4.2	3.8	3.5	3.3	4.5	5.5	5.8	6.2	6.4	6.6	6.7	7.0	6.9	6.8	7.0	7.0	7.1	7.2	7.0	6.1	5.5	5.0
Count	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

f^0F_2 (Characteristic), ____ (Unit), September (Month), 1940

Observed at Washington, D.C.

Lat. ____, Long. ____ ____ Mean Time

____ (Institution)

Scaled by: ____, ____

Calculated by: ____, ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	✓7.0	6.7	5.7	5.0	4.9	4.3	5.1	6.7	7.2	8.0	8.9	8.2	✓8.1	7.6	8.0	7.6	7.7	7.8	7.8	7.2	6.5	5.7	4.9	4.3
2	4.0	4.2	3.8	3.6	3.1	3.0	4.7	6.2	7.0	8.1	8.2	8.3	✓8.9	9.1	9.0	9.0	8.5	8.4	8.3	8.5	7.9	6.7	7.0	6.9
3	6.0	5.7	4.9	4.6	4.6	4.3	5.6	6.2	6.8	7.2	7.6	8.2	✓8.6	8.5	8.8	8.3	8.0	7.8	7.7	7.5	7.2	6.0	5.5	5.4
4	5.3	4.8	5.0	4.4	3.4	2.7	4.1	4.7	5.5	6.7	7.4	7.8	✓7.9	(8.1)	(8.4)	(8.6)	8.3	8.4	8.3	7.8	7.0	6.0	5.4	5.4
5	5.5	4.7	4.9	4.1	3.4	2.8	4.2	5.3	5.6	6.0	6.0	6.6	✓7.0	7.4	7.5	7.2	7.6	7.6	7.5	7.2	6.7	5.9	5.5	5.2
6	5.0	4.8	4.5	4.3	4.1	4.2	5.9	7.6	8.4	8.9	9.7	9.4	✓[9.8]	(9.2)	(9.2)	(9.1)	8.7	9.2	10.0	9.2	8.3	7.5	7.3	6.8
7	(5.7)	(5.6)	4.8	(4.2)	3.9	(3.4)	(3.7)	(4.4)	5.1															
8	(4.5)	(4.3)					(4.4)		(6.)															
9	(5.1)	[4.9]	[4.7]	(4.5)	[3.9]	[3.5]	(4.9)	[6.5]	(8.2)	(8.5)	(8.3)	(8.3)	[9.3]	[9.5]	9.8	9.8	9.5	9.4	9.4	8.4	7.1	6.6	5.4	5.0
10	4.9	4.7	4.8	4.0	3.4	3.0	5.4	7.6	7.6	6.8	9.4	9.2	✓8.5	8.9	9.1	9.0	9.0	9.1	8.6	7.8	6.7	6.3	6.0	5.7
11	5.2	4.9	4.6	4.3	3.8	3.3	5.0	6.5	8.0	8.3	8.8	8.9	✓8.9	8.7	9.7	9.7	(8.8)	8.3	7.7	7.6	6.9	6.3	6.0	5.5
12	5.0	5.0	4.6	4.2	4.1	3.8	5.1	6.8	7.8	7.6	7.6	7.7	✓7.9	8.3	8.6	8.4	8.3	8.6	8.0	8.2	7.0	5.7	5.1	5.0
13	4.8	4.9	4.5	4.0	3.8	3.4	4.6	6.9	7.9	7.4	7.5	7.7	✓8.4	8.8	8.8	8.8	8.8	8.9	8.5	8.0	7.0	5.7	5.4	5.2
14	5.0	5.2	4.8	4.4	4.0	3.8	4.7	6.5	7.1	7.2	7.5	7.8	✓8.3	8.6	8.8	9.7	10.3	9.4	9.7	8.7	8.2	6.0	5.4	5.4
15	5.5	4.9	5.1	3.8	3.5	3.5	4.2	5.4	6.9	7.7	8.1	9.1	✓9.7	9.8	8.8	9.8	8.5	8.3	8.2	7.9	6.8	5.9	5.1	4.7
16	4.6	4.3	3.9	3.7	3.6	3.4	4.5	5.8	6.8	7.3	8.1	9.1	✓10.1	10.3	9.6	8.7	8.0	8.2	8.2	7.5	6.8	5.3	4.7	4.4
17	3.8	3.6	3.5	3.3	3.1	(3.3)	(4.4)					(8.1)	✓8.3	(8.5)					(8.5)	(7.9)	(7.2)	(6.0)	(5.3)	(4.9)
18	(4.8)	4.6	(4.6)				(5.2)				8.4	8.5	✓8.6	(8.8)	(9.0)	8.7	8.9	(9.2)	(9.6)	(8.1)	7.0	6.6	5.6	[5.7]
19	(5.1)			4.6	(4.3)	(4.0)	(5.3)	[6.3]	[7.3]	(8.4)	(8.3)	(8.3)	✓[8.6]	(10.3)										
20	(5.5)				(4.5)	(4.2)	(5.0)				9.1	8.8	[10.9]	10.3	(10.5)	10.2	10.3	10.9	9.6	7.8	6.7	(6.2)	(5.6)	5.7
21	(5.3)				(4.4)	(4.4)	(4.4)				8.1	8.8	✓9.0	9.1.	9.0	9.0	9.0	9.4	9.3	8.4	6.9	5.9	5.5	5.4
22	5.2	4.9	4.8	4.5	3.4	3.5	5.0	6.8	8.0	8.8	9.3	9.2	✓9.7	10.5	10.5	9.8	10.2	9.9	9.5	8.6	7.3	6.3	5.5	5.6
23	5.2	5.2	4.9	4.6	4.0	3.9	5.2	8.0	8.6	9.1	[9.7]	10.3	✓10.2	10.1	9.9	9.7	9.8	9.9	9.1	8.1	6.5	6.5	5.7	5.9
24	5.0	4.9	4.7	4.5	4.2	3.3	4.3	6.5	7.4	8.1	[8.5]	9.0	[9.5]	9.5	10.6	10.6	10.3	10.2	9.7	8.5	7.4	6.8	6.6	6.5
25	6.1	5.5	4.5	4.7	4.9	4.2	4.2	[5.0]	6.8	[6.5]	7.3	8.4	✓9.5	9.5	9.7	10.0	10.0	9.8	9.7	8.0	6.3	5.5	5.1	4.8
26	4.5	4.2	3.9	3.7	3.7	3.3	4.9	7.5	8.1	8.8	9.5	10.1	✓9.8	9.9	10.5	11.5	13.0	11.8	10.5	8.6	6.4	4.9	3.3	3.3
27	3.0	2.9	3.0	<2.4	[2.]	[2.4]	4.0	7.2	9.1	10.1	10.4	10.0	✓10.5	11.2	11.4	11.2	11.2	10.5	9.8	8.3	7.6	6.5	6.0	5.4
28	4.8	3.9	3.8	3.9	4.2	4.6	4.1	6.6	7.4	9.3	9.5	10.2	✓11.0	11.6	11.4	11.4	11.3	10.3	10.4	8.8	7.6	5.7	5.1	5.0
29	4.6	4.4	4.2	3.7	3.0	2.6	4.1	7.6	7.8	9.5	10.1	9.3	✓9.7	10.9	10.0	9.5	9.9	9.9	9.3	7.8	5.8	5.3	4.7	4.4
30	4.9	4.3	4.1	3.8	3.5	3.0	4.2	6.7	8.3	9.5	8.6	8.7	✓9.4	9.7	10.3	10.7	10.4	10.6	10.1	8.6	6.5	4.9	5.0	5.0
31																								
			4.6					6.5	7.4															
Median	✓5.0	4.8	~~4.5~~	4.2	3.9	3.4	4.7	~~6.0~~	~~7.5~~	8.4	8.3	8.8	✓9.1	9.2	9.4	9.6	9.0	9.3	9.1	8.1	7.0	6.0	5.4	5.2
Count	30	~~24~~ 27	~~25~~ 26	26	~~26~~ 28	~~26~~ 29	30	~~22~~ 25	~~24~~ 25	~~23~~ 24	~~25~~ 27	28	28	~~26~~ 27	26	26	26	26	27	27	27	27	27	~~24~~ 27

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

f₀ (Characteristic), (Unit) October (Month), 1940

Observed at Washington, D.C.

Lat. ____, Long. ____

(Institution)

Scaled by: ____

Calculated by: ____

____ Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	✓53	52	54	4.8	3.8	3.0	3.5	5.8	6.5	7.0	7.3	7.9	✓8.0	88	77	95	96	8.5	82	65	4.2	3.8	37	34
2	36	36	24	1.9	[1.6]	[2.1]	3.8	6.7	7.5	9.0	9.4	9.9	✓10.9	112	117	110	105	9.5	85	80	65	53	48	4.2
3	37	34	31	3.0	2.5	2.3	3.7	5.9	7.8	8.3	8.1	8.9	✓88	95	97	97	92	86	80	64	55	50	47	[4.3]
4	39	<45	39										✓98	96	96	92	91	87	77	75	63	35	[53]	[5.1]
5	49											9.8	✓102	99	97	93	101	92	82	65	62	55	52	48
6	49	47	45	4.2	3.7	3.5	4.0	6.5	7.6	7.9	9.7	9.8	✓100	105	108	106	106	97	93	75	65	63	63	64
7	56	5.2	46	4.0	3.8	4.0	4.1	7.7	8.8	10.8	[10.8]	[10.8]	✓108	105	111	99				~~54~~				
8										<7.6	8.3	8.8	✓83	87	94	91	84	77	65	54	42	37	33	27
9	<16						3.2	4.5	5.2	5.4	5.6	5.8	✓61	67	71	71	72	72	68	59	50	42	36	34
10	33	31	31	3.0	2.8	2.7	3.7	5.9	7.0	7.5	7.6	8.5	✓88	88	89	98	86	90	85	77	66	51	49	38
11	40	40	40	3.9	3.1	2.9	3.7	6.5	8.2	9.0	9.4	10.1	✓109	109	106	111	107	96	87	76	61	56	53	53
12	53	50	48	4.4	3.9	3.3	3.8	6.5	8.9	9.0	10.1	11.0	✓106	107	108	106	107	99	99	88	73	59	58	48
13	48	46	45	4.2	4.1	3.6	4.3	7.0	8.7	9.9	10.5	10.9	✓111	111	109	109	106	98	80	74	63	57	52	49
14	47	45	42	4.0	3.6	3.5	4.0	7.0	8.5	10.1	[10.5]	11.0	✓108	112	111	113	110	105	87	72	62	58	55	48
15	45	42	43	4.4	4.5	3.8	4.1	7.1	8.4	10.0	9.5	10.2	✓114	113	115	118	110	105	94	80	67	58	58	52
16	49	48	49	4.5	4.1	3.5	4.2	7.7	9.1	10.0	10.0	10.2	✓113	120	120	120	120	116	90	72	61	59	55	51
17	50	50	48	4.8	3.8	3.2	3.7	6.9	9.5	10.1	11.0	11.8	✓117											
18	(47)												~~(113)~~											
19	(55)												~~(108)~~											
20	(51)												~~(109)~~											
21	(45)												110 (108)	114	112	114	105	102	92	77	69	66	55	47
22	43	31	22			3.3	4.0	5.4	7.1	9.3	10.6	10.9	✓117	112	113	109	101	94	87	70	61	53	50	41
23	48	41	39	3.7	3.4	3.0	3.0	6.5	7.6	8.5	(10.0)	10.5	✓108	106	105	106	105	97	81	67	49	41	39	34
24	31	32	31	3.1	3.1	2.9	3.0	6.3	7.6	9.0	9.4	10.0	✓109	108	106	112	109	100	82	65	46	41	36	35
25	38	40	41	4.1	3.9	3.2	3.8	6.4	7.8	9.1	9.7	10.2	✓105	103	112	(107)	104	94	95	85	64	69	68	62
26	60	56	56	5.1	4.9	4.4	4.5	5.6	6.9	7.2	7.2	9.0	✓97	101	109	109	99	97	84	69	56	55	53	53
27	54	51	45	3.7	3.3	2.6	3.0	5.7	8.0	10.0	11.3	11.4	✓113	111	115	114	111	106	97	85	64	55	48	45
28	47	47	45	4.0	3.6	2.6	2.8	5.8	6.7	8.3	8.8	10.1	✓113	113	114	113	106	101	75	72	55	47	41	38
29	33	34	40	4.0	4.5	3.9	3.1	6.1	8.2	9.9	10.8	11.2	✓112	113	114	112	107	95	77	66	50	46	48	45
30	44	43	45	4.5	4.2	3.7	3.5	6.3	8.4	8.5	10.5	11.3	✓113	112	110	111	104	95	70	62	49	45	47	45
31	45	46	42	3.6	3.1	2.6	2.6	5.8	8.2	9.5	11.0	11.2	✓115	112	123	(111)	108	95	84	65	45	45	47	44
Median	✓4.6	4.5	4.2	4.0	3.8	~~3.2~~ 3.3	3.7	6.4	7.9	9.0	9.7	10.2	✓10.8	10.8	11.0	10.9	10.6	9.6	8.4	7.2	6.1	5.4	~~4.9~~ 4.8	4.5
Count	30	24	24	22	~~21~~ 22	~~82~~ 23	24	24	24	25	~~23~~ 25	~~25~~ 26	~~31~~ 28	27	27	27	26	26	26	26	26	26	~~25~~ 26	~~24~~ 26

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

foF2 (Characteristic), — (Unit), November (Month), 1940

Observed at Washington, D.C.

Lat. —, Long. —

— Mean Time

— (Institution)

Scaled by: —,

Calculated by: —,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	42	41	36	36	28	25	26	52	70	78	92	106	11.4	11.5	11.4	11.3	10.4	9.5	69	5.5	50	3.8	38	3.8
2	38	38	38	35	34	34	33	61	80	95	101	108	11.2	11.2	11.3	11.2	10.6	9.4	63	5.1	40	3.9	43	4.0
3	42	37	40	38	36	23	24	55	74	95	108	111	11.0	11.0	11.2	11.1	10.7	10.1	81	5.4	43	4.5	43	4.3
4	42	40	39	37	37	37	35	67	92	(98)	102	114	12.0	?[12.2]	?[12.2]	11.7	10.6	9.8	85	7.2	65	5.8	5.3	3.4
5	36	43	54	50	39	33	31	60	81	99	108	115	11.4	11.4	11.3	11.0	10.1	9.7	77	6.7	5.2	4.2	4.1	4.2
6	43	44	43	42	38	29	27	57	83	89	[9.6]	104	11.0	11.3	10.5	11.3	10.6	8.1	62	5.7	4.2	3.7	3.8	3.8
7	36	38	39	39	34	38	36	59	79	93	101	104	10.8	10.6	10.2	9.8	9.7	8.1	70	6.6	5.1	3.9	3.9	3.5
8	36	37	37	37	35	31	27	56	75	91	[9.6]	101	10.7	10.6	10.8	10.0	9.6	8.5	68	5.5	4.8	4.3	3.8	3.5
9	39	41	41	36	33	28	24	48	65	75	74	83	8.1	8.1	8.5	8.5	8.0	7.4	64	5.8	4.4	3.9	3.6	3.7
10	39	38	36	37	36	33	31	56	82	88	102	98	10.5	10.7	10.9	10.2	9.5	8.7	70	6.0	4.2	3.6	3.5	3.4
11	33	35	35	33	32	28	26	56	80	87	97	97	10.1	11.1	10.9	10.7	10.1	8.5	57	5.3	4.6	4.1	3.7	3.8
12	36	37	37	35	38	24	23	57	66	96	105	111	11.3	11.3	11.3	11.3	12.0	[10.8]	96	8.5	7.2	6.6	5.0	[4.3]
13	(35)	38	36	37	33	[2.8]	[2.5]	55	79	98	(106)	116	11.7	10.8	9.0	7.0	6.5	6.0	07	5.0	4.3	4.2	4.3	4.0
14	42	42	33	35	32	32	31	51	66	77	91	96	9.6	9.0	9.3	9.3	8.6	7.7	68	5.8	5.0	4.5	4.5	4.5
15	39	37	39	38	38	36	32	56	78	87	104	106	10.8	10.8	10.7	11.0	10.0	9.1	74	5.7	5.5	4.7	4.8	4.5
16	37	32	36	35	35	32	28	55	77	94	100	95	9.8	10.7	11.1	(10.9)	10.6	10.0	96	7.9	5.7	5.4	4.7	4.3
17	39	38	30	31	31	30	26	59	81	94	94	100	10.5	10.2	10.7	10.5	10.8	9.2	8.3	7.0	5.8	5.8	5.5	4.6
18	40	33	27	29	30	22	30	56	80	83	97	104	11.1	10.9	9.8	9.7	9.8	8.4	7.2	6.4	5.1	4.8	4.6	4.1
19	39	35	31	36	33	27	28	58	79	86	97	98	9.9	11.1	11.2	11.9	10.7	9.2	6.7	5.8	4.8	4.1	4.2	4.0
20	39	37	40	38	39	[2.5]	36				105	106	11.0	11.3	11.3	10.9	9.7	9.3	7.7	5.7	5.3	5.0	5.2	4.9
21	46	43	37	36	31	[2.6]	[2.4]	43	66	83	94	110	11.3	12.4	11.4	10.5	10.2	9.3	7.1	5.5	4.4	4.0	3.9	3.4
22	31	23	27	—				38	47	56	67	78	7.8	8.2	8.0	8.4	8.9	7.9	6.4	4.7	3.5	2.6	2.8	3.1
23	31	33	27	[2.6]	[2.5]	2.5	2.3	33	44	54	64	67	7.5	7.9	8.4	8.5	8.3	6.4	5.8	3.9	3.6	2.6	2.4	2.4
24	25	26	36	24	25	23	21	45	67	77	86	85	9.3	9.9	9.5	8.9	8.4	6.5	6.4	6.1	5.1	3.9	3.6	3.3
25	31	30	30	32	31	<1.6	19	41	68	68	(83)	91	9.5	8.6	7.6	8.8	7.6	7.0	7.2	6.4	5.4	5.0	6.6	4.0
26	37	39	35	34	20	<1.6	<1.6	38	62	72	94	64	9.5	9.7	9.1	8.1	7.7	6.7	4.8	5.0	3.5	3.3	3.1	3.0
27	29	30	28	30	27	24	30	46	71	83	63	86	9.3	9.8	9.4	9.0	8.5	7.0	6.0	5.0	3.2	3.1	2.5	2.5
28	24	24	25	27	25	21	23	42	68	79	88	105	9.2	9.8	9.8	8.9	8.7	8.8	5.5	5.2	4.4	3.7	3.6	3.8
29	26	23	21	29	28	22	20	36	62	69	75	91	10.0	10.2	10.1	8.2	8.5	7.5	6.2	5.8	5.0	3.7	3.3	2.3
30	23	24	24	25	23	19	<1.6	31	61	76	85	94	10.7	10.1	9.2	9.3	9.5	8.0	6.2	4.5	4.3	3.2	3.0	3.1
31																								
Median	38	37	36	36	33	2.8	2.7	5.5	7.6	8.6	9.6	10.0	10.6	10.7	10.4	10.1	9.7	8.5	6.8	5.7	4.8	4.0	3.9	3.8
Count	30	30	29	29	29	29	29	29	29	29	30	30	30	30	30	30	30	30	30	30	30	30	30	30

Sweep — Mc to — Mc in — min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

f^0F_2 (Characteristic), ____ (Unit), December (Month), 1940

Observed at Washington, D.C.

Lat. ____, Long. ____ ____ Mean Time

____ (Institution)

Scaled by: ____, ____

Calculated by: ____, ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	26	27	33	33	26	22	17	37	64	84	90	89	96	96	91	98	9.5	8.3	7.8	57	45	35	32	28
2	32	33	33	33	32	29	25	36	69	80	82	104	102	98	97	96	9.2	8.6	7.2	58	45	36	31	29
3	31	36	29	32	30	27	25	36	70	79	86	94	102	96	91	90	9.0	8.2	7.1	57	48	32	29	28
4	29	28	31	35	36	29	25	49	77	86	94	98	102	103	103	99	9.3	7.6	5.6	54	40	(40)	30	30
5	26	26	30	33	35	33	31	48	88	98	102	99	95	98	94	92	8.7	8.3	6.6	47	40	33	30	27
6	27	32	35	40	40	33	28	47	74	78	84	95	96	97	102	98	9.2	7.3	6.3	52	39	30	28	26
7	27	31	36	41	41	38	36	49	70	81	[89]	[85]	88	88	85	81	9.3	8.0	5.7	57	34	34	30	31
8	32	31	34	34	34	34	33	43	69	75	83	84	95	96	94	89	9.8	7.7	6.7	54	48	35	34	33
9	35	32	27	30	36	43	32	44	66	75	93	101	101	102	99	101	9.9	8.7	[7.2]	57	54	38	37	35
10	34	34	37	43	45	46	42	42	69	85	90	98	101	102	103	110	10.6	9.1	8.5	73	57	45	38	39
11	32	30	32	32	30	36	38	45	79	86	88	96	101	101	98	98	9.3	9.0	6.9	64	56	50	50	45
12	38	38	42	41	41	45	45	45	75	85	92	95	94	105	108	96	9.5	8.1	7.4	64	49	51	50	52
13	50	52	50	44	42	32	30	42	72	87	87	95	90	104	95	94	8.8	9.5	7.3	57	42	40	37	38
14	38	39	41	41	42	40	40	48	67	80	114	103	97	96	97	98	10.0	8.9	8.1	62	45	41	39	44
15	41	37	39	37	37	40	39	41	67	100	84	98	94	96	91	97	8.9	8.4	6.6	61	55	41	41	35
16	40	35	40									103	C	[9.6]	96	93	8.6	6.7	6.4	52	42	40	35	35
17	36	39	40	42	35	39	38	47	67	83	91	103	92	101	86	89	7.8	7.1	6.6	61	55	47	40	42
18	26	34	34	40	39	38	38	42	62	76	81	93	86	93	89	80	8.1	6.2	5.3	46	39	32	28	27
19	26	28	34	35	36	34	34	49	68	74	89	93	88	85	81	79	8.0	6.6	5.5	53	42	35	29	28
20	29	27	29	38	44	40	29	31	61	62	70	98	104	99	104	100	8.0	9.0	7.9	63	59	44	21	17
21	FZ						19	44	55	65	76	85	100	96	81	85	8.3	6.7	6.0	46	39	25	24	23
22	24	26	26	27	22	19	17	25	55	58	77	78	77	83	81	79	7.6	6.5	5.4	34	34	28	22	23
23	24	22	22	24	22	20	19	31	51	63	70	86	86	95	95	90	8.1	6.4	5.8	50	34	34	25	29
24	24	20	18	24	23	23	20	30	57	66	68	78	81	87	84	82	8.0	7.0	5.3	42	37	26	22	23
25	26	28	29	20	16	20	20	29	50	60	68	79	85	87	86	73	7.6	6.0	5.5	41	27	23	23	24
26	23	27											77	84	76	80	8.7	8.3	4.5	36	26	20	20	20
27	20	27	26	29	28	29	30	36	64	72	76	83	90	85	79	67	7.5	6.0	5.0	43	38	29	28	29
28	28	32	29	28	28	21	23	30	60	64	76	88	86	82	77	78	8.4	7.1	7.3	63	55	37	34	32
29	27	27	30	32	31	32	28	38	53	66	67	87	84	81	86	87	7.6	6.4	5.8	50	30	27	27	29
30	23	21	30	21	[20]	[11]	19	26	54	74	83	101	100	94	94	93	8.3	5.7	5.8	37	30	27	24	24
31	28	31	37	32	26	27	38	38	55	66	69	87	88	85	83	85	7.1	5.7	4.5	42	33	30	31	32
Median	2.8	3.0	3.3	3.3	3.4	3.2	3.0	4.2	6.7	7.6	8.3	9.4	9.4	9.6	9.1	9.0	8.7	7.3	6.4	5.4	4.2	3.5	3.0	2.9
Count	30	30	29	28	27	28	29	29	29	29	29	29	30	31	31	31	31	31	31	31	31	31	31	31

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

IONOSPHERIC DATA

(Characteristic) , (Unit) December (Month) , 19 44

(Institution)

Observed at f_0F_2

Lat. , Long. Mean Time

Scaled by: MPK 1951 , Calculated by: BJH ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.3	2.4	2.4	2.8	3.3	3.5	3.5	4.2	5.3	6.2	5.7	6.9	7.0	7.2	6.9	[6.6]	5.6	5.3	4.1	3.6	2.9	2.6	2.8	3.0
2	3.3	3.0	3.3	3.4	3.2	2.9	2.6	3.0	4.4	5.0	5.8	6.0	6.5	6.8	7.0	7.2	6.6	5.4	4.6	3.3	2.4	2.4	2.8	1.8
3	1.9	1.8	2.3	2.4	3.5	4.4	4.2	4.1	5.4	7.0	6.0	6.8	7.0	6.1	7.1	6.2	6.4	5.1	3.8	3.1	2.8	3.0	3.0	2.6
4	3.0	3.8	4.3	4.5	4.4	4.5	3.3	3.9	6.2	5.8	6.0	6.4	6.8	[6.8]	6.6	5.8	5.6	4.8	3.5	3.2	2.6	1.9	[2.0]	[2.0]
5	2.1	2.0	2.2	2.4	3.3	2.8	1.9	2.8	5.1	6.3	5.8	5.8	7.2	[7.2]	[6.8]	5.8	5.8	5.3	3.4	2.6	2.5	2.3	2.1	1.9
6	2.2	2.2	3.0	3.1	3.2	3.0	2.9	3.5	4.9	6.0	5.6	5.9	6.1	6.1	5.9	6.0	5.7	5.0	2.9	[2.5]	2.1	2.1	2.0	2.0
7	2.0	2.0	2.6	2.7	2.8	2.9	2.7	3.2	4.9	5.0	5.6	5.8	5.7	6.4	5.9	5.5	5.7	5.8	3.5	2.6	2.3	2.4	2.2	1.9
8	1.9	1.7	1.9	2.0	2.6	3.0	2.6	3.0	6.1	5.7	6.2	5.9	6.6	6.3	6.7	6.2	6.0	4.4	3.3	3.2	2.9	2.5	2.3	3.7
9	3.2	3.3	3.4	3.5	3.7	3.6	3.4	3.3	5.3	6.0	5.4	6.0	5.7	6.2	6.8	6.7	5.8	5.3	4.1	3.6	3.2	2.7	2.6	2.3
10	2.2	2.2	2.7	2.8	3.2	3.0	2.8	3.3	5.7	6.1	6.6	7.0	7.0	7.4	6.6	6.6	5.6	5.6	4.1	3.2	2.5	2.2	1.9	2.0
11	2.2	2.6	3.2	3.3	3.6	3.3	3.1	3.3	5.6	6.0	6.5	7.0	6.8	6.7	6.5	6.4	6.6	4.7	3.3	3.6	2.8	2.7	2.6	2.3
12	2.7	3.0	3.4	3.6	3.8	3.5	3.0	3.0	5.6	5.6	[5.8]	6.4	7.4	7.0	5.6	6.7	6.3	4.8	4.4	3.3	2.6	2.2	2.1	2.0
13	2.0	2.2	2.4	2.8	3.2	3.1	2.4	3.2	6.0	5.6	6.6	7.1	7.3	8.6	8.4	7.8	6.9	5.7	4.8	4.2	3.5	3.3	2.5	2.8
14	2.2	2.2	[2.5]	3.5	3.1	2.2	1.8	3.3	5.5	6.0				7.8	7.6	5.7	5.8	5.6	4.0	3.6	3.2	2.7	2.7	2.3
15	2.3	1.8	1.6	1.7	1.8	2.1	2.0	2.5	4.7	6.8	6.0	6.2	6.7	6.8	[6.5]	6.1	5.9	5.2	4.0	3.6	[2.8]	2.5	2.6	2.6
16	2.5	2.2	2.3	2.4	2.4	2.3	2.2	2.3	3.0					3.8	4.7	4.1	4.4	4.3	3.7	3.7	3.7	3.2	2.1	1.7
17	2.3	2.2	1.9	1.7	(1.5)	(1.3)	[1.1]	2.4	4.6	5.7	6.8	7.8	(9.6)	9.0	8.6	9.3	(9.7)	6.8	5.6	4.8	3.8	2.2	1.7	1.8
18	[1.5]	1.4	1.3	1.5	1.6	1.5	[1.6]	2.3	5.1	[6.5]	7.0	[7.2]	[7.4]	7.6	6.8	6.9	6.3	7.1	5.2	2.9	[2.1]	[1.7]	1.6	1.7
19	1.8	1.7	1.7	1.7	2.1	2.2	2.2	2.4	4.9	5.3	6.4	8.0	9.1	7.4	[7.6]	7.6	7.0	5.9	4.7	3.6	2.8	1.8	[2.8]	[1.9]
20	1.9	1.7	1.7	1.8	2.8	2.6	2.1	2.2	4.5	6.6	7.4	7.6	7.4	[7.5]	6.8	6.9	6.9	5.6	3.9	3.6	2.4	2.3	2.3	2.5
21	2.5	2.7	2.9	2.9	[3.0]	3.0	[2.2]	2.3	4.8	6.0	[6.8]	[7.4]	8.0	7.6	6.8	7.6	7.0	5.9	4.6	3.7	2.2	1.8	1.8	1.9
22	2.9	2.3	2.3	2.5	2.7	2.5	2.9	2.7	4.7	6.0	6.1	9.0	7.0	6.4	7.0	7.0	6.1	6.5	5.1	4.0	3.3	2.6	2.4	2.3
23	2.3	2.0	2.2	2.3	2.6	3.7	3.2	2.5	5.1	5.1	7.0	6.4	6.6	6.5	6.3	6.6	5.8	5.5	4.8	3.1	2.2	2.0	1.9	2.0
24	1.9	2.0	2.1	2.8	3.0	3.2	3.3	2.9	4.4	4.9	7.0	7.0	6.9	6.3	6.0	6.6	5.5	5.2	4.2	2.8	2.3	2.2	2.2	2.1
25	1.9	1.8	1.9	2.7	3.3	3.2	3.3	2.6	5.1	5.6	7.2	7.2	5.9	6.0	6.6	6.2	6.2	5.2	4.8	3.6	2.3	2.2	2.2	2.4
26	2.6	2.5	2.3	2.7	3.4	3.8	3.6	3.1	5.4	6.6	7.0	8.4	7.5	7.1	6.5	6.8	6.4	6.8	5.1	4.0	[3.6]	2.6	2.7	2.7
27	3.3	3.4	3.7	3.6	3.3	3.2	3.1	3.1	4.7	6.2	7.0	6.7	6.2	6.6	6.4	6.6				6.8	5.2	3.2	2.6	[1.4]
28	[1.8]	1.8	1.8	1.4	1.3	1.3	1.5	2.1	4.3	5.4	7.0	7.0	7.4	7.4	7.2	6.8	6.2	6.4	4.9	3.0	2.6	1.8	1.8	1.7
29	1.7	1.7	1.8	2.3	2.6	2.2	2.1	2.6	4.8	5.4	7.3	8.5	7.8	7.4	7.2	7.1	6.4	5.3	4.8	3.5	2.3	2.3	2.1	1.9
30	2.1	2.3	2.5	3.0	2.8	2.1	2.0	2.4	5.4	5.6	6.3	7.4	7.4	7.2	6.7	6.6	6.2	6.0	5.0	3.4	2.9	2.6	1.9	1.9
31	2.0	2.4	2.4	3.1	3.0	1.9	1.8	2.5	4.5	5.2	6.6	7.8	7.4	6.5	6.5	6.6	5.6	4.6	4.0	3.1	2.1	2.3	2.2	1.9
	2.2	3.2	2.6	2.8	3.0	3.0	2.7	2.9													2.6	1.4	2.1	2.0
Median	2.0	2.0	2.2	2.4	2.6	2.7	2.6	2.7	5.0	5.8	6.5	7.0	7.0	6.8	6.7	6.6	6.0	5.4	4.1	3.4	2.3	2.1	1.9	1.8
Count	31	31	31	31	31	31	31	31	31	30	29	29	29	31	31	31	30	30	30	31	31	31	31	31

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

foF2 (Characteristic), — (Unit), October (Month), 1945

(Institution)

Observed at Washington, D.C.

Lat. —, Long. —

— Mean Time

Scaled by: MPK 1951,

Calculated by: B.J.H, 1951

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	(3.1)	(3.0)	[3.0]	[2.7]	(2.3)	(2.1)	3.2	4.5	5.2	[5.1]	5.2	5.4	5.4	[5.7]	5.7	5.7	5.9	5.9	5.5	5.3	4.7	3.6	3.3	[3.2]
2	(3.1)	3.2	3.2	*3.4	*3.2	*3.1	*(3.4)	*5.2	*5.7	*(6.2)	*6.4	*6.9	*(7.0)	*(7.4)	*(7.0)	6.9	*7.7	*6.8	*6.2	*5.5	*4.4	*4.3	*4.1	*3.5
3	3.2	*(3.4)	*(3.6)	*(3.5)	*3.5	*(3.4)	*3.9	*6.8	*6.6	*6.6	*7.2	*7.5	*7.8	*(7.8)	*(7.4)	7.9	7.8	7.0	6.7	(6.2)	4.8	4.3	(4.2)	3.7
4	3.2	3.3	3.2	3.0	3.0	2.9	3.9	[6.0]	6.6	6.6	7.3	8.0	8.4	8.2	8.0	8.2	7.6	7.7	[7.0]	(5.5)	(5.3)	(5.9)	(4.7)	(4.3)
5	4.9	4.1	3.8	3.3	3.2	(2.8)	3.9	6.9	7.7	(7.2)	7.8	9.0	9.0	9.8	9.4	9.8	(9.5)	8.7	7.4	5.5	4.5	(4.0)	(3.2)	(3.6)
6	(3.3)	(3.1)	2.9	2.8	2.6	2.5	3.6	5.7	6.9	7.2	7.2	7.9	7.9	8.3	[8.6]	8.3	7.9	7.9	[7.3]	5.8	5.0	4.6	(4.4)	4.0
7	[4.1]	3.8	[3.7]	(3.6)	3.1	2.9	3.8	5.8	6.9	7.0	8.1	8.5	9.0	[9.1]	9.0	8.8	8.4	[9.1]	7.5	7.1	6.5	(5.7)	4.8	3.9
8	3.8	4.0	3.8	[3.7]	3.7	4.1	3.9	6.2	[7.2]	7.2	8.6	9.9	10.4	11.0	10.3	9.7	8.6	8.2	7.4	5.5	4.8	4.6	4.3	4.0
9	3.7	(3.5)	3.4	(3.4)	(3.4)	3.1	3.5	5.4	(6.8)	6.2	7.0	7.7	8.0	8.0	7.5	7.7	7.1	6.7	(5.8)	*5.2	*4.5	*4.2	*3.9	*3.8
10	*3.8	*3.6	*3.5	*3.4	*3.4	*3.6	*4.0	(5.7)	6.2	6.3	[7.1]	[7.6]	7.8	7.5	[8.1]	8.0	7.0	7.8	6.8	(5.6)	4.8	(4.5)	4.4	4.0
11	3.9	3.8	3.7	3.7	3.5	3.4	4.0	6.2	7.0	7.8	8.0	(8.3)	9.0	[8.8]	8.8	8.8	[8.7	8.8	(7.4)	5.7	5.6	(4.5)	4.3	4.4
12	3.9	3.9	3.5	3.5	[3.8]	3.7	3.6	6.0	5.8	7.2	7.1	9.9	[10.3]	9.6	9.4	9.2	8.8	8.6	8.1	6.8	6.2	5.4	4.9	5.0
13	4.6	4.3	4.2	3.9	1.8	[1.8]	[2.6]	5.5	6.9	7.7	8.8	9.2	9.6	10.2	10.2	10.1	9.4	8.4	7.1	(6.7)	5.6	5.1	4.8	(4.7)
14	(3.8)	3.6	3.5	3.2	3.0	2.7	3.2	5.8	7.0	7.3	7.9	9.0	9.3	10.0	10.1	10.0	9.8	8.8	7.5	6.2	5.5	4.4	4.4	4.1
15	3.7	3.7	[3.8]	3.5	(3.4)	3.2	(3.2)	6.0	(7.2)	7.6	8.5	9.0	9.4	*9.5	*10.7	*10.2	(9.4)	8.4	7.8	6.2	5.2	4.8	4.6	4.2
16	4.0	3.6	3.6	3.7	[3.4]	3.1	(3.3)	5.5	6.6	9.2	8.2	[8.5]	[10.0]	[10.4]	[10.0]	[9.4]	8.2	7.6	6.2	5.7	5.1	(4.3)	(3.7)	(3.5)
17	3.4	[2.8]	(2.3)	(2.1)	1.8	1.7	(2.5)	(5.5)	7.2	(8.0)	7.8	8.8	9.6	[10.3]	10.5	9.6	(9.3)	8.5	7.0	5.9	5.6	(4.7)	(4.6)	4.0
18	3.7	3.7	3.5	3.5	3.3	3.0	3.4	[5.9]	7.1	8.4	9.0	9.5	10.5	9.8	9.2	9.7	9.1	8.6	(6.7)	6.2	5.2	4.8	(4.5)	(4.0)
19	(3.8)	(3.9)	(4.0)	(3.8)	3.7	3.8	3.5	6.4	(7.5)	[7.9]	8.4	[9.1]	9.8	10.0	10.2	10.2	10.0	8.9	8.0	(6.5)	6.7	(6.0)	5.8	5.9
20	5.6	5.0	4.6	4.6	3.5	3.3	3.5	(7.0)	[8.5]	8.7	[9.3]	10.4	10.0	9.4	10.0	10.2	9.7	8.5	7.6	6.8	5.8	4.7	4.5	4.2
21	4.1	3.8	3.8	3.8	3.7	3.1	3.5	6.2	7.4	8.2	9.2	10.0	10.2	10.2	10.2	10.7	9.6	8.4	[7.0]	[6.3]	(5.4)	4.4	4.7	4.6
22	4.3	3.9	3.7	[3.6]	3.5	3.2	3.5	6.8	7.8	8.8	9.0	9.6	11.4	*(12.1)	*12.0	11.4	(9.6)	8.2	(6.8)	*6.4	*6.5	*6.5	*5.6	*4.8
23	*4.6	*4.5	*4.2	*3.7	*3.6	*3.9	*3.4	*5.8	*6.8	*7.4	8.6	8.3	9.8	10.2	10.7	(10.4)	9.4	8.2	6.4	5.5	4.7	4.7	4.5	4.5
24	4.5	4.6	4.2	4.3	3.9	*3.6	*3.6	4.8	5.4	6.4	7.3	8.4	9.4	9.6	9.2	10.0	(10.2)	(9.4)	8.7	7.8	5.0	[4.8	3.8	[3.0]
25	(3.0)	(4.5)	3.5	(6.6)	*2.2	*[3.4]	*2.3	5.6	7.2	8.0	8.4	8.6	9.8	9.5	10.0	10.0	[9.8]	(9.2)	7.2	5.6	4.5	4.0	4.0	3.8
26	3.8	3.5	3.3	(2.8)	(3.4)	[1.9]	(2.2)	4.9	5.7	6.8	7.2	[8.3]	8.8	[8.9]	9.0	8.8	8.7	8.0	6.6	5.8	4.3	3.8	3.5	3.5
27	3.3	3.2	(3.1)	2.9	(2.7)	(2.7)	(2.8)	5.9	[7.2]	7.6	8.1	8.4	9.2	10.2	10.3	10.0	[10.0]	9.2	8.2	6.8	6.2	*[4.9]	*4.5	*3.8
28	(3.6)	(3.2)	3.3	(3.4)	(3.4)	3.4	3.6	6.4	8.8	9.0	9.8	9.6	10.8	10.2	11.4	10.4	10.8	10.0	8.4	7.2	6.0	4.3	4.8	4.2
29	(4.0)	4.4	4.1	3.5	3.3	(2.9)	3.0	6.5	8.2	(9.1)	9.2	10.0	10.6	10.3	11.0	[10.4]	(10.4)	9.0	(8.3)	[6.1]	(5.4)	(4.2)	(4.0)	3.8
30	(3.1)	3.3	3.4	(3.2)	(3.1)	(3.0)	(2.5)	5.2	7.2	8.6	9.0	(9.9)	[10.4]	[10.5]	10.6	(10.4)	(10.2)	(9.2)	7.0	6.0	(4.9)	3.8	[3.6]	3.3
31	(3.5)	3.5	3.5	(3.3)	3.2	2.9	2.9	[6.0]	7.5	8.6	[9.2]	9.6	10.0	10.4	(10.2)	(10.2)	10.2	8.4	[6.9]	5.7	4.7	4.1	4.2	4.0
			✓ 3.6		✓	✓	✓	✓	✓			✓	95 ✓ ✓	98 ✓ ✓	✓	✓				59 ✓	✓	✓		
Median	3.8	3.7	3.5	3.5	3.3	3.0	3.5	5.9	7.0	7.3	8.1	9.0	9.4	9.6	10.0	9.9	9.4	8.4	7.1	6.0	5.1	4.6	4.4	4.0
Count	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31

Sweep — Mc to — Mc in — min

Manual ☐ Automatic ☐

green figures from use of new equipment.

* - data from portable graphs

red figures - corrections for calibration error

U.S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

(Characteristic), (Unit) January (Month), 1945

IONOSPHERIC DATA

(Institution)

Observed at _____

Lat. _____, Long. _____ _____ Mean Time

Scaled by: MPK 1951, Calculated by: _____,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.2 2.0	2.1 1.8	1.8 1.7	1.8	2.2	2.5	2.4	2.6	4.7	5.4	6.8	[7.2]	7.0	6.4	6.2	7.0	6.1	6.5	4.8	3.5	2.7	[2.7] 2.4	2.6	2.6
2	2.7	2.8	3.0	3.0	3.5	3.6	3.3	2.6	4.8	5.3	6.0	7.8	7.0	7.2	7.3	7.5	5.9	5.4	4.2	3.9	3.1	2.3 2.6	2.3 2.6	2.3 2.5
3	2.4 2.2	2.5 2.2	2.8	2.9	3.1	2.5 2.2	1.8 1.9	2.2 2.5	4.4	5.2	5.7	6.6	6.5	6.7	6.6	6.4	5.4	5.0	4.0	3.5				
4	2.2 2.0	2.6	2.6	2.6	2.6	2.7	2.5 2.2	2.6	4.3	5.2	5.8	6.4	7.0	6.4	6.4	6.3	6.8	6.4	4.7	[3.2] 2.8	[2.6] 2.3	2.1 1.9	2.0 1.8	1.8 1.7
5	2.0 1.8	2.3 2.1	2.5 2.2	2.8	3.2 3.3	3.0	3.2	2.9	4.2	5.4	6.2	6.7	6.4	6.2	7.0	6.4	5.7	5.1	4.2	3.2	2.3 2.1	2.8	2.4 2.3	2.6
6	2.6	2.5	2.9	3.5	3.6	3.6	3.2	2.7	5.3	6.3	6.0	7.1	6.2	6.4	6.2	6.6	5.6	5.7	4.6	3.2	2.4 2.2	1.4 1.8	1.5	1.5 1.7
7	1.9 1.8	[2.1] 1.9	2.4 2.2	2.6 2.3	2.4 2.3	3.1	3.0	2.9	4.7	4.8	(6.6)	6.4	6.3	6.6	6.2	6.4	5.3	5.2	4.8	3.8	2.4 2.3	2.1 1.9	2.1 1.8	2.0 1.8
8	1.8 1.7	2.0 1.8	2.1 1.9	2.1 1.9	2.3 2.1	2.9	3.0	2.8	4.5	5.6	6.4	(6.8)	(6.7)	6.9	6.4	6.5	6.1	6.0	5.2	3.5	2.8 2.0	2.1 1.9	2.1 1.9	2.2 2.2
9	2.0 1.8	1.8 1.7	1.7 1.6	1.8 1.7	2.4 2.2	2.4 2.5	3.0 3.6	2.8 2.4	4.5	5.7	6.4	6.7	6.7	6.8	6.5	6.6	6.1	6.0	6.0	5.5	4.4	3.6	4.0	4.3
10	4.5	3.7	3.0	2.6	2.5 2.2	(2.4 2.2)	(2.2 2.0)	2.4 2.2	4.1	5.0	6.2	7.0	7.4	(7.2)	7.2	7.0	5.7	5.7	4.8	3.2	2.8	2.1 1.9	2.1 1.9	2.1 1.9
11	1.8 1.7	1.8 1.7	1.9 1.8	1.9 1.8	2.1 1.9	2.3 2.1	2.2 2.0	2.3 2.1	4.5	5.6	[6.2]	[6.4]	6.2	6.0	6.2	5.8	4.8	4.8	4.4	3.8	3.0	2.1 1.9	2.1 1.9	2.2 2.0
12	2.2 2.0	2.0 1.8	1.9 1.6	1.9 1.8	1.9 1.6	2.0 1.8	2.0 2.0	2.4 2.5	4.7	5.5	6.2	6.5	6.7	6.8	6.5	5.7	5.2	4.9	4.8	4.0	3.5	3.3	3.3	2.6
13	2.3 2.1	2.6 2.2	2.7	2.9	3.2	3.2	2.9	3.0	4.4	5.8	5.8	6.6	6.8	6.5	6.2	6.1	5.6	5.2	4.6	3.7	3.2	2.2	2.0	1.8
14	1.8 1.9	1.8 1.9	1.8 2.0	1.9 2.1	2.2 2.2	[2.1 2.3]	2.3	2.7	4.5	5.2	5.3	6.1	6.5	6.5	6.2	6.5	5.7	5.2	4.5	4.0	3.8	3.6	3.4	3.4
15	2.2 2.4	2.2 2.4	2.8	[3.1]	3.0	2.2 2.5	[2.2 2.3]	2.2 2.3	3.8	4.5	5.3	6.4	6.4	[6.6]	6.8	6.8	6.2	5.6	3.6	2.8	2.6	2.7	2.3	2.5
16	2.8	2.6	2.2 2.4	2.2 2.3	2.4	2.3 2.6	2.3 2.6	2.6	4.7	5.8	6.1	6.8	6.8	6.6	6.6	6.7	5.8	5.7	5.2	4.1	3.5	3.0	2.3	2.3
17	2.0 2.2	2.2 2.5	2.4 2.7	2.3 2.6	2.2 2.5	2.2 2.5	1.9 2.1	2.2 2.4	4.3	5.2	5.8	6.6	6.6	6.6	6.5	6.3	6.2	6.0	4.8	4.2	2.9	2.7	2.6	2.3
18	1.9 2.1	1.8 2.0	1.8 2.0	1.8 1.9	1.8 1.9	1.7 1.8	1.7 1.8	2.2	5.2	5.0	6.7	6.6	6.5	6.8	7.0	6.5	5.8	5.8	6.4	4.8	3.2	2.8	2.8	2.5
19	2.2 2.4	2.2 2.5	2.7	2.9	2.9	2.9	2.6	2.6	4.6	4.8	6.0	6.2	5.7	5.6	5.8	7.2	5.9	5.6	6.0	3.9	3.1	2.6	2.6	2.5
20	2.2 2.4	2.2 2.4	2.7	3.0	3.0	3.0	2.2 2.2	2.2 2.5	5.1	5.4	6.7	6.8	6.8	6.7	7.3	7.4	6.0	5.2	4.7	4.8	[2.4 2.8]	2.1 1.8	2.2 2.0	2.2 2.2
21	2.1 1.9	2.0 2.2	2.7	2.7	[2.2 2.3]	1.9 1.8	1.8 1.7	2.2 2.0	4.3	5.2	6.4	7.1	6.5	6.9	6.9	6.6	5.5	5.3	5.2	4.1	2.8	2.3 2.5	2.3 2.1	2.1 1.8
22	1.4 1.7	1.5 1.6	1.4 1.7	1.7 1.8	2.0 2.2	2.2 2.4	2.2 2.5	2.6	4.8	5.3	6.5	6.4	6.2	6.8	[7.0]	7.0	5.8	5.2	4.8	4.4	2.2 2.5	2.2 2.3	1.5	1.4 1.4
23	1.9	C	C	C	C	2.1 2.3	2.2 2.4	2.9	4.5	4.7	6.0	6.2	5.8	6.2	6.6	5.8	5.2	5.2	5.2	4.7	3.2	2.3 2.1	2.1 1.9	2.1 1.9
24	1.8 2.0	2.0	2.2 2.3	2.3	2.7	3.0	2.7	2.6	4.4	5.4	6.2	6.0	5.7	5.8	5.9	5.8	5.6	5.0	4.6	4.4	3.7	2.3 2.3	2.1 1.8	2.2 1.9
25	2.0 2.2	2.6	2.9	3.0	3.3	3.4	3.4	3.5	5.2	6.0	6.3	6.1	5.6	6.3	6.4	6.2	5.6	4.8	5.2	3.9	3.1	2.6	3.2 3.6	3.2 3.6
26	2.7	3.0	3.2	3.2	3.3	3.2	3.6	3.9	5.4	5.8	[6.6]	6.6	6.8	6.6	7.3	7.0	7.1	6.4	5.4	5.2	4.0	3.0	2.7	3.0
27	3.0	3.0	3.2	3.4	3.5	3.8	3.1	3.4	5.2	5.9	7.3	7.7	7.0	(6.5)	6.4	6.7	6.8	5.8	4.8	4.4	3.8	3.2	3.1	3.6
28	2.9 2.5	[2.5 2.7]	3.0 2.6	3.2 2.7	3.1 2.7	3.1 2.7	3.3 2.9	3.3 2.9	5.1	6.2	6.8	(8.4)	7.4	6.5	6.8	7.5	(7.4)	7.2	(7.0)	5.2	3.8	4.0	(3.8)	(4.8) 4.7
29	1.5	2.6 1.8	C	C	C	C	C	2.0 2.2	[3.5]	4.3	[5.8]	6.2	5.3	5.8	6.0	5.7	6.0	5.4	5.4	4.4	4.0	2.5 2.2	2.2 2.0	(1.6 1.5)
30	1.7 1.6	(1.4)	1.5	1.5	1.8	1.8 1.9	1.7 1.8	2.2 2.3	4.3	5.7	5.8	7.0	7.0	6.2	6.7	6.4	[6.0]	4.8	4.4	4.5	2.9	2.3	2.3 2.1	2.6 2.3
31	2.5 2.2	2.5 2.2	2.1 1.9	1.9 1.8	2.1 1.8	2.3 2.1	2.2 2.4	3.0 2.6	4.7	6.3	6.6	6.6	7.1	6.8	6.1	7.1	6.9	5.6	4.8	4.0	2.6 2.3	2.1 1.7	1.9 1.8	2.1 1.8
mag. value	2.2	2.4	✓ 2.6	✓	✓ 2.6	✓ 2.6	✓ 2.6	✓ 2.6												✓	✓	✓ 2.5	✓ 2.0	✓ 2.2
Median	2.0	2.2	2.4	2.6	2.4	2.4	2.2	2.6	4.5	5.4	6.2	6.6	6.6	6.5	6.5	6.5	5.8	5.4	4.8	4.0	3.0	2.8	2.1	2.1
Count	31	31	29	29	29	30	30	31	31	31	31	31	31	31	31	31	31	31	31	31	30	30	30	30

30

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

[ ] Mc

✓ mag value

— corrected values

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

f_0X (Characteristic), (Unit), March (Month), 1945

Observed at Washington, D.C.

Lat. ____, Long. ____ ____ Mean Time

(Institution)

Scaled by: MPK 1951, Re

Calculated by: ____, ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.9	2.8	2.7	2.8	2.9	3.0	2.5	4.6	5.8	6.1	5.9	5.7	6.8	6.8	7.4	7.5	7.3	7.2	6.2	5.4	3.8	2.9	2.5	2.3
2	2.2	2.1	2.1	2.2	2.4	2.3	2.4	4.2	5.6	5.8	6.0	6.6	7.0	7.0	7.6	7.0	7.3	7.3	6.4	5.7	4.8	4.2	3.9	3.7
3	3.7	3.7	3.5	3.0	2.8	2.6	2.8	3.9	4.5	4.9	5.5	5.9	6.6	6.7	6.7	7.1	6.5	6.2	5.7	4.9	4.6	3.4	3.1	2.9
4	2.7	2.4	2.3	2.3	2.6	2.8	3.0	4.4	4.8	5.4	5.4	5.8	6.1	6.2	6.4	6.6	6.0	6.2	5.9	4.8	4.8	4.2	3.5	3.2
5	2.6	2.3	2.4	2.6	2.6	2.7	2.9	4.9	5.5	5.5	6.0	6.4	6.6	6.8	7.8	7.8	7.8	7.0	5.4	5.2	4.2	3.6	3.2	3.1
6	3.0	3.1	3.2	3.0	2.4	2.1	2.2	4.6	5.4	5.9	5.5	6.6	7.4	7.3	7.6	7.6	7.3	7.3	6.4	6.0	4.6	3.5	3.3	3.0
7	2.7	2.6	2.5	2.4	2.1	2.0	2.2	4.0	5.0	5.8	5.8	6.3	(6.8)	6.9	6.2	[6.7]	7.0	6.7	6.0	5.3	4.6	4.0	3.5	3.3
8	(3.2)	3.3	(3.1)	3.6	2.5	2.7	2.6	3.8	4.6	5.0	6.4	6.4	6.7	7.1	6.9	6.4	5.6	6.0	6.6	6.4	4.6	(3.6)	(3.5)	2.6
9	2.0	2.1	2.0	2.1	2.1	2.1	2.0	3.6	[4.2]	4.6	5.3	5.6	5.4	6.2	6.0	6.4	6.9	6.6	6.3	5.4	4.7	3.7	3.2	(2.8)
10	2.6	(2.6)	2.8	2.9	2.8	2.8	3.6	4.7	5.6	5.7	5.9	6.4	[6.5]	6.7	7.0	7.2	6.9	6.4	6.0	5.2	4.4			
11				3.5	2.8	1.6	1.8	3.3	[4.0]	(4.5)	(4.5)	4.7	4.7	5.4	4.9	5.2	4.7	4.7				3.1	3.0	2.8
12	2.8	2.2	1.8	1.9	1.7	2.1	1.8	4.4	5.6	5.5	5.7	6.2	6.8	7.4	8.4	7.9	8.7	9.0	6.4	5.8	4.1	3.4	3.1	[2.8]
13	2.3	2.3	2.2	2.8	1.9	1.8	2.0	3.8	4.2	4.7	5.4	5.8	6.0	5.8	5.6	5.8	5.8	6.0	5.8	5.2	4.7	4.1	3.7	3.5
14	3.1	2.7	2.7	2.7	2.8	2.4	2.5	4.6	5.6	5.7	6.7	7.5	7.4	7.5	6.5	6.7	6.4	6.5	[7.0]	6.6	4.9	(4.4)	(4.0)	4.0
15	3.9	3.7	3.6	3.8	1.6	1.4	2.2	3.7	4.3	4.7	4.9	4.8	5.3	5.2	5.2	5.4	5.4	4.9	5.0	4.5	(4.7)	(4.5)	4.6	4.3
16	3.7	3.5	3.0	2.6	2.3	2.1	2.3	4.0	4.9	5.2	5.5	5.4	5.8	6.2	5.8	5.8	5.4	5.4	5.0	4.7	3.8	3.5	3.2	2.9
17	2.7	2.6	2.5	2.5	2.1	2.0	2.5	3.9	4.7	5.5	5.6	5.5	6.4	6.4	6.6	6.4	6.2	5.8	5.9	5.6	4.1	4.0	3.7	3.4
18	3.2	3.0	2.5	2.4	2.3	1.9	3.6	5.2	5.4	5.8	6.4	6.8	6.9	6.1	6.7	7.0	7.0	6.4	6.4	5.6	4.6	4.3	3.8	3.5
19	2.9	2.4	2.3	2.3	2.3	2.2	2.7	4.5	5.4	5.8	5.6	5.7	5.9	6.2	6.0	6.4	6.6	6.5	6.0	4.7	3.7	3.3	3.0	3.1
20	3.1	2.8	2.7	2.5	2.4	2.5	2.9	4.7	5.0	5.1	[5.2]	5.7	6.2	6.4	6.9	6.9	6.9	7.0	7.3	7.0	5.0	4.0	3.1	2.8
21	2.6	2.6	2.6	2.6	2.3	1.8	2.5	4.6	5.1	5.5	6.2	6.6	6.4	6.4	6.4	7.2	6.4	6.3	6.6	5.4	4.5	3.7	3.5	3.4
22	3.3	2.9	2.7	2.5	2.3	2.3	2.7	4.6	5.2	5.6	5.8	6.2	6.8	6.5	6.9	6.5	6.7	6.2	6.2	5.7	4.9	4.3	3.8	3.4
23	3.0	2.7	2.4	2.3	2.4	2.4	3.0	4.4	4.7	5.0	5.1	5.5	6.2	6.2	6.0	5.5	5.5	5.3	5.4	5.2	4.7	4.0	3.7	3.2
24	3.8	2.6	(3.0)	1.8	(2.2)	(1.9)	2.4	4.5	5.3	6.0	6.2	5.8	5.4	6.0	5.9	6.0	6.2	5.8	6.0	5.8	5.3	4.8	(4.2)	4.0
25	(3.6)	3.5	3.2	3.6	3.0	3.1	3.6	5.0	5.5	5.8	5.8	6.5	(6.1)	6.0	6.2	6.0	5.8	5.9	6.0	6.0	5.5	5.3	5.0	5.0
26	3.8	3.3	3.0	2.8	[1.2]	1.8	2.3	3.5	3.9	4.2	4.4	[4.4]	4.4	5.0	4.9	4.4	4.5	4.6	4.2	4.0	3.8	3.8	(3.5)	(2.4)
27	2.2	2.1	(2.1)	2.1	2.2	2.3	2.8	4.1	4.5	4.3	4.5	4.7	5.1	5.4	5.0	5.4	5.4	5.1	5.3	5.3	4.8	4.3	3.5	3.9
28	3.2	2.4	2.3	2.2	2.8	(1.6)	2.3	3.8	3.9	3.6	3.8	3.9	4.0	4.0	4.0	3.9	4.1	4.1	4.1	3.9	3.9	2.9	(1.7)	(1.7)
29	1.8	(1.8)	(1.7)	1.4	(1.3)	1.6	2.3	4.4	4.8	5.1	5.3	5.7	5.6	5.5	5.7	5.4	5.3	5.5	5.5	5.0	4.6	4.0	3.5	3.3
30	2.9	3.6	2.9	2.1	1.7	1.6	2.3	(4.5)	6.0	7.2	6.6	(6.3)	6.8	6.6	6.7	6.7	6.4	6.6	6.5	5.5	4.5	3.9	3.8	3.5
31	3.3	3.3	3.7	3.6	2.3	2.3	3.8	5.4	6.0	6.6	(7.1)	(6.4)	6.8	7.1	7.3	6.8	6.6	6.4	6.7	6.6	5.5	4.7	4.3	4.3
magnetic	2.9	2.6	2.6	2.4	2.3	2.2	2.6	√	√												√	√	√	3.2
Median	2.6	2.4	2.3	2.2	2.1	2.0	2.3	4.4	5.0	5.5	5.6	5.8	6.4	6.4	6.4	6.5	6.2	6.2	6.0	5.4	4.6	4.0	3.5	2.8
Count	30	30	30	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	30	30	30	30	30	30

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

- dash- corrected values

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

IONOSPHERIC DATA

(Characteristic) , (Unit) April (Month), 1945

(Institution)

Observed at _____

Lat. _____, Long. _____ _____ Mean Time

Scaled by: MPK 1951, _____

Calculated by: _____, _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	4.3	3.6	[3.9] [25]	2.3 2.1	2.8 24	x 3.3	[3.9]	3.8	4.1	3.9	3.9	4.0	4.2 G	4.2	4.5	4.5	4.7	4.8	4.6	3.9	3.3 29	2.7 24	2.6 23	2.3 21
2	2.3 21	2.1 19	[1.8] x [17]	A [15]	B [1.3]	[1.6] [15] B	3.1 27	3.9	4.1	4.9	5.6	5.5	5.8	6.0	6.4	6.5	6.1	6.0	5.7	5.5	4.9	4.0	3.6	3.2 x
3	3.2 x	3.0 x	2.8 24	2.2 20	[1.8] [17]	1.6 [15]	3.8	5.0	5.4	5.8	6.6 P	7.2 P	7.6 P	7.6 P	7.6 P	7.2 P	7.2 P	7.4 P	7.3 P	7.1 P	5.7	4.5	4.2	4.0
4	3.8	3.6	3.3 x	3.2 x	2.9 x	2.6	3.8 x	6.2	6.5	5.4	6.4 P	7.2 P	7.2 P	7.8 P	7.7 P	7.3 P	7.1	6.8	7.0	6.4	5.7	5.3	4.9	4.6
5	3.9	3.4 x	3.2 x	3.0 x	2.8 x	2.7 24	3.6	[4.5]	4.9	5.3	5.7	6.0 P	6.1	6.2	6.4	8.2 P	7.2 P	8.4	7.2 P	6.3 P	4.1	2.9 x	2.7 x	2.7 x
6	2.7 24	2.6 23	2.5 22	2.3 20	2.3 20	2.6 23	4.6	5.4	5.6	5.8	6.8 P	6.6 P	6.8 P	7.2 P	8.0 P	7.8 P	7.2 P	7.0 P	6.6	6.6	5.6	5.2	4.5	4.0
7	3.6	3.4 x	2.8 x	2.6 23	2.7 24	2.2 20	3.9	5.3	5.7	5.7	6.2	6.2	7.2 P	7.0 P	7.2 P	7.5 P	7.2 P	7.2 P	7.6 P	7.6 P	6.2 P	4.9	4.4	4.3
8	3.9	3.3 x	2.8 24	2.2 20	[1.9] 18	1.7 16	3.2 x	3.9	4.5	4.6	4.2	4.5	4.8	5.0	5.1	5.0	5.0	5.0	5.0	4.6	3.9	3.3 x 21	3.0 26	2.9 P 25
9	2.8 24	2.7 24	2.3 21	2.3 21	2.1 19	1.8 17	3.7	4.5	5.5	6.0	5.7	5.8	5.9	6.2	6.2	6.2	6.2	6.0	5.8	5.8	6.3	4.5	4.0	3.5
10	3.1 27	2.9 25	2.8 24	2.6 23	2.3 21	2.0 18	4.1	5.1 P	5.5	5.5	[5.6]	6.2	6.5	6.6 P	6.6 P	6.4 P	6.4	6.4	6.4	6.6	5.7	4.3	3.4 x	3.0 x
11	2.9 x	2.9 25	2.6 23	2.2 20	1.8 17	1.8 17	3.4 x	4.0	4.0 P	4.1 P	4.5 P	5.1	5.2	4.9	4.6	5.1	4.9	5.1	5.5	6.4 P	5.9	4.8	4.1	3.9
12	3.6	3.6	3.2 x 24	3.0 x 25	2.4 22	1.8 17	3.2 x	4.3	4.9	5.5	5.7	6.5 P	6.3	7.0 P	6.4	6.2	6.2	7.0 P	7.6 P	6.6 P	6.1	5.0	4.7	4.6
13	3.8	3.6	3.3 x	2.6 23	2.3 21	1.8 17	3.4 x	4.2	4.5	4.8	5.2	5.5	5.7	5.7	5.8	5.5	5.6	5.8	5.6	5.6	5.5	4.2	4.0	3.8
14	3.1 x	3.0 x	2.4 22	2.1 19	1.9 18	[1.8] 17	3.3 x	3.7	4.0	4.5	4.9	5.1	5.4	5.4	5.7	5.8	6.1	5.8	5.8	5.8	5.0	4.1	3.6	3.5
15	3.2 x	3.1 x	2.7 x	2.6 x 23	2.4 22	2.4 22	3.2 x	4.1	4.3	4.2	4.5	4.5	4.2 G	4.7	4.7	4.7	4.7	4.7	4.7	4.5	3.7 x	3.0 x 21	2.6 23	2.4 22
16	2.2 20	1.9 18	1.7 16	1.5	1.3	1.7 1.6	3.6	4.5	4.7	5.0	5.4	5.4	5.8	5.8	6.0	5.8	6.0	5.8	5.7	5.5	5.1	4.3	3.8	3.8 x
17	2.9 x	2.7 x	2.7 24	2.5 22	2.0 18	2.0 18	4.0	4.6	4.8	5.5	5.5	5.8	5.8	5.9	6.1	5.7	5.7	5.9	6.2	6.5	5.3	4.1	3.6	3.4 x
18	3.2 x	3.2 x	2.9 x	2.7 x	2.6 23	2.4 22	4.0	4.9	5.2	5.7	6.2 P	6.2	6.2	6.5	6.3	6.4	6.4	6.7	6.9 P	6.6 P	5.9	5.0	4.3	3.8
19	3.6	3.4 x	3.2 x	3.0 x 22	2.6 22	2.3 21	3.6	4.5	5.1	5.5	6.1	6.2	6.6 P	6.5 P	6.4	6.5	6.2	6.1	6.5 P	6.6 P	5.7	4.8	4.3	4.0
20	3.7	3.2 x	2.6 x	2.6 x 23	2.2 20	2.4 22	4.6	5.8	5.8	6.2 P	6.3 P	6.4 P	6.8 P	6.7 P	6.2 P	5.8	6.0 P	6.2	6.5 P	[6.8]	6.5 P	5.1	3.9	3.5 x
21	5.1 x	[3.0]	2.7 24	2.6 x 23	2.4 22	2.6 23	4.1	5.1	5.4	5.5	5.5	5.5	5.8	[5.7]	5.8	6.0	6.0	5.8	5.9	6.4	6.4	5.5	5.1	4.7
22	4.1	3.7	3.0 x	2.9 x	2.7 x	2.8 x	4.6	5.4	5.8	6.4 P	6.8 P	6.8 P	6.8 P	[6.8]	6.8 P	7.0 P	6.8 P	7.0 P	7.0 P	6.8 P	6.5 P	5.1	4.5	4.3
23	4.2	3.9	3.6	3.4 x	2.8 x	2.6 23	3.8	4.5	5.0	5.4	6.0	6.3	6.2	6.5	6.3	6.2	6.2	5.8	5.7	5.8	5.8	5.1	4.5	4.1
24	4.1	3.6	3.3 x	3.1 x	2.8 x	2.9 x	4.6	6.3	5.8	6.2	6.5 P	6.8 P	7.0 P	7.2 P	7.0 P	6.8 P	7.0 P	6.8 P	6.7 P	6.6 P	6.0	5.0	4.6	4.6
25	4.5	3.7	[3.4] x	[3.7] [24]	[3.1] [19]	2.4 22	3.8	4.8	5.1	5.3	[5.5]	5.9 P	6.7 P	[6.7] P	6.7 P	[6.7]	6.8	6.5	6.5	[6.4]	6.4	5.5	4.6	4.0
26	3.7	3.4 x	3.1 x	2.9 x	2.4 x	2.9 x	4.4	5.2	5.9	6.4	6.0	6.2	6.5	6.7 P	6.8 P	6.8 P	6.6 P	6.6	6.5 P	6.6 P	6.2	5.4	4.9	4.8
27	4.6	4.4	3.9	3.4 x	3.1 x	3.0 x	4.4	5.2	5.8	6.2	6.4	6.5	6.6	6.7 P	6.8	[6.9]	[6.8]	[6.8] P	6.8 P	6.8 P	6.7 P	5.7	5.1	4.5
28	4.1	4.1	3.8	3.6	3.6	3.7	5.3	[5.8]	6.3	6.4	6.2	7.0	6.8 P	6.8 P	6.7 P	7.6 P	7.8 P	7.4 P	7.0 P	7.0 P	6.4	5.9	5.5	5.1
29	5.0	4.5	4.1	3.7	3.3 x	3.1 x	4.3	5.0	5.7	5.9	6.4	6.8 P	6.8 P	7.6 P	7.8 P	[8.0]	7.6 P	7.2 P	7.1 P	6.6	6.4	5.4	4.9	4.6
30	4.3	4.0	3.7	3.6	3.1 x	3.2 x	5.0	5.5	5.4	5.6	6.3	6.8 P	6.8 P	6.8 P	7.6 P	8.6	8.6	8.6 P	7.2 P	6.6	6.2	5.7	5.5	5.1
31	✓	✓	✓	✓	✓	✓	✓	✓					✓						✓					
	✓	✓	2.9	2.6	2.4	2.4																		
Median	3.7 [30]	3.4	2.8	2.4	2.2	2.2	3.8	4.8	5.3	5.5	5.8	6.2	6.5 [24]	6.6 P	6.4	6.4 P	6.3	6.4	(6.5) P	6.6	5.8	5.0	4.3	4.0
Count	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

fur. 8-11, 13-17, 19-23 + med. MO

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

f. F2 (Characteristic), ____ (Unit), (Corrected) June-Jan 1944-45 (Month)

Observed at Washington, D.C.

Lat. ____, Long. ____ ____ Mean Time

____ (Institution)

Scaled by: ____, ____

Calculated by: ____, ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Oct 1 44	2.4	2.4	2.4	2.4	2.3	2.2	2.4	4.8	5.6	6.0	6.2	6.7	7.1	7.3	6.9	7.1	6.7	6.1	5.2	4.4	3.8	2.7	2.6	2.5
2																								
Nov. 3 44	2.2	2.3	2.5	2.7	2.9	2.8	2.5	4.1	5.6	6.0	6.3	6.3	6.4	6.7	6.6	6.5	6.2	5.6	3.8	2.8	2.4	2.2	2.1	2.1
4																								
Dec. 5 44	1.9	2.0	2.2	2.4	2.4	2.5	2.2	2.5	5.1	5.7	6.4	7.0	7.1	6.8	6.6	6.6	6.0	5.4	4.2	3.4	2.3	2.1	1.9	1.8
6																								
Jan 1 45	1.8	1.8	2.0	2.2	2.2	2.4	2.2	2.2	4.5	5.2	6.0	6.6	6.5	6.4	6.5 6.6	6.5	5.7	5.5	4.8	4.0	2.5	2.3	2.0	2.0
8																								
Feb 8 45	2.2	2.2	2.3	2.3	2.5	2.4	2.4	3.8	5.4	5.7	6.3	6.5	6.6	7.4	7.0	6.9	6.7	6.0	5.4	4.7	3.8	2.8	2.4	2.4
10																								
Mar 1 45	2.5	2.3	2.3	2.2	2.0	2.0	2.2	4.4	5.0	5.4	5.6	5.8	6.2	6.2	6.3	6.4	6.1	5.9 6.1	5.4 5.9	4.6 5.4	3.9 4.6	3.5 3.9	3.5	2.8
12																								
April 5 45	3.7	3.4	2.4	2.3	2.0	2.2	3.9	5.0	5.3	5.5	5.8	6.1	6.3	6.4	6.3	6.4	6.3	6.4	6.4	6.4	5.8	5.0	4.4	4.0
14											5.6													
May 5 45	3.8	3.5	2.9	2.5	2.4	2.8	4.1	4.9	5.2	5.4	5.5	5.6	5.7	5.8	5.8	5.9	5.9	6.1	6.2	6.4	6.1	5.6	4.6	4.0
16																								
June 5 45	4.4	4.2	3.8	3.5	3.2	3.8	4.5	5.0	5.4	5.6	5.7	5.9	5.8	5.8	5.8	5.8	5.9	6.2	6.3	6.3	6.5	5.8	5.3	4.8
18																								
July 5 45	4.1	3.9	3.5	2.9	2.4	3.4	4.0	4.6	5.3	5.5	5.4	5.5	5.5	5.6	5.5	5.7	5.7	5.9	5.8	6.0	5.9	5.5	4.8	4.5
20																								
Aug 2 45	3.7	3.5	3.4	2.9	2.4	2.5	4.0	4.7	5.2	5.6	5.6	5.7	5.8	5.6	5.8	5.7	5.8	5.8	5.7	5.9	5.8	5.3	4.6	4.0
22																								
Sept 3 45	3.5	3.4	3.4	2.8	2.4 2.9	2.5 2.9	3.8	5.2	5.8	5.8	6.2	6.2	6.4	6.6	6.6	6.5	6.4	6.5 6.9	6.9	5.8	5.4	4.6	3.9	3.6
24					3.3	3.0					8.1	9.0	9.4				9.4	8.4	7.1	6.0				
Oct 5 45	3.8	3.7	3.5	3.5	2.9	2.6	3.5	5.9	7.0	7.3	8.0	8.9	9.3	9.6	9.9	9.6	9.3	8.3	7.2	5.9	5.1	4.6	4.4	4.0
26																								
Nov 7 45	3.5	3.4	3.5	3.5	3.5	3.4	3.2	5.2	7.2	7.9	8.8	8.6	9.2	9.4	9.5	9.2	9.0	8.0	6.0	5.2	4.1	3.7	3.4	3.4
28																								
Dec 9 45	2.6	3.0	3.0	3.2	3.2	3.0	2.7	3.6	6.2	6.9	7.4	8.0	8.6	8.4	8.0	8.0	7.7	6.6	5.5	4.8	3.8	3.2	2.8	2.6
30																								
31																								
Median																								
Count																								

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Differences caused by D's not being counted

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

foF2, MC, _____, 1946
(Characteristic) (Unit) (Month)

(Institution)

Observed at Washington, D.C.
Lat. 2., Long. 3.

_____ Mean Time

Scaled by: _____,

Calculated by: _____,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Jan 1	2.5	2.7	2.6	2.8	2.6	2.8	2.4	2.8	5.3	6.2	7.0	7.9	7.7	7.6	7.3	7.2	6.9	6.6	5.6	4.8	3.6	2.9	2.7	2.7
2																								
Feb 3	3.8	3.6	3.5	3.4	3.2	3.0	2.7	4.4	6.8	7.6	8.4 (8.5)	8.6 (8.8)	9.4	9.4 (9.5)	9.5	9.4	9.2	8.7	(8.0)	(6.8)	5.6	4.8	4.5	4.1
4																								
Mar 5	5.1	4.9	4.5	4.4	3.8	3.6	3.8	6.0	7.2	8.2	8.8	9.4	9.7	9.7	9.9	9.8	9.7	9.4	8.9	7.9	6.9	6.2	5.8	5.5
6																								
Apr 7	5.5	5.1	4.6	4.3	3.9	3.6	5.0	6.4	7.1	7.6	8.4	8.8	9.2	9.4	9.5	9.1	9.0	8.7	8.2	8.0	7.5	6.4	6.0 (6.1)	5.8
8																	(6.8)							
May 9	5.3	5.0	4.5	3.9	3.6	3.8	4.8	5.2	5.6	5.6	5.6 (6.1)	6.0	6.1	6.6	6.8	6.6 (6.7)	6.9	7.0	7.2	7.0 (7.9)	6.8 (6.9)	6.2	6.0	5.8
10																								
Jun 11	5.6	5.3	4.9	4.4	4.0	4.1	5.0	5.5	6.0	6.2	(6.2)	(6.3)	6.2 (6.3)	6.2	6.4	6.7	6.8	6.7	6.9	7.0	7.0	(6.8)	(6.2)	5.9
12															(6.6)									
July 13	5.7	5.1	4.7	4.2	3.7	3.9	4.7	5.0	5.6	6.0	(6.0)	6.1	6.1	(6.3)	(6.7)	6.6	6.7	6.8	7.0	6.7 (7.6)	6.9	(6.5)	(6.4)	(5.9)
14																								
Aug 15	5.6	5.3	4.9	4.5	4.0	4.0	5.2	6.0	6.7	7.0	7.2	7.1	7.2	7.1	7.4	7.4	7.5	7.6	7.8	7.8	7.2	6.7	6.0	5.6
16																								
Sept 17	5.0	4.4	4.2 (4.1)	4.1	3.6	3.4	4.6	6.3	7.4	7.6 (7.8)	8.0	8.5	8.6	9.0	9.0	8.8	8.6	8.4	(8.2)	7.4	(6.7)	6.0	5.5	5.1
18																								
Oct 19	5.4	5.4	5.3	4.8	4.4	3.8	4.6	7.1	(9.0)	10.0	10.5 (10.8)	11.4 (10.6)	11.5 (11.0)	11.5 (11.3)	11.4 (11.2)	(11.3) (11.0)	(11.0) (10.9)	(10.2)	(8.9)	(7.7)	(7.0)	(6.4)	(6.0)	(5.7)
20																								
Nov 21	(5.0)	4.7	4.4	4.4	4.2	3.8	3.7	6.4 (6.5)	(9.3)	10.6 (10.7)	11.4	11.5	12.2	11.8 (12.0)	12.5	12.4 (12.5)	11.6	(10.4)	(9.4) (9.3)	8.0	(6.7)	(6.2)	5.6	5.4
22																								
Dec 23	4.5	4.5	4.6	4.6	4.4	4.2	4.0	5.1	8.2	10.1 (10.4)	11.3	11.7	12.0	12.0	11.6 (11.7)	11.5	11.3	10.2	8.9	(7.6) 7.7	(6.2)	5.4	4.8	4.7
24																								
25																								
26																								
27																								
28																								
29																								
30																								
31																								
Median																								
Count																								

Sweep _____ Mc to _____ Mc in _____ min
Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Difference caused by the not counting of "9"s. Also WRONG CHARACTERISTIC FOR OCT.

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit) (Month), 1947

Observed at Washington, D.C.

Lat. , Long. Mean Time

(Institution)

Scaled by: ,

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Jan. 1																								
2																								
Feb. 3																								
4																								
Mar. 5														not corrected -										
6																								
April 7																								
8																								
May 9																								
10																								
June 11																								
12													7.0	7.0	7.1	7.0	7.0							6.7
July 13	(6.5)	6.1	5.8	(5.4)	(5.0)	5.0	5.8	6.2	6.8	(7.0)	(7.0)	(7.1)	7.1	7.1	7.2	7.1	7.1	7.0	7.2	7.2	(7.2)	(7.4) 7.3	(7.1)	(6.8)
14																								
Aug. 15	(6.2)	(5.9)	5.7	(5.3)	4.9	4.7	5.6	6.5 6.7	6.6 7.0	7.6 7.7	7.9 8.0	(7.6) 8.0	7.7 8.4	7.9 8.2	7.9 8.3	8.1 8.3	7.6 8.1	7.5	7.4	7.2	7.5	(7.1)	(7.0)	(6.6)
16																								
Sept. 17	(5.8)	(5.8)	5.5	(4.9)	4.5	4.5	5.4	7.8 7.7	8.9 9.0	9.8	10.4 10.6	10.7 10.6	10.6	10.4 10.7	10.6 10.7	10.6	10.2	(10.2)	(9.7)	(9.1)	8.0	7.2	(6.8)	6.2
18																								
Oct. 19	2.8	2.8	2.7	2.6	2.7	2.7	2.8	3.1	3.1	3.1	3.0	3.0	2.9	2.8	2.8	2.8	2.8	2.9	3.0	2.9	2.9	2.8	2.8	2.8
Oct 20 21	7.0	6.7	6.2	6.0	(5.8)	5.2	5.6 5.4	8.5	10.1	11.5	12.4	12.8	13.0	13.0	(12.7)	12.6	(12.4)	(11.2)	(10.2)	(9.4)	9.0	8.0	7.4	7.2
Nov 22	6.1	6.0	5.8	5.6	5.4	4.9	4.8	6.8	(10.1)	12.2	13.0	13.4	13.5	13.5	13.2	13.0	12.6	(11.8)	(10.5)	9.4	8.4	7.5 7.4	6.8	6.4
23																								
Dec 24	4.6	4.5	4.6	4.5	4.4	4.4	4.3	4.9	8.6	10.8	11.7	12.4	12.6	12.6	12.5	12.4	(12.0)	(11.0)	(9.8)	8.6	7.1	5.8	5.6	4.9
25																								
26																								
27																								
28																								
29																								
30																								
31																								
Median																								
Count																								

Sweep Mc to Mc in min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Differences caused by G's not being counted.

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit) (Month), 19 48

Observed at Washington, D.C.

Lat. ____, Long. ____ ____ Mean Time

(Institution)

Scaled by: ____, ____

Calculated by: ____, ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
JAN 1	4.4	4.4	4.4	4.4	4.2	3.9	3.8	4.2	7.8	9.8	10.8	12.3	12.3	12.3	11.8	11.6	(11.2)	(10.5)	9.5	8.5	7.1	5.8	5.4	4.9
2																								
FEB. 3	4.6	4.6	4.6	4.4	4.2	3.9	3.6	5.0	7.7	9.0	9.8	10.4	11.2	11.4	10.9	10.6	(10.3)	(9.5)	9.3	8.6	7.0	5.9	5.4	4.9
4																								
MAR. 5	(5.8)	5.7	(5.5) 5.6	(5.1)	(4.8)	4.4	4.6	6.6	8.2	9.2	10.1	11.0	11.3	11.1	11.3	11.0	10.7	10.4	(10.1)	9.3	8.0	7.3	6.8	6.2
6																								
APRIL 7	6.9	6.8	6.6	5.9	5.5	5.5	6.4	7.8	8.8	9.5	9.8 10.0	10.6	10.7 10.9	10.6	10.5	10.5	10.2	9.8	(9.6)	(9.4)	8.7	7.9	7.6	7.2
8																								
MAY 9	7.0	(6.6)	6.2	5.6	5.3	5.1	6.1	6.7 6.6	7.1 6.9	7.5 6.9	7.9 7.6	8.2 8.0	8.3 8.2	8.3 8.1	8.4 8.2	8.4 8.2	8.0	8.0	8.2	8.3	8.2	7.8	(7.7)	7.3
10																								
JUNE 11	6.8	6.4	6.2	5.7	5.4	5.4	6.0	6.4	6.7	7.0	7.3 7.2	7.5 7.4	7.6	7.6	7.5 7.4	7.6 7.5	7.8	7.8	7.8	7.7	7.8	7.8	7.6	7.2
12																								
July 13	6.6	(6.2)	5.9	5.6	4.9	4.8	5.5	6.3	6.8	7.0	7.0	7.1 7.3	7.1 7.3	7.3	7.1	7.4	7.3	7.5	7.4	7.5	7.5	7.3	7.2	(7.0)
14																								
Aug. 15	5.7	5.4	5.1	4.9	4.7 4.5	4.1	5.4	6.0 6.3	6.7	6.7 6.8	6.6 6.7	6.6 7.2	6.7 6.9	6.8 7.3	6.9 7.3	7.0 7.1	7.0	7.1	7.3 7.4	7.1	7.0	6.8	6.2	5.8
16																								
SEPT. 17	5.6	5.2	5.1	5.0 4.9	4.5	4.1	5.4	7.2	8.1	8.8	9.2	9.1	9.1	9.6	9.6	9.6	9.3	9.2	9.1	8.6	7.5	(6.7)	(6.2)	5.9
18																								
Oct. 19	5.3	5.2	4.7	4.7	4.2	3.7	4.1	6.8	8.8	9.8	10.6	11.0	11.5	11.6	11.4	(11.5) 11.4	(10.9)	(9.8)	(9.3)	8.2	7.1	6.4	(5.9)	5.6
20																								
NOV. 21	4.8	(4.6)	(4.3)	(4.2)	(4.0)	3.8	3.7	6.3	9.0	10.4	11.5	12.0	12.4	12.4	12.1	11.9	(11.6)	(10.3)	(9.3)	8.6	7.0	6.5	5.8	5.3
28																								
DEC. 23	4.1	3.8	3.9	3.9	3.9	3.7	3.5	4.5	7.7	9.5	10.3	11.3	11.7	11.8	11.5	(11.4)	(11.0)	(10.0)	8.4	7.2	5.8	4.8	4.3	(4.3)
24																								
25																								
26																								
27																								
28																								
29																								
30																								
31																								
Median																								
Count																								

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit), (Month), 1941

Observed at Washington, D.C.

Lat. ____, Long. ____

(Institution)

Scaled by: ____,

____ Mean Time

Calculated by: ____,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Jan. 1	3.0	3.0	2.9	2.8	3.0	3.0	3.0	3.4	6.0	7.1	8.3	8.8	9.1	9.0	9.0	8.7	8.1	7.5	6.5	5.6	4.3	3.4	3.2	3.2
2																								
Feb. 3	3.3	3.3	3.2	3.1	3.0	2.7	2.8	4.0	6.0	6.7	7.5	8.2	8.7	8.6	8.6	8.8	8.6	8.0	7.3	6.2	5.0	4.2	3.8	3.5
4																								
Mar. 5	3.4	3.1	3.0	2.6	2.2	2.1	2.9	4.6	5.7	6.0	6.5	7.5	7.4	7.8	7.9	8.0	8.0	7.6	7.5	6.8	5.6	4.4	4.2	3.6
6																								
April 7	3.4	3.1	3.0	2.8	2.4	2.7	3.9	4.8	5.2	5.4	5.6	6.4	6.2	6.5	6.5	6.8	6.6	6.7	6.8	7.2	6.2	5.2	4.2	3.7
8																								
May 9	3.6	3.5	3.1	2.8	2.4	3.0	4.2	4.6	4.8	5.1	5.1	5.3	5.5	5.8	6.0	5.7	5.8	5.9	6.1	6.3	6.2	5.3	4.4	4.2
10																								
June 11	4.3	3.8	3.5	3.1	2.7	3.4	4.2	4.8	5.2	5.5	5.8	5.6	5.7	5.8	5.8	5.9	6.0	6.2	6.5	6.5	6.4	5.8	5.2	4.7
12																								
July 13	4.2	3.7	3.5	3.0	2.7	3.2	4.0	4.6	5.0	5.2	5.5	5.5	5.5	5.6	5.7	5.6	5.7	5.7	6.0	6.1	6.0	5.4	4.7	4.4
14																								
Aug. 15	4.0	3.8	3.6	3.3	3.1	3.0	4.2	4.8	5.4	5.5	5.7	5.7	5.9	6.1	6.3	6.1	6.2	6.1	6.1	6.5	6.4	5.7	5.0	4.6
16																								
Sept. 17	3.7	3.5	3.4	3.1	2.8	2.7	3.8	5.2	6.0	6.2	6.4	6.5	6.8	7.0	6.8	7.0	7.0	7.0	7.1	6.5	5.9	5.0	4.6	4.1
18																								
Oct. 19	3.7	3.7	3.5	3.2	3.0	2.8	3.2	5.5	6.8	7.4	8.0	8.5	9.3	9.3	9.6	9.5	9.1	8.5	7.0	5.5	4.8	4.2	3.8	3.7
20																								
Nov. 21	2.9	2.7	2.7	2.8	2.6	2.4	2.6	4.5	6.4	7.1	7.7	8.5	8.6	9.0	9.0	8.7	8.0	6.7	5.6	4.6	3.8	3.3	3.0	2.8
22																								
Dec. 23	3.0	3.0	3.1	3.3	3.3	3.2	3.0	3.9	6.0	6.9	7.6	8.4	8.8	8.7	8.5	8.2	7.7	6.6	5.4	4.6	3.7	3.1	2.9	2.9
24																								
25																								
26																								
27																								
28																								
29																								
30																								
31																								
Median																								
Count																								

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

Form adopted June 1946

IONOSPHERIC DATA

f^0F_2 (Characteristic), ____ (Unit), ____ (Month), 1942

Observed at Washington, D.C.

Lat. ____, Long. ____ ____ Mean Time

____ (Institution)

Scaled by: ____, ____

Calculated by: ____, ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
JAN. 1	2.6	2.6	2.6	2.9	3.2	3.1	2.8	3.0	5.1	6.2	7.3	7.9	7.8	7.7	7.5	7.4	7.0	6.4	5.4	4.9	3.7	3.1	2.9	2.8
2																								
Feb. 3	3.2	3.2	3.2	3.2	3.3	3.2	3.2	4.2	5.4	6.3	6.7	7.2	7.8	7.4	7.3	7.5	7.1	6.8	5.9	5.3	4.4	3.8	3.4	3.4
4																								
MAR. 5	3.7	3.4	3.2	3.0	2.8	2.6	2.8	4.8	6.1	6.5	7.2	7.4	8.2	8.8	8.6	8.4	8.3	8.1	7.5	6.3	5.4	4.7	4.5	4.1
6																								
APR. 7	4.1	3.7	3.4	3.2	2.8	2.7	4.1	5.0	5.3	5.6	6.1	6.5	6.8	6.9	6.9	7.0	6.9	6.7	7.2	7.1	6.2	5.0	4.6	4.1
8																								
May 9	4.2	4.0	3.7	3.1	3.0	3.4	4.6	4.9	5.4	5.4	5.7	5.9	5.9	6.0	6.1	6.4	6.2	6.6	6.8	6.9	6.6	5.4	4.6	4.2
10																								
June 11	3.8	3.4	3.1	2.7	2.5	3.2	4.0	4.4	4.7	5.1	5.0	5.2	5.2	5.3	5.2	5.2	5.3	5.2	5.7	5.7	5.7	5.0	4.2	4.0
12																								
July 13	3.4	3.0	2.6	2.3	2.2	2.8	3.5	4.1	4.6	4.8	5.0	5.0	4.8	5.0	4.8	4.8	4.9	5.0	5.1	5.3	5.1	4.4	3.8	3.4
14																								
Aug. 15	2.9	2.6	2.5	2.1	2.0	2.4	3.6	4.3	4.6	5.0	5.0	5.0	5.1	5.0	4.9	5.0	4.9	5.1	5.3	5.7	5.3	4.4	3.7	3.2
16																								
Sept. 17	2.6	2.5	2.4	2.3	2.2	2.1	3.2	4.4	5.1	5.4	5.8	5.8	6.0	5.9	6.0	5.9	5.7	6.0	5.9	5.6	4.8	3.7	3.1	2.9
18																								
Oct. 19	2.9	2.8	2.8	2.7	2.6	2.4	2.8	4.7	5.5	6.1	6.4	6.8	7.6	7.4	7.5	7.2	6.9	6.5	5.5	4.6	4.0	3.4	3.2	3.2
20																								
Nov. 21	2.7	2.9	3.0	3.1	3.0	2.8	2.8	4.4	5.9	6.5	6.7	7.1	7.5	7.8	7.5	7.3	7.0	6.0	4.8	4.2	3.4	2.9	2.9	2.9
22																								
Dec. 23	2.5	2.7	2.9	3.1	3.2	3.2	2.9	3.2	5.2	5.8	6.4	7.1	7.1	7.3	7.0	6.7	6.2	5.2	4.2	3.4	2.8	2.4	2.2	2.4
24																								
25																								
26																								
27																								
28																								
29																								
30																								
31																								
Median																								
Count																								

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

f°F2 (Characteristic), ____ (Unit), ____ (Month), 1943

Observed at Washington D.C.

Lat.____, Long.____ ____ Mean Time

____ (Institution)

Scaled by:____,____

Calculated by:____,____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
JAN. 1	2.0	2.1	2.2	2.4	2.4	2.4	2.4	2.6	4.6	5.1	5.3	5.9	6.2	6.4	6.2	6.1	5.8	5.0	4.2	3.5	2.4	2.1	1.9	2.0
2																								
FEB. 3	2.2	2.2	2.2	2.2	2.3	2.4	2.2	3.4	5.0	5.4	5.7	6.2	6.5	6.5	6.3	6.5	6.0	5.6	5.0	4.2	3.6	2.8	2.6	2.4
4																								
MAR. 5	2.9	2.6	2.5	2.4	2.2	2.2	2.5	4.2	5.2	5.6	5.8	6.3	6.3	6.3	6.4	6.3	6.4	6.1	5.8	5.6	4.6	4.1	3.8	3.5
6																								
APRIL 7	2.8	2.4	2.2	2.0	1.8	2.0	3.8	4.5	5.2	5.3	5.6	5.7	5.6	5.9	6.2	6.0	6.0	6.0	5.8	6.0	5.3	4.5	3.8	3.4
8																								
MAY 9	3.0 2.9	2.7 2.6	2.3 2.4	2.1 2.2	1.9	2.6 2.5	3.8 3.9	4.4 4.3	4.7	4.9 4.8	5.1 5.2	5.1 5.2	5.1 5.2	5.2 5.3	5.3	5.3 5.2	5.4	5.7 5.5	5.8 5.6	6.0 5.8	5.7 5.8	4.7	3.9	3.4 3.5
10																								
11																								
12																								
13																								
14																								
15																								
16																								
17																								
18																								
19																								
20																								
21																								
22																								
23																								
24																								
25																								
26																								
27																								
28																								
29																								
30																								
31																								
Median																								
Count																								

Sweep____Mc to____Mc in____min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

f °F2 (Characteristic), ____ (Unit), June-Jan. (Month), 1943,44

Observed at Washington, D.C.

Lat. ____, Long. ____ ____ Mean Time

____ (Institution)

Scaled by: ____, ____

Calculated by: ____, ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
June 1	3.4	2.8	2.6	2.2	2.1	2.8	4.0	4.4	4.6	4.7	5.0	5.0	5.2	4.9	5.1	5.0	5.2	5.4	5.5	5.7	5.5	4.6	4.0	3.6
2																								
July 3	2.9	2.4	2.1	1.8	1.8	2.4	3.5	4.3	4.6	5.0	5.0	5.1	5.2	5.2	5.0	5.0	5.1	5.1	5.1	5.1	5.0	4.5	4.0	3.6
4																								
Aug. 5	2.2	2.0	1.8	1.6	1.6	1.8	2.7	3.8	4.2	4.5	4.7	4.8	4.8	4.8	4.8	4.8	5.0	5.0	5.1	5.2	4.8	4.0	3.2	2.4
6																								
Sept 7	2.2	2.0	1.8	1.7	1.6	1.5	2.8	4.1	4.5	4.7	5.1	5.2	5.2	5.5	5.5	5.5	5.4	5.3	5.4	4.7	4.2	2.9	2.5	2.3
8																								
Oct. 9	2.2	2.0	1.9	1.7	1.8	1.8	2.2	4.3	5.0	5.4	5.5	5.8	6.1	6.1	6.3	6.3	6.0	5.7	4.8	4.0	2.8	2.5	2.4	2.2
10																								
Nov. 11	1.8	1.8	1.8	1.8	1.8	1.8	1.6	3.8	4.8	5.6	6.0	6.1	6.6	6.4	6.5	6.5	6.2	5.4	4.1	2.9	2.2	2.0	2.0	1.9
12																								
Dec. 13	2.1	2.2	2.2	2.4	2.4	2.4	2.2	2.4	4.7	5.6	6.3	7.2	7.2	6.6	6.5	6.3	6.2	4.9	3.9	3.4	2.3	2.1	2.1	2.2
14																								
Jan 15 '44	1.9	1.9	1.8	1.8	2.1	2.1	2.0	2.2	4.4	4.9	5.6	6.3	6.4	6.3	5.9	6.1	5.8	5.3	4.1	3.4	2.4	2.1	2.0	2.0
16																								
Feb 17 '44	1.9	1.8	1.8	1.9	2.0	1.9	1.9	2.6	4.6	5.0	5.4	5.7	5.9	6.0	5.8	5.8	5.7	5.3	4.7	3.8	2.8	2.3	2.1	2.1
18																								
Mar 19 '44	2.2	2.2	2.0	2.0	1.8	1.8	2.2	4.0	4.8	5.2	5.3	5.6	5.7	5.9	6.0	6.1	5.8	5.6	5.6	4.8	4.0	3.5	2.6	2.4
20																								
Apr 21 '44	2.2	2.0	1.8	1.8	1.7	1.8	3.4	4.2	4.5	4.6	4.8	4.9	5.1	5.3	5.4	5.4	5.4	5.2	5.4	5.2	4.7	3.8	2.7 2.8	2.3
22																								
May 23 '44	2.3	2.1	2.0	1.8	1.8	2.3	3.7	4.3	4.6	4.8	5.0	4.8	4.9	4.9	5.0	5.1	5.0	5.1	5.4	5.5 5.6	5.6	4.5	3.4	2.5
24																								
June 25 '44	2.6	2.4	2.1	1.9	1.8	2.5	3.7	4.3	4.5	4.6	4.9	4.8	4.8	4.7	4.7	4.7	4.8	4.9	4.9	5.2	5.3	4.6	3.9	3.4
26																								
July 27 '44	2.5	2.2	2.0	1.8	1.7	2.3	3.6	4.1	4.4	4.8	4.9	4.8	4.7	4.7	4.7	4.7	4.7	4.9	4.8	5.0	5.0	4.6	3.6	2.8
28																								
Aug 29 '44	2.4	2.2	2.1	1.8	1.7	2.0	3.6	4.2	4.7	5.0	5.0	5.1	5.0	5.0	5.0	5.0	4.8	5.0	5.1	5.2	5.2	4.2	3.6	2.8
30																								
Sept 31 '44	2.4	2.2	2.2	2.0	1.8	1.8	2.9	4.3	4.8 4.9	5.3	5.5	5.4	5.5	5.7	5.8	5.7	5.8	5.8	5.8	5.6	4.8	4.1	3.4	2.6
Median																								
Count																								

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Corrected data

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

fEs , ____ , _____ , 19__
(Characteristic) (Unit) (Month)

Observed at Washington, D.C.

Lat. _____ , Long. _____

_____ Mean Time

_____
(Institution)

Scaled by: _____ , _____

Calculated by: _____ , _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Jan. 1'49	**	**	**	**	**	**	**	**	**	**	3.1 (3.2)	2.7 (2.9)	2.1	**	**	**	1.9	2.0	**	**	**	**	**	**
Feb. 2'49	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Mar. 3'49	**	**	**	**	**	**	**	**	2.7	3.9	**	**	**	**	**	**	**	2.9 (2.7)	**	**	**	**	**	**
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																								
Median																								
Count																								

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

f°F2 (Characteristic), ____ (Unit), February (Month), 1935

Observed at Watheroo

Lat. ____, Long. ____ ____ Mean Time

(Institution)

Scaled by: ____, ____

Calculated by: ____, ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1																										
2																										
3																										
4																										
5																										
6						3.1	3.9	[4.6]	5.2	[5.8]	[6.5]	[7.1]	7.6													
7																										
8									5.8	5.9	6.4	8.0	8.7													
9																										
10																										
11																										
12																										
13								6.2	6.4	6.2	5.9	6.1	6.6													
14																										
15										4.7	5.1	5.2	5.4	5.7	5.9	5.8	5.7									
16																										
17																										
18																										
19																										
20													5.9	6.3												
21																										
22																										
23																										
24																										
25																										
26																										
27													6.6	[6.6]	6.6	6.2	6.7	5.9	6.0	[5.4]	5.1	5.3	4.0	4.1		
28	4.6																									
29																										
30																										
31																										
Median													(6.6)													
Count													6													

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) March (Month) , 19 1935

(Institution)

Observed at Watheroo

Lat. _____ , Long. _____

_____ Mean Time

Scaled by: _____ ,

Calculated by: _____ ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1																								
2																								
3																								
4																								
5																								
6					3.1	3.0	3.8	4.9	[5.6]	6.0	6.2	6.0	6.5											
7																								
8									[5.1]	6.6	7.0	7.1	8.3	8.5	8.5	8.6	8.8	8.8						
9																								
10																								
11																								
12																								
13		4.3	4.2	4.2	4.1	4.0	4.2	5.1	[6.0]	6.8	7.4	7.8	9.0											
14																								
15									5.2	5.3	5.6	5.3	5.4	5.3	5.2	5.5	5.6							
16																								
17																								
18																								
19																								
20													7.4	8.4	7.3	7.5	7.4	[6.5]	[5.1]	4.7	4.9?			
21																								
22									5.3	6.2	7.4	9.0	8.8	[8.4]	7.9	7.3	7.1	7.4						
23																								
24																								
25																								
26																								
27													9.1	[8.9]	8.8	8.8	9.1							
28																								
29									6.4	6.4	7.0	8.4	8.7	[8.4]	8.1	8.3	8.4	8.0						
30																								
31																								
Median									(5.4)	(6.3)	(7.0)	(7.4)	(8.5)	(8.4)	(8.0)	(7.9)	(7.9)							
Count									6	6	6	6	8	6	6	6	6							

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) April (Month), 1935

(Institution)

Observed at Watheroo

Lat. ____, Long. ____ ____ Mean Time

Scaled by: ____,

Calculated by: ____,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1										8.0	7.6	8.8	8.6	[8.5]	8.4	[8.3]	8.3							
2																								
3							3.0	5.6	6.9	7.2	7.2	7.2	8.0											
4																								
5																								
6																								
7																								
8											7.8	7.4	8.8	9.3	9.7	10.1								
9																								
10		4.2	4.2	4.4	4.1	3.1	3.0	5.4	8.1	10.2	9.5	8.7	9.0											
11																								
12																								
13																								
14																								
15									[6.1]	6.8	7.6	9.0	9.1	8.7	8.2	8.4	7.7	6.8						
16																								
17													8.1	[8.2]	8.4	8.8	8.0	7.6	6.3					
18																								
19																								
20																								
21																								
22																								
23																								
24													8.4	8.1	7.7	8.3	7.6	7.3	[5.4]	[4.1]	3.8	[3.7]	3.7	3.6
25																								
26																								
27																								
28																								
29									6.1	6.2	6.3	7.4	8.0	[8.0]	7.6	7.2	7.2	6.1						
30																								
31																								
Median										(7.2)	(7.6)	(8.0)	(8.5)	(8.4)	(8.4)	(8.4)								
Count										5	6	6	8	6	6	6								

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) May (Month) , 1935

(Institution)

Observed at Watheroo

Lat. _____ , Long. _____ _____ Mean Time

Scaled by: _____ ,

Calculated by: _____ ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1							3.2	4.3	5.5	6.7	7.6	8.3	7.3													
2																										
3																										
4																										
5																										
6																										
7																										
8		2.3	3.1	2.9	3.2	3.1	3.0	4.5	[5.6]	6.7	8.5	8.6	7.8													
9																										
10																										
11																										
12																										
13										7.8	8.3	7.2	7.6	[7.3]	7.0	8.0	9.0	7.6								
14																										
15													7.2	[6.9]	6.8	7.4	7.0	6.8	4.5	3.2	[2.8]					
16																										
17																										
18																										
19																										
20										6.0	6.3	8.0	6.8	8.0	8.8	9.3	8.4	6.8								
21																										
22													6.9	[6.9]	7.0	7.4	6.9	6.3	4.8	[4.4]	4.1	3.2	[3.7]	[3.6]	2.3	
23																										
24																										
25																										
26																										
27										6.6	6.8	6.7	7.0	[6.1]	5.6	6.4	6.4	5.6								
28																										
29							3.2	[4.4]	[5.8]	6.2	6.0	7.0	6.6													
30																										
31																										
Median										(6.6)	(7.2)	(7.6)	(7.1)	(6.9)	(7.0)	(7.4)	(7.0)	(6.8)								
Count										6	6	6	8	5	5	5	5	5								

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) June (Month), 1935

Observed at Watheroo

Lat. _____, Long. _____

_____ Mean Time

_____ (Institution)

Scaled by: _____, _____

Calculated by: _____, _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1																										
2																										
3										5.6	5.9	6.3	6.1	[6.1]	6.3	6.4	6.5	[5.3]								
4																										
5		4.6	3.9	2.9	3.8	3.6	3.5	4.1	5.2	[6.0]	6.5	6.8	7.4													
6																										
7																										
8																										
9																										
10										6.2	6.9	7.3	7.6	[7.8]	8.0	8.2	6.9	5.7								
11																										
12													7.2	[7.2]	7.0	6.5	6.4	5.8	4.4	3.2	3.3					
13																										
14																										
15																										
16																										
17										5.5	6.2	5.4	6.2	[6.2]	6.0	6.6	6.3	5.8								
18																										
19													5.4	[5.2]	5.0	5.6	5.6	5.1	3.4	[3.2]	[3.2]	[3.1]	2.8	2.4		
20	2.6																									
21																										
22																										
23																										
24													(6.7)													
25																										
26													6.0													
27																										
28																										
29																										
30																										
31																										
Median													(6.4)	(6.2)	(6.3)	(6.5)	(6.4)	(5.8)								
Count													8	5	5	5	5	5								

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit), July (Month), 1935

(Institution)

Observed at Watheroo

Lat. ____, Long. ____ ____ Mean Time

Scaled by: ____,

Calculated by: ____,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1										5.7	6.0	5.6	6.0	6.0	5.9	6.8	5.4	[6.3]						
2																								
3		3.6	3.5	4.0	3.6	3.5	3.5	[3.5]	[4.6]	5.5	6.1	6.1	5.8											
4																								
5																								
6																								
7																								
8										5.9	6.3	6.0	5.9	[6.1]	6.1	6.0	6.2	6.9						
9																								
10													6.0	[5.8]	5.7	[5.6]	[5.4]	4.8	3.9	3.1	2.8	3.0	3.5	[2.5]
11																								
12																								
13																								
14																								
15										6.2	6.0	6.2	6.8	6.5	6.2	6.7	5.8	6.1						
16																								
17													6.3	[6.1]	6.1	6.2	6.0	5.7	4.6	3.1	2.8	2.7	2.6	3.2
18																								
19																								
20																								
21																								
22										5.3	6.4	7.9	7.5	6.9	6.2	7.3	7.6	6.1						
23																								
24							2.8	3.1	4.8	5.6	5.9	6.5	7.0	[6.6]	6.0									
25																								
26																								
27																								
28																								
29										5.7	5.4	5.8	5.2	[6.0]	6.6	6.1	6.0	5.4						
30																								
31		2.4	2.5	2.8	3.2	3.5	3.1	3.5	5.0	5.8	5.9	6.4	6.1											
Median										(5.7)	(6.0)	(6.2)	(6.0)	(6.1)	(6.1)	(6.2)	(6.0)	(6.1)						
Count										8	8	8	10	8	8	7	7	7						

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit) August (Month), 1935

(Institution)

Observed at Watheroo

Scaled by: ,

Lat. , Long. Mean Time

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1																								
2																								
3																								
4																								
5										5.6	6.7	6.2	6.7	[6.6]	6.3	7.5	6.1	6.3						
6																								
7													6.1	[6.4]	6.6	6.3	6.2	5.6	6.0	[5.0]	4.0			
8																								
9																								
10																								
11																								
12										6.1	6.3	6.6	6.4	[6.0]	5.7	6.4	6.8	5.7						
13																								
14													6.2	[6.4]	6.4	6.4	6.3	6.0	6.0	3.4	3.1	2.8	3.0	2.5
15																								
16													7.2											
17																								
18																								
19										5.8	5.6	6.3	6.1	[6.4]	6.8	7.1	7.2	6.0						
20													8.4											
21							2.8	[4.7]	[6.0]	6.4	6.3	7.2	7.9	[8.5]	9.1									
22																								
23																								
24																								
25																								
26										6.3	6.8	6.6	6.1	[6.6]	7.3	7.6	6.2	6.4						
27																								
28		2.0	3.0	2.7	2.3	[2.7]	[3.0]	[4.3]	5.8	6.4	6.4	8.0	8.1											
29																								
30													6.7											
31																								
Median										(6.2)	(6.4)	(6.6)	6.7	(6.4)	(6.6)	(6.8)	(6.2)	(6.0)						
Count										6	6	6	11	7	7	6	6	6						

Sweep Mc to Mc in min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit) September, 1935 (Month)

(Institution)

Observed at Hatteras

Lat. ____, Long. ____ ____ Mean Time

Scaled by: ____,

Calculated by: ____,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1																								
2										6.5	7.4	7.8	7.7	7.6	7.6	7.8	6.7	6.1						
3																								
4													6.3	[6.6]	6.8	7.0	6.2	6.2	5.6	[4.8]	4.4	4.4		
5																								
6													8.1											
7																								
8																								
9											7.3	7.6	8.2	[8.5]	8.5	7.6	7.3	6.8						
10																								
11													7.1	[6.5]	6.0	6.4	5.9	5.8	5.8	5.7	5.3	4.4	4.2	4.3
12	3.8																							
13													6.1											
14																								
15																								
16										7.7	8.2	8.0	7.1	[7.3]	7.4	6.8	7.0	7.1						
17																								
18						2.8	3.3	4.7	5.7	6.6	7.2	7.0	8.7	[8.4]	7.8									
19																								
20													7.3											
21																								
22																								
23										7.2	7.5	7.4	7.1	[7.3]	7.4	7.5	7.6	7.2						
24																								
25		[3.0]	2.6	2.5	[2.3]	[2.1]	[4.6]	5.9	6.2	6.5	6.9	7.4	7.2											
26																								
27																								
28													9.4?											
29																								
30										6.1	6.9	7.1	8.3	[8.9]	9.2	9.4	9.1	9.0						
31																								
Median										(6.6)	(7.3)	(7.4)	7.3	(7.4)	(7.4)	(7.5)	(7.0)	(6.8)						
Count										6	7	7	13	8	8	7	7	7						

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) October (Month) , 1935

(Institution)

Observed at Watheroo

Lat. _____ , Long. _____ _____ Mean Time

Scaled by: _____ ,

Calculated by: _____ ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1																								
2													9.7	[9.0]	8.6	8.5	8.4	8.3	7.9	6.6	5.5	5.0		
3																								
4																								
5																								
6																								
7										8.4	8.3	9.4	10.1	10.1	9.7	9.3	9.5	9.7						
8																								
9													10.3	[10.1]	9.9	9.5	9.5	9.3	9.0	[8.2]	6.7	5.6	5.5	5.5
10	[5.2]																							
11													10.4											
12																								
13																								
14										7.5	7.6	9.0	9.2	9.4	9.8	10.0	9.6	9.9						
15																								
16						4.0	5.0	[6.0]	[6.4]	6.6	7.2	8.2	9.1											
17																								
18													9.2											
19																								
20																								
21										6.1	6.5	6.9	7.5	[8.1]	8.7	7.8	9.1	8.4						
22																								
23		5.5	5.1	4.7	4.5	4.2	5.9	6.9	7.2	7.3	8.9	9.1	9.5											
24																								
25													6.3											
26																								
27																								
28										4.6			5.1	[5.1]	5.1	5.0	5.1							
29																								
30													9.7	10.1	10.3	10.3	9.9	9.9	8.6	7.7				
31																								
Median										(7.0)	(7.6)	(9.0)	9.4	(9.4)	(9.7)	(9.3)	(9.5)	(9.6)						
Count										6	5	5	12	7	7	7	7	6						

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit) November (Month), 1935

Observed at Watheroo

Lat. ____, Long. ____ ____ Mean Time

(Institution)

Scaled by: ____,

Calculated by: ____,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1													8.0											
2																								
3																								
4										5.4	6.2	8.5	9.4	[9.7]	9.6	9.0	9.1	[8.3]						
5																								
6													7.2	[7.6]	7.6	7.1	6.6	7.2	7.4	[7.0]	6.1	5.6	5.9	5.8
7	5.8																							
8													10.3											
9																								
10																								
11										7.7	8.8	9.5	9.9	[9.9]	9.7	9.3	9.5	9.2						
12																								
13						5.4	4.9	[5.2]	6.0	6.2	6.3	7.5	7.5	[7.1]	6.7									
14																								
15													9.6											
16																								
17																								
18										6.3	7.3	8.4	9.2	10.0	10.2	10.2	9.8	9.6						
19																								
20		6.5	5.7	5.4	5.0	4.9	5.8	6.4	[7.1]	7.9	8.7	9.8	9.9											
21																								
22													9.4											
23																								
24																								
25										8.0	8.9	9.6	10.2	[10.3]	10.1	9.9	9.9	10.0						
26																								
27													9.6	[9.9]	10.1	10.2	10.2	10.1	10.2	[9.5]	8.4	7.7		
28																								
29													9.2											
30																								
31																								
Median										(7.0)	(8.0)	(9.0)	9.4	(9.9)	(9.7)	(9.6)	(9.6)	(9.4)						
Count										6	6	6	13	7	7	6	6	6						

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

_____ (Characteristic), _____ (Unit) December (Month), 1935

Observed at Fatherson

Lat. _____, Long. _____

_____ (Institution)

Scaled by: _____, _____

_____ Mean Time

Calculated by: _____, _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1																										
2																										
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										
11																										
12																										
13																										
14																										
15																										
16																										
17																										
18																										
19																										
20													9.1													
21																										
22																										
23										7.0	7.6	7.0	7.2	7.3	7.4	7.6	7.5	[6.6]								
24																										
25																										
26																										
27													7.5	[7.6]	7.6	6.8	6.6	6.9	6.8	[6.9]	6.7	6.0	[5.7]			
28																										
29																										
30										9.5	10.1	10.1	10.2	[10.3]	10.4	10.1	9.2	[7.7]								
31																										
Median																										
Count																										

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

IONOSPHERIC DATA

(Characteristic), (Unit), January (Month), 19 36

Observed at Watheroo

Lat. ____, Long. ____

(Institution)

Scaled by: ____,

____ Mean Time

Calculated by: ____,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1																								
2																								
3													10.2	10.2	10.2	10.2	9.8	8.8	7.9	[8.1]	8.3	8.1	8.1	8.1
4	[7.4]																							
5																								
6						5.5	6.4	6.8	[7.4]	7.9	8.2	9.1	9.7	9.8										
7																								
8										9.7	9.9	9.8	10.2	[10.1]	10.0	10.2	10.1	10.1						
9																								
10													10.2											
11																								
12																								
13										7.2	7.4	7.2	7.9	[8.8]	9.2	8.4	8.5	8.4						
14																								
15		[6.3]	[5.7]	5.3	5.0	5.0	5.2	[5.6]	[6.7]	7.7	8.3	8.8	9.0											
16																								
17																								
18																								
19																								
20													9.3	[9.5]	[9.5]	[9.3]	[9.0]	8.6	8.1	[7.7]	7.5	7.4		
21																								
22										6.6	6.8	7.4	7.6	[8.0]	8.4	8.4	8.1	7.6						
23																								
24													8.6											
25																								
26																								
27										6.2	6.0	5.7	5.6	[5.9]	6.2	6.4	6.0	6.4						
28																								
29													9.2	[9.8]	10.2	9.9	9.0	8.0	8.0	[8.0]	8.0	7.4	6.8	7.0
30	7.7																							
31																								
Median										(7.4)	(7.8)	(8.1)	9.2	(9.6)	(9.5)	(9.3)	(9.0)	(8.4)						
Count										6	6	6	11	8	7	7	7	7						

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) , February (Month) , 1936

(Institution)

Observed at Watheroo

Lat. _____ , Long. _____

_____ Mean Time

Scaled by: _____ ,

Calculated by: _____ ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1																								
2																								
3						4.4	5.2	6.3	6.5	6.5	6.3	6.1	7.0	[7.3]	[7.3]									
4																								
5										6.3	7.0	7.6	8.6	[9.3]	9.6	9.4	8.5	7.8						
6																								
7													9.0											
8													8											
9																								
10										7.6	7.8	8.3	9.0	9.2	9.2	8.6	8.6	8.5						
11																								
12		5.5	5.8	5.4	[4.9]	4.8	4.8	[6.2]	[7.6]	8.6	9.4	9.8	9.5											
13																								
14													9.3	[9.8]	10.2									
15																								
16																								
17													7.1											
18																								
19																								
20																								
21																								
22																								
23																								
24																								
25																								
26																								
27																								
28													7.0											
29																								
30																								
31																								
Median													(8.8)											
Count													8											

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) March (Month) , 1936

(Institution)

Observed at Hatheroo

Lat. _____ , Long. _____ _____ Mean Time

Scaled by: _____ ,

Calculated by: _____ ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1																										
2						[4.9]	[5.2]	[6.5]	[7.6]	8.6	9.6	10.2	10.2													
3																										
4									8.6	8.6	9.2	9.4	10.2	[10.3]	10.3	10.2	9.9	9.5								
5																										
6													10.1													
7																										
8																										
9										8.0	9.6	10.5	10.9	10.7	10.5	10.5	10.2	10.1								
10																										
11		6.7	[5.9]	4.9	4.5	4.4	5.0	[6.4]	[7.1]	[7.8]	8.9	9.7	10.5													
12																										
13													>10.0													
14																										
15																										
16													11.0	[10.8]	[10.5]	10.2	11.3	11.2	10.2	8.6						
17																										
18										9.0	9.3	10.7	11.0	[11.2]	11.3	10.9	9.7	9.6	[7.6]							
19																										
20													10.4													
21																										
22																										
23										8.2	8.6	9.1	10.0	[10.4]	10.8	11.4	11.2	10.1								
24																										
25													10.0	10.5	10.6	10.2	9.5	[9.1]	8.6	[7.3]	[6.2]	5.9	[5.7]	[5.6]		
26																										
27													10.1													
28																										
29																										
30							[5.3]	[7.5]	[8.9]	9.6	10.0	10.0	10.2													
31																										
Median										(8.6)	(9.3)	(10.0)	10.2	(10.6)	(10.6)	(10.4)	(10.0)	(9.9)								
Count										7	7	7	13	6	6	6	6	6								

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) April (Month) , 1936

(Institution)

Observed at Hatteras

Lat. , Long. Mean Time

Scaled by: ,

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1										10.6	10.6	10.8	11.2	11.6	11.8	11.4	11.8	11.8						
2																								
3													11.6											
4																								
5																								
6										[10.0]	[11.3]	11.3	11.5	[11.7]	11.8	11.6	11.8	10.9						
7																								
8		[6.1]	5.9	5.5	[4.8]	4.4	[5.0]	[7.2]	[9.1]	10.4	11.4	11.8	11.8											
9																								
10													12.0											
11																								
12																								
13													11.4											
14													11.7											
15											11.6	10.8	11.2	[11.9]	12.4	12.0	11.7	11.4						
16																								
17													11.4											
18																								
19																								
20										10.2	11.7	11.0	11.9	[12.5]	12.6	12.0	11.0	10.2						
21																								
22													10.2	[10.4]	10.5	10.0	9.8	10.1	10.0	7.4	[5.0]	4.6	4.6	4.4
23	[3.7]																							
24													11.8											
25																								
26																								
27																								
28																								
29																								
30													10.2											
31																								
Median											(11.4)	(11.0)	11.5	(11.7)	(11.8)	(12.0)	(11.7)	(10.9)						
Count											5	5	13	5	5	5	5	5						

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

IONOSPHERIC DATA

(Characteristic), (Unit) May (Month), 1936

(Institution)

Observed at Hatheroo

Lat. ____, Long. ____ ____ Mean Time

Scaled by: ____,

Calculated by: ____,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1																										
2																										
3											10.0	10.2	[10.2]	[10.2]	10.3	10.4	10.2	10.2								
4													10.2													
5																										
6													10.2													
7																										
8																										
9																										
10																										
11													11.5	[11.3]	[10.8]	10.4	10.9	9.7	9.4							
12																										
13																										
14																										
15																										
16																										
17																										
18																										
19																										
20																										
21																										
22																										
23																										
24																										
25																										
26																										
27																										
28																										
29																										
30																										
31																										
Median																										
Count																										

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

IONOSPHERIC DATA

(Characteristic), (Unit), June (Month), 1936

Observed at Watheroo

Lat. ____, Long. ____ ____ Mean Time

(Institution)

Scaled by: ____, ____

Calculated by: ____, ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1																										
2																										
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										
11																										
12													9.4													
13																										
14																										
15										[9.0]	9.0	9.7	9.7	[9.4]	9.2	9.2	9.2	9.0								
16																										
17									[7.8]	8.3	[9.0]	9.6	9.6	[9.7]	10.1	10.1	9.0	7.6								
18									[6.6]	[8.4]	[9.5]	[9.2]	8.6	[9.0]	[9.5]	9.9	[9.5]	[8.3]								
19									[7.3]	[8.0]	[9.4]	[10.0]	9.8	10.1	10.3	10.3	10.4	10.2								
20										[9.7]	[9.9]	[10.0]	9.9	[9.5]	[9.4]	9.3	[9.1]	[8.7]								
21										[8.2]	[9.2]	[9.4]	9.0	9.0	[9.4]	9.7	9.5	[8.3]								
22								[4.7]	[6.7]	7.9	8.2	8.2	9.7													
23																										
24										8.0	8.5	8.6	8.5	[8.7]	9.0	[9.5]	9.6	8.9								
25																										
26																										
27																										
28																										
29																										
30																										
31																										
Median										(8.2)	(9.1)	(9.5)	(9.6)	(9.4)	(9.4)	(9.7)	(9.5)	(8.7)								
Count										8	8	8	9	7	7	7	7	7								

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit) July (Month), 1936

Observed at Fathoo

Lat. ____, Long. ____

(Institution)

Scaled by: ____,

____ Mean Time

Calculated by: ____,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1		4.3	4.4	4.5	4.5	4.1	4.0	4.3	6.6	[8.3]	9.1	8.8	7.7											
2																								
3																	9.1							
4																								
5																								
6													8.9	[9.0]	9.0	8.5	8.1	7.0	[6.0]	[5.1]	4.5	[4.0]		
7																								
8											8.0	9.0	8.6	8.6	8.6	8.9	9.4	8.2						
9																								
10													8.3											
11																								
12																								
13										8.2	9.0	[9.0]	[9.0]	[9.2]	[9.6]	[9.9]	9.9							
14																								
15													9.6	[9.1]	8.5	8.9	8.9	8.4	7.8	6.0	4.0	3.9	3.9	[3.7]
16	2.4																							
17													9.1											
18																								
19																								
20							3.3	[4.4]	[6.5]	7.7	8.0	8.8	8.2											
21																								
22										7.0	8.0	7.7	7.8	[7.9]	8.1	8.8	8.6	7.6						
23																								
24													7.1											
25																								
26																								
27										7.0	7.3	7.3	6.9	[7.0]	7.2	7.7	7.8	7.2						
28																								
29		4.0	3.8	4.0	4.6	4.0	[3.7]	[4.5]	[6.1]	7.0	7.6	8.2	7.9											
30																								
31													8.2											
Median										(7.4)	(8.0)	(8.8)	8.2	(8.8)	(8.6)	(8.8)	(8.9)	(7.6)						
Count										6	7	7	13	6	6	6	7	5						

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

IONOSPHERIC DATA

(Characteristic), (Unit) August (Month), 1936

(Institution)

Observed at _____

Scaled by: _____,

Lat. _____, Long. _____ _____ Mean Time

Calculated by: _____,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1																								
2																								
3													8.5	[8.1]	7.7	8.7	8.3	7.2	6.4	4.4	3.7			
4																								
5													[7.5]											
6																								
7													8.6											
8																								
9																								
10													8.9											
11																								
12													9.8											
13																								
14													9.4											
15																								
16																								
17													9.7											
18																								
19													9.0											
20																								
21													9.8											
22																								
23																								
24													9.5											
25																								
26																								
27																								
28																								
29																								
30																								
31																								
Median													9.2											
Count													10											

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit) September (Month), 1936

(Institution)

Observed at Hatheroo

Lat. ____, Long. ____ ____ Mean Time

Scaled by: ____,

Calculated by: ____,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1																										
2																										
3																										
4													10.3													
5																										
6																										
7													10.2													
8																										
9													11.1													
10																										
11													10.9													
12																										
13																										
14													10.1													
15																										
16													11.4													
17																										
18													10.5													
19																										
20																										
21													11.1													
22																										
23													11.0													
24																										
25													11.0													
26																										
27																										
28													10.8													
29																							7.4			
30													10.8													
31																										
Median													10.8													
Count													12													

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

IONOSPHERIC DATA

(Characteristic), (Unit) October (Month), 1936

Observed at Fatherson

Lat. ____, Long. ____ ____ Mean Time

(Institution)

Scaled by: ____,

Calculated by: ____,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1																								
2													[9.8]											
3																			10.6	9.9				
4																								
5													>8.0											
6																								
7													10.6	[10.6]	[10.6]	[10.2]	[9.6]	[9.0]	[8.4]	[8.2]	[7.9]	[7.8]	7.6	
8																								
9												10.4	11.2											
10																								
11																								
12													11.5											
13																								
14													11.6											
15																								
16													11.7											
17																								
18																								
19													13.0											
20																								
21													11.8											
22																								
23													10.8											
24																								
25																								
26													10.4											
27																								
28													10.4											
29																								
30													11.1											
31																								
Median													11.1											
Count													13											

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) November (Month) , 1936

(Institution)

Observed at Watheroo

Lat. _____ , Long. _____

_____ Mean Time

Scaled by: _____ ,

Calculated by: _____ ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1																										
2													11.0													
3																										
4													6.2	[6.4]	[6.5]	[6.6]	[6.6]	[6.6]	[6.6]	[6.5]	[6.4]					
5													11.0													
6													12.0													
7																										
8																										
9													10.0													
10																										
11													7.4													
12																										
13																		9.6								
14																										
15																										
16													7.8													
17													10.0	[10.0]	[99.0]	9.8										
18													11.7													
19																										
20													9.2													
21																										
22																										
23													10.4													
24																										
25													11.1													
26																										
27													7.0													
28																										
29																										
30													9.4													
31																										
Median													10.0													
Count													14													

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) December (Month), 1936

(Institution)

Observed at _____

Lat._____, Long._____ _____ Mean Time

Scaled by: _____,

Calculated by: _____,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1																								
2													11.1											
3																								
4													7.4	[7.6]	[7.9]	[8.0]	8.0							
5																								
6																								
7					5.9	5.9	6.3	6.6	6.8	[6.9]	7.0	7.2	7.8	[7.9]	[7.9]	[7.8]	7.7							
8																								
9										10.0	10.2	10.2	10.3	[10.3]	10.3	10.3	10.4	10.2						
10																								
11																								
12																								
13																								
14																								
15																								
16																								
17																								
18																								
19																								
20																								
21																								
22																								
23											[10.5]	10.6	10.6	10.6	10.4	10.2	10.2	[9.9]						
24																								
25																								
26																								
27																								
28										9.3	[10.0]	[10.6]	11.6	[12.2]	[12.1]	11.5	10.4	9.9						
29																								
30													10.6	10.6	10.4	[10.2]	[9.7]	9.3	9.2	[9.2]	9.3	9.2	8.8	
31																								
Median													10.6	1.04	10.4	10.2	10.0							
Count													7	6	6	6	6							

Sweep_____Mc to_____Mc in_____min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) Jan (Month), 1937

Observed at Watheroo

Lat. , Long. Mean Time

(Institution)

Scaled by: ,

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1																								
2																								
3																								
4					5.7	5.6	6.2	6.8	7.4	8.2	9.0	9.8	10.5	[10.9]	[11.0]	[11.0]	[10.9]							
5																								
6										10.6	11.0	10.9	10.8	11.5	11.8	11.1	10.7	10.5						
7																								
8												[9.4]	9.7	[9.8]	[9.8]	[9.4]	[8.6]							
9																								
10																								
11									5.4	5.6	5.8	6.0	6.1	6.2	6.1	[4.9]	4.6							
12																								
13						3.8	4.5	5.7	7.1	8.7	[8.7]	[8.4]	[8.5]	[8.9]	[9.2]	[9.2]	[9.1]							
14																								
15												[10.2]	10.4	[10.6]	[10.5]	[10.3]	[9.2]							
16																								
17																								
18												9.3	10.2	10.9	11.4	11.2	10.4	9.5	8.5	[8.2]	8.1	7.7	[7.1]	
19																								
20									6.3	7.4	8.0	8.1	8.1	8.4	8.3	8.1	7.9	7.2						
21																								
22												[5.8]	[6.3]	[6.6]	[6.7]	[6.7]	[6.4]							
23																								
24																								
25									8.6	9.0	9.7	10.2	10.1	11.3	10.4	9.6	9.2	9.3						
26																								
27												10.5	10.8	10.9	10.7	10.0	9.2	9.1	8.9	8.4	8.8	9.6	9.6	
28																								
29												[7.3]	7.4	[7.4]	[7.3]	7.0	6.3							
30																								
31																								
Median									(7.1)	(8.5)	(8.8)	9.4	9.9	10.4	10.1	9.5	9.2	(9.3)						
Count									5	6	6	12	12	12	12	13	12	5						

Sweep Mc to Mc in min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

IONOSPHERIC DATA

(Characteristic), (Unit) Feb., 1937 (Month)

Observed at Watheroo

Lat. ____, Long. ____ ____ Mean Time

(Institution)

Scaled by: ____, ____

Calculated by: ____, ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1						5.4	6.4	7.7	8.3	8.3	9.1	9.6	9.7	9.7	9.6	9.4	9.1							
2																								
3									10.3	10.5	10.9	11.2	11.3	11.8	11.9	10.4	9.9	9.5						
4																								
5												9.8	8.2	8.5	[8.7]	[8.8]	[8.5]							
6																								
7																								
8									10.4	11.0	11.5	12.0	11.8	11.7	11.6	11.4	11.0	10.5						
9																								
10							5.7	6.6	[7.4]	[8.2]	9.3	9.3	9.0											
11																								
12												[11.0]	11.4	[11.6]	[11.6]	[11.4]	[11.0]							
13																								
14																								
15												10.9	11.1	11.3	11.4	10.8	10.0	10.2	10.3	9.4	8.3	7.4	[6.9]	
16																								
17									[9.9]	10.7	11.3	11.3	11.4	11.5	11.6	11.6	11.1	10.6						
18																								
19												[10.5]	10.8	[11.0]	[10.9]	[10.5]	[10.0]							
20																								
21																								
22									9.5	10.2	10.7	10.8	10.6	10.9	11.0	10.7	10.3	9.8						
23																								
24												10.6	10.8	11.0	10.9	10.7	10.5	10.0	9.6	9.6	9.4	8.6	8.2	
25																								
26																								
27																								
28																								
29																								
30																								
31																								
Median									(97)	(104)	(108)	108	108	11.2	11.2	10.7	10.2	(101)						
Count									6	6	6	11	11	10	10	10	10	6						

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit) March (Month), 1937

Observed at Watheroo

Lat. ____, Long. ____ ____ Mean Time

(Institution)

Scaled by: ____,

Calculated by: ____,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							7.7	9.8	11.0	11.8	12.0	12.8	[13.0]	[12.8]	[12.5]	[12.0]	11.3							
2																								
3									[7.4]	7.4	7.2	7.6	7.7	7.6	7.9	8.2	8.2	8.2						
4																								
5												[10.9]	11.3	[11.5]	[11.6]	11.5	11.3							
6																								
7																								
8									8.7	9.9	10.7	11.0	11.5	11.3	11.1	10.9	10.6	10.5						
9																								
10							[5.2]	8.2	10.3	10.7	10.8	11.5	11.8	12.0	12.2	12.2	12.0	11.5						
11																								
12												[7.5]	7.8	8.0	8.0	8.0	7.9	7.6						
13																								
14																								
15											[9.5]	[10.0]	10.5	10.5	9.8	9.6	9.4	8.8	8.4	7.8	7.3	6.9		
16																								
17									[8.3]	9.2	10.1	11.0	11.5	12.0	12.4	12.1	11.7	11.3	10.9					
18																								
19												[11.7]	[11.9]	12.0	12.0	11.8	11.5	11.0						
20																								
21																								
22									[11.3]	11.6	11.6	11.7	12.7	12.5	12.4	12.7	12.6	12.3	12.0	[11.2]				
23																								
24													12.2	12.2	12.1	12.0	11.8	11.8	11.7	10.5	8.6	7.3	7.0	
25																								
26												[12.0]	12.3	12.4	12.4	12.3	12.2	11.9						
27																								
28																								
29						4.9	4.9	7.4	9.9	11.0	11.8	12.2	11.9	[11.8]	[11.9]	[12.0]	[11.9]	[11.7]	[11.6]					
30																								
31									[11.5]	12.0	12.2	12.4	13.2	13.1	13.4	13.6	13.2	13.9	13.0					
Median									(10.1)	(10.8)	(10.8)	11.5	11.8	12.0	12.1	12.0	11.6	11.4	(11.4)					
Count									8	8	9	13	14	14	14	14	14	12	6					

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) April (Month) , 1937

Observed at Watheroo

Lat. , Long. Mean Time

(Institution)

Scaled by: ,

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1																								
2													12.4	12.4	[12.3]	[12.1]	[11.8]	11.2						
3																								
4																								
5									[9.9]	10.8	11.6	11.6	12.0	12.2	12.4	12.4	12.3	11.5	10.0					
6																								
7						4.4	4.7	[7.1]	[9.1]	[11.0]	11.6	11.2	11.4	12.0	[12.2]	[12.3]	[12.3]	12.8	[11.2]					
8																								
9													[13.4]	12.4	[12.4]	[12.3]	[12.1]	11.7						
10																								
11													11.4	11.5	11.6	11.6	11.7	12.0	10.2	8.1	6.6	5.7		
12																								
13																								
14									[8.2]	9.2	10.4	11.2	11.0	11.7	12.1	12.1	11.5	11.2	10.0	8.1	6.6	5.7		
15																								
16													[11.9]	11.9	[11.9]	[11.8]	[11.7]	11.6						
17																								
18																								
19									10.6	11.5	12.6	12.9	11.8	11.7	11.6	11.5	10.9	10.8	10.2					
20																								
21													[11.9]	12.0	13.0	13.1	12.5	11.4	10.8	10.7	9.3	6.9	6.2	
22																								
23													11.8	11.8	[11.8]	[11.8]	[11.7]	11.6						
24																								
25																								
26								[3.0]	6.1	8.5	10.1	11.3	12.2	12.6	12.5	12.4	12.4	12.3	12.0					
27																								
28										7.3	8.5	9.9	10.8	12.0	13.2	12.8	12.8	13.1	13.2	12.0				
29																								
30														[11.7]	11.1	[11.1]	[11.1]	[11.0]	10.8					
31																								
Median									(88)	(104)	(116)	(114)	119	120	122	121	118	116	(102)					
Count									6	6	6	6	13	13	13	13	13	13	7					

Sweep Mc to Mc in min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit), May (Month), 1937

Observed at Watheroo

Lat. ____, Long. ____ ____ Mean Time

(Institution)

Scaled by: ____,

Calculated by: ____,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1																										
2																										
3									[6.5]	9.0	10.3	9.9	10.1	10.9	11.5	11.5	10.7	10.2	8.7							
4																										
5							3.2	4.8	7.6	8.8	9.2	9.6	11.2	12.4	12.5	12.3	12.0	11.4	10.8							
6																										
7													[9.8]	[9.8]	[9.7]	[9.6]	[9.4]	[9.0]								
8																										
9																										
10													[10.5]	10.7	12.0	11.6	11.8	9.8	7.8	6.3	6.0					
11																										
12									[6.9]	10.5	12.0	11.8	11.6	11.3	11.3	11.8	11.2	9.8	[7.4]							
13																										
14														10.8	[10.6]	[10.4]	[10.1]	[9.6]	[9.2]							
15																										
16																										
17									9.8	10.4	11.0	11.5	11.4	11.1	11.0	10.8	10.2	10.3	9.5							
18																										
19													10.8	10.8	10.8	10.9	10.9	9.6	8.4	6.5	5.7	5.2	[4.2]			
20																										
21													[11.3]	[11.3]	11.3	11.2	10.9	10.0								
22																										
23																										
24							3.6	5.4	8.5	10.6	11.8	12.2	11.3	11.2	11.1	11.0	10.7									
25																										
26									8.9	10.4	11.3	12.0	13.0	12.6	12.4	12.6	12.5	12.0	10.7							
27																										
28													[11.4]	11.5	[12.0]	[12.3]	[12.4]	12.4								
29																										
30																										
31									[9.4]	9.8	10.4	10.8	10.7	11.9	12.7	11.9	11.5	10.6	9.2							
Median									(8.5)	(10.4)	(11.0)	(11.5)	11.3	11.2	11.3	11.5	10.9	10.1	(9.2)							
Count									4	4	4	4	13	13	13	13	13	12	9							

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit) June (Month), 1937

Observed at Watheroo

Lat. _____, Long. _____

_____ Mean Time

_____ (Institution)

Scaled by: _____, _____

Calculated by: _____, _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1																								
2								5.4	7.3	8.5	9.2	9.8	10.3	9.9	10.2	10.5	10.6	10.5	10.1					
3																								
4													9.8	9.8	[9.7]	[9.6]	[9.4]	9.0	8.5					
5																								
6																								
7	3.7	4.6	4.5	4.9	4.8	4.5	3.9	5.0	7.7	9.2														
8	3.6	3.5	3.6	3.6	3.6	2.8	2.8	4.3	7.7	9.2														
9	3.8	4.0	4.0	4.2	4.6	4.1	3.2	4.5	7.9	9.6	10.2	10.7	10.3	10.3	11.2	11.3	10.8	10.2	[9.1]					
10	4.0	4.0	4.0	3.9	4.0	4.0	3.3	4.6	7.2	8.5														
11	3.7	4.6	3.9	3.9	4.1	3.6	4.0	5.2	7.6	9.4	10.4	10.9	11.0	11.0	10.9	10.8	10.4	9.6						
12																								
13																								
14									8.4	9.2	10.2	11.0	11.1	11.4	11.3	10.9	10.9	10.1	8.3					
15																								
16													10.4	10.4	10.6	10.6	10.5	9.8	9.1	7.9	6.4	4.9		
17																								
18																		9.2						
19																								
20													11.-	12.-	11.-	11.-	11.-							
21													11.8	12.0	11.8	11.5	11.2	10.5						
22																								
23									9.2	9.7	11.0	13.6	11.0	11.8	11.7	11.4	11.0	10.4	9.8					
24																								
25													10.2	10.3	10.4	10.6	10.5	10.3						
26																								
27																								
28									9.2	9.1	9.9	9.5	10.5	11.2	11.2	10.9	10.1	9.8	9.0					
29																								
30								3.0	8.0	9.3	9.5	9.2	8.7	8.8	9.1	9.5	9.6	9.5						
31																								
Median	(37)	(40)	(40)	(39)	(41)	(40)	(33)	(46)	77	93	(10.2)	(10.7)	10.4	10.4	10.9	10.8	10.5	10.0	(9.1)					
Count	5	5	5	5	5	5	5	7	10	10	7	7	11	11	11	11	11	12	7					

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

_____ (Characteristic), _____ (Unit), July (Month), 1937

Observed at Watheroo

Lat. _____, Long. _____

_____ Mean Time

_____ (Institution)

Scaled by: _____, _____

Calculated by: _____, _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1																										
2													8.4	8.4	[8.6]	[8.7]	[8.8]	[8.8]								
3																										
4																										
5													8.4	8.4	8.9	9.7	9.0	8.1	7.6	6.0						
6																										
7									7.0	8.2	9.7	10.3	10.1	10.2	10.1	10.0	10.3	9.3	8.7							
8																										
9													10.0	10.0	[10.1]	[10.2]	[10.2]	10.2								
10																										
11																										
12										10.2	10.6	11.6	11.6	11.6	11.3	10.3	10.4	9.5	8.8							
13																										
14													11.6	10.7	9.6	9.5	10.4	10.1	8.3	6.7	5.3	4.7	[4.3]			
15																										
16													[10.5]	10.4	[10.3]	[10.1]	9.7	[9.2]								
17																										
18																										
19								5.0	7.8	10.2	10.7	10.2	10.1	9.4	[9.6]	[9.7]	[9.7]	9.5								
20																										
21									7.6	10.2	11.2	10.9	10.5	10.2	10.2	10.3	9.9	9.5	9.0							
22																										
23													[11.6]	11.6	[11.5]	[11.4]	[11.3]	[10.7]								
24																										
25																										
26									7.5	10.1	11.4	11.3	12.0	11.0	10.5	10.6	10.7	10.3	9.8							
27																										
28								5.7	7.0	8.4	9.5	10.1	10.0	9.5	9.4	9.4	9.2	8.7								
29																										
30													[9.6]	9.6	[9.5]	[9.3]	[9.0]	8.2								
31																										
Median									(7.5)	(10.2)	(10.6)	(10.6)	10.1	10.2	10.1	10.0	9.9	9.5	(8.8)							
Count									5	6	6	6	13	13	13	13	13	13	6							

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit) August, 1937 (Month)

Observed at Watheroo

Lat. ____, Long. ____

(Institution)

Scaled by: ____,

Calculated by: ____,

____ Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1																								
2													10.2	10.3	10.5	11.2	12.0	11.8	11.5	8.0	4.2			
3																								
4										10.6	10.3	10.5	10.5	10.7	10.6	10.1	9.3	9.4	9.6					
5																								
6													11.2	11.2	[11.1]	[10.8]	[10.6]	10.3						
7																								
8																								
9									9.5	10.8	11.6	12.0	12.2	11.8	11.6	11.5	10.9	10.5	10.4					
10																								
11												11.9	12.2	12.1	11.9	11.5	10.9	10.5	9.9	8.4	4.3	6.4	5.3	
12																								
13													11.2	11.1	11.0	10.8	10.5	10.2						
14																								
15																								
16								9.5	8.6	9.8	11.1	12.3	12.3	11.5	11.4	11.3	11.2	11.0						
17																								
18									8.1	10.4	11.8	12.0	11.8	12.0	11.4	10.9	10.8	10.9	10.3					
19																								
20													[10.8]	[10.8]	[10.8]	[10.8]	[10.7]	10.6						
21																								
22																								
23									7.0	9.4	10.8	11.3	11.2	10.9	10.9	11.1	10.8	10.7	9.6					
24																								
25								9.2	8.6	9.5	10.1	10.4	11.1	11.3	11.1	10.8	10.5	10.1						
26																								
27													11.0	[11.0]	[11.0]	[11.0]	10.9	10.8						
28																								
29																								
30													11.8	11.7	11.1	10.8	11.0	11.0	10.8	10.0	8.0			
31																								
Median									(8.6)	(9.8)	(11.0)	(11.9)	11.2	11.2	11.1	10.9	10.8	10.6	(10.3)					
Count									5	6	6	7	13	13	13	13	13	13	7					

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) Sept. (Month), 1937

(Institution)

Observed at Watheroo

Lat. , Long. Mean Time

Scaled by: ,

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1									8.9	10.2	11.2	11.5	12.2	11.6	11.1	10.8	10.8	10.5	10.4					
2																								
3													11.0	11.0	[11.0]	[10.9]	[10.8]	10.4						
4																								
5																								
6									9.5	11.0	11.8	11.8	12.1	11.9	11.9	11.9	11.3	11.0	9.0					
7																								
8												12.4	12.7	12.6	11.6	11.1	11.2	11.2	11.1	10.5	9.4	8.6	8.3	
9																								
10													[11.6]	[11.6]	[11.5]	[11.4]	[11.2]							
11																								
12																								
13							5.0	7.8	10.0	11.4	12.2	12.6	12.0	11.8	11.7	11.6	11.4	11.1						
14																								
15									10.5	11.0	11.7	12.4	12.3	12.2	11.9	11.5	11.3	11.0	10.9					
16																								
17													[13.4]	13.6	[13.4]	[13.1]	12.7	13.1						
18																								
19																								
20									10.8	11.0	11.2	11.7	11.9	11.8	11.4	10.9	10.7	10.3	10.1					
21																								
22							6.2	8.7	10.4	11.4	11.8	11.5	11.5	11.8	11.7	11.5	11.2	10.9						
23																								
24												11.9	12.2	12.2	12.0	11.6	11.2	10.6						
25																								
26																								
27													13.6	13.6	12.1	11.8	11.8	11.8	11.5	10.5	9.4	8.8		
28																								
29										13.0	13.1	13.2	12.4	12.4	13.2	11.9	11.5	11.3	10.9					
30																								
31																								
Median									(10.2)	(11.0)	(11.8)	(11.9)	12.2	11.9	11.7	11.5	11.2	11.0	(10.9)					
Count									6	7	7	9	13	13	13	13	13	12	7					

Sweep Mc to Mc in min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) October (Month) , 1937

(Institution)

Observed at Watheroo

Lat. , Long. Mean Time

Scaled by: ,

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1												11.1	11.4	[11.5]	[11.4]	[11.1]	[10.6]	10.1								
2													8.8													
3													12.2													
4										10.6	10.5	10.7	11.9	12.0	11.7	10.8	10.5	10.5	10.0							
5													12.7													
6												12.3	12.7	12.7	12.6	13.4	13.0	11.5	11.1	10.5	10.0	9.6	9.1			
7													12.9													
8												9.1	10.0	10.7	10.6	10.3	10.0	9.6								
9																										
10																										
11						4.0	4.0	4.9	7.5	7.0	6.9	7.0	7.0	7.9	8.9	9.8	10.3										
12																										
13									8.5	9.6	10.7	11.1	11.5	11.9	12.0	11.7	11.1	10.8	10.6							
14																										
15													11.9	12.0	12.0	11.9	11.8	11.6								
16																										
17																										
18									10.2	10.6	11.1	11.7	11.9	11.8	11.6	11.6	11.8	11.4	11.1							
19																										
20						5.2	7.5	9.0	10.0	10.3	10.8	11.7	12.3	12.6	12.6	12.2	11.9	11.3								
21																										
22												11.0	11.3	11.4	11.4	11.4	11.3	11.2								
23																										
24													7.1													
25												9.4	9.7	9.8	9.7	9.6	9.3	9.2	9.1	8.9	8.6	[7.8]				
26																										
27									6.8	7.5	8.9	10.3	11.1	11.2	11.2	11.2	11.1	10.6	10.2							
28																										
29												11.5	12.0	12.1	12.0	11.7	11.4	11.0								
30																										
31																										
Median									(8.5)	(10.0)	(10.6)	10.8	11.7	11.8	11.6	11.4	11.1	10.9	(10.4)							
Count									5	6	6	12	18	13	13	13	13	12	6							

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit) Nov., 1937 (Month)

Observed at Watheroo

Lat. ____, Long. ____ ____ Mean Time

(Institution)

Scaled by: ____,

Calculated by: ____,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1									9.9	10.4	10.8	11.6	11.8	12.0	12.0	11.8	11.3	11.0	[10.9]					
2																								
3												11.6	12.1	12.2	11.8	11.7	10.9	10.8	10.8	10.5	9.9			
4																								
5												12.8	13.3	13.4	13.3	12.9	12.4	12.0						
6																								
7																								
8						5.8	7.4	8.9	9.8	10.3	10.7	11.6	12.1	12.0	11.8	11.6	11.3	11.0						
9													7.4											
10									10.0	10.9	11.1	11.0	11.3	11.4	11.3	10.9	10.5	10.2	10.2					
11																								
12												8.2	8.5	8.6	8.5	8.2	8.0	7.7						
13																								
14																								
15									8.6	9.7	10.0	10.2	10.4	10.5	10.6	10.5	10.3	10.0	10.2					
16																								
17					5.8	6.0	7.2	8.3	9.0	9.8	10.4	11.1	11.7	11.8	11.5	11.1	10.6	10.0	9.2					
18																								
19									5.1	5.7	6.0	6.4	6.7	6.9	7.0	7.2	7.2	7.2						
20																								
21																								
22												8.5	8.9	9.1	9.4	9.3	9.2	9.6	10.0	9.8	9.5	9.1	8.7	
23																								
24									6.2	6.6	7.1	7.5	7.6	7.5	7.6	7.5	7.5	7.8						
25																								
26													10.3	10.4	[10.4]	[10.4]	[10.3]	10.1	[9.7]					
27																								
28																								
29									8.1	8.5	8.8	9.1	9.2	9.1	8.7	8.5	8.8	9.1	8.9					
30																								
31																								
Median									(8.8)	(9.8)	(10.2)	10.6	10.4	10.5	10.6	10.5	10.3	10.0	(10.1)					
Count									8	8	8	12	14	13	13	13	13	13	8					

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) Dec (Month) , 1937

(Institution)

Observed at Watheroo

Lat. , Long. Mean Time

Scaled by: ,

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1													<4.8	<4.8	<4.8	[5.4]	5.2	5.2	5.2	5.3	5.7	[5.9]		
2																								
3												[9.9]	[10.3]	10.4	[10.6]	[10.6]	[10.5]	[10.3]						
4																								
5																								
6						6.3	6.6	6.8	6.9	7.2	7.8	8.2	8.4	8.4	8.6	8.4	8.1	7.7	[7.3]					
7																								
8									5.2	5.8	6.3	6.6	6.9	7.1	7.2	7.3	7.2	6.5						
9																								
10												[9.5]	[10.0]	10.2	[10.2]	[10.0]	[9.7]	[8.4]						
11																								
12																								
13									[7.2]	9.1	9.8	9.7	9.7	10.0	10.4	10.6	10.3	9.8	[8.3]					
14																								
15					6.2	6.7	7.5	8.4	8.7	9.3	9.8	10.3	10.8	11.2	11.1	10.8	10.3	9.8						
16																								
17												10.6	10.9	11.0	11.0	10.6	10.2	9.8						
18																								
19																								
20												6.6	7.0	7.3	7.6	7.4	6.9	6.9	7.2	[7.5]	[7.8]	[7.9]	7.9	[7.5]
21																								
22									8.8	9.9	10.7	11.1	11.2	11.2	10.9	10.3	9.8	9.3	9.0					
23																								
24											[7.6]	[8.0]	[8.3]	[8.4]	[8.3]	[8.2]	7.8	7.4						
25																								
26																								
27									6.8	7.7	8.3	8.5	8.8	9.3	9.2	8.6	8.4	8.4						
28																								
29												9.8	10.2	10.5	10.5	10.2	9.1	8.6	8.5	8.7	9.0	9.1	9.0	
30																								
31												9.9	10.4	10.6	10.5	10.0	9.0	8.3						
Median									(7.0)	(8.4)	(8.3)	9.7	9.8	10.2	10.5	10.0	9.0	8.4	(8.4)					
Count									6	6	7	13	14	14	14	14	14	14	6					

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) Jan (Month) , 1938

Observed at Watheroo

Lat. , Long.

(Institution)

Scaled by: ,

Mean Time

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1																								
2																								
3				4.8	[4.6]	[4.4]	5.4	7.5	9.2	10.2	[10.6]	[10.7]	10.8	11.2	[10.8]	[10.2]	[9.4]	[8.5]						
4																								
5				[5.0]	4.4	4.1	4.6	5.5	[6.3]	[6.4]	6.4	6.8	8.0	9.1	8.9	8.2	7.6	7.3						
6																								
7													[8.8]	[8.7]	[8.5]	[8.2]	[7.7]	[7.0]						
8																								
9																								
10						[4.8]	[5.5]	[6.5]	[7.3]	[7.9]	[8.6]	[9.4]	[10.0]	[10.4]	[9.9]	[9.4]	[8.2]	[7.2]	[6.0]					
11																								
12					5.5	4.8	5.5	[6.3]	[7.1]	[7.9]	[8.7]	[9.7]	[9.8]	9.4	9.2	8.8	8.3	[7.4]						
13																								
14													[7.2]	[7.8]	[7.8]	[7.6]	[7.2]	[6.6]						
15																								
16																								
17					4.8	[5.2]	[6.2]	[7.2]	[8.2]	[9.1]	[9.9]	[10.4]	[10.3]	[9.5]	[9.2]	[8.8]	[8.5]	[8.6]	[8.1]	[7.7]				
18																								
19							4.3	5.1	[5.5]	[6.3]	[7.5]	[7.9]	[7.7]	[7.3]	[7.5]	[7.5]	7.2	[7.2]						
20																								
21					4.7	4.0	5.1	[6.4]	[7.1]	[7.8]	[8.3]	[8.7]	[8.8]	[8.8]	[8.8]	[8.7]	[8.6]	[8.5]						
22																								
23																								
24					5.0	[4.2]	5.0	[5.7]	[6.5]	[6.8]	[7.4]	[7.9]	[7.9]	[7.9]	[7.9]	[7.9]	[7.8]	[7.9]	[8.2]					
25																								
26		4.8							[4.1]	[4.4]	[4.5]	[4.6]	[4.7]	[4.8]	[4.7]	[4.6]	[4.6]	[4.8]	5.8	[5.2]	[4.9]	[5.1]		
27																								
28													[11.1]	[11.0]	[10.8]	[10.2]	[9.5]							
29																								
30																								
31			4.6	4.0	3.5	3.3	5.7	7.8	[8.6]	[8.6]	[8.7]	9.3	[9.8]	[9.8]	[9.7]	9.4	8.8	[8.0]						
Median					(4.4)	(4.3)	(5.4)	(6.4)	7.1	7.8	8.4	9.0	8.8	9.1	8.9	8.7	8.2	7.4						
Count					4	8	9	9	10	10	10	10	13	13	13	13	13	12						

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) Feb (Month) , 1938

Observed at Watheroo

Lat. , Long.

(Institution)

Scaled by: ,

Mean Time

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1																								
2			5.0	4.2	3.5	3.3	4.8	6.3	7.9	[9.0]	[9.7]	[9.8]	9.9	10.4	10.3	9.6	[9.3]	[9.1]	[8.5]					
3																								
4						4.8	[5.8]	[6.5]	[7.3]	[7.9]	[8.4]	[8.9]	9.2	9.2	[9.0]	[8.7]	[8.3]	[7.8]						
5																								
6																								
7		4.8	4.4	4.1	4.1	4.1	4.9	6.0	7.0	[7.0]	[7.5]	[8.3]	8.4	[8.4]	[8.0]	[7.2]	[7.2]	[7.3]	[7.3]					
8																								
9				4.9	4.9	[4.7]	4.8	5.0	5.3	6.4	7.7	8.6	[9.2]	[9.2]	9.0	8.8	[8.8]	[8.6]						
10																								
11					4.8	4.8	[5.5]	[6.6]	[7.7]	[8.5]	[9.1]	[9.8]	10.2	[10.6]	[10.7]	[10.7]	[10.7]	[10.5]						
12																								
13																								
14						4.9	[5.7]	[6.8]	[7.9]	[8.8]	[9.5]	[10.1]	10.5	10.6	[10.5]	[10.1]	10.1	[9.8]	[9.7]	9.2	[8.2]	[7.2]		
15																								
16									[8.3]	[9.3]	[9.8]	[10.2]	[10.4]	[10.9]	[11.0]	[10.7]	[9.9]	[9.6]	[9.3]					
17																								
18												[11.5]	[11.8]	12.0	12.0	[11.8]	[11.4]	[10.7]						
19																								
20																								
21									[9.8]	9.9	10.2	11.0	11.5	11.9	12.0	11.9	11.9	11.5	11.2					
22																								
23												10.4	10.8	11.3	11.7	11.9	11.7	11.3	11.3	10.8	10.0	8.9	[7.8]	
24																								
25												[10.3]	11.7	11.9	[11.9]	[11.8]	[11.7]	11.5						
26																								
27																								
28						[4.7]	5.3	7.0	9.3	10.1	10.3	10.5	11.5	11.7	[11.8]	[11.7]	[11.7]	11.5						
29																								
30																								
31																								
Median						(4.7)	(5.3)	(6.5)	(7.9)	(8.8)	(9.5)	10.2	10.6	10.8	10.8	10.7	10.3	10.2	(9.5)					
Count						7	7	7	9	9	9	12	12	12	12	12	12	12	6					

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) March (Month) , 1938

(Institution)

Observed at Watheroo

Lat. , Long. Mean Time

Scaled by: ,

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1																								
2									7.5	7.7	7.8	8.2	8.6	8.7	8.9	9.2	9.0	8.7	8.2					
3																								
4												[11.0]	[11.2]	11.4	[11.6]	[11.6]	[11.5]	[11.1]						
5																								
6																								
7									[9.6]	9.8	10.4	11.2	11.6	11.6	11.4	11.4	11.8	11.7	[10.3]					
8																								
9						5.0	5.4	7.2	9.2	9.7	9.6	9.5	10.0	[10.3]	[10.3]	[10.3]	[10.3]	[10.2]						
10																								
11													[11.6]	[11.8]	[11.9]	[11.9]	[11.9]	[11.8]						
12																								
13																								
14													[11.6]	11.9	12.1	12.0	11.7	11.3	10.8	[9.7]				
15																								
16									[10.5]	11.3	11.6	11.7	12.1	12.1	12.1	12.1	11.8	11.5	11.1					
17																								
18													[12.1]	12.4	[12.3]	[12.2]	[11.9]	[11.6]						
19																								
20																								
21									10.0	10.4	11.0	11.8	12.2	12.2	12.2	12.3	12.0	11.7	11.2					
22																								
23												[5.0]	5.7	5.7	5.6	5.7	6.1	6.0	5.6	5.1	4.7	4.6	[4.9]	
24																								
25													[11.7]	12.0	[12.0]	[11.7]	11.4	11.1						
26																								
27																								
28							[7.8]	7.7	9.7	10.8	11.2	11.0	11.9	12.4	12.4	12.3	12.0	11.7						
29																								
30									[7.5]	9.3	11.2	12.3	13.0	12.7	12.5	12.6	12.4	11.8	11.8					
31																								
Median									(9.6)	(9.8)	(11.0)	(11.0)	11.6	11.9	11.9	11.9	11.8	11.5	(10.8)					
Count									7	7	7	9	13	13	13	13	13	13	7					

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit) April, 1938 (Month)

Observed at Watheroo

Lat. ____, Long. ____ ____ Mean Time

(Institution)

Scaled by: ____,

Calculated by: ____,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1												[11.6]	[11.7]	[11.7]	[11.6]									
2																								
3																								
4						5.2	[5.9]	[7.5]	[9.2]	11.0	12.5	12.4	12.6	12.4	12.5	12.7	12.4	12.0	11.5					
5																								
6					4.6	4.3	4.4	8.0	10.4	11.7	12.1	12.2	[12.4]	[12.6]	[12.6]	[12.6]	[12.6]	[12.5]						
7																								
8												[12.0]	[12.5]	12.7	[12.6]	[12.5]	[12.0]	[11.5]						
9																								
10																								
11												[11.4]	[12.0]	[12.3]	[12.7]	[12.5]	12.1	[11.9]	[11.5]	[10.3]	[9.3]	[7.6]		
12																								
13									[10.6]	12.1	13.1	13.2	[13.1]	13.0	[12.9]	[12.8]	[12.6]	12.2	[11.5]					
14																								
15																								
16																								
17																								
18																								
19																								
20																								
21																								
22																								
23																								
24																								
25																								
26																								
27																								
28																								
29																								
30																								
31																								
Median												(12.1)	(12.4)	(12.4)	(12.6)	(12.5)	(12.4)	(12.0)						
Count												6	6	6	6	5	5	5						

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit) May (Month), 1948

(Institution)

Observed at _____

Lat._____, Long._____

_____ Mean Time

Scaled by: _____, _____

Calculated by: _____, _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1																										
2																										
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										
11																										
12																										
13																										
14																										
15																										
16																	12.3	[11.2]	[9.8]	[8.0]	[6.0]	4.6	4.6			
17																	11.2	[10.4]	[9.1]	[7.9]	6.3	4.3				
18																										
19										9.6	10.3	10.3	10.5	10.8	11.4	11.4	10.8	10.0	9.5	5.9	5.9	4.0	3.8	3.0		
20	3.0	3.2	3.5	3.6	3.8	3.6	3.6	5.5	9.2	10.4	11.5	10.5	10.0	10.2	10.2	10.7	[10.3]	9.5	8.7	5.1	5.1	[3.6]	[3.7]	[3.2]		
21	[3.3]	[3.2]	[3.4]	[3.5]	[3.7]	[3.7]	[3.4]	[5.3]	[8.6]	9.0	9.8	9.5	10.1	10.1	10.4	9.6	10.3	9.9	7.3	4.3	3.4	3.2	3.7	3.4		
22	3.5	3.3	3.3	3.5	3.7	3.7	3.3	5.2	[8.3]	8.7	9.7	9.5	9.8	10.0	9.7	9.5	10.6	9.6	7.1	4.9	4.7	4.1	3.7	3.5		
23	3.8	3.5	3.6	3.7	4.0	4.1	4.2	6.2	8.0	9.0	(9.7)	(10.1)	(10.1)	(9.9)	(9.5)	(9.7)	9.5	9.4	8.1	6.1	5.0	3.8	3.4	3.2		
24	3.5	3.6	3.6	3.8	3.8	3.9	3.9	6.4	8.1	8.8	9.7	10.7	10.4	9.7	9.3	(10.9)	10.5	(9.5)	(8.6)	(6.8)	(5.5)	(4.6)	3.8	3.7		
25	3.7	3.8	3.6	3.6	3.6	4.0	2.5	5.5	7.9	9.5	11.4	11.6	10.2	10.0	10.9	11.3	10.8	9.6	9.1	7.5	6.0	5.4	4.9	4.6		
26	4.7	4.4	4.6	4.7	4.8	4.4	4.0	6.2	8.3	9.5	11.3	10.9	10.2	9.8	11.3	11.1	11.3	9.7	7.2	5.8	4.7	4.3	4.1	4.1		
27	4.1	4.1	3.9	4.1	4.2	3.5	3.7	6.0	8.1	8.7	10.9	10.3	9.7	9.6	10.0	10.5	10.4	9.2	7.1	8.6	5.2	4.2	4.3	3.7		
28	3.6	3.9	3.9	4.1	4.3	3.9	4.2	6.0	7.5	9.8	11.0	11.0	11.1	9.7	10.0	10.3	10.3	9.0	7.7	6.9	4.6	4.0	4.3	3.7		
29	3.7	3.8	3.9	4.0	3.1	2.5	2.9	5.2	7.8	10.3	10.5	10.9	(11.1)	(9.8)	(10.0)	(10.0)	(10.1)	(9.0)	(7.9)	(6.6)	4.8	4.4	(4.2)	(3.9)		
30	4.4	4.6	(4.2)	(4.3)	4.1	3.4	2.9	5.3	(8.0)	(9.6)	(9.9)	(10.4)	11.1	9.9	(9.9)	9.8	9.9	9.0	8.0	6.2	4.7	3.7	3.8	4.0		
31	4.0	4.4	4.5	4.6	4.7	4.4	4.7	6.5	8.3	(8.8)	9.4	10.0	10.3	10.6	11.4	11.1	10.1	10.1	8.1	6.4	5.4	3.7	3.1	3.1		
Median	3.7	3.8	3.8	3.9	3.9	3.8	3.6	5.8	8.1	9.5	10.3	10.4	10.2	9.9	10.0	10.5	10.4	9.6	8.1	6.4	5.1	4.1	3.8	3.7		
Count	12	12	12	12	12	12	12	12	12	13	13	13	13	13	13	13	15	15	15	15	15	15	14	13		

Sweep_____Mc to_____Mc in_____min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

IONOSPHERIC DATA

(Characteristic), (Unit), June (Month), 19 44

Observed at Kodiak

Lat. ____, Long. ____ ____ Mean Time

(Institution)

Scaled by: ____, ____

Calculated by: ____, ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	4.6	4.3	4.0	3.5	3.5					(4.6)			5.3	5.0	4.9	[4.8]	4.8	4.9	[5.5]	6.1	6.3			
2		3.2	3.1	(3.0)	3.2				5.1	4.6	4.6	4.7	4.8	4.9	5.0	5.0	4.8	5.2	5.9	[6.3]	6.7	[6.5]	(6.3)	5.9
3	5.0	3.9	3.8	3.8	3.1	4.4	5.3	5.3	6.0	6.1	5.7	5.6	4.9	4.9	4.8	5.0	4.8	5.0	7.0	8.0	(8.5)	7.0	[6.0]	5.3
4	4.4	3.6	3.6	3.3	3.5	4.3	5.2	5.7	(6.3)	6.4	6.2	5.1	5.4	5.0	5.4	5.2	5.2	5.5	(5.9)	6.7	7.0	[6.4]	[5.8]	5.0
5	4.5	4.1	3.8	3.5	3.1	3.5	4.0	4.7	5.5	5.3	5.0	5.2												5.3
6	4.9	4.0	3.7	3.3	3.2	3.7	4.2	4.8	5.2	6.2	5.8							5.5	6.0	6.8	8.0	(7.7)fs	(5.7)	5.2
7	5.1	4.8	4.1	3.7	[3.4]	4.4	4.9	5.4	(5.7)	5.8	5.6	7.8	5.2	5.2	4.8					5.8	7.2	7.2	6.8	5.5
8	4.4	3.6	3.6	3.4	3.6	4.7	5.6	(6.6)	5.7	6.5	5.6	5.2	5.4	5.1	[5.1]	5.1	5.0	5.2	6.0	6.8	(7.3)	7.7	(6.5)	5.0
9	4.4	4.0	3.7	3.5	3.4	4.6	5.4	(6.0)	6.0	6.0	5.4	5.6	[5.3]	[5.6]	4.8	[4.9]	5.0	5.4	[6.2]	[7.0]	7.9	(8.0)	7.2	4.8
10	3.6	3.4	3.2	3.7	3.5	4.4	5.0	[5.0]	5.1	[5.1]	5.2	4.8	5.0	4.7	4.9	[5.0]	5.0	[5.1]	[5.3]	[5.7]	6.0	[5.5]	5.0	4.7
11	4.1	3.9	3.4	3.1	3.4	4.5	4.8	[4.8]	4.8	5.3	6.4	6.4	5.1	4.8	[4.8]	4.8	[5.0]	5.2	[6.4]	[7.2]	7.4	(7.5)	7.2	5.3
12	4.0	3.8	3.4	3.3	3.5	[4.1]	[4.6]	4.7	[4.8]	5.0	[5.4]	4.7	5.0	4.8	[4.8]	[4.8]	4.8	[4.9]	5.0	5.3	5.6	5.5	5.0	4.0
13	3.8	3.6	3.5	3.5	3.8	4.6	5.2	5.1	5.4	5.0	5.2	5.3	5.7	5.4	5.0	5.3	5.0	5.2	5.1	5.8	6.4	6.8	[6.4]	6.0
14	5.3	4.8	4.2	3.7	3.7	4.0	4.4	4.1	5.0	4.9	5.0	4.9	[4.8]	4.7	5.2	5.1	5.4	6.4	[5.6]	5.9	[6.4]	7.0	6.8	(6.0)
15	5.2	4.8	4.1	3.5	3.5	3.9	4.3	5.0	[5.0]	[5.3]	[5.4]	5.9						5.4	5.8	5.8	[5.4]	[6.2]	4.6	[3.9]
16	[3.7]	[3.5]	3.2	3.0	3.3						4.6	[4.7]	[4.9]	5.0	4.8					[5.4]	[6.0]	6.5	[5.7]	5.1
17	4.5	(3.7)	3.8	3.7	3.6	4.4	4.4	4.5	5.3	5.9	5.3	4.9	[5.0]	5.1	(5.3)	5.1	5.4	5.4	[6.2]	[7.0]	7.9	7.7	5.2	3.7
18	3.2	3.1	3.1	3.0	3.4	4.2					4.8	4.8	[4.8]	[4.9]	4.9	5.0	[5.1]	[5.2]	5.3	6.1	[6.3]	6.6	5.7	4.3
19	3.7	[3.5]	[3.3]	3.0	3.3	4.1	5.2	5.9	5.4	[5.8]	5.3	[5.1]	5.0							7.2	7.0	6.8	6.2	5.1
20	4.4	3.5	3.3	3.5	3.9	4.6											[5.2]	[5.2]	[5.2]	[5.3]	[5.7]	6.0	[5.3]	4.5
21	4.3	3.7	3.2	3.0	3.1	3.5	[4.1]	[4.9]	[5.7]	[5.9]	[5.8]	[5.4]	4.8	4.9	5.0	5.2	5.3	[5.2]	[5.1]	(5.0)	6.0	6.3	[6.7]	5.0
22	4.6	3.8	3.7	3.5	3.2	3.6	4.4	[4.6]	[4.8]	5.0	[5.2]	[5.4]	5.5	[5.3]	[5.6]	4.8	4.7	5.0	5.9	5.8	5.6	[5.3]	5.0	3.7
23	[3.6]	[3.5]	3.3	2.8	3.0	3.8				5.3	[5.0]	5.8	(5.1)	4.9	[4.7]	4.5	5.0	4.7	5.1	(6.3)	7.0	6.6	4.7	3.8
24	2.8	2.7	2.8	2.8	3.0	3.4	[4.0]	4.5	[4.7]	[4.9]	5.1	5.1	4.9	4.8	4.8	4.8	4.5	4.8	4.9	5.1	6.2	6.5	[5.1]	3.8
25					3.0	[3.8]	4.6	4.7	[5.0]	5.3	[5.0]	[4.8]	[4.9]	4.9	[4.9]	[4.8]	4.8	4.8	4.9	5.1	6.0	6.3	[5.2]	4.2
26										5.1						4.7	4.9	5.5	5.7	5.3	5.8	[5.4]	5.0	4.7
27	[4.0]	3.3	[3.1]	2.9	2.9	3.3	3.9	[4.1]	4.4	4.5					(4.6)	4.6	[4.5]	4.4	5.0	5.4	[5.4]	(5.5)	4.4	4.2
28	3.8	3.6	2.8	2.8	3.1	3.5	4.3	4.4	[4.6]	4.9	4.9	5.2	4.8	[4.8]	4.8	5.0				5.4	5.6	5.4	[4.7]	4.0
29	3.7	3.7	3.2	(3.0)	3.1	3.6	4.4	(4.5)	[4.8]	[5.1]	5.4	5.2	5.4	[5.0]	4.6	[4.8]	4.9					5.1	(4.6)	4.3
30	4.1	[4.3]	3.6	3.4	3.2	4.0	4.9	[5.0]	[5.1]	5.2	[5.3]	5.4	5.6	5.4	5.3	5.2	5.0	4.9	[5.3]	5.7	7.1	6.0	4.1	3.7
31																								
Median	4.3	3.6	3.4	3.3	3.3	4.0	4.6	4.9	5.1	5.3	5.3	5.2	5.0	4.9	4.9	5.0	5.0	5.2	5.6	5.8	6.4	6.5	5.5	4.7
Count	27	24	28	24	29	26	23	23	24	27	26	25	24	23	24	23	23	24	24	28	28	28	28	29

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

IONOSPHERIC DATA

(Characteristic) , (Unit) Sept. (Month) , 1944

Observed at Kodiak

Lat. , Long. Mean Time

(Institution)

Scaled by: ,

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.7	3.7	3.5	3.8	3.7	3.4	4.0	4.8	4.2	4.6	5.0	4.9	5.0	5.0	4.9	5.1	5.0	5.1	5.7	6.2	6.1	5.1	4.2	3.9
2	3.8	(3.3)	3.1	3.0	3.5	3.1	3.9	4.4	4.4	4.9	(5.6)	5.3	(4.9)	5.8	(4.5)	5.0	5.2	5.3	5.9	7.2	6.0	5.0	5.4	4.9
3	4.0	4.1	4.0	3.8	3.3	3.7	4.4	5.2	5.5	6.9	7.0	6.2	5.6	5.5	5.9	5.4	5.5	5.3	5.7	7.3	6.8	6.0	5.0	4.4
4	4.0	3.7	3.6	3.5	3.4	3.4	4.5	5.5	6.5	(6.2)	6.0	6.1						6.0	7.3	6.8	(6.3)	5.8	5.2	4.3
5	4.6	(3.7)	3.8	3.2				4.0	4.6	5.0	5.1	4.9	5.0	5.3	5.0	6.0	5.2	4.9	4.9	5.2	5.0	4.2	3.6	(3.3)
6	(2.2)	(3.2)	3.0	2.9	2.8	2.8	3.7	4.3	4.8	5.4	5.5	5.1	5.0	4.8	(5.0)	5.1	5.8	6.0	5.5	5.9	5.9	5.1	5.0	4.3
7	4.0	3.9	3.6	(3.3)	3.1	3.0	4.0	4.7	5.1	6.0	5.9	5.9	5.8	5.7	5.1	5.2	5.5	5.5	6.7	6.9	6.4	6.6	5.5	(3.7)
8	(3.5)	3.5	3.6	3.5	3.9	3.8	4.8	4.8	5.3	5.4	5.9	5.9	5.6	5.4	5.6	6.0	6.2	6.3	6.3	6.5	6.2	6.2	5.4	4.4
9	3.7						4.3														6.0			
10												6.0	5.7	5.5	5.6	6.0	5.6	5.5	6.8	6.3	(6.3)	5.7	4.5	4.1
11	4.0	4.2	4.2	3.8	3.7	3.8	4.7	4.9	5.7	6.5	6.3	5.7	5.3	5.8	5.8	5.6	5.4	5.9	7.3	7.4	6.9	5.0	3.5	3.3
12	3.2	3.1	3.1	3.2	3.0	3.6	4.0	(5.0)	5.3	6.0	5.7	5.5	4.9	5.3	5.7	5.0	5.2	5.6	(6.2)	6.3	6.3	6.1	4.0	3.8
13	3.7	3.5	3.8	3.7	3.6	3.2	4.3	5.6	5.6	5.8	6.0	5.9	5.8	5.5	5.5	5.4	5.2	5.9	(6.0)	6.3	6.5	5.7	3.7	3.1
14	3.2	3.2	3.0	3.0	2.9	3.0	2.7	3.9	4.7	5.1	5.5	5.8	6.0	5.5	6.0	5.0	5.4	6.1	6.8	(6.9)	6.8	4.2	3.1	2.5
15	2.7	2.6	2.7	2.7	2.8	2.8	3.8	4.3	5.6	5.5	6.0	5.0	5.2	5.2	5.1	4.9	5.5	6.2	6.5	6.9	6.0	5.2	3.7	3.1
16	3.1	3.1	2.9	3.1	3.0	3.2	4.4	5.2	5.9	6.3	6.2	6.0	5.9	5.5	5.5	5.3	5.8	6.4	7.2	7.7	6.1	(5.2)	4.8	4.7
17	4.5	4.3	4.3	4.1	4.1	3.8	4.8	4.6	5.2	5.7	5.8	6.5	6.3	6.2	6.0	6.0	5.3	(5.6)	5.7	6.0	5.4	5.3	4.6	4.3
18	4.1	4.0	3.8	3.2	3.2				4.8	5.8	6.2	(6.0)	6.0	6.0	5.6	5.8	5.7	6.3	6.3	6.7	6.7	4.9	3.4	3.8
19	(3.8)	3.6	3.8	3.7	3.3	3.3	3.5	4.0	4.5	5.4	5.5	5.7	5.9	6.9	5.4	5.5	5.4	5.2	5.7	5.8	5.3	4.8	3.8	3.5
20	3.3	3.3	3.2	3.2	3.3	3.1	4.3	4.9	5.3	5.7	6.4	5.8	5.9	5.5	5.4	5.6	5.8	6.3	6.6	6.9	5.3	5.0	4.4	4.0
21	3.9	3.5	3.3	3.4	3.2	2.8	3.7	4.7	4.1	5.1	5.0	5.4	5.4	5.6	5.4	5.8	5.5	5.8	6.2	6.1	(5.6)	5.2	4.5	4.2
22	4.0	4.0	4.1	4.1	4.5	3.8	4.4	5.0	5.1	6.0	5.4	5.7	5.0	5.2				6.1	6.8	(6.3)	6.0	4.0	3.7	3.4
23	3.3	3.2	3.3	3.0	2.3	2.6	3.0	3.7	3.8	3.8	4.1	4.4	4.5	5.0	4.9	4.2	4.0	4.6	5.1	5.1	4.8	3.6	3.0	3.0
24	(3.2)	3.0	3.0	2.9		2.2		4.0	(4.9)				4.9	(5.3)		4.8	5.5	5.4		4.7	(5.0)	3.7	(3.5)fo	(3.3)fo
25	(3.6)fo	(3.9)fo	(3.9)fo	(3.6)fo	(3.8)fo	(3.1)fo		(4.7)	4.6	5.5									6.3	6.1	6.5		3.2	3.1
26	3.3	3.2	3.4	3.8	3.1	3.1	3.4	4.7	5.0	5.5	5.9	5.6	5.3	5.6	5.3	5.9	5.6	5.4	6.1	6.1	5.3	4.9	4.0	3.8
27	3.5	3.6		3.7	3.4	4.0				5.9	6.0	6.8	6.2	6.9	6.2	5.8	5.7	(6.3)		5.1	(5.0)	4.6	4.3	4.0
28	3.8	3.6	3.3	3.1	2.9	2.4		4.5	(4.9)	5.6		5.9	(6.3)	(6.7)	6.1			(6.3)			4.9		3.4	3.2
29			(3.1)	3.0	3.0	2.6	3.5	4.9	5.4											(5.1)		(3.7)	3.3	
30	(3.2)	(3.3)	(3.3)	3.0	3.0	2.6	3.7	4.9	5.5		6.2			(6.7)	6.0	(6.0)				(7.5)		4.9	4.0	3.8
31																								
Median																								
Count																								

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) October, 1944 (Month)

Observed at Kochel

Lat. , Long. (Institution)

Mean Time

Scaled by: ,

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.9	3.4	3.1	3.3	3.0	2.6	3.0	4.0	4.4	4.9	5.4	6.2	6.1	6.0	6.0	6.3	6.4	6.3				4.2	3.4	3.3
2	3.4	3.4	3.3	3.2	3.0	2.4	3.4	5.1	5.5	6.5	[7.3]	7.0	6.4	6.1	6.2	6.0	6.5	6.8	6.2	5.9	4.7	3.3	3.4	3.4
3	3.2	3.3	3.2	3.3	3.1	2.7	3.6	5.8	6.5	7.6	7.3	7.3	6.0	7.3	6.1	6.6	7.5	6.3	6.7	5.6	4.8	3.3	3.6	3.1
4	3.0	3.0	3.1	3.1	2.9	2.4				7.1	7.7	8.2	6.5	7.0	6.3	6.2	6.7	6.9	6.2	5.8	4.3	3.8	3.5	3.7
5	3.6	3.5	3.3	3.2	2.9	2.7	3.9	5.1	6.1	6.8				7.5	7.2	7.0	6.8	6.3	5.6	4.6	3.9	3.5	3.3	3.2
6	3.4	3.4	3.3	3.2	3.1	2.8	3.8	5.4	5.9	6.3	7.1	6.5	6.9	6.6	6.0	7.0	7.2	7.3	6.8	[5.9]	4.5	3.5	3.5	3.6
7	3.3	3.3	3.2	3.2	3.0	2.4	3.0	5.3	6.1	6.7	7.8	7.2	6.9	6.3	6.2	6.6	7.3	6.7	6.6	6.1	4.6	3.2	3.1	3.2
8	3.3	3.1	3.2	3.1	3.1	2.5	3.5	5.5	6.0	6.8	6.4	7.3	6.8	6.2	6.0	6.7	6.7	6.0	6.3	6.2	4.6	3.7	3.5	3.2
9	3.2	3.2	3.2	3.1	2.8	2.7	3.7	5.6	6.0	6.3	7.4	7.5	6.6	6.2	6.7	6.3	6.3	6.1	[6.3]	6.4	4.7	4.1	3.7	3.7
10	3.6	3.5	3.5	3.5	3.7	3.5	[3.0]	[3.4]	6.0	7.0	6.8	7.0	6.9	6.5	6.2	6.2	5.8	6.0	5.7	5.5	4.9	4.6	4.1	4.0
11	(3.7)	3.7	3.7	3.7	3.4	2.0				5.5	5.8	6.5	7.2	6.9	6.2	7.0	7.7	7.9	5.2	6.2	4.3	[3.6]	3.8	3.2
12	3.3	3.2	3.7	3.9	2.5	2.0	4.0	4.9	4.6	4.8	4.9	5.0	5.0	4.9	4.8	5.0	4.9	4.8	4.4	[3.9]	[3.2]	2.7	2.7	2.4
13	[2.9]	3.1	3.1	[3.5]	3.8	3.0	3.8	4.9	5.7	[6.2]	[6.1]	6.2	6.0	6.3	6.1	5.9	5.7	5.9	6.2	5.6	3.6	3.5	3.0	2.6
14	2.9	3.0	2.9	2.8	2.6	2.2	2.4	3.9									6.8	[6.2]	5.3	4.4	[3.6]	[3.5]	[3.4]	3.2
15	3.1	2.8	2.8							3.7	4.4	4.8	4.7	4.8	4.9	4.8	4.9	4.5	3.9	3.6	3.2	3.1	2.8	2.9
16										5.2	5.4	5.6	5.2	5.8	5.3	5.3	5.9	6.0	5.4	4.6	4.0			
17										5.6	5.5	6.0	5.8	5.5	5.6	5.6	6.7	6.0	5.5	5.0	3.7	3.2	3.2	3.1
18	3.2	3.2	3.3	3.2	2.8	2.2	2.7	5.7	5.3	5.7	5.9	7.3	7.1	6.4	6.7	6.3	6.2	5.8	5.8	4.3	3.8	3.2	2.6	2.7
19	2.9	2.9	3.1	3.1	3.1	3.0	3.0	5.4	6.0	5.8	6.0	7.1	7.3	6.2	6.3	6.4	6.5	6.0	5.4	3.9	3.6	3.3	3.0	3.0
20	3.3	3.3	3.3	3.3	3.4	3.5	4.6				6.1	6.7	6.5	6.5	6.5	6.1	6.5	5.6	5.6	4.5	3.9	3.2	3.2	3.3
21	3.3	3.6	3.7	3.8	3.7	3.9	3.6	5.6	6.7	7.3	7.4	7.8	7.0	6.7	6.8	6.3	6.3	6.0	4.7	4.6	4.2	[3.6]	3.4	3.3
22	3.6	3.8	3.8	3.6	3.7	3.2	3.1	[5.0]	6.1	7.0	7.4	6.4	6.3	7.1	6.7	6.7	7.3	6.3	5.0	4.5	3.7	3.6	3.5	3.5
23	3.6	3.7	3.8							6.9	7.8	8.1	7.3	7.8	7.7	7.7	7.0	5.9	6.1	5.1	4.4	4.1	4.1	4.0
24	3.9	3.6	3.8	3.3	2.5	2.0	2.7	4.2	4.7	5.3	5.9	7.0	6.0	6.8	6.9	6.3	6.2	5.5	5.3	4.6	3.1	2.8	2.8	3.0
25	3.3	3.5	3.2	3.4	3.5	3.2	3.1	4.2	5.0	5.3	5.4	5.9	6.1	6.3	6.6	6.2	6.1	6.2	5.4	4.9	3.7	3.1	2.7	2.7
26	3.1	2.9	2.9	2.8	2.4	2.3	2.9	4.6	5.6	5.7	6.6	6.3	6.8	6.5	6.1	6.0	6.2	6.1	6.0	5.9	4.0			
27							4.0	5.1	6.1	7.0	7.2	6.2	6.4	6.3	6.5	6.4	5.9	5.4	5.0	4.3	3.6	3.5	3.3	(3.5)
28	3.6	3.9	(3.5)[f]	(3.7)[f]	(3.8)[f]	(3.7)[f]	(3.5)[f]	5.1	[6.2]	[6.9]	7.8	7.5	6.8	7.3	6.5	6.1	6.5							
29													7.0	7.1	6.3	6.6	6.2	5.8	5.0	3.7	3.2	3.2	3.2	(3.3)[f]
30	3.3	3.4	3.5	4.0	3.6	3.0	2.7	5.3	6.3	7.6	8.1	8.0	7.9	7.1	7.4	6.2	5.6	5.2	4.9	4.2	3.3	2.8	2.9	2.9
31	3.1	3.0	3.0	3.0	2.8	2.9	3.2	4.6	6.2	7.2	8.7	7.9	7.4	7.0	7.2	7.1	6.2	5.4	5.2	4.9	4.3	4.5	4.4	4.3
Median	3.3	3.3	3.3	3.3	3.1	2.7	3.3	5.1	6.0	6.4	6.7	7.0	6.8	6.5	6.2	6.3	6.3	6.0	5.5	4.9	3.9	3.5	3.2	3.2
Count	27	27	27	25	25	25	24	23	23	28	28	28	29	30	30	30	31	30	29	29	29	28	28	28

Sweep Mc to Mc in min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

IONOSPHERIC DATA

(Characteristic) , (Unit) Nov. (Month) , 1944

(Institution)

Observed at Kochel

Lat. , Long. Mean Time

Scaled by: ,

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.4	3.8	4.3	4.1	4.6	3.8	2.8	[4.6]	7.1	7.1	6.9	7.1	8.1	6.2	[6.1]	6.2	6.3	5.2	3.8	[3.4]	[3.2]	3.0	3.1	3.2
2	3.3	3.2	3.5	3.6	4.1	3.6	3.3	5.0	6.0	6.2	8.0	8.3	7.7	6.0	6.0	[6.8]	6.0	5.3	3.9	3.3	3.2	3.3	3.7	[3.7]
3	3.8	4.0	3.9	4.0	3.8	3.5	2.8	[4.5]	[5.7]				8.2	6.3	6.2	6.6	6.2	5.6	4.4	4.0	[3.3]	3.5	3.7	3.7
4	3.8	3.8	4.0	4.1	4.1	4.2	3.9	4.9	7.1	7.3	7.9	7.9	8.1	7.8	6.8	6.3	6.6	5.2	4.7	[3.5]	[3.4]	3.2	[3.5]	[3.7]
5	3.7	3.7	3.1	3.2	3.2	3.0	2.6	5.3	[5.7]	[6.1]	[6.8]	[7.4]	8.0	6.8	6.5	7.3	6.3	4.9	4.1	3.9	4.0	3.8	4.0	4.2
6	4.0	4.1	4.1	[3.9]	[3.6]	2.6	2.0	4.7	[6.5]	8.1	8.6	8.1	7.6	[7.0]	6.8	6.7	6.1	5.4	3.5	3.4	3.1	2.4	2.3	2.5
7	2.8	3.0	3.0	2.8	2.6	2.5	2.1	4.6	4.9	5.6	5.9	6.7	5.9	6.1	6.1	6.7	5.5	4.8	4.8	3.9	2.9	2.8	2.9	2.7
8	2.8													6.7	6.5	6.3	5.7	4.3	3.8	4.1	3.9	3.5	3.8	3.7
9	3.8	3.8	3.8	3.9	3.8	3.8	3.5	4.0	5.2	5.6	6.0	6.7	7.3	6.9	5.9	5.7	5.4	4.3	3.8	3.9	3.8	2.8	3.0	3.6
10	[3.5]	[3.8]	[3.6]	[3.1]	2.9	2.7	2.9	4.0	5.3	5.1	5.5	6.0	6.2	5.1	5.7	6.2	5.3	5.6	4.2	3.2	2.8	2.8	3.1	3.1
11	3.2	3.3			3.1	4.3					6.2	[5.8]	[5.6]	5.3	6.3	5.4	3.8	3.2	[3.6]	[2.9]	2.8	3.1		
12		3.4	3.5	3.4	3.0	2.5	2.8	4.2	5.3	5.7	6.5	6.7	6.2	5.5	6.2	5.7	5.0	4.1	3.8	3.8	3.5	3.1	[3.3]	[3.4]
13										5.6	6.0	6.3	7.0	5.7	5.9	5.3	4.9	4.1	3.9	3.5	2.9	3.0	[3.2]	3.7
14	[3.6]	[3.8]	[3.9]	[3.7]	[3.6]	[3.6]	[3.8]	4.4	5.3	5.8	5.2	6.3	[6.4]	6.2	6.3	5.8	5.0							
15										5.6	5.0	6.5	6.4	5.9	6.6	5.9	5.1	4.1	4.0	[3.7]	3.2	3.2	3.4	3.7
16	3.8	4.1	4.1	3.8	3.3	3.3	2.7	[3.5]	5.2	6.2	7.2	7.1	8.1	5.9	5.9	5.9	5.2	4.1	3.1	2.9	2.7	2.9	2.9	3.2
17	3.5	3.6	3.7	3.7	3.6	3.8				5.2	5.4	5.7	6.2	6.5	5.6	5.4	5.3	4.6	3.0	2.9	2.6	2.5	2.8	3.1
18	3.1	3.0	3.0	2.9	2.6	2.5	2.5	3.4	4.6	6.6	5.9	[6.4]	[7.0]	5.9	6.0	6.2	5.3	4.1	3.6	2.8	2.7	2.7	2.9	2.8
19	2.8	3.1	3.3	[3.5]	[3.4]	3.0	3.0	[3.7]	5.4	6.0	6.3	6.6	7.1	6.8	6.6	6.3	6.0	4.9	4.4	3.4	3.4	3.3	3.8	4.1
20	3.9	4.0	4.4	4.3	4.2	3.7	3.0	3.5	5.2	5.5	6.5	7.3	6.5	6.1	6.3	6.6	6.5	4.8	4.0	4.2	2.9	3.1	3.2	3.2
21	3.2	3.3	3.1	3.1	3.1	2.6	2.1	3.6	4.8	6.0	6.2	6.3	6.3	5.4	6.4	6.3	5.1	4.2	2.9	3.0	2.6	2.6	2.9	3.2
22	3.0	3.0	3.1	3.1	2.5	2.2	2.0	3.8	4.9	5.1	5.5	5.4	6.2	6.1	5.9	6.0	5.6	3.4	3.2	2.8	2.7	2.3	2.6	3.0
23	3.1	3.2	3.2	3.1	2.7	2.5	2.6	3.2	4.3	5.2	6.0	6.6	6.0	6.3	5.7	6.0	5.0	4.5	3.2	3.3	3.6	3.5	2.9	3.1
24										5.2	5.3	5.3	5.3	5.7	5.9	[5.4]	4.9			3.2	3.0	2.9	3.2	3.0
25	3.1	3.2	3.2	3.3	3.2	2.9	2.9	3.4	[4.5]	5.2	5.7	5.2	6.1	[5.5]	5.2	5.4	[4.7]	[3.6]	3.1	3.0	3.1	3.0	3.0	2.9
26	3.1	3.1	3.2	3.2	2.7	2.3	2.6	3.4	5.0	5.3	5.8	6.3	6.6	5.6	6.0	5.3	4.3	3.2	3.0	3.1	3.2	3.6	3.7	3.7
27	3.6	3.4	3.4	3.7	4.1	2.8	2.9	3.8	5.1	5.8	7.0	7.2	6.6	5.8	6.0	5.3	4.0	3.3	3.9	4.2	4.0	4.1	4.3	5.0
28	4.0	[3.3]	[3.8]	[3.9]	[3.8]	[3.4]	[3.0]	3.4	5.1	5.0	5.8	6.0	5.8	5.3	5.9	5.8	4.3	2.9	3.2	2.8	3.0	3.0	3.1	3.0
29	3.1	3.2	3.3	3.3	3.8	2.4	2.5	3.1	4.7	5.5	5.7	6.3	6.0	6.6	6.5	5.5	5.3	3.0	2.4	2.5	2.9	2.8	2.7	3.0
30	3.3	3.5	3.6	3.6	3.5	3.3	2.8	3.7	5.6														3.2	3.4
31																								
Median	3.4	3.4	3.5	3.6	3.4	3.0	2.8	3.8	5.2	5.6	6.0	6.5	6.4	6.1	6.0	6.0	5.3	4.3	3.8	3.4	3.1	3.0	3.2	3.2
Count	26	26	25	25	26	26	24	24	24	26	27	27	28	29	29	29	29	27	27	28	28	28	28	28

Sweep Mc to Mc in min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) December (Month), 19 44

Observed at Kochel

Lat. , Long. Mean Time

(Institution)

Scaled by: ,

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.5	3.7	3.7	3.2	3.3	3.1	2.7	3.0	5.0					6.0	5.9	6.9	5.7	4.3	3.7	2.9	2.7	2.8	3.2	3.2
2	[3.3]	3.5	3.2	3.1	2.8	2.3	2.6	2.9	4.5	[5.0]	5.0	5.9	7.8	7.0	[5.9]	4.9	3.9	2.8	[3.2]	3.5	[3.3]	3.5	3.4	3.2
3									4.4	5.9	[6.1]	[6.6]	6.4	6.3	6.0	5.0	[5.0]	[4.6]	[3.6]	2.9	2.5	2.1	2.0	2.4
4	2.4	2.5	2.7						4.1	4.5	4.8	5.7	5.5	5.4	5.0	5.9	4.9	3.4	2.8	3.1	2.8	2.7	3.0	3.0
5	3.0	3.0	3.1	2.9	2.1									5.3	5.9	[5.8]	5.2	[3.8]	3.2	2.8	3.6	3.0	3.0	3.1
6	2.6	2.6	2.5	2.4	3.1	2.9	2.7	2.9	4.0	4.9	5.3	5.7	5.7	5.5	5.5									
7	2.6				1.8															2.6	2.6	2.5	2.2	2.6
8	2.8	2.6	2.5	2.4	1.8	2.2	2.0	3.7	4.8	5.2	5.8	5.8	6.3	5.5	[5.6]	5.4	5.0							
9											7.3	6.1	6.1	6.3	[6.1]	5.9	[5.4]	4.9	3.7	2.9	2.8	2.4	2.6	3.0
10	3.0	3.0	3.2	3.0	2.6	2.4	2.5	2.9	[3.7]	5.0	5.0	5.0	[5.3]	[5.1]	6.0	6.0	4.6	3.7	2.3	2.8	2.7	3.0	3.2	3.3
11	3.1	2.8	2.8	3.0	2.9	2.9	2.8	2.8	4.3	4.7	[5.5]	6.1	5.5	5.9	5.3	5.8	4.9	[4.1]	3.3	3.0	3.1	3.0		
12										5.0	[5.5]	5.9	6.3	6.2	6.2	6.0	5.7	[3.6]	3.0	3.1	2.3	2.5	3.0	[3.2]
13	3.2																							
14																				2.7	2.8	2.4	2.6	3.0
15	3.0	3.0	3.1							4.9	5.9	6.2	5.5	5.8	6.2	5.8	4.9	[4.1]	3.3	2.8	2.6	2.8	2.6	2.8
16	2.7	2.8	2.8	2.6	2.3	2.3	2.4	2.8	4.5	5.4	8.2	7.2	7.7	8.2	8.2	8.2	5.8	2.4	[4.0]	(3.4)	(2.1)	(2.0)	(2.0)	(2.1)
17	(1.9)	(2.0)	(2.0)	(1.8)	1.6	1.7	1.6	2.2	4.5	6.0	5.7	6.0	5.9	6.5	6.0	5.9	6.0	[5.0]	[3.4]	2.3	2.8	2.9	2.4	2.6
18	2.3	1.9	1.9	1.8	1.5	1.7	1.9	2.1	3.6	4.6	5.0	5.8	6.0	6.2	5.7	4.9	4.8	3.7	2.8	2.2	2.1	2.1	2.2	2.4
19	2.6	2.4	2.1	2.2	1.7	2.0	2.0	2.2	4.4	5.1	7.5	7.0	6.1	6.4	6.2	5.2	4.9	4.4	3.1	2.8	2.4	2.8	2.7	2.7
20	2.8	2.7	2.8	2.7	2.1	2.2	2.5	2.6	4.2	6.3	7.4				6.2	5.5	5.3	4.1	4.0	3.8	2.7	2.7	2.8	3.1
21	3.0	3.0	2.9	2.9	2.9	2.8	2.4	2.8	4.4	7.5	7.8	7.4	7.7	7.6	6.3	5.6	5.2	4.9	3.9	2.8	3.1	2.7	2.8	3.0
22	3.5	3.5	3.2	3.1	3.1	3.3	3.2	4.0	6.0	6.8	6.9	7.2	6.2	8.1	4.9	6.6	5.1	5.0	4.5	3.1	3.3	3.5	3.2	3.6
23	3.2	3.4	3.5	3.5	3.5	2.6	2.0	2.3	6.1	7.2	[8.0]	7.8	8.3	6.0	5.9	5.9	[6.0]	5.0	3.5	3.2	3.1	3.7	3.4	3.4
24	3.7	3.5	3.6	3.5	2.8	2.6	3.1	3.0	5.4	[6.6]	6.1	6.7	6.0	6.1	5.8	5.7	4.9	4.9	3.7	3.2	3.2	3.2	3.1	3.2
25	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3.2	5.5	6.1	6.1	6.1	6.8	6.3	6.2	5.5	5.3	4.3						
26																6.5	5.6	4.8	5.5	4.6	3.5	3.5	3.7	3.0
27	4.2	4.0	3.9	3.2	2.3	2.1	2.1	2.7	5.0	6.3	7.8	9.3	7.4	8.7	7.7	8.1	7.0	4.8	3.3					
28									4.9	7.2	8.3					6.1	[5.8]	4.5	3.0	2.7	2.3			
29																	5.9	4.6	3.6	2.9	2.4	2.9	2.8	3.0
30	3.1	2.6	2.7	2.8	2.1	1.8	2.1	2.2	4.9	5.7	6.3	5.4	6.4	7.6	[6.3]	5.8	5.0	4.4	3.5	2.8	2.7	2.8	3.1	3.1
31	3.1	3.0	2.9	2.6	2.3	2.1	1.8	2.1	5.4	7.7	6.6	6.2	4.9	6.1	6.8	5.9	5.5	3.2	2.6	3.1	2.8	2.7	2.7	2.8
Median	3.0	3.0	2.9	2.9	2.4	2.3	2.4	2.8	4.5	5.7	6.1	6.2	6.1	6.2	6.0	5.8	5.2	4.3	3.4	2.9	2.8	2.9	2.8	3.0
Count	22	21	21	19	20	19	19	19	22	23	24	22	22	24	25	26	27	26	25	26	26	25	24	24

Sweep Mc to Mc in min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

(Characteristic) , (Unit) December, 1943 (Month)

IONOSPHERIC DATA

(Institution)

Observed at Kochel

Lat. , Long. Mean Time

Scaled by: ,

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.0	3.0	2.8	2.9	2.5	2.3	2.6	3.0	4.6	6.2	6.2	5.4	5.0	5.6	6.1	5.6	5.3	4.2	3.5	3.6	3.9	[3.9]	[3.6]	3.3
2	3.3	3.0	3.0	2.9	2.9	2.9	2.3	3.0	5.4	6.3	8.2	6.1	6.3	5.6	[6.4]	[6.6]	5.4	4.6	4.6	4.8	4.4	3.9	[3.8]	3.8
3	2.9	2.7	3.0	2.9	2.5	2.9	2.8	3.1	5.0	6.2	6.6	6.2	[5.7]	6.5	5.8	5.6	5.8	5.6	3.8	3.8	3.2	3.2	3.2	3.4
4	3.2	3.0	3.0	3.0	2.6	2.6	2.2	2.7	4.8	6.2	[6.7]	7.2	7.2	6.0	6.2	5.4	6.7	5.4	4.1	3.6	2.9	3.4	3.0	3.0
5	3.1	3.5	3.4	3.1	2.9	[2.7]	1.9	3.0	4.2	5.0	5.5	5.6	6.8	[6.4]	(6.0)	7.0	5.5	5.1	4.0	3.7	3.0	3.2	3.3	3.7
6	3.3	3.6	3.6	3.4	3.4	3.1	2.8	3.3	5.6	5.4	5.8	7.0	5.9	5.6	5.9	6.6	4.9	(4.0)	[3.4]	4.7	3.1	3.0	2.4	2.8
7	2.8	3.0	3.0	3.1	2.4	2.3	2.6	2.9	4.6	5.1	7.0	6.2	6.0	5.5	6.1	5.5	4.5	3.8	33	33	33	(3.2)	2.4	2.8
8	2.6	2.9	2.9	2.9	2.6	2.3	3.3	3.4	4.5	4.8	6.3	6.1	6.0	5.5	5.8	5.8	[4.7]	3.6	3.4	3.4	3.7	3.5	3.9	3.6
9	3.9	3.9	3.8	3.6	3.2	3.1	3.3	3.6	5.0	6.0	6.6	6.6	6.0	6.3	5.9	(5.6)	4.9	4.8	3.9	3.8	3.7	3.5	3.4	3.5
10	3.8	3.9	3.8	3.4	3.0	3.2	3.0	(2.4)	5.4	6.7	6.6	6.6	6.8	7.0	5.9	5.8	5.3	4.8	4.0	3.2	4.0	4.4	3.4	3.9
11	3.7	3.6	3.6	3.5	3.3	3.1	3.4	3.8	5.7	6.6	5.9	6.5	6.6	5.6	5.4	5.3	5.0	[4.1]	3.8	3.7	4.2	4.3	3.8	3.4
12	3.5	3.3	3.1	3.3	2.9	2.7	3.1	2.8	5.2	6.1	5.9	5.9	6.7	6.6	5.8	5.3	4.7	3.8	3.4	3.6	[3.6]	3.7	3.3	3.4
13	3.6	3.2	3.4	3.2	2.9	2.6	2.6	3.0	5.0	7.1	5.9	7.3	6.4	6.9	5.7	[5.6]	5.6	3.9	3.6	4.0	4.2	4.1	4.3	4.0
14	[4.3]	4.6	4.0	4.3	4.3	4.2	3.9	3.9	5.9	[5.6]	5.4	5.6	5.6	6.4	[5.7]	5.0	5.0	4.5	4.7	3.5	3.9	[3.6]	2.8	3.1
15	3.1	3.2	3.2	3.0	2.7	[2.6]	2.6	2.8	5.1	5.6	6.4	6.6	[6.2]	5.8	5.3	5.2	4.8	[3.8]	3.2	3.0	3.4	3.9	3.8	3.6
16	3.1	3.0	3.0	2.9	2.4	[2.4]	2.4	2.7																
17	3.1																							
18														5.3	4.9	4.8	4.2	2.9	2.6	[2.5]	2.5	2.1	2.2	2.2
19	[2.2]	2.2	[2.6]	2.9	[2.7]	[2.5]	2.1	2.9	4.3	4.9	5.2	5.9	6.4	6.7	5.8	5.4	[4.7]	[4.0]	3.9	[3.4]	3.6	3.7	3.3	3.2
20	3.8	3.6	2.9	2.5	1.9	2.1	2.0	[2.2]	[3.9]	5.9	6.4	7.4	6.4	6.5	[6.3]	6.0	5.4	4.4	3.6	3.2	3.4	2.9	3.1	[3.0]
21	2.9	2.9	3.0	3.0	2.8	2.2	2.4	[3.5]	4.6	6.2	6.3	6.4	[6.0]	6.6	5.9	5.9	4.8	3.6	4.2	3.5	3.8	3.6	3.6	[3.2]
22	[3.2]	3.0	2.9	2.6	2.1	1.9	2.3	2.7	4.7	6.0	6.5	6.2	5.8	6.4	6.5	5.3	4.8	3.9	3.1	3.1	3.1			
23										6.2	6.3	[6.2]	6.1	5.8	5.5	4.9				2.3	2.7	3.2	2.6	2.7
24	2.9	3.0	3.0	2.6	2.4	3.0	2.4	2.5	4.7	5.4	5.7	5.8				4.4	[4.9]	[3.9]	2.4	2.8	2.8	2.8	3.0	2.9
25	2.9	2.9	2.6	2.9	[2.8]	[2.3]	[2.0]	[2.2]	4.4	6.7	6.8	6.5	6.0	[6.9]	5.7	[5.3]	4.8	4.2	[3.9]	2.6	2.6	2.5	2.9	3.2
26	3.6	3.2	3.3	3.2	3.0	2.5	2.4	[2.5]	4.4	6.0	7.2	7.2	5.4	6.0	5.9	5.6	5.1	4.4	2.4	2.6	2.7	3.0	3.2	3.0
27	3.1	3.2	3.4	3.8	3.2	2.5	2.2	2.7										[6.1]	[4.9]	[3.0]	[2.5]	2.7	3.2	3.4
28	3.4	3.3	3.4	3.2	2.8	2.7	2.8	2.3	4.8	5.6	[6.1]	6.6	[6.2]	5.8	[5.5]	5.2	4.3	3.8	3.2	3.0	(2.8)	3.1	3.1	3.6
29	3.0	3.1	3.2	3.1	2.9	2.6	2.6	2.4	4.3	6.1	7.2	6.6	5.9	[6.8]	[5.6]	5.2	4.4	[4.0]	[3.4]	3.0	3.2	3.2	3.7	3.6
30	3.4	2.8	2.9	3.0	3.4	2.8	2.4	2.7	4.2	6.0	5.9	5.9	5.8	5.3	5.1	5.0	4.6	3.6	3.0	2.8	2.4	2.7		
31																		3.6	2.8	2.3	(2.9)	2.9	(3.1)	(3.2)
																	4.9							3.3
Median	3.2	3.1	3.0	3.0	2.8	2.6	2.6	2.8	4.7	6.0	6.3	6.3	6.0	5.8	5.8	5.4	4.8	4.0	3.4	3.3	3.3	3.2	3.2	3.4
Count	27	27	27	27	27	27	27	27	25	26	26	26	25	26	26	27	26	27	28 27	29 26	29 28	28	27	27

Sweep Mc to Mc in min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

IONOSPHERIC DATA

(Characteristic), (Unit) November, 1943 (Month)

(Institution)

Observed at _____

Lat. _____, Long. _____ _____ Mean Time

Scaled by: _____, _____

Calculated by: _____, _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.0	3.1	3.3	2.6	1.9	1.6	1.8	5.9	[5.7]	[6.4]	[7.0]	6.3	6.2	7.0	6.4	6.2	5.8	5.7	4.7	4.8				
2												7.2	7.3	6.3	5.8	5.4	5.6	5.4	4.2	4.1	3.7	3.9	3.0	3.4
3	3.4	3.5	3.5	3.0	2.6	2.1	2.2	4.3	5.3	5.3	7.2	6.5	7.2	6.2	6.0	6.1	3.9	4.9	3.9	3.5	3.3	3.2	3.4	3.4
4	3.2	3.2	3.3	3.4	3.0	2.9	2.1	4.1	6.2															
5																								
6																			6.0	5.4	4.2	3.3	3.7	3.6
7	3.5	3.6	3.5	3.6	3.5	3.0	2.5	3.9					6.9	[6.4]	6.0	6.6	5.5	5.0	4.0	4.3	3.8	3.2	3.0	
8		3.5	3.5	3.5	3.2	3.1	2.6	4.5	6.3	6.3	6.9	7.1	6.3	6.3	6.2	5.7	5.1	4.1	4.7	4.3	4.1	3.4	3.2	[3.2]
9	3.2	3.1	3.3	3.7	3.0	2.9	2.7	4.1	5.6				6.6	[6.4]	6.0	6.2				3.7	3.5	3.1	2.9	2.9
10	3.1	3.3	3.2	3.1	3.0	2.9	2.4	3.9	4.4	5.0	8.0	7.3	7.2	6.8	6.4	6.7	5.4	4.0	3.0	2.8	2.7	3.2	3.4	3.4
11	3.5	3.5	3.7	3.6	3.0	2.7	2.8	4.2	5.7	5.1	7.2	7.3							3.2	2.9	3.0	2.9	3.1	3.1
12	3.1	3.0	3.1	3.0	3.4	3.2	3.1	4.6	5.0	[5.1]	6.2	6.5	7.4	6.5	5.8	6.1	[5.7]	[4.4]	3.3	3.5	3.3	3.3	3.9	3.6
13	3.2	3.6	3.4	3.6	3.3	3.6	2.8	4.4	5.4	5.9	6.0	5.9	7.1	6.4	6.0	5.8	5.3	5.0	3.3	3.1	3.0	3.4	3.6	3.7
14	3.7	3.8	3.8	3.8	3.3	3.3	2.8															2.7	3.3	
15										5.7	5.6	5.9	6.4	5.6	5.9	6.4	5.1	[4.3]	3.3	2.8	3.3			
16										5.6	5.6	5.5	6.4	5.5	6.1	7.0	6.8	6.7	[5.5]	3.3	3.2	3.1		
17										5.3	6.3	5.3	5.6	6.2	5.7	5.8	[5.5]	5.3	3.8	2.9	3.2	3.6	3.1	3.3
18	3.5	3.5	3.3	3.5	3.5	3.3	3.4	3.8	5.1	5.7	5.4	5.6	7.2	6.9	5.5	5.7	5.4	4.9	3.5	3.4	3.2	3.2	3.9	3.1
19	3.4	3.3	3.2	3.4	3.2	2.9	2.8	3.9	5.0	6.6	7.7	[8.1]	8.2	7.0	7.3	6.3	5.5	5.3	4.3	4.1	4.5	4.2	4.1	3.9
20	3.8	3.7	3.7	3.4	3.7	3.2	2.3	2.6	4.4	4.6	5.5	6.1	5.9	6.2	6.4	5.5	5.2	4.5	3.6	3.6	4.6	3.6	3.5	3.1
21	3.0	3.0	2.9	2.8	2.7	2.5	2.7	3.2	5.1	5.4	5.3	6.4	6.3	6.1	5.9	6.1	5.4	4.1	3.5	3.3	3.5	3.1	2.7	3.0
22	3.0	2.9	2.9	3.0	3.0	3.0	2.2	3.2	4.6	5.5	5.9	6.5	6.8	6.2	6.1	6.1	6.0	5.1	4.5	3.5	2.6	2.6	2.7	2.8
23	2.8	2.7	2.8	2.8	2.8	2.4	2.4	[2.8]	4.6	4.8	[5.4]	6.2	6.4	5.7	5.9	6.0	5.3	5.0	3.8	3.2	3.3	2.8	3.4	3.0
24	2.5	2.7	2.4	2.3	1.6	1.8	1.5	3.2	5.5	5.6	6.7	6.8	7.4	[6.5]	6.0	6.0	5.3	4.5	3.9	3.8	2.8	2.9	2.4	3.5
25	2.6	2.7	2.7	2.9	1.7	1.7	1.7	1.9	5.0	5.3	5.9	6.9	6.4	6.2	6.6	[5.8]	4.9	4.1	[3.3]	2.4	2.7	2.5	2.7	2.5
26	2.7	2.5	2.4	1.7	1.7	1.5	1.7					6.4	6.2	5.9	6.2	7.0	4.8	5.9	4.6	4.2				
27	2.5	2.5	2.7	2.4	1.9	1.9	1.8	2.9	4.0	4.6	5.3	5.2	5.2	5.6	5.5	5.4	4.5	3.7	4.4	2.4	2.2	2.3	2.2	1.8
28	2.3	2.7	2.8	2.8	2.2	2.0	1.9	3.6	3.9	6.4	5.6	6.0	6.3	5.7	6.4	5.4	5.1	3.9	3.4	3.6	3.3	3.2	3.3	3.0
29	3.0	2.7	2.2	2.3	1.9	1.9	2.2	3.1	4.8	5.8	7.7	6.0	7.4	6.6	6.8	6.4	4.0	3.6	3.6	2.9	2.8	2.9	3.1	3.1
30	3.1	3.0	2.8	2.9	2.6	2.5	2.3	3.0	5.0	6.2	7.0	6.6	6.2	5.9	7.8	5.6	4.7	4.7	3.8	3.2	3.2	2.9	3.1	3.1
31																								
Median	3.1	3.1	3.2	3.0	2.9	2.6	2.7	3.8	5.0	5.6	6.1	6.4	6.4	6.2	6.0	6.1	5.4	4.4	3.8	3.5	3.3	3.1	3.1	3.1
Count	83	24	24	24	24	24	24	22	21	22	23	24	25	25	25	25	24	24	26	27	25	25	24	22

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

IONOSPHERIC DATA

(Characteristic) , (Unit) October (Month) , 1943

Observed at Kochel

Lat. , Long. (Institution)

Mean Time

Scaled by: ,

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.4	2.2	2.2	1.9	1.6	1.5	2.6	3.3	3.7	4.0	4.0	4.5	4.2	4.6	4.6	4.6	5.0	4.6	5.0	4.6	3.7	2.4	2.4	2.4
2	2.6	2.4	(2.3)	2.1	2.0	1.8											4.4	4.6	4.2	4.4	3.5	3.4	3.0	2.8
3	2.8	2.6	2.0	1.9	1.9	1.5	3.0	3.8	4.2	4.4	4.5	4.8	4.8	4.8	4.5	4.4	4.2	4.4	4.0	4.1	3.6	3.4	3.0	2.6
4	2.6	2.2	2.2	2.2	2.2	1.5	2.8	3.4	3.6	4.0	4.2	4.2	4.3	4.9	4.8	4.6	5.2	4.8	4.6	4.8	2.8	2.8	2.2	2.4
5	2.3	2.3	2.5	2.5	2.3	2.1	2.6	3.8	4.4	4.8	4.8	4.9	4.9	4.8	5.2	5.2	5.4	5.5	4.5	4.2	3.4	2.9	2.4	2.7
6	2.7	2.8	2.6	2.6	2.6	2.2							5.4	5.9	5.4	5.4	6.1	6.6	(5.0)	4.6	3.4	2.8	2.8	2.7
7	2.7	2.8	2.8	2.8	2.8	2.8	3.6	5.1	5.5	5.6	5.9	5.3	5.8	5.8	6.2	(6.8)	7.4	8.1	7.8	5.8	4.4	4.0	3.6	3.2
8	3.2	3.4	3.2	3.2	3.0	2.0	3.4	4.5				6.1	5.8	5.7	(5.8)	7.6	7.6	6.9	5.4	5.4	4.4	3.5	3.4	3.3
9	3.4	3.3	3.4	3.0	3.0	2.4	3.2	4.8	4.8	5.4	5.7	7.1	5.8	5.0	5.4	5.5	5.1	5.5	6.6	7.0	5.8	3.4	2.8	3.0
10	3.0	3.2				2.3	2.8	3.6	4.2	4.2	4.6	4.9	5.2	5.1	5.6	5.8	6.1	5.3	5.8	5.5	4.1	2.8	2.5	2.8
11	2.8	2.8	2.9	3.0	2.9	2.6	3.1	4.6	5.0	4.7	6.0	6.0	5.4	5.4	5.8	5.8	5.2	5.3	5.0	4.9	3.8	3.4	2.8	2.7
12	3.0	3.0	2.9	3.0	3.0	2.4	3.1	4.4	4.6	5.3	5.7	6.3	6.0	6.0	5.6	6.5	5.5	5.5	4.6	4.8	3.3	3.1	2.9	3.0
13	3.1	3.1	3.1	3.2	3.3	2.6	3.1	4.7	5.0	5.3	6.2	6.2	(6.0)	6.0	5.8	6.6	6.0	5.5	4.7	4.6	4.2	3.2	3.2	3.2
14	3.4	3.3	3.5	3.6	3.8	2.5	3.0	4.8	5.2	4.9	6.3	6.4	6.1	5.9	5.5	(5.3)	5.6	5.6	5.0	4.5	3.4	3.1	3.4	3.4
15	3.4	3.4	3.3	3.3	3.4	2.8	3.4	4.7	4.8	5.7	(6.3)	6.0	6.6	6.0	5.6	5.5	5.6	6.0	5.4	(5.4)	4.2	3.7	3.2	3.6
16	3.6	3.8	3.8	3.8	3.7						(3.6)	6.0	6.0	6.8	5.4	5.8	6.0	5.9	5.1	5.2	4.2	3.4	3.4	3.3
17	3.2	3.5	3.4	3.5	3.3	2.9	3.0	4.5	5.4	6.0	6.5	6.0	6.8	6.8	6.5	6.2	6.4	6.6	4.8	5.0	4.7	3.6	3.6	3.6
18	3.8	4.0	3.8	3.8	3.8	3.6	3.6	5.0	5.8	5.2	5.8	6.1	5.6	5.3	5.6	6.2	6.2	6.4	5.3	5.0	4.4	3.8	3.9	3.6
19	3.7	3.9	3.7	3.7	3.8	3.6	3.5	4.8	4.6	5.9	5.7	6.6	7.2	6.0	5.5	7.1	6.5	6.2	6.1	3.6	3.3	3.3	3.2	3.4
20	3.2	3.3	3.3	3.4	3.2	2.8	3.0	4.7	5.7	6.8	5.8	6.4	7.4	6.3	6.9	7.3	7.0	5.2	4.6	4.4	3.9	3.6	3.8	3.6
21	3.6	3.5	3.4	3.9	2.8	2.8	2.8	4.7	5.3	6.0	6.2	6.6	(7.2)	7.0	6.8	6.5	6.3	5.9	4.8	3.9	2.6	2.8	3.0	3.0
22	3.1									5.8	6.0	7.0	7.3	6.6	7.5	7.4	7.4	6.0	5.4	5.4	4.4	(3.7)	3.4	3.4
23	3.6	3.5	3.5	3.4	3.4	3.5	3.0	4.6	4.9	4.7	5.1	5.2	5.3	5.7	5.8	5.5	5.6	4.2	3.7	4.1	3.7	3.5	3.4	3.6
24	3.5	3.6	3.5	3.6	3.8	2.6	4.4	5.1														3.1	(3.0)	2.8
25	2.8	3.0	3.2	2.9	2.8				4.4	(4.8)	4.8	5.8	5.8	5.6	6.0	6.2	5.9	4.6	4.9	4.4	3.1	2.7	1.9	2.1
26	1.9	2.0	2.0	2.7	2.8				4.5	4.8	4.7	4.8	(5.2)	5.1	4.8	4.5	4.1	3.9	3.7	3.4	3.0	2.7	2.5	2.6
27	2.7	2.8	2.9	3.0				4.3	5.4	5.8	5.6	6.2	6.4	5.8	(6.4)	5.6	5.5	4.9	5.0	5.0	3.8	3.4	3.0	2.9
28	2.8	2.7	2.6	2.3	1.9	1.7	2.0	(3.5)	4.1	4.2	4.5	4.7	(4.6)	4.6	4.6	4.7	4.3	4.4	4.2	2.5	3.0	2.7	2.7	2.8
29	2.9	2.0	2.7	1.8	2.6	2.3	2.0	4.0	4.8	5.6	5.5	6.1							4.1	3.5	3.0	2.6	2.6	2.5
30	2.8	2.8	2.8	2.5	1.8	1.7	2.0	4.1	4.9	(5.2)	(5.5)	5.7	5.9	6.0	6.3	5.6	5.8	(5.1)	4.8	3.4	(2.3)	2.4	2.4	2.4
31	2.4	2.7	2.8	2.5	1.8	1.7	2.0	4.1	5.2	5.7	6.4	6.4	5.7	5.7	7.0	7.2	5.6	6.3	5.8	3.7	3.2	2.8	2.9	(3.0)
Median	3.0	3.0	2.9	3.0	2.9	2.4	3.0	4.5	4.8	5.2	5.7	6.0	5.8	5.8	5.6	5.8	5.6	5.5	5.0	4.6	3.6	3.2	3.0	3.0
Count	31	30	29	29	28	26	24	25	25	26	26	28	28	28	28	28	27	29	30	30	30	31	31	31

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

IONOSPHERIC DATA

(Characteristic) , (Unit) December , 19 42

(Institution)

Observed at Kodiak

Lat. , Long. Mean Time

Scaled by: ,

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.8	2.9	2.9	2.9	3.8	2.3	1.9	1.7	4.8	7.0	7.1	6.9	7.5	7.4	6.4	5.6	5.6	4.3	3.9	3.3	2.5	2.2	2.7	3.0
2	2.9	3.1	3.2	3.4	3.4	3.0	2.7	3.3	5.8	6.6	8.3	6.7	7.0	(7.4)	6.9	5.9	5.0	3.8	3.8	(3.1)	2.9	2.6	2.8	3.0
3	3.0	3.2	3.3	3.3	3.0	3.3	2.9	3.2	5.1	6.5	6.9	(6.0)	7.1	6.8	6.8	5.8	5.2	4.2	4.0	2.7	(3.6)	3.0	2.8	3.1
4	3.4	3.4	3.5	3.7	3.7	3.7	2.6	3.3	5.6	6.1	(8.3)	7.6	8.1	7.1	7.2	(6.5)	6.3	5.0	4.8	3.7	3.6	2.8	3.1	3.4
5	3.6	3.8	3.9	4.0	3.9	3.6	3.5	2.6	4.6	7.2	6.0	7.8	7.0	6.8	7.0	7.4	5.4	4.5	3.4	3.7	3.4	2.8	(3.3)	3.5
6	3.9	4.1	3.9	3.7	3.3	3.3	3.7	3.4	5.0	6.0	6.0	6.2	6.0	6.7	6.4	6.6	5.6	4.0	3.3	3.8	3.4	3.5	3.7	3.8
7	3.8	4.2	4.3	4.1	4.2	3.8	3.4	3.5	4.6	5.5	(7.3)	6.9	7.5	6.8	6.6	6.1	7.0	6.3	3.8	3.0	3.1	3.2	31	30
8	3.0	3.6	3.4	3.2	3.6	4.1	2.6	2.9	(5.5)	(6.1)	7.3	7.1	8.1	(6.4)	6.8	(5.8)	5.7	5.4	(3.8)	3.2	3.2	(3.0)	(3.0)	(3.2)
9	3.2	(3.2)	3.0	(2.8)	(2.4)	1.9	2.4	2.8	5.3	6.5	6.0	7.6	6.4	5.8	6.3	6.6	5.3	4.8	4.1	3.4	3.4	3.1	2.8	2.9
10	3.0	3.2	(2.6)	2.6	2.4	2.0	1.7	(2.8)	4.8	5.3	5.6								(3.5)	3.4	3.5	3.6	35	34
11	3.4	3.3	3.4	3.4	1.9	1.6	1.8	1.7	4.6	(5.8)	(6.9)	(8.4)	(6.2)	5.9	5.7	6.2	6.4	(5.0)	(4.0)					
12	3.0	3.0	3.0	3.0	2.9	3.1	3.1	3.7	4.6	5.2	5.6	7.1	6.4	(6.7)	5.7	5.8	3.9	(0.9)	3.5	(2.9)	2.9	2.9	2.7	2.6
13	2.8	2.9	2.9	3.0	2.4	2.5	2.3	2.4	4.8	5.8	5.4	5.8	6.3	5.8	5.9	5.1	4.3	3.8	3.4	3.1	2.8	2.4	2.8	2.9
14	2.8	3.0	3.0	3.2	3.3	(3.3)	3.2	3.0	4.2	5.2	5.5	6.0	5.8	5.6	6.3	5.6	3.9							3.3
15	3.2	3.3	3.3	3.2	3.3	3.3	3.2	(2.8)	4.1	5.8	(5.0)	6.1	6.6	(5.8)	(5.6)	5.8	4.8	3.9	3.0	3.3	3.2	(2.8)	(3.0)	3.4
16	(3.5)	3.5	3.5	3.5	3.1	(2.6)	(2.4)	2.1	4.4	4.9	(5.6)	6.0	5.8	5.7	5.5	4.8	3.5	3.2	2.7	3.1	2.6	2.5	2.8	2.8
17	3.0	2.7	2.9	2.8	2.2	2.1	2.4	2.5	3.7	5.6	5.8	5.3	5.8	5.3	5.5	6.0	5.5	4.6	2.8	2.3	3.0	3.0	2.8	3.2
18	3.0	3.2	3.2	3.3	2.8	(3.1)	3.5	2.7	4.5	4.8	6.0	5.3	6.0	5.0	(5.8)	5.5	4.0	3.4	2.8	3.0	3.1	2.9	3.2	3.3
19	3.5	3.5	3.5	3.5	3.3	3.1	3.3	3.1	4.4	4.8	5.8	(5.0)	7.8	5.4	5.5	6.2	4.9	3.5	2.8	2.6	3.7	3.6	3.4	3.7
20	3.6	3.9	4.0	3.9	4.2	3.3	3.8	3.4	5.1	5.9	6.0	6.1	6.0	6.0	5.5	5.9	5.2	(4.8)	(3.2)	3.3	3.6	3.7	4.2	4.3
21	4.2	4.2	4.3	4.0	3.2	3.3	2.8	2.9	4.8	6.2	7.5	7.0	6.7	7.3	7.5	7.8	7.3	5.4	5.1	3.7	(2.8)	3.2	3.5	3.7
22	3.8	3.6	3.5	3.4	3.4	2.3	2.0	2.0	4.2	5.4	(6.0)	6.1	6.4	6.7	6.6	7.0	5.4	3.5	2.4	2.2	1.9	1.7	1.7	2.3
23	1.6	2.1	1.8	1.7	1.6	1.5	1.6	1.9	3.7	5.0	7.7	5.9	7.0	7.0	7.1	7.1	5.8	4.7	3.8	3.2	(3.0)	3.2	3.3	3.4
24	3.4	3.2	2.8	2.8	2.2	2.2	1.9	1.8	4.3	5.9	6.0	6.2	6.0	6.0	5.8	5.0	4.4	4.2	3.6	2.5	(2.6)	2.6	2.8	2.5
25	2.4	2.8	2.9	2.9	2.1	1.9	1.7	2.0	4.2	5.0	6.8	6.8	6.5	7.2	7.6	6.1	5.0	3.7	3.3	2.8	2.6	2.7	3.0	2.8
26	2.8	3.0	2.9	2.7	2.2	(2.8)	2.1	2.1	4.4	5.3	7.0	7.9	6.2	6.0	7.2	6.1	5.8	5.2	4.4	3.4	2.8	2.8	(3.1)	3.3
27	3.4	3.4	3.6	3.6	3.5	3.2	2.0	2.2	4.4	(5.9)	6.2	6.5	5.9	5.3	6.5	5.7	5.2	4.3	4.2	3.7	2.8	2.0	2.6	2.6
28	2.7	2.9	(2.8)	3.0	2.9	2.4	2.4	2.6	4.4	6.3	5.9	5.7	6.0	5.7	5.8	4.9	5.3	4.3	3.7	3.0	2.7	2.4	2.3	2.7
29	3.5	3.6	3.2	3.2	2.8	2.2	2.5	2.8	4.6	6.5	6.3	6.2	5.8	6.0	6.3	5.4	4.7	4.1	(3.0)	2.8	2.7	2.6	2.9	3.1
30	3.8	3.6	3.7	3.6	3.1	3.1	2.6	2.5	4.6	5.3	7.0	5.6	5.9	5.4	6.6	5.6	5.0	3.8	2.8	2.7	3.0	2.2	2.5	2.8
31	2.9	3.2	3.0	3.0	2.7	2.3	2.7	2.8	4.8	6.0	6.1	6.0	6.3	6.6	5.7	5.4	4.5	3.3	3.0	2.8	2.8	2.8	2.5	3.0
Median	3.2	3.2	3.2	3.2	3.1	3.0	2.6	2.7	4.6	5.8	6.0	6.8	6.4	6.0	6.4	5.8	5.2	4.2	3.5	3.1	3.0	2.8	2.9	3.1
Count	30	30	31	31	31	31	31	31	31	31	31	30	30	30	30	30	30	29	30	29	29	29	29	30

Sweep Mc to Mc in min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

IONOSPHERIC DATA

(Characteristic) , (Unit) November (Month), 19 43

(Institution)

Observed at Kodiak

Lat. , Long. Mean Time

Scaled by: ,

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.3	3.3	3.4	(3.4)fq	(3.1)fq	(2.8)fq	[2.5]	3.8	4.9	5.9	5.9	6.7	6.5	6.5	6.1	6.3	6.1	5.1	4.4	3.9	3.3	2.7	[2.5]	[2.3]
2	(2.6)fq	(3.7)fq	2.3	2.3	2.3	1.9	1.9	4.3	6.2										4.6	4.1	3.5	3.4	3.6	3.5
3	3.4	3.3	(3.1)fq	(2.9)fq	(2.6)fq	[2.1]	(2.7)fq	4.0	4.8	5.4	6.1	6.7	7.2	6.8	6.4	6.3	6.3	5.0	4.8	3.9	3.0	2.9	2.7	2.8
4	2.9	3.4	3.3	3.3	(3.1)fq	(2.7)fq	[2.2]	4.5	6.7	6.7	7.5	7.9	7.9	7.3	(7.3)	(7.3)	(6.5)	5.1	4.7	4.3	3.0	2.8	3.0	3.0
5								(5.3)	6.5	(7.0)	6.6	7.6	7.2	(7.2)	6.9	(7.0)	6.5	5.5	4.1	4.1	3.4	2.8	3.0	3.0
6	2.8	3.0	3.0	3.0	(2.6)	(2.7)	3.0	4.9	6.6	7.3	7.0	7.3	7.3	6.8	7.7	7.0	6.3				4.2	3.5	3.6	3.8
7		3.8	3.9	4.0	3.5	3.5	3.4	5.2	6.4	(7.0)	6.8	7.3	7.7	7.1	6.8	6.4	6.6	(5.6)	(5.2)	(5.4)	4.6	3.9	3.8	3.8
8	3.6	3.8	3.6	3.9	4.2	3.5	2.9	4.8	(7.2)	(7.5)	(7.4)	8.4	(9.5)	7.8	7.6	7.4	5.7	4.8	4.3	4.2	3.9			
9			3.4	3.6	3.3	3.0	2.8	4.3	5.9	6.7	7.7	7.5	8.1	7.0	6.9	7.2	5.9	4.9	4.9	3.7	2.8	(2.6)	3.0	(3.0)
10	3.0	(3.1)	3.0	2.4	2.1	2.4	2.1	2.1	5.4	6.0	6.9	(7.3)	(7.2)	(6.5)	7.0	7.1	6.7	6.5	5.0	3.6	3.0	2.7	2.5	2.8
11			3.4			2.8	3.0	4.6	(6.0)	6.7	6.6	7.3	6.8	7.4	7.3	(7.2)	6.3	5.3	4.8	3.8	(3.3)	(2.9)	(3.5)	(3.0)
12	(3.3)	(3.3)	3.4	3.4	3.7	3.4	3.5	(3.6)fq	(6.1)fq															
13																								
14											5.8	7.3	6.3	6.7	6.4	6.4	6.3	4.8	4.3	3.9	(3.6)	(3.3)	(3.0)	3.2
15	3.0	3.3	3.5	3.4	3.4	3.4	(2.8)							6.1	6.4	6.4	5.7	4.9	4.1	3.5	3.0	3.0	3.2	3.2
16	3.3	3.1	3.2	3.0	3.0	2.3	1.9	3.6	4.9	5.8	7.1	6.5	7.2	6.3	6.1	6.3	5.1	3.2	3.2	3.0	2.8	2.8	2.8	3.2
17	3.0	2.8	2.8	2.8	2.8	2.7	2.8	2.8	4.2	5.7	6.3													
18													6.6	6.3	5.8	5.0	4.6	3.8	3.4	3.6	3.5	3.3	3.3	3.5
19	3.3	3.3	3.4	3.3	3.5	3.0	2.7	3.6	4.5	5.1	5.8	6.8	6.7											
20																					3.4	3.6	3.4	3.2
21	3.2	3.2	2.8	2.8	2.8	2.8	2.5	4.1	4.5	5.6	6.4	6.8	6.4	6.0	6.7	5.4	5.2	4.2	4.8	3.3	3.1	2.7	2.8	3.2
22	3.3	3.3	3.7	3.4	3.0	2.6	2.5	3.4	4.7	6.0	(5.6)	6.2	6.9	6.1	6.0	6.3	5.2	3.8	3.4	2.7	3.0	2.8	3.1	3.3
23	3.4	3.6	3.6	3.5	3.1	3.0	2.9	3.6	5.1	6.0	6.3	7.8	7.0	6.5	6.6	6.1	6.2	5.8	4.5	3.6	3.5	3.5	3.2	3.3
24	3.4	3.2	3.1	3.0	2.9	1.9	2.0	2.6	3.8	4.2	4.7	4.8	5.0	4.9	5.2	4.8	4.8	3.9	4.1	3.5	2.9	1.8	3.1	3.2
25	3.3	3.5	3.5	2.4	2.7	2.5	2.4	2.9	4.7	5.8	6.6	7.4	8.0	7.0	7.8	6.8	6.3	4.2	3.7	3.4	(4.8)	3.6	3.2	2.9
26	3.3	3.5	3.5	3.5	2.3	1.9	1.8	3.5	4.8	6.2	7.1	7.8	6.5	7.5	8.5	6.3	5.8	4.7	3.4	2.9	3.0	3.0	3.3	3.4
27	3.2	3.3	3.3	3.3	3.0	2.5	2.0	3.2	5.2	6.6	7.2	8.1	7.0	6.9	7.0	6.0	6.4	3.8	4.0	3.7	2.8	(2.8)	(2.8)	(3.0)fq
28	3.0	(3.0)fq	(2.8)fq	(2.9)fq	(2.7)fq	2.3	2.3	(2.9)fq	(5.2)	6.2	(7.3)	7.9	(7.3)	7.3	(7.5)	7.0	(6.3)	4.8	(3.8)	4.1	2.9	2.8	2.9	3.0
29	3.0	2.9	2.9	2.8	2.5	2.8	1.9	3.0	5.0	5.9	6.6	7.9	8.0	8.4	6.3	7.0	5.5	4.0	3.0	3.4	2.6	2.7	2.4	2.7
30	3.3	3.2	3.4	3.4	3.0	3.0	1.8	3.0	5.1	5.8	7.3	7.6	7.1	7.2	6.8	6.6	5.8	4.4	3.4	3.5	2.8	1.9	2.0	2.6
31																								
Median	3.3	3.3	3.4	3.3	3.0	2.7	2.5	3.6	5.1	6.0	6.6	7.3	7.2	6.8	6.8	6.4	6.0	4.8	4.2	3.6	3.0	2.8	3.0	3.0
Count	23	23	24	24	24	25	25	25	25	23	24	23	24	24	24	24	24	23	24	24	24	25	25	25

Sweep Mc to Mc in min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

IONOSPHERIC DATA

(Characteristic) , (Unit) , October (Month) , 1942

(Institution)

Observed at Kirkhill

Lat. , Long. .

Mean Time

Scaled by: ,

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.9	3.7	3.7	3.6	3.4	3.3	3.7	5.2	5.8	6.3	6.2	6.3	6.7	6.7	6.5	6.7	6.7	6.1	5.8	5.7	5.0	4.8	4.8	4.0
2	3.8	3.6	3.6	3.8	3.3	3.4	3.9	4.8	5.5	5.7	6.3	6.8	7.4	7.8	7.9	8.8	8.7	7.4	8.8	6.8	5.8	5.4	4.6	3.4
3	3.6	3.4	3.4	(3.0)	2.5	2.2	2.5	3.4	3.8	4.2	4.4	4.4	4.5	4.7	4.8	4.8	4.8	4.8	5.4	5.6	4.3	3.7	3.2	3.0
4	2.6	2.7	2.6	2.3	2.2	1.8	2.8	3.6	3.8	4.4	4.4												2.6	2.8
5	3.1	2.8	2.7	2.7	2.4	2.0	2.8	3.6	4.0	4.7	5.4	5.4	5.8	5.9	5.8	6.0	5.8	5.6	5.2	5.2	4.5	3.0	2.7	2.6
6	2.6	2.6	2.6	2.6	2.6	(2.0)	2.9	4.3	4.7	4.8	5.3	6.2	5.4	5.7	5.2	5.4	(5.0)	5.4	5.8	5.9	5.1	3.7	3.3	2.8
7	3.0	3.0	3.1	2.9	2.3	2.0	2.9	4.2	4.8	4.8	5.3	5.3	5.4	5.4	5.8	(5.6)	5.8	5.2	6.0	5.7	4.4	3.9	3.1	2.9
8	3.0	3.3	3.4	3.2	3.4	(3.1)[6]	(2.8)[6]	4.2	(4.6)	4.9	5.1	(5.5)	5.6	5.4	5.1	5.8	5.9	4.8	4.8	4.3	4.0	2.9	3.0	3.3
9	3.0	2.8	2.8	2.7	2.5	2.2	4.2	5.2	5.8	5.9	6.1	5.9	6.0	6.6	6.4	6.0	6.2	5.5	6.2	5.4	4.9	4.0	3.8	3.4
10	3.4	3.3	(3.3)	3.4	3.3	3.0	4.3	5.2	5.5	6.8	6.8	6.2	5.7	7.1	4.4	6.7	6.8	6.4	5.8	6.0	5.3	4.0	3.6	3.5
11	3.5	3.6	3.5	3.4	3.0	2.4	3.2	4.8	5.7	6.4	6.7	6.7	6.1	6.6	6.3	7.3	7.6	6.4	6.6	7.0	5.7	5.1	4.1	3.8
12	3.9	3.8	3.6	3.6	3.2	2.5	3.8	5.7	7.6	6.8	7.4	8.3	6.6	7.3	6.4	8.3	8.2	6.6	6.2	5.0	4.6	3.7	3.8	3.6
13	3.5	3.4	3.2	2.9	2.4	2.3	3.5	4.4	6.1	5.8	4.6	7.8	8.0	7.6	7.0	6.8	7.2	7.0	6.0	5.0	4.7	4.5	4.0	4.0
14	3.9	3.8	3.5	3.4	(3.1)	2.4	3.0	4.4	4.9	5.4	6.0	6.2	6.2	6.1	5.7	6.8	5.8	6.2	5.9	5.4	4.7	3.6	3.1	2.9
15	2.8	3.0	3.2	2.9	2.5	1.9	4.0	4.5	5.0	5.1	5.0	5.8	5.5	5.3	5.3	5.8	5.8	6.0	6.5	6.0	5.2	3.6	3.0	3.2
16	3.2	3.2	3.2	3.1	2.8	2.2	2.8	4.0	4.5	5.2	(5.2)	5.6	6.4	6.6	6.2	6.3	6.0	5.7	5.3	5.4	4.2	3.2	2.7	3.0
17	3.4	3.4	3.2	3.1	3.1	2.4	(2.5)	4.8	5.4	6.0	6.5	6.2	(6.2)	6.3	5.6	6.0	6.5	6.6	6.2	5.9	4.2	3.4	3.3	3.4
18	3.5	3.5	3.6	3.5	3.0	2.0	3.0	4.4	4.9	5.1	5.5	6.2	6.9	6.7	5.7	6.1	5.8	5.4	5.8	5.3	5.0	3.5	2.4	3.7
19	3.6	3.8	3.2	3.0	2.6	2.2	2.3	3.4	4.4	4.8	5.6	5.5	5.6	6.0	5.7	5.7	5.4	5.2	5.4	4.5	3.9	3.0	2.7	2.9
20	2.9	3.2	3.2	3.6	2.3	1.6	2.2	4.8	4.8	5.1	6.0	6.6	6.6	5.7	5.8	6.2	6.0	4.8	6.2	4.2	3.9	3.7	(3.6)	3.0
21	3.3	2.9	2.9	2.9	2.9	(2.0)	3.4	5.4	6.0	6.0	6.0	7.8	6.8	6.0	6.2	6.6	6.4	5.7	5.7	4.5	3.8	2.7		
22	3.5						2.6	4.4	5.4	5.8	6.4	6.6	6.7	5.8	6.0	6.8	6.3	5.7	4.8	4.5	3.8	3.5	3.5	3.4
23	3.5	3.7	3.6	3.6	3.6	3.3	3.1	5.0	5.5	6.8	6.4	6.8	6.7	6.6	6.6	6.4	7.0	5.9	4.6	4.3	4.3	3.6	3.7	3.6
24	3.5	3.7	3.6	3.4	3.4	3.0	3.1	4.7	5.3	6.4	6.9	7.2	6.8	6.0	5.7	6.0	6.5	5.3	4.2	4.0	3.6	3.5	3.6	
25				3.6	3.3	3.4	2.8	4.8	6.1	7.5				5.9	6.0	6.6	6.8	6.4	6.3	6.5	3.6	3.1	3.1	3.3
26	3.3	3.5	3.7	3.6	3.6	3.7	2.8	4.7	6.0	7.3	6.9	7.7	7.2	6.8	6.5	7.2	7.3	6.8	5.2	4.8	4.0	3.4	3.4	3.6
27	3.6	3.8	4.0	3.8	4.0	4.2	(3.0)	4.5	5.1	6.7	5.9	6.7	7.2	6.9	6.4	6.4	6.2	4.9	4.8	4.9	4.0	4.0	3.5	3.4
28	3.8	4.1	4.0	3.9	4.0	3.9	3.5	4.7	5.6	6.0	7.2	6.7	6.8	6.2	7.0	7.6	6.4	6.9	6.6	5.8	5.3			
29							2.6	3.8	3.7	4.5	4.9	4.8	4.3	4.4	4.3	4.3	4.1	(3.6)	3.2	3.0	2.5	2.2	2.2	2.2
30	2.2	2.3	2.2	2.0	1.8	1.7	2.3	4.4	5.6	6.9	7.3	6.1	6.8	6.4	6.7	7.1	6.1	5.2	4.6	3.6	3.1	2.8	2.8	3.0
31	2.8	2.8	(3.2)[6]	(3.3)[6]	(2.8)[4]	(2.8)[6]	(3.0)[6]	4.8	5.3	5.5	6.6	7.1	7.1	6.1	7.1	6.3	5.3	5.2	4.1	4.0	(3.2)	(2.8)[6]	2.9	(3.3)[6]
Median	3.4	3.4	3.2	3.2	3.0	2.4	3.0	4.5	5.1	5.8	6.0	6.2	6.6	6.2	6.2	6.4	6.4	5.7	5.8	5.2	4.3	3.5	3.3	3.3
Count	28	28	28	29	29	29	31	31	31	31	30	29	29	30	30	30	30	30	30	30	30	29	29	28

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

IONOSPHERIC DATA

(Characteristic) , (Unit) December (Month) , 1941

Observed at Kwajalein (Institution)

Lat. , Long. Mean Time

Scaled by: ,

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.0	(3.2)	3.2	3.2	3.8	4.2	4.3	4.6	5.9	7.3	7.8	8.8						4.6	3.7	4.0	4.2	4.3	3.2	2.8
2	2.3	2.2	2.1	2.3	2.0	1.8	1.6	3.0	5.8	6.8	7.8	7.8	7.8	7.1	7.6	7.3	6.9	5.4	5.4	2.9	2.1	1.9		
3								(3.7)	5.2	6.7							5.6	3.7	(3.0)	2.7	2.4	2.6	2.4	2.6
4	2.5	2.5	2.5	2.2	2.2	2.0	(1.9)	4.1	6.0	6.7	8.4	7.8	7.8	8.2	8.3	(8.6)							2.8	2.8
5	3.1	3.2	3.1	2.4	2.2	2.1	2.1	3.4	6.5	7.6	7.3	7.4	8.0	8.0	7.8	7.0	7.0	5.0	4.3	3.6	3.2	3.0	2.8	3.2
6	3.0	3.2	3.0	3.1	2.5	2.5	2.3	2.3	6.0	7.4	(7.4)	8.2	7.8	(7.4)	7.0	8.6	6.6	4.7	4.7	3.0	2.4	2.4	2.6	2.7
7	3.0	3.0	3.0	2.9	2.7	2.8	2.7	3.6	5.9	7.6	7.3	6.8	(7.5)	(7.6)	7.8	7.2	6.7	3.9	4.1	4.0	2.6	2.4	2.1	2.3
8	3.2	4.0	3.4	3.2	2.8	3.0	2.2	2.1	6.2	7.1	6.9	8.5	7.2	(7.7)	(6.4)	7.8	6.4	4.6	4.0	3.5	3.0	2.2	2.6	2.9
9	2.8	3.2	3.2	3.2	3.4	3.2	2.4	3.0	6.0	6.6	6.8	7.8	(8.5)	7.2	7.5	7.5	6.9	5.4	3.4	2.8	2.4	2.8	2.9	3.1
10	2.9	3.6	3.7	3.6	3.2	(3.2)	3.2	3.4	6.0	7.1	7.0	8.2	7.3	7.5	7.8	6.9	6.2	4.9	(3.2)	2.8	2.6	2.6	3.0	3.2
11	3.2	3.2	3.4	3.5	3.3	3.6	2.8	3.2												4.3	2.9	2.8	2.4	2.5
12	2.4	2.5	2.7	2.6	2.2	2.2	2.5	3.0	5.3	6.0	6.8	6.8	7.2	7.0	6.6	6.6	6.8	5.6	3.7	3.5	3.4	2.9	2.7	2.9
13	3.2	3.5	3.7	3.9	3.7	3.5	3.3	3.3	5.5	6.6	7.2	7.2	8.1	6.3	6.7	7.1	6.7	6.1						4.0
14	3.9	3.7	3.8	3.4	3.1	2.9	2.3	2.8	4.5	6.0	7.3	7.3	8.0	7.8	8.4	7.6	5.4	4.3	3.7	3.7	2.6	2.3	2.2	2.4
15	2.4	2.6	3.9	3.7	3.6	3.1	2.4	3.0	4.8	6.8	6.7	6.6	(6.5)	6.4	7.2	7.0	5.6	6.4	4.2	3.7	3.0	2.6	2.6	2.8
16	3.0	3.0	3.2	2.8	2.6	2.6	2.7	2.9	6.4	6.8	6.2	7.8	7.5	7.3	7.5	7.1	6.0	4.6	3.8	3.6	3.0	2.5	2.8	3.2
17	3.3	3.3	3.4	3.4	3.1	2.7	2.8	2.9	5.4	(7.0)	6.9	7.0	7.8	6.2	7.4	6.8	5.4	4.6	4.2	3.6	3.7	3.6	3.4	3.2
18	3.0	2.9	3.5	3.5	3.1	3.4	3.4	3.3	5.1	6.8							5.9				4.4	4.3	3.5	3.5
19	3.7	3.6	3.5	3.8	3.6	3.0	3.9	2.6	5.3	5.8	7.3	7.3	7.6	6.8	7.7	7.4	6.5	4.3	4.7	3.5	2.8	2.9	3.0	3.5
20	3.7	3.7	3.6	3.8	3.7	2.6	2.8	3.0	4.8	5.9	7.2	7.5	(6.9)	7.6	7.1	7.6	5.4	4.6	(3.5)	3.1	2.6	2.7	3.1	3.5
21	3.6	3.6	3.7	3.8	3.4	3.6	6.4	7.0	7.4	7.7	(8.4)	7.8	8.0	(7.4)	7.8	6.8	5.2	4.2	2.8	3.5	2.9	2.6	3.0	3.4
22	3.4	3.8	3.6	3.4	3.4	3.2	3.0	3.0	4.6	6.8	(7.8)	8.0	7.0	6.8	6.8	7.7	6.5	5.4	3.7	3.4	3.4	3.1	3.6	3.9
23	3.6	3.6	3.8	3.6	3.6	3.7	2.9	2.9	5.1	(7.2)	7.4	78.6	7.0	6.0	(7.8)	7.0	6.3	5.4	5.0	5.0	3.5	3.5	3.8	3.7
24	4.1	4.4	4.4	4.2	4.0	3.6	3.2	3.5	6.3	6.5	7.3	7.4	6.4	7.8	7.2	(6.5)	6.6	4.7	3.9	3.8	3.5	3.8	3.7	3.7
25	4.2	4.0	4.1	4.0	4.0	3.8	3.4	3.7	5.5							5.9	5.9	4.6						
26														7.1	6.0	(5.8)	6.2	6.7	5.3	3.9	3.6	3.4	3.2	3.3
27	3.5	3.6	3.5	3.5	3.5	3.6	2.1	2.4	(4.0)	7.2	7.5	7.9	7.5	7.9	7.6	7.2	6.0	5.6	4.5	3.8	3.6	3.0	3.1	3.4
28	3.2	3.3	3.2	3.2	3.0	3.4	2.8	2.6	5.0	7.8	7.8	6.9	6.8	7.8	6.5	8.2	6.4	5.3	5.1	3.8	3.2	3.1	3.6	3.6
29	3.6	4.0	3.7	3.7	3.6	3.6	3.0	3.5	5.0	7.1	7.6	7.6	6.4	(8.3)	7.4	6.5	6.4	5.0	5.3	3.5	3.3	3.0	3.4	3.4
30	3.5	3.7	3.6	3.6	3.7	3.9	3.6	3.0	5.6	6.7	7.2	(7.8)	7.0	7.8	7.6	6.2	6.2	4.4	3.7	3.6	(2.8)	3.0	3.0	3.5
31	3.4	3.4	3.0	3.4	3.2	3.1	2.9	2.8	4.8	6.6	7.8	(8.2)	6.8	7.5	6.7	6.5	(6.0)	4.2	4.5	3.7	3.3	3.3	3.4	3.3
Median	3.2	3.4	3.5	3.4	3.2	3.2	2.8	3.0	5.4	6.8	7.3	7.8	7.5	7.4	7.4	7.1	6.2	4.8	4.0	3.6	3.0	2.9	3.0	3.2
Count	29	29	29	29	29	29	29	30	29	29	26	26	25	26	26	27	28	28	26	27	28	28	28	29

Sweep Mc to Mc in min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

IONOSPHERIC DATA

_____ (Characteristic), _____ (Unit), November (Month), 1941

Observed at Kodiak

Lat. _____, Long. _____ _____ Mean Time

_____ (Institution)

Scaled by: _____, _____

Calculated by: _____, _____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.5	3.3	3.2	2.9	1.7	1.7	2.0	3.2	3.8	4.1	4.3	4.7	4.6	4.6	4.4	5.0	4.7	4.0	2.9	2.6	2.0	1.8	1.6	1.6
2	1.6	1.4	1.5	1.3	2.1	2.2	1.9	3.9	4.4	4.9	5.1	5.7	5.3	5.8	6.1	5.7	5.6	4.8	4.1	3.3	2.5	2.5	2.3	2.2
3	2.0	2.1	2.1	2.3	2.1	1.9	2.4	4.6	5.9	6.6	7.6	8.5	7.2	6.5	7.0	7.1	7.2	6.6	7.9	5.6	3.4	2.4	2.5	2.6
4	2.6	2.7	2.8	2.9	2.8	3.0	2.1	4.7	7.3	8.0	8.4	8.7	8.6	6.6	8.1	8.3	8.2	7.2	5.2	4.2	3.6	2.7	2.7	2.9
5	3.2	3.3	3.4	3.3	3.2	3.0	2.7	5.7	[6.3]	[7.0]	7.8	8.7	9.6	8.6	8.3	7.7	7.3	6.9						
6											79.8	79.8	9.2	9.2	9.3	8.7	8.2	6.9	6.0	4.7	4.7	4.5	4.6	4.5
7	4.3	3.9	3.8	3.9	3.6	3.3	2.5	5.2	6.8	8.1	8.8	9.3	9.0	7.6	8.7	[7.9]	[6.7]	5.6	4.9	4.6	3.7	3.1		
8				2.6	1.9	1.9	2.0	3.9									7.0	5.7	4.5	4.3	3.4	3.0	2.6	3.0
9	2.9	2.9	2.9	3.0	2.8	2.6																		
10									6.7	7.5	7.5	7.8	7.2	7.3	8.4	7.7	7.5	6.8	6.8	4.6	2.9	3.2	3.5	3.2
11	3.3	3.4	3.3	3.4	3.0	2.6	2.7	5.0	7.2	6.6	7.2	8.9	8.8	8.6	9.3	8.4	6.5	5.7	4.2	3.3	3.2	3.1	2.8	2.9
12	3.0	3.3	3.3	3.3	2.9	2.8	2.1					7.6	7.3	7.8	8.2	7.3	6.5	5.0	5.1	4.5	3.0	2.5	2.7	2.8
13	3.0	3.2	3.1	3.0	[2.9]	[2.5]	[2.9]	4.5	6.5	7.3	[7.8]	[8.4]	7.7	8.4	8.4				3.8	4.0	3.6	3.5	2.8	2.8
14	2.8	3.1	3.2	2.8	2.8	3.1	2.8	4.6	6.4	7.7	8.7	8.1	6.8	7.4	8.1	6.4	5.7	4.6	3.4	2.9	2.7	2.9	3.0	3.2
15	3.2							4.5																
16		[3.0]	[3.0]	[2.8]	[2.4]	[2.6]	[2.9]	5.4	6.6	[6.8]	7.3	[7.1]	[6.7]	6.3	6.5	6.5	6.4	4.7	5.7	4.2	3.3	3.1	3.5	3.6
17	3.8	3.9	4.2	3.6	3.9	3.2	[3.0]	3.5																
18									5.3	7.6	8.6	8.5	8.3	7.8	8.4	8.3	6.8	4.8	4.3	3.7	3.2	3.1	3.2	3.4
19														7.6	[7.3]	7.1								
20		[3.1]	[2.9]	[2.8]	[2.5]	2.7	2.7	2.6	[5.6]	[6.6]	[7.4]							5.1	4.5	[3.4]	[3.2]	2.6	2.5	2.9
21	2.6	3.0	3.1	2.5	2.2	2.3	1.9	3.6	5.9	7.2	7.2	7.3	7.7	7.7	7.4	7.5	5.8	4.9	4.2	3.3	3.2	2.7	3.1	3.2
22	3.1	3.2	3.1	3.1	2.7	2.1	2.1	2.5	6.1	7.1	6.9	7.8	6.9	7.8	7.4	7.8	5.8	5.8	4.3	3.7	2.9	2.7	3.0	3.0
23	3.0	3.5	3.7	3.5	2.2	1.6	1.9	4.9	6.4	7.4	6.1	79.7	5.7	8.1	8.6	8.1	7.0	6.3	3.4	3.6	3.2	2.5	2.6	2.8
24	2.8	3.1	3.0	2.9	3.2	2.9	2.1	3.5	5.7	7.8	7.9	8.8	79.7	7.7	7.4	7.5	6.5	4.7	3.2	3.1	3.0	[3.2]	3.4	3.8
25	3.8	4.1	4.1	3.7	4.2	3.8	[3.0]	[3.6]	5.9	7.5	7.3	[7.5]	7.7	7.5	6.8	6.7	6.3	5.1	4.5	4.3	3.1	[3.0]	[3.2]	3.1
26	3.5	3.6	3.5	3.4	3.0	3.1	3.1	4.1	7.1	7.7	8.6	8.5	8.0	8.7	8.3	7.5	7.5	6.5	5.3	4.7	4.6	3.9	3.9	4.0
27	4.2				3.3	3.1	2.9	3.7	7.1	7.7	8.5	8.6	8.0	8.5	8.1	7.5	7.5	7.4	4.7	4.7	4.6	3.9	3.8	4.0
28	4.2	4.6	4.6	3.9	3.2	3.1	3.5	4.1	[5.4]	[7.8]						7.5	7.9	7.4	7.5	5.7	4.7	5.1	4.3	4.6
29	4.7	4.5	3.9	4.6	3.5	2.0	1.9	3.0	5.8	6.2	7.3	7.7	7.9	8.2	8.3	8.0	6.9	5.7	4.5	3.5	2.6	2.6	2.5	2.4
30	2.4	2.4	2.2	2.1							7.7	7.9	7.8	7.8	7.8	7.1	6.4	5.5	3.8	3.3	2.9	2.7	2.5	2.8
31																								
Median	3.1	3.2	3.2	3.0	2.8	2.6	2.5	4.1	6.4	7.4	7.7	8.4	7.8	7.8	8.1	7.5	6.6	5.7	4.5	4.0	3.2	3.0	2.9	3.0
Count	23	23	23	24	24	24	23	23	22	22	23	23	23	24	24	24	24	25	25	25	25	25	24	24

Sweep _____ Mc to _____ Mc in _____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) October (Month) , 19 41

Observed at Kodiak

Lat. , Long. Mean Time

(Institution)

Scaled by: ,

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	4.2	4.2	4.4	4.4	3.8	3.5	4.4	5.5	6.4	7.3	7.2	8.1	8.2	7.5	7.6	7.8	9.1	9.4	8.1	6.7	5.6	5.0	4.8	4.8
2	4.6	4.6	4.4	4.3	4.3	3.8	4.9	6.6	7.1	8.0	7.9	8.8	8.1	8.0	7.9	8.0	8.0	8.4	8.1	6.8	5.8	4.4	4.0	4.0
3	4.0	3.8	3.8	3.8	3.3	2.8	4.2	5.7	6.6	7.8	7.4	8.0	(8.4)	8.0	8.1	8.2	7.6	7.8	7.4	6.9	6.5	5.4	4.6	4.2
4	4.2	4.2	4.2	4.1	4.0	3.6	4.2	6.3	7.1	7.8	7.7	8.0	8.2	8.6	7.6	7.2	7.7	8.1	8.1	7.3	5.9	(5.0)	4.9	4.6
5	4.6	4.4	4.4	4.1	4.2	(4.1)	5.0	6.8	7.3	7.9	8.9	9.2	>9.8	>9.8	>9.8	9.3	8.4	8.1	7.7	6.6	6.6	5.8	5.4	4.5
6	4.0	3.9	4.0	3.9	3.8	4.1	4.5	6.4	6.9	7.6	8.7	8.7	(9.3)	9.2	9.0	7.9	7.8	8.6	8.0	7.8	6.5	5.6	4.6	4.7
7	4.7	4.6	4.6	4.7	4.7	4.4	4.5	6.4	7.9	8.8	7.6	8.2	8.8	8.2	8.9	(8.9)	8.7	8.1	6.7	7.0	5.6	6.0	5.4	5.4
8	5.0	4.8	4.8	4.7	4.6	4.2	4.6	6.1	6.4	7.8	8.1	8.8	8.9	9.1	9.4	9.6	9.8	8.2	6.6	5.8	5.2	5.0	4.9	4.8
9	5.0	4.8	4.6	4.5	4.1	3.6	4.2	5.9	6.2	7.7	8.3	7.3	7.5	7.7	7.8	8.0	8.8	9.0	7.2	6.4	5.1	4.7	4.7	4.4
10	4.3	4.1	4.3	4.0	3.7	3.5	4.5	6.0	6.8	7.1	8.1	7.6	8.1	8.1	8.0	7.9	9.2	9.6	7.6	7.2	4.8	5.2	4.8	5.1
11	4.8	4.7	4.8	4.5	3.9	3.6	3.6	5.4	5.7	5.9	6.0	7.1	7.6	8.6	8.8	7.9	7.8	7.4	6.6	6.6	4.7	4.6	4.7	4.8
12	4.5	4.3	4.3	4.0	3.7	3.8	3.5	4.4	5.9	6.8	8.0	8.2	7.5	8.7	8.5	7.9	7.6	6.8	7.2	7.2	5.6	4.3	3.8	3.6
13	3.8	3.9	3.8	3.8	3.6	3.2	3.6	4.0	5.8	6.6	7.2	7.2	7.5	8.1	7.4	7.4	7.6	7.3	6.5	6.8	5.3	4.3	3.3	3.8
14	3.4	3.6	3.6	3.4	3.4	3.1	4.1	5.8	6.5	7.8	8.0	8.8	9.3	8.2	8.3	8.8	8.2	7.5	7.5	6.5	5.2	3.9	3.9	3.9
15	4.0	3.7	3.7					4.8	5.9	5.7	6.4	6.8	7.2	7.6	6.8	7.1	7.0	6.8	6.6	6.4	5.2	4.6	4.3	3.9
16	3.9	3.8	3.7	3.6	3.4	2.2	2.9	4.6	5.4	5.6	6.3	7.1	7.2	6.8	7.5	7.8	8.2	7.9	6.5	6.6	4.4	3.6	3.2	3.3
17	3.4	3.8	3.5	3.5	3.4	2.7	3.4	5.6	6.0	7.3	7.1	8.3	8.2	7.4	7.8	7.6	6.8	6.8	6.0	6.3	5.2	4.6	4.2	3.6
18	3.6	3.7	3.6	3.7	3.6	3.5	4.2	5.8	7.3	7.3	8.6	8.7	8.4	8.4	7.8	8.6	8.6	7.4	6.5	6.8	6.0	4.8	4.6	4.8
19	4.7	4.3	4.3	4.3	4.0	2.5	3.1	5.1	6.4	7.3	7.6	7.6	8.3	7.8	8.2	7.8	7.3	6.7	6.3	6.1	4.7	4.9	4.6	4.9
20	4.2	4.3	4.2	3.8	4.1	3.2	3.4	6.0	7.4	8.5	8.6	9.2	9.6	9.4	9.4	8.7	8.2	7.0	6.3	6.3	4.4	3.8	3.6	3.7
21	3.7	3.8	3.8	3.7	3.7	2.8	3.3	6.2	8.6	8.7	8.3	9.3	8.9	8.7	9.3	9.0	8.9	7.2	5.8	5.5	4.3	3.1	3.4	3.4
22	3.4	3.4	3.4	3.3	3.3	3.1	3.6	5.7	7.4	7.9	9.3	>9.8	>9.8	9.1	8.8	>9.8	>9.8	8.8	7.7	5.1	4.9	4.6	4.7	4.4
23	4.0	3.1	2.6	2.6	2.2	2.0	2.7	4.2	5.1	5.8	6.4	7.3	7.3	7.5	8.0	8.2	8.6	7.5	5.8	5.5	3.4	3.1	3.2	3.2
24	3.1	3.2	2.9	2.9	2.7	2.1	2.8	4.7	5.8	6.2	7.4	>9.8	8.9	7.6							(3.4)	(3.2)	(3.2)	
25					(3.1)	2.4	2.7											(7.4)	6.5	6.9	4.5	3.8	3.7	3.8
26	3.8	3.7	3.8	3.5	3.8	3.4	(3.4)	5.7	7.1	7.3	(7.4)	8.7	8.5	7.3	8.2	9.4	8.7	6.8	6.0	5.4	4.8	4.7	4.4	4.4
27	3.9	3.6	3.6	3.4	3.3	2.7	3.0	4.9	7.4	7.9	8.7	8.2	7.8	8.0	8.1	8.6	8.1	6.9	6.5	6.4	4.6	3.2	3.1	3.1
28	3.1	3.2	3.4	3.4	3.5	3.3	2.4	5.3	7.1	6.4	7.8	9.1	7.8	6.7	8.0	6.3	8.5	7.3	7.5	5.6	3.7	3.4	3.1	3.0
29	3.3	3.2	3.2	3.2	2.9	2.9	2.8	5.0	6.0	7.0	7.9	9.1	8.6	7.7	7.3	8.5	7.4	6.0	5.6	4.9	4.2	3.0	3.0	3.1
30	3.4	3.5	3.3	3.2	3.4	3.4	3.2	5.2	6.3	7.3	7.6	8.7	8.0	7.1	7.3	8.2	7.8	6.5	5.5	4.6	4.6	3.1	3.0	3.3
31	3.4	3.5	3.5	3.3	3.3	3.2	2.8	5.2	7.3	7.7	9.0	7.4	7.2	7.3	7.4	7.7	7.9	8.5	7.2	5.5	4.8	3.8	4.4	3.7
Median	4.0	3.8	3.8	3.8	3.6	3.2	3.6	5.7	6.6	7.3	7.8	8.8	8.2	8.0	8.0	8.2	8.2	7.4	6.6	6.4	5.8	4.6	4.3	4.0
Count	30	30	30	29	30	30	30	30	30	30	30	30	30	30	29	29	29	30	30	30	30	31	31	30

Sweep Mc to Mc in min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic), (Unit), Dec (Month), 1940

Observed at Kochel

Lat. ____, Long. ____ ____ Mean Time

(Institution)

Scaled by: ____, ____

Calculated by: ____, ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	(3.8)	4.0	4.2	4.1	3.7	3.4	2.4	3.5	6.0	7.5	7.6	6.9	8.8	(7.3)	7.9	6.6	(6.7)	4.6	4.0	3.8	3.0	3.1	3.4	3.2
2	3.2	3.4	3.4	(3.2)	2.8	2.5	2.1	2.9	5.7	6.7	9.4	8.4	8.8	9.1	79.5	9.0	7.3	5.6	5.0	4.5	2.9	3.1	(3.3)	3.5
3	3.4	3.6	3.6	3.6	3.4	2.9	2.5	3.1	5.4	6.6	8.1	6.5	8.7	7.9	(8.3)	8.2	6.5	5.6	4.2	3.7	2.8	2.5	2.9	
4									5.4	7.5	8.7	8.1	8.0	8.2	7.3	8.3	6.7	(5.5)	5.3	4.5	3.5	2.5	2.5	2.6
5	2.6	2.8	3.2	3.6	4.6	3.7	3.0	3.9	6.1	7.0	7.8	6.4	8.3	(8.0)	7.2	7.9	7.4	5.5	4.4	4.6	(3.2)	2.9	(3.0)	3.4
6	3.6	3.6	3.7	3.6	3.6	3.6	3.4	(4.2)	(5.7)	6.6	7.2	8.7	(7.5)	19.0	8.2	7.6	6.6	4.8	3.8	3.6	3.4	3.3	(3.0)	3.4
7	3.4	3.6	3.9	3.8	3.4	3.3	3.7	4.0	6.4	6.5	7.6	7.4	6.1	7.9	7.6	7.0	6.5	4.7	4.0	3.7	3.2	3.1	3.3	3.6
8	3.2	3.7	3.9	4.2	3.9	4.0	4.0	3.6	5.6	(4.8)	7.6	8.1	7.6	8.2	6.4	7.6	6.6	4.3	4.4	3.8	(3.2)	2.6	2.9	3.1
9	3.3	3.6	3.6	3.6	3.4	3.4	3.6	3.8	6.4	7.5	8.9	78.8	78.9	79.5	7.3	7.6	7.3	6.6	(5.5)	4.4	3.9	3.4	(3.4)	3.8
10	4.0	4.2	4.2	4.5	4.1	3.8	(2.8)	3.8	6.3	7.2	79.5	79.3	8.2	(9.2)	8.0	7.9	(7.6)	(5.9	4.6	4.9	3.5	3.8	4.4	4.4
11	4.4	(4.4)	4.4	4.4	4.4	4.1	3.4	4.0	(6.4)	7.4	8.1	(9.3)	(9.4)	8.6	8.5	7.9	(6.7)	5.8	(5.7)	3.6	3.0	3.9	3.6	3.6
12	3.8	3.9	3.9	3.9	3.9	3.4	2.4	3.4	6.0	7.3	(8.4)	6.8	79.9	79.0	8.6	78.6	(6.8)	5.2	(5.7)	4.2				
13	3.8								5.9	(7.3)	(8.6)	79.5	(9.4)	(8.7)	(9.1)	7.6	8.1	4.4	3.8	4.2	(3.0)	(2.0)	2.5	3.0
14	3.8	3.2	3.2	(3.4)	1.9	3.0	3.4	4.0	6.1	7.0	(9.0)	(9.1)	9.0	8.1	(9.1)	8.3	7.4	6.3	(5.8)	2.8	2.6	(2.8)	3.3	3.4
15	3.6	3.9	3.7	3.6	3.2	2.6	2.5	3.4	5.7	7.6	(8.1)	77.1	8.6	7.6	(8.1)	8.0	7.5	6.9	5.0	3.6	2.2	2.6	2.6	(2.8)
16	72.9	73.1	72.9	(3.0)	2.6	2.6	2.4	(2.6)	5.0	6.5	8.0	7.9	8.2	7.6	7.9	7.0	7.8	6.4	4.3	4.3	3.5	2.9	(3.2)	3.2
17	3.5	3.5	3.6	3.4	(3.3)	3.3	3.3	3.4	5.4	6.9	7.7	7.9	8.9	8.2	8.6	(7.1)	8.4	4.9	4.4	2.9	2.8	2.6	2.8	2.8
18	2.8	3.2	(3.2)	(3.3)	2.7				5.4	(6.6)	7.5	(8.0)	8.6	7.0	9.0	(8.6)	6.3	4.6	3.4	3.2				
19													8.4	8.0				4.9	4.4	3.5	2.9	2.5	2.6	3.3
20	3.4	3.3	(3.5)	(3.5)	3.3	2.9	3.0	2.9	6.2	7.4	(9.4)	8.8	7.7	7.4	7.4	7.6	7.4	6.5	4.0	3.5	3.7	3.9	4.0	4.2
21	3.6	3.5	3.3	3.4	2.9	2.6	2.0	2.4	5.1	6.4	7.2	7.1	6.7	7.3	8.5	8.4	7.0	5.9	5.4	3.3	2.6	2.1	2.6	2.5
22	2.5	2.5	2.8	2.4	2.1	2.3	2.4								7.5	7.9	6.8	4.6	(3.8)	2.1	2.4	2.2	2.5	2.5
23	2.1	2.5	2.6	2.6	2.0	2.9	2.6	2.6	5.0	5.9	(6.7)	8.2	6.9	6.9	6.4	6.4	5.3	5.0	3.8	3.3	(2.8)	2.9	3.4	3.5
24	3.5	3.4	3.4	(3.5)	2.8	2.3	2.0	(2.4)	(5.4)	6.0	(6.6)	8.4	6.7	6.4	8.1	6.0	5.1	4.1	3.6	3.6	3.3	2.6	2.6	8.0
25	3.3	3.2	3.4	3.6	<3.3	(2.9)	2.4					8.4	5.9	(6.1)	7.8	7.6	6.2	4.5	3.4	2.7	2.6	2.8	3.0	(3.2)
26	(3.1)	2.9	2.9	3.0	3.0	3.4	4.2	4.9	5.6	6.4	7.0	7.4	7.2	6.9	6.8	6.7	5.7	3.9	2.6	3.1	3.1	2.8	3.1	3.4
27	3.6	3.5	3.5	3.6	3.0	2.5	2.6	2.7	4.9	5.4	6.5	6.0	7.1	6.6	6.6	7.0	5.1	4.3	3.8	3.0	2.6	2.4	2.4	2.6
28	2.9	3.3	3.2	(3.4)	2.9	(2.7)	2.4	(2.5)	4.8	4.7	6.1	8.1	7.2	(6.4)	7.8	6.5	5.7	4.5	3.6	3.4	3.1	2.7	3.1	3.1
29	(3.2)	3.1	(3.2)	3.2	3.4	2.1	1.6	2.1	5.0	2.6	8.2	8.8	7.7	(8.2)	7.3	6.2	5.6	4.7	4.2	3.9	2.5	3.1	(3.0)	3.3
30	3.4	3.4	3.4	3.3	(2.9)	2.6	2.0	2.8	5.2	78.	8.2							5.3	5.8	5.1	3.9	3.0	3.2	(3.0)
31	3.0	3.2	3.3	(3.1)	2.7	(3.3)	4.2	5.3	6.3	7.3	7.8	(8.4)	6.9	7.4	79.5	8.0	6.4	6.2	5.5	4.5	3.6	2.8	3.1	2.9
Median	3.4	3.4	3.4	3.5	3.2	2.9	2.6	3.4	5.6	7.0	7.9	8.4	8.2	8.0	7.9	7.6	6.7	5.0	4.3	3.6	3.0	2.8	3.0	3.2
Count	28	28	28	28	28	27	27	25	26	28	28	28	29	29	29	29	29	31	31	31	29	29	29	28

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(Characteristic) , (Unit) Nov. (Month) , 1940

Observed at Kochel (Institution)

Lat. , Long. Mean Time

Scaled by: ,

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	4.0	3.7	3.8	3.5	3.5	3.0	3.6	6.4	8.6									8.3	6.6	6.0	4.8	4.4	4.2	4.4
2	4.1	3.9	3.7	3.6	3.7	3.4	3.9	6.5	7.8	>9.5						>9.6	>9.4	8.1	7.2	6.2	5.0	3.6	3.6	3.8
3	3.7	3.8	4.0	4.1	2.9	2.7	2.8												8.2	6.3	4.9	4.2	4.4	4.5
4	4.4	4.6																				5.9	5.5	4.6
5	4.6	4.6	4.7	4.9					5.3	5.6	6.4	6.6	6.5	7.0	7.5	7.1	6.9	6.2	5.0	4.3	3.3	2.5	2.6	2.7
6	2.8	2.9	2.9	2.8	2.3	2.2	3.0	5.5	7.5	[8.7]	8.9	[8.8]	9.0	9.0	>9.6	>9.6	9.0	7.2	5.7	5.4	3.8	2.9	2.9	2.9
7	2.9	3.2	3.0	2.9	2.5	2.6	2.6	5.6	7.7	8.6	10.4	8.9	10.4	9.3	10.4	11.1	9.6	7.5	5.9	4.8	3.9	3.4	3.6	3.7
8	3.4	3.4	3.4	3.3	3.3	3.4	3.3	5.9	8.6	>8.5	>9.0	[10.6]	10.4	10.4	[10.6]	10.4	[8.5]	8.4	6.3					
9																			6.4	4.0	4.2	4.1	3.6	4.0
10	4.0	4.0	4.1	4.1	3.9	4.2	2.5	5.5	7.4	7.5				8.7	>9.2	9.6	7.9	7.5	6.0	[4.1]	[3.0]	2.8	2.2	2.7
11	2.8	2.9	3.0	2.9	2.5	3.6	3.3	[5.4]	7.9	>9.5	8.7	10.2	[9.9]	9.1	9.4	[8.8]	8.3	7.1	6.1	4.3	[3.6]	3.4	2.8	2.6
12	2.6					3.0	[3.4]	[5.8]	[8.0]	9.3	9.6	9.6	[10.1]	[10.2]	[10.8]	[10.6]	8.9	6.6	4.9	4.9	5.4	[5.0]	4.8	4.0
13	3.4	3.4	3.9	2.9	2.9	2.1	2.3	4.5	6.2	7.2	[7.2]					8.7	9.4	8.9	6.6	4.7	2.7	2.5	2.4	2.3
14	1.6	1.8	[1.7]	1.6	1.7	2.2	3.4	5.3	7.9	[7.9]	[9.1]	[10.5]	10.3	10.3	10.3	10.3	8.2	[7.0]	5.9	4.7	3.5	3.0	[2.9]	2.6
15	2.5	3.5	2.9	2.6	2.1	2.9	3.4	5.2	7.3	(9.6)	9.3	[10.0]	9.6	[9.4]	9.6	[9.8]	[8.8]					3.6	3.5	3.9
16	3.8	3.5	3.5	3.6	3.6	2.7	2.1	4.0	6.5	8.1	10.2	[11.6]	[10.9]	9.6	9.6	[10.1]	8.4	6.9	6.0	4.0	4.1	4.1	4.0	4.0
17	4.0	4.2	3.9	3.3	2.9	2.3	2.0	4.2	6.0	7.6	9.1	[10.5]	10.2	9.6	[9.5]	9.6	8.3	5.6	4.8	4.3	3.8	3.5	3.7	3.8
18	3.5	3.5	[3.3]	3.3	2.9	1.9	2.4	5.8	6.8	8.3	8.6	[9.4]	9.6	10.2	8.5	8.4	8.9	7.0	5.0	4.2	3.1	1.9	2.3	2.3
19	2.4	2.5	3.7	2.8							7.4	>8.5	10.3	>8.2	8.5	9.2	[8.1]	6.8	6.8	5.8	4.0	2.8	2.8	2.9
20	2.9	(3.1)	3.1	3.4	3.3	3.4	2.4	4.6	6.5	8.7	9.6	9.0	[9.4]	(9.4)					5.7	4.6	3.5	2.7	2.9	(2.9)
21	3.2	2.9	3.3	3.8	3.6	2.5	2.3	4.5	7.2	8.3	9.6	10.2				10.2	>8.6	5.5	5.3	5.5	3.9	3.4	3.3	3.3
22	3.5	3.0	3.1	3.1	3.2	3.2	2.9	4.7	7.1	8.5	10.2				10.2	10.3	6.6	6.1	4.8	[4.6]	[3.8]	3.3	3.4	3.4
23	3.4	3.6	[3.5]	3.3	3.3	2.5	2.6	4.2	6.8	8.1	9.3	10.2	[10.7]	[11.8]	10.2	8.6	6.7	5.4	5.8	5.3	4.0	3.5	3.7	3.7
24	3.6	3.7	3.6	3.4	3.3	2.8	2.8	4.2	5.8	[7.6]	7.6	9.6	>8.1	[7.9]	7.2					4.1	3.6	2.8	2.9	3.3
25	3.4	3.4	3.6	3.4	3.3	3.4	3.4	3.4	6.0	6.2	8.6	8.6	8.2	[7.9]	[8.1]	8.2	[6.9]	6.8	5.6	5.4	[5.2]	4.8	4.4	3.7
26	3.5	[3.3]	2.8	[2.8]	[2.6]	2.4	1.8	3.6	5.7	7.7	8.1	9.0	8.0	8.2	7.2	7.9	7.0	4.7	4.8	[4.4]	3.9	2.6	2.5	2.6
27	2.6	2.7	2.5	3.3	2.4	2.1	2.2	3.8	6.1	6.9	8.2	7.8	7.4	8.7	8.4	[7.3]	6.4	5.2	3.8	[3.1]	2.8	2.6	2.6	2.9
28	3.0	3.3	3.0	3.2	2.7	2.3	2.4	4.2	6.8	6.6	[7.9]	7.9	8.4	8.4	7.4	7.3	6.4	5.8	4.0	3.8	2.8	2.4		
29										7.7	8.3	[8.8]	9.6	9.6	8.4	7.9	7.9	5.5	4.9	4.6	[4.2]	[3.6	3.9	4.2
30	4.1	4.1	4.4	4.2	4.0	2.7	2.1	3.8	6.5	7.2	9.1	7.2	8.8	7.6	7.8	7.4	6.8	4.7	4.3	3.6	3.5	3.6	3.8	4.0
31																								
Median	3.4	3.4	3.4	3.3	3.0	2.7	2.6	4.6	6.8	8.1	9.0	9.5	9.6	9.2	9.4	9.4	8.2	6.8	5.7	4.6	3.8	3.4	3.4	3.6
Count	28	27	26	26	24	25	25	24	25	25	24	22	21	20	22	24	24	24	27	27	27	29	28	28

Sweep Mc to Mc in min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Form adopted June 1946

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

IONOSPHERIC DATA

(Characteristic), (Unit), October, 1940 (Month)

(Institution)

Observed at Kochel

Lat. ____, Long. ____ ____ Mean Time

Scaled by: ____, ____

Calculated by: ____, ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	5.4	5.0	4.1	3.9	3.4	(2.9)	4.0	5.4	6.2	6.3	6.4	6.6	7.0	7.6	7.8	7.4	7.6	6.9	6.6	5.6	4.3	4.3	4.0	4.1
2	4.5	3.6	3.2	[3.1]	[2.0]	1.9	3.4	4.9	7.0	7.6	8.4	8.6	7.6	8.4	[8.6]	8.4	8.6	8.1	7.6	7.1	5.6			
3								6.9	8.4	9.4	9.6	(9.4)	8.7	9.3	9.0	8.9	8.6	8.2	7.3	5.7	4.6	4.2	4.1	4.2
4	[3.9]	3.6	(3.5)	3.0							7.4	8.2	8.2	7.3	8.6	9.0	(9.5)	8.9	7.5	6.1	4.7	4.4	3.6	3.5
5	3.6	3.6	3.6	3.5	3.3	3.0	3.9	5.3	6.6	7.2	8.2	7.9	8.4	8.7	8.8	8.9	[9.2]	8.8	7.1	6.8	[5.4]	4.0	3.6	3.0
6	3.6	3.6	(3.1)	(3.1)	(3.1)	2.6	3.8	4.9	5.8	5.6	6.2	7.0	7.4	7.5	7.9	8.2	8.1	7.5	6.4	6.8	4.6	4.4	4.2	3.7
7	3.7	3.6	3.6	3.3	3.3	(3.0)	3.9	4.8	5.6	5.8	5.9	(6.1)	6.4	7.0	7.0	(6.6)	(6.9)	7.0	4.6				5.2	4.9
8	4.4	3.9	4.0	3.0	8.7	1.9	4.4	4.6	5.6	5.5	6.3	7.8	7.6	7.6	7.8	7.3	7.1	7.0	6.7	6.0	4.5	4.3	4.6	4.5
9	4.4	4.3	4.1	3.7	3.6	3.0	4.6	7.1	8.1	[9.6]	7.9	7.8	7.4	(4.8)	(4.7)	7.4	7.6	5.3	7.6	8.2	6.5	6.0	5.4	5.0
10	4.9	4.9						7.4	[8.0]	[8.6]	9.4	7.6	7.8	7.2	7.8	(7.6)	7.7	7.6	8.9	7.8	6.6	5.6	5.2	5.1
11	6.1	4.9	4.8	4.8	4.4	3.7	4.1	5.8	7.4	8.4	7.6	7.9	8.3	8.4	8.0	8.2	8.6	8.8	8.6	7.8	6.6	5.6	4.6	4.4
12	4.4	4.4	4.4	4.1	4.0	3.8	4.6	5.8	7.0	[6.8]	6.7	7.0	7.0	(6.3)	6.9	7.4	7.4	7.1	6.4	6.4	5.4	4.6	4.4	4.2
13	4.2	4.6	4.4	4.2	3.8	(2.9)	4.4	6.3	(8.0)	8.8	9.0	7.6	7.6	8.4	9.1	9.0	9.0	8.1	7.8	[6.7]	[5.6]	4.5	4.4	4.2
14	4.2	4.4	4.2	4.0	4.0	3.6	4.4	7.1	7.7	8.8	9.4	9.9	10.3	10.2	9.8	10.1	10.2	9.7	9.5	6.2	5.2	5.0	4.8	5.0
15	4.9	5.1	(4.8)	4.6	4.4	(4.0)	4.5	7.1	8.1	9.8	11.5	12.0	12.2	12.3	12.4	12.4	11.9	10.1	8.9	7.7	5.7	5.4	5.1	5.3
16	5.0	5.2	5.1	5.1	4.6	3.4	4.2	7.1	8.9	9.8	10.9	11.5	11.7	11.2	10.8	11.0	9.9	9.2	8.8	6.9	4.7	4.4	4.7	4.9
17	4.6	4.4	4.4	4.2	4.0	3.7	4.1	(6.2)	7.2	8.6	9.6	[10.0]	[9.6]	10.6	10.0	10.6	10.8	9.4	8.3	7.5	5.4	5.0	4.8	4.6
18	4.5	4.6	4.4	4.3	4.3	4.3	4.8	(6.7)	8.5	9.8	9.9	12.0	12.4	12.5	12.5	12.5	12.1	10.6	9.5	9.0	7.6	6.5	5.8	5.3
19	5.5	5.3	5.1	4.9	4.6	3.4	4.4	6.4	8.7	9.8	11.2	12.0	12.2	12.3	12.4	12.3	11.8	10.2	8.4	8.4	6.5	5.7	5.2	5.0
20	5.4	5.2	5.0	4.4	4.3	3.8	4.0	5.4	6.9	8.8	9.2	11.2	10.7	10.7	10.3	11.7	10.8	9.8	8.9	7.9	5.4	4.7	4.7	4.6
21	4.4	4.2	4.3	4.2	4.4	2.6	4.2	7.0	[8.8]	9.6	11.5	11.9	12.0	12.0	11.8	11.6	11.1	9.3	8.8	7.8	6.2	5.6	5.2	5.0
22	5.0	4.5	4.7	4.6	4.0	2.8	3.6	(5.7)	6.8	(8.6)	11.0	11.5	10.4	9.8	10.2	10.3	10.2	10.3	9.6	8.5	5.7	4.0	3.9	3.9
23	4.1	4.0	3.9	3.8	3.6	(3.4)	4.2	(6.0)	(7.8)	9.2	10.3	11.3	10.5	9.5	9.7	10.1	9.6	9.1	7.8	6.8	4.9	4.0	4.0	4.0
24	4.0	4.1	4.0	4.0	4.0	(3.4)	3.6	6.2	7.8	9.1	9.6	9.4	10.3	9.0	9.1	9.4	9.0	8.2	7.5	6.2	4.8	3.6	3.6	3.6
25	3.8	3.9	3.9	4.0	3.9	3.6	3.7	6.3	7.6	[8.9]	9.8	9.4	9.5	9.8	9.2	9.6	9.0	8.2	7.4	6.3	5.0	4.3	4.0	3.6
26	3.4	3.4	3.3	3.4	(3.1)	[2.6]	2.9	6.0	9.4	9.6	11.0	10.8	11.2	10.3	11.0	10.4	8.5	7.6	9.4	9.0	[8.1]	[7.2]	6.2	6.1
27	5.8	4.8	4.7	3.9	[3.7]	[2.6]	[3.5]	4.4	5.0	5.6	6.0	6.4	6.7	6.8	7.3	7.3	6.7	6.5	5.3	4.4	3.6	3.6	3.8	3.6
28	3.4	3.4	3.4	3.4	2.8	2.6	(2.9)	5.4	(7.0)	[5.3]	10.2	16.2	10.8	10.0	(8.9)	8.9	7.6	7.8	6.8	5.4	4.7	3.6	3.6	3.4
29	3.6	3.6	3.6	3.6	3.6	3.0	3.7	5.7	7.5	(8.6)	[9.6]	10.5	10.8	(9.7)	9.5	10.4	(9.0)	8.0	6.2	4.9	(3.0)	[3.0]	3.1	3.4
30	3.6	3.6	3.7	3.8	3.7	2.6	3.0	5.6	7.9	9.3	10.3	9.6	9.8	9.5	(9.0)	8.6	8.8	9.2	7.6	6.4	4.8	3.6	3.0	3.3
31	3.6	3.6	4.0	3.5	3.9	2.9	3.5	6.2	8.5	9.8	10.3	10.5	10.4	10.4	(9.7)	(9.2)	8.8	7.7	6.8	(6.5)	5.4	[5.1]	4.7	4.0
Median	4.4	4.2	4.1	3.9	3.8	3.0	4.0	6.0	7.6	8.6	9.2	9.6	9.6	9.2	9.2	9.3	9.0	8.8	7.6	6.8	5.4	4.4	4.5	4.2
Count	30	30	29	29	28	28	28	30	28 30	29 30	31 31	31 31	31 31	31 31	31 31	31 31	31 31	31 31	29 30	28 30	30	29	30	30

Sweep 1.0 Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

7.6 8.8 9.8 10.3 9.5 9.1 9.5 9.1 8.4 7.8 6.8

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Ordinary-ray F_2-region

Kochel — **Month: Dez. 45.**

Central-European time.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	3,45	3,50	3,50	3,60	3,05	[2<]	[2<]	2,85	5,95	6,65	7,75	6,85	7,65	7,75	7,05	(6,8)	(6,4)	4,70	[4?]	3,40	[3?]	(2,8)	(2,9)	(3,35)	
2	(3,3)	(3,5)	(3,7)	3,95	(3,7)	(3,6)	4,25	[5?]	(6,0)	(6,9)	(7,8)	7,65	7,35	7,15	7,15	(7,0)	(6,5)	4,70	4,50	4,15	3,30	3,30	(3,7)	4,00	
3	4,05	4,15	4,00	(4,2)	4,40	4,85	4,40	(3,3)	(6,3)	(6,9)	(7,3)	7,20	7,65	6,80	6,35	6,70	6,65	(5,3)	(4,9)	(4,3)	[3,5]	(2,7)	(3,0)	3,60	
4	3,70	4,00	(3,6)	(4,1)	4,00	(3,6)	(3,5)	[<,9]	3,00	[3,9]	(7,0)	[?,1]	7,10	7,05	[3,9]	6,70	5,90	4,50	4,50	[aE]	[3<,6]	(3,0)	(3,2)	3,70	
5	(3,9)	4,15	4,20	4,25	4,20	4,30	(5,1)	(2,9)	5,25	5,95	(6,4)	6,60	6,95	7,10	6,85	7,10	6,65	4,65	4,20	4,20	3,60	(2,90)	3,45	3,75	
6	3,70	3,90	4,00	4,35	4,50	4,30	3,45	[<,6]	5,80	7,15	8,10	7,95	7,75	7,00	7,15	7,00	7,75	6,90	(4,50)	4,10	[3<5]	(2,80)	(3,5)	(3,6)	
7	(3,75)	3,85	4,20	4,45	3,55	3,35	(3,0)	3,45	5,20	7,05	7,35	7,55	7,05	7,05	7,10	7,10	6,75	5,20	3,85	4,75	4,75	4,00	[4,2]	(4,35)	1)
8	(4,10)	(4,00)	4,55	5,30	5,15	4,80	3,65	3,55	4,60	6,60	7,35	7,75	7,05 + 7,40	7,65	7,00	6,70	6,65	6,10	4,85	4,30	3,90	3,35	3,65	4,30	1)
9	4,40	4,35	4,60	4,35	3,85	4,25	[3,<]	[<,6]	4,40	5,75	6,80	6,85	7,60	6,80	7,10	6,90	7,00	5,00	5,10	4,65	4,30	3,60	4,25	4,45	1)
10	3,90	(4,35)	4,40	4,70	4,95	4,10	(3,0)	(3,4)	4,95 + 5,25	5,95	6,15	7,90	7,10	6,45 + 6,60	6,40 + 7,10	6,85 + 7,10	6,50	5,25	(3,6)	(3,8)	(2,8)	(2,8)	(2,8)	(2,8)	
11	3,40	(3,6)	3,70	3,45	(3,0)	(2,9)	(2,8)	(2,7)	4,95	6,00	7,90	7,05	(7,1)	(7,2)	5,7 + (6,8)	6,80	6,10	4,3 + 4,7	[aE]	(4,3)	(3,6)	(3,0)	[2<,6]	(3,0)	
12	(3,4)	3,55	(3,35)	(3,40)	3,80	(3,8)	(3,5)	(3,3)	5,10	5,35	(6,5)	7,45	(7,1)	(7,1)	(6,7)	6,50	(6,1)	4,90	3,50	3,50	aE	<	<	(2,8)	
13	(3,0)	(3,2)	[3?,2]	(3,15)	(3,2)	(3,60)	(3,35)	(2,8)	4,85	5,95	6,85	6,40	7,45	[7?]	6,65	6,50	5,50	(5,6)	4,70	3,60	(3,1)	[3,0]	[<,9]	(2,9)	
14	(2,8)	<	<	<	<	<	<	<	4,85	5,65	(5,8)	6,65	6,60	6,50	(7,2)	(8,2)	7,70	5,45	4,40	(4,7)	(3,0)	(2,9)	(3,6)	(4,0)	1)
15	(4,3)	(4,3)	(4,0)	(4,0)	(4,0)	(4,1)	[3,8]	[3,7]	4,85	6,65	6,80	6,80	6,75	7,25	(7,0)	(7,1)	[6,?]	5,15	3,90	3,35	(2,9)	(2,8)	(2,9)	(3,3)	
16	(3,3)	(3,1)	(3,7 + 4,3)	(3,4)	3,50	[3<,2]	(3,1 + 4,0)	<[3,3]	5,10	5,45	7,30	8,30	7,05 + 7,20	7,20	6,70	6,25	5,45	4,15[2]	3,8	<	<	<	<	<	
17	<	(2,9)	(2,9)	<	<	<	<	(2,9)	5,30	6,80	6,60	8,35	7,75 + 8,2	8,75	8,25	7,60 + 8,1	7,50	6,35	4,4	[aE]	(2,8)	<	<	(3,2)	
18	(3,2)	(3,7)	3,70	(3,7)	(3,0)	(3,2 + 2,8	[2<,9]	[<,0]	5,10	6,30	7,05	7,40	6,90	7,45	7,75	6,05	5,80	4,70	(2,8)	<	<	<	2,8	3,35	
19	3,70	3,35	3,65	3,60	3,35	3,55	(3,0)	(2,6)	4,65	5,95	6,90	7,40	8,05	7,80	6,80	7,10	6,25	4,80	4,25	4,40	<	<	<	(2,7)	
20	[3<,1]	[<?]	(2,7)	[<2,8]	(2,9)	aE	<	<	4,70	7,70	8,80	(9,3)	9,00	8,30	7,95	8,05	7,10	(6,2)	(6,2)	4,75	[<1]	[3<,7]	(2,8)	[<3,0]	
21	(2,8)	(3,2)	(3,4)	[<3,2]	(3,1)	<	aE	aE	4,80 + 5,10	7,10	7,49 + 7,60	7,40 + 7,70	7,3 + 7,7	(8,8)	(8,5)	8,30	(6,0)	(6,0)	6,00	4,55	(4,1)	(2,7)	[<,9]	(3,0)	
22	(3,1)	(3,1)	(3,2)	(3,3)	(3,0)	(2,8)	[3<,7]	[<,4]	4,70	6,95	6,70	7,30	6,60	6,90	7,30	6,55	6,35	5,25	[4,5]	3,45	(3,4)	[3<,0]	(2,6)	(2,6)	1)
23	3,35	(3,4)	(3,6)	(3,6)	3,70	[3?,5]	(4,0)	4,30	4,85	5,35 + (6,0)	7,20	6,85	6,80	7,50	6,80	6,85	5,65	5,15	4,60	3,85	4,00	3,70	3,70	3,80	
24	4,10	(4,1)	4,10	3,95	3,50	<	aE	<	5,25	6,10	6,90	6,20	6,45	7,00	8,10	6,85	7,65	7,35	5,15	3,70	3,00	(2,8)	(2,8)	(2,8)	
25	(2,9)	(3,4)	(3,6)	(3,4)	(3,1)	(2,6)	[2<,6]	[<,5]	4,85	6,40	8,45	7,10	7,30	7,20	6,70	7,30	6,70	5,20	4,35	3,70	3,60	(3,2)	(3,7)	3,70	
26	3,70	3,70	3,50	3,50	(2,8)	<	<	<	3,90	4,90 + 5,05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
28	—	—	—	—	—	—	—	—	—	—	—	(5,3)	(6,0)	6,25	6,25	6,65	6,70	5,85	4,75	(4,0)	?<	?<	<	(3,7)	
29	(4,0)	(4,3)	(4,3)	(4,3)	(4,2)	<	<	<	4,85	(6,4)	6,40	(6,8)	5,95	5,40 + (6,2)	6,15 + 6,50	7,60	5,70	[6,?]	4,30	4,05	aE	<	<	?<	
30	(3,4)	(3,4)	(3,4)	(3,4)	(3,3)	<	aE	aE	4,40	5,10	5,80	7,20	6,75	5,40 + 5,70	5,30 + 5,80	(5,9)	(6,6)	(4,2)	4,30	3,70	<	<	<	<	
31	(3,2)	[3<,]	(3,3)	(3,4)	3,40	(2,8)	(3,3)	[<,7]	4,00	4,70	6,20	6,60	6,15	(5,7)	7,70	(6,0)	5,25	4,25	4,40	(3,8)	(4,0)	(2,8)	(2,8)	?[3,]	
M.	3,55 / 27 28	3,69 / 26 28	3,76 / 27 28	<3,87 / 25 27	3,64 / 27 29	<3,70 / 18 21	<3,62 / 15 21	<3,17 / 12 22	4,93 / 29	6,23 / 28 29	7,06 / 28	7,23 / 28	7,16 / 29	7,13 / 28 29	7,08 / 28 29	6,96 / 29	6,46 / 28 29	5,27 / 28 29	4,45 / 26 29	4,04 / 25 27	<3,54 / 22 27 29	<3,06 / 21 18 29	<3,23 / 22 18 29	<3,45 / 24 27	
	3,4	3,5	3,6	3,6	3,5	3,2	3,0	3,3	4,9	6,1	7,0	7,2	7,1	7,1	7,0	6,8	6,5	5,2	4,4	4,0	3,4	3,8	3,9	3,9	
	3,3						2,9	3,2	4,8		7,1	7,3	7,2	7,2	7,1	6,9	6,6	5,1	4/3	3,8	3,6	2,8	2,8	3,3	

Remarks: 1) very scattered reflections this night

2) abnormal F_2-layer ↓ 3.6 MHz

Ordinary-ray F_2 region

Kochel

Month **Nov. 45**

Central European time

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.85	4.30	4.00	4.00	3.90	4.00	3.40	5.20	6.90	7.60	8.05	(8.90)	(9.1)	8.20	8.15	8.40	7.30	7.05	6.10	5.70	4.90	4.55	3.95	3.85
2	3.80	4.00	4.00	4.25	3.90	3.90	3.70	5.40	6.95	7.40	7.65	8.50	8.80	8.90	8.10	8.40	8.00	6.80	5.50	5.40	4.20	3.60	3.70	3.80
3	3.85	4.05	4.10	4.35	4.25	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
6	3.90	4.25	4.30	–	–	–	–	–	–	7.00	7.75	8.15	(9.3)	8.10	7.35	7.55	6.60	5.80	5.05	4.50	3.95	[3.7]	[3.7o]	3.80
7	[3.3]	3.65	3.80	3.80	3.70	<2.7o	<2.7o	4.55	6.35	6.70	7.45	8.50	[8.35]	8.20	7.90	8.10	7.45	6.00	4.90	4.35	?	?	?	?
8	3.00	[3.18]	3.35	[3.2]	3.10	[2.6]	[3?.2]	4.75	6.40	7.40	7.75	9.20	8.45	7.70	7.25	7.95	7.65	6.75	5.70	4.90	5.05	3.90	3.80	3.95
9	3.70	3.50	3.50	3.35	3.35	(2.7)	[3.7]	4.00	5.05	5.40	6.45	6.45	6.40	7.45	6.65	6.05	5.10	5.50	4.90	4.85	4.70	4.70	4.95	5.10
10	4.50	4.30	4.05	3.70	3.60	3.05	[8.8]	3.40	4.75	5.70	6.90	7.15	6.85	7.00	6.95	7.15	6.65	5.30	5.20	4.80	4.25	3.35	2.65	[8.5]
11	[2.8]	(3.75)	?	?	?	?	?	3.90	5.45	6.85	7.20	7.30	7.90	7.05	7.35	7.50	6.70	5.95	5.55	4.25	4.30	3.45	3.20	3.55
12	3.85	3.95	3.80	4.05	3.65	3.65	[3.8]	4.00	5.90	6.65	7.30	8.05	7.90	8.35	7.65	7.70	7.50	5.50	4.85	3.60	2.85	?	?	?
13	?	2.80	2.90	2.85	[3.7]	[3.3]	2.85	4.70	7.00	7.95	7.30	7.65	7.95	7.25	7.05	8.10	7.40	5.70	4.90	4.85	3.75	all	?	?
14	?	?	3.30	3.50	3.55	3.35	2.70	4.20	5.90	7.30	7.40	7.90	8.00	8.90	7.55	7.80	7.10	5.50	4.85	4.25	4.10	?	?	?
15	3.55	3.60	3.80	3.55	3.50	3.50	3.30	5.05	6.20	7.10	7.90	9.10	8.45	7.30	8.30	7.95	6.90	5.70	5.45	4.55	4.25	3.90	4.00	4.10
16	3.95	4.05	3.85	3.60	3.60	4.00	3.10	4.35	6.20	7.45	8.15	8.75	8.50	8.70	8.80	8.80	7.70	7.25	5.15	4.15	3.65	?	?	?
17	3.70	(3.4)	(3.65)	3.65	(3.35)	[3.0]	[3.2]	4.25	6.90	8.15	8.50	(8.90)	(9.1)	8.40	7.80	8.15	6.95	[6.1]	5.10	–	–	–	–	–
18	–	–	–	–	–	–	–	4.30	6.45	7.50	7.55	7.90	8.10	7.55	–	–	–	–	–	–	–	–	–	–
19	–	–	–	–	–	–	–	–	–	–	–	–	8.30	7.35	7.80	(8.7)	7.15	[6.7]	4.95	(3.3)	[3.3]	[3.2]	3.20	3.65
20	3.70	3.80	3.70	3.65	3.50	3.30	(3.55)	4.25	6.40	7.60	(9.6)	(9.2)	(8.6)	7.95	7.70	7.80	6.70	5.65	(4.85)	3.60	[3.3]	[3.0]	(2.8)	[2.9]
21	(3.0)	(2.8)	(3.2)	(3.1)	(3.4)	(3.5)	(3.65)	4.20	6.10	7.35	7.70	7.95	8.00	7.70	7.25	7.80	7.00	5.25	4.45	3.70	3.75	3.65	[3.6]	3.60
22	3.75	3.60	4.00	4.00	3.75	3.95	(3.2)	(4.2)	6.00	7.60	8.10	8.00	8.50	8.40	8.40	8.00	7.00	6.00	4.50	3.40	3.50	(2.8)	(2.8)	3.30
23	3.70	3.70	3.70	3.75	3.85	3.85	3.95	3.50	5.70	7.00	7.20	7.80	8.50	8.30	8.05	7.05	6.80	6.00	–	–	–	–	–	–
24	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
25	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
26	4.00	4.05	4.20	4.40	4.30	3.70	3.40	3.55	6.00	(6.4)	(7.2)	(7.8)	7.30	7.90	(7.10)	(7.0)	6.05	5.50	4.85	4.00	?	?	?	?
27	3.30	[3.35]	3.40	3.60	4.00	4.65	(3.50)	(3.65)	?	?	?	?	?	?	?	?	?	?	–	4.70	3.50	[3.4]	3.30	(3.65)
28	4.00	4.00	4.05	3.90	3.80	4.00	4.10	3.90	6.30	[7.2]	8.10	(8.5)	8.10	7.85	7.90	8.05	6.50	5.30	4.80	3.85	3.45	?	?	?
29	(3.6)	(3.7)	(3.8)	(3.9)	(4.1)	(3.6)	(3.6)	(3.8)	[4.9]	[6.4]	8.50	8.40	8.75	8.60	8.60	7.65	6.55	5.80	4.45	4.30	(3.80)	[3.5]	(3.2)	(3.2)
30	[3.5]	(3.75)	(3.75)	(3.75)	(3.75)	(3.50)	(3.3)	4.00	6.20	(7.85)	7.75	7.35	8.45	7.35	7.70	6.90	5.95	5.10	4.05	(3.8)	(3.2)	?	?	?
31	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	3.72	3.76	3.75	3.75	3.71	3.61	3.38	4.22	6.15	7.14	7.72	8.15	8.23	7.94	7.71	7.76	6.93	5.86	5.00	4.33	<3.93	<3.75	<3.38	<3.77
	22~~19~~	23~~21~~	23	22~~21~~	22~~21~~	21~~16~~	21~~16~~	23	22~~21~~	23~~21~~	25	23	24~~23~~	24	23	23	23	23~~21~~	23	23	21~~19~~	16~~14~~	16~~14~~	16~~14~~
	3.7	3.8	3.8	3.7	3.7	3.5	3.3	4.2	6.2	7.2	7.7	8.2	8.4	7.9	7.7	7.8	6.9	5.8	4.9	4.3	3.8	3.4	3.3	3.6
	3.6	3.7	3.7	3.6	3.6	3.4		4.0		7.3	7.9	8.1	8.7		7.9					4.2				

Kochel — Ordinary-ray F_2 region — Month: Oct. 45

Central European time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	5.1o	4.95	5.05	4.6o	4.45	4.05	3.9o	5.65	6.45	6.65	6.5o	7.3o	7.2o	7.05	7.2o	6.65	7.1o	7.1o	–	–	–	–	4.45	4.5o
2	4.45	4.45	4.45	4.4o	4.25	3.6o	4.oo	6.15	7.15	7.75	7.7o	[7.7]	[7.8]	(7.95)	7.85	7.8o	7.6o	7.5o	7.5o	6.1o	5.6o	5.6o	4.8o	4.7o
3	4.35	4.3o	4.25	4.3o	4.25	3.95	(3.9o)	5.95	7.o5	7.45	7.35	7.45	7.75	8.1o	8.35	8.3o	8.2o	7.8o	7.oo	6.3o	5.7o	5.oo	4.6o	4.3o
4	4.4o	4.45	4.45	4.4o	4.55	3.3o	3.65	5.9o	6.8o	7.15	7.6o	8.35	8.4o	8.1o	86o	7.7o	7.95	8.35	7.7o	7.3o	5.65	5.1o	5.o5	4.9o
5	4.85	4.75	4.75	4.6o	4.25	3.6o	2.9o	6.35	6.65	8 3o	9.oo	8.35	8.3o	8.65	8.7o	9.1o	9.o5	8.45	8.35	6.6o	6.35	5.45	5.45	5.35
6	5.55	5.55	5.2o	4 7o	4.6o	3.6o	3.7o	6.1o	7.35	7.65	7.45	7375	7.85	8.75	8.55	(8.9o)	8.9o	8.4o	7.55	6.9o	5.3o	4.1o	3.5o	3.65
7	3.55	3.55	3.65	3.65	4.o5	[3,0]	3.6o	5.8o	6.75	7.8o	8.35	8.65	9.2o	9.oo	8.55	8.45	8.95	9.25	8.3o	6.55	5.45	4.35	4.25	3.5o
8	3.25	3.25	3.25	3.95	2.9o	[2.4]	3.35	5.8o	7.5o	7.4o	9.1o	9.o5	8.7o	8.4o	7.15	8.35	9.1o	8.95	8.1o	7.2o	5.35	4.55	4:o5	4.25
9	3.95	4.oo	4.1o	4.15	4.15	3.75	3.75	6.oo	7.55	8.85	8.5o	8.55	8.65	8.75	9.oo	8.6o	8.15	8.1o	7.8o	7.2o	5.4o	4.9o	4.3o	3.55
10	3.55	3.5o	3.7o	3.7o	3.95	3.45	3.85	6.2o	7.o5	7.8o	9.2o	8.oo	8.75	8.45	8.1o	8.6o	8.2o	7.65	7.85	7.55	6.25	5.5o	4.65	4.55
11	4.3o	4.35	4.3o	4.3o	4.3o	4.o5	4.2o	6.35	7.5o	7.45	7.5o	8.o5	9.45	8.5o	7.75	8.6o	8.8o	8.3o	7.8o	6.65	5.85	4.5o	4.6o	4.6o
12	4.55	4.55	4.45	4.4o	4.45	4.45	4.45	6.5o	7.35	8.15	8.3o	9.2o	8.8o	8.o5	9.2o	[9.1]	[9.1]	9.1o	9.2o	8.9o	8.oo	6.1o	6.1o	5.85
13	5.85	5.75	5.45	5.35	5.15	5.45	4.55	6.8o	7.8o	8.1o	8.75	8.5o	8.75	8.85	8.2o	7.85	7.8o	7.3o	6.9o	6.65	5.6o	4.85	4.3o	4.oo
14	3.8o	3.45	3.55	3.55	3.3o	2.85	2.75	5.3o	6.o5	7.15	7.oo	7.9o	8.7o	8.45	8.1o	8.3o	7.85	7.7o	6.95	6.6o	5.65	4.15	3.35	3.35
15	3.4o	3.45	3.45	3.4o	3.4o	2.85	3.25	5.3o	5.95	6.6o	6.75	7.85	7.75	7.95	7.45	7.85	7.55	6.85	6.75	6.8o	5.6o	5.oo	4.35	4.3o
16	4.3o	3.95	4.3o	4.3o	4.35	3.95	3.6o	5.75	7.1o	7.95	8.95	9.oo	8.4o	9.2o	9.45	8.25	7.7o	8.75	(9.oo)	8.55	7.65	6.oo	5.4o	4.75
17	4.35	4.45	4.6o	4.75	4.35	3.75	3.35	5.oo	7.25	7.75	9.oo	9.55	9.25	9.oo	8.75	8.75	8.4o	7.4o	7.3o	7.2o	6.45	6.5o	5.2o	4.55
18	4.25	4.o5	4.25	4.35	4.3o	3.95	3.75	6.15	7.65	9.5o	9.7o	(9.9o)	(9.9o)	9.1o	8.9o	8.3o	8.5o	7.75	7.o5	6.o5	4.85	4.7o	4.35	4.35
19	4.45	4.25	4.o5	3.85	3.75	3.55	3.55	6.o5	7.8o	8.55	8.7o	9.3o	(9.8o)	9.2o	8.3o	9.oo	8.35	7.75	6.65	5.55	4.75	4.3o	4.2o	3.8o
20	3.95	4.oo	3.8o	3.5o	3.7o	3.35	3.1o	5.45	6.25	6.85	7.8o	8.75	(9.6o)	8.35	8.2o	8.oo	8.1o	7.o5	6.15	4.75	3.65	3.7o	3.5o	3.35
21	3.4o	3.35	3.5o	3.55	3.55	[3.0]	[3.0]	5.75	7.oo	7.5o	8.2o	8.7o	8.25	7.8o	8.o5	8.3o	7.2o	6.75	6.1o	6.1o	5.6o	4.6o	4.25	3.7o
22	3.8o	3.95	3.8o	3.8o	3.8o	3.35	2.95	5.4o	6.9o	8.25	8.4o	(9.4o)	(9.3o)	8.45	8.4o	8.7o	8.6o	(9.oo)	(8.2o)	(6.3o)	5.6o	4.65	4.2o	4.2o
23	4.15	4.1o	4.15	–	–	–	–	–	–	8.85	9.8o	(9.9o)	(9.4o)	9.2o)	(9.2o)	8.5o	8.4o	7.9o	6.9o	6.35	4.5o	4.55	(3.95)	4.1o
24	3.8o	4.1o	4.5o	4.oo	4.o5	3.2o	[3.0]	5.6o	(7.6o)	9.9o)	9.5o	(9.5o)	[9.8]	(9.oo)	(9.9o)	>9.oo	>9.oo	>9.oo	8.6o	(6.9o)	5.4o	4.8o	4.5o	5.oo
25	4.55	4.3o	3.65	3.4o	2.6o	[2.1]	2.6o	5.45	7.o5	8.2o	7.5o	8.4o	8.85	(8.8o)	(9.4o)	(9.4o)	(9.1o)	7.75	4,75	3.oo	a.E.	a.E.	a.E.	a.E.
26	3.3o	3.o5	?	?	?	?	?	5.7o	7.15	8.6o	8.o5	8.5o	8.8o	8.85	8.3o	8.15	[7.6]	6.95	6.1o	6.oo	4.oo	(3.35)	3.25	3.4o
27	3.4o	3.45	3.45	3.6o	3.25	3.6o	2.8o	5.5o	6.85	7.6o	7.8o	8.4o	8.7o	8.o5	7.75	8.15	8.5o	7.7o	6.o5	5.55	4.35	3.6o	3.55	3.4o
28	3.15	[3.3o]	[a.3]	2.65	?	?	?	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2.8o	[3.6]	3.2o
29	3.35	3.65	3.6o	3.6o	3.4o	[2.5]	2.85	4.75	6.4o	7.oo	7.2o	7.4o	7.95	8.2o	7.3o	8.25	7.75	7.15	6.1o	5.25	4.4o	3.65	3.7o	[3.6]
30	3.6o	3.6o	3.8o	3.6o	3.55	3.25	[3.0]	5.o5	6.7o	7.6o	8.oo	8.45	9.2o	8.1o	8.1o	8.3o	8.oo	6.9o	6.5o	5.55	[4.6]	3.4o	3.4o	3.6o
31	3.9o	3.6o	4.o5	3.9o	3.7o	[3.1]	[3.1]	(6.oo)	(7.5o)	8.5o	7.75	8.35	9.3o	(9.6o)	8.6o	9.oo	7.8o	6.75	6.7o	5.5o	4.8o	4.oo	3.95	4.3o
	4.08	4.02	4.02	3.96	3.84	3.3o	3.32	5.8o	7.o4	7.9o	8.18	8.55	8.75	8.53	8.38	8.4o	8.25	7.86	7.23	6.42	5.46	4.6o	4.32	4.11
	31	31 30	30 29	29	28	28 22	28 24	29	29	30	30	30 29	30 28	30	30	30 29	30 28	30	29	29	28 27	29	30 29	30 29
	4.0	4.0	4.1	4.0	4.0	3.4	3.5	5.8	7.0	7.8	8.2	8.4	8.8	8.5	8.4	8.4	8.2	7.8	7.0	6.5	5.5	4.6	4.3	4.2

P

138

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

f°F2, ____ (Characteristic, Unit) February, 1952 (Month)

Observed at Leopoldville

Lat. 4.3°S, Long. 15.3°E

____ Mean Time

____ (Institution)

Scaled by: ____, ____

Calculated by: ____, ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1																										
2																										
3																										
4																										
5																										
6																										
757										<	<	10.4	10c5	c106	10.6	10.1	10.7									
78									8.5	9.5	11.0	(12.0)P	118c	116c	113c	11.0	10.6									
99									8.7	(9.8)C	10.0	10.3	<	<	<	<										
8/10																										
311										10.6	11.3	(12.0)P	(12.8)P	(12.6)P	11.8	11.5										
512								7.0	9.0	9.4	10.0	11.3	(12.4)P	(13.0)P	12.0	12.0										
713								7.1	9.2	11.3	11.6	12.5	13.2P	13.0P	13.3	13.3	7									
914								8.9	9.4	11.0	12.8	(12.0)P	(12.0)P	(12.1)P	12.3	12.8										
9/15								7.8	[7.9]	9.1	10.2	11.8	12.6	12.8	12.6	12.5	12.4P									
316								6.8P	c6	c82	c90	9.8	11.0	12.7	13.8	14.4P	14.0	14.7P	(13.6)P	12.8P	11.6P	10.5	6.5	4.6		
517	4.5	4.4	4.6	5.3	5.6	6.5	8.5	7.8	8.7	10.5	11.4P	(13.5)P	(14.4)P	(14.3)P	(13.8)P	13.2	12.8	12.6	(12.5)P	(12.6)P	13.4P	(13.0)P	11.8	7.6		
7/18	5.6	5.3	4.7	4.1	3.5	4.3	6.5P	7.0	8.0	9.4	10.0	10.8	11.6	11.6	10.4	10.4	11.0	11.0	11.0	9.4P	9.5P	9.8P	9.1	4.9		
919	4.2	3.7	3.6	3.5	3.8	4.4	6.7	7.8	8.2	8.7	10.4	10.6	12.0	12.8	(13.6)P	13.8	13.9P	14.2P	(13.6)P	(13.6)P	(13.5)F	14.2	(13.2)F	(9.4)F		
10/20	6.8	6.4	6.1	5.1	4.7	4.6	6.0	8.0	8.0	8.9	9.8	(10.4)P	11.2	12.8	13.2	(12.4)P	12.0	12.6	(13.0)P	(11.8)P	9.4	8.9	8.3	5.6		
321	4.9	4.8	4.6	4.5	4.7	(5.0)C	C63	(7.6)C	C<	C<	C<	C<	C<	C<	C<	10.0	9.6	9.8	10.4	10.0	8.9	7.8	7.7	5.0		
522	3.3	2.7	2.6	2.6	A26	3.6	6.5	7.5	8.0	8.7	9.5	10.1	10.9	11.8	12.2	12.3	12.5	12.8	12.6	12.6	(12.0)P	(13.2)P	10.2J	4.7		
723	3.5	3.4	3.4	3.3	3.5	4.1	6.7	8.0	8.5	9.4	11.5	12.7	13.2P	12.8	13.0	11.8	11.2	11.2	11.2	(11.4)P	12.7	(12.0)P	6.6	(4.2)A		
924	4.0	(2.6)A	24A	23A	22A	3.7	5.7	5.4	7.6	12.0	11.6	11.8	11.7	11.6	11.7	9.5	10.2	9.7	10.9	10.8	8.7	5.7	5.4	4.9		
11/25	3.6	3.5	3.0	3.0	2.9	3.9	6.5	7.0	7.6	8.8	8.8	9.5	9.0	8.8	8.3	8.3	8.9	8.3	10.2	7.9	6.6	6.0	6.4	5.0		
326	4.4	3.9	3.5	3.0	2.9	4.0	6.8	7.0	8.8	10.5	12.2	12.4	12.4	12.5	13.2	11.6	10.3	10.3	11.0	10.8	9.8	9.6	6.1	3.7		
527	3.2	2.7	2.7	2.8	2.1	2.9	6.9	8.9	9.6	11.5	(12.0)P	11.8	(12.0)P	12.8	12.7	12.8	12.6	12.2	11.8	11.8	(10.2)P	6.5	6.4	6.4		
728	58F	57F	46F	4.0	2.9	3.9	6.7	8.0	8.3	8.4	11.0	12.7	(13.0)P	13.0	12.4	11.4	9.3	8.6	8.7	(8.6)P	5.5	2.4	2.0	2.3		
929	2.4	2.6	2.6	2.8	1.9	3.3	6.2	6.6	8.0	9.6	11.6	13.0	13.0	(13.6)P	14.0	(13.6)P	12.6	(13.0)P	(13.0)P	(12.4)P	10.0	6.0	5.0	4.6		
30																										
31																										
Median	4.2	3.7	3.5	3.3	2.9	4.0	6.5	7.3	8.2	9.4	10.9	11.8	12.0	12.6	12.4	11.9	11.7	11.7	11.5	11.6	9.9	9.2	6.6	4.9		
Count	13	13	13	13	13	13	13	18	20	21	21	22	23	22	27	27	18	14	14	14	14	14	14	14		

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

f°F2, —, March, 1952
(Characteristic), (Unit), (Month)

Observed at Leopoldville

Lat. 4.3°S, Long. 15.3°E

(Institution)

Scaled by: —, —

Calculated by: —, —

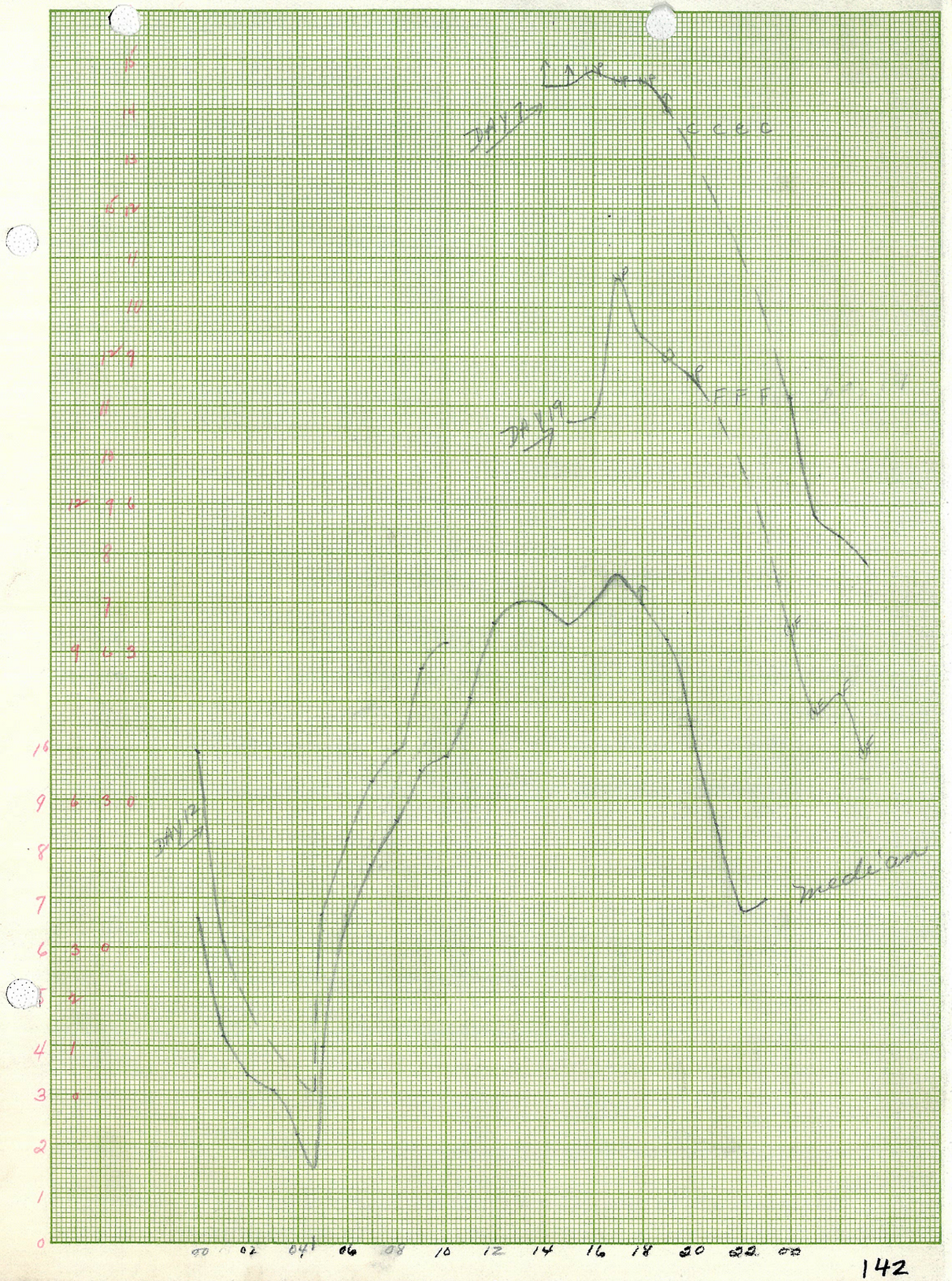
— Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1 2	4.4	4.3	4.5	4.3	4.3	3.9	5.3	6.6	7.6	8.6	9.8	11.2	12.3	11.3	11.3	11.3	11.3	12.2	(13.3)P	12.6	7.3	5.4	4.2	3.6
3 2	3.9	3.4	3.6	3.0	1.9	3.2	6.0	7.2	7.4	8.5	9.4	10.4	11.3	11.0	10.0	9.5	9.4	9.6	10.7	(12.0)P	10.0	8.5	4.1	3.4
5 3	3.1	3.2	3.3	2.9	2.2	2.9	5.8	6.9	7.0	6.8	8.2	9.7	9.8	10.8	(10.8)P	12.2	12.2	12.6	(14.2)P	(12.0)P	(9.5)F	F8.7	F8.0	F7.3
7 4	16.6	F5.9	5.3	4.9	3.6	3.0	5.8	7.8	9.6	8.7	7.0	7.6	8.9	10.3	10.9	10.3	9.8	10.3	11.3	(12.5)P	(13.6)P	6.3	4.6	3.9
9 5	3.4	2.7	2.3	A2.3	2.3	3.3	6.8	8.0	8.0	8.3	10.8	9.3	9.4	9.7	8.6	8.0	8.4	9.8	9.4P	10.4	7.8	7.8	4.9	3.5
13 6	3.3	4.0	4.6	3.3	1.6	3.1	7.6	8.2	6.5	7.9	10.0	9.4	10.4	10.3	10.0	10.5	10.3	11.0	10.4	9.3	9.0	9.0	6.2	6.2
9 7	5.3	5.4	4.4	3.4	3.3	3.6	7.4	7.6	7.8	8.3	9.8	12.0	(13.8)P	(14.0)P	(14.0)P	(13.8)P	14.0	(14.4)P	(14.2)P	14.6P	(12.8)P	(12.3)P	11.3	6.3
5 8	5.1	4.6	4.6	5.0	2.4	3.4	5.8	7.6	10.6	10.8	11.0	12.3	(13.5)P	(14.6)P	(14.8)P	(14.0)P	14.0	(13.8)P	(14.0)P	(14.0)P	(13.8)P	12.9	11.2	7.3
7 9	5.6	5.2	4.6	3.8	4.4	5.3	7.9	6.3	9.2	12.0	12.4	11.0	11.4	12.5	13.0	13.2	14.2	14.4	(14.0)P	(14.0)P	11.5	10.2	7.2	5.8
9 10	5.5	5.0	4.7	2.9	2.6	3.6	6.2	7.6	8.4	7.8	8.7	10.4	11.6	12.6	11.3	11.5	11.7	12.0	12.3	(11.8)P	10.2	7.2	4.6	3.3
14 11	3.2	3.3	3.7	3.3	2.2	3.3	6.2	7.8	8.8	9.5	10.8	11.3	12.3	13.4	13.2	11.6	12.0	(13.3)P	(14.5)P	(15.0)P	(12.5)P	8.8	6.2	6.0
3 12	4.3	3.9	3.3	2.8	4:20 1.8 1.6	2.5	6.8	7.8	8.7	9.5	10.6	12.8	14.3	(14.5)P	(13.6)P	(13.6)P	14.0	(14.0)P	(13.8)P	(13.6)P	(12.0)P	10.7	10.8	(8.8)F
5 13	6.4	5.6	4.3	3.3	1.9	3.5	6.3	7.2	7.7	9.3	11.3	13.0	(13.6)P	(13.8)P	(13.6)P	(13.8)J	14.3	14.2	(13.8)P	(13.2)P	12.6	(11.4)F	(9.5)F	(8.5)F
7 14	7.3	6.0	4.7	3.3	3:40 2.3	A4.0	6.5	7.8	8.0	8.8	9.0	10.0	11.6	12.3	12.1	12.0	11.9	11.5	(12.4)P	(13.3)P	11.2	(9.4)P	8.2	5.2
9 15	4.1	3.4	3.3	3.3	3.2)A	4 2.6	5 5.0	6 7.3	7 7.9	8 8.0	9 9.0	10 11.5	11 (13.3)P	12 (13.5)P	13 (13.8)P	14 (13.6)P	15 12.8	16 13.2	17 13.8	18 (13.6)P	19 (14.0)P	20 (14.0)P	21 13.1	23 (13.5)P
15 16	23 (9.3)F	0 6.9	1 7.0	2 7.4	3 6.1	4 4.7	5 5.2	6 7.5	7 7.3	8 8.3	9 8.9	10 10.1	11 11.8	12 13.6	13 (14.6)P	14 13.8	15 13.6	16 13.6	17 13.8	18 (14.2)P	19 (13.8)P	20 10.8	21 10.2	23 8.2
3 17	23 7.0	0 6.3	1 6.3	2 5.4	3 4.1	4 3.6	5 4.2	6 7.4	7 7.0	8 7.9	9 7.9	10 9.8	11 (12.0)P	12 (13.8)P	13 (13.6)P	14 (14.0)P	15 14.0	16 12.8	17 12.5	18 (12.6)P	19 (13.8)P	20 12.0	21 9.3	23 8.2
5 18	23 7.4	0 5.8	1 5.5	2 5.6	3 5.0	4 3.1	5 3.5	6 6.3	7 6.3	8 6.0	9 7.7	10 9.5	11 10.2	12 11.0	13 11.8	14 11.8	15 11.8	16 13.0	17 12.8	18 (12.0)P	19 (12.2)P	20 (9.8)P	21 8.8	22 7.0
7 19	23 6.8	0 5.6	1 4.5	2 4.3	3 3.9	4 2.6	5 3.6	6 5.9	7 6.6	8 6.4	9 7.8	10 9.5	11 10.4	12 (12.0)P	13 C13.3	14 14.6	15 13.8	16 13.8	17 14.5	18 >13.5 14	19 >13.5 14	20 (14.4)P	21 [12.4]	23 (9.2)F
9 20	23 9.0	0 8.2	1 7.1	2 5.6	3 A4.4	4 A3.2	5 3.3	6 5.4	7 6.4	8 9.7 6.8	9.6	10.1	11.1	11 9C	12.6	11.5	11.4	11.4	(12.0)P	(12.4)P	(12.8)P	(11.0)P	9.8	(9.0)P
11 21	8.7	6.3	5.5	4.6	3.0	3.5	5.4	6.0	6.6	8.0	9.5	10.2	11.7	13.3	14.4	13.0	(13.8)P	(14.8)P	>13.5 14	>13.8 13	(12.3)P	8.0	7.6P	8.6P
9 22	8.7	6.6P	4.5P	3.6	2.8	3.8	7.1	7.5	8.0	9.0	(11.5)P	12.2	(14.0)P	15.5	14.8	13.2	12.7	12.8	(12.3)P	(12.0)F	12.0	11.0	10.6	9.1
5 23	6.8	3.8	3.0	3.1	3.6	2.2	5.4	7.1	8.4	9.7	10.8	11.5	12.3	13.4	(13.5)P	12.0	10.9	11.2	11.0	12.3P	(14.6)P	(12.7)P	(9.6)F	5.2
7 24	4.4	2.9	2.6	3.0	2.3	4.0	6.1	6.8	7.4	8.4	9.6	10.4	12.5	15.0	14.0	12.6	12.6	(13.8)P	>13.5 14	(14.2)P	(13.6)P	11.0	8.1	5.8
9 25	5.6	4.4	3.9	3.0	2.1	3.6	6.6	7.3	7.6	7.8	9.4	11.3	12.7	(14.3)P	(14.0)P	13.6	13.8	13.8P	13.5P	11.7	9.0	7.5P	5.8	5.0
11 26	3.1	A9.8	A2.5	A2.2	4:20 2.0	4.3	6.7	6.6	6.9	8.8	11.0	12.5	(14.0)P	(15.0)P	14.0P	14.0P	14.0P	(14.0)P	13.3	12.4P	12.0P	10.0P	8.7	5.9
9 27	4.9	2.6	1.9	C1.8	1.7	3.3	6.1	6.7	7.7	8.6	9.8	10.7	12.4	(14.4)P	15.3P	12.5	12.2	12.6	(12.6)P	11.6P	10.5P	9.8P	(9.2)F	(8.8)F
5 28	(7.8)F	(5.8)F	(4.7)F	(4.0)F	[2.6]	3.6	6.6	6.7	8.0	9.3	10.9	13.0	14.5	(14.5)P	14.4	13.8P	[13.8]	[14.1]	[>13.0 14]	>14.0	8:30 12.6	10.3P	[8.0]	7.2P	(8.0)F
7 29	[7.2]	3.7	[2.5]	2.0	2.0	[4.3]	[6.4]	7.0	7.7	8.9	10.0	12.2P	13.0P	14.0P	13.8P	7	7	7						
9 30												12.6	12.8P	(14.0)P	(14.8)P	(14.8)P	14.0	14.6P	13 C9	13.2	11.0	8.6	6.8	7.0
18 31	7.3	6.6	5.4	2.9	3.2	3.9	7.0	7.0	8.1	11.4	11.8	11.4	12.5	12.8	11.0	11.4	12.7	(14.0)P	>15.0	(14.8)P	8.6	6.2	3.9	10:70 3.2
		4.8	4.5				6.2	7.2	7.7		9.8	11.0				13.0	12.7	✓	13.6	12.9	12.1	9.8	8.2	
Median	5.6	4.5	4.4	3.3	2.6	3.6	6.3	7.0	7.8	8.6	10.0	11.3	12.3	13.4 ✓	13.6 ✓	12.8	12.8	13.3	13.5	13.2	12.0	9.4	8.0	6.6
Count	30	30	30	30	30	30	30	30	30	30	30	31	31 ✓	31 ✓	31 ✓	30	31	31 ✓	30	30	30	30	30	30 ✓

Sweep — Mc to — Mc in — min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519


Median
00
02
04
06
08
10
12
14
16
18
20
22
00

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

foF2 (Characteristic), ____ (Unit), April (Month), 1952

Observed at Leopoldville

Lat. 4.3°S, Long. 15.3°E

____ Mean Time

____ (Institution)

Scaled by: ____

Calculated by: ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
831	a	2.9a	2.2	4.1	2.2	3.7	6.3	8.2	9.0	9.5	10.2	11.6	12.4J	11.9	11.3J	11.8	c	c	c	c	c	c	c	c
852	c	c	c	c	c	c	c	c	8.0J	10.2	[12.2]	14.3	14.6	14.5	13.4	14.0	15.0J P	D	D	D	(14.4)P	13.8	12.9	7.6
873	6.7	6.1	5.8	7.0	2.6	4.1	6.2	6.8	8.6	10.7	10.0	10.1	11.3	12.6	12.2	12.0	12.8	12.5	(14.7)P	12.0	9.0	6.8	5.3	4.6
894	4.5	4.0	4.3	3.7	3.2	3.2	6.5	8.9	10.0	10.0	9.9	10.7	12.8	13.1	13.3	13.1	13.9	14.9	(7.5)	D	(7.5)	11.8	11.7	9.8
915	6.8	6.6	6.4	5.8	4.8	5.4	7.1	8.0	8.4	8.9H	10.3	[12.4]	13.7	12.7J	13.0	15.0	D	D	(>14.5)	(>13.0)	13.1	(13.2)P	10.8	11.8
936	6.8	5.9	5.2	5.3	3.6	3.6	(6.5)a	6.4	7.6	9.8	11.6	13.2	13.7	13.6	13.3	12.6	14.7	>14.8	(14.3)	12.6	11.5	9.8	8.8	8.8
957	*9.0	6.8	6.1	6.5	(14.0)S	3.5	7.0	8.5	9.1	9.3	9.8	11.0	13.2	(14.0)P	(>14.5)	(>14.5)	(14.8)P	(14.6)P	(14.6)P	(>14.0)	[13.1] C	[12.1] C	[11.0] C	[9.8] C
978	7:15 8.2	5.8	5.4	4.9	4.6	4.4	6.6	7.1	8.3	11.8	8.7	10.0	12.5	13.5	12.3	12.7	12.8	12.6	12.0	(13.5)P	[5.2]	(13.1)P	(13.0)P	(12.5)P
999	(10.0)a	(4.9)a	[4a3]	(3.9)F	[3F5]	5.0	6.5	6.9	8.4	9.8	10.4	12.0	13.3	12.9	(13.5)P	(13.5)P	13.2	11.4	(11.8)P	(13.4)P	(13.5)P	(11.5)P	6.1	4.7
20110	4.6	3.6	3.2	2.3	1.9	4.0	6.2	7.9	10.5	10.6	11.3	12.8	(14.3)P	64.5P	(14.5)P	14.8	>15.0	14.6J	13.0	(12.3)P	10.0J	7.7J	6.4	7.6
20311	6.6	3.6	3.0	2.6	1.8	3.6	6.5	7.1	8.1	9.9	11.3	13.2	14.3	(15.1)P	>13.1	D	15.5J	12.8	10.5	11.0	8.3	7.5	7.5	7.1
20512	7.0	3.1	[0.8] a	[1.0] a	a E	3.7	6.1	6.9	7.2	9.6	11.3	13.8	(14.8)P	14.1	13.6J	14.0	(15.1)P	>14.0	>14.0	11.3	9.1	(8.5)P	6.8	7.0
2913	8.5	5.0	3.3	2.6J	[a 2]	3.7	5.2	6.4	7.0	8.7	9.2	10.5*	12.2	13.3	(13.7)P	12.5	12.7	12.8	12.0	(12.2)P	11.3	9.6	9.2	10.3
20914	8.3	5.1	2.5	2.0	(1.6J)	3.6	5.8	7.0	8.1	9.7	9.8	11.5	(14.2)P	*>14.0	11.5	11.3	12.6	14.2	(14.2)P	12.0	8.3	(7.4)P	5.0	4.6
21115	4.8	4.9	(3.2)A	[2.4] A	[1.7] A 2.6 3:32	4.0	16.0a	[6.6]A	17.6A	8.6	9.4	10:40 10.6]	[C.8]	13.0	[C3.6]	C4.2	14.8	14.2	11.2	10.0	6.9	3.6	3.2	3.8
21316	4.2	(3.6)F	(3.6)A	A	[2 A]	3.8	6.3	C	C	C	C	9.9	11.0	11.6	11.9	12.1	12.5	12.9	12.0	10.0	9.0	6.6J	5.7	5.3
2617	4.9	4.2	3.2	2.4	3:40 [4.9] 1.6	3.9	6.3	8.1	9.0	8.7	9.5	10.6	12.3	13.0	13.0	12.2J	12.4J	12.5	12.7	(12.0)P	8.0	5.3	4.6	3.7
21718	4.0	4.4	[3.5] (2.2)a	[2.2] a	4:40 2.5 [2.2]	3.6	6.6	7.1	9.0	9.7	8.8	10.6	13.8	(14.5)P	(14.8)P	(14.4)P	(13.7)P	(13.7)P	(12.4)P	(12.8)P	11.0	5.7	6.0	7.0
21919	4.9	2.9	3.0	3.3	2.7	4.0	7.6	8.1	9.2	10.7	10.3	11.0	13.0	12.9	11.3	10.7	10.8	(13.6)P	12.4	[12.0]F	(11.6)F	[10.8]F	[9.7]F	F[8.4]
22120	(6.5)F	(4.8)F	(5.2)F	(4.0)F	(2.0)a	4.0	6.7	9.5	9.6	7.6	8.4	10.8	12.2	11.2	10.8	11.6	11.5	(14.8)P	(13.2)P	(12.8)P	9.8	6.0	(5.2)P	5.5
22321	6.7	3.3	2.3	1.6	1.8	4.5	7.2	8.0	8.8	10.0	13.0	(14.0)P	12.7	12.8	12.5	13.0	14.0	(16.4)P	12.0	(10.8)P	(11.0)P	(10.6)F	(10.0)F	(8.0)F
522	3.2	3.8	5.1	4.9	(2.7)a	(3.5)a	8.0	8.6	7.6	8.0	9.6	6.0	11.8	10.7	12.4	11.3	11.0	11.0	10.0	9.0	6.3	5.0	4.7	4.4
723	(4.3)F	2.5	1.8	(1.5)a	E	4.5	7.0	7.8	9.5	10.3	11.0	14.0	14.7	13.0	(13.6)P	(13.8)P	(14.5)P	(14.5)P	>15.0	(12.5)P	(10.0)P	(9.7)P	8.4	6.7
924	7.3	5.3	2.9	2.0	[1.5] a	4.2	6.6	7.6	8.7	7.3	8.6	11.2	(13.2)P	15.8	12.0	12.1	11.8	11.5	11.0	8.6	3.7	3.0	3.3	3.7
22825	5.0	4.0	3.0	2.6	2.0	4.0	7.1	8.1	8.4	8.2	9.2	C9.9	12:20 10.6	11.2	10.8	9.6	9.0	10.0	(10.7)P	8.6	5.6	4.4	4.5	3.9
326	3.7	3.5	3.1	1.6	1.7	4.2	5.8	7.0	7.7	8.3	9.0	10.3	11.0	11.6	11.5	11.0	12.0	(12.4)P	(13.2)P	(14.2)P	(11.5)P	9.5	8.4	7.3J
527	5.6J	4.2	3.5	3.0	(2.2)F	4.3	a [5.4]	6.4	7.1	8.1	9.4	9.6	11.0	12.6	12.6	11.8	13.0	13.4	(13.4)P	(12.4)P	(8.6)P	(6.8)P	(5.6)P	5.0
728	4.6	2.7	1.9	[1.5] (2.0)a	[1.2] a	3.8	6.0	7.2	8.6	8.9	10.1	11.6	12.6	(14.0)P	(14.5)P	>13.0	12.7	(14.5)P	[14.3] >13.0	(13.5)P	(12.0)P	(10.0)P	8.5	7.8
929	7.0	6.0	5.0	4.8	4.1	3.7	6.3	8.3	10.5	9.6	9.5	9.6	[10.6] C	11.6	12.0	12.0	12.2	13.3	>14.5	>13.0	>13.0	(12.4)P	10.9J	10.3J
24130	8.6	8.2	(8.3)F	(7.7)F	5.2	5.7	7.6	9.6	11.5	10.7	11.4	11.8	12.5	13.2	(13.8)P	(13.5)P	>14.0	>15.0	>16.0	(12.6)P	(11.6)P	(10.4)F	(10.4)F	(10.6)F
31																								
			3.3	3.0	2.2								12.6						13.2	12.3	11.0	9.5	7.5	7.1
Median	6.6	4.2	3.2	3.3	2.6	4.0	6.5	7.7	8.6	9.6	9.9	11.1	12.8	13.0	13.0	12.6	13.0	13.6	>13.0	(12.4)	10.0	8.5	6.8	7.0
Count	28	29	27	25	20	29	28	28	29	29	29	28	27	30	29	29	29	29	29	28	27	27	27	27
			29	29	29		29													29	29	29	29	29

Sweep 30 Mc to 0 Mc in 30 min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

M 3000 (Characteristic), ____ (Unit), April (Month), 1952

Observed at Lindau

Lat. ____, Long. ____

____ Mean Time

____ (Institution)

Scaled by: ____, ____

Calculated by: ____, ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	a	8.0	9.1	14.0	7.8	11.2	18.5	23.0	24.5	25.0	26.0	30.0	(35.0)	32.5	(30.5)	32.0	C	C	C	C	C	C	C	C
2	C	C	C	C	C	C	C	C	(17.8)	25.0	[31.5]	38.5	45.0	37.0	32.5	35.0	(41.0)	D	D	D	(40.5)	40.0	37.5	22.5
3	19.0	17.0	16.0	22.5	9.5	12.8	21.0	20.0	24.0	32.0	28.5	27.0	32.0	37.5	36.0	30.5	37.0	36.0	(44.5)	37.0	25.0	22.0	16.5	12.0
4	11.7	10.7	11.8	11.2	12.5	9.4	19.5	27.0	31.0	30.5	27.0	28.0	36.5	38.0	39.0	40.0	40.0	44.0		D		36.0	37.0	33.0
5	18.0	19.0	17.0	17.0	16.5	19.0	24.0	24.5	25.0	23.0	27.5	[36.3]	39.0	(35.0)	34.0	40.0	D	D			40.0	37.0	31.5	35.5
6	18.5	15.5	13.0	15.0	13.5	11.0	20.0	18.0	18.0	25.5	31.0	37.0	38.0	36.5	36.0	(34.0)	42.0	44.0	C	(38.0)	30.0	24.0	23.0	22.0
7	*26.5	19.5	18.0	19.5	14.2	10.5	23.0	27.5	29.0	27.5	27.0	29.0	37.0	(37.0)			(39.0)	(39.5)	(39.5)		C	C	C	C
8	25.5	17.5	16.0	14.0	14.5	15.0	22.0	23.0	23.0	31.5	25.5	24.0	33.0	39.5	34.0	37.0	37.0	36.0	34.0	(37.5)	F		(37.0)	(37.5)
9	(33.0)a	(13.5)a	a	(10.0)F	F	16.0	22.0	20.0	22.0	27.5	27.0	32.5	37.5	35.0	(37.0)	(40.0)	40.5	33.0	(33.0)	(40.5)	(42.0)	(36.0)	19.5	13.0
10	14.0	10.0	10.0	7.3	5.9	12.5	19.5	21.0	30.0	28.5	29.0	33.0	(38.0)	(39.0)	(38.0)	40.0	45.0	43.0	39.0	(36.0)	31.0	20.0	20.0	23.0
11	(27.0)C	9.5	9.2	8.0	6.0	12.0	23.0	25.0	24.0	28.0	32.0	38.0	41.0	(38.0)	(40.0)	D	49.0	43.0	33.0	35.5	26.0	23.0	22.0	22.0
12	22.0	11.1	a	a	a	11.5	21.0	22.0	24.0	27.0	31.0	38.0	(43.0)	36.0	37.5	38.0	45.0			38.0	29.0	26.0	19.5	20.0
13	27.5	16.3	10.2	8.0	a	13.5	18.5	17.0	20.0	24.5	25.0	28.0*	33.0	38.0	38.5	36.0	36.5	39.5	37.0	37.5	35.0	29.0	26.0	34.5
14	30.0	11.9	7.5	6.8	(5.5)	12.0	20.0	23.0	24.6	33.0	26.5	33.0	(43.0)	*	32.0	29.0	35.0	43.0	45.0	37.5	27.5	24.0	15.0	14.0
15	14.0	15.5	10.0	A	A	13.0	20.0	[20.5]A	23.0	24.0	25.0	10:40 29.0	C	37.5	C	C	44.0	43.5	34.0	30.0	23.0	11.0	8.0	9.0
16	10.0	10.0	10.5	A	A	12.5	21.0	C	C	C	C	27.5	30.5	32.0	31.5	35.0	36.0	40.0	37.0	31.0	27.5	20.0	16.0	14.0
17	13.0	12.0	10.0	7.7	3:40 5:2	12.5	21.0	26.0	28.0	26.0	21.0	28.0	35.5	38.0	37.5	35.0	36.0	38.0	49.0	(40.5)	27.0	15.5	14.0	10.5
18	11.5	15.5	(7.8)	a		12.0	23.0	23.0	29.5	30.0	24.5	29.0	39.0	42.0	(39.0)	(40.0)	(39.0)	(40.0)	(39.0)	(38.0)	(36.0)	17.5	17.0	23.5
19	16.0	7.3	8.0	10.0	9.0	12.0	25.5	27.0	27.5	32.0	30.0	31.0	38.5	40.0	33.5	32.0	31.0	(44.0)	40.0	F	(32.5)	F	F	F
20	(19.0)F	(12.0)F	(15.0)F	(12.0)F	6.8	12.0	22.5	30.0	31.0	22.0	22.0	31.0	36.0	32.0	30.0	33.0	32.5	(35.0)	(39.0)	(40.5)	33.0	17.0	(15.0)	18.0
21	21.0	9.3	7.0	5.4	6.0	15.0	25.0	25.0	24.0	27.0	35.0	(37.0)	32.5	34.0	29.0	32.5	38.0	(50.0)	35.0	(27.0)	(30.0)	(33.0)F	(29.0)	(22.5)F
22	8.5	9.5	14.5	15.0	(8.0)a	(10.5)a	27.0	28.0	24.0	19.5	25.0	30.0	34.0	28.0	37.0	33.0	32.0	34.0	30.0	29.5	18.5	15.0	14.0	13.0
23	(14.0)F	8.0	5.0	(4.0)a	E	14.0	23.0	23.0	27.0	29.0	31.0	40.0	42.0	26.0	36.0	(37.0)	(41.0)	(42.0)		(40.0)	(30.0)	(28.0)	27.5	19.0
24	22.0	16.0	8.0	6.0	a	14.0	32.5	25.0	29.0	21.0	22.5	32.5	(38.0)	37.0	35.5	37.5	36.0	36.0	35.0	28.0	11.5	9.0	10.0	11.0
25	15.0	13.0	9.0	8.0	6.0	12.0	24.0	28.0	26.0	25.0	25.0	C	C	32.0	34.0	30.0	25.0	30.0	(35.0)	30.0	20.0	12.0	11.5	11.0
26	11.0	11.0	6.0	5.0	5.0	14.0	20.0	23.0	24.0	24.0	25.0	29.0	31.0	35.0	33.0	31.0	35.0	(37.0)	(42.0)	(46.0)	(37.0)	28.0	25.0	23.0
27	18.5	12.5	10.0	9.0	(9.5)F	14.5	a	22.0	22.5	25.0	23.0	26.0	32.0	37.0	35.0	34.0	38.0	40.0	(40.0)	(39.0)	(25.0)	(18.0)	(15.0)	16.0
28	14.0	8.0	5.4	(6.0)a	a	12.0	20.0	24.0	26.0	25.0	27.0	33.0	35.0	(39.0)	(40.0)		35.0	(42.0)		(40.0)	(39.0)	(28.0)	23.0	19.5
29	18.5	18.0	13.0	14.0	14.0	11.5	19.0	25.0	34.0	27.5	28.0	27.0	C	33.0	34.0	35.0	34.0	39.0				(33.0)	32.5	30.0
30	27.0	25.0	(22.5)F	(21.0)F	15.0	17.0	23.0	28.0	35.0	32.0	32.5	33.0	35.0	40.0	(40.0)	(37.0)				(37.0)	(24.0)	(29.0)	(30.0)	(30.0)
31																								
Median																								
Count																								

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

F^0F_2 (Characteristic), ____ (Unit), May (Month), 1952

Observed at Leopoldville

Lat. 4.3°S, Long. 15.3°E

____ Mean Time

____ (Institution)

Scaled by: ____, ____

Calculated by: ____, ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	10.6	7.9	4.3	3.3	2.0	4.9	7.2	7.7	8.7	11.1	13.0	15.3	15.0	13.4	13.9	13.5	13.7	14.0	13.2	10.1	8.1	8.2	8.8	8.2
2	7.4	7.5	4.2	2.1	1.6	4.1	7.0	8.5	9.6	10.4	11.3	13.1	13.0	12.8	13.4	13.2	13.4	14.7	14.9	13.2	10.0	9.3	9.2	9.3
3	6.1	5.2	4.7	3.0	1.9	A[50]	6.5	7.0	9.3	11.0	11.2	12.1	13.2	13.0	13.6	14.0	13.8	15.2	13.4	15.4	13.1	13.2	13.2	F[24]
4	11.4F	[10.6]	[8.0] 2120 7.0	6.9	6.0	5.2	8.7	7.2	10.2	10.5	10.9	11.3	11.0	11.2	12.2	13.2	13.4	12.8	13.3	12.4	10.9	10.1	10.2	F[11]
5	12.0	4.5	A[34]	[3.25]	[2.0]	4.1	6.9	8.1	9.8	10.6	12.9	15.5	13.0	13.0	14.1	14.3	13.2	13.4	14.3	12.2	10.3	9.8	9.1	8.7
6	7.3	4.5	4.2	4.5	4.0J	4.5	6.0	8.0J	10.0	11.7	10.5	10.3	9.8	10.2	10.2	10.5	11.5	12.0	11.0	8.0	5.8	5.8	5.5	6.0
7	9.0	6.5	3.5	2.8	1.9	4.3	6.0	7.3	8.8	8.6	10.0	10.6	11.2	11.6	11.0	11.7	13.5	(15.0)	(14.0)	(11.3)	(11.8)	(10.0)	(12.0)	10.5
8	7.5	6.0	6.2	4.3	3.0	3.9	7.0	10.0	10.5	10.5	12.2	12.5	12.6	12.2	12.0	13.8	15.0	12.5	13.0	13.2P	[F24]	F[16]	F[08]	(10.0)
9	(9.0)	8.5	4.8	4.8	3.3	4.2	6.0	[F47]	8.2	9.5	10.0	10.8	12.2	13.5	13.0	14.0	16.0	13.2	13.0J	9.5	8.0	8.2	8.2	9.0
10	9.5	6.0F	6.0F	4.5	3.0	4.2	7.0	7.2	8.9	8.5	10.0	11.8	14.5P	14.8P	14.8	11.7	11.6	11.4	11.2	[8.0]	4.8	4.6	4.8	5.5
11	[F53]	5.0	[F33]	1.5	[1.0] F3	4.6	6.1	7.4	8.2	9.0	9.1	9.5	11.0	12.5	12.8	9.3	7.1	7.2	7.0	7.0	5.3	4.4	4.7	5.5
12	5.6	3.0	2.8	3.0	3.1	4.0	6.0	6.3	6.9	8.2	9.0	9.9	10.0	(10.5)	12.0	11.8	10.0	7.0	5.5	4.0	2.7	2.5	2.8	2.6
13	3.0F	2.8F	F[24]	2.0	1.8	3.8	6.0	7.4	7.0	8.0	8.6	9.8	10.0	11.2	12.0	10.0	8.4	7.8	5.5	4.3	4.0	3.4	3.4	3.8
14	5.3	2.2	1.9	2.0	2.5	5.1	6.1	6.5	7.7J	8.6	11.0	13.0	[F22]	11.4	11.0	12.2	11.8	11.0	8.1	4.5	[4.0]	3.6	3.9	5.1
15	4.7	3.6	2.7	2.5	A[3]	4.2	5.6	7.2	7.0	8.0	9.2	11.8	13.5P	14.0P	12.6	12.8	11.8	10.0	8.5	6.0	A[50]	F[47]	3.2	3.7
16	4.7	4.0	3.5	2.9	2.5	4.0	5.6	5.5	6.6	7.8P	(8.5)	(9.5)	7.6	8.8	(8.6)F	8.5	8.0	8.8	9.0	7.0	3.8	3.0	3.5	4.5
17	5.5	3.3	3.0	2.2	[3.1.7]	3.7	5.6	6.8	8.0	8.7	9.2	8.2	7.4	8.2	9.0	7.1	7.6	7.1	6.3	4.6	2.8	2.1	A[27]	3.3
18	4.3	3.3	2.8	2.5F	F[2.3]	4.2	5.5	6.0	7.2	9.2	10.8	10.2	10.0	10.0	9.3	9.0	10.7	11.9	11.3	6.8	3.7	3.5	3.3	3.9
19	5.0	3.4	3.4	3.0	1.8	5.3	7.3	6.3	7.3	8.0	8.3	9.0	9.4	10.7	11.0	10.9	12.2	13.0	13.3	11.4	9.2	7.9	6.9	F[69]
20	F[69]	6.8	4.8	3.0	2.4	4.1	6.0	7.4	9.3	10.2	(10.4)	13.0	13.3	13.0	11.6	12.9	12.8	10.9	7.5	5.8	4.0	3.8	4.7	4.6
21	4.8	3.0	2.6	2.4	1.8J	4.6	7.0	6.8	8.6	9.8	9.5	9.6	10.0	10.4	10.8	9.5	11.4	11.0	(8.3F	5.0	3.8	3.3	4.0	4.4
22	6.8	[4.2] 1138	3.7	2.0	1.8	4.0	6.4	7.6	8.0	10.1	10.3	10.3	11.2	11.3	8.8	7.2	8.0	6.3	5.8	5.2	2.6	A[26]	2.6	3.3
23	3.8	2.0	(2.0)F	[2.0]F	2.0	4.3	6.0	7.3	7.0	8.0	9.3	9.4	10.3	11.2	10.0	7.0	7.4	7.6	8.6	5.5	3.8	[2.8]	(3.3)	[4.0]F
24	F[34]	[3.2]F	1.7	1.6	1.8	4.0	6.0	7.0	8.5	8.5	9.0	9.6	11.0	12.3	13.6	13.8P	12.8	12.2	11.2	7.2	6.0	[4.2]	3.6J	3.0
25	3.0F	4.0F	3.8F	F[31]	2.4F	4.2	6.0	6.0	9.0	10.2	9.8	9.5	10.2	10.2	10.5	11.4	11.8	13.5	13.2P	11.8	9.0	7.8	8.5	9.0
26	10.0F	(9.0)	9.8F	3.8	2.2	3.6	6.5	7.7	8.0	10.2	11.8	13.3	13.0	13.5	12.2	10.0	9.4	9.0	6.2	4.9	4.0	4.6	4.0	3.6
27	4.2	[3.4] A	2.5	2.5	[2.8] A	3.9	8.3	7.2	9.2	11.0	12.3	11.6	11.4	13.3P	12.4	11.6	10.9	11.2	8.5	6.8	6.2	5.0	7.4	9.8
28	8.0	5.2	6.0	5.6	3.6	4.1	8.0	8.4	8.0	F[12]	10.5	12.5	13.0	12.5	14.0P	13.5	12.8	12.8	12.2	5.5	5.2	4.8	4.5	7.0
29	9.0	[7.5]F	[6.2]F	[4.9]F	3.6	4.2	5.5	7.2	9.2	10.0	9.6	11.7	13.6	14.5	13.3	12.4	12.8	11.8	9.5	8.6	7.0	6.6	6.4	6.2
30	8.3	7.2	3.5	[5.2]	[1.8] E	4.2	6.2	6.8	8.6	9.2	9.2	9.4	10.2	11.0	11.6	13.5	12.4	10.0	9.2	(6.8)#	4.6	(4.2)#	4.2	6.0
31	5.0	7.0	1.8	1.9	[1.8] A7	4.0	6.5	9.0	9.5	11.0	10.5	9.0	9.6	11.5	11.5	8.6	9.6	8.5	[7.8]A7	7.0	4.6	[4.6]#	(4.5)#	6.0
Median	6.1	4.5	3.5	2.8	2.2	4.2	6.1	7.2	8.6	9.5	10.0	10.6	11.2	11.6	12.0	11.7	11.8	11.4	9.5	7.0	5.2	4.6	4.7	6.0
Count	31	31	31	31	31	31	31	31	31	31	31	31												

May be omitted

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

foFz, , June, 1952
(Characteristic), (Unit), (Month), 19

Observed at Leopoldville

Lat. 4.3°S, Long. 15.3°E

Mean Time

(Institution)

Scaled by: ,

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	8.5	(4.2)	(3.0)	2.8	A20	4.0	7.6	8.8	8.4	9.0	8.7	8.4	9.0	9.7	10.7	8.6	8.5	10.8	(11.5)	10.5	5.7	4.9	(5.0)F	(6.3)
2	7.5	6.3	4.4	4.3	3.7	5.1	6.6	7.7	8.4	8.7	8.5	8.5	8.5	10.0	10.8	9.8	8.6	8.5	6.5	5.4	(5.5)T	(5.5)A	6.0	6.8
3	5.8	4.7	3.1	2.9	A26	4.5	(7.0)	7.5	7.8	9.0	7.2	7.5	9.0	10.8	10.0	9.5	11.3	11.5	8.5	5.3	3.9	4.0	5.0	5.5
4	5.7	(6.0)F	F52	F43	(3.5)F	4.4	6.1	7.8	9.2	C96	C100	10.5	11.4	11.0	10.8	9.3	9.2	6.0	5.2	4.8	3.5	3.7	3.5	4.0
5	(3.0)F	(2.5)F	(2.2)F	2.5	1.6	3.6	6.6	7.6	8.4	7.5	8.2	N83	8.4	8.6	10.2	11.6	10.6	9.2	10.0	7.0	5.2	(4.3)	(4.5)F	(5.8)F
6	(7.5)F	(7.5)F	6.2	(4.8)F	(3.5)F	3.8	5.7	7.2	8.7	9.2	8.6	6.7	7.3	8.9	6.4	6.7	7.0	7.3	7.2	5.0	3.4	2.6	(3.7)A	(4.3)F
7	5.0	5.6	(3.2)F	A24	A19	3.2	5.9	7.2	8.4	9.4	9.4	9.7	10.0	9.8	10.7	7.8	7.8	5.7	5.6	5.6	3.1	2.2	2.6	2.8
8	3.3	3.8	4.2	2.2	1.6	3.7	7.6	8.2	7.1	7.2	7.7	9.4	11.5	9.2	9.7	12.0	10.7	9.0	4.5	3.3	2.6	3.0	2.8	(3.5)F
9	32	28	25	2.2F	2.1F	3.5	6.8	9.0	10.1	11.3	8.0	8.2	9.7	10.2	10.3	11.2	9.2	8.0						
10																								
11																								
12																								
13																								
14																								
15																								
16																								
17																								
18																	9.8	(9.0)A	12.0	9.8	(5.7)P	4.5	5.7	5.2
19	5.8	4.1	3.2	2.7	3.0	4.1	6.5	7.2	7.7	6.8	7.2P	7.7	8.1	9.0	10.0	10.1	8.2	9.0	10.6	(8.5)P	6.0	5.4	5.8	5.1
20	5.5	5.7	2.3	2.0	1.9	3.7	6.4	7.0	7.2	6.5	6.6	7.5	9.3	10.3	10.9	12.1	10.0	9.7	8.7	4.7	4.2	3.7	3.3	3.2
21	(3.6)V	(2.8)	2.6	2.6	2.8	4.2	5.6	6.5	7.8	7.4	(7.4)P	8.1	8.2	8.3	9.4	10.4	10.6	9.3	8.1	(8.1)S	7.0	6.5AF	F60	F55
22	F50	F43	(3.6)F	28	2.0A	3.6	6.2	9.4	8.6	(8.0)A	8.8	9.6	(7.0)G	(7.8)	(7.7)A	8.1	9.8	10.5	(9.6)P	(9.2)	(9.0)	F7	F8	C7
23	7	A7	7	F7	F7	7	(9.2)P	8.4	(6.6)P	6.6	7.3J	7.9	8.2	10.2	9.2	9.6	8.4	7.0	6.1	4.8	3.3	3.1	4.0	4.9
24	F55	6.1F	2.2	e	e	4.0	8.3	7.8	7.8	9.8	11.4	712.0	713.0	12.3P	11.3	12.0	12.5	10.0	8.8	6.7	3.9	3.1	3.3	3.8
25	4.1	2.8	2.5	(2.5)	2.6	3.9	8.3	9.3	9.5	8.8	11.3	12.5P	13.0P	(12.4P	(12.5)P	13.5P	12.3	11.2	8.7	(7.8)F	5.0	5.5	(5.5)P	4.7
26	4.8	(3.6)F	5.0	4.6	3.8	4.6	6.5	7.1	10.7	8.4														
27										8.8	9.7	9.2	10.3	11.7	12.8	13.3	13.4	11.0	A8.3	5.6	(4.4)F	3.6	3.9	3.8
28	4.6	5.1	(6.0)F	(4.3)F	(2.1)F	3.9	6.8	8.3	7.3	7.6	9.2	9.7	10.6	10.9	11.0	13.5P	13.3	12.3	9.6	8.5	4.2	4.6	5.6	4.8
29	3.6	3.1	1.9	1.7	E	3.6	6.8	7.7	8.6	11.0	10.3	10.7	12.2	14.5	13.7	9.5	9.2	9.8	8.2	7.3	7.4	6.0	53F	(4.6)F
30	(7.0)F	(4.6)F	F36	(2.6)P	A20	3.8	6.6	7.0	8.0	9.1	10.2	N8 11:20	9.3	10.0	12.6	11.5	9.6	8.3	5.8	3.1	2.3	2.0	2.0	A<
31																								
Median	5.2	4.4	3.2	2.7	2.4	3.9	6.6	7.7	8.4	8.3	8.6	8.9	9.3	10.1	10.7	10.3	9.8	9.2	8.4	6.2	4.3	4.2	4.7	4.8
Count	20	20	20	20	20	20	20	20	20	21	20	20	20	20	20	20	21	21	20	20	20	20	20	20

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

foF2 (Characteristic), — (Unit), July (Month), 1952

Observed at Leopoldville

Lat. 4.3°S, Long. 15.3°E

Mean Time

(Institution)

Scaled by:

Calculated by:

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	[20]A	[20]A	(2.0)F	(2.0)F	(2.0)F	3.8	7.3	8.5	7.6	7.4	7.8	7.8	8.3	8.3	9.6	9.0	9.6	10.8	10.5P	6.5	5.0	5.5	F [17]	F [19]
2	9.2F7	6.0F	4.0F	2.9F	2.8	3.6	6.4	6.1	6.6	7.1	7.8	10.0	10.3	11.8P	12.7	11.0	10.2	12.2	7h1.0	7h2.0	(8.6)P	20/40 5.6 [5.3]	(5.0)F	5.3
3	20/40 6.5 [65]	5.5P	#[41]	(3.3)F	2.8F	(4.5)F	6.6	8.3	7.3	8.3	9.6	9.8	8.6	A[90]	9.3	8.9A	7.6	7.9	5.7	5.1	4.0	3.4	(3.0)F	(2.8)
4	(3.0)F	(2.9)F	3.0F	(2.9)F	(2.6)F	3.4F	6.3	8.6	[8 6]	9/20 [8.6]	[83]	[79]	7.6	9.0	10.0	8.3	9.0	9.8	11.4	11.4P	9.0	7.6	6.4	7.2
5	5.7	3.5	2.6	2.5	2.4F	3.5F	6.0	7.6	8.4	9.3	7.1	6.5	7.0	8.2	9.9	[10 6]P	11.3P	13.3P	13.5P	7h3.0	12.7	9.3	8.9	8.8
6	A[74]	(6.0)F	(6.0)F	(6.1)F	5.0	(4.5)F	6.8	7.8	7.8	7.6	7.8	7.9	(6.7)A	6.7	8.6	9.8	11.5	12.6	13.6P	11.8P	(10.8)P	(7.8)P	(7.4)P	6.3
7	6.2	6.4	4.4	(3.0)F	(2.5)F	2.8	6.5	7.8	8.1	8.3	9.8	9.4	10.3	11.0	10.7	9.8	8.5	9.2	10.5	(11.5)F	4.5	2.3	2.6	(2.2)F
8	3.3	3.6	3.3	2.5F	2.0	2.6	6.0	7.3	6.3	8.2	9.6	11.6P	12.8	11.3	11.2	11.4	10.8	12.5P	11.0P	6.7	5.6	4.0	4.5	4.4
9	4.4F	4.0F	4.0	4.4	3.0F	3.4	6.0	7.6	7.7	7.3	6.8	6.7	8.0	7.6	8.3	7.8	8.6	8.8	10.0P	6.0P	4.6	5.8	4.8	4.6
10	6.4	7.6 0F	(3.9)F	A[28]	[21] 4:0 20	A[34]	6.3	7.1	8.2	9.8	11.0P	10.8	12.8	12.0	11.6P	12.6P	12.7	8.9	9.5P	(10.2)P	5.0	4.7	3.6	4.7
11	4.2	A[46]	3.7	3.3F	(2.4)A	3.6	6.7	7.2P	17.2A	8.6	7.9	7.2	8.6	9.6	9.5	9.9	10.7	11.8	(12.0)P	11.5P	8.4	7.0	A[71]	F[72]
12	7.3	5.1	11/20 [4.1] 3.F	[2.7]	[18] 4:20	3.5	6.6	8.8	7.7	9.8	8.6	A[100]	11.4)P	11.4P	11.2	(11.8)P	(12.0)P	10.7	11.0P	(11.2)P	(9.6)P	(5.1)P	4.3P	4.9
13	4.9	4.1	2.9	1.7J	1.5	3.6	6.3	8.0	7.7	8.6	[7.4]	[7] 5 11/20	9.2	11.8P	11.2P	11.6P	11.0	(8.7)A	9.2P	(11.0)P	(6.0)P	(5.2)P	(6.3)P	(6.0)P
14	(5.8)F	(5.0)F	(6.0)F	(3.5)F	(2.6)F	(4.3)F	6.4	7.2	7.2	(6.8)B	(7.2)B	(7.5)A	[5.7] 10/20 10/08	12.0)P	(12.5)P	(12.2)P	13.5P	12.0P	19.6P	6.2P	3.8	3.0	3.1	(2.3)P
15	A[24]	A[25]	A[26]	2.6	A[75]	3.6	6.0	7.3	8.4	10.6	(7.3)A	8.7	9.8	11.0	(11.5)P	12.0)F	12.4)P	(13.3)P	(12.0)P	(8.0)P	16.4)P	5.6	(6.0)P	(7.0)P
16	5.7	7.0	7.8	4.0	2.8	3.9	(6.6)B	[8 6]	[9 2]	[9.4] 9:20	(9.8)P													
17																								
18																								
19																								
20																								
21																								
22																								
23																								
24									×7.2	6.7	8.8	9.7	10.3	12.2	12.8	12.0	11.4	10.0	11.6	7.7	5.2	5.0	4.6	4.9
25	4.3	4.0	3.9	3.1	2.1	3.7	7.8	5.7	7.8	8.0	10.7	13.0	12.2	11.7	11.6	10.3	10.3	11.4	11.2	8.5	6.3	4.7	5.2	5.6
26	5.0	4.4	3.4F	2.6	A[22]	3.6	6.3	6.7	6.6	7.2	8.5	8.7	8.1	9.0	11.0	11.9	14.0	13.6	12.2P	11.2	8.0J	7.1	8.7	(8.4)F
27	(5.6)F	(3.7)F	(3.8)F	3.3	3.2	4.2	6.8	7.6	9.0	8.5	9.6	9.9	10.8	11.0	11.6	10.9	12.0	12.2P	10.7	9.0	5.3P	4.5	5.4	7.3
28	5.2	5.7	4.7	3.2	2.6	3.3	6.5	8.4	8.4	10.4	10.7	10.9	10.7	12.0	12.7	(13.4)P	11.9P	10.5	10.8	11.2	10.4	(8.5)F	19.0)F	7.0F
29	(5.5)F	(3.4)F	2.6	2.3	2.2	3.2	6.2	6.9	8.6	(9.0)A	6.5	6.8	6.6	8.2	9.5	10.8	12.5	10.0	10.7	12.4	6.5	5.2	4.8	4.9
30	4.6	3.6	3.2	A[25]	1.9	3.2	5.8	6.3	7.4	7.6	7.5	6.4	7.9	8.5	8.5P	8.7	8.7	9.0	10.8	(11.4)F	11.8)P	8.7	[87]F	[87]F
31	8.6F	5.7F	(4.2)F	2.8F	2.6F	3.5	5.3	7.3	9.3	9.9	10.3	9.9	9.9	8.9	9.0	7.6	7.7	6.3	7.4	7.4	3.1	2.2	12.0)F	(2.3)F
Median	5.5	4.1	3.7	2.9	2.5	3.6	6.4	7.6	7.8	8.4	8.4	8.7	9.7	11.0	11.0	10.8	11.0	10.7	10.8	11.0	6.3	5.2	5.2	5.6
Count	23	23	23	23	23	23	23	23	24	24	24	23	23	23	23	23	23	23	23	23	23	23	23	23

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

f°F2 (Characteristic), — (Unit), Aug. (Month), 1952

Observed at Leopoldville

Lat. 4.3°S, Long. 15.3°E

Mean Time

(Institution)

Scaled by: ,

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.6	A24	A23	(2.2)A	A[21]	2.5	5.6	8.4	6.7	6.6	7.1	7.1	7.2	9.2	8.8	8.9	(9.0)A	9.5	11.3	12.7	(12.5)F	9.7	(7.0)F	(6.0)F
2	(6.8)F	(4.3)F	(3.2)F	(3.2)F	(3.0)F	3.7	6.2	7.8	8.6	9.6	11.5	11.0	12.2	11.7	12.2	12.2	12.3	12.0	11.5	9.8	5.2	4.9	5.8F	(5.9)F
3	(4.8)F	(3.4)F	2.9F	2.6F	2.7	3.3	6.0	6.6	6.8	7.2	6.6	7.4	8.1	9.0	11.2	12.4	13.6P	13.0	12.4	10.4	7.2	4.9	5.2	8.0
4	5.4	(3.7)F	2.7	2.6	2.9	3.6	6.3	8.6	9.9	9.3	8.7	6.9	6.4	8.2	8.3	8.5	8.9	10.1	12.0P	12.6	(13.5)F	10.9	(7.6)F	F7.1
5	F6.6	F6.1	F5.6	F4.9	(4.2)F	(4.4)F	6.0	9:40 12 6.8	8.0	9:20 33 8.3	8.3	9.5	9.9	11.9	12.3	2:40 12.5 126	4:20 12.8 128	13.0	13.8	8.0	5.9	2.9	2.6	2.6
6	(5.3)F	(4.7)F	(2.8)	(3.1)F	3.6	3.4	5.5	6.2	7.2	7.0	8.0	9.0	9.9	9.8	10.0	9.9	9.4	9.9	9.5	9.5P	(9.3	(7.0)P	8.7	(8.2)F
7	F6.8	5.4	(5.3)F	F3.8	(2.3)F	3.6	5.5	6.3	8.2	9.4	[10.8]A	12.6	(12.2)P	12.6	11.8	12.0	12.4	12.1	11.4	8.9	7.0	4.4	5.0	5.4
8	6.0	6.3	5.3F	3.4	(2.2)A	4.2	6.4	7.3	7.8	8.5	10.3	11.3	12.1	13.0	(13.8)F	13.4	12.4J	12.8	12.1J	8.9	5.4F	[4.4]F	4.1	(4.6)F
9	5.6	3.3	2.6	A2.2	4:20 A 1.6 1.8	3.7	6.6	7.3	6.8	9.1	9.8	8.4	7.7	9.6	10.4P	10.0	8.6	8.4	7.8	7.2	7.5P	6.6	5.6P	5.0
10	4.6	3.4F	2.4F	(2.2)A	(2.3)F	4.3	7.4	8.1	7.6	8.0	7.4	9.3	10.6	(12.3)P	(11.3)F	(12.2)P	11.8P	13.0	12.0	9.4P	6.8	5.8P	5.2P	5.4P
11	6.0P	4.5	4.0	3.5	(2.5)A	4.4	7.1	7.8	8.0	8.5	9.3	10.4	10.3	10.4	10.6	11.8	11.4	(12.2)P	(13.2)P	10.7	(6.2)P	3.6	3.6F	(4.8)F
12	F5.1	F5.5	(5.8)F	(4.7)F	(3.3)F	4.1	6.3	6.5	7.8	10.8	10.2	11.4	10.9	11.5	(12.2)P	12.3	11.4	11.9	11.4	10.4	10.2	8.7	8.0	9.2
13	7.6	5.2	3.2	2.3	1.9	3.5	7.2	8.3	8.6	8.7	9.0	9.2	10.2	12.0	12.7	(12.8)P	12.4	12.0	10.6	11.4	6.7	5.4	4.8	(4.2)P
14	3.3	3.7	4.3	1.9	1.7	4.4	5.8	6.3	7.3	7.4	7.9	8.6	8.6	9.3	10.0	9.8	9.7	9.8	11.5	(9.4)P	7.0	(6.5)P	5.9	5.2
15	4.0	(2.9)F	2.1	A2.0	(1.8)A	3.8	5.8	6.3	7.2	8.8	9.4	7.8	8.9	10.2	11.2	11.2	9.6	9.3J	8.3	8.9	5.8	4.9	(5.1)F	5.0
16	(5.0)F	(4.4)F	(3.6)F	(2.4)F	(2.0)F	3.7	6.2	7.4	8.3	7.4	8.0	8.3	7.9	8.2	8.4	8.8	9.8	9.6	10.2	(9.8)P	(9.2)P	F9.2	F9.3	(9.4)F
17	8.0	3.8	2.8	2.4	2.3	3.7	6.2	7.6	8.3	8.5	9.3	7.7	8.7	9.2	8.7	8.6	8.5	9.1	11.0	10.8	8.0	(5.9)P	(4.3)A	4.0
18	5.0	4.7	3.3	2.7	2.6	4.0	6.0	7.3	7.9	8.6	8.9	10.0	11.4	13.0	(12.5)P	12.7P	13.6P	14.0P	13.8P	11.8P	7.3J	4.7	4.6	5.4
19	5.4	F5.4	5.4	3.4	(2.6)F	3.7	7.0	8.0	7.6	7.7	7.6	8.7	8.4	9.1	9.0	8.8	9.8	9.8	[11.3]B	7.6	3.6	7.5A	10:20 21 2.1	(2.6)F
20	(4.8)F	6.4P	3.9	3.1	24 <2.5 A	3.6	6.3	6.6	8.0	8.4	8.3	8.0	7.3	8.2	9.2	9.6	9.4	9.4P						
21																								
22												9.0	9.7C	11.3	12.5	12.0	11.5	10.8	9.1	6.6	5.9	3.7	(2.6)F	(3.4)F
23	(2.5)F	(2.7)F	A24	A22	2.0	3.6	6.2	8.4												12.4P	12.6P	10.0	(10.5)F	(10.0)F
24	7.3	5.0F	4.8F	4.6F	3.4F	3.5F	6.7	7.5	7.8	8.4	8.9	10.5	13.0	12.7	12.4	12.6	12.2P	11.6	8.6	8.3	8.5	3.7	3.3	3.0
25	2.7	2.3	(1.8)A	(1.6)A	(1.6)A	3.6	6.6	7.5	7.7	9.2	9.4	10.7	11.0C	11.2	10.5	10.0	9.3	7.3	7.0	7.2	7.2P	(5.6)P	6.6	5.2
26	3.6	2.0	2.4	A2.0	A1.8	3.7	6.6	7.3	8.6	9.0	9.8	11.2P	12.9	12.3	1:40 11.6 118	12.2	13.0	12.7	12.1	12.8	(12.8)F	(13.0)F	(12.0)F	(10.3)F
27	(5.6)F	3.9F	3.3F	3.0	(2.7)A	(4.3)F	6.6	7.2	8.4	8.1	9.4	9.7	7.9	11:20 77 7.6	82 11:40 8.0	8.7	9.1	94 4:40 9.3	9.6	10.2	11.0P	8.4	5.5P	6.0
28	3.1	2.3	2.2	2.0	A1.8	4.0	6.5	7.4	8.2	8.9	10.3	12.1	13.3	12.8	12.8	12.9	13.2	12.2P	12.6	13.7P	13.6P	11.2	8.5	(5.9)F
29	(4.4)F	(3.4)F	(2.0)A	1.5	1.6	4.1	6.3	8.3	9.0	8.9	9.1	11.3	12.4	13.0	12.8	12.5	13.8P	13.6P	13.0	12.0	10.0	7.6	7.2	6.6S
30	6.2	5.1	4.6	3.2	2.0	4.2	7.4	7.9	8.9	7.9	8.9	8.8	9.7	11.3	11.7	12.1	13.6P	>14.0	>14.5	13.7P	11.8	9.8	9.0	8.7
31	7.0	6.0	4.9	3.5	3.0	4.3	7.0	7.3	8.2	8.9	8.3	8.5	8.9	9.0	9.2	9.9	9.6	10.2	10.7	11.8F	11.7P	10.4P	8.9	(8.8)F
Median	5.3	4.3	3.2	2.6	2.3	3.7	6.3	7.4	8.0	8.5	9.0	9.2	9.9	11.2	11.2	12.0	11.4	11.6	11.4	10.2	7.5	5.9	5.6	5.4
Count	29	29	29	29	29	29	29	29	28	28	28	29	29	29	29	29	29	29	28	29	29	29	29	29

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

f'Fn (Characteristic), ____ (Unit), Sept. (Month), 1952

Observed at Leopoldville

Lat. 4.3°S, Long. 15.3°E

____ Mean Time

____ (Institution)

Scaled by: ____, ____

Calculated by: ____, ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
489	7.9 F	6.0 F	(5.4) F	(4.4) F	(3.5) F	4.6	5.4 0 6.4 7.0	C7.8	7.9	7.7	8.6	10.2	10.8	10.3	10.8	12.4	12.6	12.1 J	12.4 J	12.4 J	11.3 J	10.8 P	(8.3) P	(7.6) P
912	6.0 P	(5.8) P	(5.7) P	(5.3) P	2.0	3.4	7.5	10.0	10.6	10.8	9.2	11.3	12.4	11.8	11.2 J	12.1	12.8	13.8 P	13.3 P	12.6	11.6	10.0	9.2 P	8.3
933	7.2 P	5.4 P	4.3 F	3.6	2.7	4.6	7.6	8.0	9.6	10.3	9.5	10.3	11.3	12.6	13.3 P	13.0 P	13.6 P	14.0 P	(14.2) P	(14.0) P	13.2	12.1	9.8	10.2
954	4.8	3.5 J	2.7 J	2.3	2.3	4.7	8.2	9.8	10.6	10.1	11.2 P	13.1	(13.6) P	(12.4) P	12.6	13.3	14.2 P	14.8	13.3	11.0	9.4	(8.0) J	8.3	7.8
975	3.9	2.6	2.4	2.1	2.2	4.6	8.0	8.0	8.4	9.3	9.9	10.5	11.2 P	11.4 P	11.5	12.3 P	12.6	12.3 P	13.5	(13.8) P	12.8	9.0	6.8	4.6
996	4.1 P	3.4	2.4	2.0	2.5	4.9	8.0	8.7	7.6	7.8	8.3	9.2	9.4	10.6	10.9	12.0	12.5	12.4	13.2 P	14.2	14.4 20:00 F 14.3	8.7	7.0	7.7
5017	3.6	3.2	2.9	2.6	2.4	4.2	6.6	7.8	8.0	10.4	8.6	9.8	11.5	12.3	13.6	13.7 P	13.7	13.7	13.7	(14.0) J	F129	F129	11.5	6.8
5038	(6.2) F	(6.0) F	F56	F52	F48	(5.6) P	7.1	8.0	8.0	9.0	8.1	7.3	7.8	8.8	10.0	11.0	11.9	13.6	(14.0) P	(13.8) P	(13.8) P	9.0	(7.4) P	(6.5) P
5059	A 60	5.4	5.2	5.1	A44	(4.4) A	7.0	9.3	8.6	9.1	10.4	12.5	(14.0) P	(13.6) P	(13.5) P	12.4	12.4 P	12.8	13.3	14.2 P	(15.0) P	10.0	(8.0) P	F81
6010	(7.2) F	6.0	(5.7) F	(6.5) F	6.4	6.6	8.3	7.6	8.4	9.6	9.8	10.8	12.8	(13.6) P	(13.0) P	(13.5) P	(13.8) P	(14.0) P	13.6	(13.2) P	12.4 J	(12.0) P	F92	(6.4) F
6011	5.8	5.3 F	4.4	4.2	4.6	(6.3) F	6.0	6.3	7.7	9.3	8.2	8.3	9.2	10.3	12.4	12.5	13.0	14.0	13.8	12.8	10.2	7.7	6.3	6.2
6112	5.6	(4.6) P	3.4	3.4	2.9	5.0	7.4	7.2	6.6	7.2	8.4	10.0	11.8	12.8	13.0	13.4	14.0	14.2	13.6	(12.0) J	(12.4) C	F110	(9.6) C	F88 → frequency too low
6113	F80	F72	(6.5) C	(5.5) C	(3.3) C	(4.9) C	(6.3) C	(7.3) C	7.6	8.8	9.6	C7	C	C	C	C	C7	C7	(13.6) P	(13.8) P	13.6	12.0	8.3	7.8
6514	6.6	5.6	4.4	2.6	1.9	4.0	5.6	8.0	9.1	7.6	7.1 J	8.3	9.7	9.7	9.4	10.5	11.2	11.8	12.6	12.3	9.6	6.6 P	5.0	4.5
6715	3.8	3.6	3.4	3.2	3.2	4.3	6.6	7.6	8.7	8.9	9.4	10.0	10.6	11.0	12.1	13.2	13.6	14.2 P	14.2 P	(15.0) P	(13.8) P	X.6	6.6	5.6
6916	5.0	4.6	4.3	4.0	3.4	4.8	6.3	7.2	8.0	8.9	9.9	12.3	12.4 P	12.4	13.0	13.4 P	14.0	13.8	13.8 P	13.6 P	13.0	8.8	(6.5) P	5.2
7217	4.9	4.0	4.7	4.0	3.1	4.4	7.4	8.8	7.9	9.1	10.7	10.6	11.4 P	11.2	11.8	12.7	13.4	14.8 P	(13.8) P	12.0	8.7	8.3	(8.0) P	7.6
7318	4.8	4.0	3.6	(3.1) A	2.8	4.7	6.7	8.0	9.0	9.3	10.2	11.9	12.2 J	12.8	13.6	13.6	13.5	13.7	13.6	14.0	(12.8) F	(12.0) F	(9.0) F	(7.4) F
7519	(6.0) F	4.7	4.1	3.6	3.4	4.8	6.0	6.3	6.9	7.6	9.0	9.8	8.6	9.3	10.3	11.3	13.3	12.8	10.4	9.6	11.8	9.0	F70	5.0
7720	4.4	3.6	3.2	3.4	3.6	5.3	6.3	6.5	7.0	8.4	9.9	11.8	11.0	12.0	12.4	13.3	13.3	13.5 P	(13.8) P	(13.4) P	12.3 J	F113	F103	F93
8021	F83	F73	(6.4) F	(7.0) F	6.8	6.8	5.8	6.4	7.8	9.6	11.3 P	11.9 J	11.6	11.3 P	11.0	11.4	(12.5) P	13.5	13.6	F136	(13.6) F	F120	(10.3) F	F84
8122	(6.5) F	(5.1) F	(4.7) F	(4.2) F	(4.2) F	5.5	6.6	8.0	7.3	6.7	7.6	9.3	C	C	C	C	10.6	11.8	11.0	10.4	9.4	7.6 J	5.4	4.7
8323	3.9	3.5	3.0	2.9	3.2	4.6	6.2	6.8	8.0	8.3	9.3	10.8	(12.0) P	13.0	13.8	13.6	13.6	13.6	13.8 P	(13.8) P	12.4 J	10.4	9.6	7.2 J
8524	4.3	4.4	4.2	(3.4) F	2.4	4.8	6.5	6.8	7.0	8.3	9.7	11.2	11.3	11.6	11.8	11.9	12.4	12.4	11.6	9.6	8.8	7.6 J	(6.9) P	4.9
8625	3.8	3.8	4.0	4.3	2.4	5.0	6.5	7.6	8.6	8.5	8.9	9.3	9.8	10.0	10.5	11.1	12.3	12.4	13.0	12.8 P	11.6 P	F106	9.6	7.4
8926	4.6	3.6	3.0	3.6	2.6	4.5	5.9	8.5	11.3	11.9	9.8	11.2	12.3	11.6	12.0	12.2	12.6	13.3 P	12.8 J	12.8	11.6	(10.0) P	F86	6.7
9127	7C	7C	7C	7C	7C	7C	7C	7C	7C	10.4	9.1	9.8	11.6	13.2	14.4	14.7	7 15.0	14.6 P	(14.0) P	(13.8) P	(13.0) P	11.8	8.3	7.3 J
9328	5.2	4.8	4.3	3.6	2.0	4.8	6.0	7.8	9.1	9.3	8.1	8.9	9.7	10.4	10.0	10.6	11.4	12.0	12.6	F137	(14.8) P	F122	(9.5) F	6.7
9529	(4.8) F	(6.0) F	(5.5) F	(6.2) F	(6.6) F	5.4	6.6	6.7	8.3	9.9	11.0	9.8	9.8	10.6	11.3	11.4	12.0	13.8	(12.0) P	13.3	(10.0) P	8.8	(9.0) P	(8.0) F
9730	(7.3) P	(5.3) J F	4.8	4.6	4.8 P	5.9	8.6 P	9.5	11.5	13.3	13.8	14.3 P	12.8	12.8	12.7	12.2 P	12.8 P	13.8 P	(14.0) P	14.8	13.6	11.8	7.3	4.7
31																								
Median	5.7	4.8	4.3	3.8	3.2	4.8	6.6	7.8	8.2	9.1	9.5	10.2	11.4	11.6	12.0	12.4	12.9	13.6	13.6	13.6	12.4	10.0	8.3	7.2
Count	30	30	30	30	30	30	30	30	30	30	30	30	28	28	28	28	30	30	30	30	30	30	30	30

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

foF2 (Characteristic), — (Unit), October (Month), 1952

Observed at Leopoldville

Lat. 4.3°S, Long. 15.3°E

Mean Time

(Institution)

Scaled by: ,

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
5491	3.6	3.8	4.1	4.5	(2.3)A 4:20 2.3	4.7	6.6	7.7	8.4	9.9	12.0	13.0P	12.8P	14.4P	14.8P	14.4F	14C	14.8P	13.5 141	F 13.4	(12.7)F	(12.6)F	10.8F	F9.0
5512	(7.2)F	(6.3)F	(6.0)F	4.5	4.2	5.7	6.5	6.5	7.7	9.3	11.0	12.3	13.6	(14.0)P	14.8P	14.3P	14.2P	14.2P	14.0P	14.4P	13.7 F	[12.0]7	(9.5)F	F8.7
533	F8.0	7.5	F6	5.8	5.0	5.0	6.4	6.3	6.5P	8.4	10.3	11.6	13.3P	13.8F	13.8P	13.7P	14.0P	(15.0)F	15.4P	(14.0)P	13.2P	12.0F	(10.8)F	(8.5)F
54	7.3	[7.2]F	6.8	5.9	4.6	4.6	6.0	7.1	9.0	11.2	10.6	10.0	10.8	11.8	12.1	12.2	13.0	14.4	12.0	12.1	(13.0)F	11.5F	(10.0)F	(8.2)F
75	(7.3)F	(7.3)F	(7.0)F	(6.3)F	3:40 3.0 A6	A4.6	(6.6)P	[7.0]	7.6	A8.1	A8.6	9.1	10.4	12.0	13.3	13.4	12.0	11.3	11.3	11.3	11.0	8.8	7.0	5.0
96	4.6	(4.2)F	3.7A	(3.2)F	4:20 2.2 2.4	5.0	7.7	8.3	8.4	9.6	11.0	10.4	11.0	11.7	11.5	11.2	11.7	13.3	13.2P	10.5	9.2	7.9	7.5	5.4
617	5.0	4.9	4.7	4.6	2.9	5.3	6.0	7.3	8.6	10.6	12.0	13.3	(14.0)P	14.2 >13.6	(14.4)P	(14.6)P	(14.4)P	13.8	13.3	12.0	10.8	(11.5)F	(10.4)F	8.2
38	6.4	6.0	6.2	6.2	4.6	5.3	6.7	6.5	5.9	6.7	8.2	8.8	9.3	10.0	10.8	11.8	11.3	10.6	10.6	9.2	8.9	9.4	(8.8)F	(8.3)F
59	(6.4)F	5.4	4.4P	4.4	4.3	5.4	5.7	5.7	6.2	8.4	9.0	9.4	10.0	11.1	11.6	12.0	13.2	14.2	(15.0)P	13.7F	12.3	11.3	(9.8)F	(9.1)F
710	(5.8)F	(5.0)F	5.3	5.4	2.6	4.9	5.9	5.6	6.6	8.1	(9.0)P	9.8	10.8	12.2	(13.4)P	(14.3)P	(14.2)P	(14.4)F	7	7	7	7	7	7
911																								
7112																								
313									8.3	9.3	10.3	10.6	10.6	11.1	12.0	12.3	12.5	10.0	9.3	10.7	(11.6)F	10.2	(9.0)F	(7.3)F
514	5.6	4.9	4.2	4.0	3.2	5.4	6.6	7.3	8.2	9.5	10.9	9.6	11.0	12.6	14.6	15.0	14.2P	13.0	12.1	12.2P	(13.2)F	(14.5)P	10.6	5.9
715	5.2	4.3	4.0	3.9	(2.0)	4.9	6.2	8.0	9.0	9.9	10.3	9.9	9.7	10.3	10.4	11.0	12.9	(13.8)P	(14.4)P	(11.0)P	10.0P	10.3	(9.6)F	F8.2
916	6.8P	(7.0)P	(7.0)F	4.6P	3:40 2.1 A3.0	4.6	6.5	6.3	7.8C	9.3C	10.8C	C11.3	(13.8)C	(13.8)C	(14.2)P	(14.0)P	13.6P	C13.8	(14.0)P	(13.6)P	F12.6	C11.6	10.6	(9.6)F
8117	(6.8)F	5.3	4.4	4.4	3.2	5.6	7.0	8.4	7.6	9.0	10.1	11.6	12.8	(14.0)P	14.5	14.6	12.2	12.2P	11.2	10.6	11.0	10.0	6.4	3.6
318	3.3	3.3	2.6	2.1	1.8	5.0	7.0	7.0	8.6	10.1	12.0	13.0	13.0	13.1	13.6	13.3	13.1	12.6	11.8P	11.6P	12.1	10.2	10.0	5.3
519	4.7	4.8	4.4	(4.1)C	3.2	6.5	6.4	7.7	7.2	7.9	8.6	9.3	10.6	11.6	12.5	11.8	10.6	10.6	10.1	9.8	9.3	8.9	8.6	5.1
720	4.7	4.4	4.4	4.1	3.4	6.1	7.2	C7.2	(7.0)C	8.2	9.9C	11.6	12.7	13.0	(13.6)P	14.1	13.6	12.2	11.4	9.8P	9.0	9.5	9.0	4.5
921	4.6	4.9	5.1	4.7	2.9	4.9	5.7	6.6	8.2	9.0	10.1	12.3J	13.5	(14.0)P	(14.0)P	14.7	13.6	12.7	12.4J	12.0	11.0	F9.7	8.4	(9.4)F
9122	(7.2)F	6.1	5.9	5.2	4.7	6.4	7.2	8.9	8.7	9.4	10.6	12.0	12.1	12.3	12.5	13.4	14.3	(14.2)P	>13.0	(14.6)P	14.8P	14.5	(10.0)F	6.7
323	6.7F	(6.6)F	6.2	4.4	2.5	5.0	6.5	7.7	8.7	10.1	(11.8)P	13.0	(14.0)P	(14.5)P	14.8P	14.8	13.6P	13.0	13.2P	13.6P	13.8P	(11.8)F	(9.8)F	F8.4
524	(7.0)F	(7.0)F	(6.0)F	4.7	A3.1	4.8	5.8	7.0	7.8	8.4	9.1	9.5	9.9	10.9	12.3	14.0	11.6	10.1	9.3	9.0	9.0	10.2P	>12.0	5.7
725	F5.8	(5.9)F	4.8	3.5	3.0	4.6	5.4	6.1	7.0	8.3	9.4	10.6	12.0P	13.3	14.4	14.5	13.7	12.8	(12.0)P	12.6P	13.0	12.3	F10.0	(7.6)F
5826	(7.2)F	5.8	4.5A	3.2A	1.9	5.0	6.8	7.5	7.5	8.9	9.8	11.0	11.2	11.3	12.0	12.3	13.0	(12.0)P	9.3	9.6	8.7	8.6	6.0	3.6
6027	3.6	(3.6)F	(3.8)F	3.8	(3.5)F	4.6	6.5	6.9	7.9	8.5	9.1	10.0	10.9	11.9	12.4	11.8	11.3	11.8	11.0	10.6	10.2	9.8	5.9	3.8
328	3.9	3.7	3.5	3.3	3.0	4.7	6.0	6.2	6.8	8.2	9.3	9.9	10.3	11.9	12.0	11.4	10.4	10.3	10.4	11.3	12.4J	14.4P	10.0	7.0
529	5.6	5.2	4.8	4.0	2.4	4.8	6.1	6.6	8.4	10.0	12.6	13.5	13.3	(14.0)P	14.3	12.7	12.7	13.0	13.5	13.2	13.6	(13.3)F	13.3	6.9
730	5.7	5.4	5.4	6.1	3.3	5.0	6.2	7.2	9.2	9.5	10.8	12.4	13.1	13.4P	13.6P	13.6	13.2	13.0	12.4	12.4	13.0	12.0	8.4	5.7
931	4.9	4.2	4.2	3.4	1.9	5.4	6.8	7.4	8.0	9.1	10.7	12.0	12.2	12.0	12.0	12.6	12.6	13.8	12.2	11.2	8.6	7.0	6.3	4.9
Median	5.8	5.3	4.8	4.4	3.0	5.0	6.6	7.0	8.0	9.1	10.3	11.0	12.0	12.3	13.4	13.4	13.1	13.6	12.1	12.0	12.1	11.3	9.8	7.0
Count	28	28	28	28	28	28	28	28	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

foF2, ____ (Characteristic, Unit) November, 1952 (Month)

Observed at Leopoldville

Lat. 4.3°S, Long. 15.3°E

____ Mean Time

(Institution)

Scaled by: ____, ____

Calculated by: ____, ____

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	5.0	4.3	4.3	4.0	3.9	6.9	8.4	8.0	9.1	10.6	11.7	11.7	11.6	11.0	11.2	11.3	11.9	11.0	11.0	9.8	10.0	7.0	4.2	4.0
2	4.2	4.0	4.0	3.8	2.9	5.6	7.2	7.4	8.3	10.6	12.6	12.8	13.3	13.4	13.6	13.4	13.4P	13.2	11.8	10.7	10.7	10.7	6.7	5.9
3	5.6	4.9	4.5	3.2	2.9	5.0	6.5	7.8	7.6	8.7	(10.6)P	12.3	12.0	11.8	12.4	12.6	12.0	11.0	8.9	9.0	10.3	12.3	F9.4	6.6
4	6.3	5.4	4.2	3.7	3.40 3.6A 24	5.0	5.9	7.2	8.5	10.6	12.0	12.8	12.4	12.6	12.7	12.0	11.8	11.6	10.6	10.3	10.2P	9.6	8.4	7.3
5	7.6	6.3	4.3	2.6	2.3	4.6	5.8	6.4	7.9	10.2														
6																						8.4	6.7	4.7
7	4.6	5.2	4.6	(3.3)A	2.6	5.2	6.6	6.1	6.5	8.4	9.8	9.3	9.8	10.7	12.1	11.2	11.8	10.4	11.1	12.1	13.3	(13.0)F	(8.6)F	(6.0)F
8	(5.8)F	(6.0)F	(6.0)F	(5.3)F	(4.2)F	5.0	6.4	7.0	6.3	6.9	8.0	8.0	8.7	9.4	10.0	10.1	10.1	9.8	8.3	8.3	8.9	F9.2	9.4	6.2
9	4.8	4.7	4.0	4.0	3.8	5.6	7.4	5.6	6.0	7.5	9.4	10.4	10.5	11.8	12.1	12.4	12.4	13.0	12.0	11.8	11.3	11.7	10.4	8.0
10	7.3	6.2	5.4	3.9	3.0	5.2	6.0	6.6	7.9	8.7	10.7	11.5	11.2	11.6	11.5	11.7	12.1	10.8	10.8	11.0	11.7	11.8	11.0	7.0
11	6.0	5.8	5.9	5.0	3.8	5.6	4.5	6.5	7.5	7.7	8.4	9.2	10.1	11.0	11.6	11.8	11.2	10.4	10.6	11.0	10.8	9.8	8.8	5.6
12	4.6	4.3	4.1	3.9	3.9	5.7	6.8	8.2	8.9	8.0	(9.3)C	11.4	12.7	12.3	12.5	12.1	12.0	11.8P	11.6	12.1	(12.3)F	F13.2	14.1	7.1
13	5.9	5.3	(5.3)F	(5.2)F	(5.0)F	6.4	6.6	6.6	8.0	9.8	12.1	12.7P	12.7	12.6	12.6	12.8	12.6	11.1	10.6	10.6	(11.0)F	(11.8)F	12.8	7.3
14	5.6	B.U	5.3	4.8	3.8	5.8	5.8	6.4	7.6	8.3	8.4	8.9	9.8	10.3	10.0	10.0	10.9	10.8	9.4P	9.4	9.8	F9.4	9.1	7.9
15	7.7	7.9	(6.5)F	3.3	(2.4)A	4.7	6.0	6.5	7.8	9.0	10.6	11.3	11.5	11.2	10.9	11.2	10.9	10.6	10.6	11.6	12.3	13.6	(9.5)F	(7.8)F
16	7.8	8.2	6.6	5.3	(3.8)F	5.1	6.1	6.6	7.8	9.0	9.6	9.0	9.6	10.0	10.4	10.3	10.7	11.2	10.0	10.5	11.2	12.6	10.4	8.0
17	7.6	7.9	6.2	4.2	2.8	5.3	6.4	7.2	7.6	8.6	C9.5	10.3	10.5	10.6	10.6	11.0	10.8	9.1	9.6	10.4	11.4P	12.3	10.3	6.8
18	F11	(7.3)F	6.2	(5.9)F	5.6	(6.0)F	7.4	9.9	10.2	11.0	12.3	12.8	13.3P	15.4	(14.4)F	(14.0)P	14.2	12.9	11.0	11.4	11.7	11.2	7.7	5.5
19	5.9	5.7	6.3	3.6	3.0	5.6	7.1	7.9	8.6	10.7	(12.5)P	(12.0)P	12.0	12.2	12.3	12.2	12.6	12.4	11.0	10.6	11.6	11.6	9.8	8.0
20	7.6	7.3	6.0	4.0	3.1	5.6	6.3	6.3	8.0	9.6	(11.6)P	12.8	12.8	(12.6)P	12.8	12.6	12.4	(12.2)P	10.8	10.2	10.5	9.7	8.4	8.0
21	8.0	8.0	5.9	3.7	2.6	5.0	5.6	6.4	7.6	9.0	10.3	11.6	13.0	12.7	12.3	12.5	(12.0)P	12.0	10.8	10.3	10.8	10.6	10.1	7.3
22	6.8	6.7	6.0	(6.0)F	(5.8)F	6.4	6.8	6.9	7.3	8.4	9.6	11.0	(12.0)P	11.5	11.3	11.4P	11.8	12.1	12.0P	12.4	11.8	9.0	5.8	5.4
23	5.5	6.0	6.0	5.6	4.7	5.9	6.6	7.0	7.6	7.9	9.8	9.0	9.5	10.4	11.0	11.0	11.3	11.0	11.3	11.2	10.8	11.5	8.0	8.3
24	7.7	7.8	C7.7	7.6	5.3	4.9	6.3	6.5	8.0	9.8	11.7	12.8	12.8	12.8	12.4	12.6	12.5	11.6	11.6	12.0P	12.2S	12.2	11.0	8.6
25	6.9	6.6	5.9	5.5	5.2	4.7	5.5	6.0	6.8	8.6	9.2	9.0	9.3	9.3	9.9	10.7	10.3	10.0	9.4	9.9	11.0	12.0	10.0	6.9
26	6.2	6.2	6.0	5.6	4.7	4.0	5.9	6.5	7.7	8.4	9.1	9.8	9.8	10.1	10.4	10.4	10.7	10.5	11.0	11.7	13.5P	10.1	8.4	6.7
27	6.0	5.6	5.4	4.9	3.2	4.5	6.4	8.1	8.4	7.8	8.6	8.8	9.0	9.4	9.5	9.8	10.6	11.4	11.3	11.3	11.3P	12.4	9.6	4.7
28	4.0	4.3	4.3	4.3	4.4	5.6	6.9	7.2	8.0	8.6	8.6	8.9	9.2	9.6	10.3	10.7	10.8	10.9	10.6	11.0	12.2	13.0	11.1	7.0
29	5.8	5.6	5.3	5.1	4.1	4.7	6.6	8.0	6.8	8.0	8.6	9.5	9.7	9.5	9.6	9.0	9.3	9.9	10.1	9.6	11.1	10.0	7.0	5.6
30	5.3	5.4	5.3	5.2	4.8	6.2	6.1	6.8	6.7	7.6	8.6	9.9	10.7	11.1	11.5	11.6	11.4	11.6	11.4P	11.5P	9.6			
31																								
Median	6.0	5.8	5.4	4.3	3.8	5.3	6.4	6.8	7.8	8.6	9.7	10.7	11.0	11.1	11.5	11.5	11.8	11.1	10.8	10.8	11.2	11.5	9.4	7.0
Count	29	29	29	29	29	29	29	29	29	29	28	28	28	28	28	28	28	28	28	28	27	28	28	28

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

F^0F_2 (Characteristic), (Unit) December (Month), 1952

Observed at Leopoldville

Lat. 4.3°S, Long. 15.3°E

(Institution)

Scaled by: ,

Mean Time

Calculated by: ,

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1																9.6	10.0	10.6	10.0	10.5	11.3	8.8	5.1	5.0
2	4.6	4.2	4.2C	4.2	3.9	C52	C60	6.6	6.6	7.2	8.6	10.2	(10.6)C	7	7	7								
3																								
4																								
5																								
6																		∠	8.2	8.4	(8.6)C	10.2	8.5	7.6
7	6.0	5.0	4.4	4.0	3.1	5.2	6.0	6.0	6.8	8.0	8.6	9.9	11.0	11.2	11.2	10.7	10.6	10.7	10.0	10.2	12.0	11.0	5.7	4.8
8	4.8	4.1	3.6	3.3	(3.3)A	5.3	6.2	6.4	7.0	8.4	9.4	9.6	9.5	9.0	9.0	9.4	8.6	8.4	8.4	8.4	8.7	9.2	8.0	6.2
9	5.3	5.0	4.3	4.4	3.1	4.6	6.2	6.2	7.8	9.1	11.3	11.3	11.2	11.4	11.4	11.0	10.0	9.6	(9.1)P	9.3P	9.5	10.1	8.0	5.6
10	5.7	6.6	6.3	(4.9)F	3.3	4.5	5.6	6.6	8.4	9.0	9.6	10.6	11.0	11.0	10.7	10.7	10.7	11.2	11.0	10.6	10.6	11.4	9.2	7.2
11	6.7	6.6	6.4	(6.1)F	4.4	5.0	6.0	7.7	8.4	7.8	8.2	8.5	8.8	9.0	9.8	10.6	9.5	9.4	8.0	7.7	8.2	8.6	8.6	7.3
12	5.2	4.0	3.8	3.9	3.7	4.8	6.3	7.1	8.1	8.9	9.2	9.6	10.0	10.2	11.2P	11.7	10.4	10.2	9.6	10.5	10.6	11.2	[10.3]	7.6
13	6.6	6.8	6.5	6.7	6.8	7.9	6.7	6.1	6.8	7.7	8.3	8.5	8.6	10.1	10.5	9.7	11.1	10.8	10.3	9.0	7.0	6.7	5.9	5.3
14	5.3	5.3	5.1	4.6	4.0	5.4	7.3	7.3	7.3	8.7	10.0	10.4	10.5	10.8	11.0	11.3	11.3	11.7	11.3	11.0	11.7	13.0	10.0	6.1
15	5.8F	5.6	5.5	5.7	5.4	6.0	7.2	7.0	8.0	9.6	10.9	11.3	10.7	10.5	10.7	11.4	C11.2	11.0	(11.2)A	12.1S	14.8P	15.0P	7.2	5.0
16	5.0	4.8	5.0	5.6	6.2	6.6	7.0	7.6	7.9	7.6	8.2	8.8	9.0	9.5	10.2	9.8	10.0	10.7	11.4P	11.2P	10.0	9.0	7.1	6.7
17	6.7F	6.6F	6.6	5.9	6.0	5.0	6.8	7.0	8.5	9.3	8.8	8.8	9.2	9.6	10.1	10.1	10.0	10.5	10.5	(11.8)P	12.8	13.0	F11.0	8.9
18	8.9	F8.0	7.2	(7.6)F	6.8	7.3	7.1	8.2	7.0	7.6	8.8	10.0	10.8	11.5	11.6	11.0	10.4	10.6	10.6	10.6	12.2S	10.2	6.3	(6.0)F
19	5.8	5.6	5.5	4.5	4.1	5.4	5.6	6.8	8.2	8.5	9.0	10.0	11.2	12.1	12.2	11.9R	11.6	11.0	10.1	10.2	11.0	11.1	F10.2	F7.3
20	F8.4	(7.5)F	(7.3)F	6.2	3.0	5.0	6.3	7.2	8.0	8.8	9.7	9.1	9.4	9.8	9.8	9.8	10.6	10.2	9.2	9.6	10.2	11.2	9.6	6.0
21	6.0	5.4	5.4	5.0	3.7	4.4	6.6	9.3	9.0	8.0	8.0	9.5	10.3	10.7	11.0	10.4	10.0	10.0	9.5	9.4P	9.0	8.2	6.8	5.6
22	5.0	5.3	5.5	5.2	4.4	4.9	6.2	6.6	7.3	8.6	9.6	10.4	10.9	11.3	11.6	11.6P	11.0	9.8	9.0	7.9	8.6	10.0	6.1	5.4
23	3.5	3.9	4.2	4.4	4.0	4.5	6.2	6.7	7.6	9.0	9.6	10.5	11.2	11.7	11.7P	11.6	11.6	11.6	10.9	10.6	11.0S	12.3	12.7	5.0
24	4.4	3.8	3.6	3.5	3.3	4.6	6.2	6.6	6.2	6.3	7.3	8.4	9.6	9.6	9.9	9.4	7.6	7.4	7.2	7.1	7.4	9.3	7.0	3.9
25	3.3	3.3	3.0	3.2	3.1	4.7	5.6	5.5	7.6	8.7	8.3	8.1	8.1	7.7	7.9	6.7	6.5	6.5	7.0	7.3	7.9	9.0	7.6	4.6
26	4.3	4.2	3.9	3.6	2.7	4.5	5.3	5.4	6.3	7.5	8.6	9.3	10.9	10.9	10.7	10.0	9.7	9.3	8.9	8.4	8.3	9.8	8.4	4.6
27	4.8	3.6	3.0	2.7	2.6	4.3	5.4	6.2	7.7	8.4	8.4	8.6	9.9	10.6	7.8	7.8	8.0	8.8	8.4	7.8	8.0	8.6	8.4	(9.0)F
28	(6.0)F	(4.5)F	(4.6)F	(4.6)F	4.4F	(4.4)F	5.7	7.0	8.6	9.9	7.4	7.3	8.8	10.0	10.0	9.4	9.2	9.6	9.4	8.8	9.3	11.7	8.4	4.3
29	4.3	4.9	4.4	(4.0)F	(3.8)F	3.8	4.7	6.6	8.6	9.1	9.2	8.6	8.0C	7.5C	7.0	6.2	6.7	7.3	6.7	6.7	7.9	10.1	3.5	3.5
30	2.9	3.0	2.8	2.7	2.9	4.3	4.9	6.3	7.3	7.0	7.3	7.7	8.5	8.4	8.0	7.8	7.9	7.7	7.0	6.6	7.1	8.2	5.4	4.3
31	4.1	2.8	2.4	A2.1	A1.9	A3.2	4.8	6.3	6.5	6.6	7.3	8.0	7.8	8.0	7.3	7.3	8.3	8.4	7.7	8.0	8.8	7.3	4.6	3.7
Median	5.3	5.0	4.5	4.5	3.8	4.8	6.2	6.6	7.6	8.4	8.7	9.4	10.0	10.4	10.6	10.1	10.0	10.0	9.4	9.3	9.3	10.1	8.0	5.6
Count	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	27	26	27	27	27	27	27	27	27

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

F°F2 (Characteristic), — (Unit), January (Month), 19 53

Observed at Leopoldville

Lat. 4.3°S, Long. 15.3°E

Mean Time

(Institution)

Scaled by:

Calculated by:

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.6	3.4	3.0	2.7	2.0	3.1	4.5	7.0	7.7	9.0	9.0	8.6	7.7	6.7	6.1	5.5	5.9	6.3	6.6	6.6	6.7	6.4	5.4	4.6
2	4.3	3.6	2.5	1.9	E	2.9	4.8	5.7	7.0C	C9.3	9.6	11.2	10.4	7.2J	6.2	6.1	6.6	7.2	6.8	7.0	8.4	6.6	3.7	3.6
3	3.9	3.6	2.6	2.2	2.0	3.8	5.0	5.7	7.2	7.6	8.2	8.4	8.4	8.5	8.2	8.2	8.0	7.9	8.0	7.0	6.8	6.3	3.9	3.1
4	2.9	2.9	2.4	2.0	C1.8	3.1	5.0	5.4	6.5	8.0	8.8	9.4	10.0	9.3	8.6	8.4	8.6	8.3	8.3	9.0	10.0	5.6	4.6	4.7
5	4.6	4.6	4.0	2.7	2.1	3.3	5.5	6.1	6.5	8.9	10.2	10.7	10.8	11.0	9.9	9.5	9.5	9.3	10.4	12.6	4.9	2.8	3.0	3.5
6	3.5	2.5	2.0	2.2	1.9	3.9	6.6	6.9	7.6	9.8	12.0	11.8	11.0	10.3	9.7	9.6	9.0	9.0	9.0	8.0	6.6	4.5	4.0	3.6
7	4.0	3.0	2.2	E	E	3.8	6.0	6.5	6.3	8.0	9.0	9.7	10.7	10.4	9.7	8.8	8.0	8.0	8.5	10.0	(9.0)F	4.4	4.9	5.6
8	4.8	4.4	3.9	2.7	<2.0	3.2	5.6	7.3	6.6	7.8	9.6	10.7	10.5	11.0	10.7	10.6	9.5	9.3C	9.0C	8.6	8.6	6.0	(6.2)F	6.0
9	6.0	5.5	4.0	3.6	3.6	4.0	5.5	6.5	7.3	7.5	8.2	8.6	9.0	8.9	9.0	9.0	8.5	8.5	8.2	7.4	7.1	6.6	6.5	6.8
10	6.4	4.8	2.8	(0.9)J	E	3.6	5.0	6.4	8.0	7.8	8.3	9.3	10.2	10.4	9.2	8.6	8.3	8.3	7.6	7.6	8.2	7.2	5.4	5.3
11	5.3	5.4	5.0	3.6	2.6	3.6	5.0	6.0	6.6	7.4	7.3	10.2	11.6	12.3	11.5	11.0	10.2	10.4	8.3	7.9	8.2	6.7	5.8	5.6
12	5.3	4.7	C4.0	C3.4	C2.7	3.3	5.3	6.0	7.6	8.9	10.3	11.6	11.0	9.7	8.7	8.6	8.6	8.0	7.6	8.0	9.5	10.8	6.1	5.4
13	5.3	5.6	5.8	5.1	3.3	3.4	5.0	5.9	6.6	7.6	9.8	11.0	11.5	11.0	10.6	10.6	11.0	8.7	8.7	9.0	10.3	10.2	5.7	4.7
14	5.0	5.0	4.9	4.7	2.7	3.6	5.4	6.4	7.6	8.4J	8.3	8.8	10.0	10.8	8.2	7.4	8.0	7.5	6.2	6.2	6.4	6.6	5.7	(5.2)F
15	5.0	4.5	2.6J	2.1	<2.0C	3.6	6.0	7.0	8.0	9.3	10.5	10.6	11.3	10.8	9.8	9.3	9.1	8.8	7.9	(8.3)P	8.2	8.5	7.2	5.7
16	4.8	4.4	3.9	3.6	3.3	4.5	6.0	6.8	7.3	8.3	9.6	11.1	11.6	10.1	9.3	8.3	8.9	8.4	C7.9	7.4	9.2	9.1	4.4	2.6
17	4.7C	2.7	2.6	2.8	3.0	4.1	5.5	5.9	7.2	7.5	9.8	C9.6	9.4	10.3	9.8	8.9	8.6	8.6	8.0	7.6	7.6	C7.3	7.0	6.0
18	5.6	5.0	4.7	4.0	3.3	3.7	5.4	7.6	7.0	6.8	7.2	8.0	9.5	9.3	9.0	C3:40 9.2	9.0C	7.0	6.6	6.4	6.8	8.0	4.9	3.1
19	3.2	3.2	2.8	2.5	2.0	3.6	5.4	6.8	C6.0	5.3J	6.1	8.5	8.0	7.8	7.8	8.2	9.3	9.2	7.8	6.2	6.2	6.0	5.1	4.9
20	5.0	4.9	3.2	2.4	2.4	3.2	4.6	6.0	7.6	8.0	9.3	10.6	9.7	9.9	8.7	8.1	7.2	6.9	6.6	6.8	8.0	6.7	4.4	2.9
21	2.2	2.0	(1.9)K	1.8J	3.2	5.0	5.9	7.0	7.6	8.3	9.4	9.0	9.2	8.6	8.0	8.1	8.6	8.7	7.6	7.1	7.8	8.1	2.8	3.0
22	3.0	3.0	3.1	2.9	2.9	2.9	4.8	6.8	6.3	6.9	9.0	10.4	11.0	11.5	10.8	10.2	10.1	10.1	9.8	9.5	9.5	10.2	9.5	6.5
23	4.0	4.0	C3.8	3.5	3.6	4.0	4.8	5.4	5.8	7.3	8.9	10.0	10.8	11.0	11.0	10.7	10.3	11.1	10.5	8.2	8.4	9.0	9.6	5.0
24	3.1	3.6	3.6	3.6	3.4	3.9	5.7	6.0	(6.3)C	6.0	6.3	7.3	8.6	9.6	10.0	8.6	8.6	8.3	(7.8)J	7.0	7.4	7.9	8.9	(5.2)P
25	2.6	2.3	(2.0)A	<2.0	<2.0	3.0	5.3	6.3	5.9	7.2	[8.3]	9.9	11.0	10.5	9.8	10.0	11.6	9.4	9.0	8.5	8.6	9.6	7.0	3.8
26	3.6	3.9	3.8	3.4	3.0	3.6	4.7	7.4	5.7	5.4	6.5	7.9	9.0	9.8	8.4	6.6	6.4	6.7	6.9	6.6	7.2	7.4	6.3	4.3
27	4.3	4.1	3.0	A2.4	A1.9	3.2	5.3	5.6	6.2	6.3	7.9	9.0	9.2	8.6	8.3	8.0	8.9	8.6	7.2	7.0	7.2	6.0	4.8	4.5
28	3.3	2.6	2.1	1.0A	1.9	3.2	5.7	5.6	6.7	7.4	8.3	9.3	10.6	10.0	8.7	8.4	9.6	9.2	7.7	7.2	7.6	7.2	3.3	3.3
29	3.4	3.4	3.3	2.8	(1.9)C	2.9	5.3	6.3	7.3	8.7	10.6	11.3	12.3	12.0	10.6	9.4	9.5	10.0	10.4	10.1	10.3	9.6	6.3	5.8
30	5.8	5.8	5.3	3.9	2.3	2.7	5.5	5.9	6.6	7.8	9.4	10.6	11.2	11.7	11.2	10.5	10.5	9.8	9.6	9.6	11.0	10.8	4.6	3.2
31	2.8	2.8	2.8	2.3	2.1	2.7	5.4	5.5	6.3	8.3	10.1	(11.6)F	(11.6)P	11.3	11.8	11.7	10.7	10.0	10.3	10.4	11.0	9.0	4.9	4.6
Median	4.0	3.9	3.1	2.7	2.1	3.4	5.4	6.3	6.7	7.8	9.0	9.9	10.5	10.3	9.3	8.8	8.9	8.6	8.0	7.6	8.2	7.2	5.4	4.7
Count	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31

Sweep ____ Mc to ____ Mc in ____ min

Manual ☐ Automatic ☐

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 702519