

1951年

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I(522. 8)
258

258



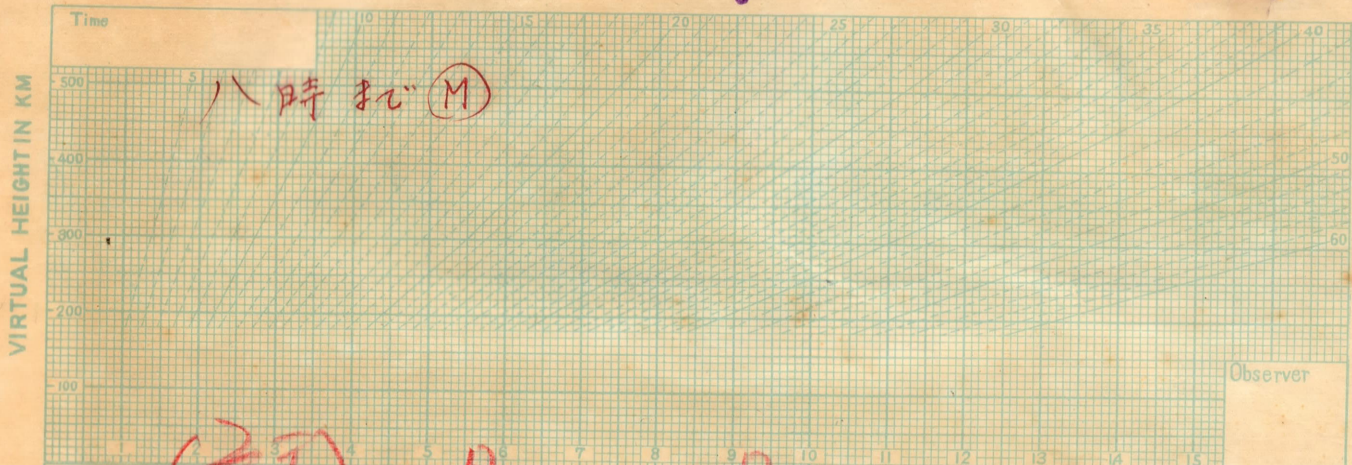
IONOSPHERIC RECORD

135°E MEAN TIME

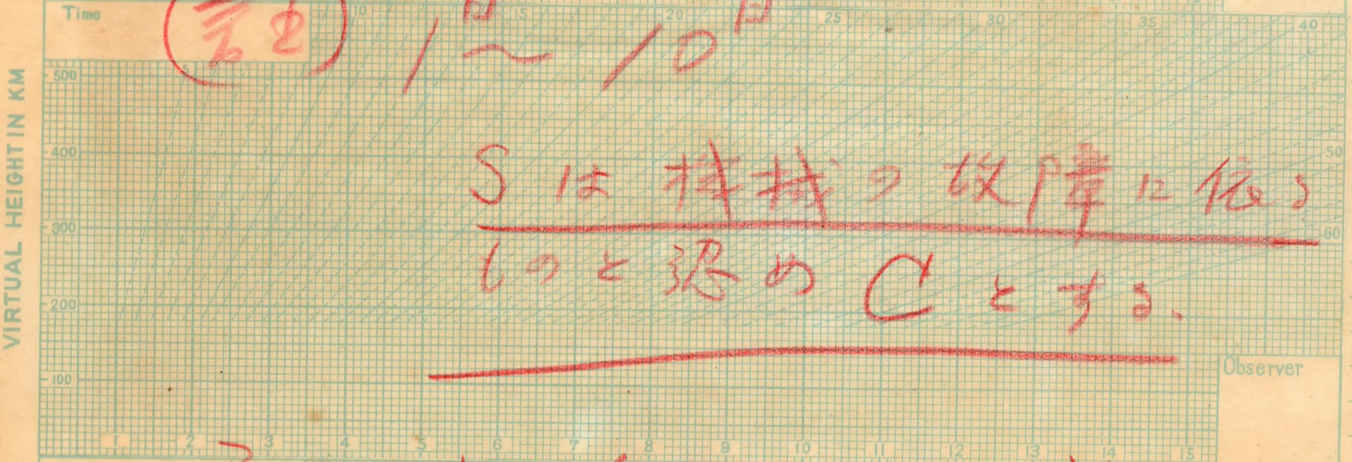
DATE 26.9.1

STATION Yamakawa

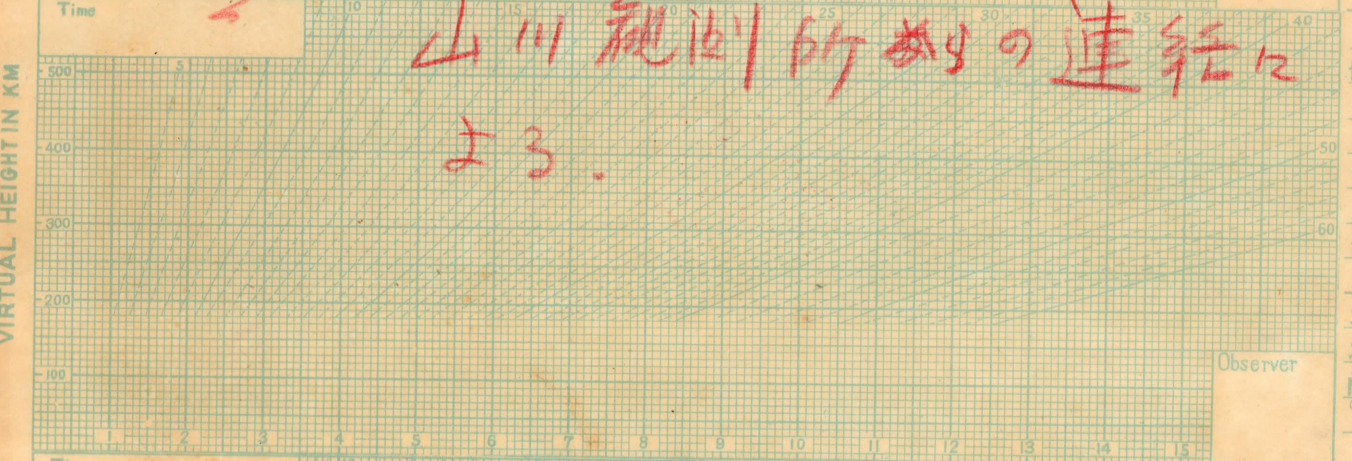
NO



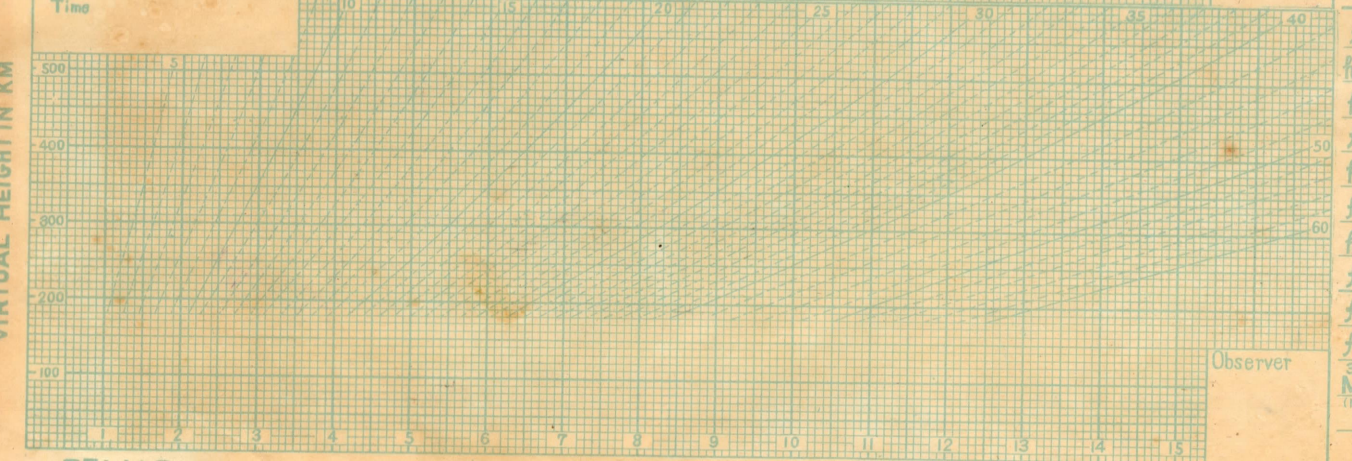
f_oF2
h_pF2
h'F2
f_oF1
h'F1
f_oE
h'E
fE_s
f_{min}F
f_{min}E
3000 MUF (M3000)
F2
Z_d



f_oF2
h_pF2
h'F2
f_oF1
h'F1
f_oE
h'E
fE_s
f_{min}F
f_{min}E
3000 MUF (M3000)
F2
Z_d



f_oF2
h_pF2
h'F2
f_oF1
h'F1
f_oE
h'E
fE_s
f_{min}F
f_{min}E
3000 MUF (M3000)
F2
Z_d



f_oF2
h_pF2
h'F2
f_oF1
h'F1
f_oE
h'E
fE_s
f_{min}F
f_{min}E
3000 MUF (M3000)
F2
Z_d

REMARKS

IONOSPHERIC RECORD

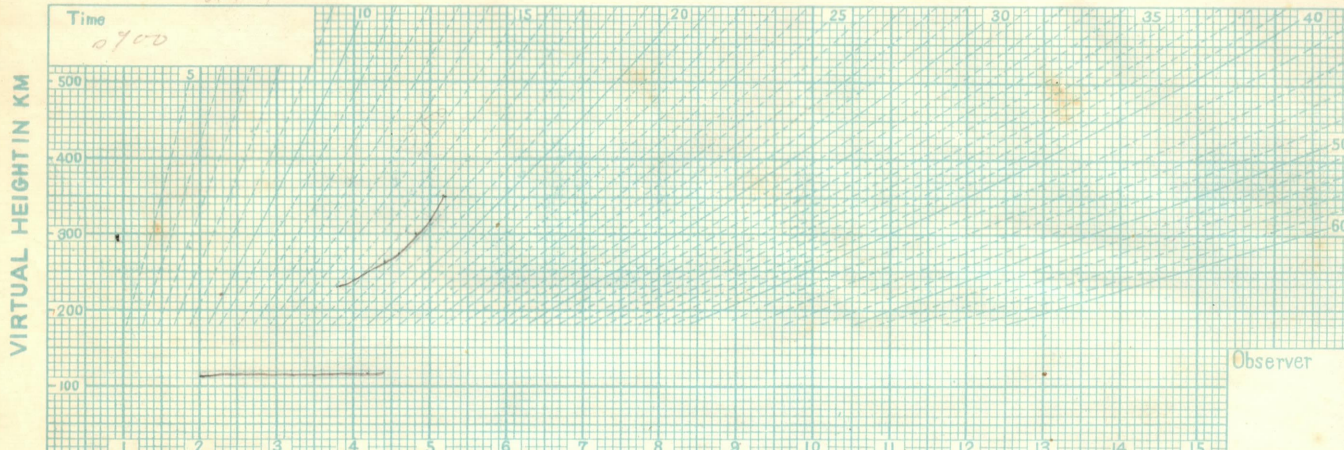
135°E MEAN TIME

DATE **26.9.1**

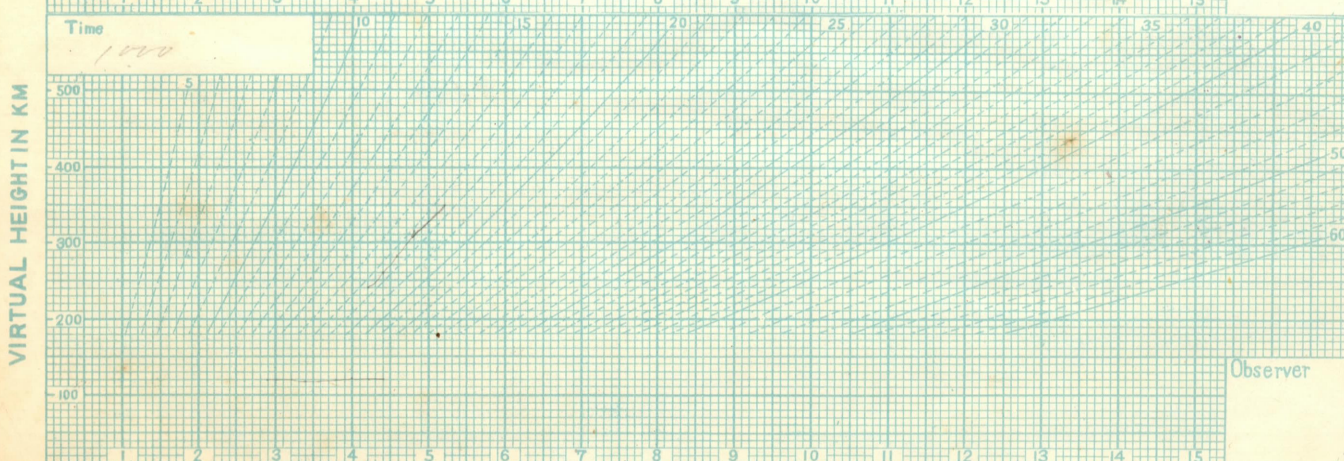
STATION *yamakawa*

NO ~~0001~~ **2**

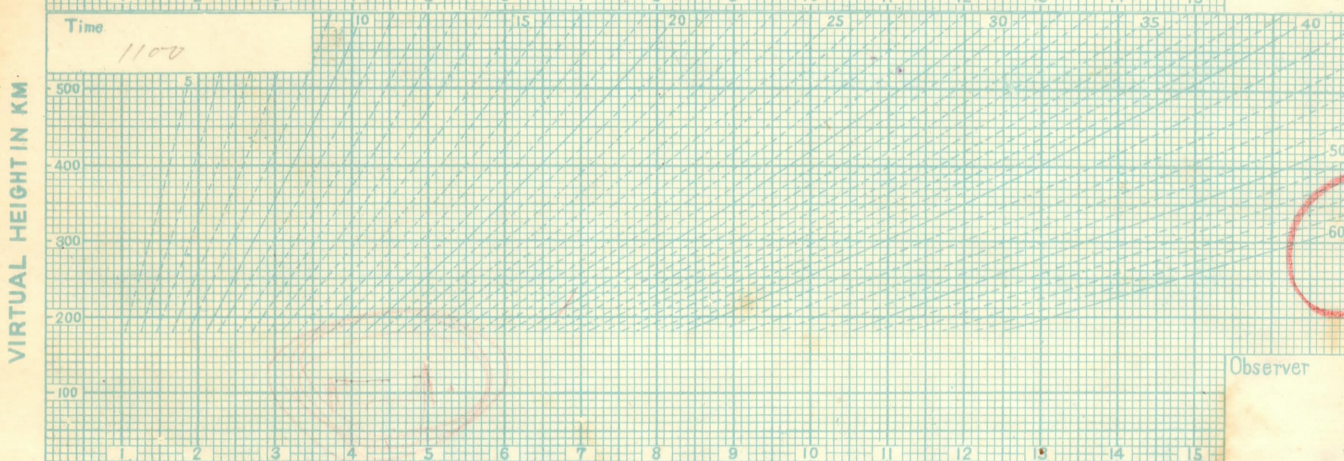
26.9.1



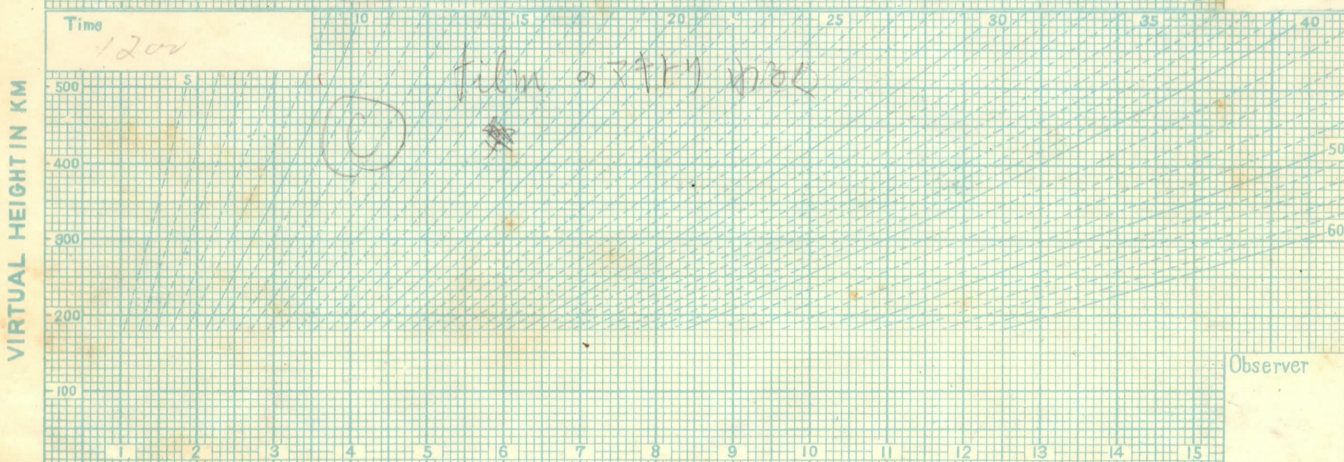
foF2 **B**
 h'pF2 **E**
 h'F2 **S**
 foF1 **(5.2) SC**
 h'F1 **230 A**
 foE **A**
 h'E **A**
 fEs **44**
 fminF **3.8 A**
 fminE **20**
 3000 MUF **E**
 (M3000) F2 **E**
 Zd



foF2 **S**
 h'pF2 **E**
 h'F2 **S**
 foF1 **(5.2) SC**
 h'F1 **240 A**
 foE **A**
 h'E **A**
 fEs **44**
 fminF **4.2 A**
 fminE **29**
 3000 MUF **E**
 (M3000) F2 **E**
 Zd



foF2 **S O**
 h'pF2 **S C**
 h'F2 **C A**
 foF1 **S A**
 foE **6 B**
 h'E **5 B**
 fEs **49 Y**
 fminF **S A**
 fminE **38 S**
 3000 MUF **S**
 (M3000) F2 **S**
 Zd



foF2 **C**
 h'pF2 **C**
 h'F2 **C**
 foF1 **C**
 h'F1 **C**
 foE **C**
 h'E **C**
 fEs **C**
 fminF **C**
 fminE **C**
 3000 MUF **C**
 (M3000) F2 **C**
 Zd

REMARKS

IONOSPHERIC RECORD

135°E MEAN TIME

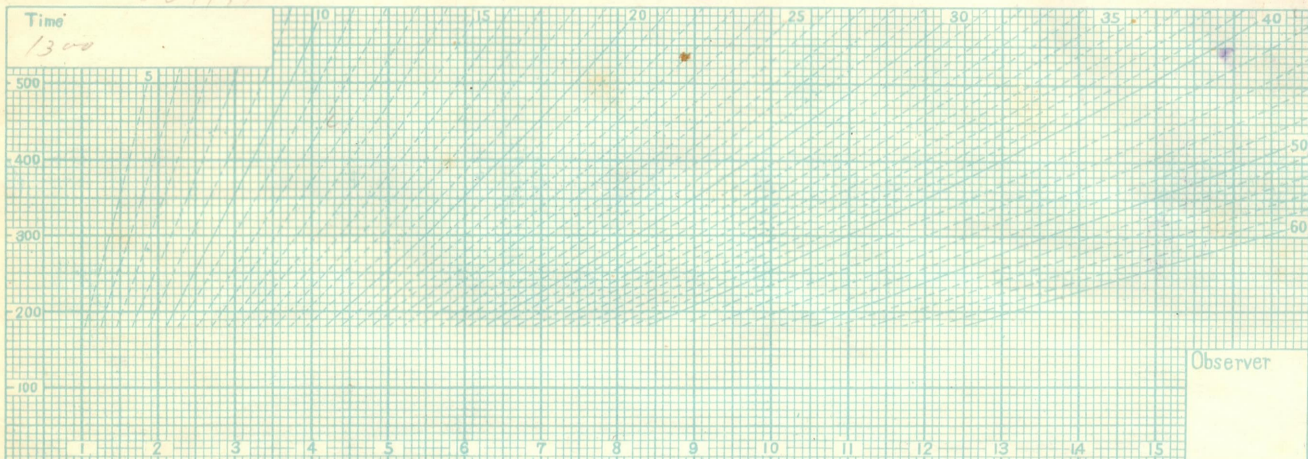
DATE 26.9.1

STATION *yamakawa*

NO ~~00042~~ 9

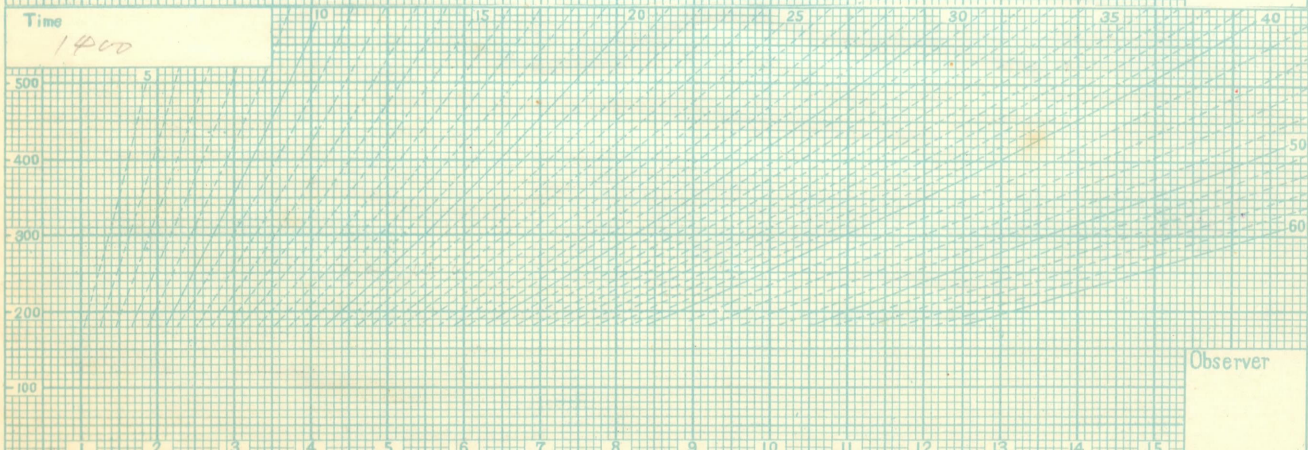
26.9.1

VIRTUAL HEIGHT IN KM



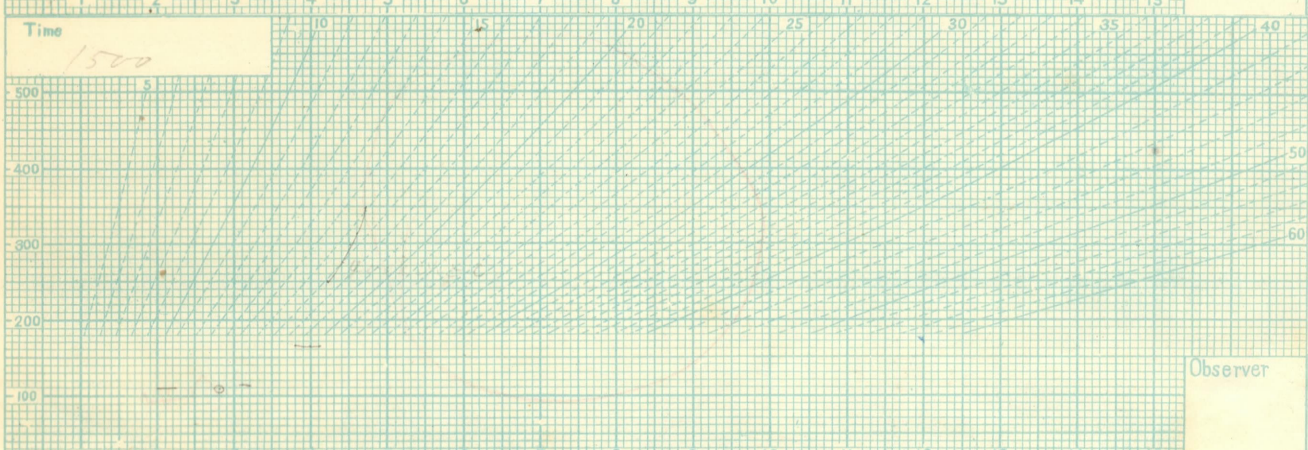
foF2 C
h'pF2 C
h'F2 C
foF1 C
h'F1 C
foE C
h'E C
fEs C
fminF C
fminE C
Observer
3000 MUF C
(M3000) C
F2 C
Zd

VIRTUAL HEIGHT IN KM



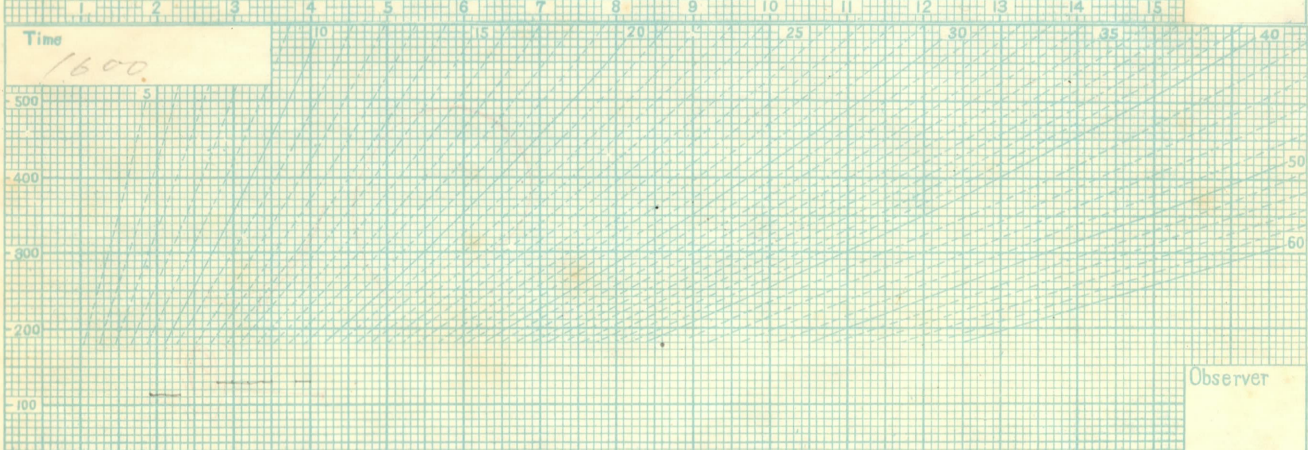
foF2 C
h'pF2 C
h'F2 C
foF1 C
h'F1 C
foE C
h'E C
fEs C
fminF C
fminE C
Observer
3000 MUF C
(M3000) C
F2 C
Zd

VIRTUAL HEIGHT IN KM



foF2 B
h'pF2 B
h'F2 S
foF1(48) B
h'F1 250 B
foE S B
h'E S 110
fEs 327 G
fminF 42
fminE 20
Observer
3000 MUF C
(M3000) C
F2 C
Zd

VIRTUAL HEIGHT IN KM



foF2 B
h'pF2 B
h'F2 B
foF1 S A
h'F1 S A
foE S B
h'E 110 S
fEs 40 S
fminF S A
fminE 19.5
Observer
3000 MUF C
(M3000) C
F2 C
Zd

REMARKS

IONOSPHERIC RECORD

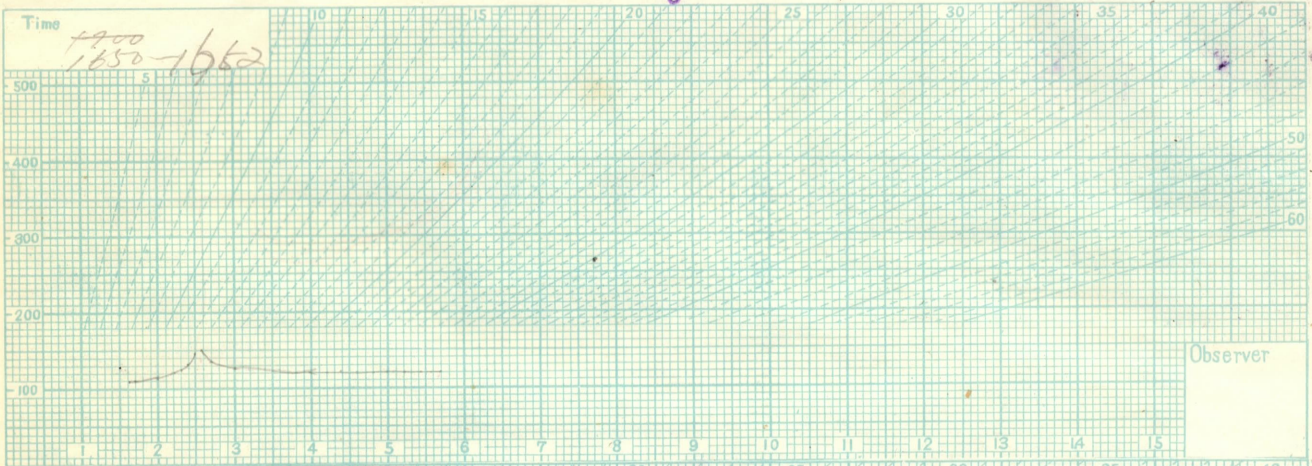
135°E MEAN TIME

DATE **26.9.1**

STATION *Yamagawa*

NO **02003**

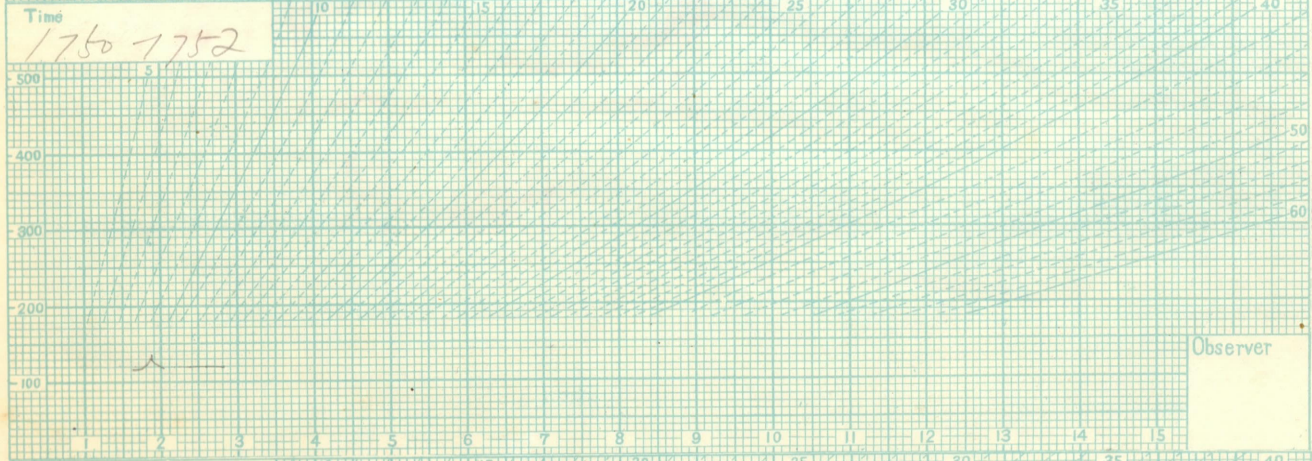
VIRTUAL HEIGHT IN KM



f _o F ₂	S
h _p F ₂	C
h'F ₂	340
f _o F ₁	A
h'F ₁	A
f _o E	25
h'E	110
fE _s	59
f _{min} F	X A
f _{min} E	16
MUF(3000)F ₂	C
Z _d	

Observer

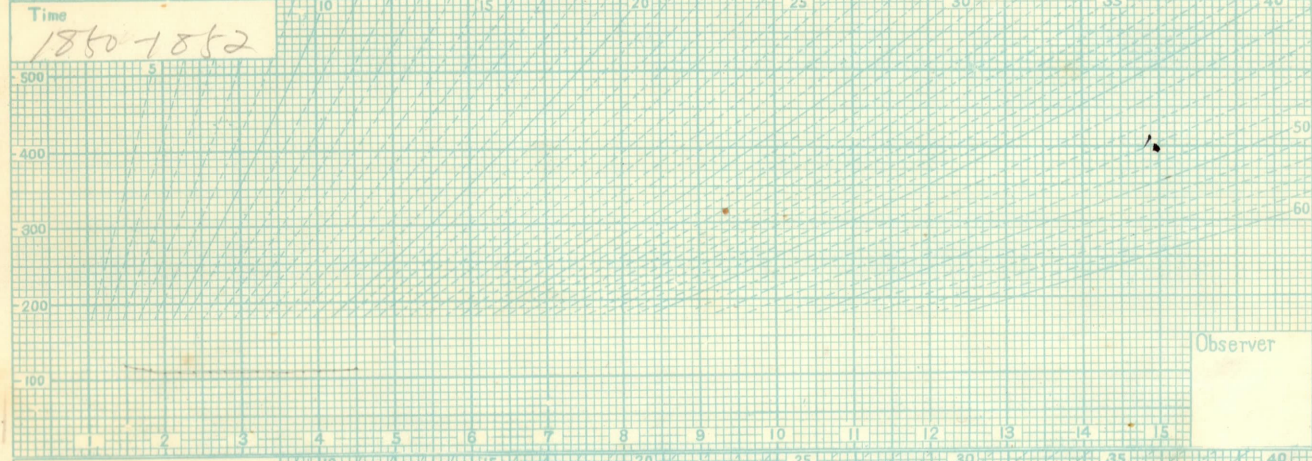
VIRTUAL HEIGHT IN KM



f _o F ₂	S
h _p F ₂	C
h'F ₂	340
f _o F ₁	A
h'F ₁	A
f _o E	18
h'E	120
fE _s	28
f _{min} F	X A
f _{min} E	16
MUF(3000)F ₂	C
Z _d	

Observer

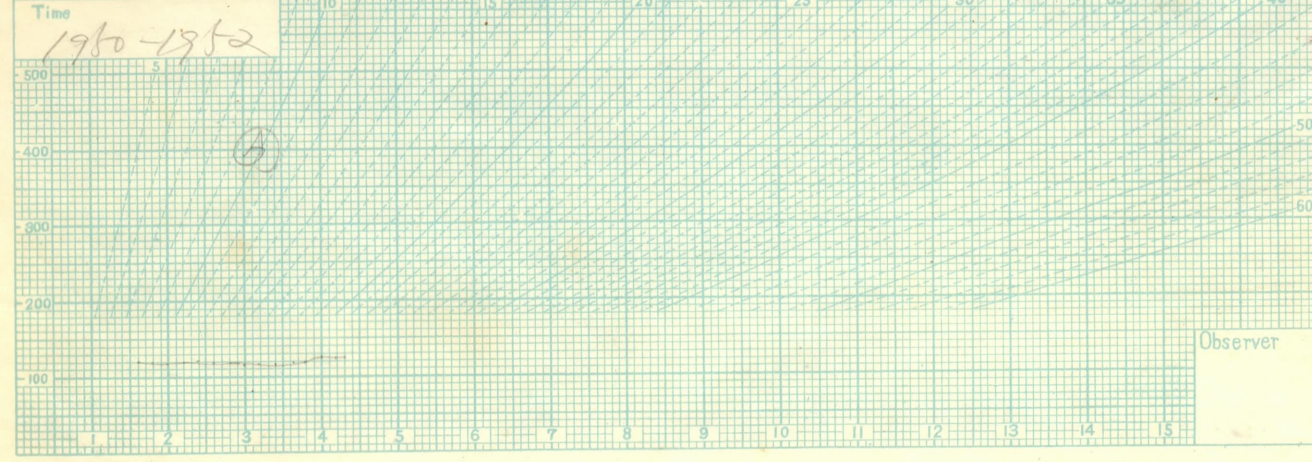
VIRTUAL HEIGHT IN KM



f _o F ₂	S
h _p F ₂	C
h'F ₂	A
f _o F ₁	
h'F ₁	
f _o E	
h'E	
fE _s	45
f _{min} F	A
f _{min} E	15
MUF(3000)F ₂	C
Z _d	

Observer

VIRTUAL HEIGHT IN KM



f _o F ₂	S
h _p F ₂	C
h'F ₂	A
f _o F ₁	
h'F ₁	
f _o E	
h'E	
fE _s	43
f _{min} F	A
f _{min} E	16
MUF(3000)F ₂	C
Z _d	

Observer

REMARKS

IONOSPHERIC RECORD

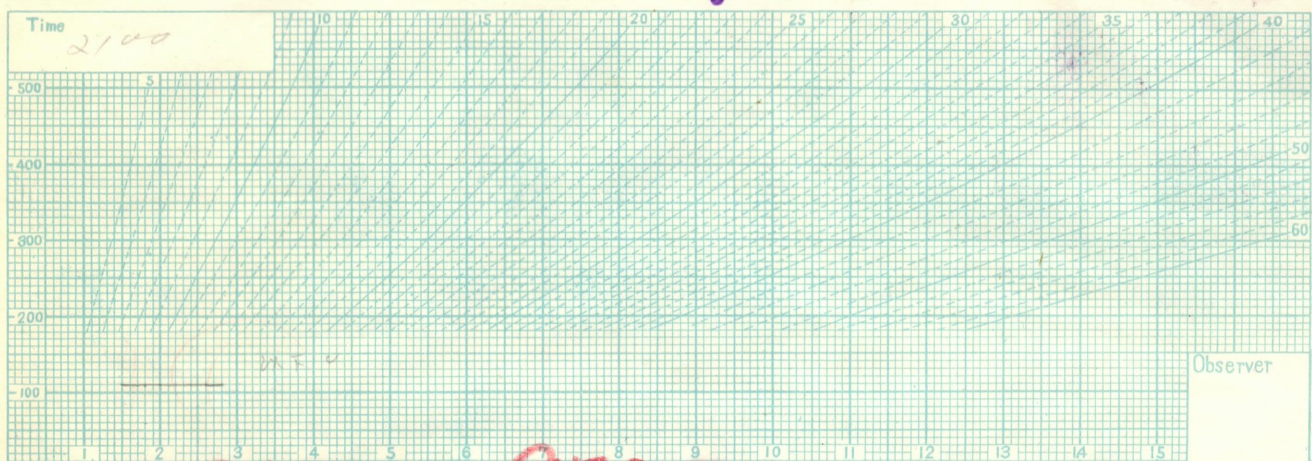
135°E MEAN TIME

DATE 26.9.12

STATION Yamakawa

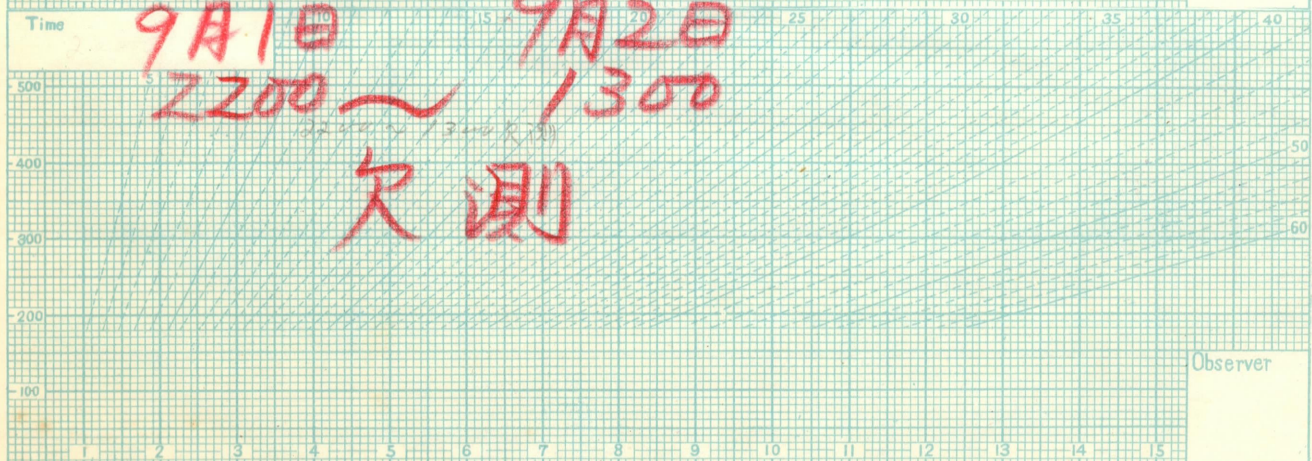
NO 0004

VIRTUAL HEIGHT IN KM



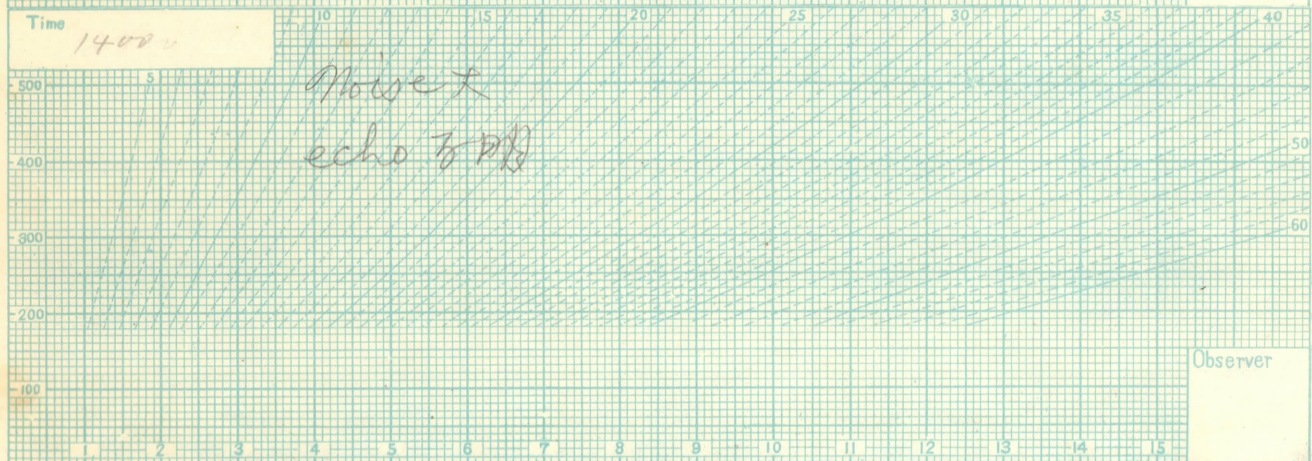
foF2
h'F2
foF1
h'F1
foE
h'E
fEs
fminF
fminE
MUF(3000)F2
Zd

VIRTUAL HEIGHT IN KM



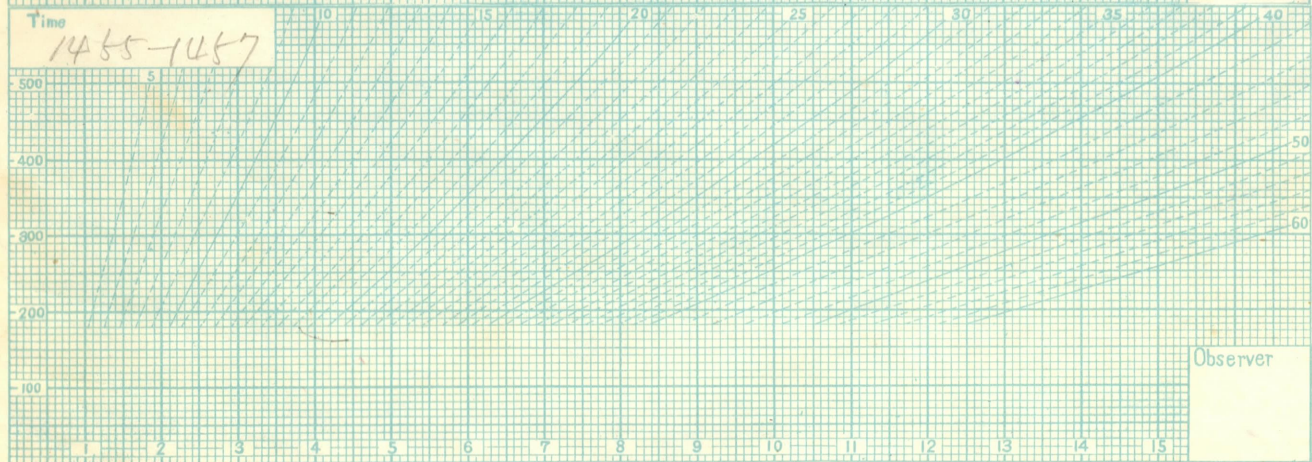
foF2
h'F2
foF1
h'F1
foE
h'E
fEs
fminF
fminE
MUF(3000)F2
Zd

VIRTUAL HEIGHT IN KM



foF2
h'F2
foF1
h'F1
foE
h'E
fEs
fminF
fminE
MUF(3000)F2
Zd

VIRTUAL HEIGHT IN KM



foF2
h'F2
foF1
h'F1
foE
h'E
fEs
fminF
fminE
MUF(3000)F2
Zd

REMARKS

IONOSPHERIC RECORD

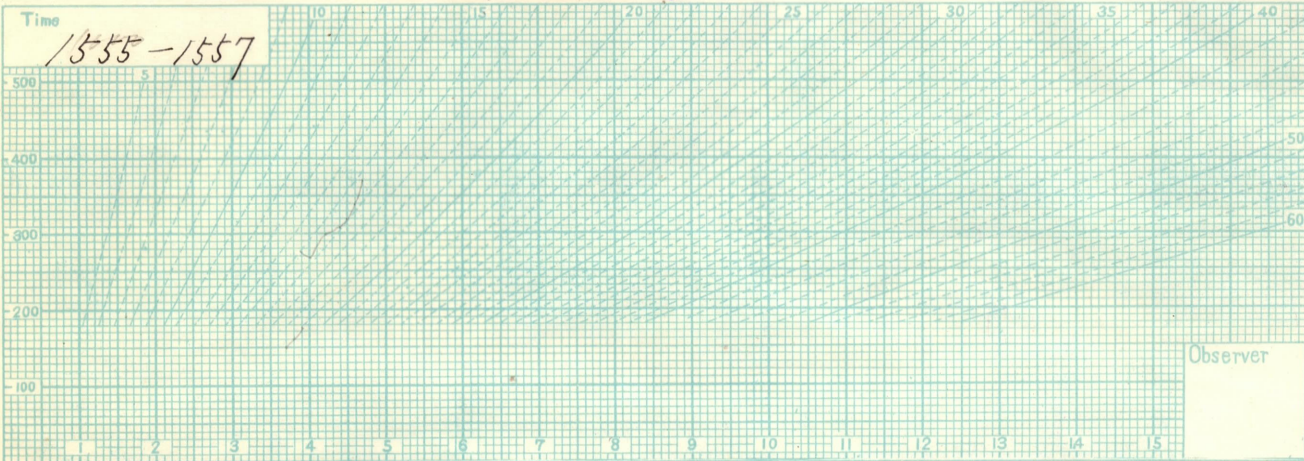
135°E MEAN TIME

DATE **26.9.2**
26.9.2

STATION *yamakawa*

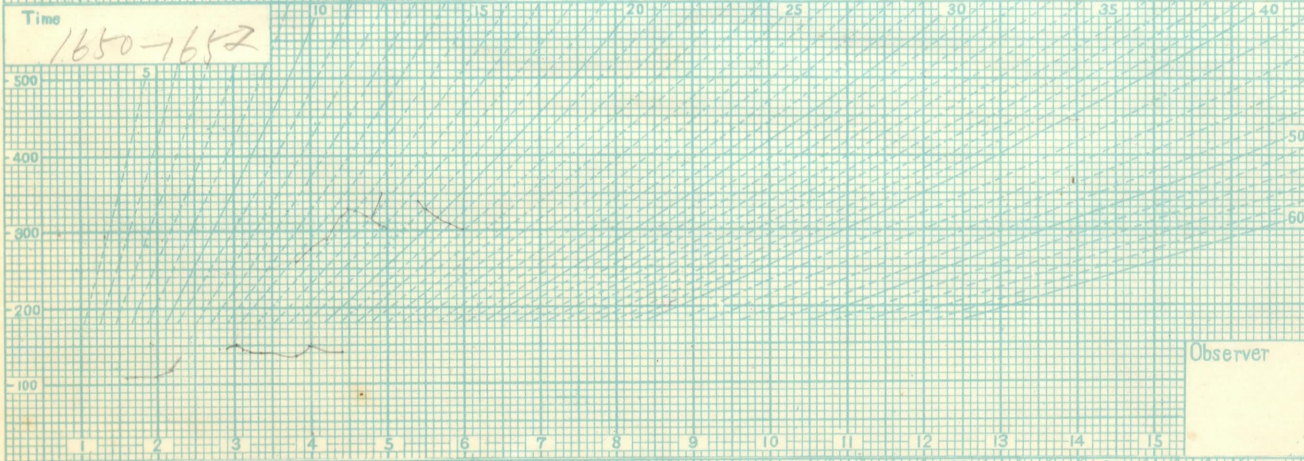
NO ~~00005~~ **6**

VIRTUAL HEIGHT IN KM



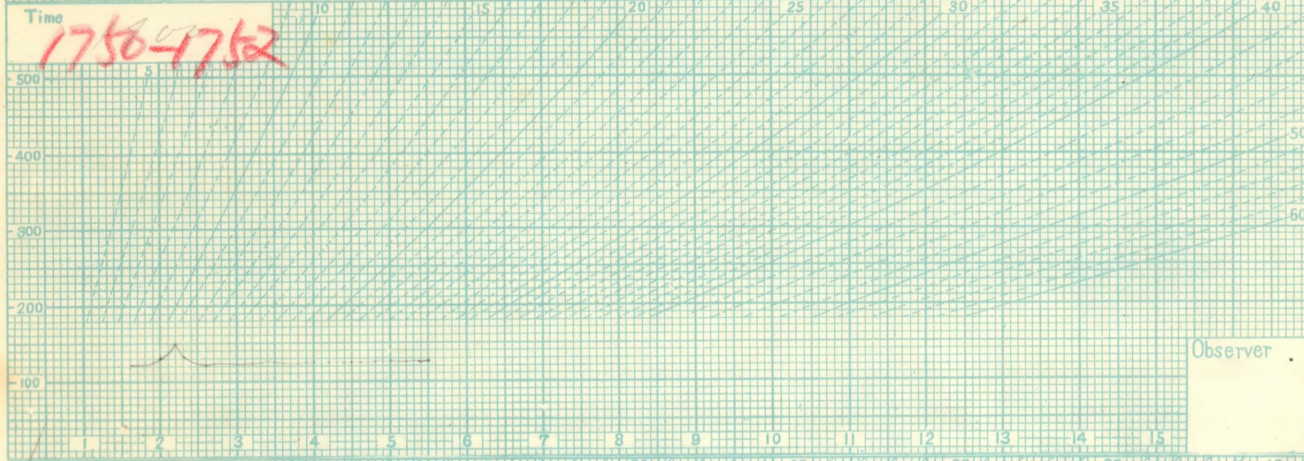
f_oF2 S
 h_pF2 C
 $h'F2$ C
 f_oF1 4.7
 $h'F1$ 270
 f_oE (33) J
 $h'E$ B A
 fEs G
 $f_{min}F$ 3.9
 $f_{min}E$ 3.7 S
 $MUF(3000)F2$ C
 Z_d

VIRTUAL HEIGHT IN KM



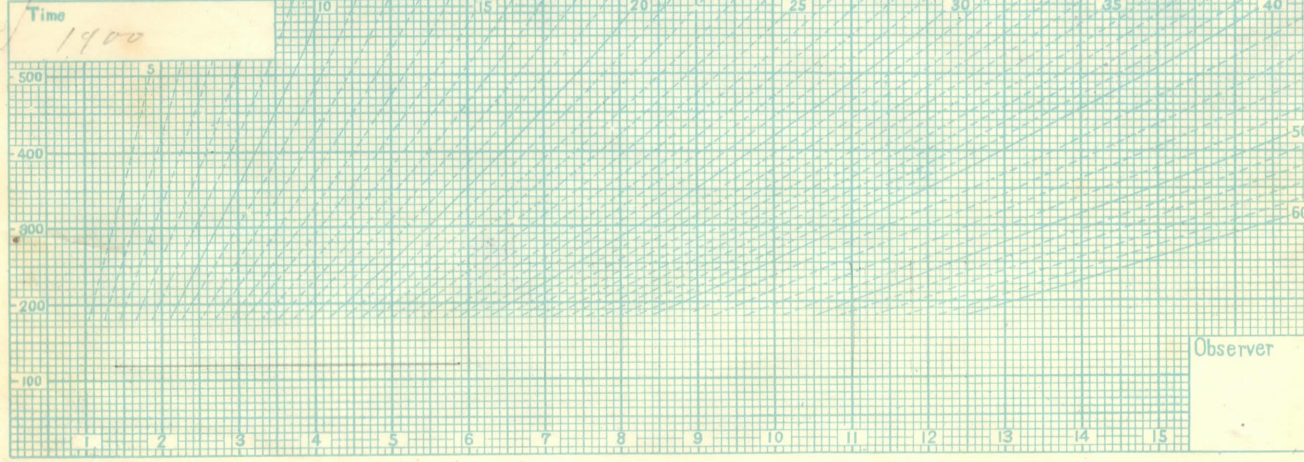
f_oF2 S
 h_pF2 C
 $h'F2$ C
 f_oF1 4.5
 $h'F1$ 260 A
 f_oE 2.3
 $h'E$ 110
 fEs 4.4
 $f_{min}F$ 3.8 A
 $f_{min}E$ 1.6
 $MUF(3000)F2$ C
 Z_d

VIRTUAL HEIGHT IN KM



f_oF2 C
 h_pF2 C
 $h'F2$ A
 f_oF1 A
 $h'F1$ A
 f_oE 2.2
 $h'E$ 120
 fEs 5.5
 $f_{min}F$ A
 $f_{min}E$ 1.6
 $MUF(3000)F2$ C
 Z_d

VIRTUAL HEIGHT IN KM



f_oF2 A
 h_pF2 A
 $h'F2$ A
 f_oF1 A
 $h'F1$ A
 f_oE A
 $h'E$ A
 fEs 5.9
 $f_{min}F$ A
 $f_{min}E$ 1.4
 $MUF(3000)F2$ A
 Z_d

REMARKS

IONOSPHERIC RECORD

135°E MEAN TIME

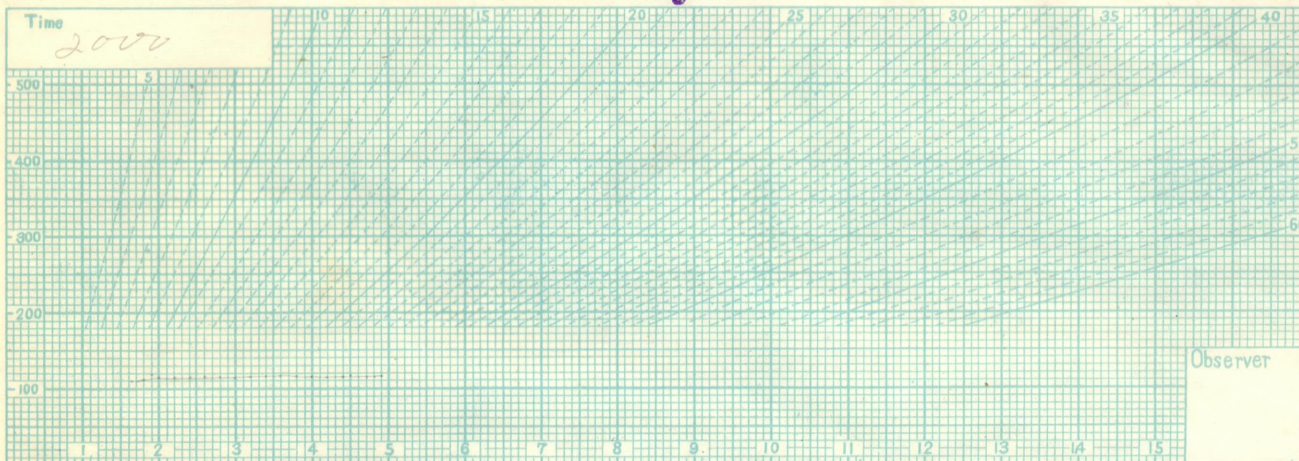
DATE **26.9.2**

STATION *yamakawa*

NO **0000**

26.9.2

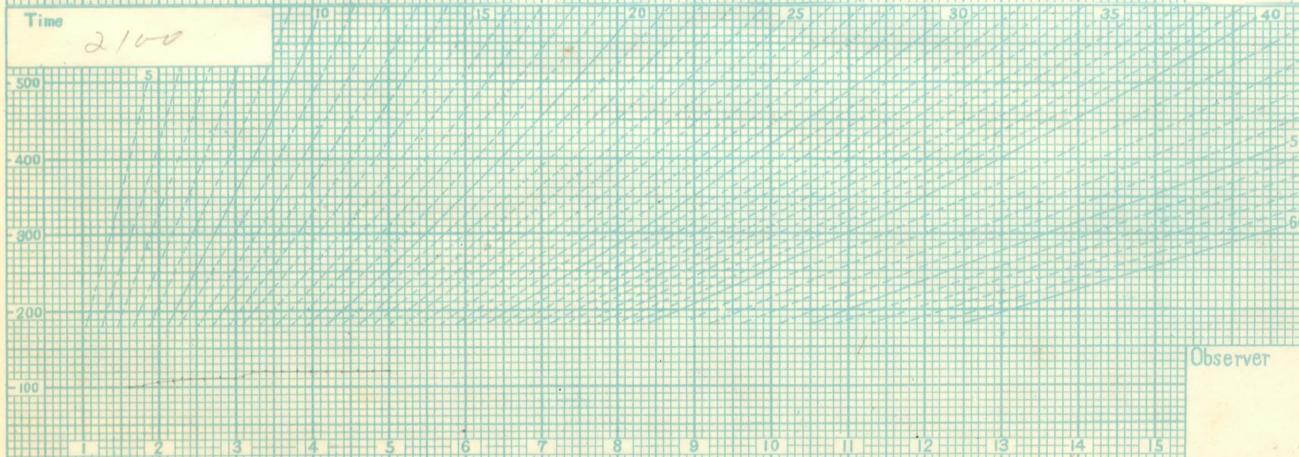
VIRTUAL HEIGHT IN KM



f_oF2 C
 $h_p F2$ C
 $h'F2$ A
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs 49
 $f_{min}F$ ~~S~~ A
 $f_{min}E$ 16
 $MUF(3000)F2$ C
 Z_d

Observer

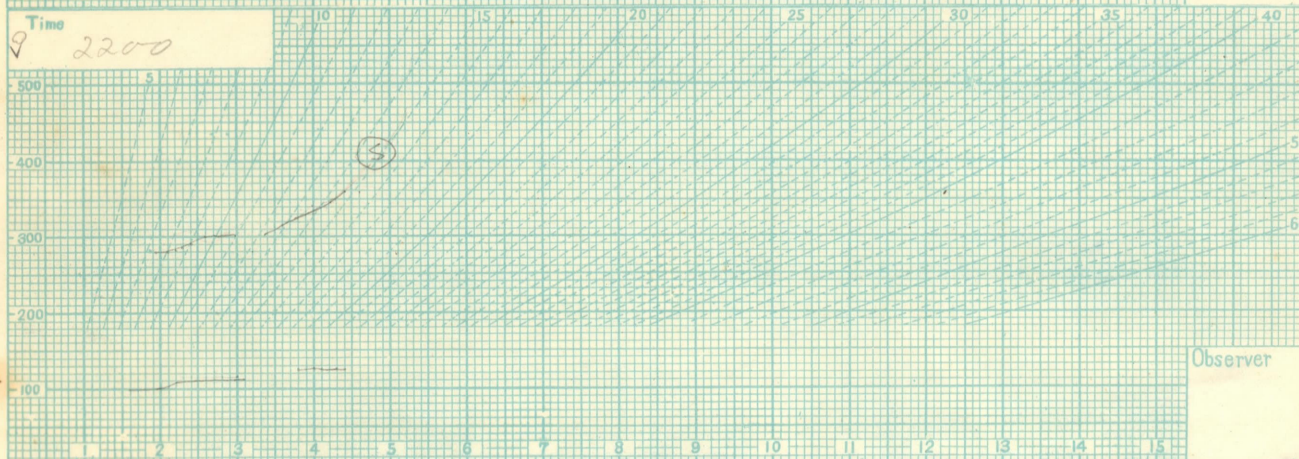
VIRTUAL HEIGHT IN KM



f_oF2 S
 $h_p F2$ C
 $h'F2$ A
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs 50
 $f_{min}F$ ~~S~~ A
 $f_{min}E$ 16
 $MUF(3000)F2$ C
 Z_d

Observer

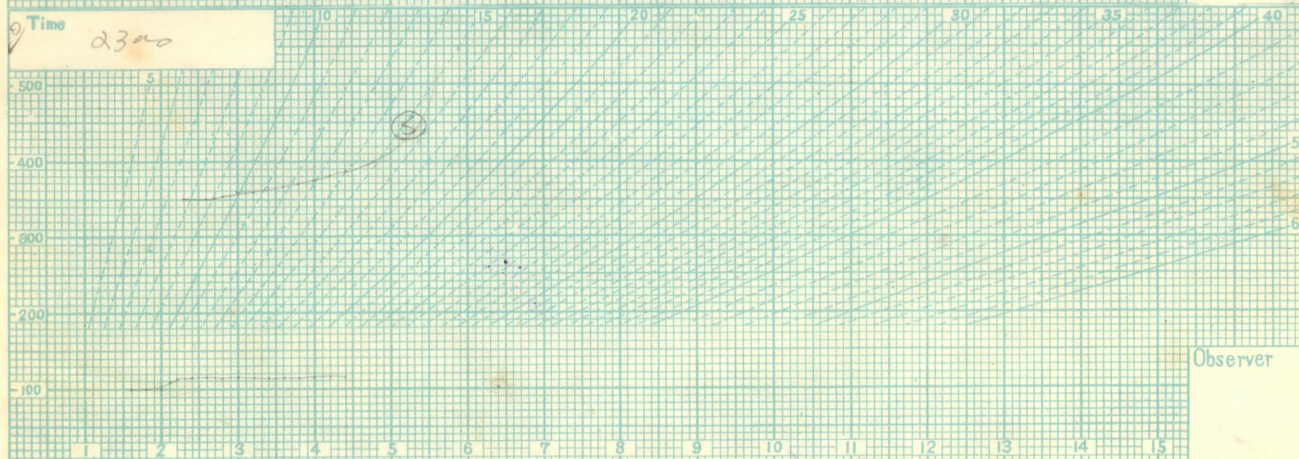
VIRTUAL HEIGHT IN KM



f_oF2 SH(52)PSH
 $h_p F2$ SH(350)PSH
 $h'F2$ 280H
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs 44Y
 $f_{min}F$ 19
 $f_{min}E$ 16
 $MUF(3000)F2$ 15.0 SH
 Z_d SH

Observer

VIRTUAL HEIGHT IN KM



f_oF2 ~~(56)PS~~ S
 $h_p F2$ ~~(390)PS~~ S
 $h'F2$ 350
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs 44
 $f_{min}F$ 23 A
 $f_{min}E$ 16
 $MUF(3000)F2$ (15.5)PS S
 Z_d (27)PS S

Observer

REMARKS

IONOSPHERIC RECORD

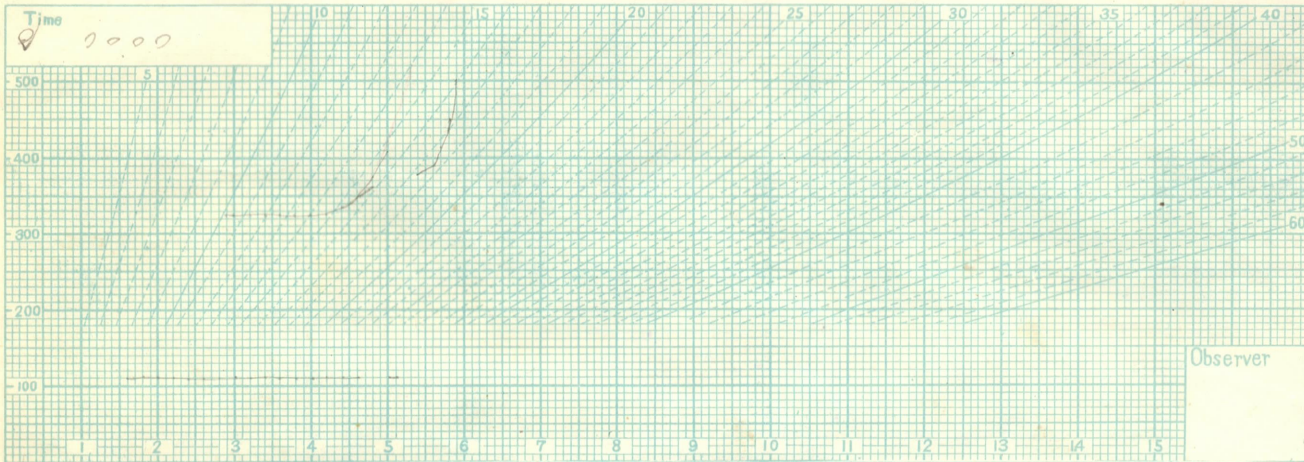
135°E MEAN TIME

DATE **26.9.3**
26.9.3

STATION *Yamakawa*

NO. **0008**

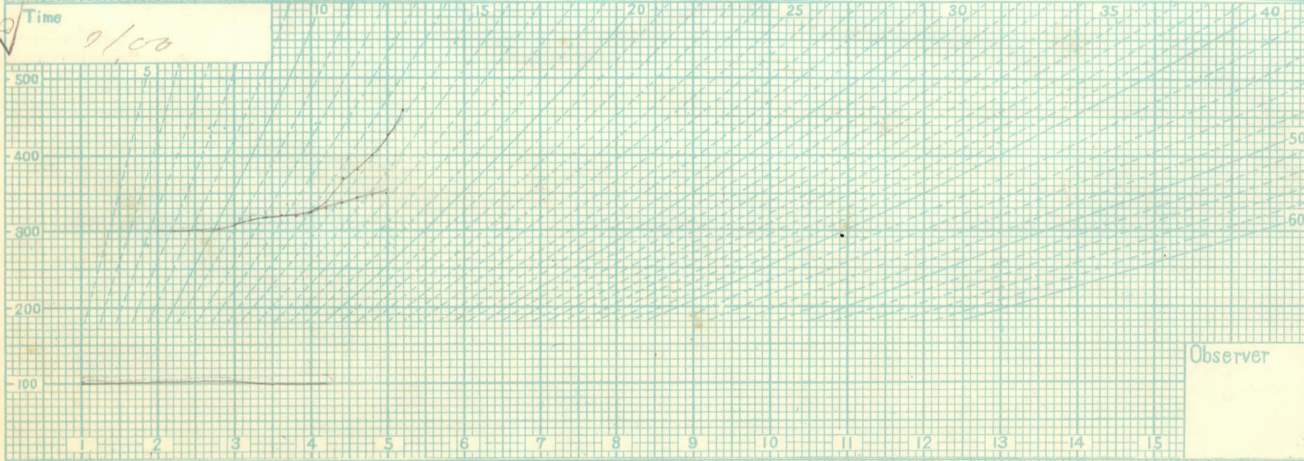
VIRTUAL HEIGHT IN KM



Time 0000

f_oF2 (53)R
 $f_{up}F2$ (330)RP
 $h'F2$ 320
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs 51V
 $f_{min}F$ 2.9A
 $f_{min}E$ 16
Observer
 MUF_{3000} 15.5
 $(M3000)$
 $F2$ (29)P
 Z_d 15

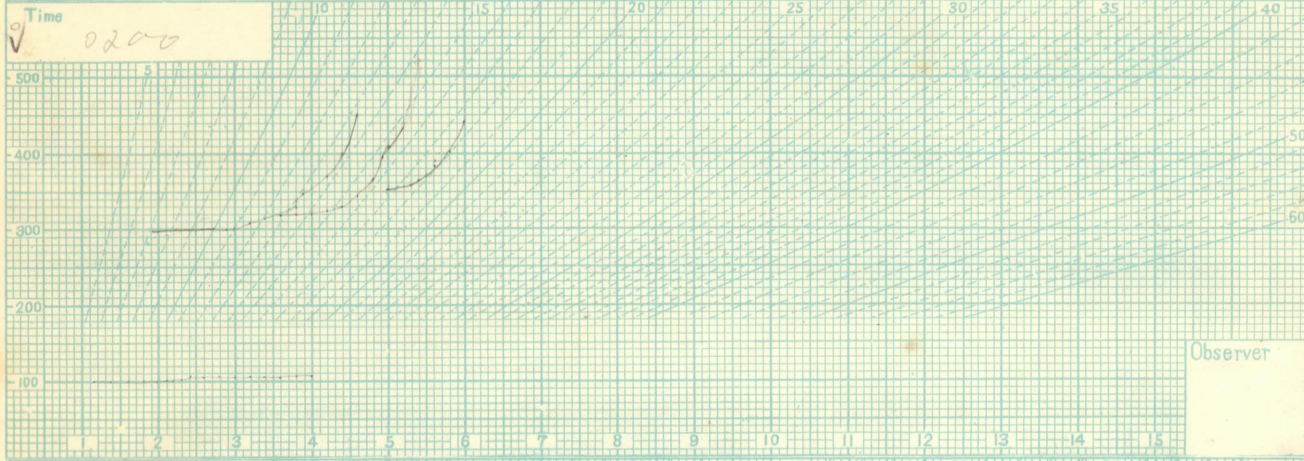
VIRTUAL HEIGHT IN KM



Time 0100

f_oF2 53
 $f_{up}F2$ 360
 $h'F2$ 300A
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs 4.2
~~4.3~~
 $f_{min}F$ 2.0A
 $f_{min}E$ E
Observer
 MUF_{3000} 15.0
 $(M3000)$
 $F2$ 28
 Z_d

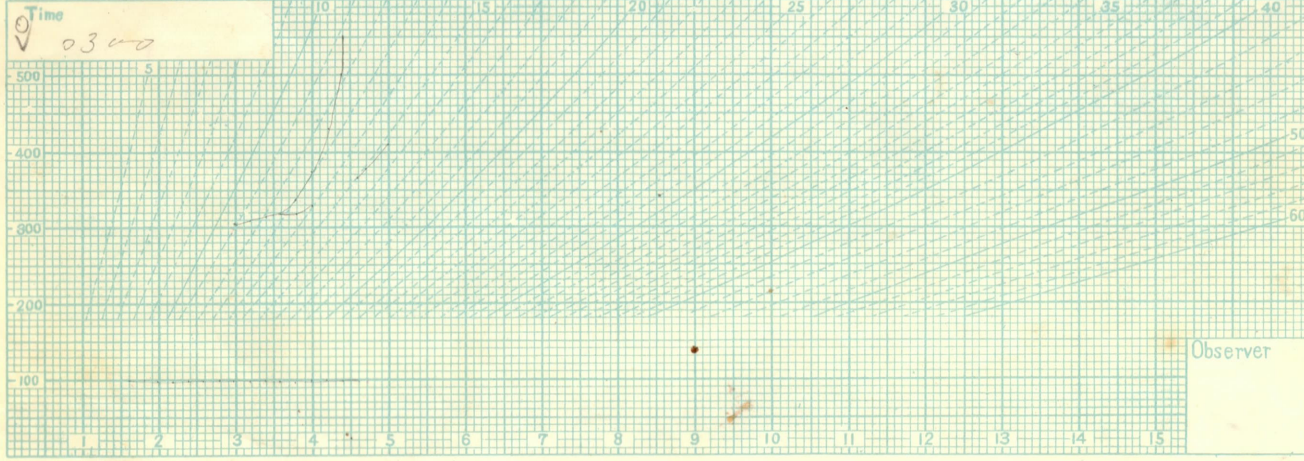
VIRTUAL HEIGHT IN KM



Time 0200

f_oF2 54Z
 $f_{up}F2$ 340Z
 $h'F2$ 300A
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs 40
 $f_{min}F$ 1.9A
 $f_{min}E$ 11
Observer
 MUF_{3000} 15.7Z
 $(M3000)$
 $F2$ 29Z
 Z_d

VIRTUAL HEIGHT IN KM



Time 0300

f_oF2 44
 $f_{up}F2$ 320
 $h'F2$ 300A
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs 46
 $f_{min}F$ 3.0A
 $f_{min}E$ 16
Observer
 MUF_{3000} 13.0
 $(M3000)$
 $F2$ 29
 Z_d

REMARKS

IONOSPHERIC RECORD

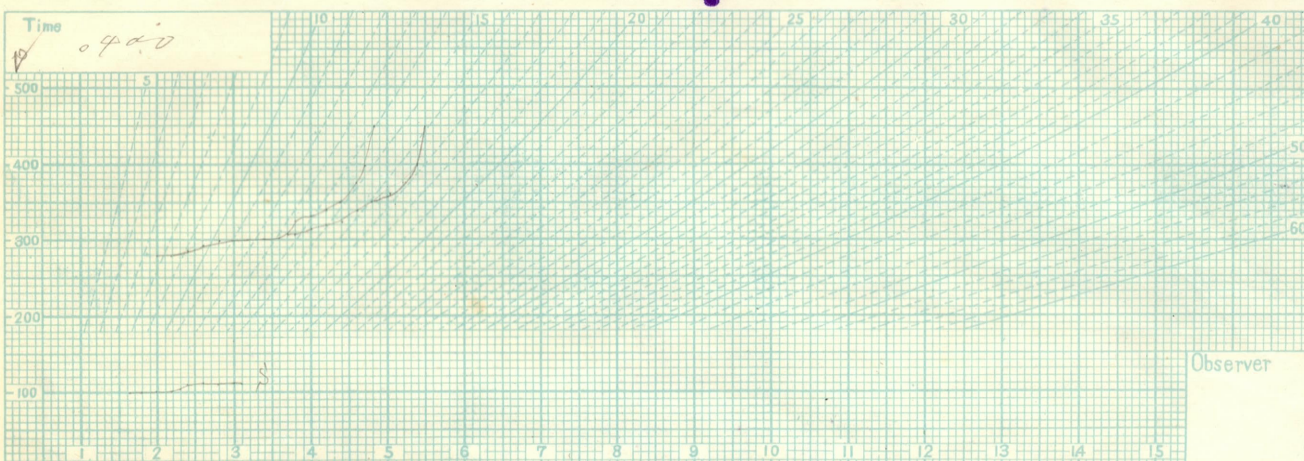
135°E MEAN TIME

DATE **26.9.3**
26.9.3

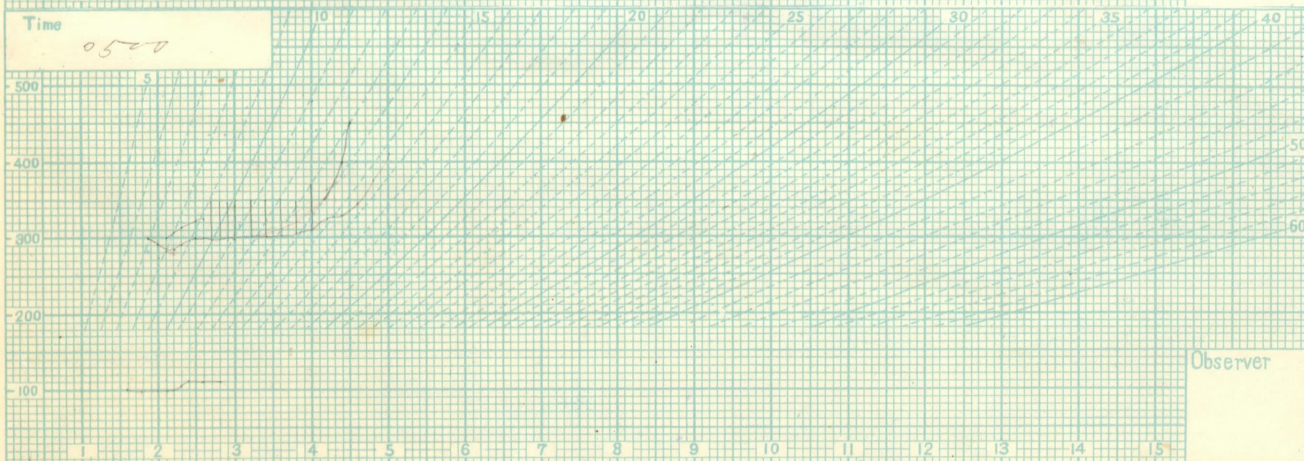
STATION *Yamagawa*

NO **0500**

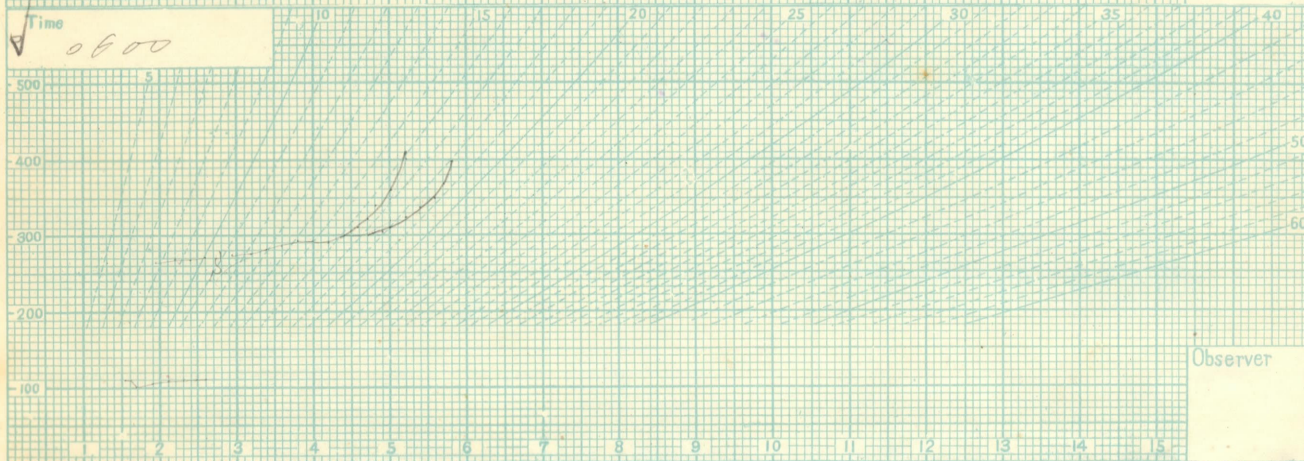
VIRTUAL HEIGHT IN KM



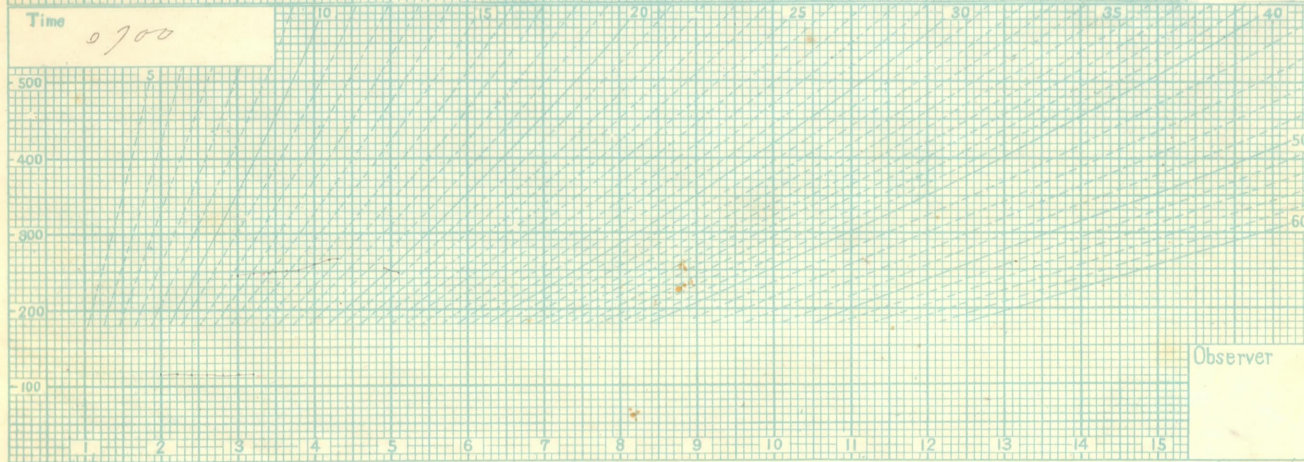
foF2 48
h_pF2 330
h'F2 280
foF1
h'F1
foE
h'E
fEs 31 A
f_{min}F 20 A
f_{min}E 16
Observer
MUF(3000)F2 14.9
F2 31
Z_d



foF2 45
h_pF2 ~~(320) F~~
h'F2 280.
foF1
h'F1
foE
h'E
fEs 28
f_{min}F 18
f_{min}E 16
Observer
MUF(3000)F2 14.0 F
F2 31 F
Z_d



foF2 52
h_pF2 290
h'F2 260
foF1 Q
h'F1 Q
foE ~~A B~~
h'E ~~A B~~
fEs 26
f_{min}F 19
f_{min}E 15
Observer
MUF(3000)F2 16.6
F2 31
Z_d



foF2 S
h_pF2 S
h'F2 S
foF1 S
h'F1 240
foE A
h'E A
fEs 32
f_{min}F 30 A
f_{min}E 20
Observer
MUF(3000)F2 S
F2 S
Z_d

REMARKS

IONOSPHERIC RECORD

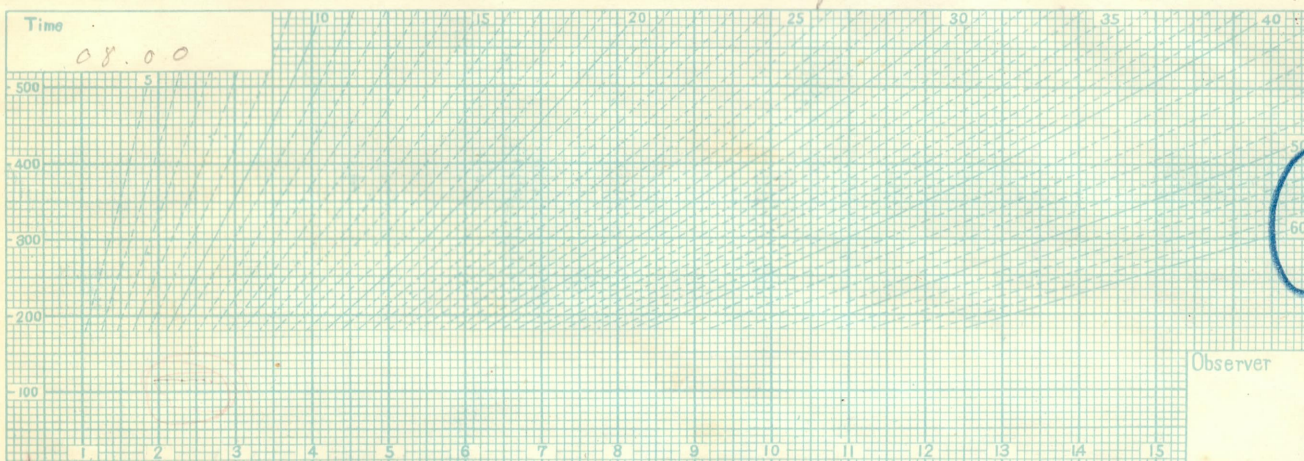
135°E MEAN TIME

DATE 26.9.33

STATION Yamabara

NO 10

VIRTUAL HEIGHT IN KM

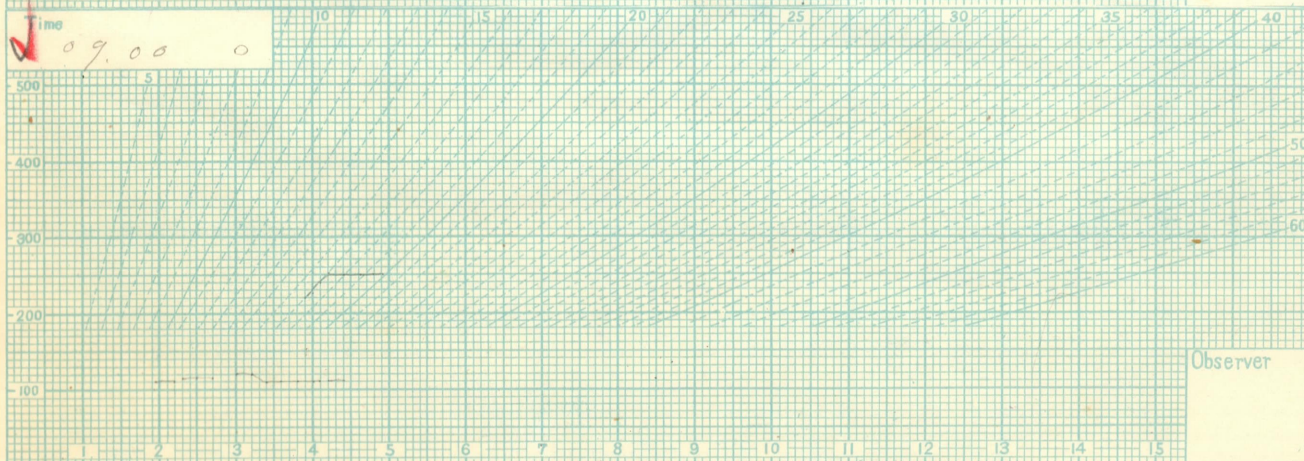


Time 08.00

foF2 S
 h'pF2 S
 h'F2 S
 foF1 S
 h'F1 S
 foE X A C
 h'E A 110
 fEs 659
 fminE 1.9
 MUF (M3000) F2 S
 Zd

Observer

VIRTUAL HEIGHT IN KM

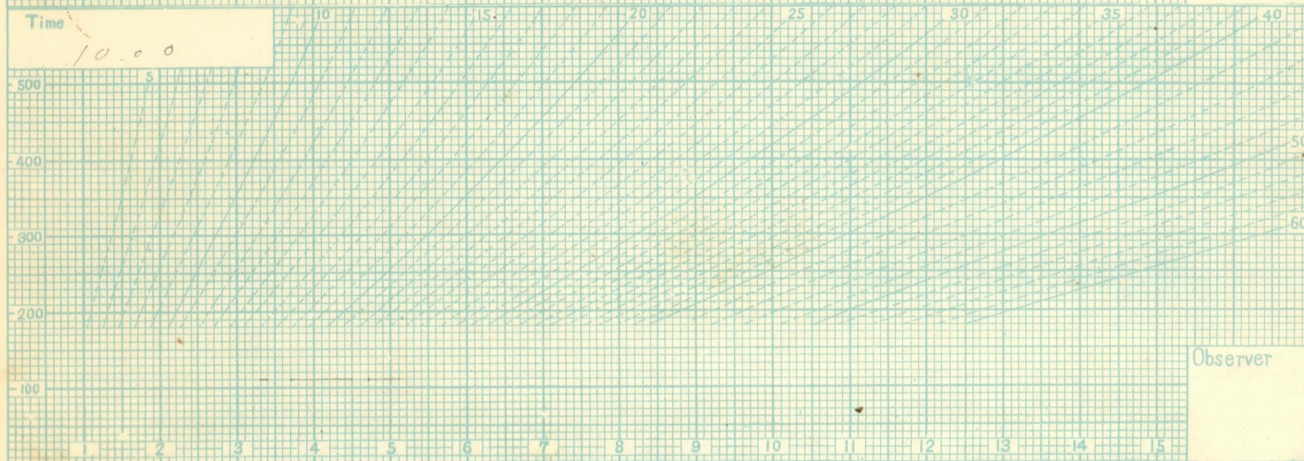


Time 09.00

foF2 S
 h'pF2 C
 h'F2 250
 foF1 L
 h'F1 220A
 foE X B
 h'E X 110
 fEs 40Y
 fminF 39A
 fminE 1.9
 MUF (M3000) F2 C
 Zd

Observer

VIRTUAL HEIGHT IN KM

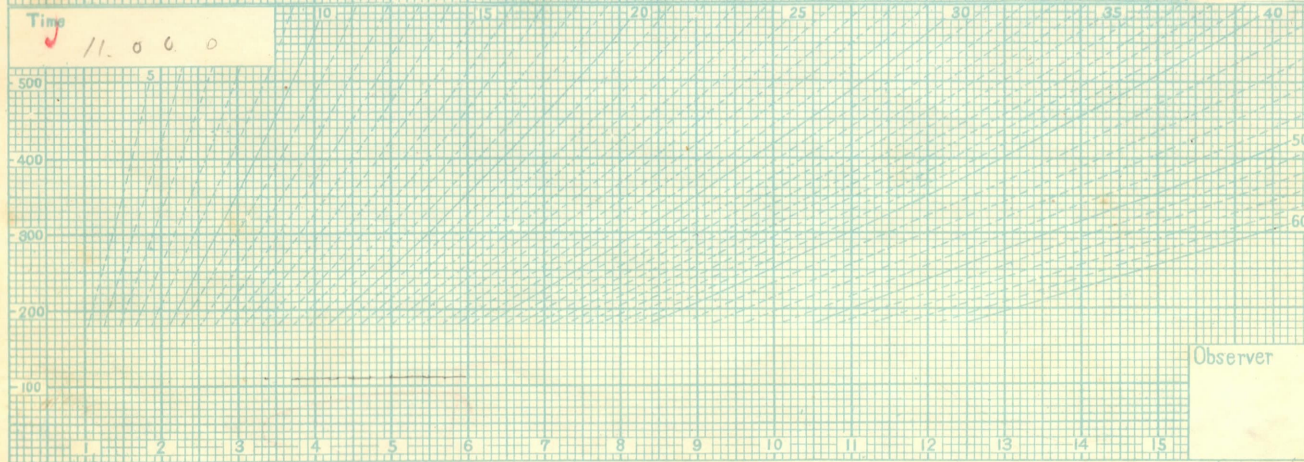


Time 10.00

foF2 C
 h'pF2 S
 h'F2 A
 foF1 A
 h'F1 A
 foE X B
 h'E X B
 fEs 51Y
 fminF A
 fminE 33
 MUF (M3000) F2 S
 Zd

Observer

VIRTUAL HEIGHT IN KM



Time 11.00

foF2 S
 h'pF2 S
 h'F2 A
 foF1 A
 h'F1 A
 foE S B
 h'E S B
 fEs 60Y
 fminF A
 fminE 33
 MUF (M3000) F2 S
 Zd

Observer

REMARKS

IONOSPHERIC RECORD

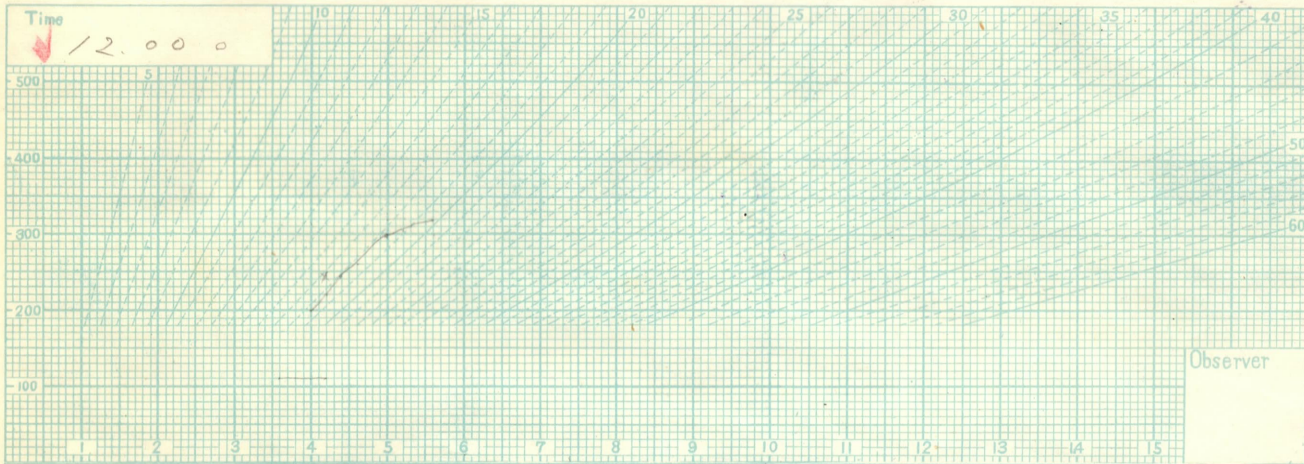
135°E MEAN TIME

DATE **26.9.3**
26. 8. 3

STATION *Yamagawa*

NO. **11**

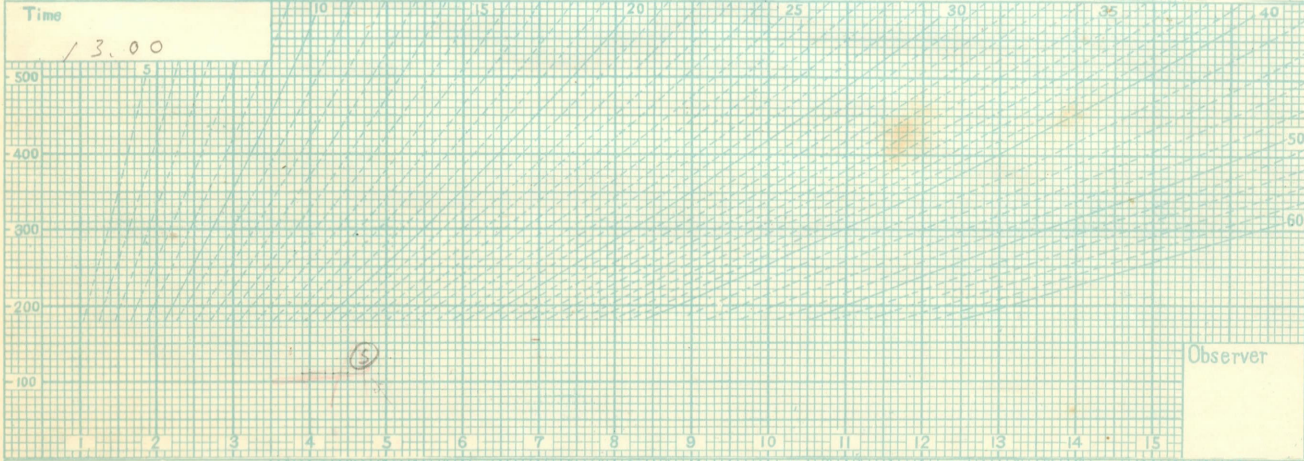
VIRTUAL HEIGHT IN KM



foF2 **S**
 h_pF2 **S**
 h'F2 **XL**
 foF1 **L**
 h'F1 **200A**
 foE **B**
 h'E **BA**
 fEs **42**
 f_{min}F **40A**
 f_{min}E **36**
 MUF (M3000) **S**
 F2 **S**
 Z_d

Observer

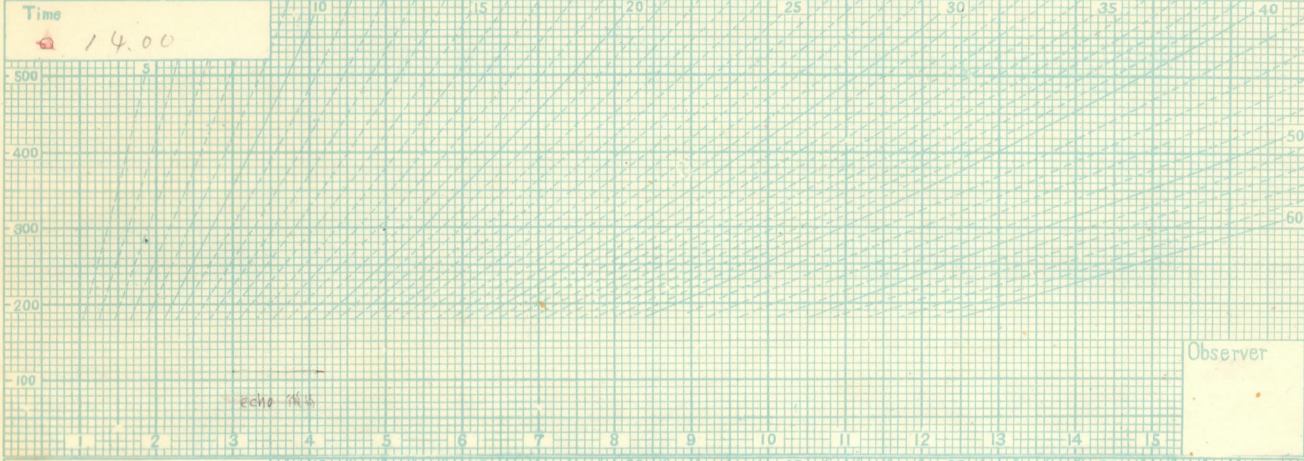
VIRTUAL HEIGHT IN KM



foF2 **S**
 h_pF2 **S**
 h'F2 **S**
 foF1 **S**
 h'F1 **S**
 foE **S**
 h'E **S**
 fEs **45S**
 f_{min}F **S**
 f_{min}E **39**
 MUF (M3000) **S**
 F2 **S**
 Z_d

Observer

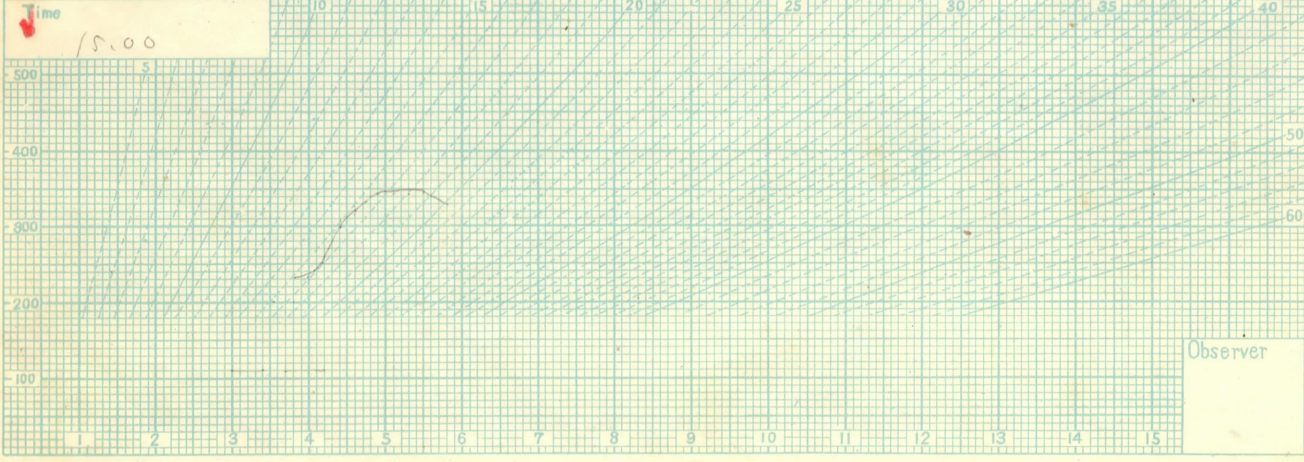
VIRTUAL HEIGHT IN KM



foF2 **S**
 h_pF2 **S**
 h'F2 **S**
 foF1 **S**
 h'F1 **S**
 foE **A**
 h'E **A**
 fEs **42S**
 f_{min}F **S**
 f_{min}E **30**
 MUF (M3000) **S**
 F2 **S**
 Z_d

Observer

VIRTUAL HEIGHT IN KM



foF2 **S**
 h_pF2 **S**
 h'F2 **(300)S**
 foF1 **L**
 h'F1 **230**
 foE **A**
 h'E **A**
 fEs **42**
 f_{min}F **38**
 f_{min}E **30**
 MUF (M3000) **S**
 F2 **S**
 Z_d

Observer

REMARKS

IONOSPHERIC RECORD

135°E MEAN TIME

DATE

26.9.3

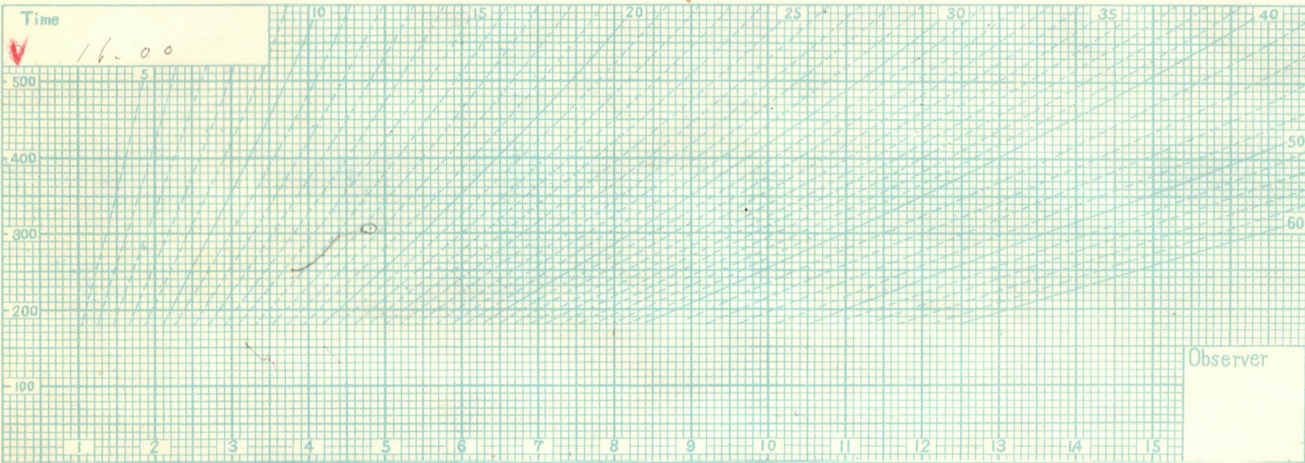
STATION

Yamagata

NO

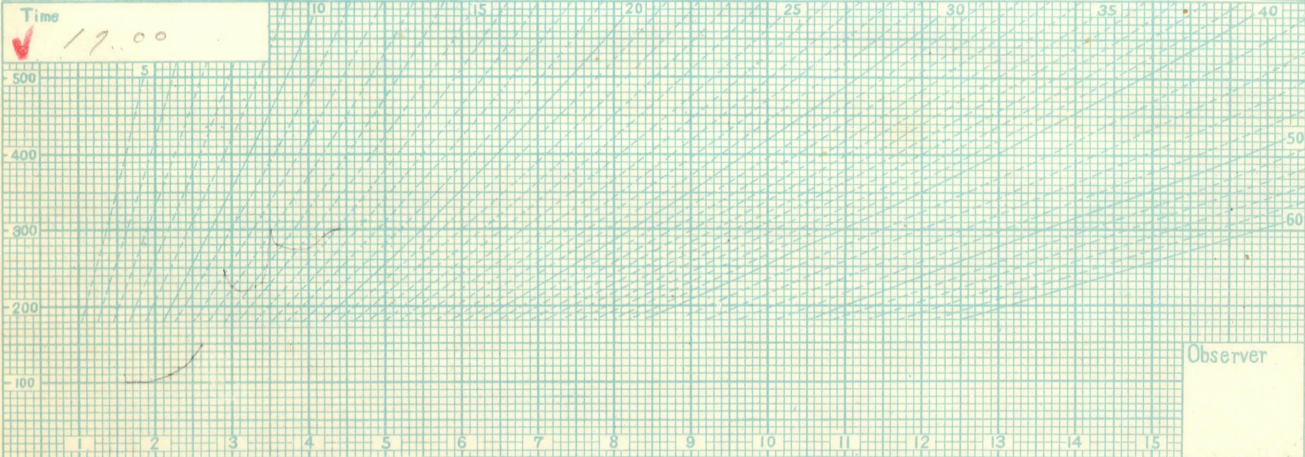
12

VIRTUAL HEIGHT IN KM



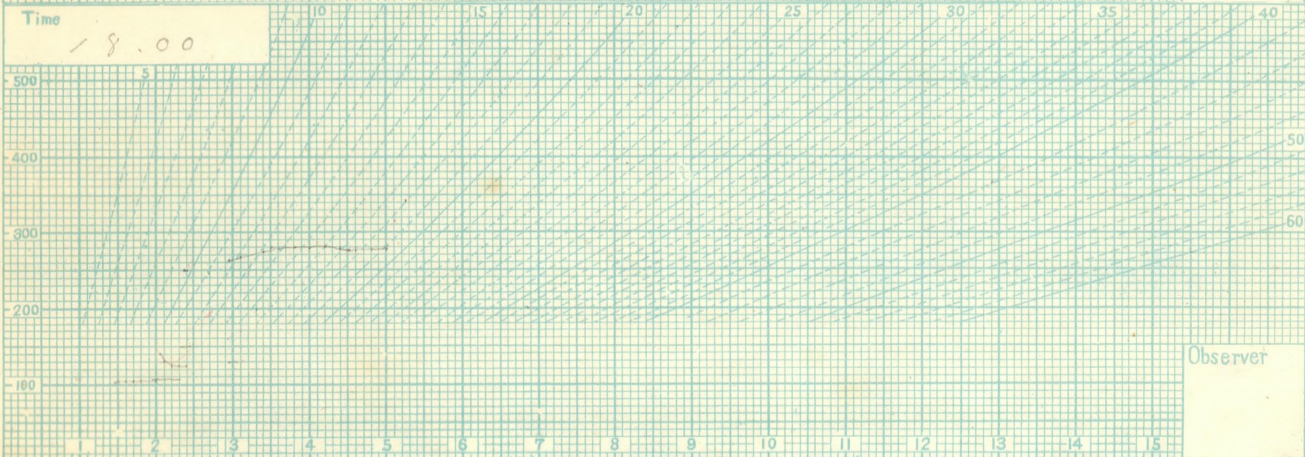
Time 16.00
foF2 5
h_pF2 C
h'F2 S
foF1 2.9
h'F1 250
foE BS 372
h'E B S 8
fEs G 8
f_{min}F 38
f_{min}E 32
Observer
3000 MUF (M3000) C
F2 C
Z_d

VIRTUAL HEIGHT IN KM



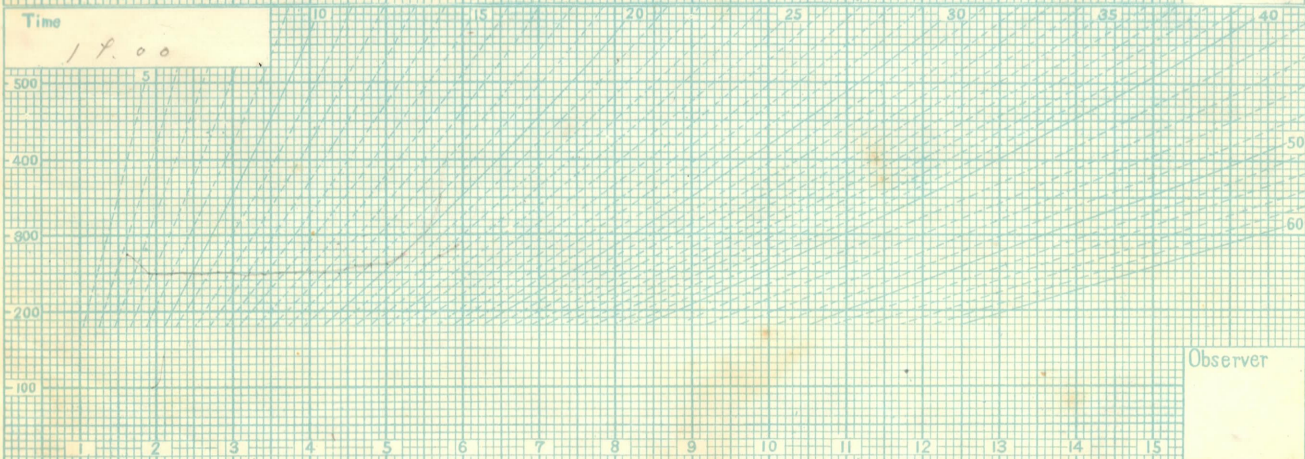
Time 17.00
foF2 C
h_pF2 C
h'F2 270
foF1 35
h'F1 220
foE 26
h'E 100
fEs G
f_{min}F 29
f_{min}E 16
Observer
3000 MUF (M3000) C
F2 C
Z_d

VIRTUAL HEIGHT IN KM



Time 18.00
foF2 C
h_pF2 S
h'F2 270
foF1 4
h'F1 260
foE A(20)
h'E A
fEs 30Y
f_{min}F 29
f_{min}E 14
Observer
3000 MUF (M3000) C
F2 C
Z_d

VIRTUAL HEIGHT IN KM



Time 19.00
foF2 (270)PS C
h_pF2 (250)PS C
h'F2 250
foF1
h'F1
foE 1.5J
h'E B
fEs G
f_{min}F 16
f_{min}E 19
Observer
3000 MUF (M3000) (200)PS C
F2 (30)PS C
Z_d

REMARKS

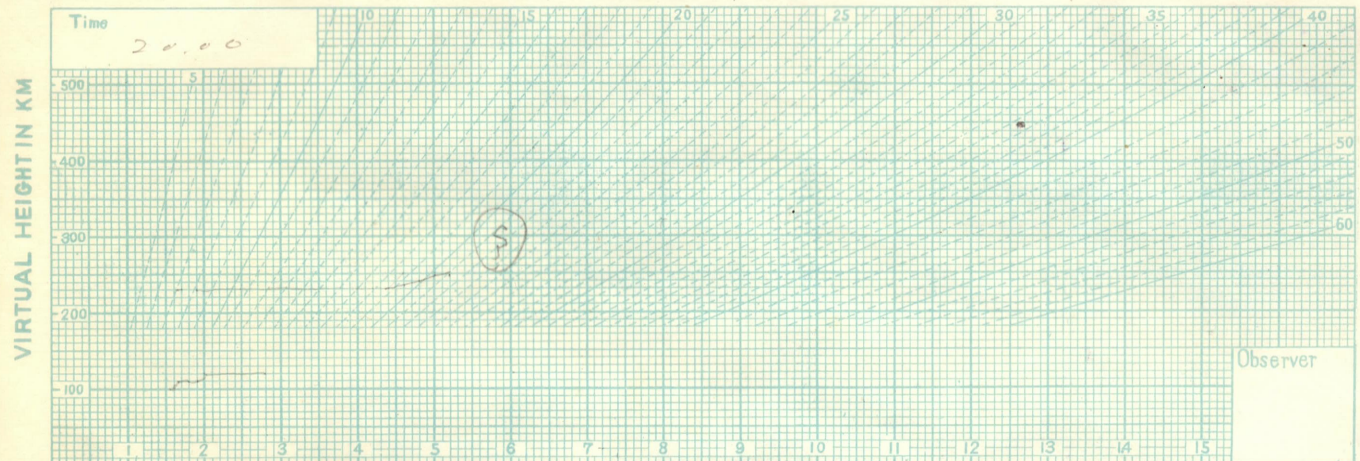
IONOSPHERIC RECORD

135°E MEAN TIME

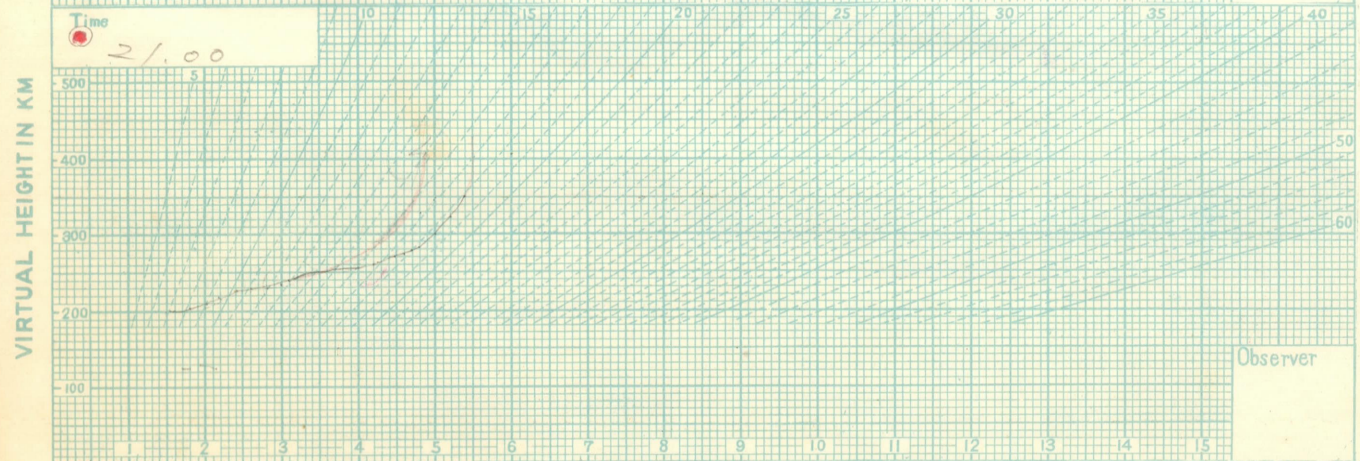
DATE 26.9.33

STATION Yamakawa

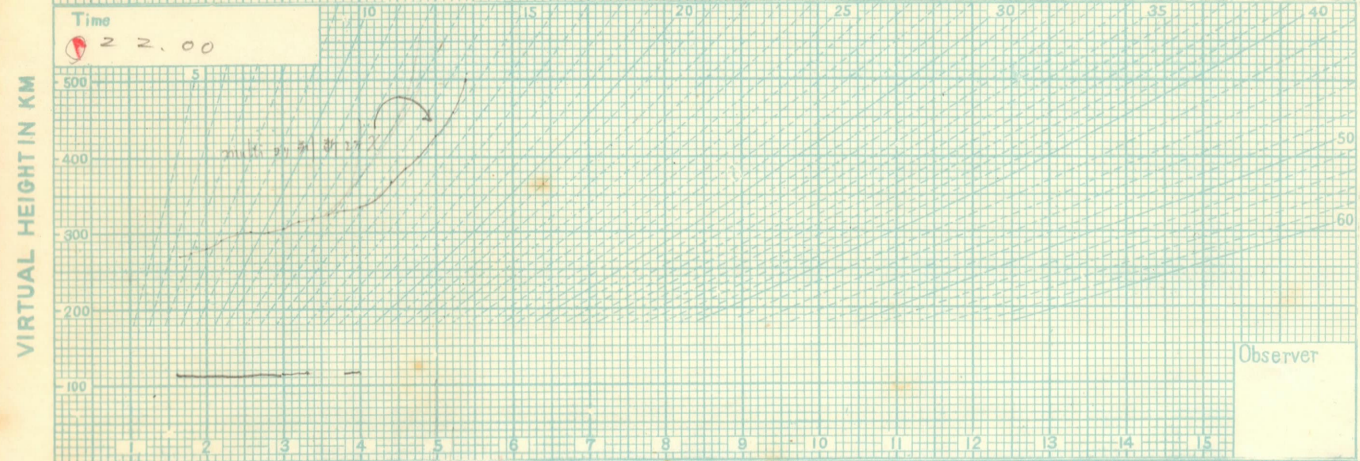
NO 7 13



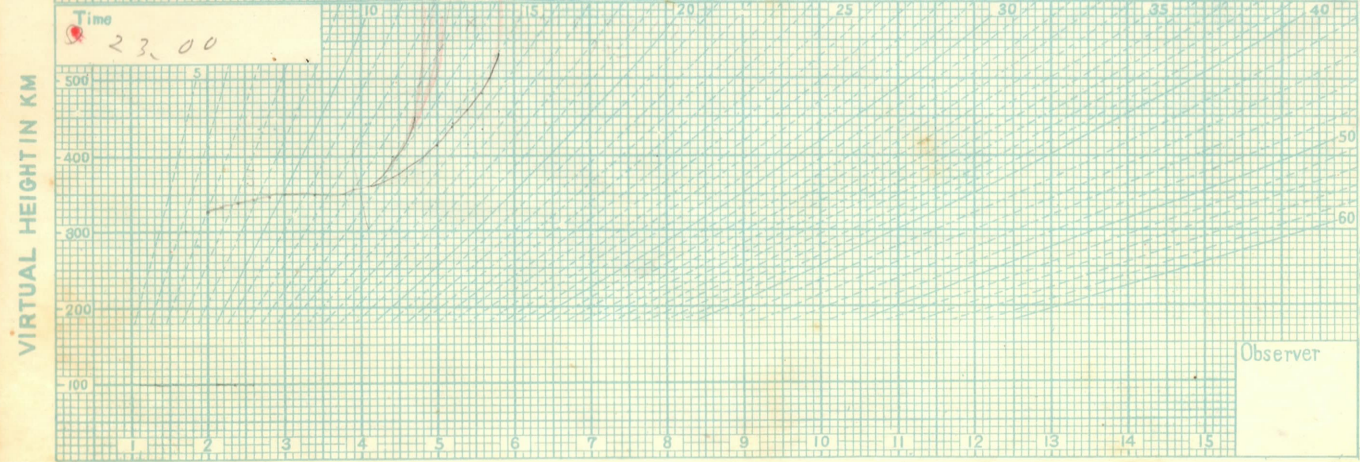
f_oF2 3
 h_pF2 3
 h'F2 230
 f_oF1
 h'F1
 f_oE
 h'E
 fEs 28
 f_{min}F 16
 f_{min}E 15
 MUF (M3000) F2 3
 Z_d



f_oF2 49J
 h_pF2 (270)J
 h'F2 200
 f_oF1
 h'F1
 f_oE
 h'E
 fEs 21Y
 f_{min}F 15
 f_{min}E 17
 MUF (M3000) F2 (16.0)J
 F2 (32)J
 Z_d



f_oF2 48JH
 h_pF2 (370)JH
 h'F2 270H
 f_oF1
 h'F1
 f_oE
 h'E
 fEs 40Y
 f_{min}F 16
 f_{min}E 16
 MUF (M3000) F2 (13.0)JH
 F2 (27)JH
 Z_d 50P



f_oF2 ~~80P~~
 h_pF2 360P
 h'F2 320A
 f_oF1
 h'F1
 f_oE
 h'E
 fEs 26
 f_{min}F 20A
 f_{min}E 11
 MUF (M3000) F2 139
 F2 27P
 Z_d

REMARKS

IONOSPHERIC RECORD

135°E MEAN TIME

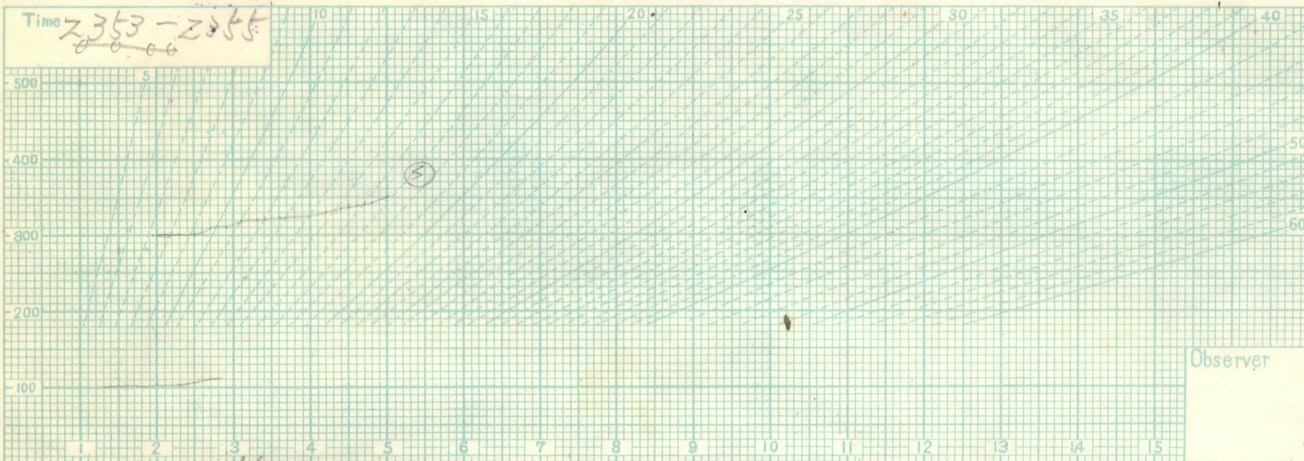
DATE **26.9.4**

STATION *yamakawa*

NO **7** 14

VIRTUAL HEIGHT IN KM

Time *2353-2055*
01.00

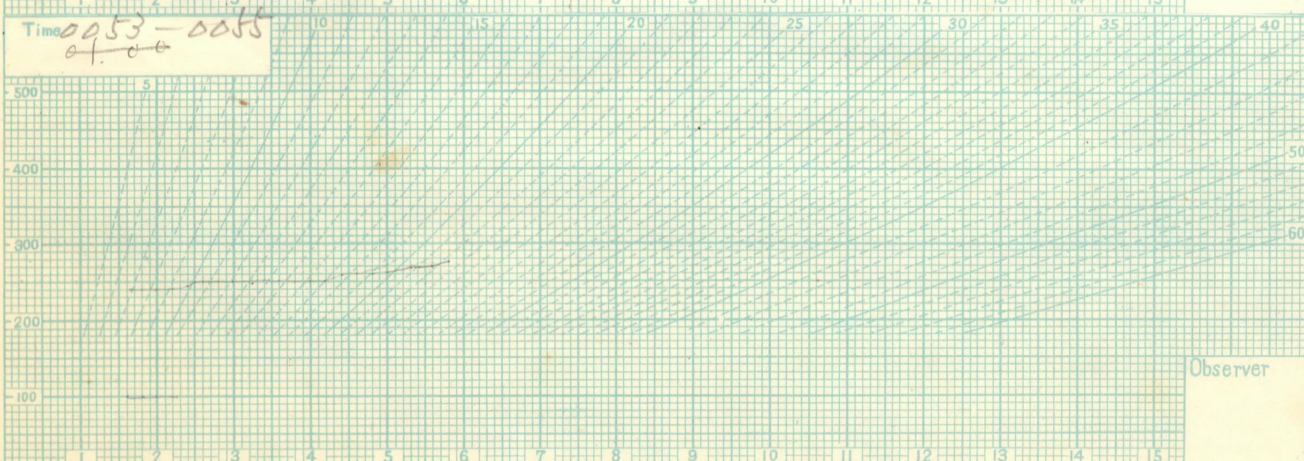


f_oF2 **E**
 f_pF2 **E**
 $h'F2$ 300
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs 28
 $f_{min}F$ ~~A 2.0~~
 $f_{min}E$ 13
 $MUF(3000)F2$ **E**
 Z_d

Observer

VIRTUAL HEIGHT IN KM

Time *0053-0055*
01.00

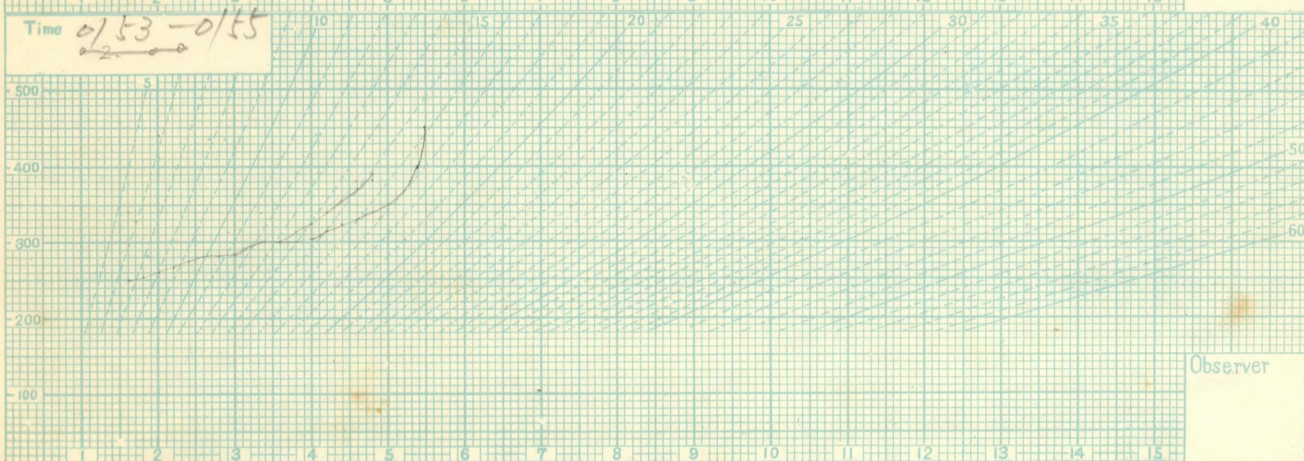


f_oF2 **E**
 f_pF2 **E**
 $h'F2$ 240
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs 22
 $f_{min}F$ 16
 $f_{min}E$ 16
 $MUF(3000)F2$ **E**
 Z_d

Observer

VIRTUAL HEIGHT IN KM

Time *0153-0155*
02.00

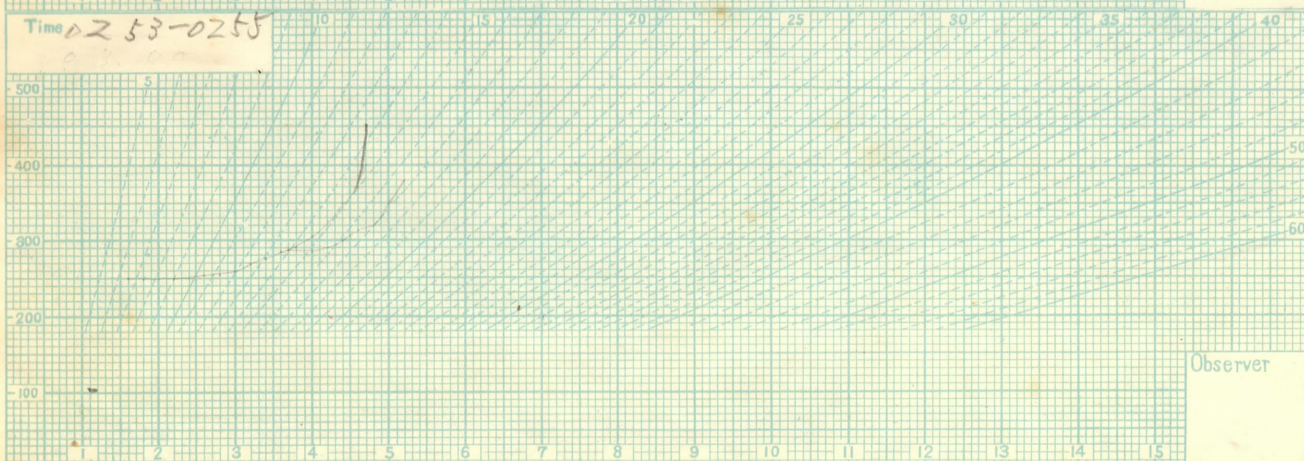


f_oF2 49 H
 f_pF2 330 H
 $h'F2$ 250 H
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs E
 $f_{min}F$ 16
 $f_{min}E$ E
 $MUF(3000)F2$ 15.2 H
 Z_d 31 H

Observer

VIRTUAL HEIGHT IN KM

Time *0253-0255*
02.00



f_oF2 49
 f_pF2 300
 $h'F2$ 250
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs ~~1.2~~ ~~1.1~~
 $f_{min}F$ 16
 $f_{min}E$ ~~10~~ ~~11~~
 $MUF(3000)F2$ 15.0
 Z_d 3/0

Observer

REMARKS

IONOSPHERIC RECORD

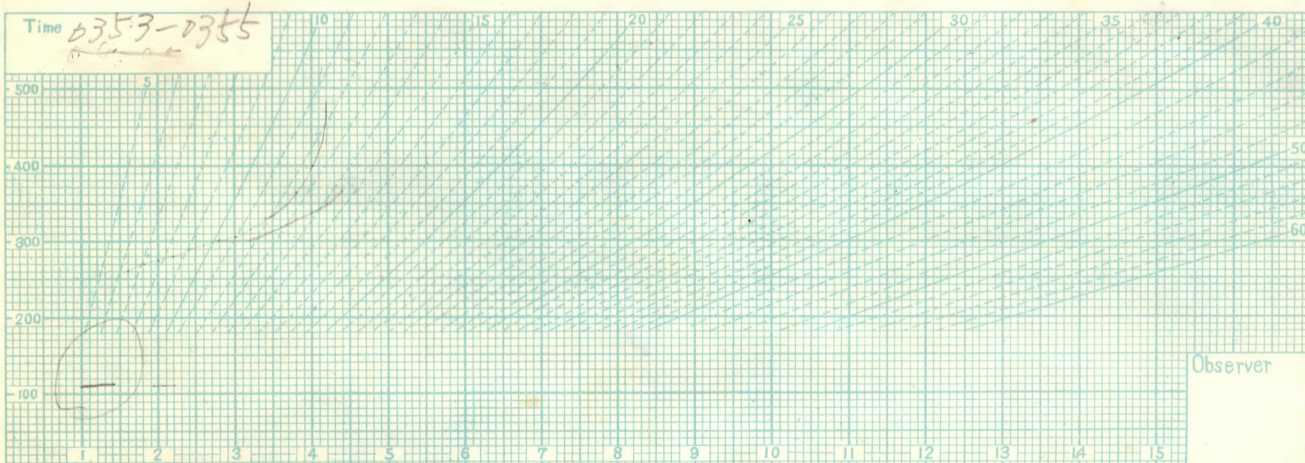
135°E MEAN TIME

DATE **26.9.44**

STATION *yamakawa*

NO **15**

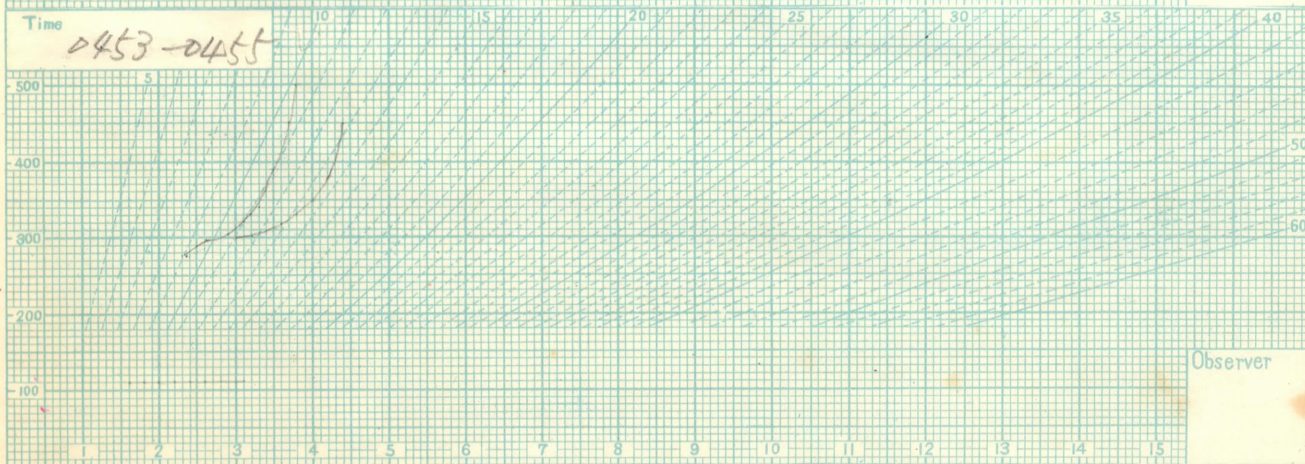
VIRTUAL HEIGHT IN KM



f_oF2 42
 $f_{up}F2$ 330
 $h'F2$ 260
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs 22Y
 $f_{min}F$ 16
 $f_{min}E$ E
 MUF_{3000} 12.5
 $(M3000) F2$ 29
 Z_d

Observer

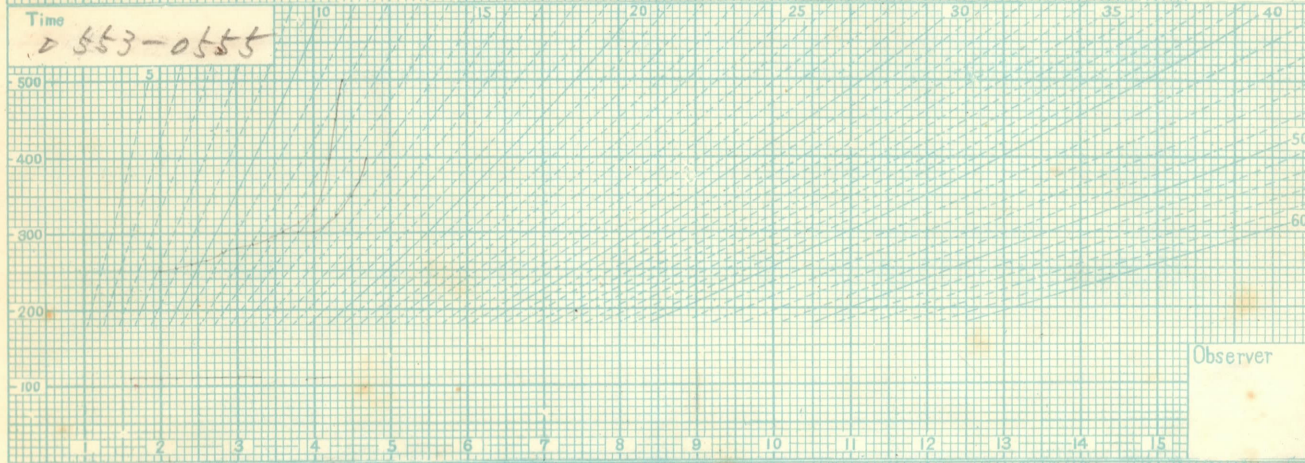
VIRTUAL HEIGHT IN KM



f_oF2 38
 $f_{up}F2$ 330
 $h'F2$ 270A
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs 31
 $f_{min}F$ 23A
 $f_{min}E$ 16
 MUF_{3000} 11.1
 $(M3000) F2$ 29
 Z_d

Observer

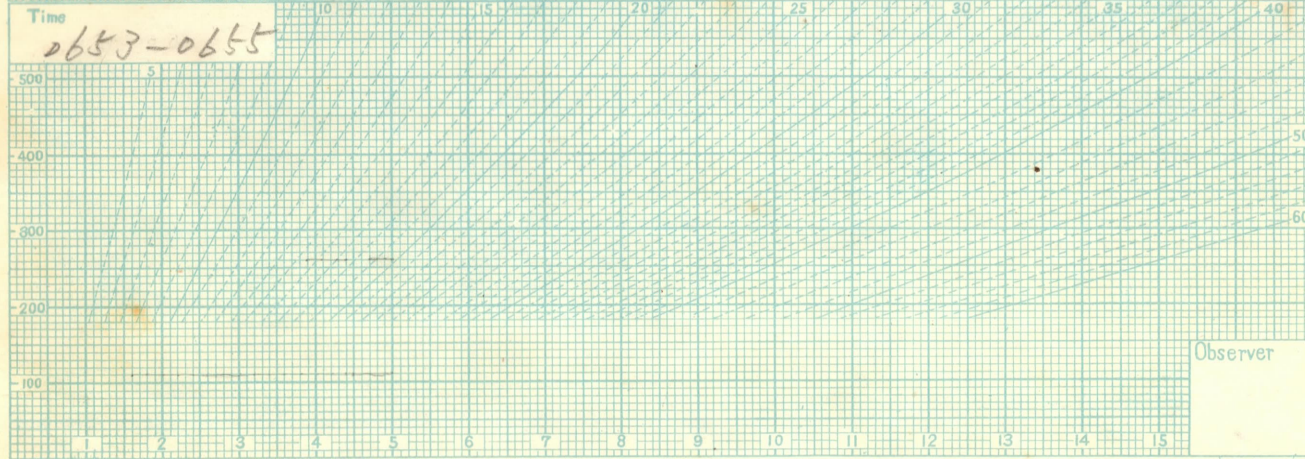
VIRTUAL HEIGHT IN KM



f_oF2 44
 $f_{up}F2$ 300
 $h'F2$ 250
 f_oF1 Q
 $h'F1$ Q
 f_oE A B
 $h'E$ A B
 fEs 42Y
 $f_{min}F$ 20A
 $f_{min}E$ 16
 MUF_{3000} 13.9
 $(M3000) F2$ 31
 Z_d

Observer

VIRTUAL HEIGHT IN KM



f_oF2 50
 $f_{up}F2$ 50
 $h'F2$ 260A
 f_oF1 A
 $h'F1$ A
 f_oE A
 $h'E$ A
 fEs 50
 $f_{min}F$ 39A
 $f_{min}E$ 16
 MUF_{3000} C
 $(M3000) F2$ C
 Z_d

Observer

REMARKS

IONOSPHERIC RECORD

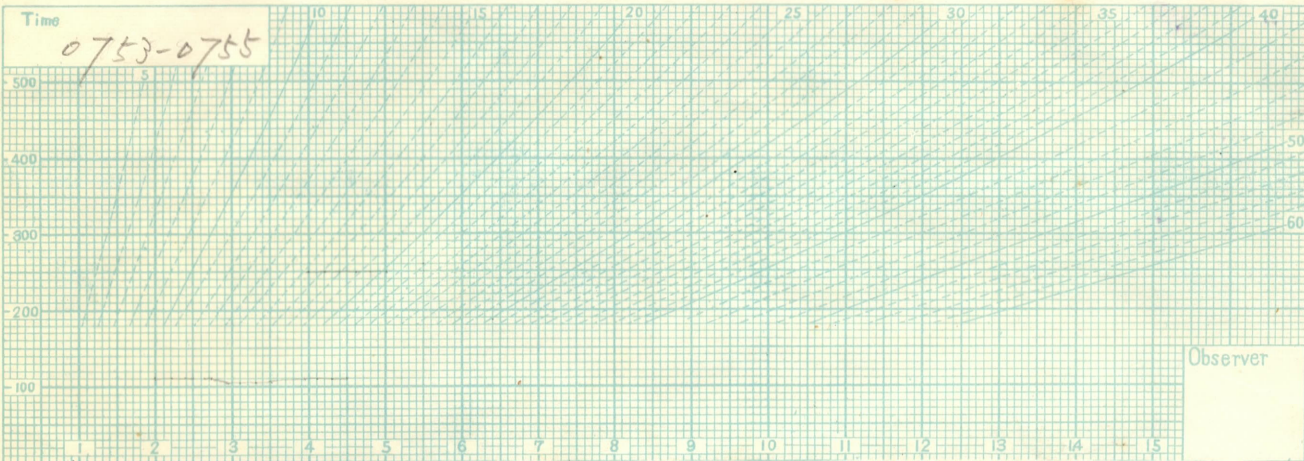
135°E MEAN TIME

DATE **26.9.4**

STATION *yamakawa*

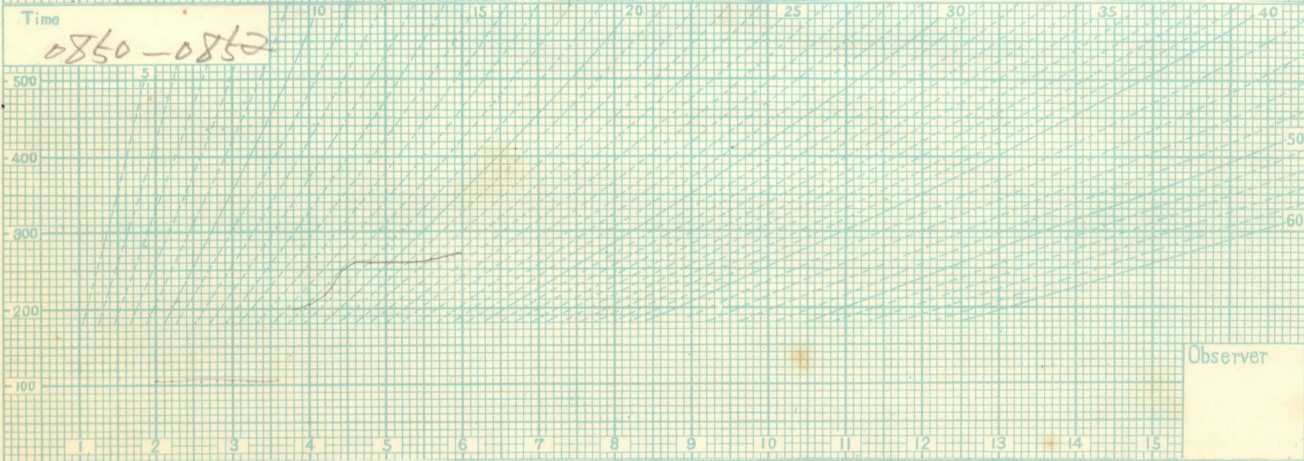
NO **11** **16**

VIRTUAL HEIGHT IN KM



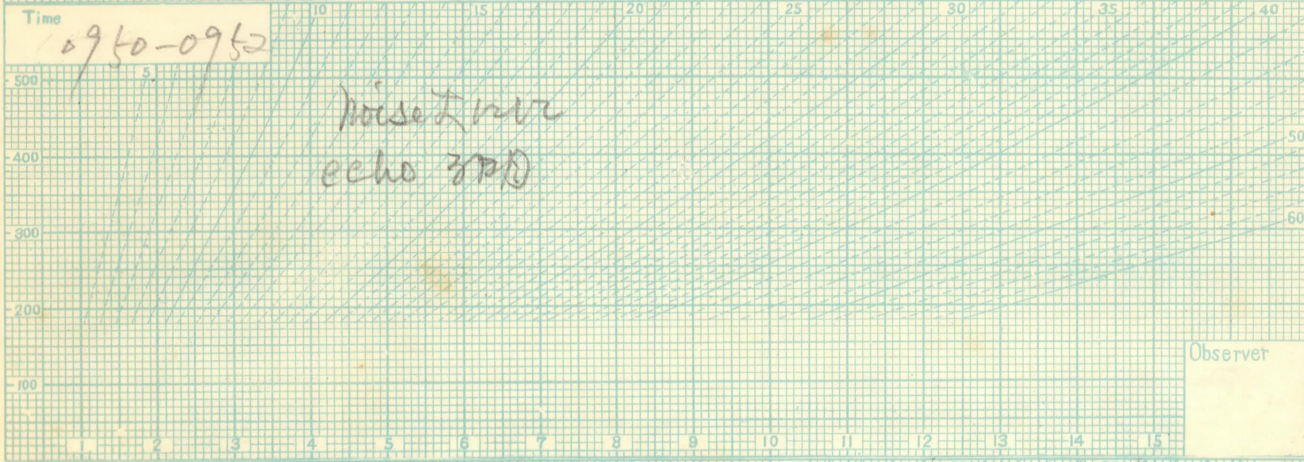
f_oF2 **C**
 h_pF2 **C**
 $h'F2$ **250 A**
 f_oF1 **A**
 $h'F1$ **A**
 f_oE **A**
 $h'E$ **A**
 fEs **45**
 $f_{min}F$ **40 A**
 $f_{min}E$ **20**
 $MUF(3000)F2$ **C**
 Z_d

VIRTUAL HEIGHT IN KM



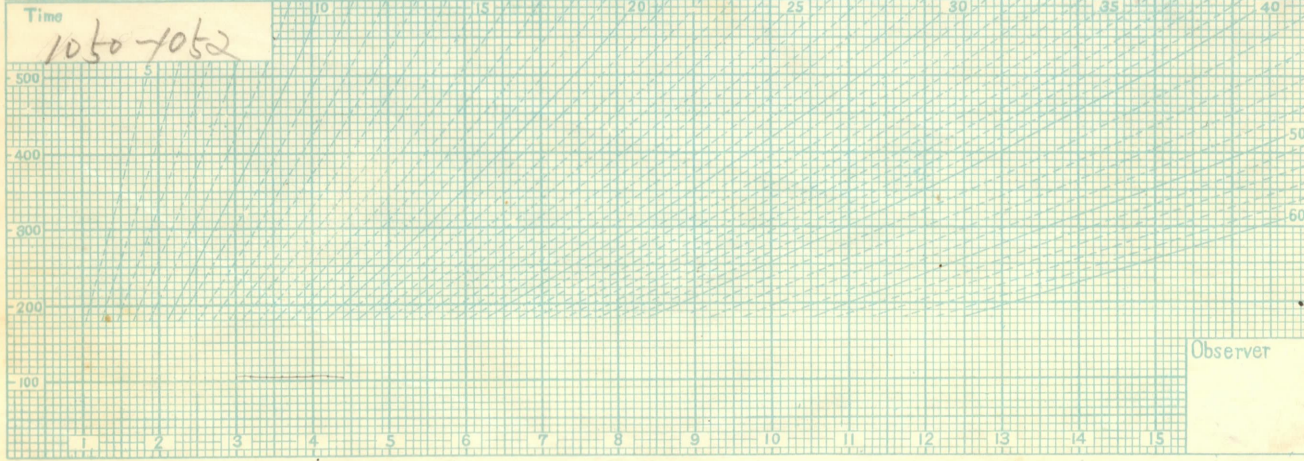
f_oF2 **C**
 h_pF2 **C**
 $h'F2$ **260**
 f_oF1 **L**
 $h'F1$ **200**
 f_oE **A**
 $h'E$ **A**
 fEs **36**
 $f_{min}F$ **38**
 $f_{min}E$ **20**
 $MUF(3000)F2$ **C**
 Z_d

VIRTUAL HEIGHT IN KM



f_oF2 **S**
 h_pF2 **S**
 $h'F2$ **S**
 f_oF1 **S**
 $h'F1$ **C**
 f_oE **C**
 $h'E$ **C**
 fEs **S**
 $f_{min}F$ **S**
 $f_{min}E$ **S**
 $MUF(3000)F2$ **S**
 Z_d

VIRTUAL HEIGHT IN KM



f_oF2 **S**
 h_pF2 **S**
 $h'F2$ **C**
 f_oF1 **C**
 $h'F1$ **C**
 f_oE **S A**
 $h'E$ **S A**
 fEs **44**
 $f_{min}F$ **A**
 $f_{min}E$ **30**
 $MUF(3000)F2$ **C**
 Z_d

REMARKS

IONOSPHERIC RECORD

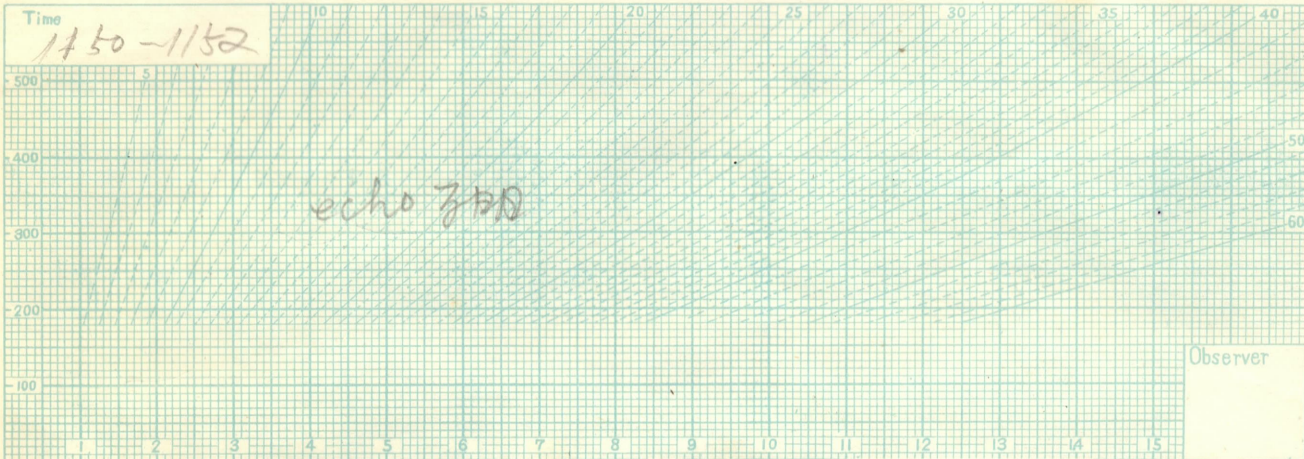
135°E MEAN TIME

DATE **26.9.44**

STATION *yamakawa*

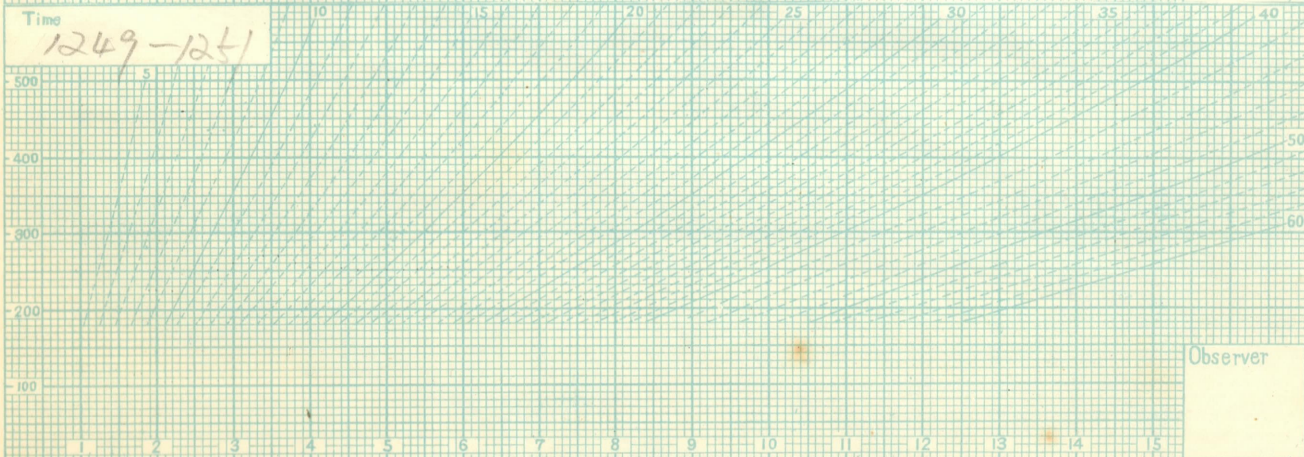
NO **5** **17**

VIRTUAL HEIGHT IN KM



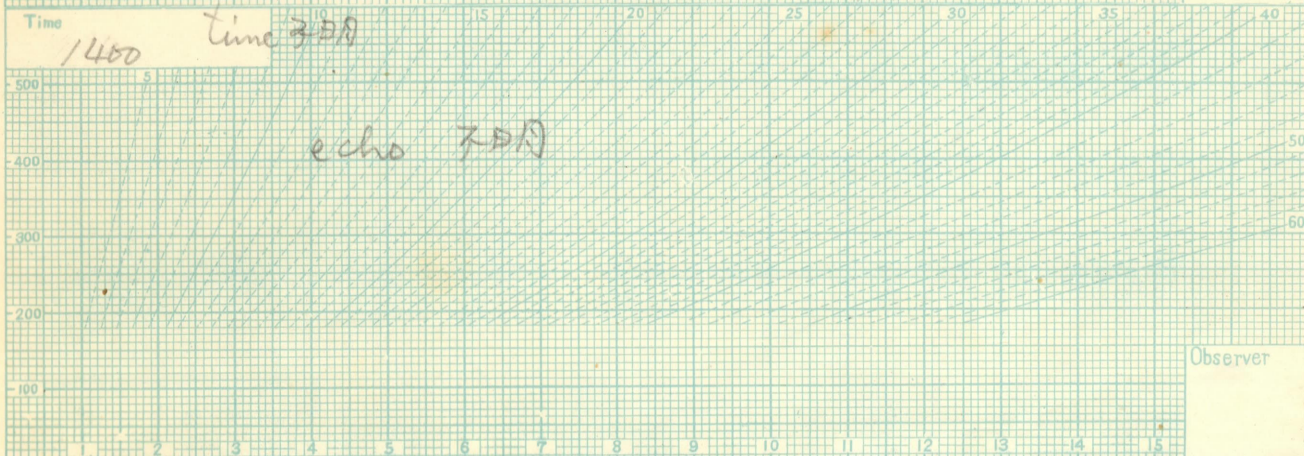
- f_oF2
- h_pF2
- $h'F2$
- f_oF1
- $h'F1$
- f_oE
- $h'E$
- fEs
- $f_{min}F$
- $f_{min}E$
- 3000 MUF (M3000)
- F2
- Zd

VIRTUAL HEIGHT IN KM



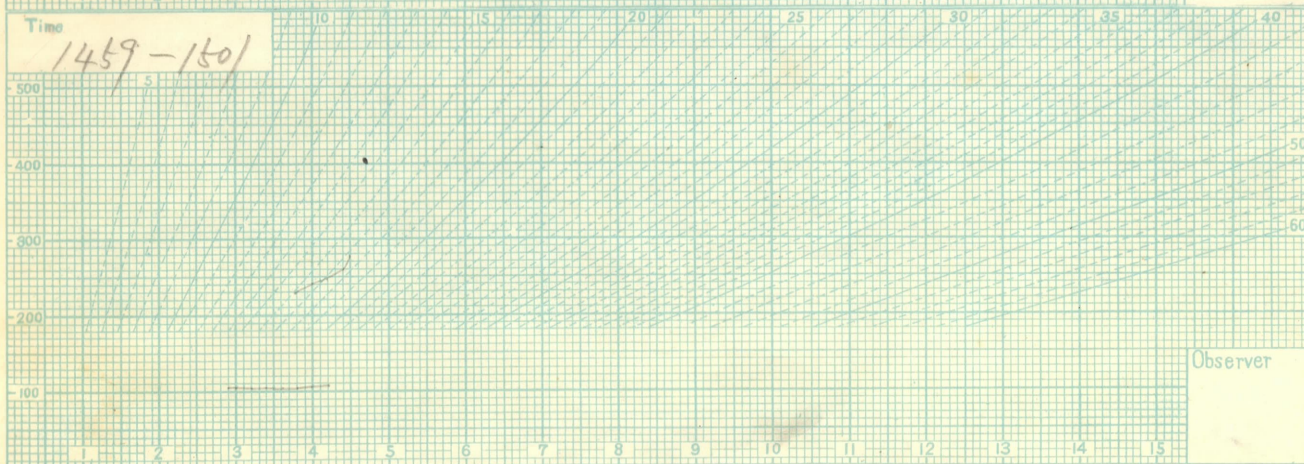
- f_oF2
- h_pF2
- $h'F2$
- f_oF1
- $h'F1$
- f_oE
- $h'E$
- fEs
- $f_{min}F$
- $f_{min}E$
- 3000 MUF (M3000)
- F2
- Zd

VIRTUAL HEIGHT IN KM



- f_oF2
- h_pF2
- $h'F2$
- f_oF1
- $h'F1$
- f_oE
- $h'E$
- fEs
- $f_{min}F$
- $f_{min}E$
- 3000 MUF (M3000)
- F2
- Zd

VIRTUAL HEIGHT IN KM



- f_oF2
- h_pF2
- $h'F2$
- f_oF1 *45*
- $h'F1$ *230A*
- f_oE *A*
- $h'E$ *A*
- fEs *4.2*
- $f_{min}F$ *3.8*
- $f_{min}E$ *2.9*
- 3000 MUF (M3000)
- F2
- Zd

REMARKS

IONOSPHERIC RECORD

135°E MEAN TIME

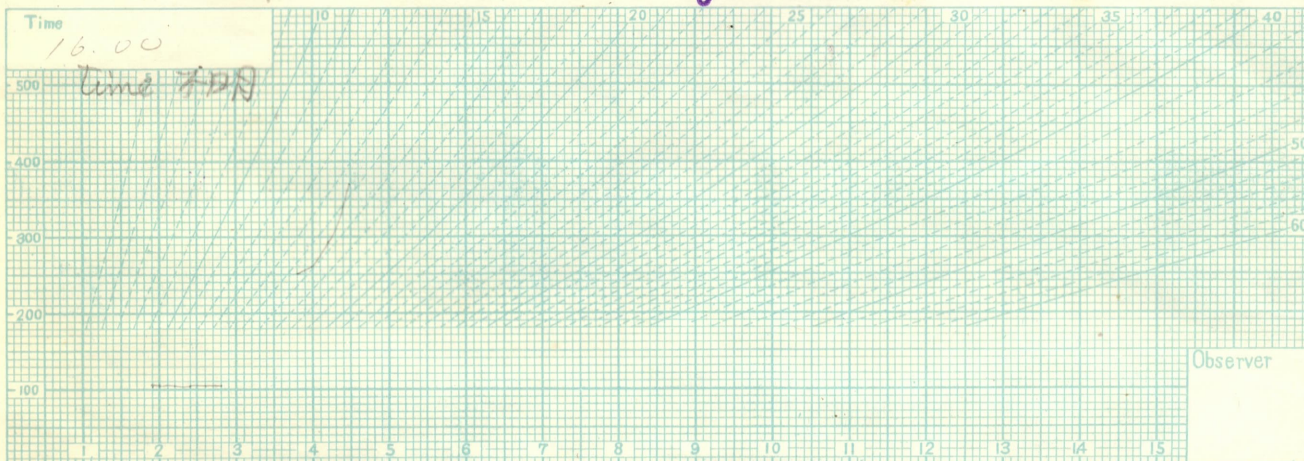
DATE **26.9.4**

STATION *yamakarwa*

NO

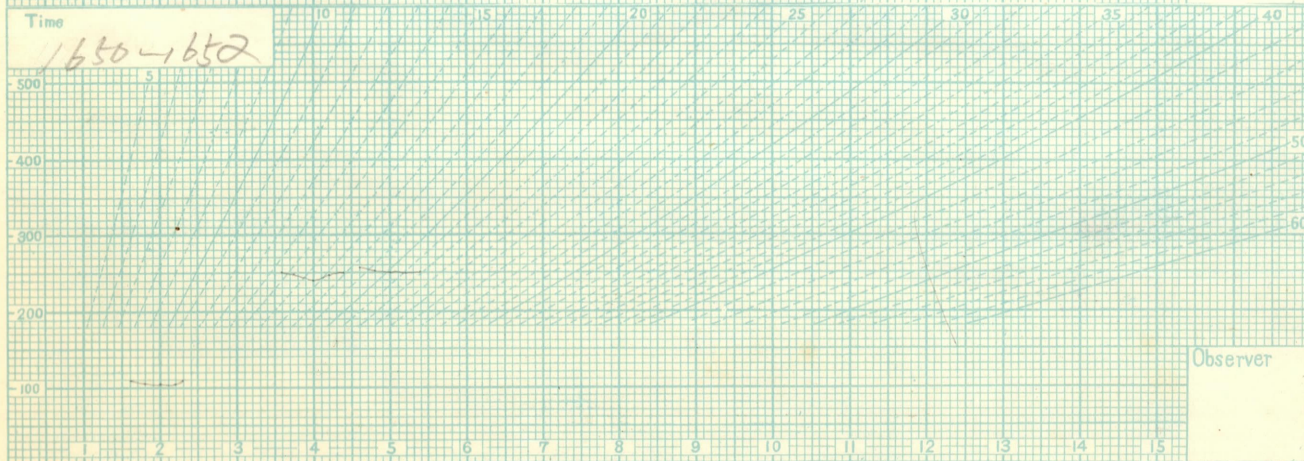
18

VIRTUAL HEIGHT IN KM



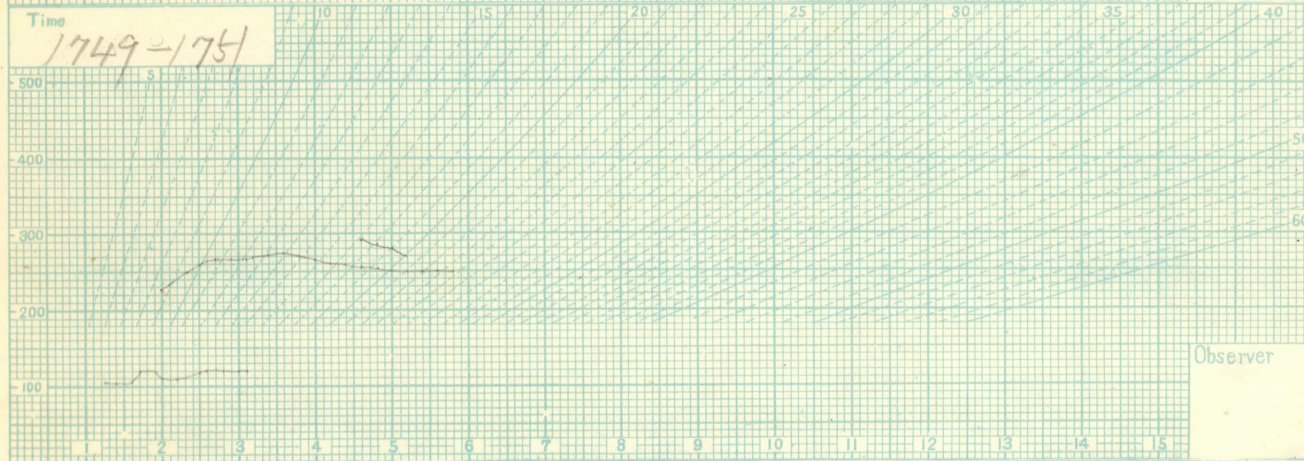
foF2 **3**
h_pF2 **C**
h'F2 **C**
foF1 **45**
h'F1 **250**
foE **3 B**
h'E **5 100**
fEs **28 G**
f_{min}F **38**
f_{min}E **19**
Observer
3000 MUF (M3000) **C**
F2 **C**
Z_d

VIRTUAL HEIGHT IN KM



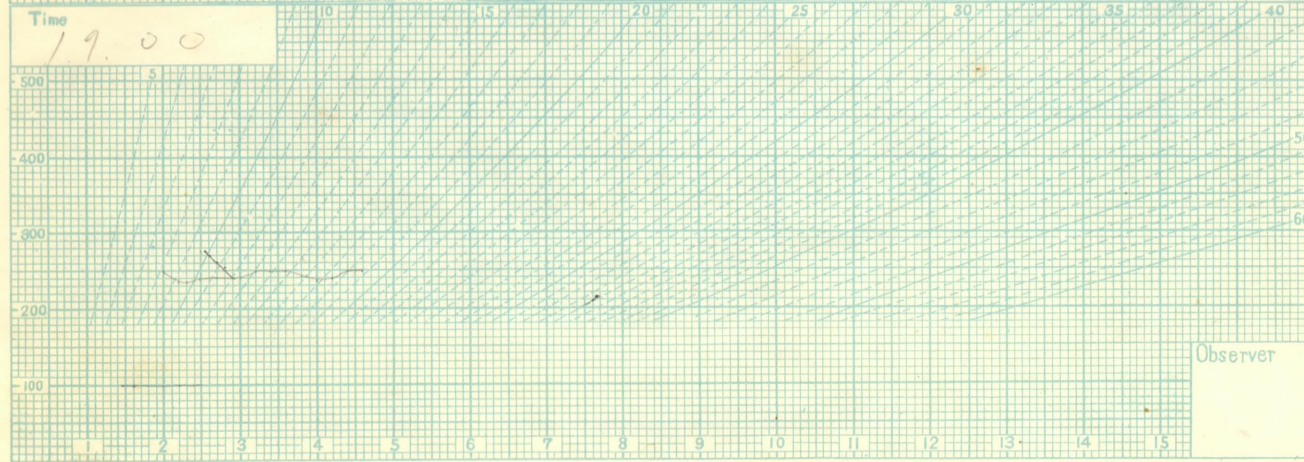
foF2 **C**
h_pF2 **C**
h'F2 **250**
foF1 **L**
h'F1 **240**
foE **23**
h'E **100**
fEs **G**
f_{min}F **36**
f_{min}E **16**
Observer
3000 MUF (M3000) **C**
F2 **C**
Z_d

VIRTUAL HEIGHT IN KM



foF2 **C**
h_pF2 **C**
h'F2 **250**
foF1 **L**
h'F1 **220A**
foE **17**
h'E **100**
fEs **31**
f_{min}F **20**
f_{min}E **12**
Observer
3000 MUF (M3000) **C**
F2 **C**
Z_d

VIRTUAL HEIGHT IN KM



foF2 **C**
h_pF2 **C**
h'F2 **240 230**
foF1
h'F1
foE
h'E
fEs **25**
f_{min}F **20A**
f_{min}E **14**
Observer
3000 MUF (M3000) **C**
F2 **C**
Z_d

REMARKS

IONOSPHERIC RECORD

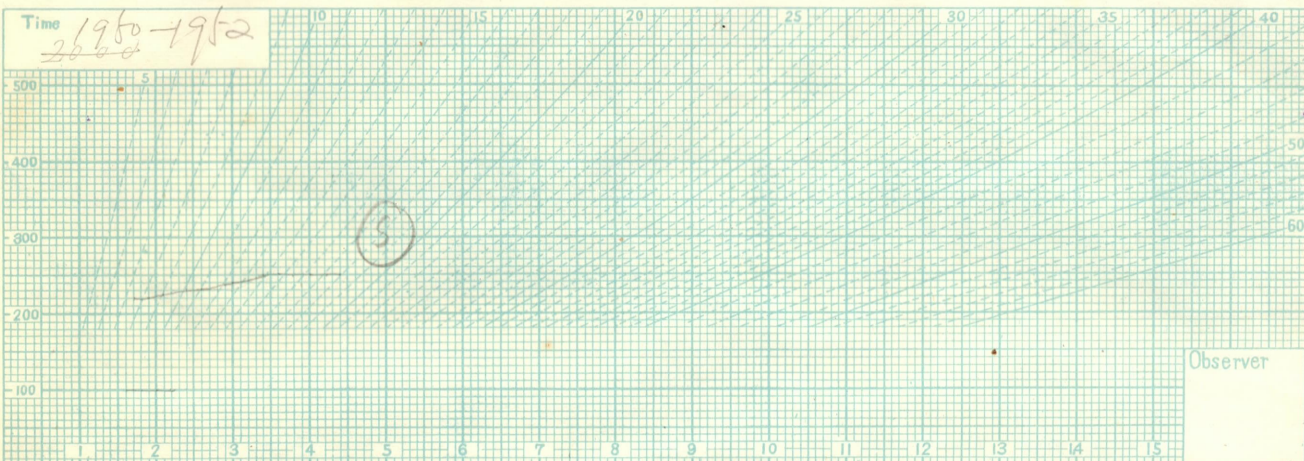
135°E MEAN TIME

DATE **26.9.4**

STATION *yamakawa*

NO 19

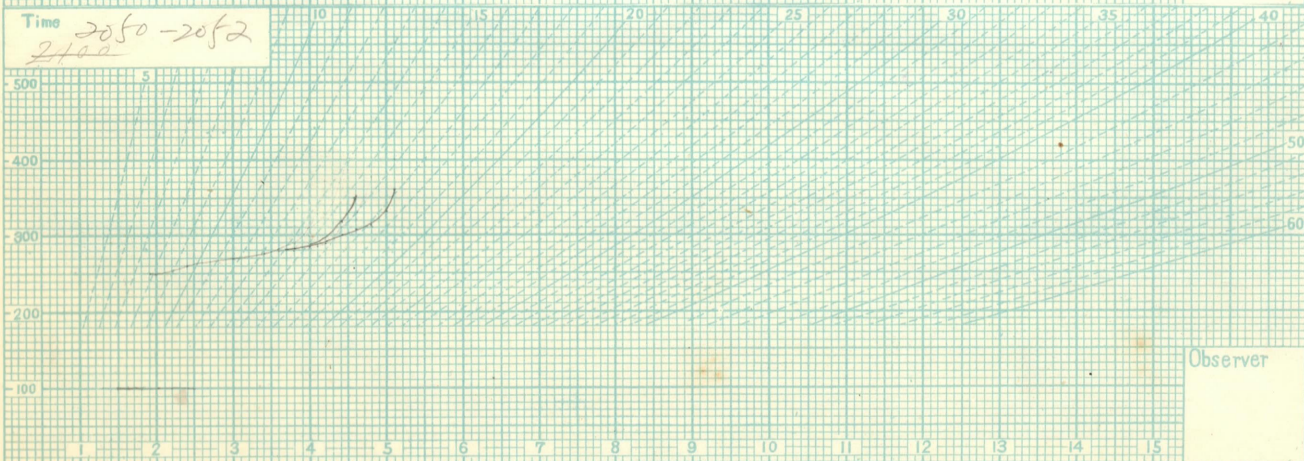
VIRTUAL HEIGHT IN KM



f_oF2 **C**
 $f_{hp}F2$ **C**
 $h'F2$ **220**
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs **22**
 $f_{min}F$ **17**
 $f_{min}E$ **16**
 $MUF(3000)F2$ **C**
 Z_d

Observer

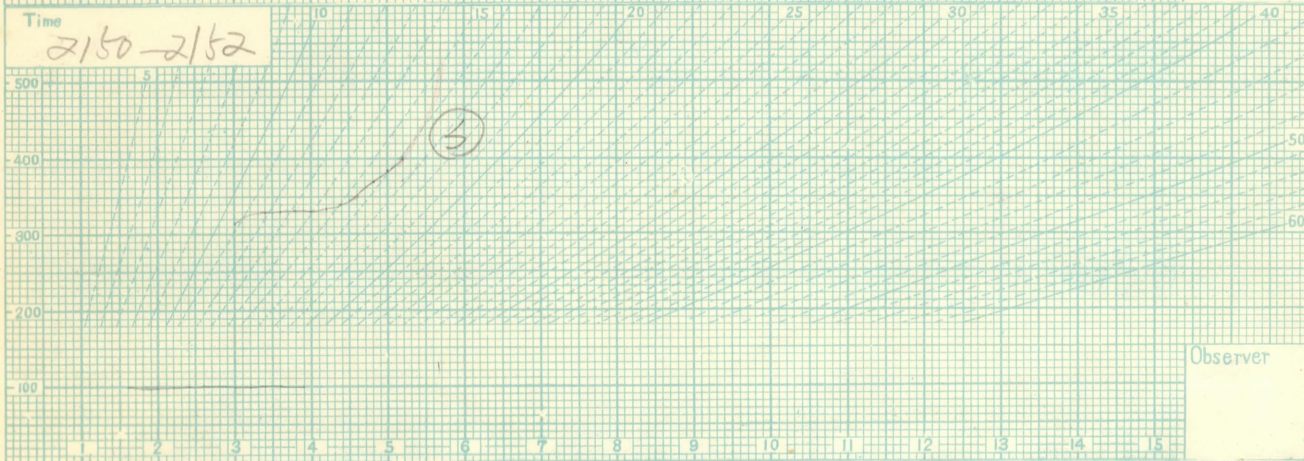
VIRTUAL HEIGHT IN KM



f_oF2 **46**
 $f_{hp}F2$ **280**
 $h'F2$ **250**
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs **25**
 $f_{min}F$ **19**
 $f_{min}E$ **13.5**
 $MUF(3000)F2$ **15.7**
 Z_d **34**

Observer

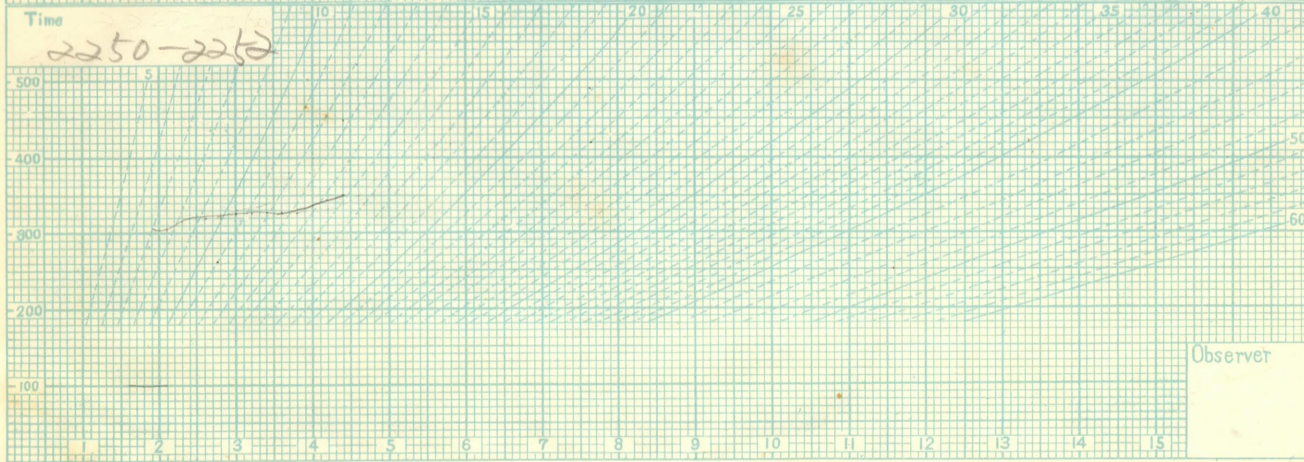
VIRTUAL HEIGHT IN KM



f_oF2 **C**
 $f_{hp}F2$ **C**
 $h'F2$ **310A**
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs **39**
 $f_{min}F$ **30A**
 $f_{min}E$ **16**
 $MUF(3000)F2$ **C**
 Z_d

Observer

VIRTUAL HEIGHT IN KM



f_oF2 **C**
 $f_{hp}F2$ **C**
 $h'F2$ **300**
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs **21**
 $f_{min}F$ **19**
 $f_{min}E$ **16**
 $MUF(3000)F2$ **C**
 Z_d

Observer

REMARKS

IONOSPHERIC RECORD

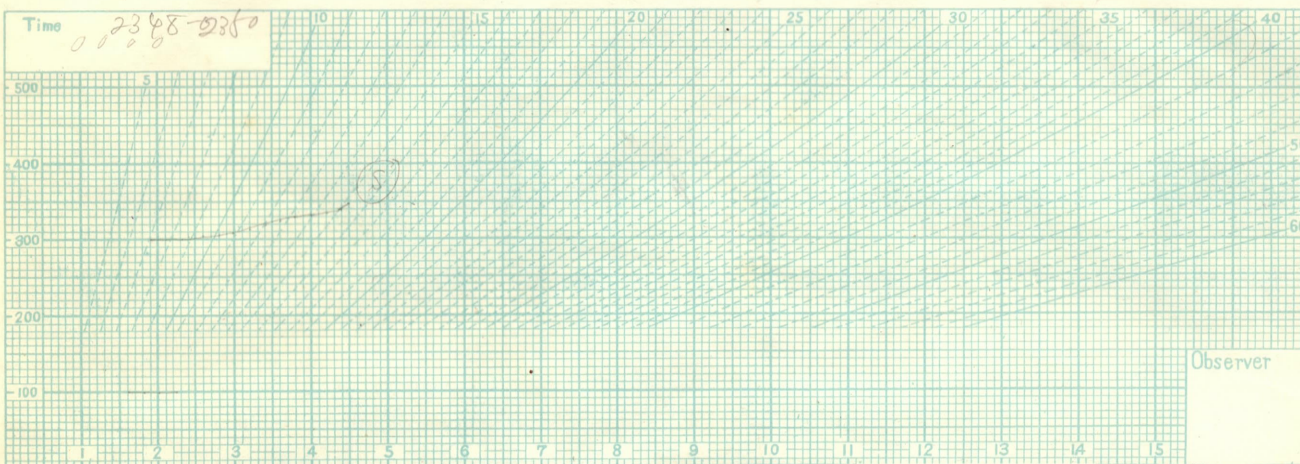
135°E MEAN TIME

DATE **26.9.5**

STATION *yamokawa*

NO **7 20**

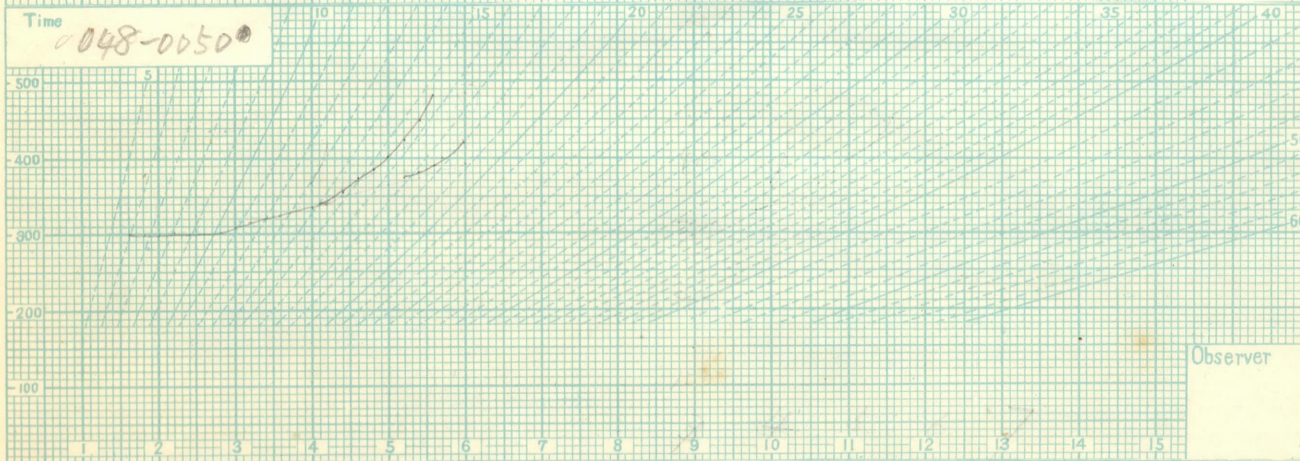
VIRTUAL HEIGHT IN KM



f_oF2 **C**
 $f_{up}F2$ **C**
 $h'F2$ **310A**
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs **22**
 $f_{min}F$ **19A**
 $f_{min}E$ **6**
 $MUF(3000)F2$ **C**
 Z_d

Observer

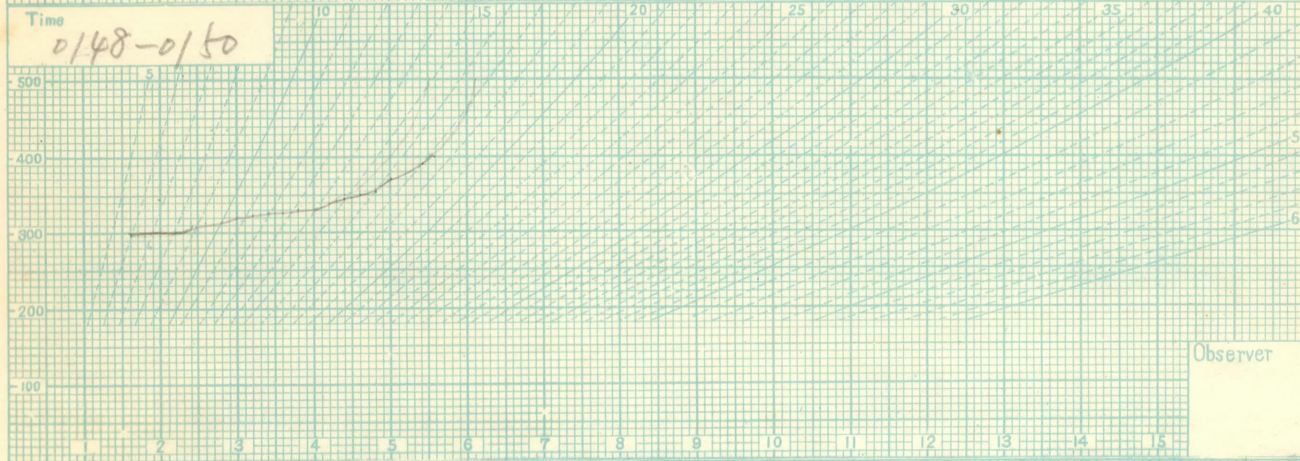
VIRTUAL HEIGHT IN KM



f_oF2 **57**
 $f_{up}F2$ **380**
 $h'F2$ **300**
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs **E7**
 $f_{min}F$ **16**
 $f_{min}E$ **E**
 $MUF(3000)F2$ **156**
 Z_d **27**

Observer

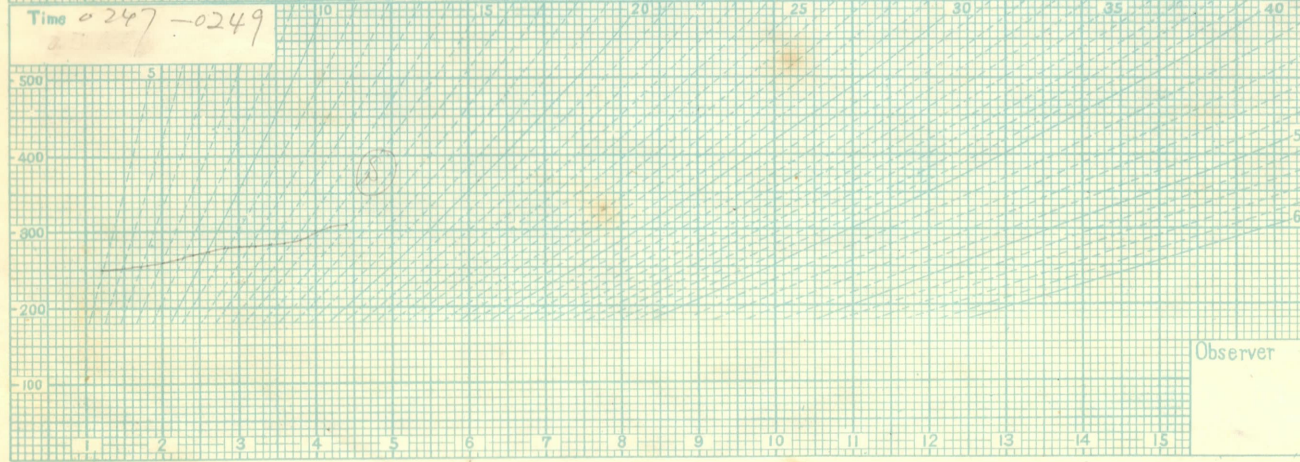
VIRTUAL HEIGHT IN KM



f_oF2 **(55)JP**
 $f_{up}F2$ **(350)JP**
 $h'F2$ **300**
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs **E7**
 $f_{min}F$ **16**
 $f_{min}E$ **E**
 $MUF(3000)F2$ **(155)JP**
 Z_d **(28)JP**

Observer

VIRTUAL HEIGHT IN KM



f_oF2 **C**
 $f_{up}F2$ **C**
 $h'F2$ **250**
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs **E7**
 $f_{min}F$ **12**
 $f_{min}E$ **E**
 $MUF(3000)F2$ **C**
 Z_d

Observer

REMARKS

IONOSPHERIC RECORD

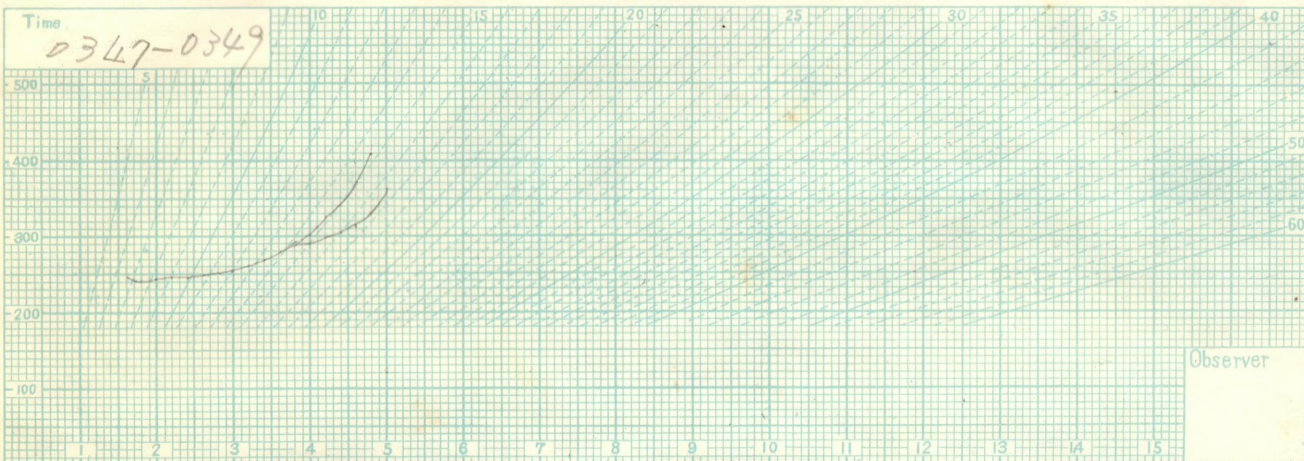
135°E MEAN TIME

DATE **26.9.5**

STATION *Yamakarwa*

NO **1** **21**

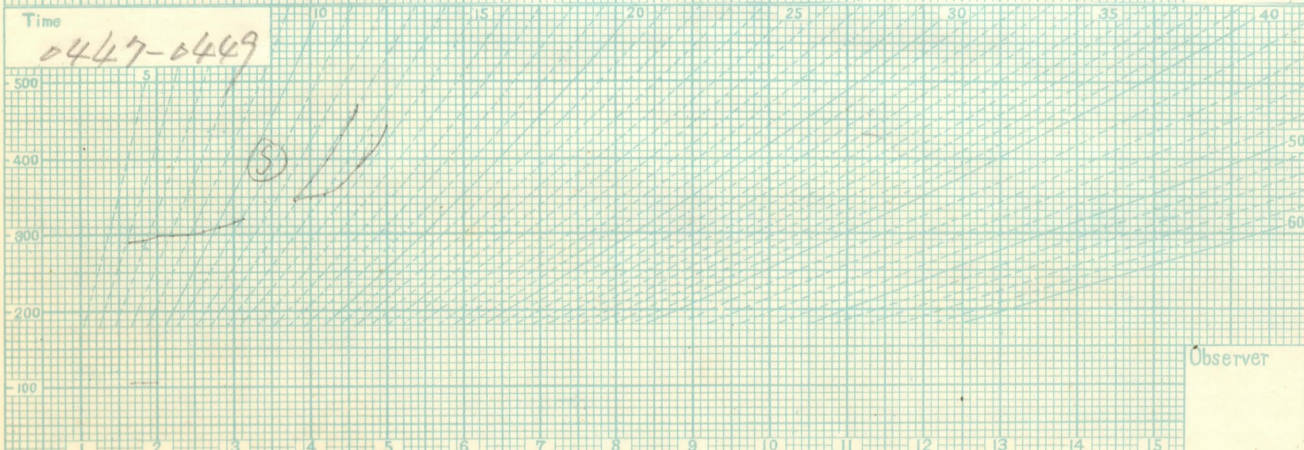
VIRTUAL HEIGHT IN KM



f_oF2 4.8
 h_pF2 300
 $h'F2$ 240
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs E
 $f_{min}F$ 1.6
 $f_{min}E$ E
 $MUF(3000)F2$ 15.0
 $F2$ 31
 Z_d

Observer

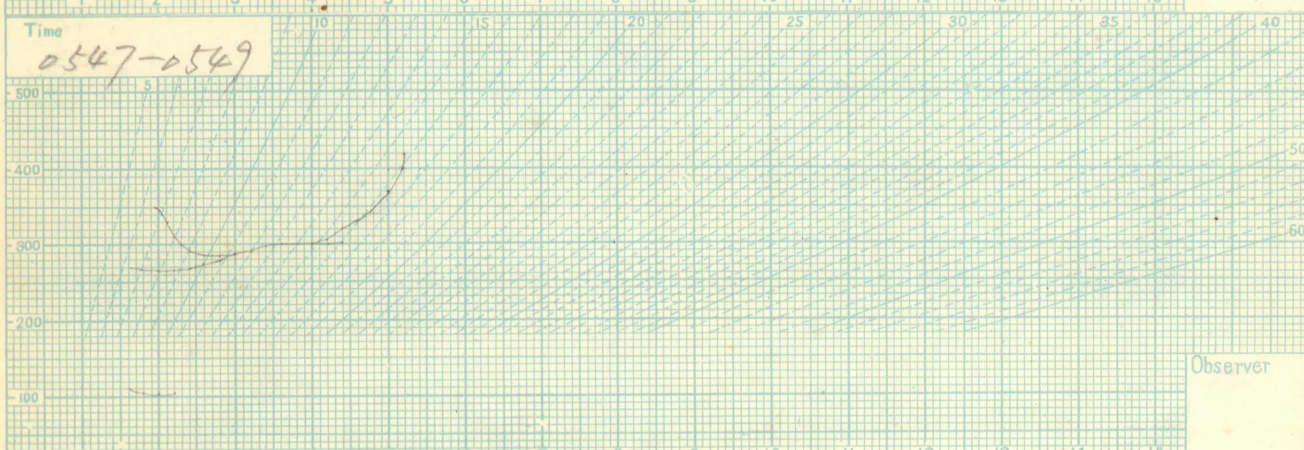
VIRTUAL HEIGHT IN KM



f_oF2 4.6
 h_pF2 350
 $h'F2$ 290
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs 2.0
 $f_{min}F$ 1.6
 $f_{min}E$ 1.65
 $MUF(3000)F2$ 13.2
 $F2$ 28
 Z_d

Observer

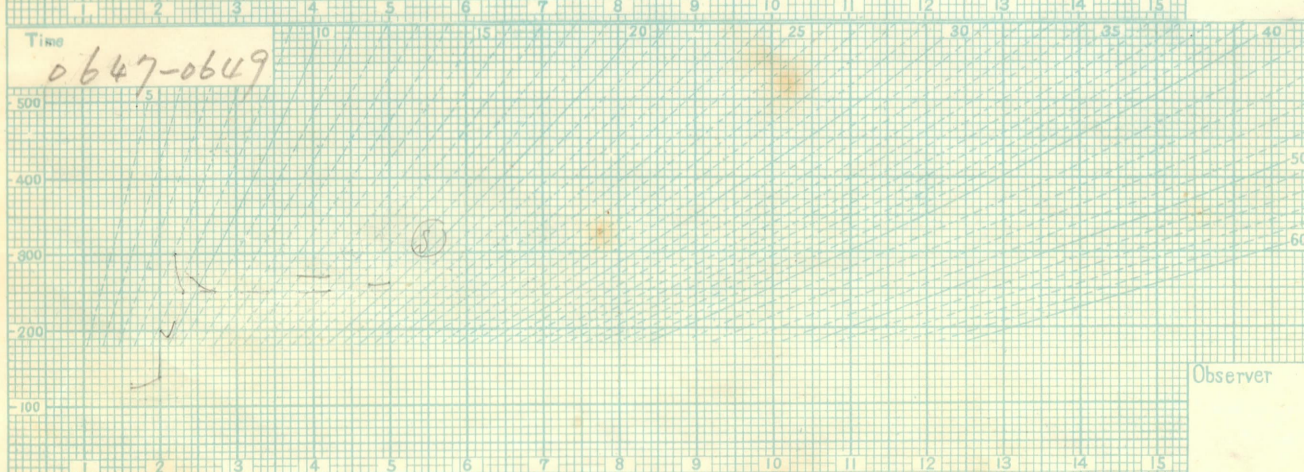
VIRTUAL HEIGHT IN KM



f_oF2 5.2
 h_pF2 310
 $h'F2$ ~~260~~ 300
 f_oF1 ~~4~~ L
 $h'F1$ ~~2~~ 260
 f_oE B
 $h'E$ B
 fEs 2.2
 $f_{min}F$ 1.6
 $f_{min}E$ 1.6
 $MUF(3000)F2$ 16.3
 $F2$ 31
 Z_d

Observer

VIRTUAL HEIGHT IN KM



f_oF2 ~~5.2~~ C
 h_pF2 C
 $h'F2$ 250
 f_oF1 Q
 $h'F1$ Q
 f_oE 2.2 H 2.0
 $h'E$ 120
 fEs G
 $f_{min}F$ 2.2
 $f_{min}E$ 1.6
 $MUF(3000)F2$ 5
 $F2$ S C
 Z_d

Observer

REMARKS

IONOSPHERIC RECORD

135°E MEAN TIME

DATE

26.9.5

STATION

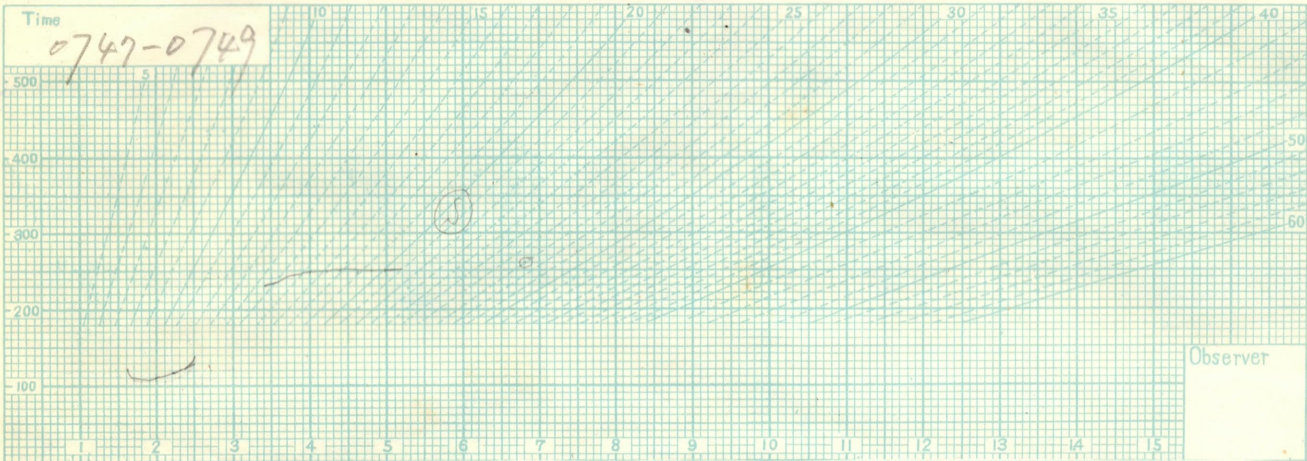
yamakawa

NO

7

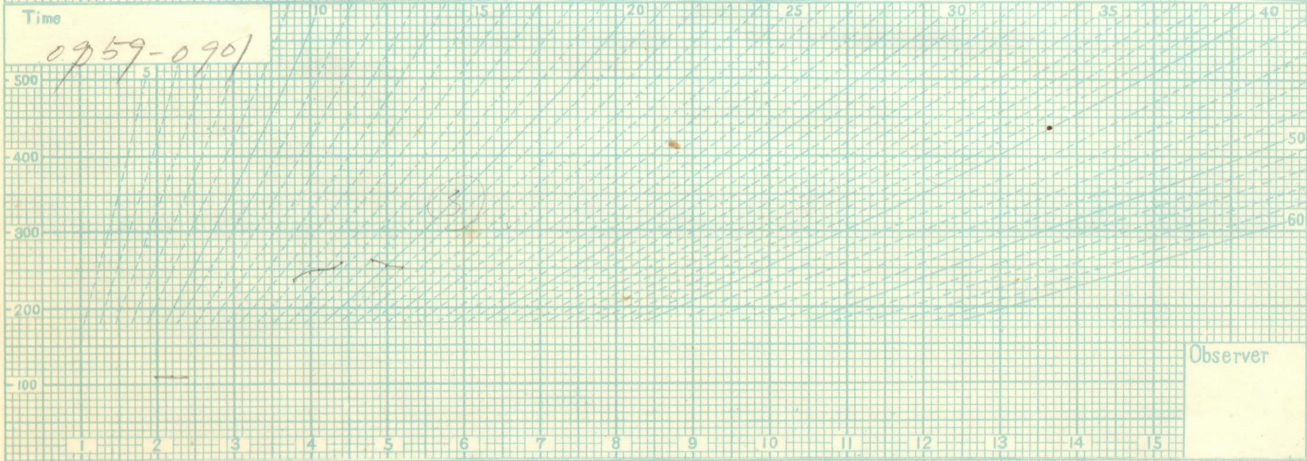
22

VIRTUAL HEIGHT IN KM



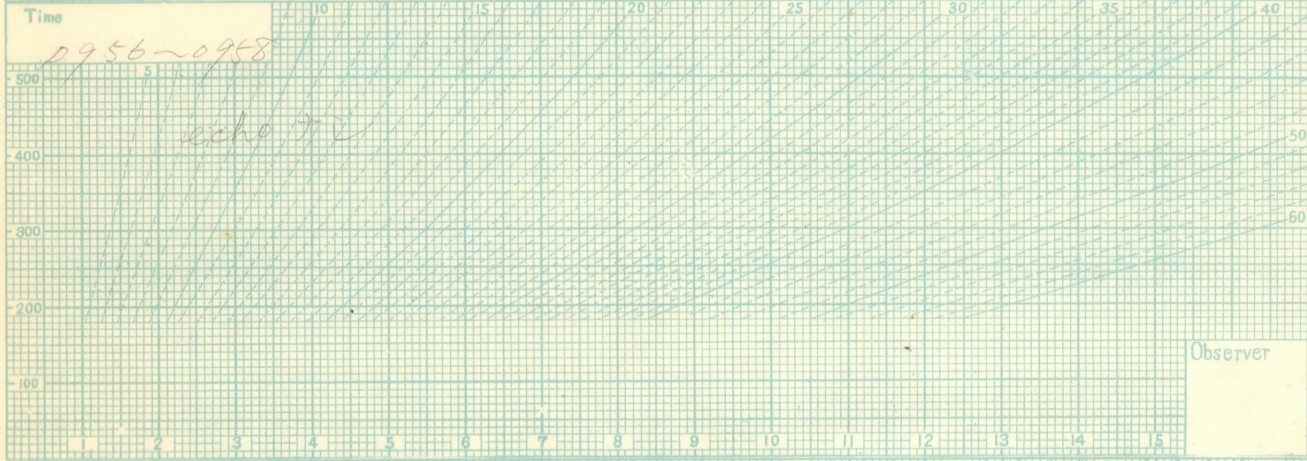
f_oF2 *5*
 $f_{up}F2$ *C*
 $f'F2$ *230 250*
 f_oF1 *4*
 $f'F1$ *230*
 f_oE *2.5*
 $f'E$ *110*
 fEs *G*
 $f_{min}F$ *3.4*
 $f_{min}E$ *1.6*
 Observer
 $MUF(3000)F2$ *C*
 Z_d

VIRTUAL HEIGHT IN KM



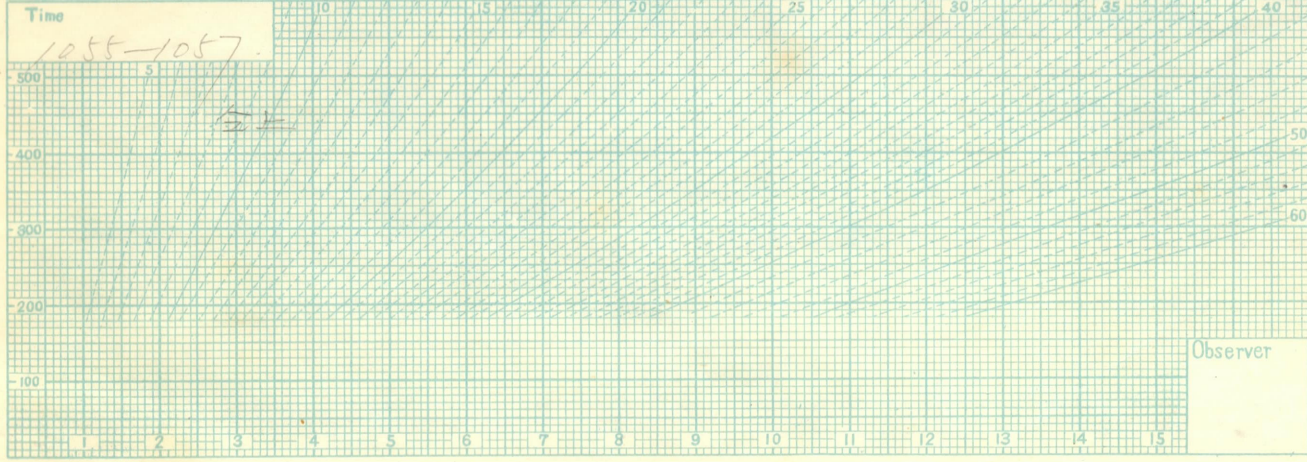
f_oF2 *C*
 $f_{up}F2$ *C*
 $f'F2$ *250*
 f_oF1 *B*
 $f'F1$ *230*
 f_oE *B*
 $f'E$ *110*
 fEs *24 G*
 $f_{min}F$ *3.8*
 $f_{min}E$ *2.0*
 Observer
 $MUF(3000)F2$ *E*
 Z_d

VIRTUAL HEIGHT IN KM



f_oF2 *S*
 $f_{up}F2$ *S*
 $f'F2$ *S*
 f_oF1 *S*
 $f'F1$ *C*
 f_oE *S*
 $f'E$ *S*
 fEs *S*
 $f_{min}F$ *S*
 $f_{min}E$ *S*
 Observer
 $MUF(3000)F2$ *S*
 Z_d

VIRTUAL HEIGHT IN KM



f_oF2 *S*
 $f_{up}F2$ *S*
 $f'F2$ *S*
 f_oF1 *S*
 $f'F1$ *C*
 f_oE *S*
 $f'E$ *S*
 fEs *S*
 $f_{min}F$ *S*
 $f_{min}E$ *S*
 Observer
 $MUF(3000)F2$ *S*
 Z_d

REMARKS

IONOSPHERIC RECORD

135°E MEAN TIME

DATE

26.9.5

STATION

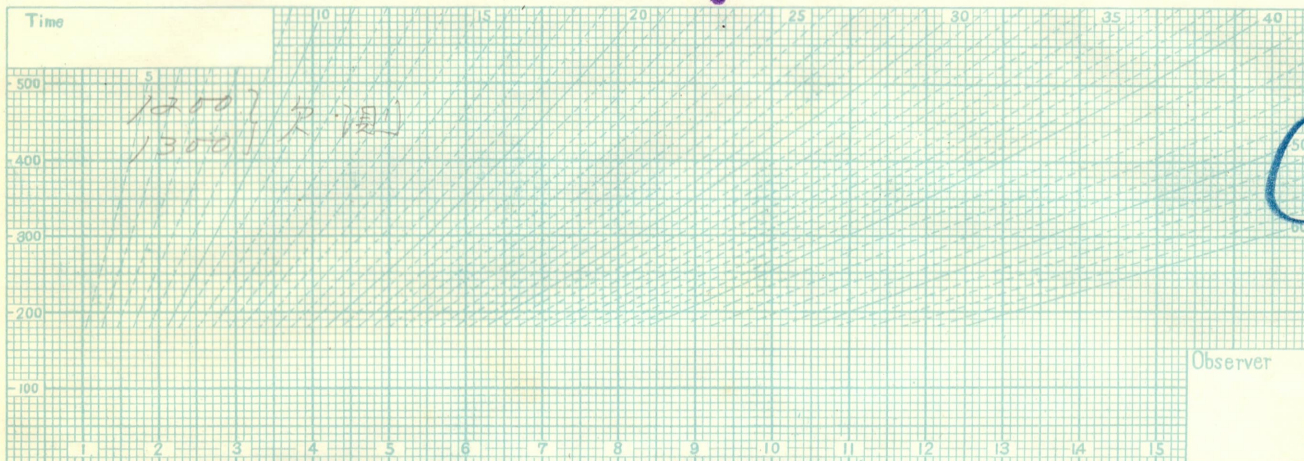
yamakawa

NO

6

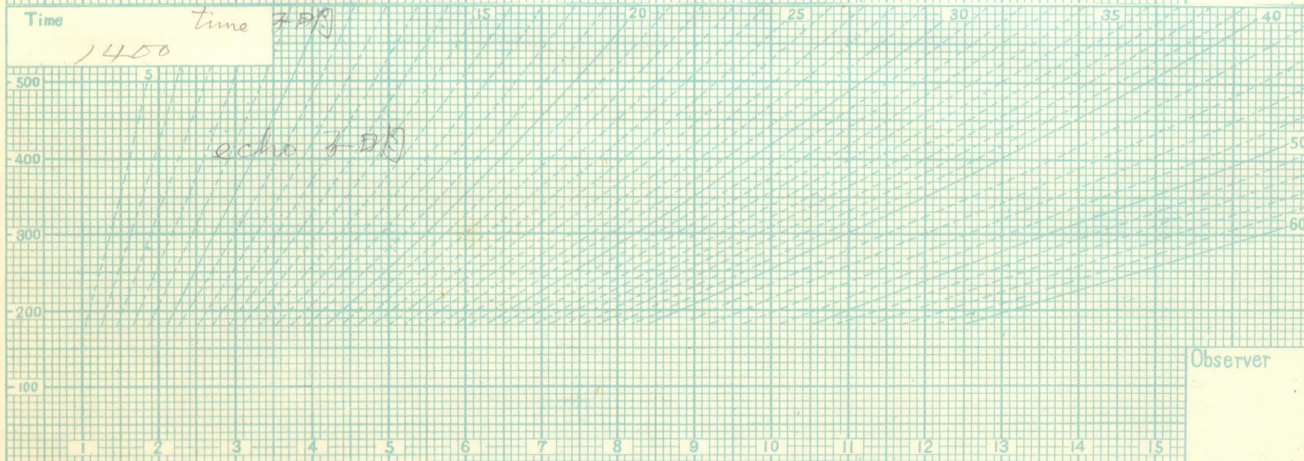
23

VIRTUAL HEIGHT IN KM



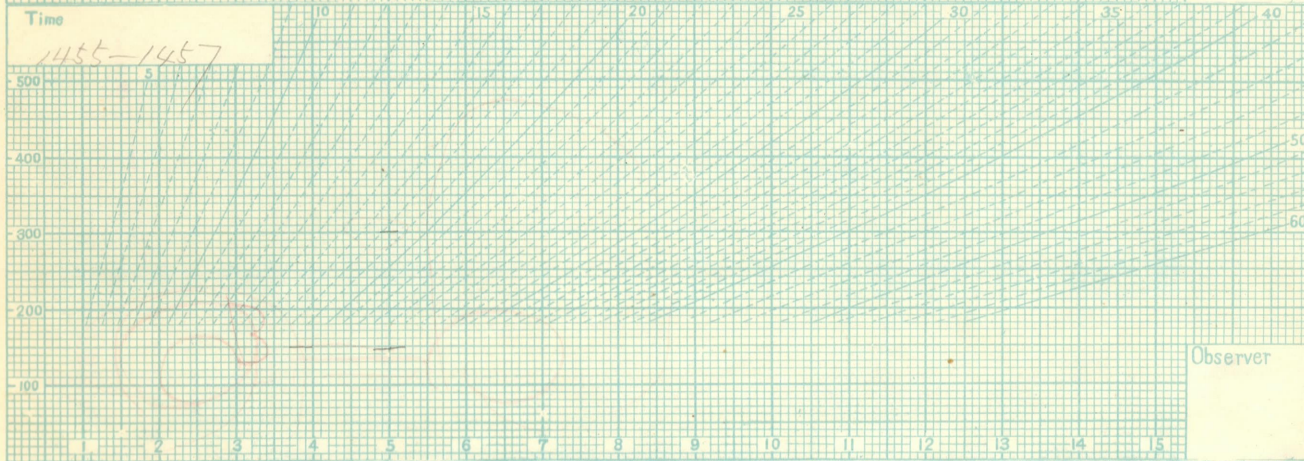
foF2 C
 h_pF2
 h'F2
 foF1 12.7 } C
 h'F1 13 } C
 foE
 h'E
 fEs
 f_{min}F
 f_{min}E
 3000 MUF
 (M3000)
 F2
 Z_d

VIRTUAL HEIGHT IN KM



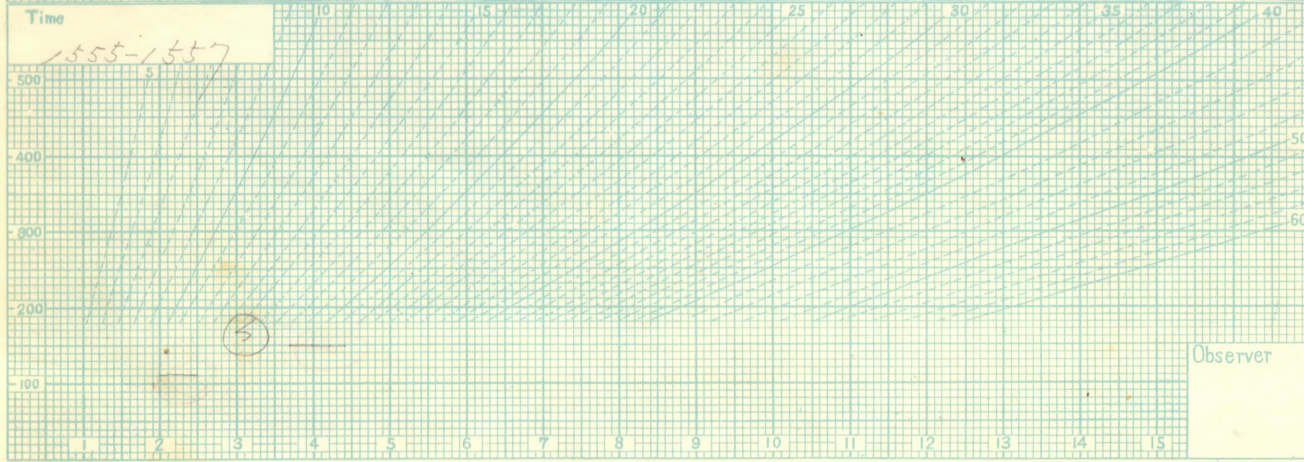
foF2 S
 h_pF2 S
 h'F2 S
 foF1 S
 h'F1 S
 foE S
 h'E C
 fEs C
 f_{min}F S
 f_{min}E S
 3000 MUF S
 (M3000)
 F2 S
 Z_d

VIRTUAL HEIGHT IN KM



foF2 S
 h_pF2 C
 h'F2 C
 foF1 A
 h'F1 A
 foE S
 h'E S
 fEs 50
 f_{min}F S
 f_{min}E 3.7
 3000 MUF C
 (M3000)
 F2 C
 Z_d

VIRTUAL HEIGHT IN KM



foF2 S
 h_pF2 C
 h'F2 C
 foF1 S
 h'F1 S
 foE S
 h'E S
 fEs 4.4 Y
 f_{min}F S
 f_{min}E 2.0
 3000 MUF C
 (M3000)
 F2 C
 Z_d

REMARKS

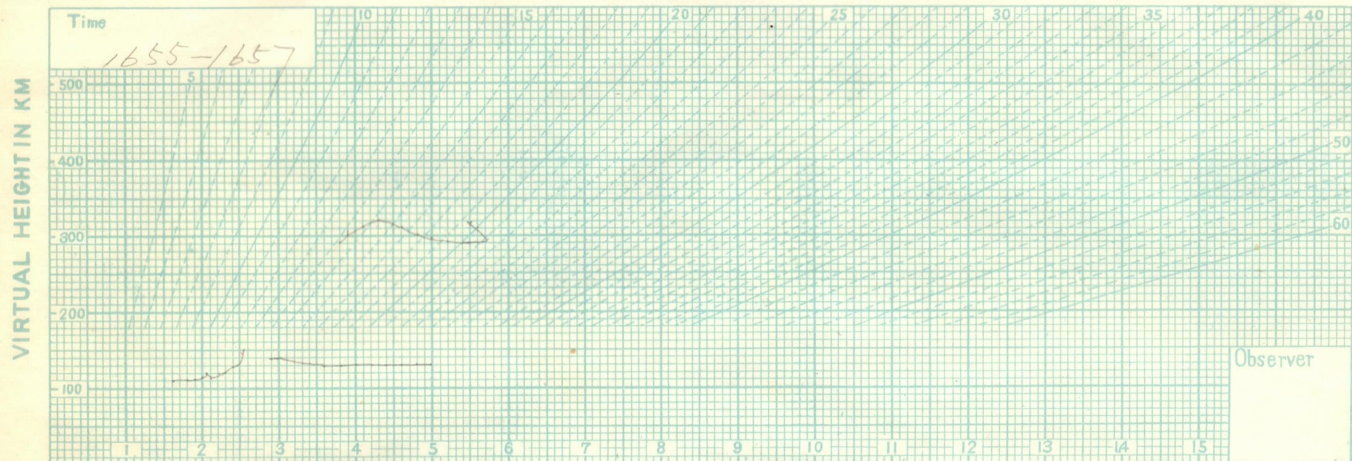
IONOSPHERIC RECORD

135°E MEAN TIME

DATE **26.9.5**

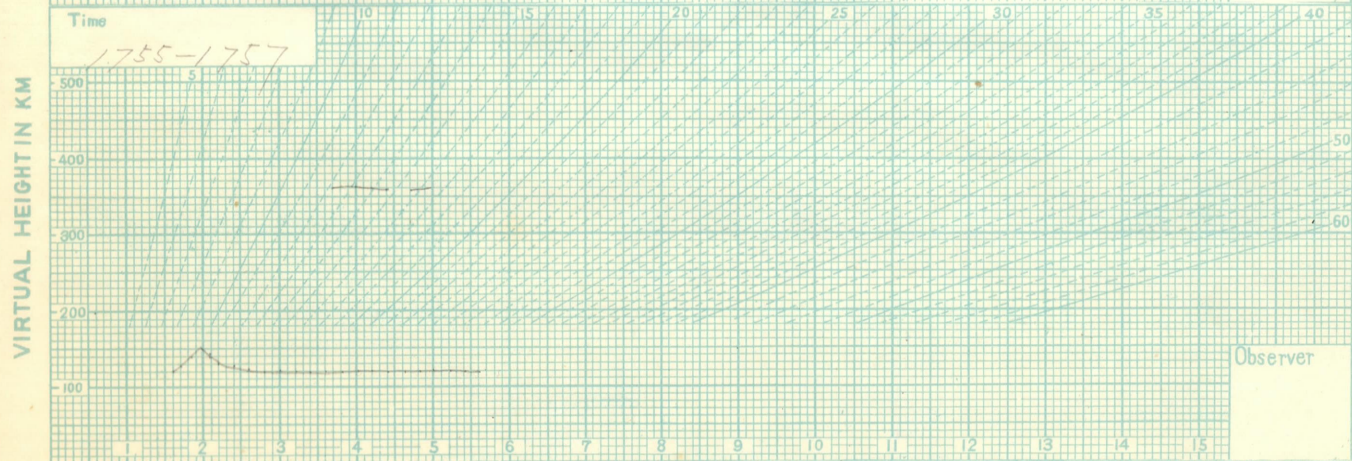
STATION *yamakawa*

NO **7** **24**



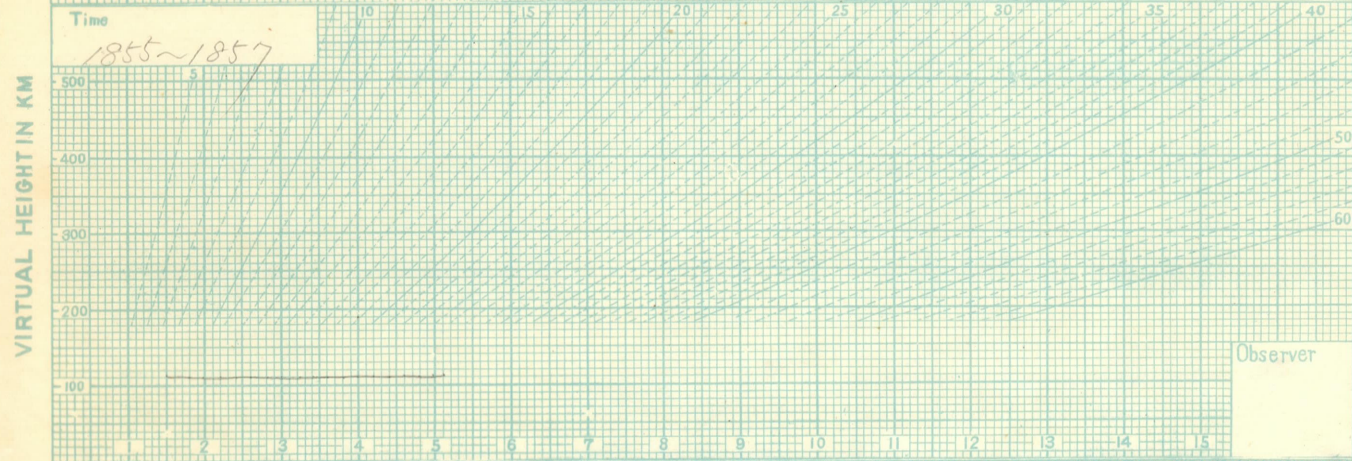
f_oF2	S
h_pF2	S
$h'F2$	290
f_oF1	43
$h'F1$	290 A
f_oE	254
$h'E$	1104
fEs	50
$f_{min}F$	38 A
$f_{min}E$	16
$MUF(3000)F2$	S
Z_d	S

Observer



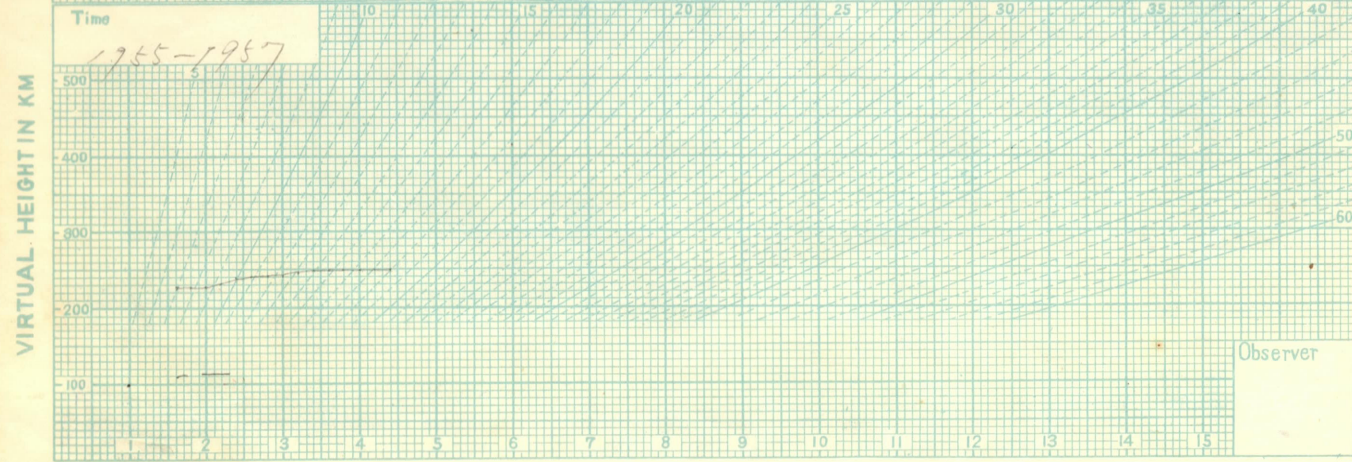
f_oF2	C
h_pF2	C
$h'F2$	A
f_oF1	A
$h'F1$	A
f_oE	20
$h'E$	120
fEs	56
$f_{min}F$	A
$f_{min}E$	16
$MUF(3000)F2$	C
Z_d	C

Observer



f_oF2	C
h_pF2	C
$h'F2$	A
f_oF1	
$h'F1$	
f_oE	
$h'E$	
fEs	51
$f_{min}F$	A
$f_{min}E$	15
$MUF(3000)F2$	C
Z_d	C

Observer



f_oF2	S
h_pF2	S
$h'F2$	220 A
f_oF1	
$h'F1$	
f_oE	
$h'E$	
fEs	234
$f_{min}F$	41.6
$f_{min}E$	16
$MUF(3000)F2$	C
Z_d	C

Observer

REMARKS

IONOSPHERIC RECORD

135°E MEAN TIME

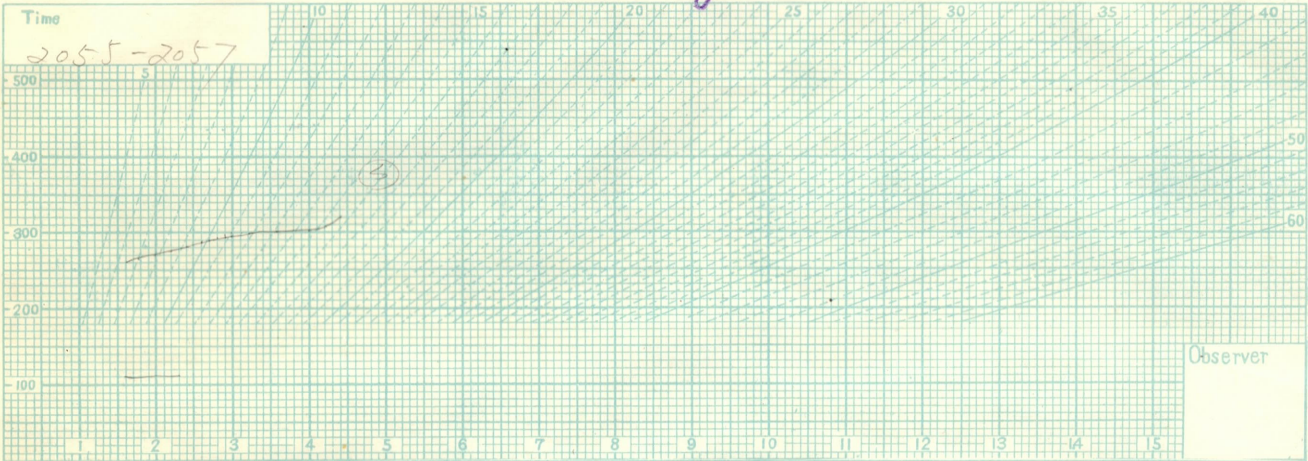
DATE **26.9.5**

STATION **yamakawa**

NO **10**

25

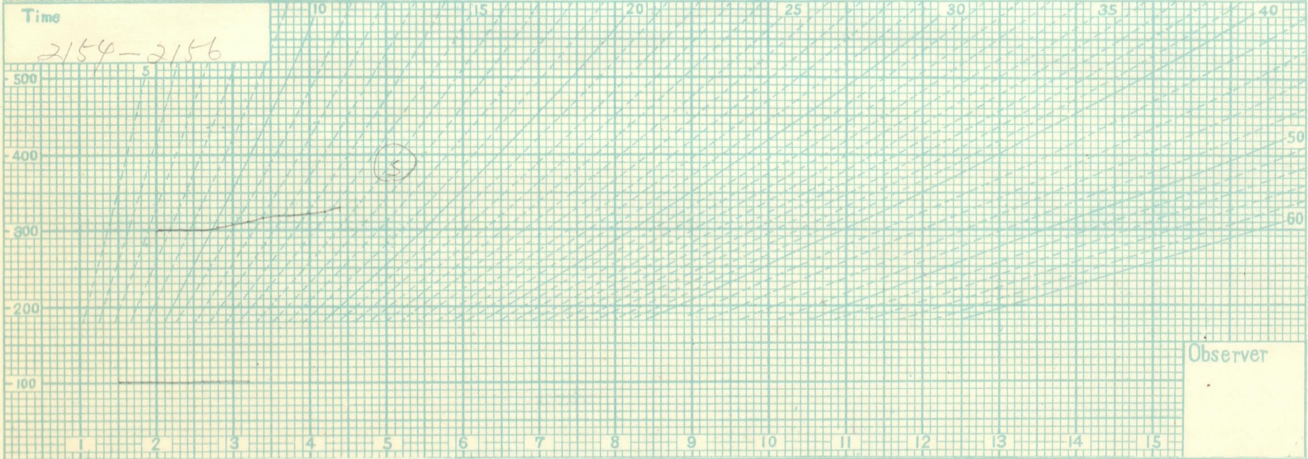
VIRTUAL HEIGHT IN KM



foF2 **5**
 h_pF2 **5**
 h'F2 **260**
 foF1 _____
 h'F1 _____
 foE _____
 h'E _____
 fEs **23**
 fminF **16**
 fminE **16**
 3000 MUF (M3000) **5**
 F2 **5**
 Z_d _____

Observer

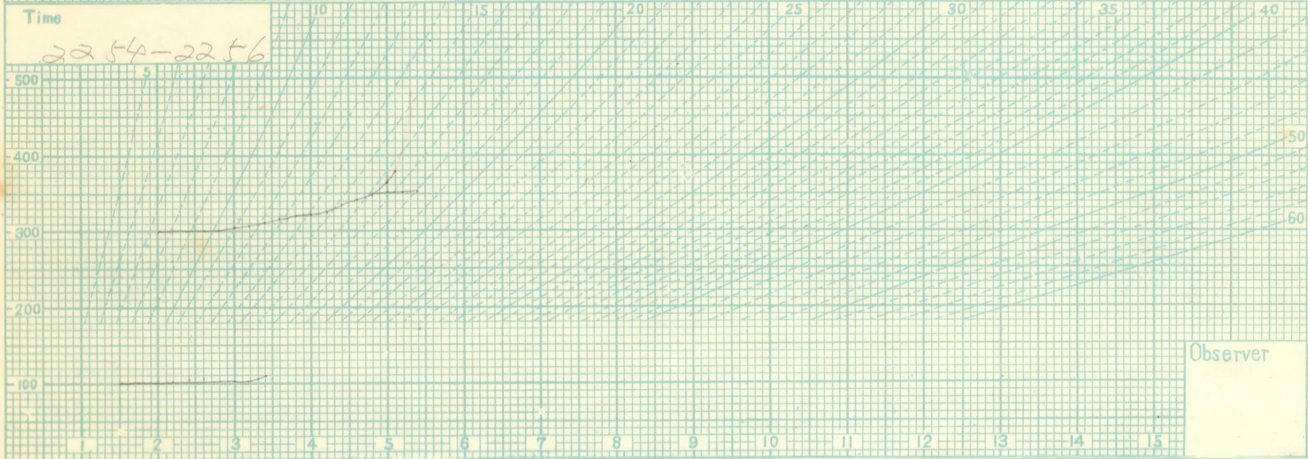
VIRTUAL HEIGHT IN KM



foF2 **5**
 h_pF2 **5**
 h'F2 **300A**
 foF1 _____
 h'F1 _____
 foE _____
 h'E _____
 fEs **32**
 fminF **20A**
 fminE **15**
 3000 MUF (M3000) **5**
 F2 **5**
 Z_d _____

Observer

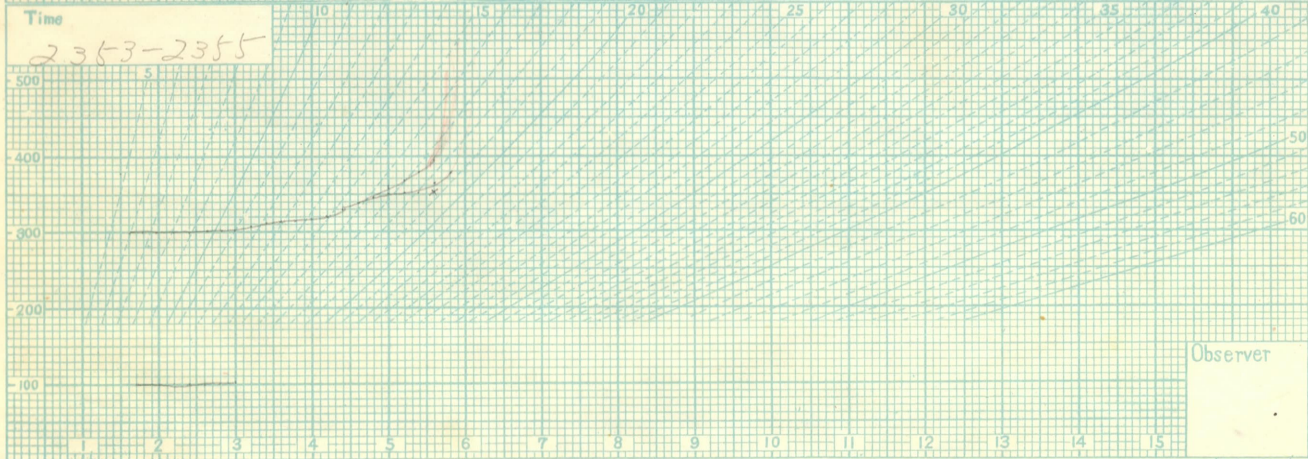
VIRTUAL HEIGHT IN KM



foF2 **53P**
 h_pF2 **330P**
 h'F2 **300A**
 foF1 _____
 h'F1 _____
 foE _____
 h'E _____
 fEs **34**
 fminF **20A**
 fminE **15**
 3000 MUF (M3000) **164**
 F2 **30**
 Z_d _____

Observer

VIRTUAL HEIGHT IN KM



foF2 **59P**
 h_pF2 **350P**
 h'F2 **300A**
 foF1 _____
 h'F1 _____
 foE _____
 h'E _____
 fEs **30**
 fminF **16**
 fminE **17**
 3000 MUF (M3000) **175P**
 F2 **29P**
 Z_d _____

Observer

REMARKS

26.9.6

IONOSPHERIC RECORD

135°E MEAN TIME

DATE

26.9.6

STATION

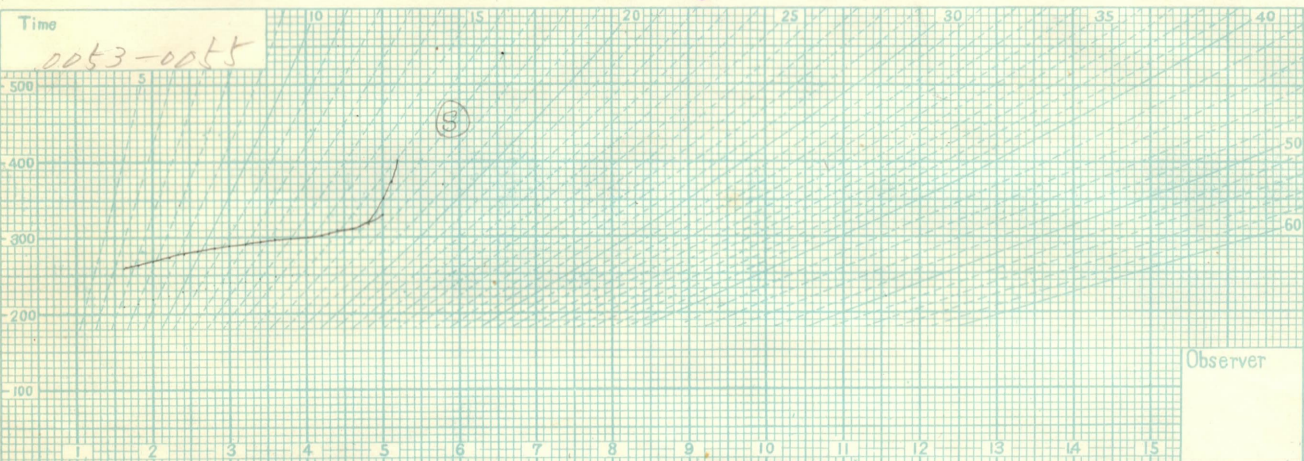
Yunakarwa

NO

9

26

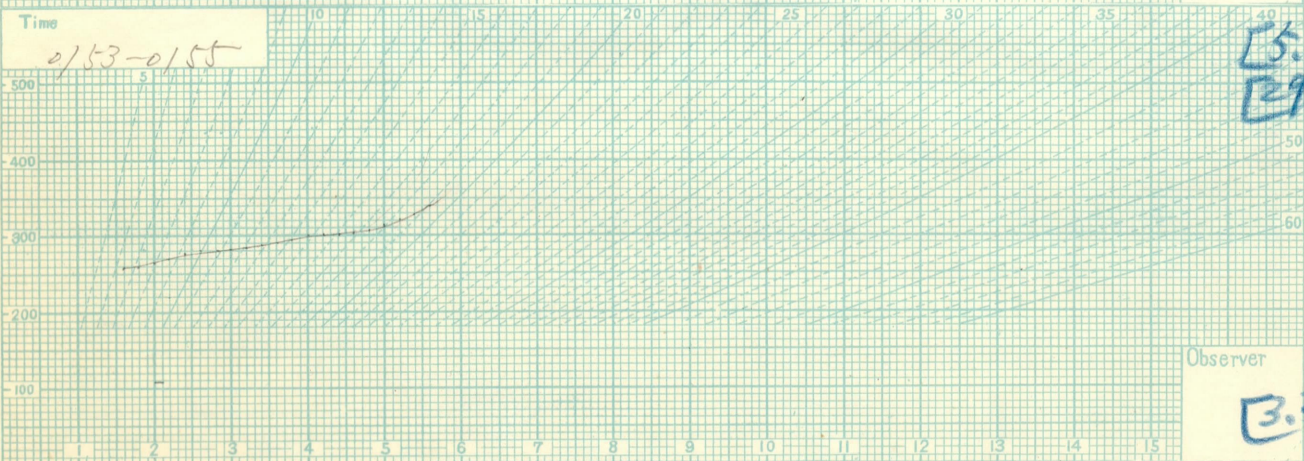
VIRTUAL HEIGHT IN KM



f_oF2 52
 h_pF2 300
 h'F2 260
 f_oF1
 h'F1
 f_oE
 h'E
 fE_s E
 f_{min}F 16
 f_{min}E E
 MUF₃₀₀₀ 17.0
 (M3000) F2 32
 Z_d

Observer

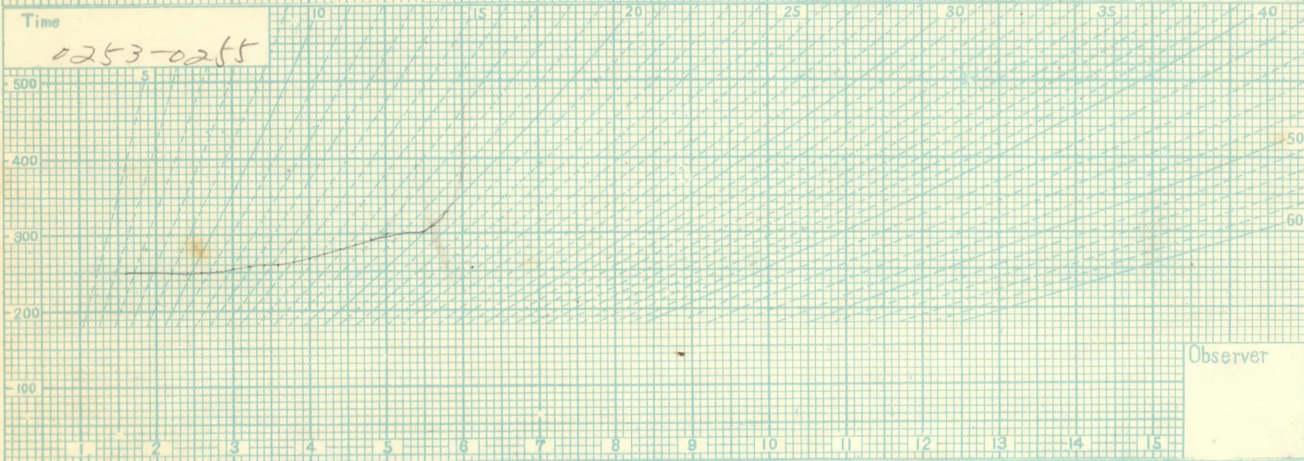
VIRTUAL HEIGHT IN KM



f_oF2 52 TP
 h_pF2 300 TP
 h'F2 260
 f_oF1
 h'F1
 f_oE
 h'E
 fE_s 21
 f_{min}F 16
 f_{min}E 20
 MUF₃₀₀₀ (7.5) TP
 (M3000) F2 (3.1) TP
 Z_d

Observer

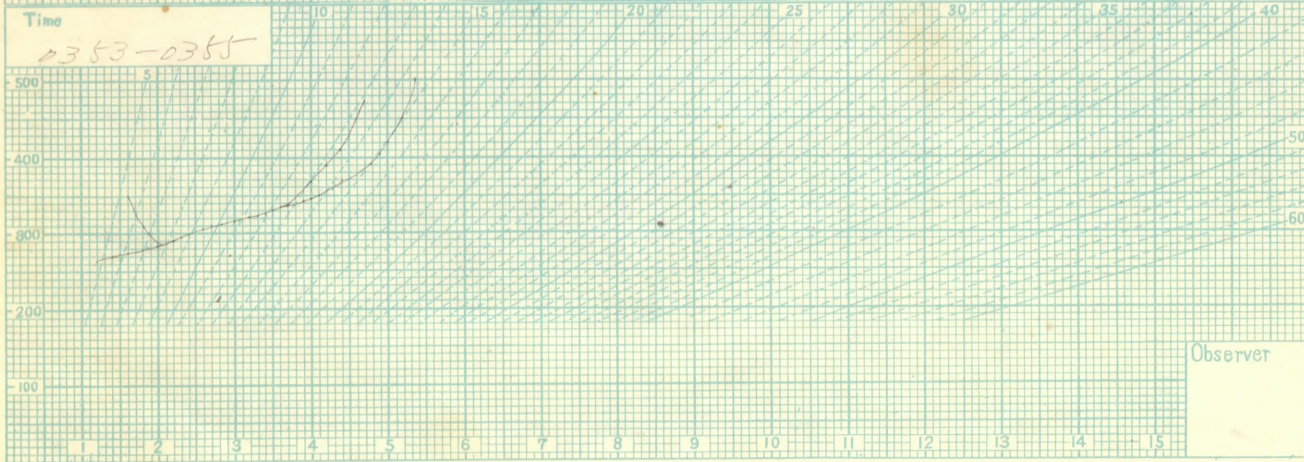
VIRTUAL HEIGHT IN KM



f_oF2 54 TP
 h_pF2 (280) TP
 h'F2 250
 f_oF1
 h'F1
 f_oE
 h'E
 fE_s E
 f_{min}F 16
 f_{min}E E
 MUF₃₀₀₀ (18.3) TP
 (M3000) F2 (3.3) TP
 Z_d

Observer

VIRTUAL HEIGHT IN KM



f_oF2 48
 h_pF2 370
 h'F2 260
 f_oF1
 h'F1
 f_oE
 h'E
 fE_s E
 f_{min}F 12
 f_{min}E E
 MUF₃₀₀₀ 13.4
 (M3000) F2 26
 Z_d

Observer

REMARKS

IONOSPHERIC RECORD

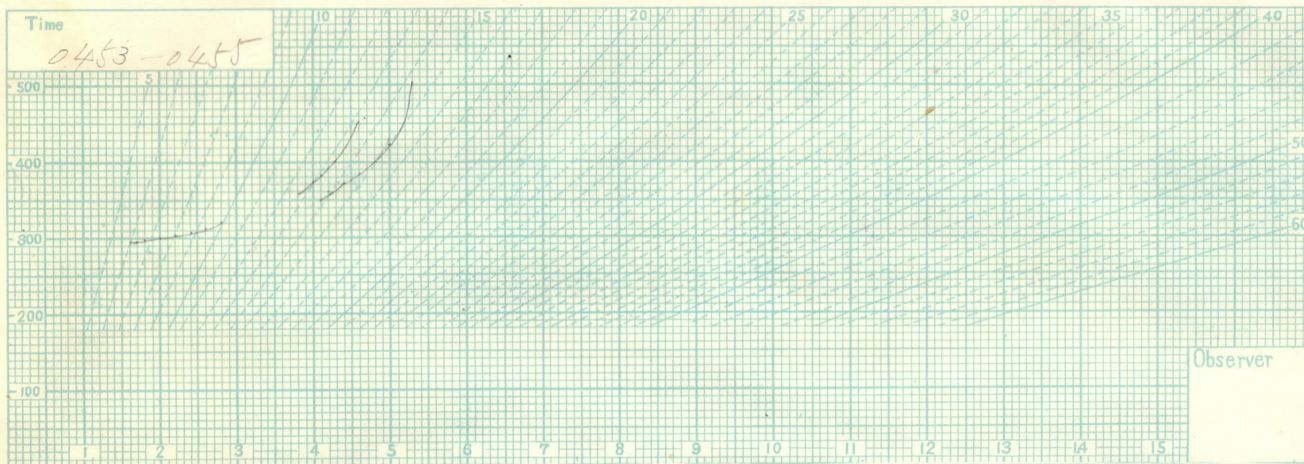
135°E MEAN TIME

DATE **26.9.6**

STATION *yamakawa*

NO **7** **27**

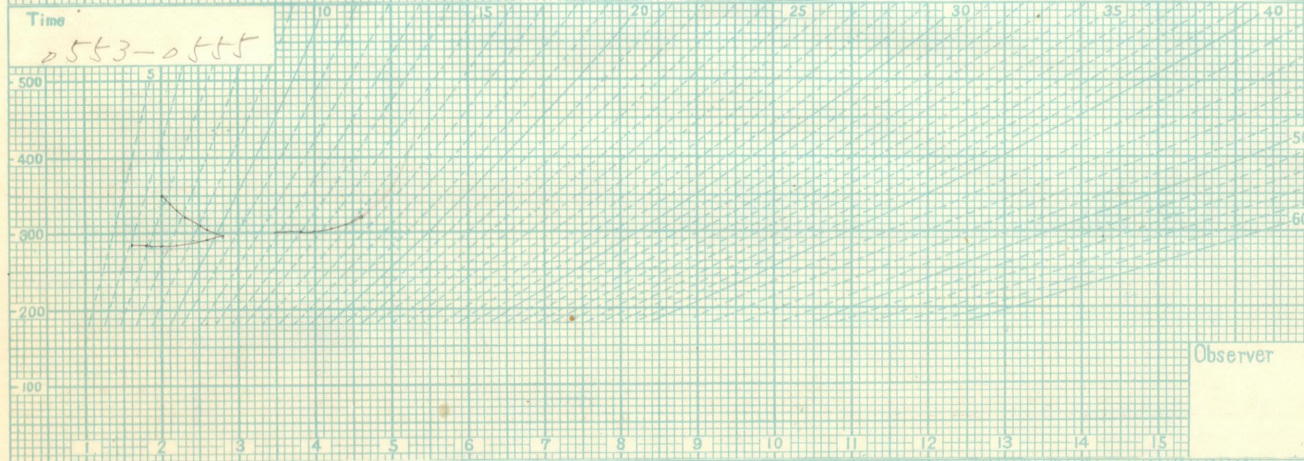
VIRTUAL HEIGHT IN KM



f_oF2 47
 h_pF2 360
 $h'F2$ 290
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs E
 $f_{min}F$ 16
 $f_{min}E$ E
 MUF^{3000} 13.4
 $F2$ 28
 Z_d

Observer

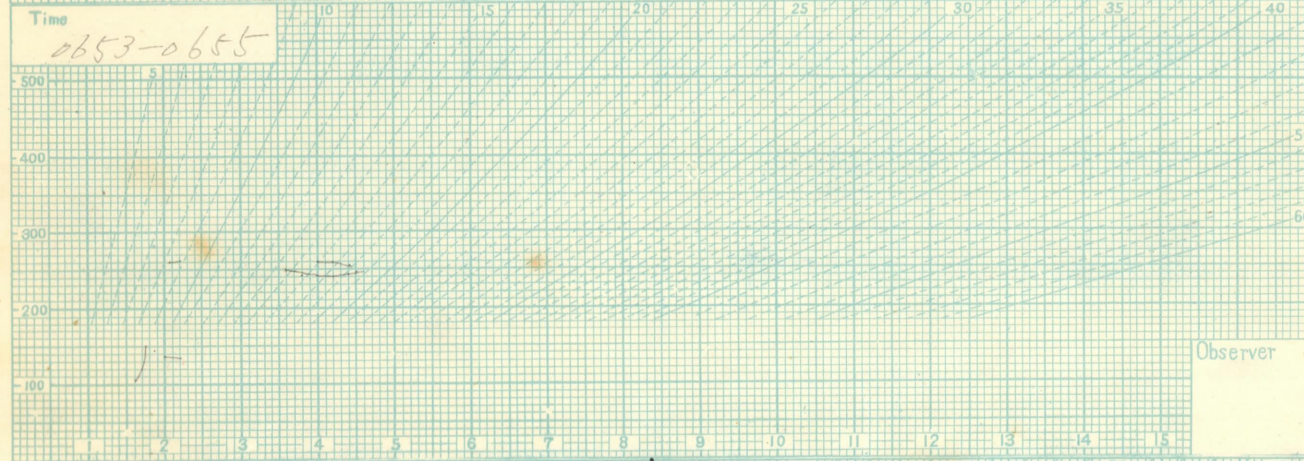
VIRTUAL HEIGHT IN KM



f_oF2 ~~47~~ 28
 h_pF2 ~~360~~ 280
 $h'F2$ 280
 f_oF1 Q
 $h'F1$ Q
 f_oE B
 $h'E$ B
 fEs ~~E~~ B
 $f_{min}F$ 16
 $f_{min}E$ ~~E~~ B
 MUF^{3000} ~~13.4~~ 5
 $F2$ ~~28~~ 5
 Z_d

Observer

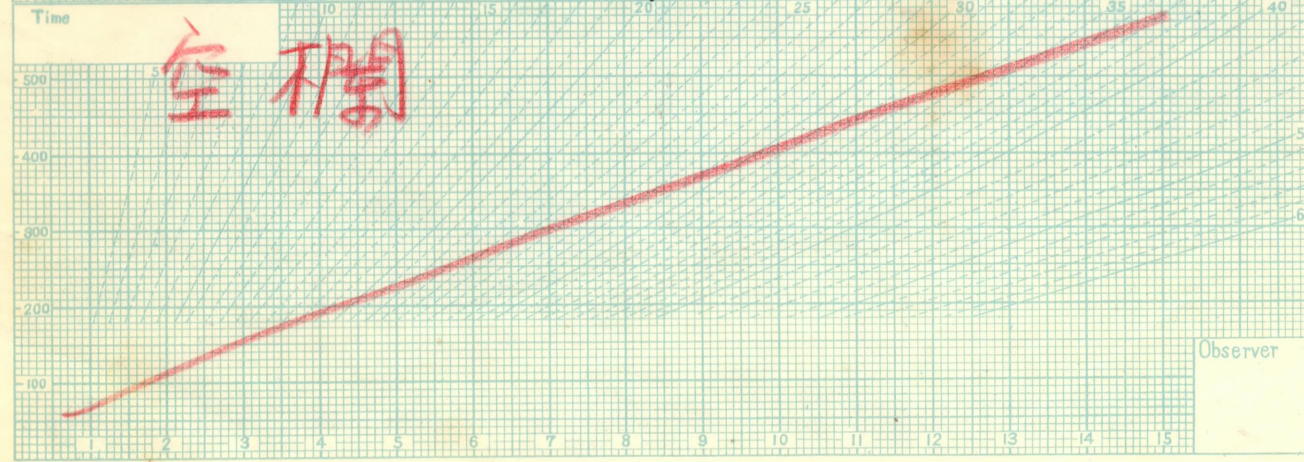
VIRTUAL HEIGHT IN KM



f_oF2 5
 h_pF2 5
 $h'F2$ 240
 f_oF1 B
 $h'F1$ B
 f_oE 17
 $h'E$ 100
 fEs ~~E~~
 $f_{min}F$ 36
 $f_{min}E$ 16
 MUF^{3000} 5
 $F2$ 5
 Z_d

Observer

VIRTUAL HEIGHT IN KM



f_oF2
 h_pF2
 $h'F2$
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs
 $f_{min}F$
 $f_{min}E$
 MUF^{3000}
 $F2$
 Z_d

Observer

REMARKS

IONOSPHERIC RECORD

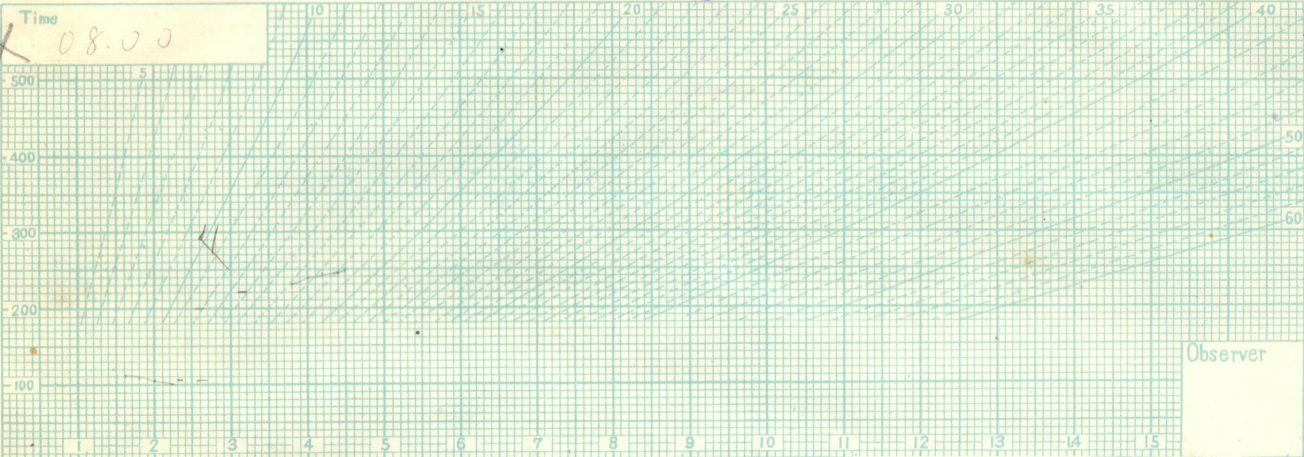
135°E MEAN TIME

DATE **26.9.6**

STATION *yamakawa*

NO **4 28**

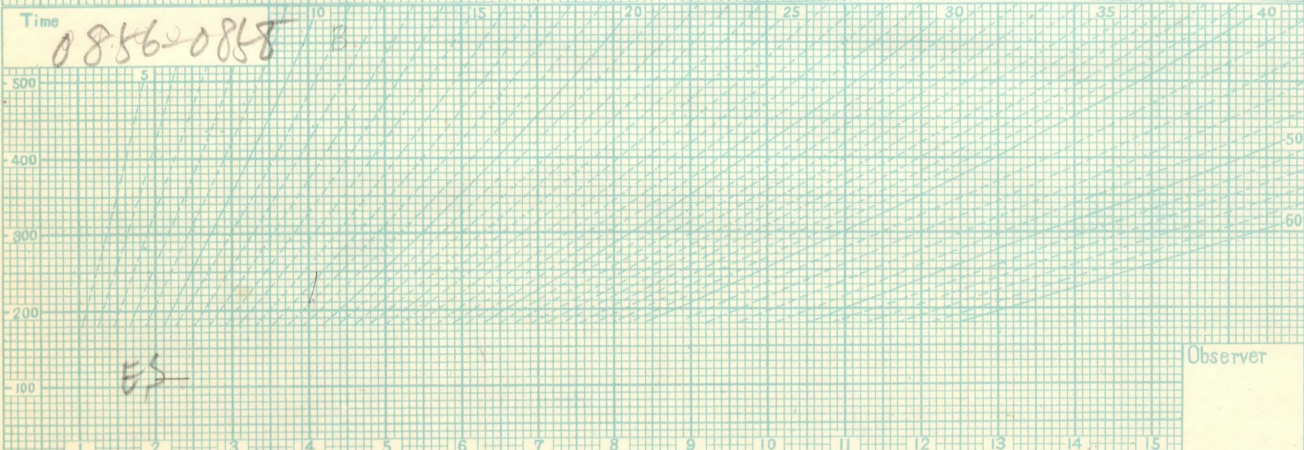
VIRTUAL HEIGHT IN KM



f_oF2 **C**
 $f_{up}F2$ **C**
 $f'F2$ **220**
 f_oF1 **Q**
 $f'F1$ **Q**
 f_oE **A**
 $f'E$ **A**
 fEs **27Y**
 $f_{min}F$ **252.6**
 $f_{min}E$ **16**
 $MUF(3000)F2$ **C**
 Z_d

Observer

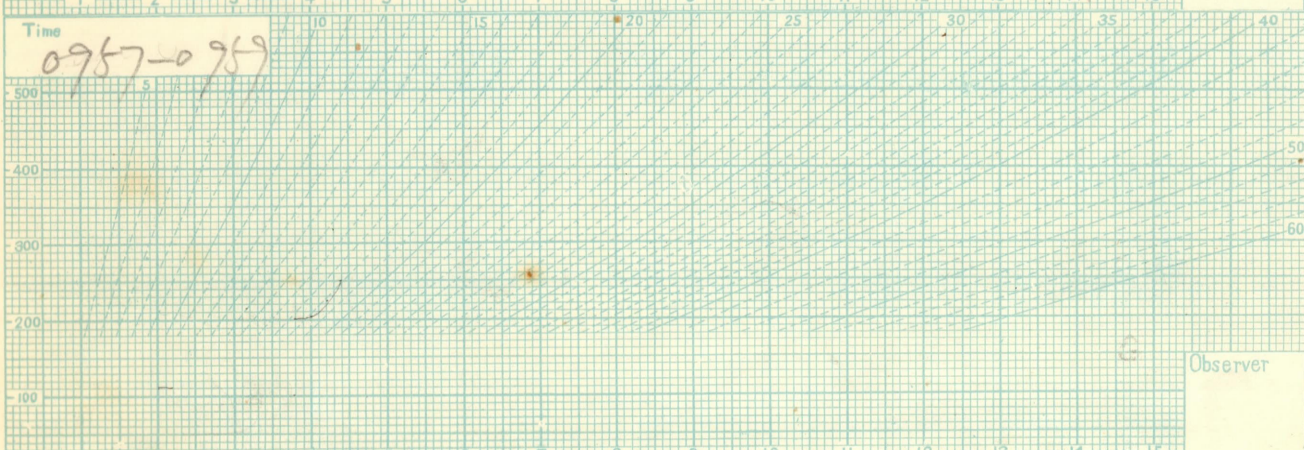
VIRTUAL HEIGHT IN KM



f_oF2 **S**
 $f_{up}F2$ **C**
 $f'F2$ **C**
 f_oF1 **(41) 3**
 $f'F1$ **210**
 f_oE **110**
 $f'E$ **110**
 fEs **24G**
 $f_{min}F$ **40**
 $f_{min}E$ **20**
 $MUF(3000)F2$ **S**
 Z_d

Observer

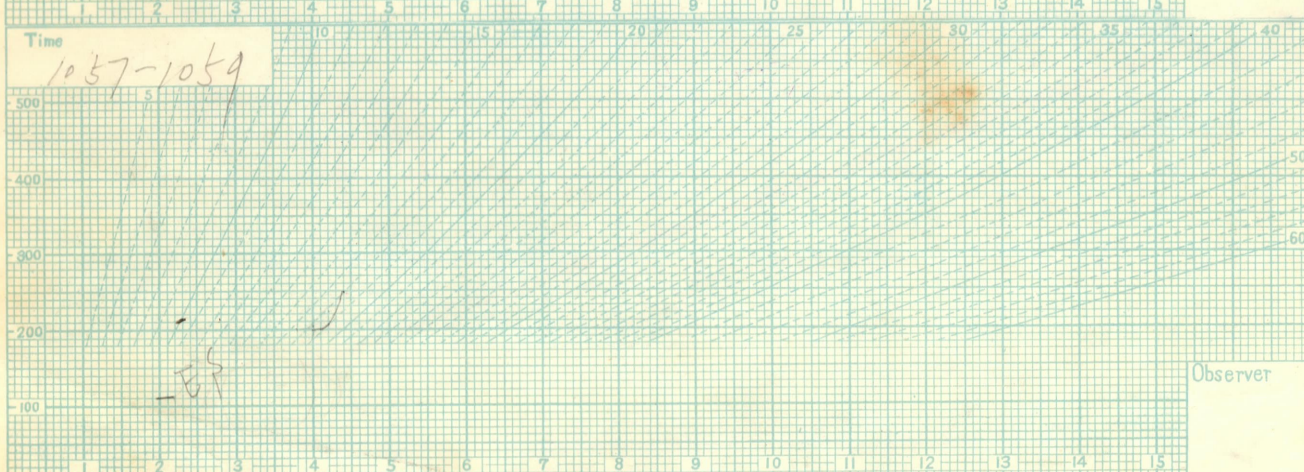
VIRTUAL HEIGHT IN KM



f_oF2 **S**
 $f_{up}F2$ **C**
 $f'F2$ **C**
 f_oF1 **(44) 44**
 $f'F1$ **200**
 f_oE **B**
 $f'E$ **110**
 fEs **22G**
 $f_{min}F$ **38**
 $f_{min}E$ **20**
 $MUF(3000)F2$ **C**
 Z_d

Observer

VIRTUAL HEIGHT IN KM



f_oF2 **S**
 $f_{up}F2$ **C**
 $f'F2$ **C**
 f_oF1 **(44) 44**
 $f'F1$ **200**
 f_oE **B**
 $f'E$ **110**
 fEs **22BG**
 $f_{min}F$ **40**
 $f_{min}E$ **20**
 $MUF(3000)F2$ **C**
 Z_d

Observer

REMARKS

IONOSPHERIC RECORD

135°E MEAN TIME

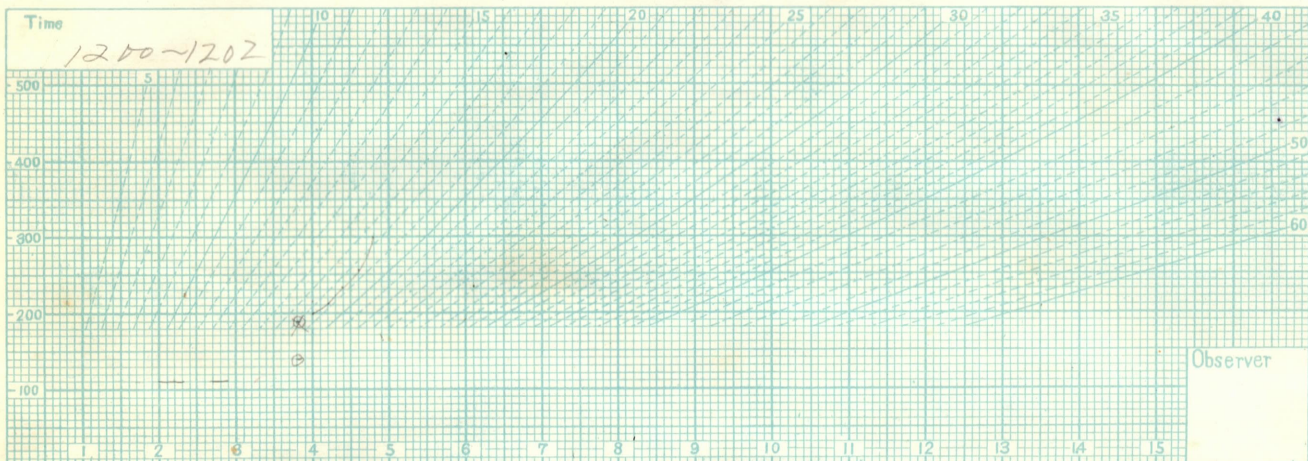
DATE 26.9.6-

STATION *yamakawa*

NO 4

29

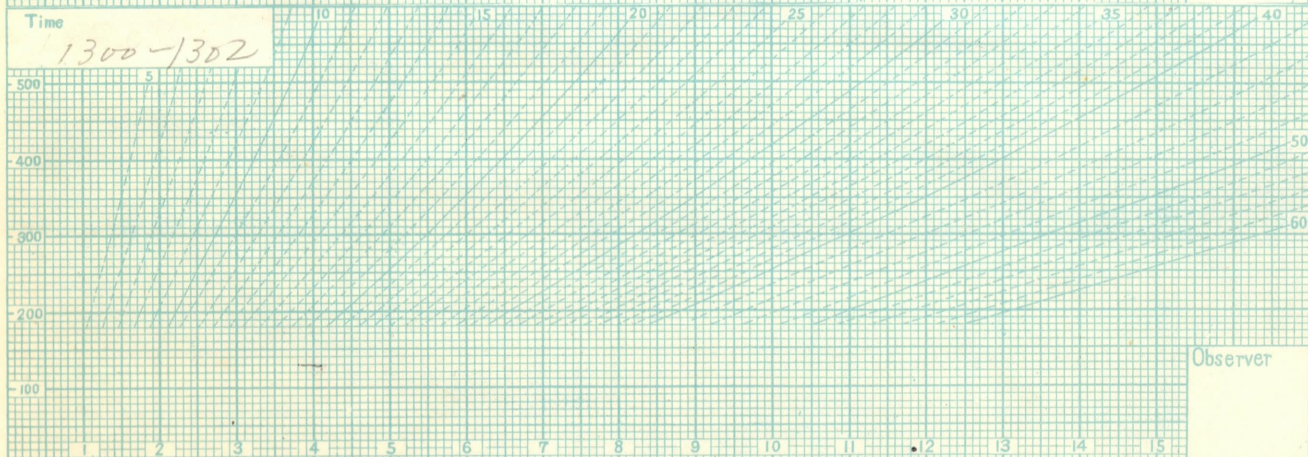
VIRTUAL HEIGHT IN KM



f_oF2 ∞
 $f_{hp}F2$ ∞
 $f'F2$ ∞
 f_oF1 (48)^S
 $f'F1$ 200
 f_oE B B
 $f'E$ 110
 fEs 297 G
 $f_{min}F$ 4.0 S
 $f_{min}E$ 2.0
 $f_{3000}MUF$ ∞
 $MUF(F2)$ ∞
 Z_d

Observer

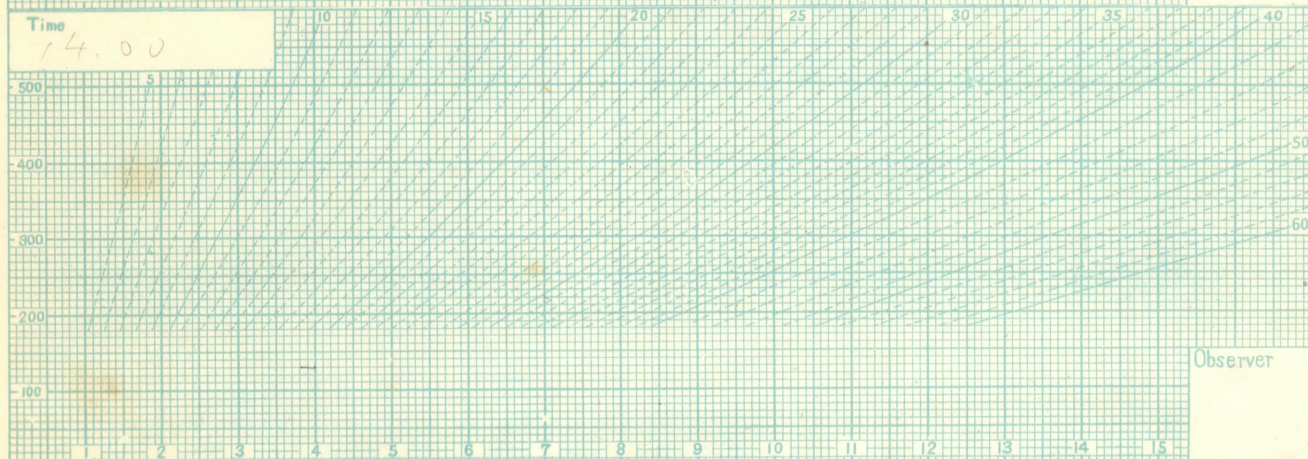
VIRTUAL HEIGHT IN KM



f_oF2 S
 $f_{hp}F2$ S
 $f'F2$ S
 f_oF1 S
 $f'F1$ S
 f_oE C
 $f'E$ S
 fEs 41
 $f_{min}F$ S
 $f_{min}E$ 3.8 S
 $f_{3000}MUF$ S
 $MUF(F2)$ S
 Z_d

Observer

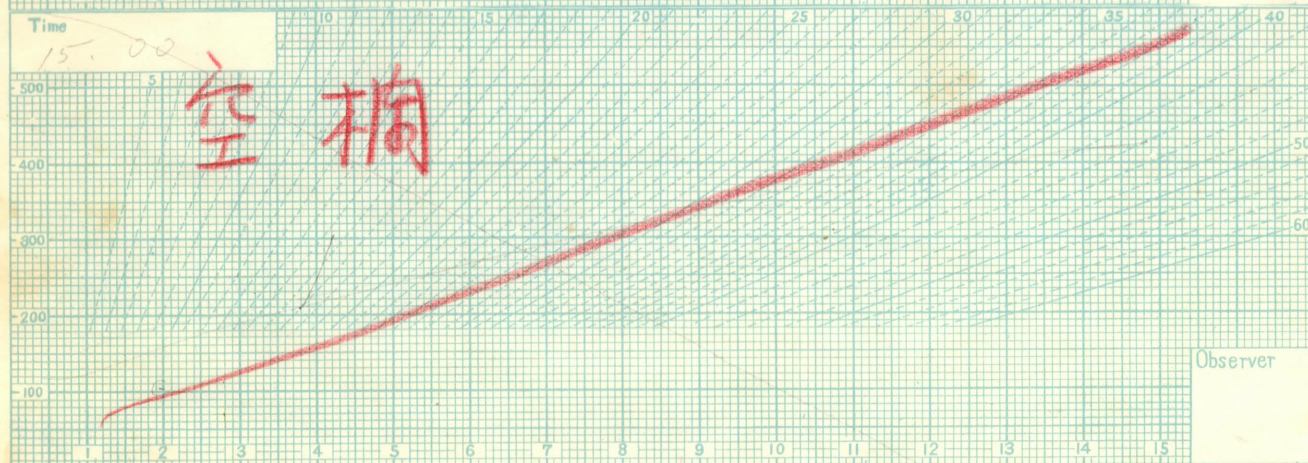
VIRTUAL HEIGHT IN KM



f_oF2 S
 $f_{hp}F2$ S
 $f'F2$ S
 f_oF1 S
 $f'F1$ S
 f_oE C
 $f'E$ S
 fEs 40
 $f_{min}F$ S
 $f_{min}E$ 3.8 S
 $f_{3000}MUF$ S
 $MUF(F2)$ S
 Z_d

Observer

VIRTUAL HEIGHT IN KM



f_oF2
 $f_{hp}F2$
 $f'F2$
 f_oF1
 $f'F1$
 f_oE
 $f'E$
 fEs
 $f_{min}F$
 $f_{min}E$
 $f_{3000}MUF$
 $MUF(F2)$
 Z_d

Observer

REMARKS

IONOSPHERIC RECORD

135°E MEAN TIME

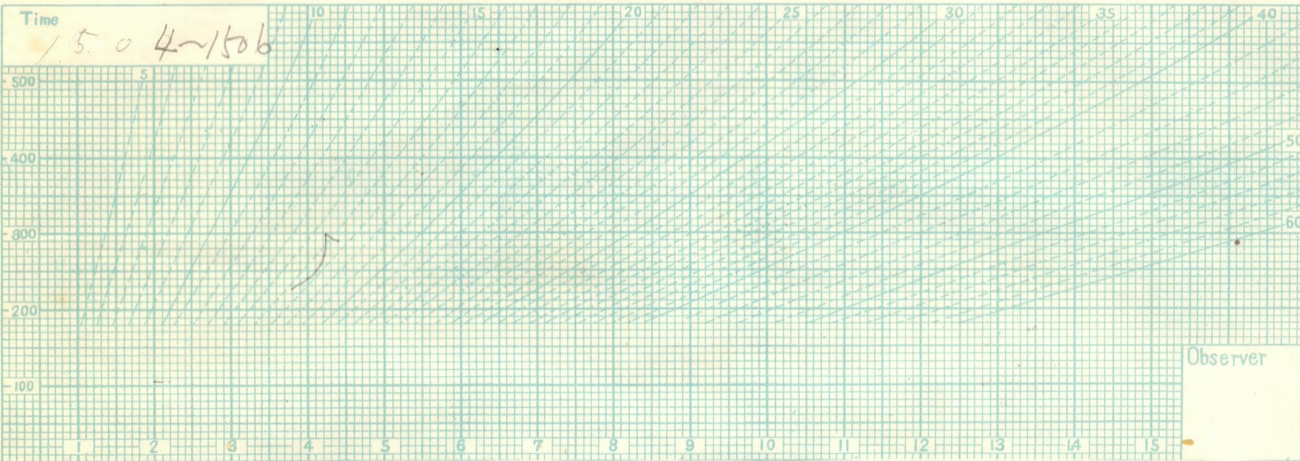
DATE **26.9.6**

STATION *yamakawa*

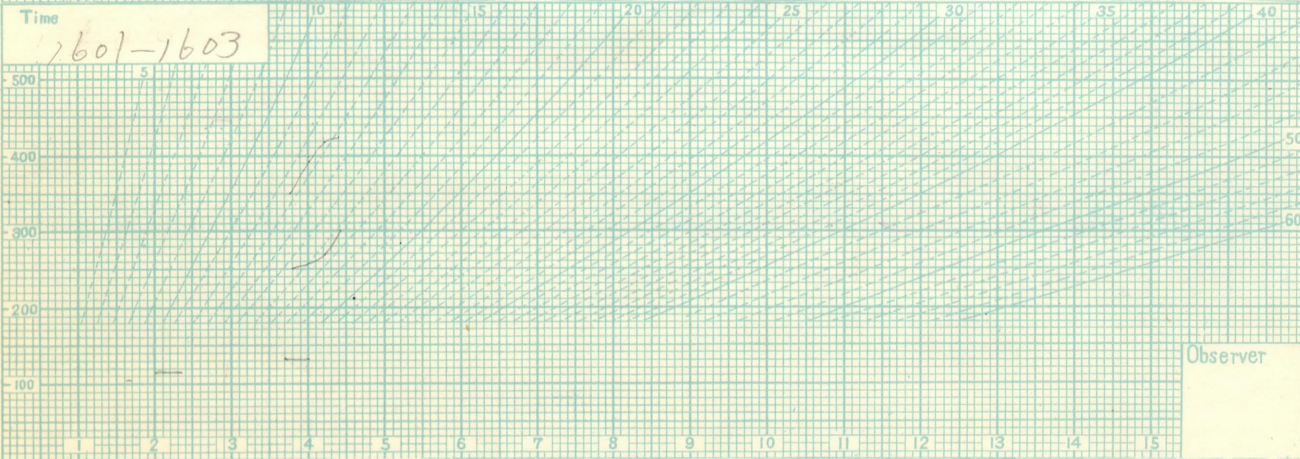
NO **7**

30

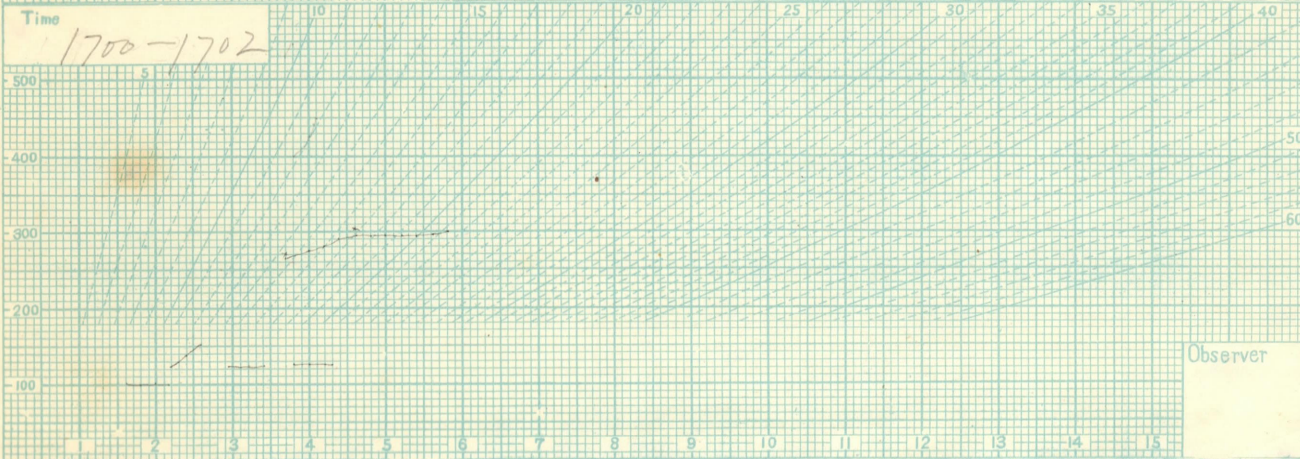
VIRTUAL HEIGHT IN KM



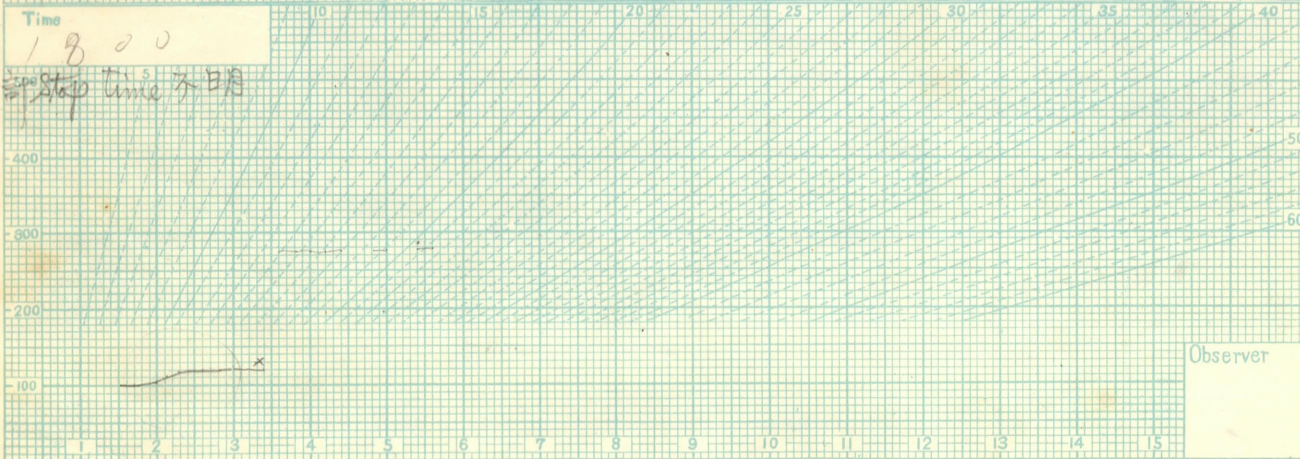
VIRTUAL HEIGHT IN KM



VIRTUAL HEIGHT IN KM



VIRTUAL HEIGHT IN KM



REMARKS

IONOSPHERIC RECORD

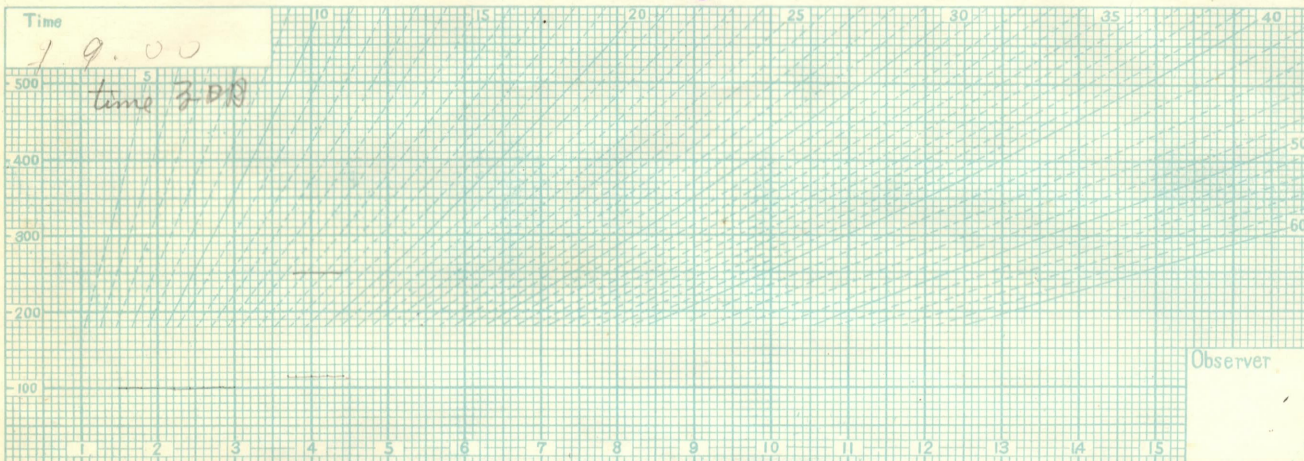
135°E MEAN TIME

DATE 26.9.6

STATION yamakawa

NO 81

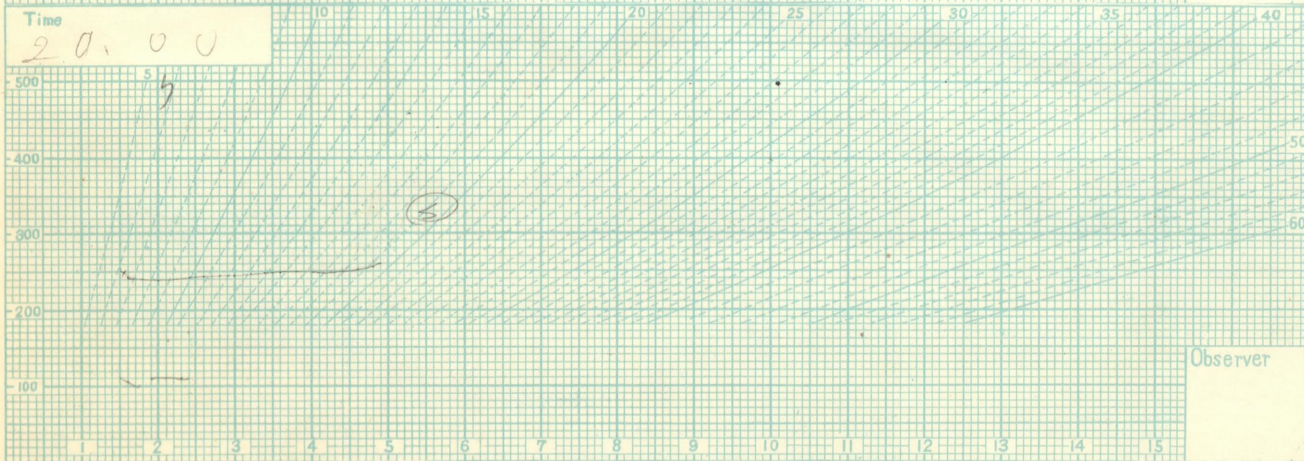
VIRTUAL HEIGHT IN KM



f_oF2 C
 h_pF2 S
 $h'F2$ 250A
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs 44V
 $f_{min}F$ 37A
 $f_{min}E$ 15
3000 MUF (M3000) C
F2 S
 Z_d

Observer

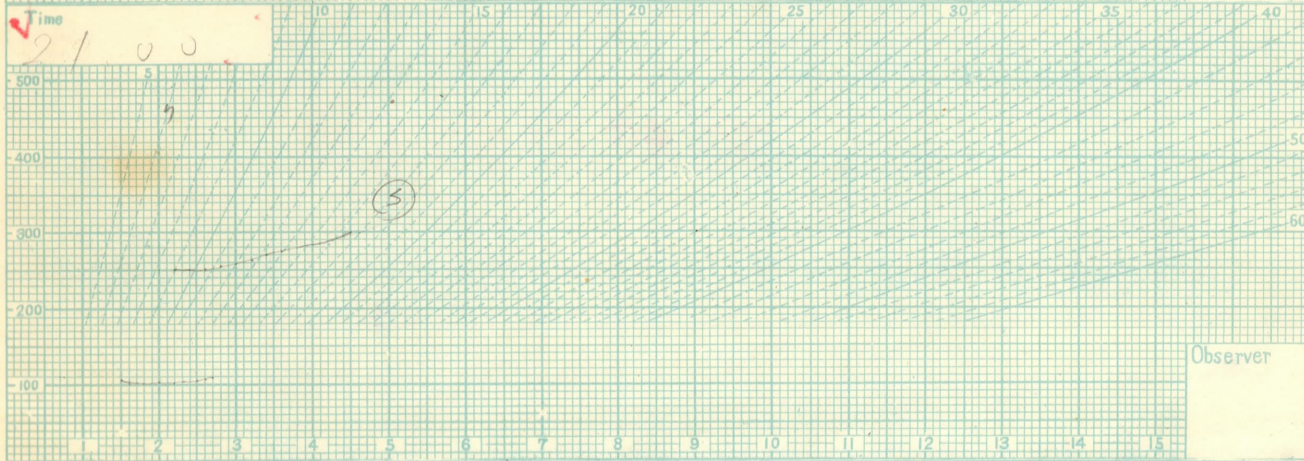
VIRTUAL HEIGHT IN KM



f_oF2 C
 h_pF2 S
 $h'F2$ 240
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs 24
 $f_{min}F$ 46A
 $f_{min}E$ 15
3000 MUF (M3000) C
F2 S
 Z_d

Observer

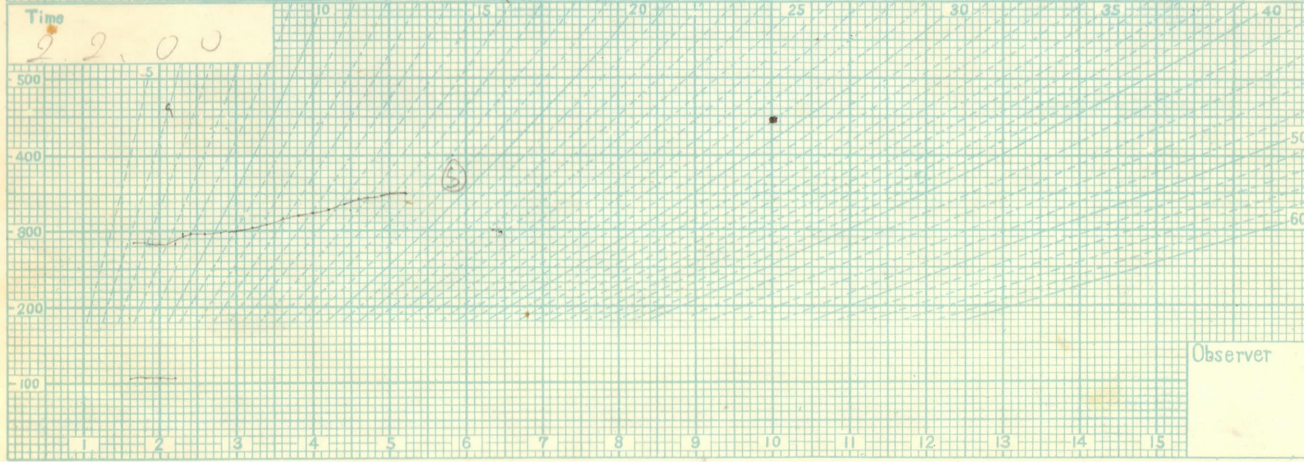
VIRTUAL HEIGHT IN KM



f_oF2 C
 h_pF2 S
 $h'F2$ 250
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs 27
 $f_{min}F$ 22A
 $f_{min}E$ 15
3000 MUF (M3000) C
F2 S
 Z_d

Observer

VIRTUAL HEIGHT IN KM



f_oF2 C
 h_pF2 C
 $h'F2$ 280
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs 22
 $f_{min}F$ 16
 $f_{min}E$ 16
3000 MUF (M3000) C
F2 S
 Z_d

Observer

REMARKS

26.9.6

IONOSPHERIC RECORD

135°E MEAN TIME

DATE

26.9.7

STATION

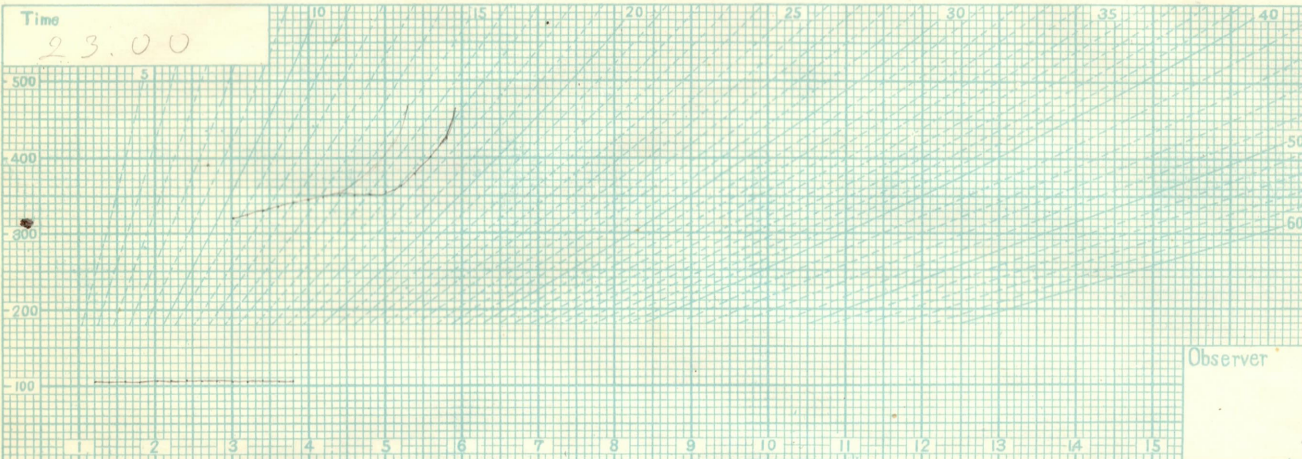
yamakawa

NO

4

32

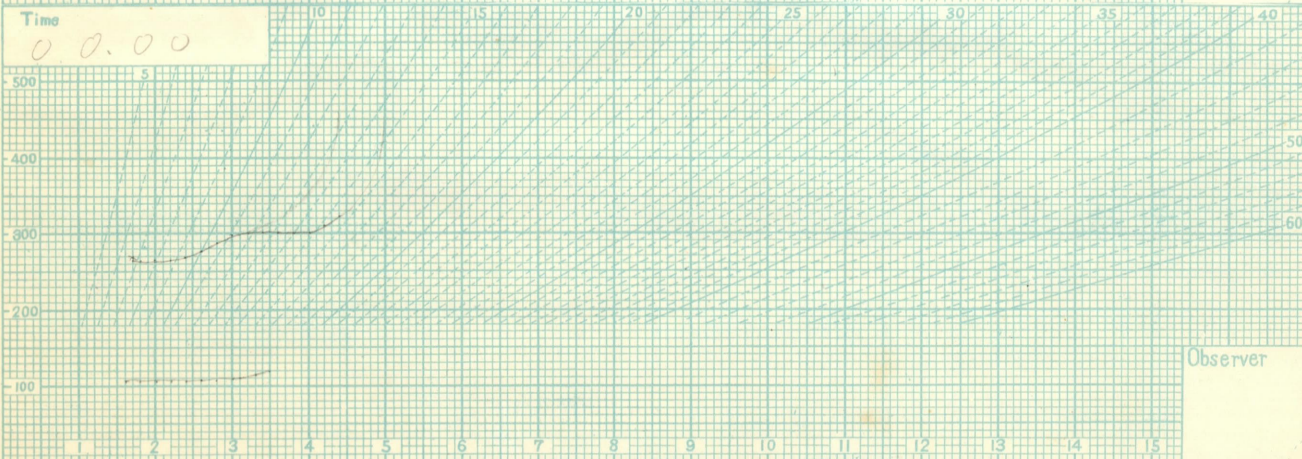
VIRTUAL HEIGHT IN KM



f_oF2 (53)J
 h_pF2 (350)J
 h'F2 320
 f_oF1
 h'F1
 f_oE
 h'E
 fEs 38
 f_{min}F 30A
 f_{min}E 12
 MUF (3000) (15.4)J
 F2 (29)J
 Z_d

Observer

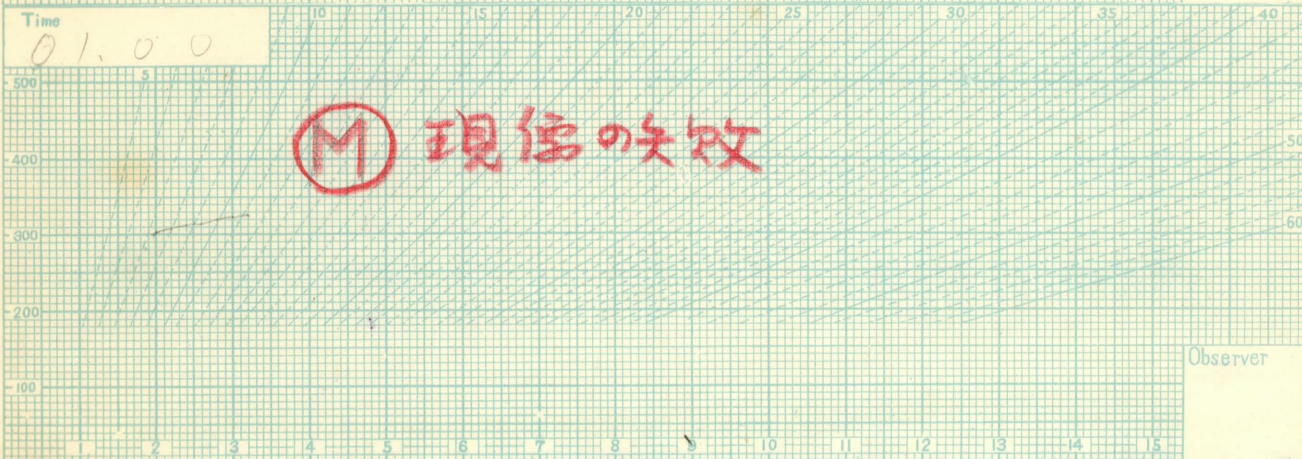
VIRTUAL HEIGHT IN KM



f_oF2 (44)JP
 h_pF2 (320)JP
 h'F2 260
 f_oF1
 h'F1
 f_oE
 h'E
 fEs 35
 f_{min}F 17
 f_{min}E 16
 MUF (3000) (13.5)JP
 F2 (30)JP
 Z_d

Observer

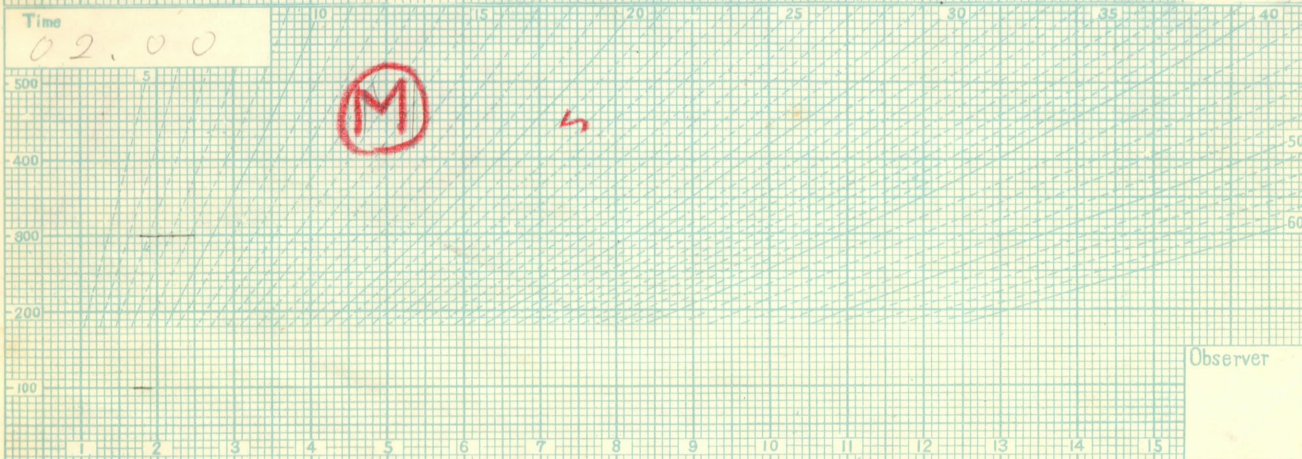
VIRTUAL HEIGHT IN KM



f_oF2 M
 h_pF2 M
 h'F2 300
 f_oF1
 h'F1
 f_oE
 h'E
 fEs E
 f_{min}F 20
 f_{min}E E
 MUF (3000) M
 F2 M
 Z_d

Observer

VIRTUAL HEIGHT IN KM



f_oF2 M
 h_pF2 M
 h'F2 300
 f_oF1
 h'F1
 f_oE
 h'E
 fEs 19
 f_{min}F 18
 f_{min}E 17
 MUF (3000) M
 F2 M
 Z_d

Observer

REMARKS

IONOSPHERIC RECORD

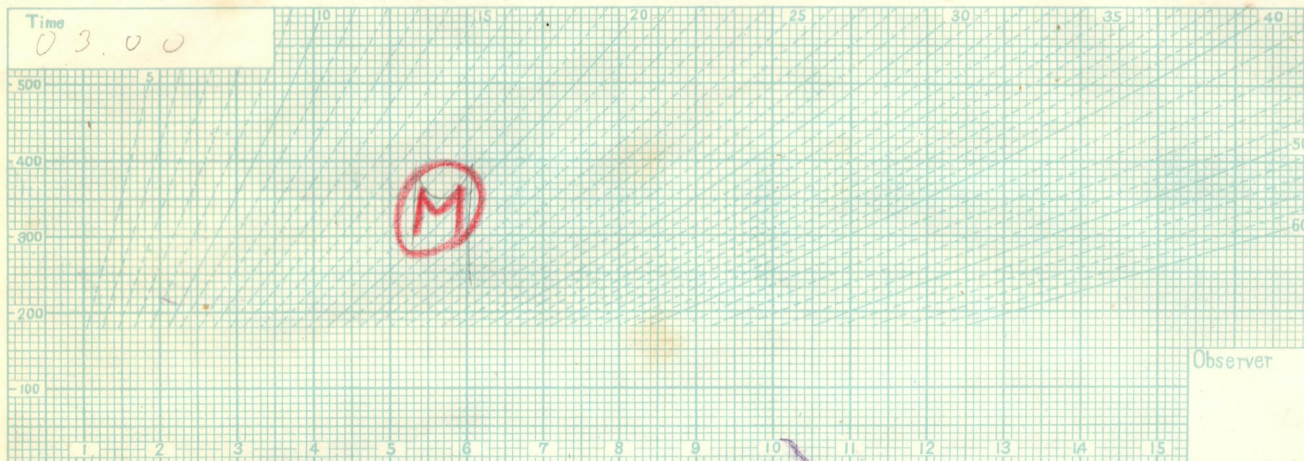
135°E MEAN TIME

DATE 26.9.7.

STATION Yamakawa

NO 33

VIRTUAL HEIGHT IN KM



f_oF2
h_pF2
h'F2
f_oF1
h'F1
f_oE
h'E
fEs
f_{min}F
f_{min}E
3000 MUF
(M3000)
F2
Z_d

Observer

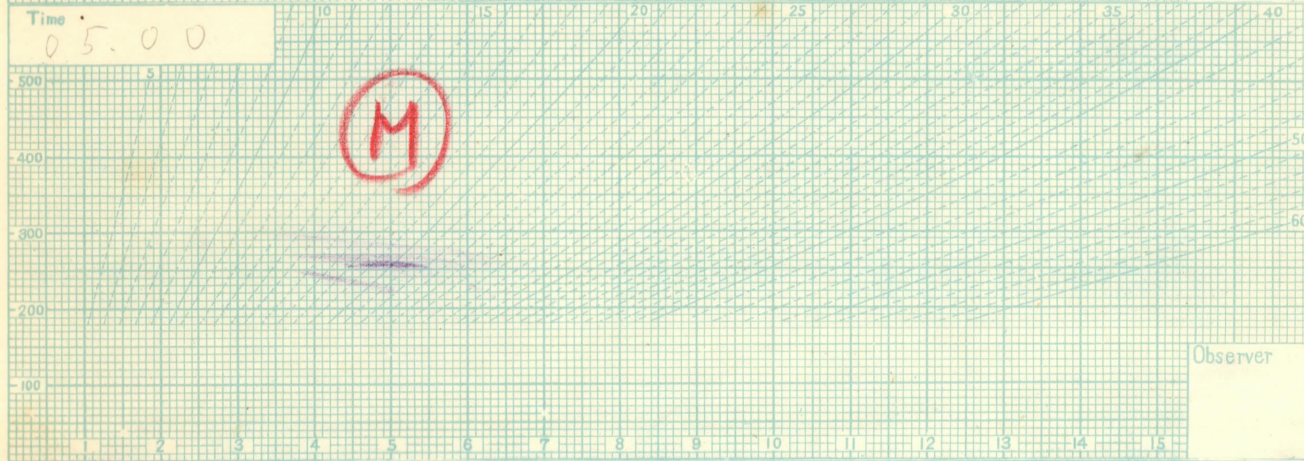
VIRTUAL HEIGHT IN KM



f_oF2
h_pF2
h'F2
f_oF1
h'F1
f_oE
h'E
fEs
f_{min}F
f_{min}E
3000 MUF
(M3000)
F2
Z_d

Observer

VIRTUAL HEIGHT IN KM



f_oF2
h_pF2
h'F2
f_oF1
h'F1
f_oE
h'E
fEs
f_{min}F
f_{min}E
3000 MUF
(M3000)
F2
Z_d

Observer

VIRTUAL HEIGHT IN KM



f_oF2
h_pF2
h'F2
f_oF1
h'F1
f_oE
h'E
fEs
f_{min}F
f_{min}E
3000 MUF
(M3000)
F2
Z_d

Observer

REMARKS

IONOSPHERIC RECORD

135°E MEAN TIME

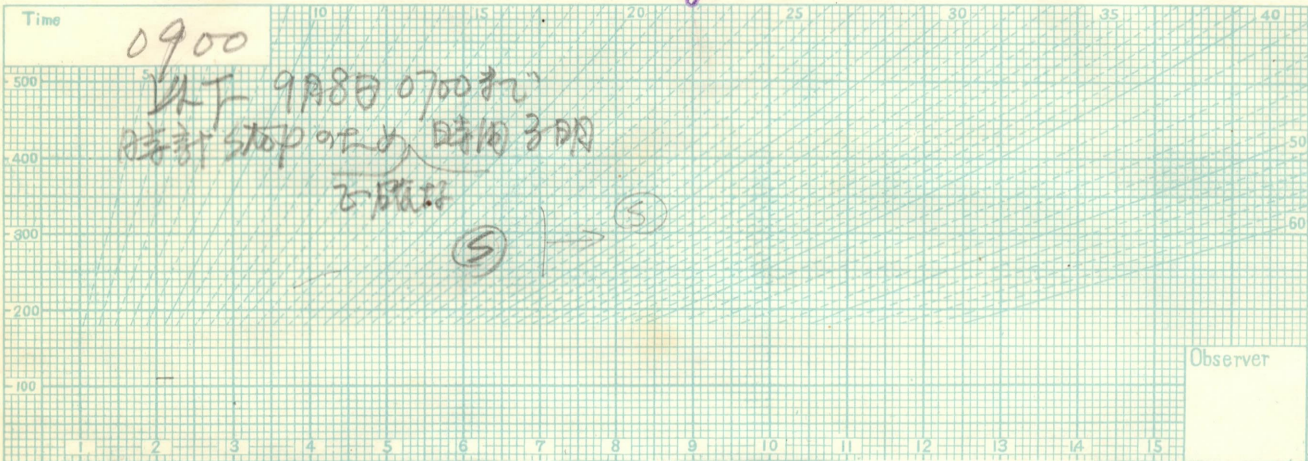
DATE 26.9.7.

STATION Yamakawa

NO

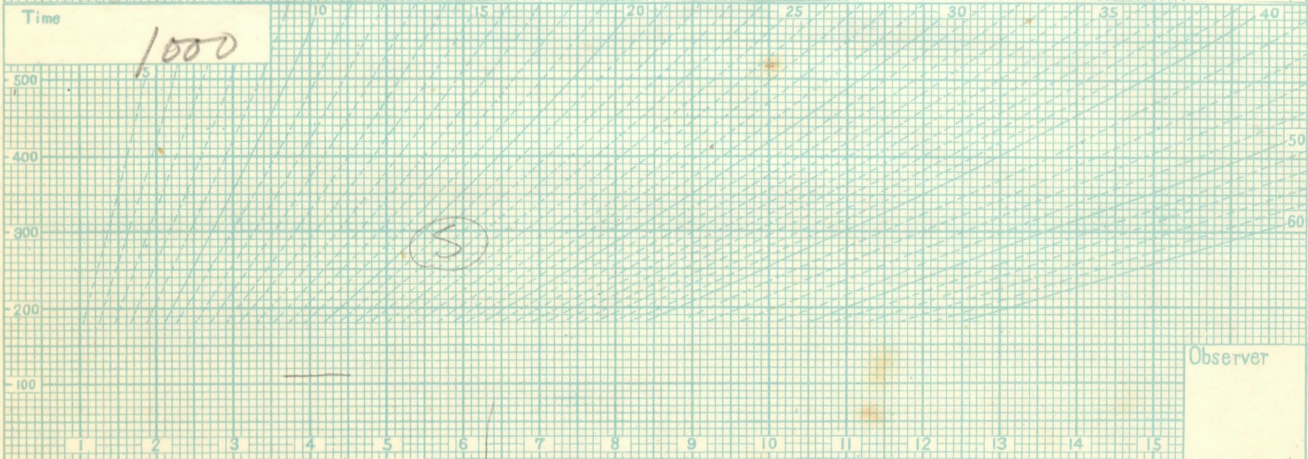
34

VIRTUAL HEIGHT IN KM



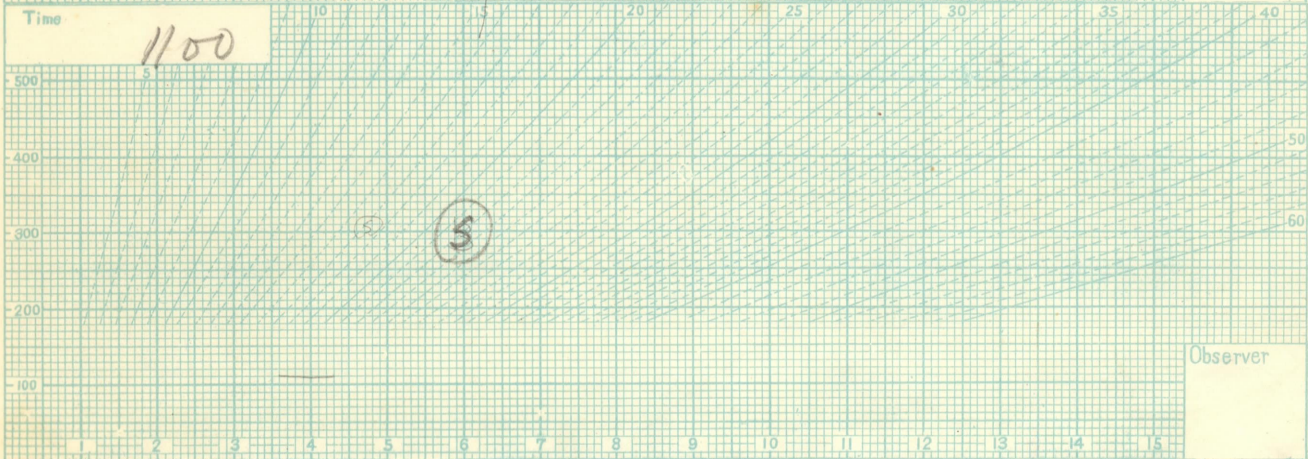
f_oF2 S
h_pF2 S
h'F2 S
f_oF1 X
h'F1 230
f_oE S
h'E S
fE_s G
f_{min}F 38
f_{min}E 20
MUF(3000)F2 S
F2 S
Z_d S

VIRTUAL HEIGHT IN KM



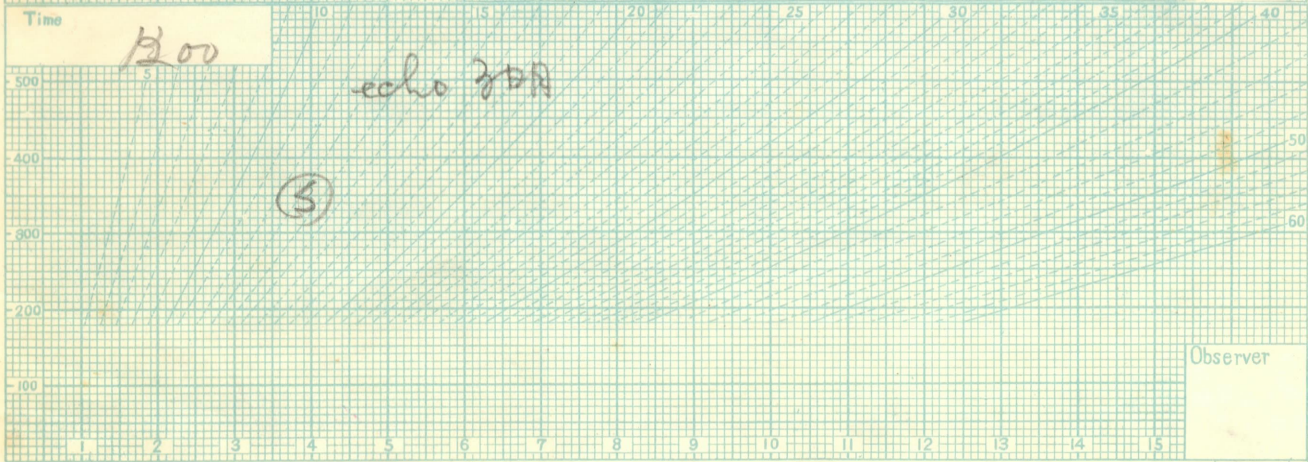
f_oF2 S
h_pF2 S
h'F2 S
f_oF1 S
h'F1 S
f_oE S
h'E S
fE_s 45
f_{min}F S
f_{min}E 26
MUF(3000)F2 S
F2 S
Z_d S

VIRTUAL HEIGHT IN KM



f_oF2 S
h_pF2 S
h'F2 S
f_oF1 S
h'F1 S
f_oE S
h'E S
fE_s 40
f_{min}F S
f_{min}E 26
MUF(3000)F2 S
F2 S
Z_d S

VIRTUAL HEIGHT IN KM



f_oF2 S
h_pF2 S
h'F2 S
f_oF1 S
h'F1 S
f_oE S
h'E S
fE_s S
f_{min}F S
f_{min}E S
MUF(3000)F2 S
F2 S
Z_d S

REMARKS

IONOSPHERIC RECORD

135°E MEAN TIME

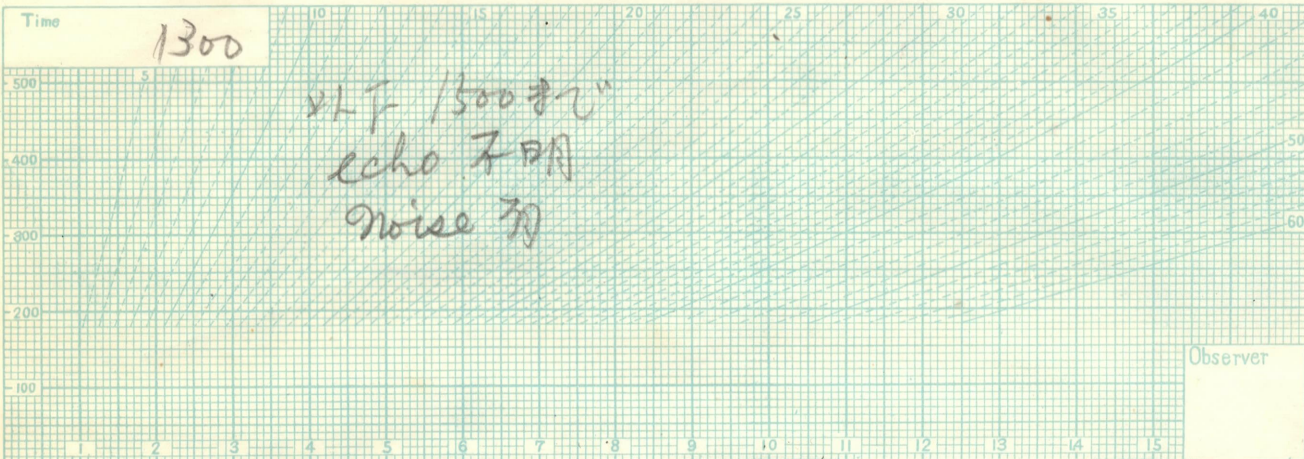
DATE 26.9.7

STATION *yamakawa*

NO

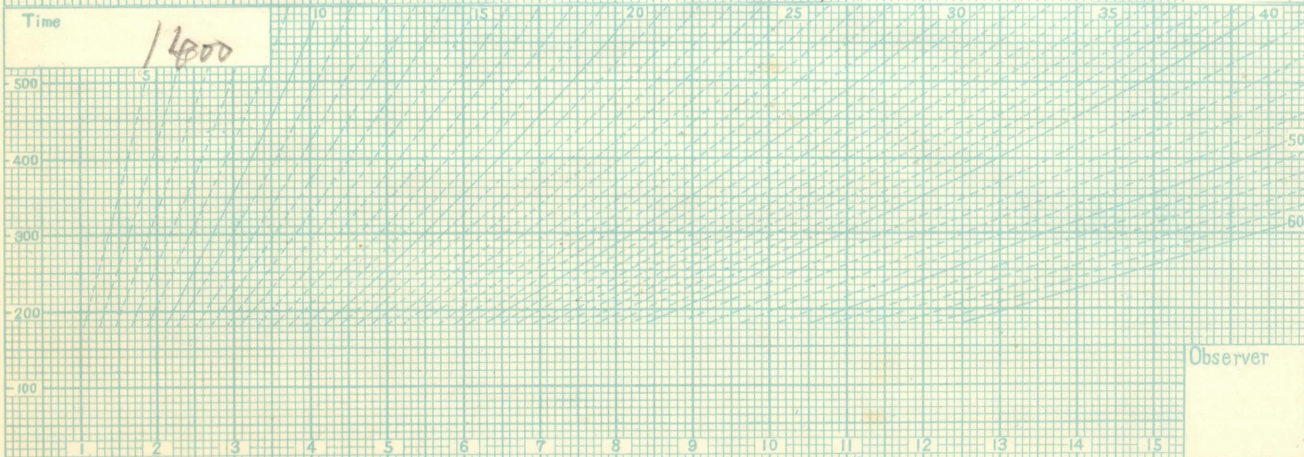
35

VIRTUAL HEIGHT IN KM



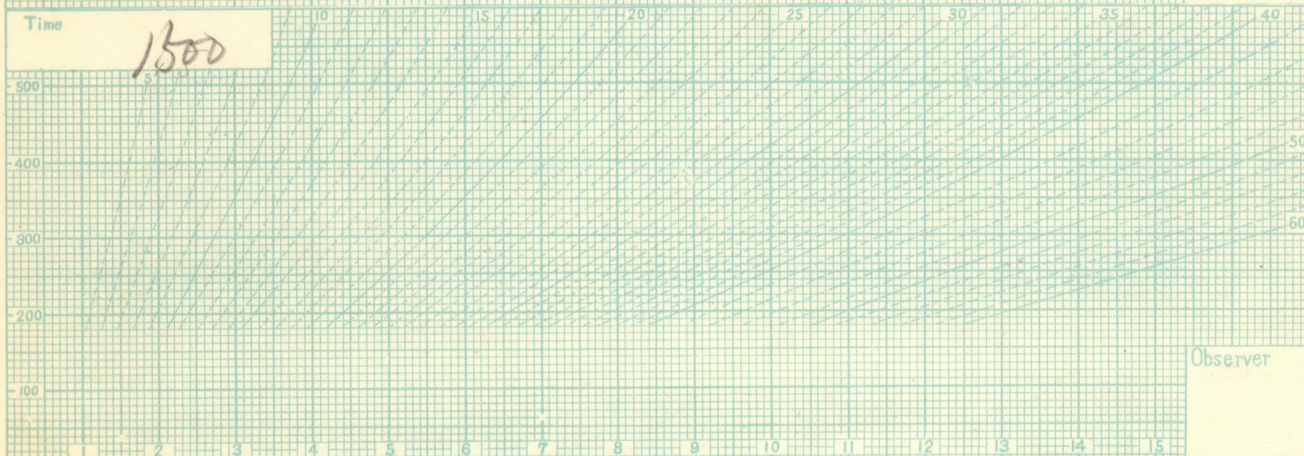
f_oF2 *~*
 $f_{up}F2$ *~*
 $h'F2$ *~*
 f_oF1 *~*
 $h'F1$ *~*
 f_oE *~*
 $h'E$ *~*
 fEs *~*
 $f_{min}F$ *~*
 $f_{min}E$ *~*
 $MUF(3000)F2$ *~*
 Z_d *~*

VIRTUAL HEIGHT IN KM



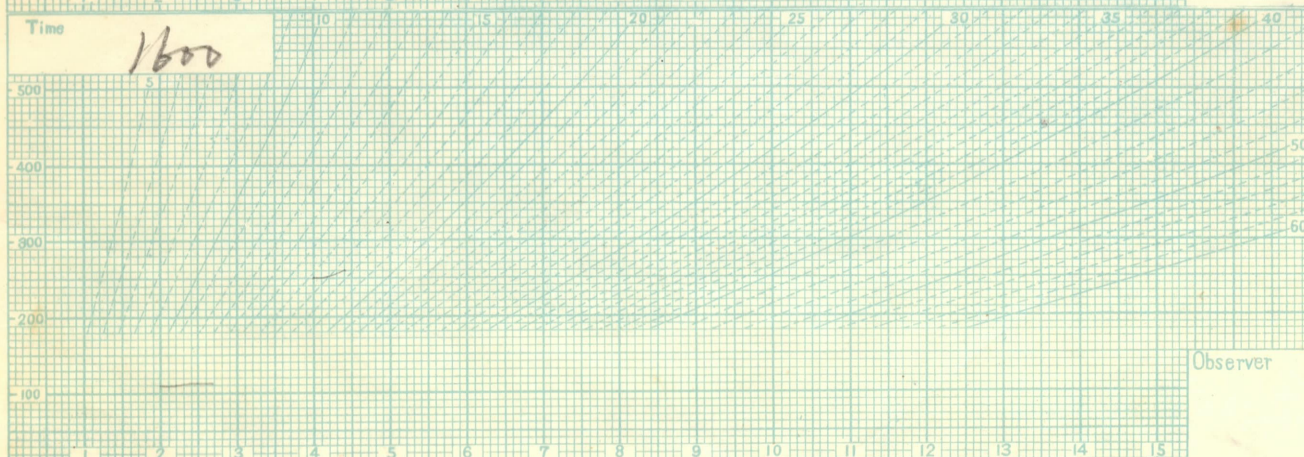
f_oF2 *~*
 $f_{up}F2$ *~*
 $h'F2$ *~*
 f_oF1 *~*
 $h'F1$ *~*
 f_oE *~*
 $h'E$ *~*
 fEs *~*
 $f_{min}F$ *~*
 $f_{min}E$ *~*
 $MUF(3000)F2$ *~*
 Z_d *~*

VIRTUAL HEIGHT IN KM



f_oF2 *~*
 $f_{up}F2$ *~*
 $h'F2$ *~*
 f_oF1 *~*
 $h'F1$ *~*
 f_oE *~*
 $h'E$ *~*
 fEs *~*
 $f_{min}F$ *~*
 $f_{min}E$ *~*
 $MUF(3000)F2$ *~*
 Z_d *~*

VIRTUAL HEIGHT IN KM



f_oF2 *~*
 $f_{up}F2$ *~*
 $h'F2$ *~*
 f_oF1 *~*
 $h'F1$ *250*
 f_oE *F B*
 $h'E$ *110*
 fEs *275*
 $f_{min}F$ *40*
 $f_{min}E$ *20*
 $MUF(3000)F2$ *~*
 Z_d *~*

REMARKS

IONOSPHERIC RECORD

135°E MEAN TIME

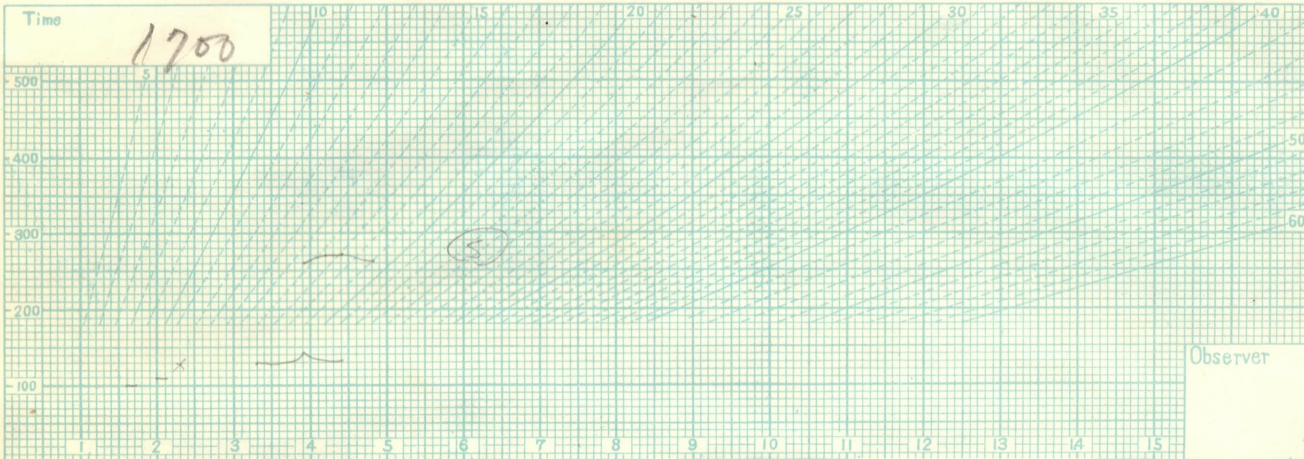
DATE 26.9.7.

STATION *yamakawa*

NO

36

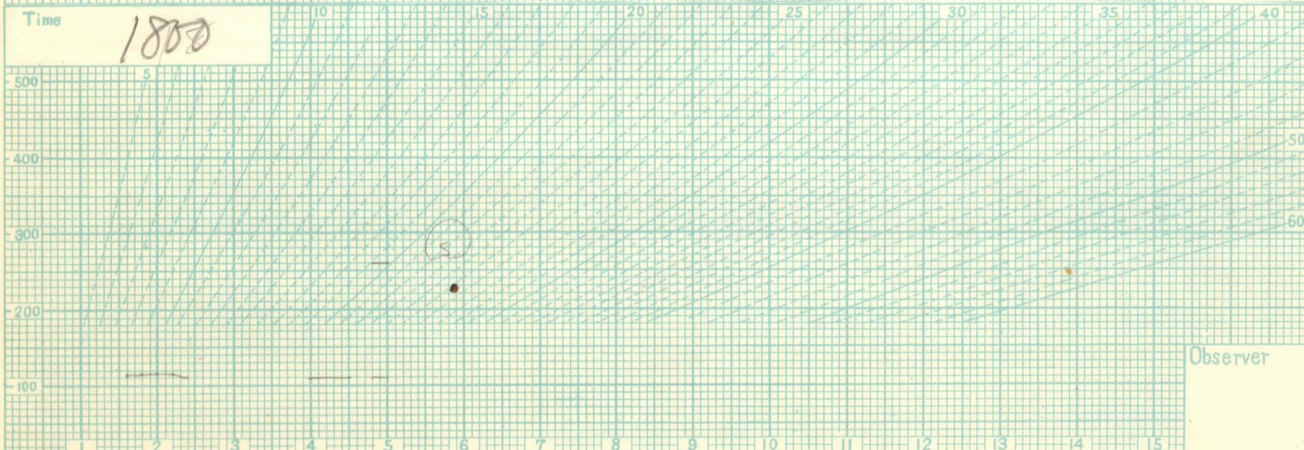
VIRTUAL HEIGHT IN KM



f_oF2 E
 $f_{hp}F2$ E
 $h'F2$ 260 S
 f_oF1 S
 $h'F1$ A
 f_oE 33 B
 $h'E$ 100 S
 fEs 44
 $f_{min}F$ 39 A
 $f_{min}E$ 16
3000 MUF (M3000) E
F2 E
 Z_d

Observer

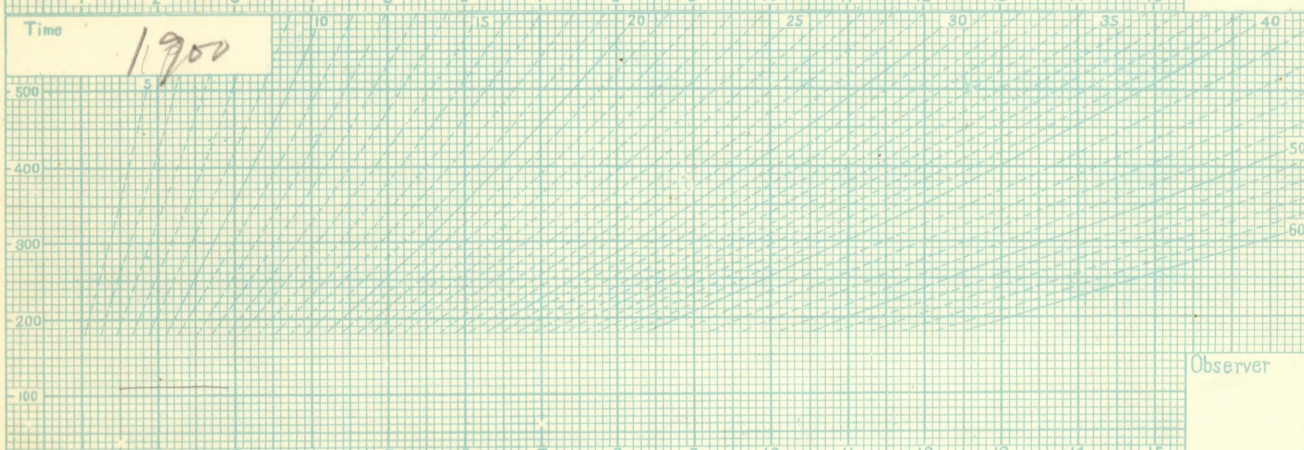
VIRTUAL HEIGHT IN KM



f_oF2 S
 $f_{hp}F2$ S
 $h'F2$ 280 A
 f_oF1 S
 $h'F1$ S
 f_oE 11 B
 $h'E$ 11 B
 fEs 50 S
 $f_{min}F$ 38 A
 $f_{min}E$ 16
3000 MUF (M3000) S
F2 S
 Z_d

Observer

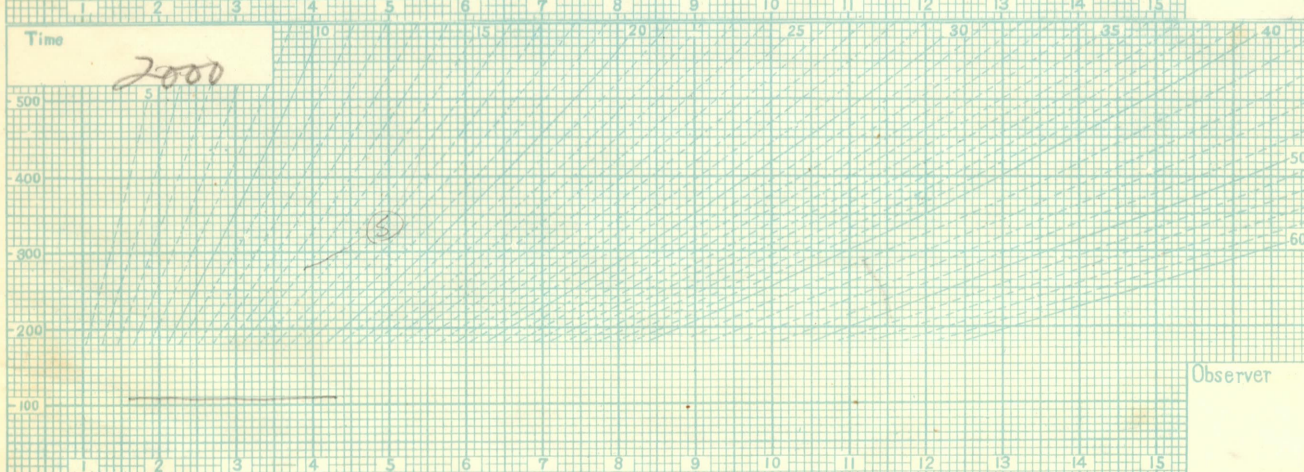
VIRTUAL HEIGHT IN KM



f_oF2 E
 $f_{hp}F2$ E
 $h'F2$ 3 A
 f_oF1 S
 $h'F1$ S
 f_oE S
 $h'E$ S
 fEs 29
 $f_{min}F$ 5 A
 $f_{min}E$ 15
3000 MUF (M3000) E
F2 E
 Z_d

Observer

VIRTUAL HEIGHT IN KM



f_oF2 (50 PS)
 $f_{hp}F2$ (50 PS)
 $h'F2$ 280 A
 f_oF1 S
 $h'F1$ S
 f_oE S
 $h'E$ S
 fEs 43
 $f_{min}F$ 39 A
 $f_{min}E$ 16
3000 MUF (M3000) S
F2 S (30 PS)
 Z_d

Observer

REMARKS

IONOSPHERIC RECORD

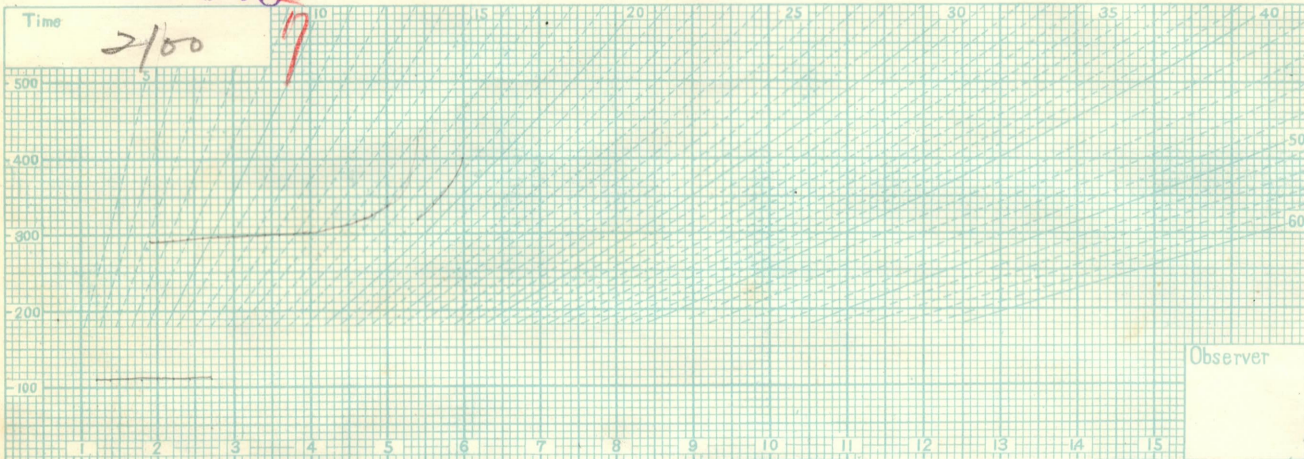
135°E MEAN TIME

DATE **26.9.7.**
26.9.8

STATION *yamakawa*

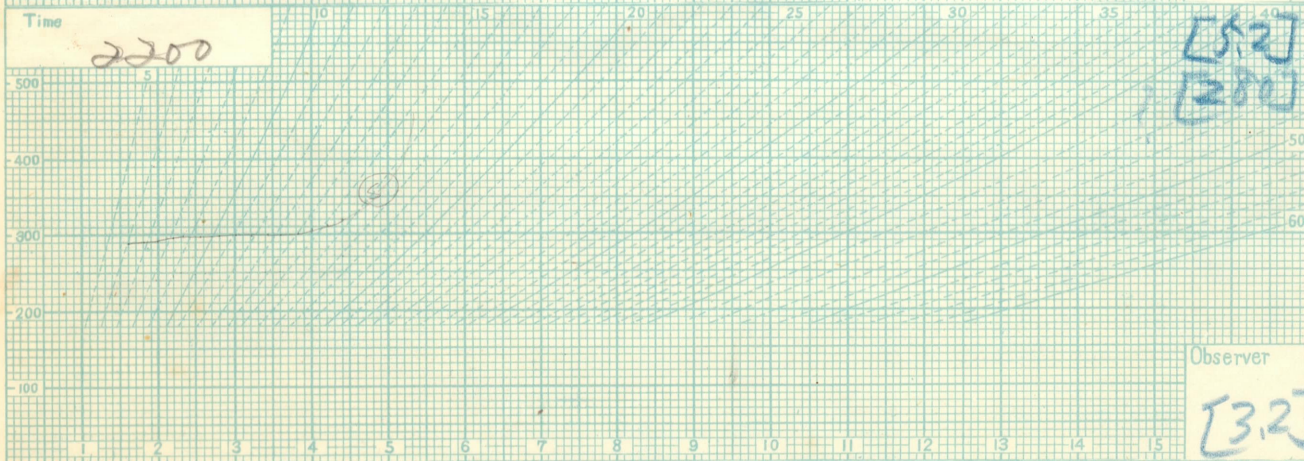
NO **7** **37**

VIRTUAL HEIGHT IN KM



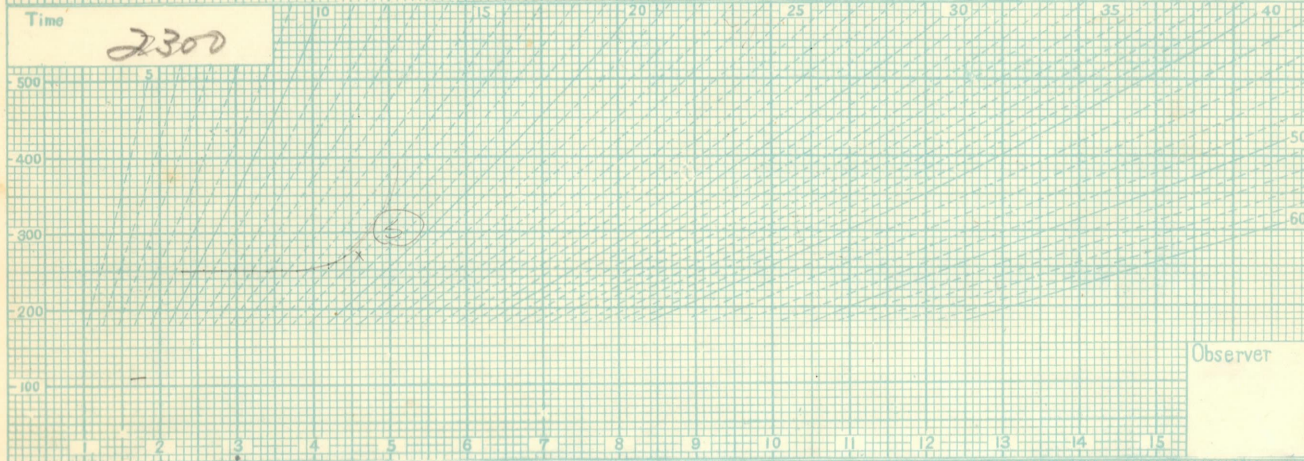
f_oF2 (54)^P
 h_pF2 (310)^P
 $h'F2$ 290
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs 27
 $f_{min}F$ 19
 $f_{min}E$ 12
 Observer
 $MUF_{3000}(M3000)$ (17.4)^P
 $F2$ (32)^P
 Z_d

VIRTUAL HEIGHT IN KM



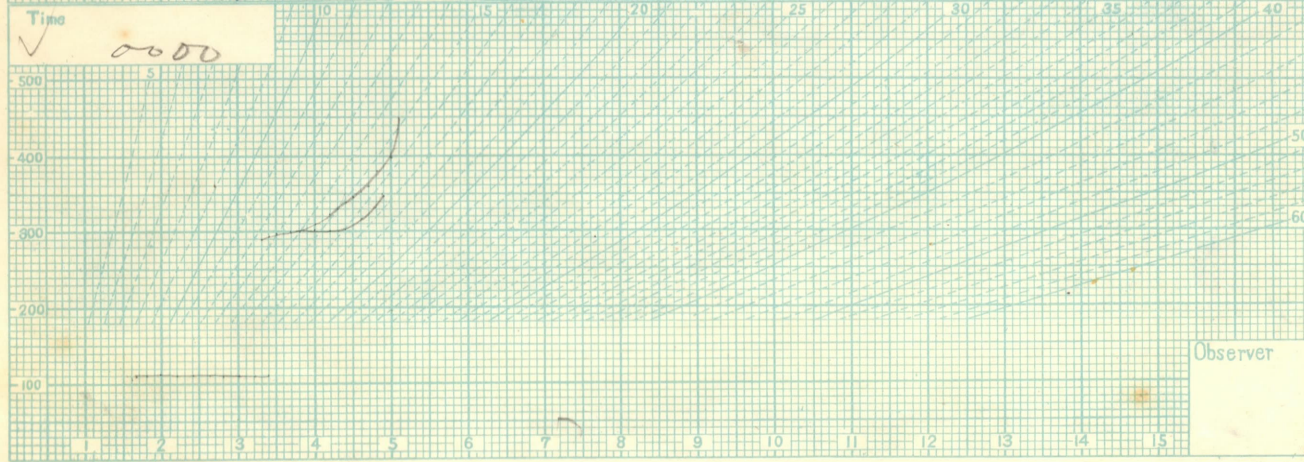
[5.2] f_oF2 53^{PS}
 [200] h_pF2 310^{PS}
 $h'F2$ 290
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs E
 $f_{min}F$ 16
 $f_{min}E$ E
 Observer
 $MUF_{3000}(M3000)$ 16.3^{PS}
 $F2$ 30^{PS}
 Z_d

VIRTUAL HEIGHT IN KM



f_oF2 (51)^{PS}
 h_pF2 (260)^{PS}
 $h'F2$ 250
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs 18
 $f_{min}F$ 23
 $f_{min}E$ 16
 Observer
 $MUF_{3000}(M3000)$ (17.4)^{PS}
 $F2$ (31)^{PS}
 Z_d

VIRTUAL HEIGHT IN KM



f_oF2 51
 h_pF2 320
 $h'F2$ 290^A
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs 24
 $f_{min}F$ 33^A
 $f_{min}E$ 16
 Observer
 $MUF_{3000}(M3000)$ 15.5
 $F2$ 30
 Z_d

REMARKS

IONOSPHERIC RECORD

135°E MEAN TIME

DATE 26.9.8

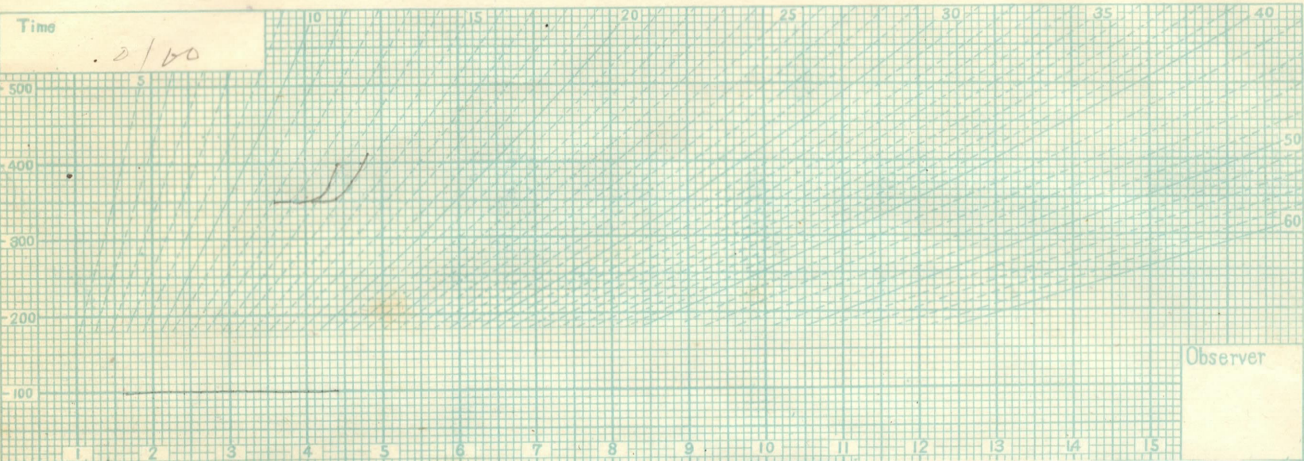
STATION

yamakawa

NO

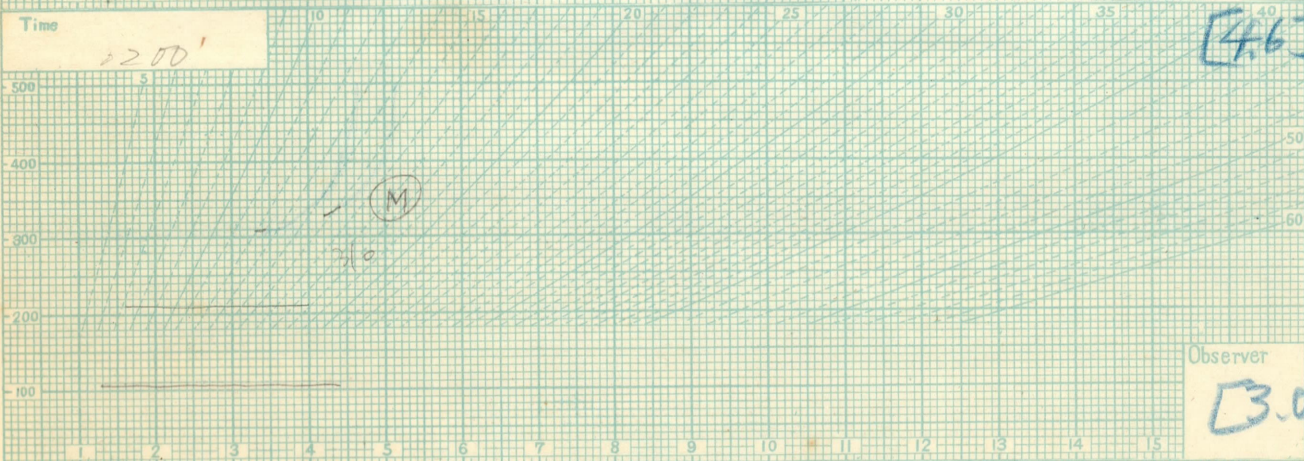
38

VIRTUAL HEIGHT IN KM



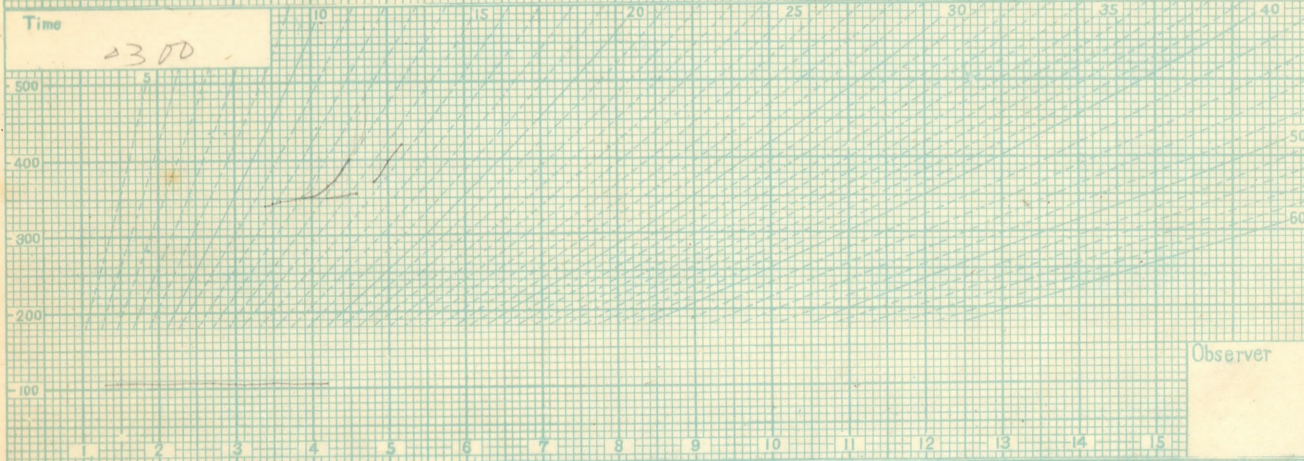
foF2 45
 h_pF2 350
 h'F2 350A
 foF1
 h'F1
 foE
 h'E
 fEs 44
 f_{min}F 36A
 f_{min}E 16
 Observer
 3000 MUF 140
 (M3000) F2 31
 Z_d

VIRTUAL HEIGHT IN KM



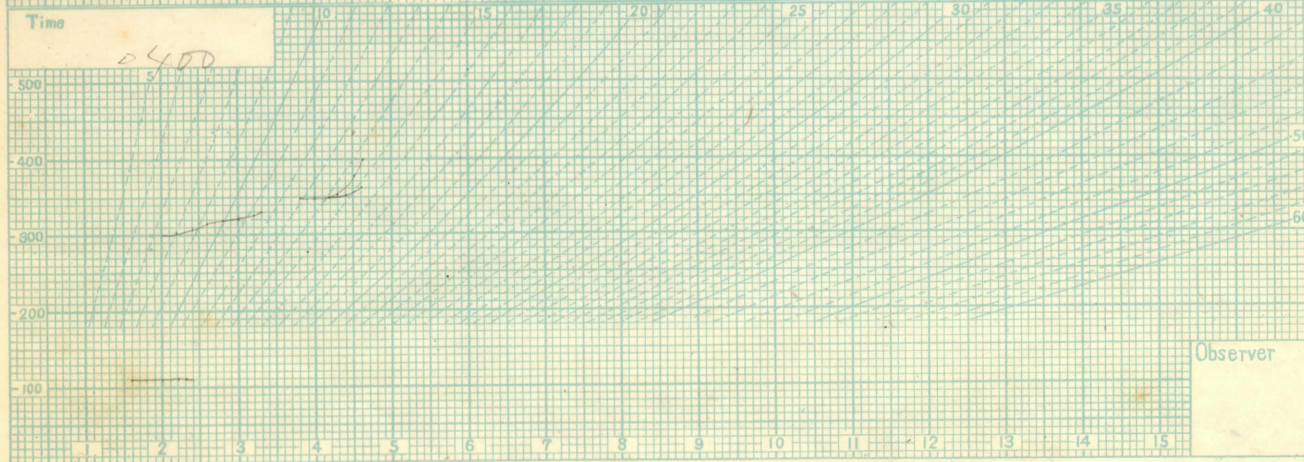
[4.6] M
 foF2 M
 h_pF2 M
 h'F2 310A
 foF1
 h'F1
 foE
 h'E
 fEs 44
 f_{min}F 33A
 f_{min}E 13
 Observer
 3000 MUF M
 (M3000) F2 M
 Z_d

VIRTUAL HEIGHT IN KM



foF2 47
 h_pF2 350
 h'F2 340A
 foF1
 h'F1
 foE
 h'E
 fEs 42
 f_{min}F 34A
 f_{min}E 13
 Observer
 3000 MUF 14.0
 (M3000) F2 29
 Z_d

VIRTUAL HEIGHT IN KM



foF2 49
 h_pF2 350
 h'F2 300
 foF1
 h'F1
 foE
 h'E
 fEs 24
 f_{min}F 20A
 f_{min}E 16
 Observer
 3000 MUF 14.6
 (M3000) F2 31
 Z_d

REMARKS

IONOSPHERIC RECORD

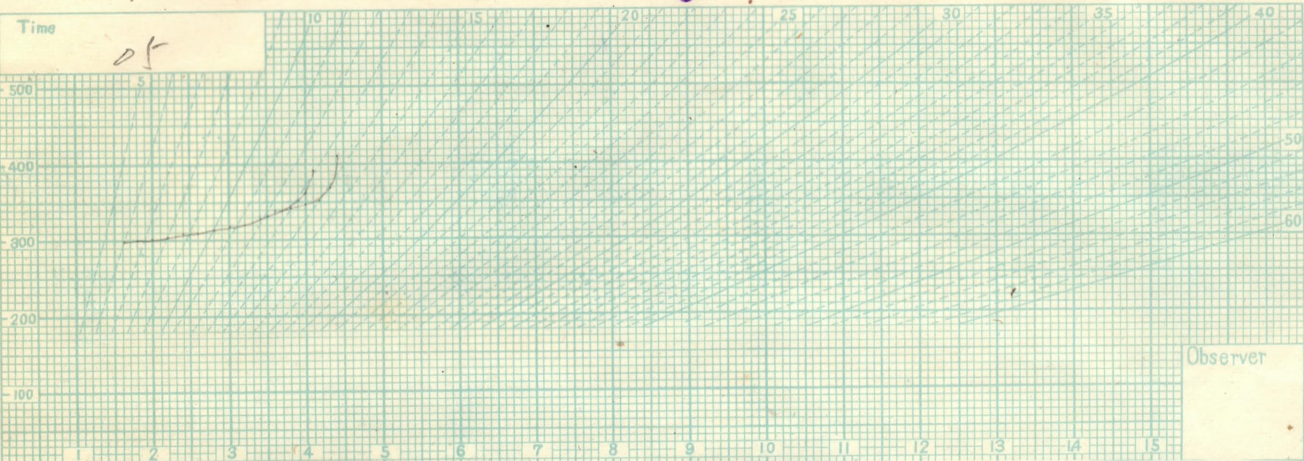
135° E MEAN TIME

DATE **26.9.8**

STATION *Yamagawa*

NO **4 39**

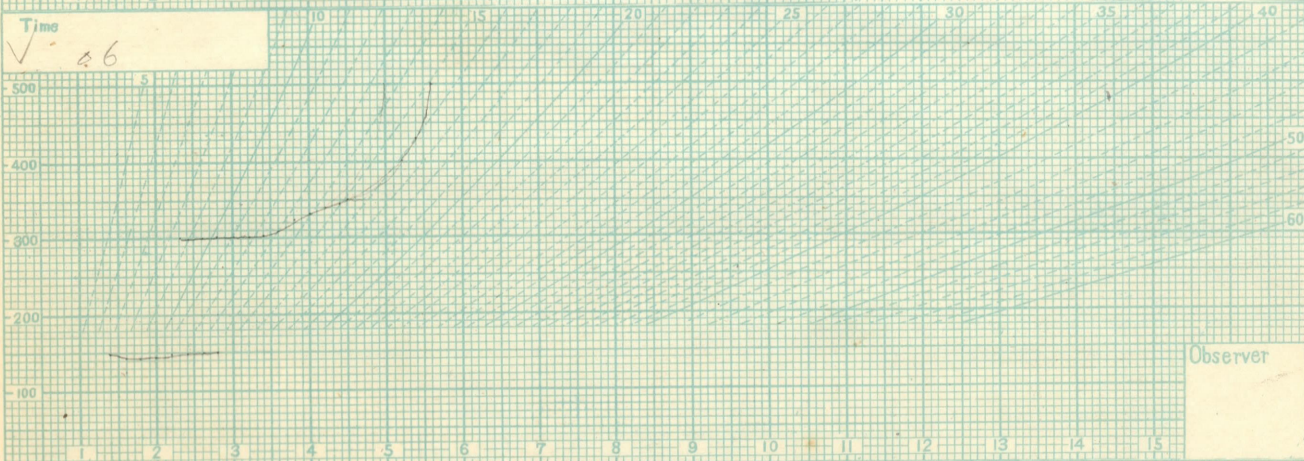
VIRTUAL HEIGHT IN KM



foF2 4.1
 h_pF2 320
 h'F2 300
 foF1
 h'F1
 foE
 h'E
 fEs E
 f_{min}F 16
 f_{min}E E
 MUF³⁰⁰⁰ 13.2
 (M3000)
 F2 32
 Z_d

Observer

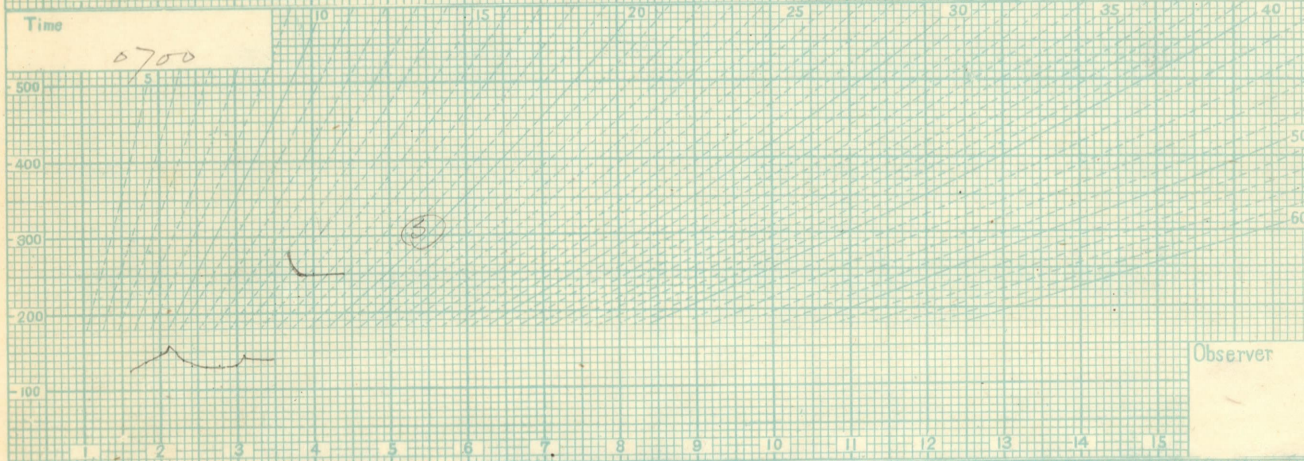
VIRTUAL HEIGHT IN KM



foF2 5.0 J
 h_pF2 (330) J
 h'F2 300
 foF1 Q
 h'F1 Q
 foE ~~A~~ B
 h'E ~~A~~ B
 fEs 28
 f_{min}F 2.3
 f_{min}E 14
 MUF³⁰⁰⁰ (14.8) J
 (M3000)
 F2 (29) J
 Z_d

Observer

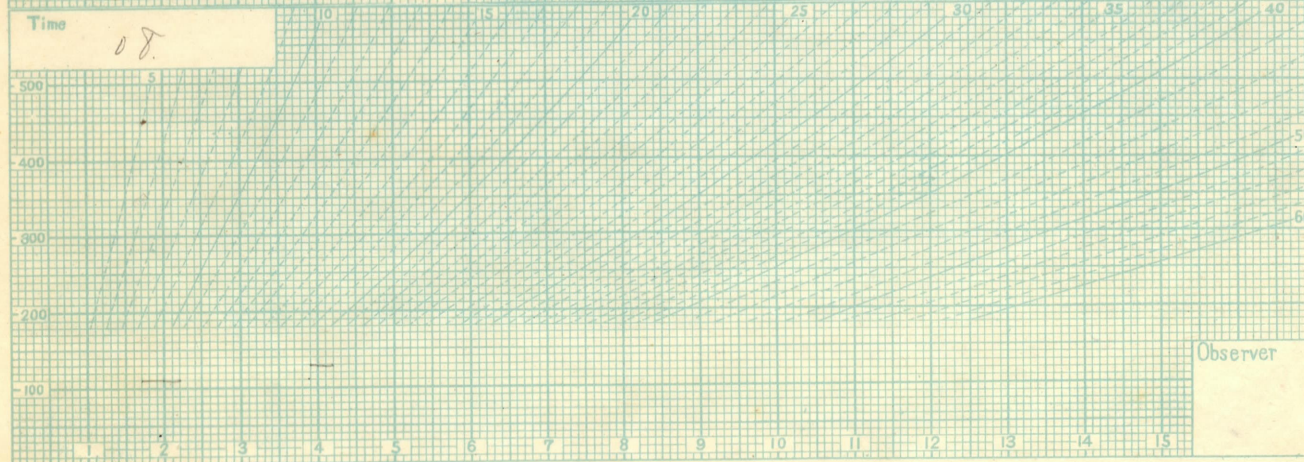
VIRTUAL HEIGHT IN KM



foF2 S
 h_pF2 S
 h'F2 250
 foF1 B S
 h'F1 A ~~S~~
 foE 21
 h'E 120 B
 fEs 35
 f_{min}F 37
 f_{min}E +61.6
 MUF³⁰⁰⁰ S
 (M3000)
 F2 S
 Z_d

Observer

VIRTUAL HEIGHT IN KM



foF2 S
 h_pF2 S
 h'F2 S
 foF1 S
 h'F1 S
 foE ~~S~~ B
 h'E ~~S~~ 110
 fEs 42 Y
 f_{min}F S
 f_{min}E 17
 MUF³⁰⁰⁰ S
 (M3000)
 F2 S
 Z_d

Observer

REMARKS

IONOSPHERIC RECORD

135°E MEAN TIME

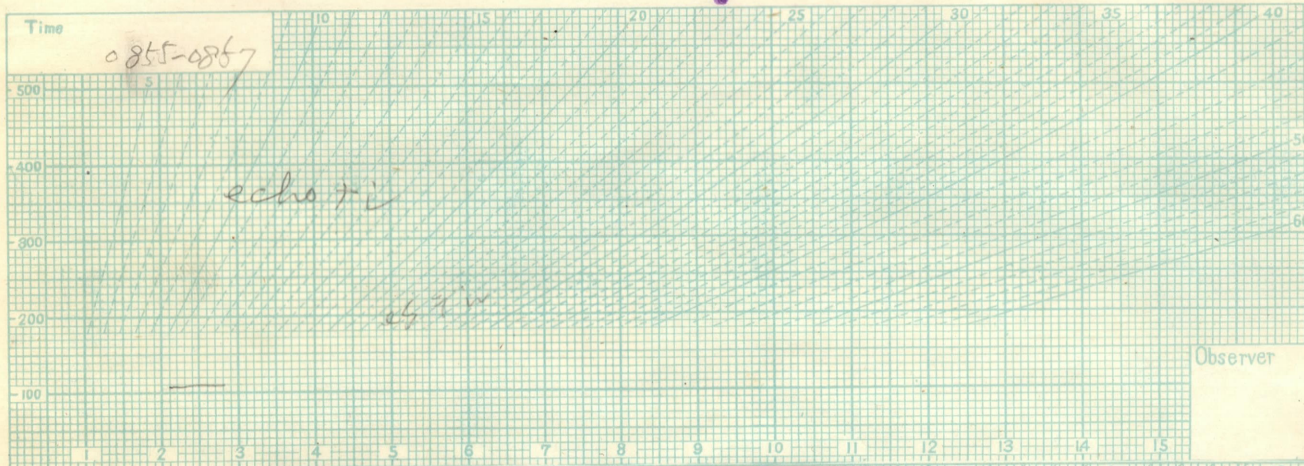
DATE **26.9.8**

STATION *yamakawa*

NO

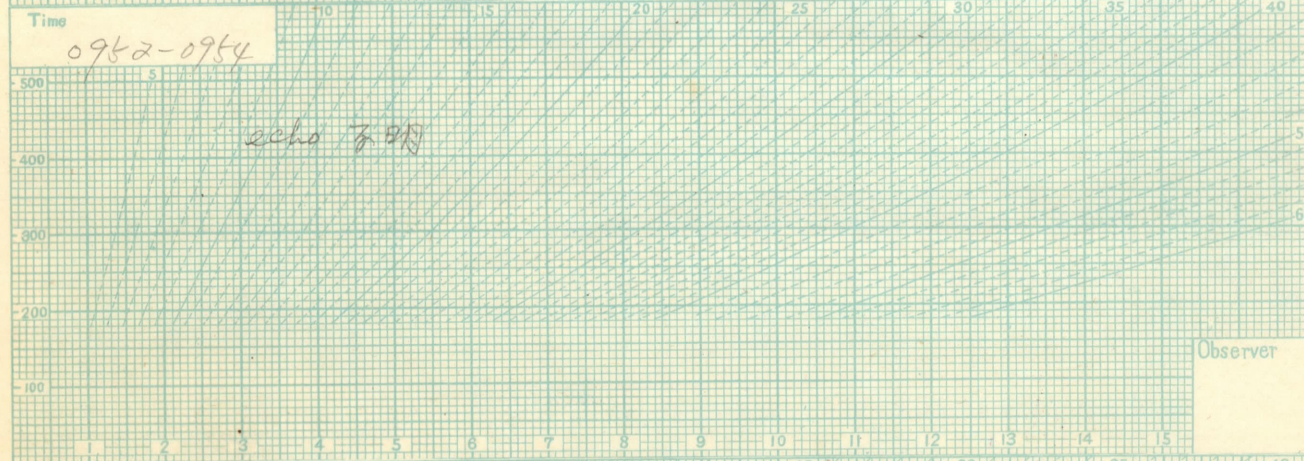
40

VIRTUAL HEIGHT IN KM



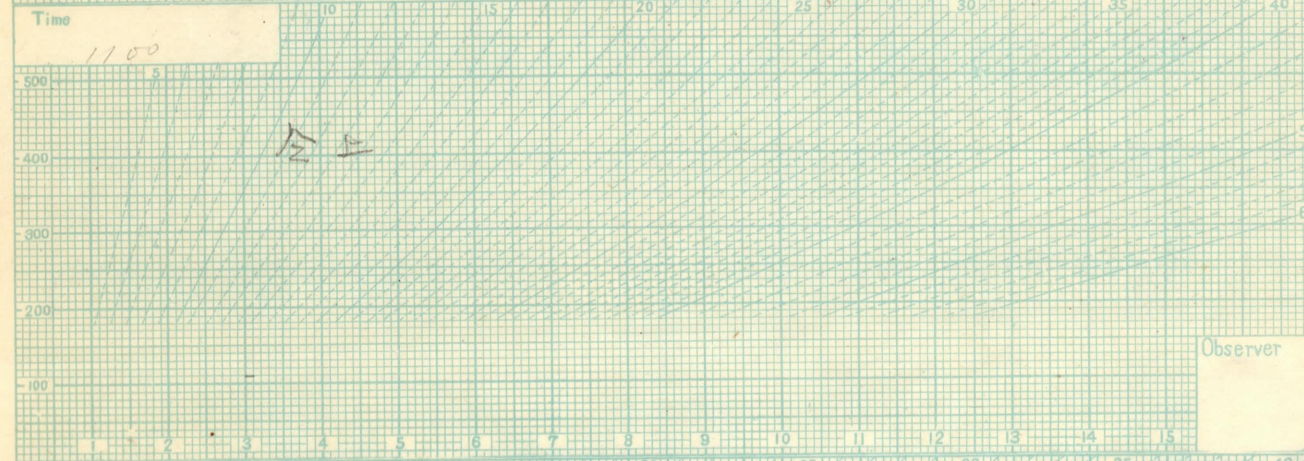
foF2 *S*
 h_pF2 *S*
 h'F2 *S*
 foF1 *S*
 h'F1 *S*
 foE *S*
 h'E *S*
 fEs *S*
 f_{min}F *S*
 f_{min}E *S*
 MUF(3000)F2 *S*
 Z_d *S*

VIRTUAL HEIGHT IN KM



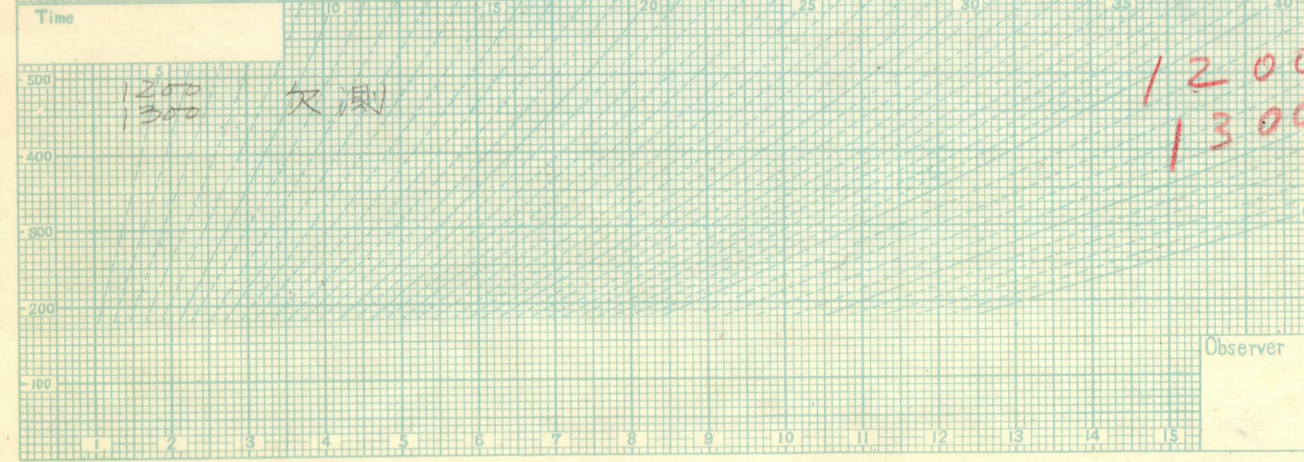
foF2 *S*
 h_pF2 *S*
 h'F2 *S*
 foF1 *S*
 h'F1 *S*
 foE *S*
 h'E *S*
 fEs *S*
 f_{min}F *S*
 f_{min}E *S*
 MUF(3000)F2 *S*
 Z_d *S*

VIRTUAL HEIGHT IN KM



foF2 *S*
 h_pF2 *S*
 h'F2 *S*
 foF1 *S*
 h'F1 *S*
 foE *S*
 h'E *S*
 fEs *S*
 f_{min}F *S*
 f_{min}E *S*
 MUF(3000)F2 *S*
 Z_d *S*

VIRTUAL HEIGHT IN KM



foF2 *S*
 h_pF2 *S*
 h'F2 *S*
 foF1 *S*
 h'F1 *S*
 foE *S*
 h'E *S*
 fEs *S*
 f_{min}F *S*
 f_{min}E *S*
 MUF(3000)F2 *S*
 Z_d *S*

REMARKS

IONOSPHERIC RECORD

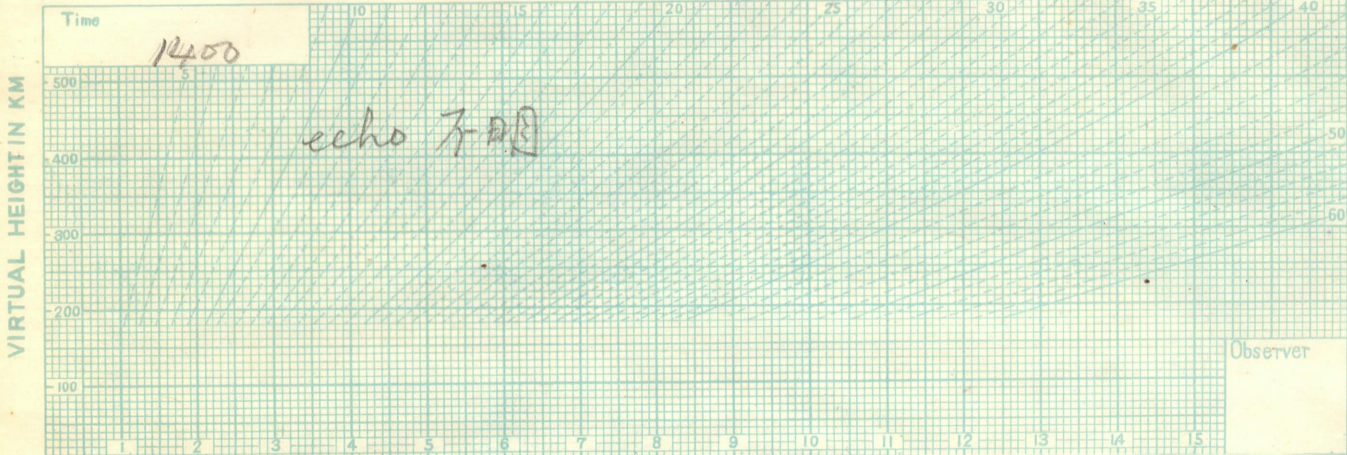
135° E MEAN TIME

DATE **26.9.8**

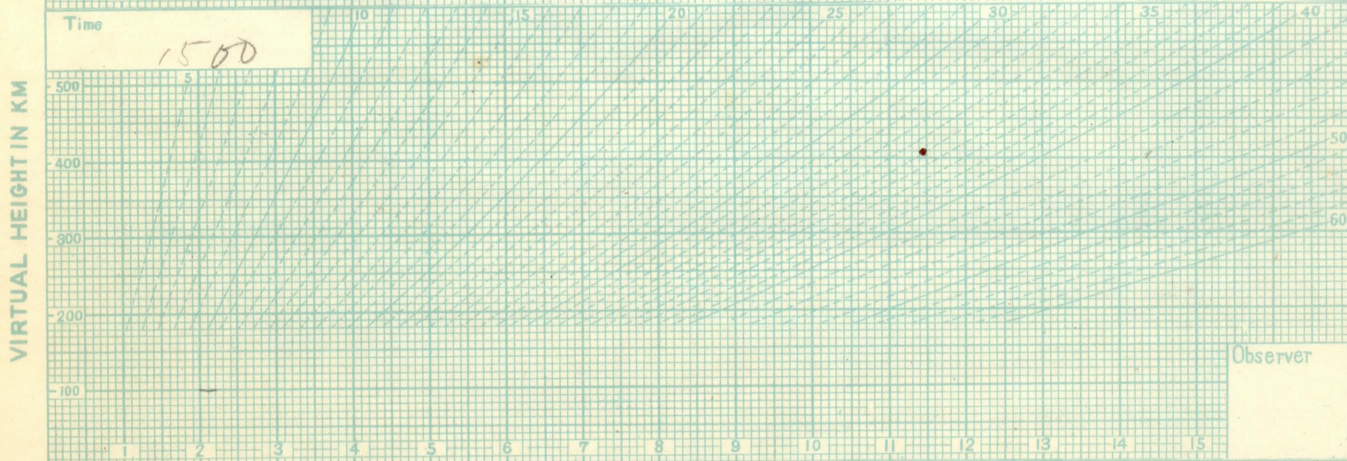
STATION *yamagata*

NO

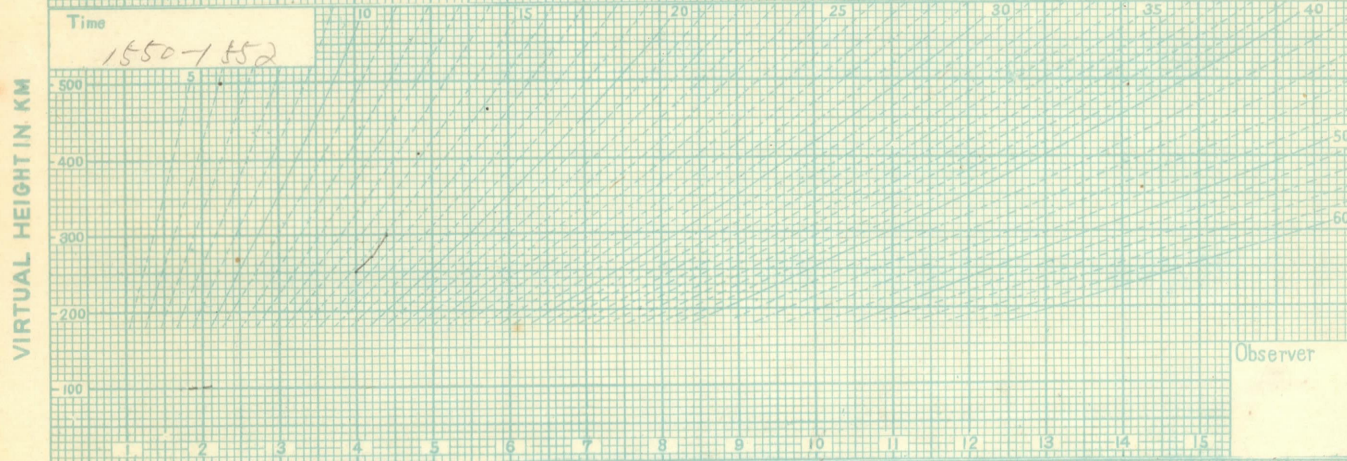
41



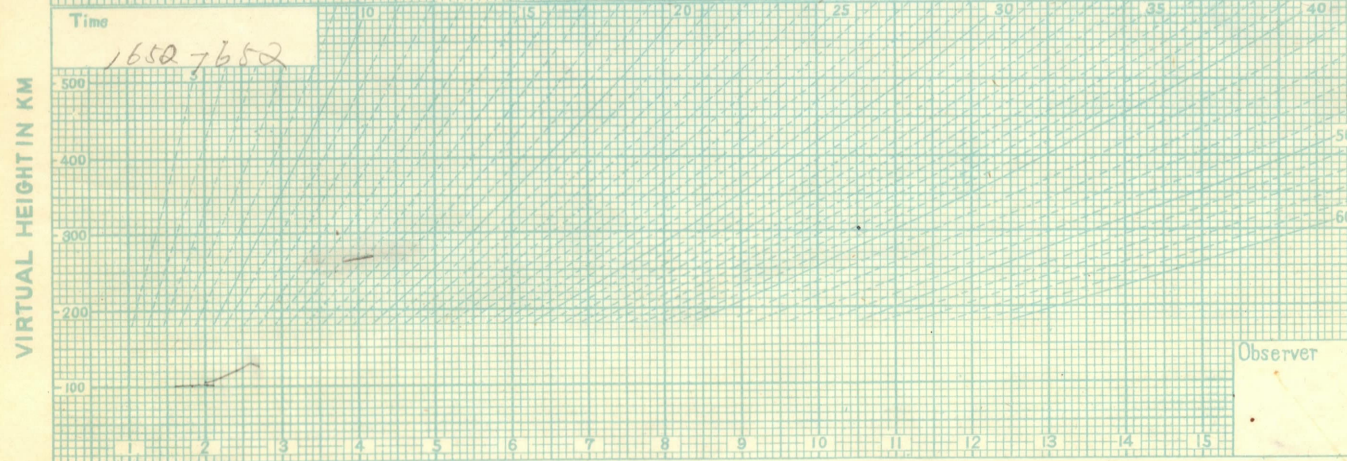
f _o F2	S
h _p F2	S
h'F2	S
f _o F1	S
h'F1	S
f _o E	S
h'E	S
fEs	S
f _{min} F	S
f _{min} E	S
3000 MUF (M3000)	S
F2	S
Z _d	S



f _o F2	S
h _p F2	S
h'F2	S
f _o F1	S
h'F1	S
f _o E	S
h'E	<i>3100</i>
fEs	<i>22.4</i>
f _{min} F	S
f _{min} E	<i>20</i>
3000 MUF (M3000)	S
F2	S
Z _d	S



f _o F2	S
h _p F2	S
h'F2	S
f _o F1 (44)	S
h'F1	<i>250 B</i>
f _o E	S
h'E	<i>3100</i>
fEs	<i>21.4</i>
f _{min} F	<i>4.05</i>
f _{min} E	<i>18</i>
3000 MUF (M3000)	S
F2	S
Z _d	S



f _o F2	S
h _p F2	S
h'F2	S
f _o F1	S
h'F1	<i>260</i>
f _o E	<i>26</i>
h'E	<i>100</i>
fEs	<i>4</i>
f _{min} F	<i>38</i>
f _{min} E	<i>16</i>
3000 MUF (M3000)	S
F2	S
Z _d	S

REMARKS

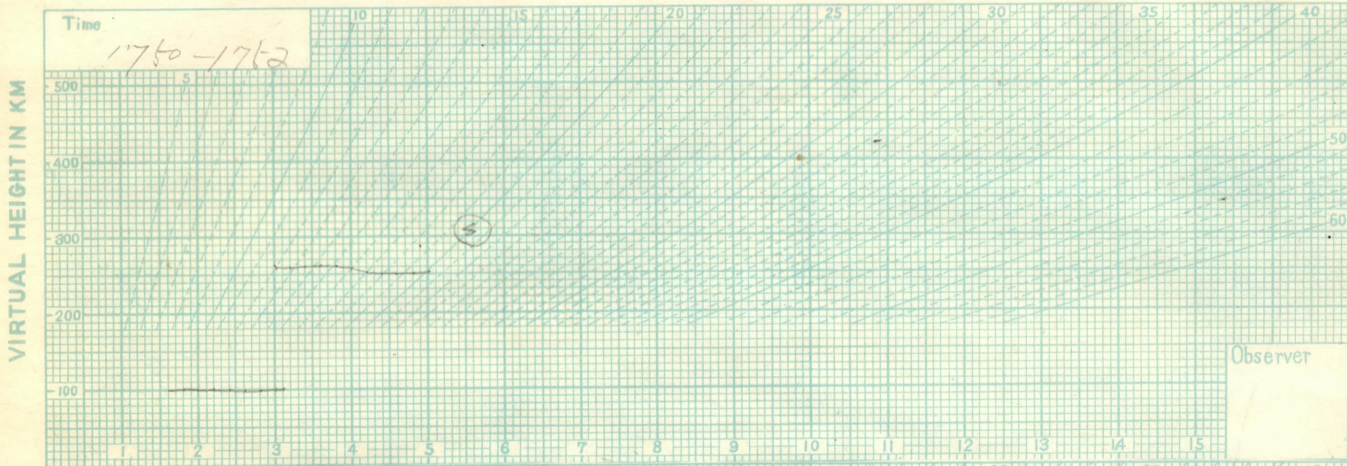
IONOSPHERIC RECORD

135°E MEAN TIME

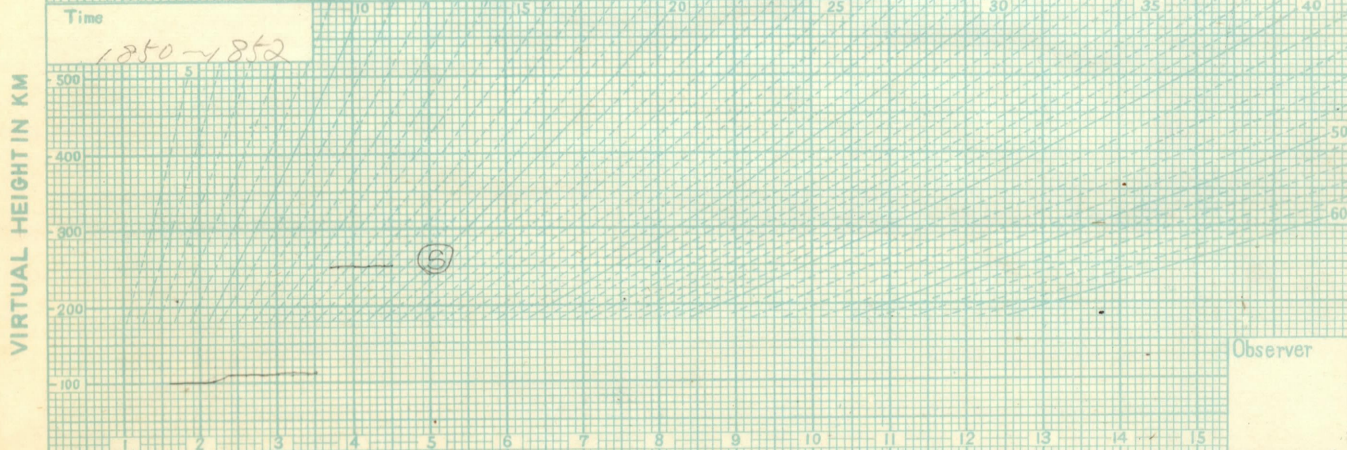
DATE **26.9.8**

STATION *Yamokawa*

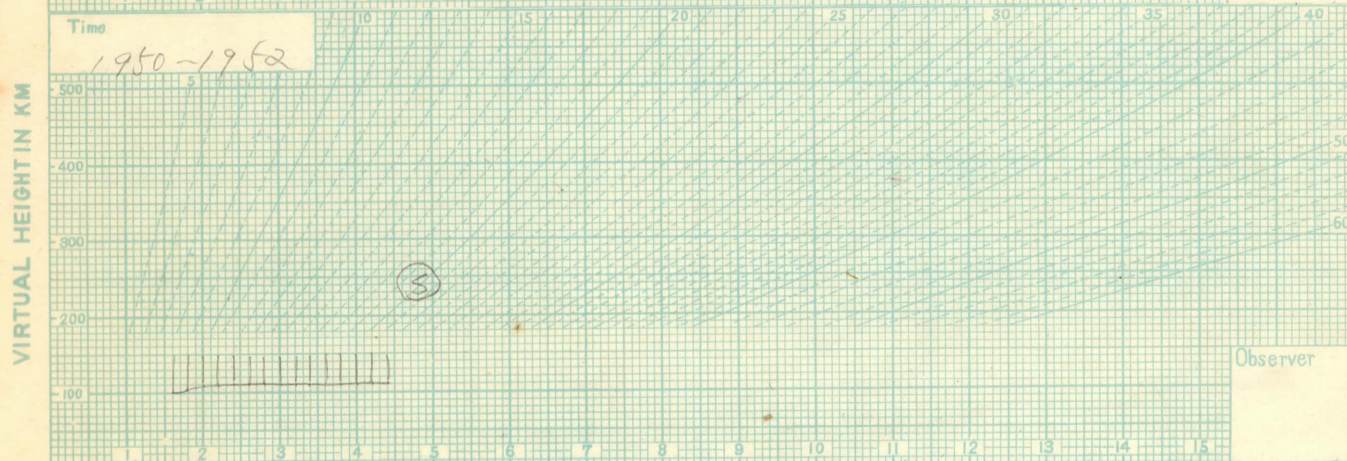
NO **42**



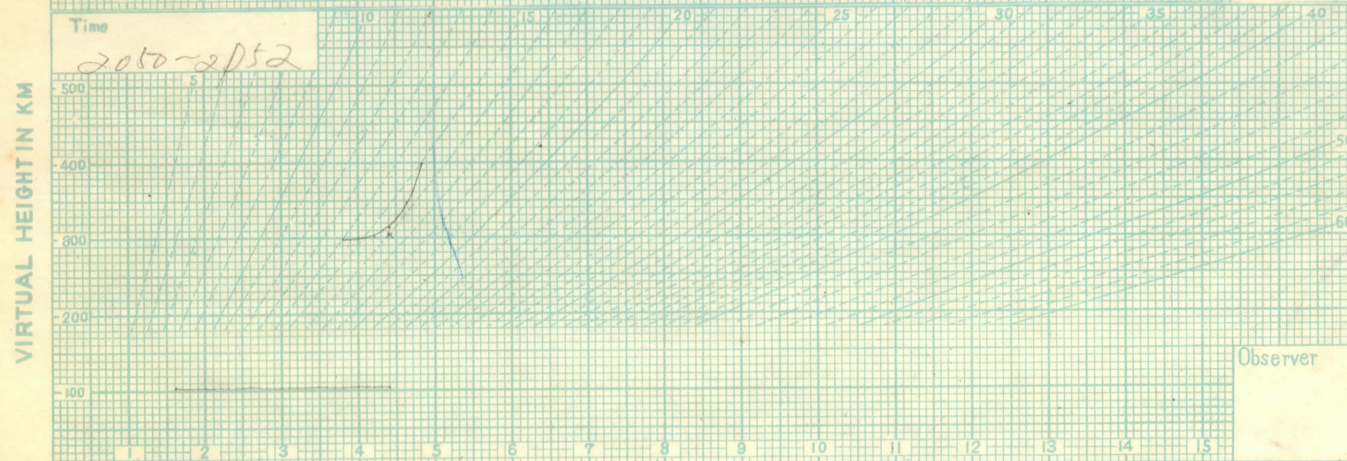
f_oF2 **C**
 h_pF2 **C**
 $h'F2$ **250**
 f_oF1 **Q**
 $h'F1$ **Q**
 f_oE **A**
 $h'E$ **A**
 fEs **31**
 $f_{min}F$ **30A**
 $f_{min}E$ **16**
 $MUF_{3000}F2$ **C**
 Z_d



f_oF2 **C**
 h_pF2 **C**
 $h'F2$ **250**
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs **35**
 $f_{min}F$ **37A**
 $f_{min}E$ **16**
 $MUF_{3000}F2$ **C**
 Z_d



f_oF2 **C**
 h_pF2 **C**
 $h'F2$ **AF**
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs **44F**
 $f_{min}F$ **AF**
 $f_{min}E$ **16F**
 $MUF_{3000}F2$ **C**
 Z_d



f_oF2 **48**
 h_pF2 **300**
 $h'F2$ **300A**
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs **44**
 $f_{min}F$ **38A**
 $f_{min}E$ **16**
 $MUF_{3000}F2$ **15.7**
 Z_d **32**

REMARKS

IONOSPHERIC RECORD

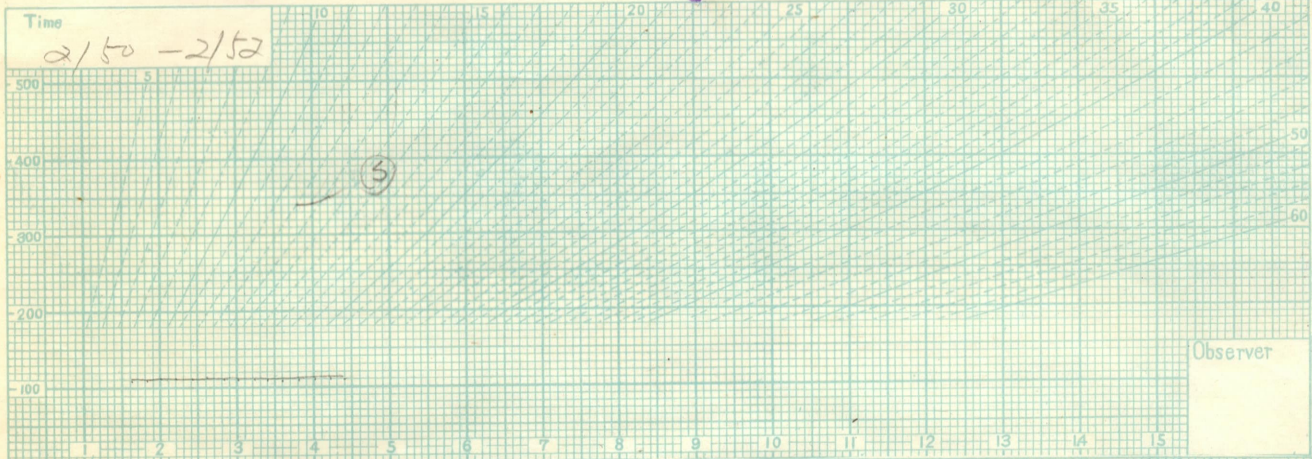
135°E MEAN TIME

DATE 26.9.8
20.9.9

STATION Yamakawa

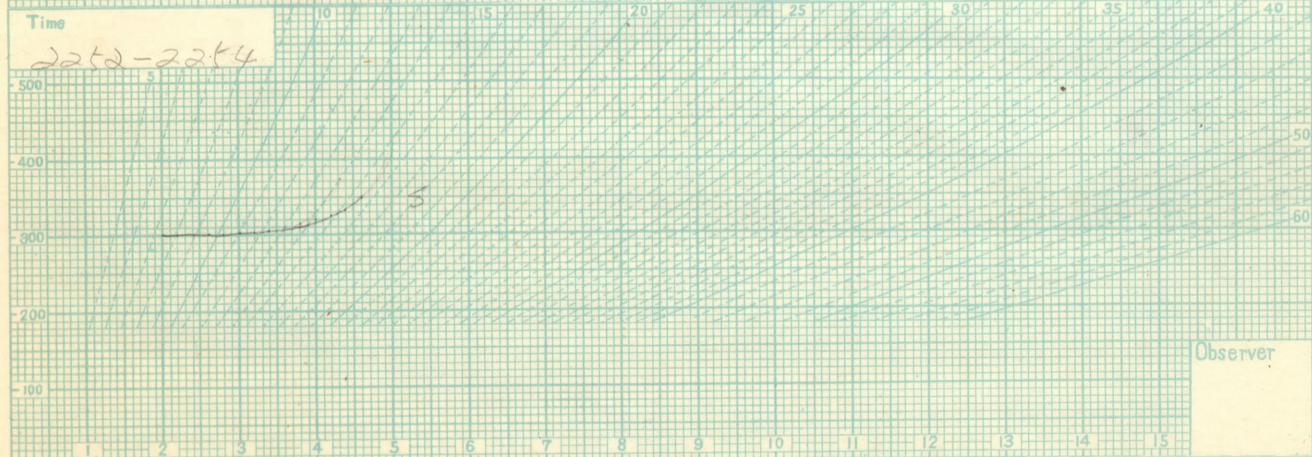
NO 43

VIRTUAL HEIGHT IN KM



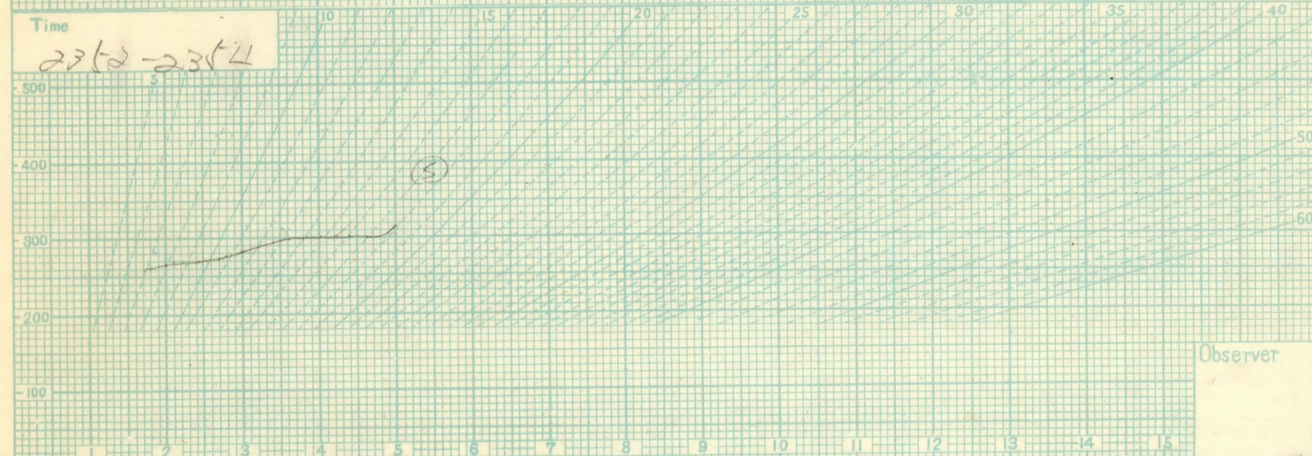
foF2 ~~(200)~~ JP
 h_pF2 ~~180~~
 h'F2 340 A
 foF1
 h'F1
 foE
 h'E
 fEs 44
 fminF 38A
 fminE 16
 Observer
 3000 MUF (M3000) ~~(140)~~ JP
 F2 (31) JP
 Zd

VIRTUAL HEIGHT IN KM



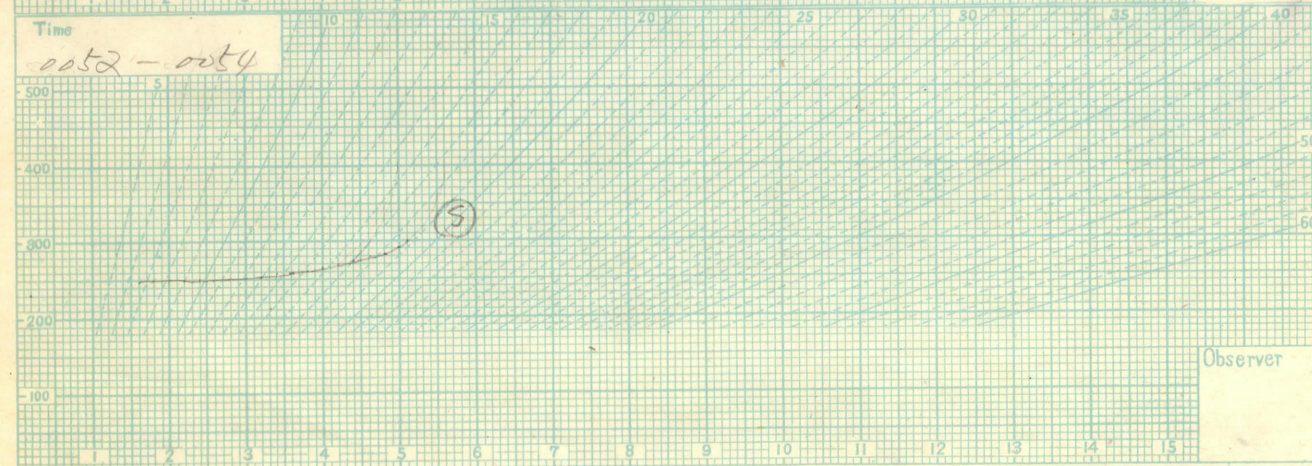
foF2 (44) JP
 h_pF2 (300) JP
 h'F2 300
 foF1
 h'F1
 foE
 h'E
 fEs E
 fminF 20
 fminE E
 Observer
 3000 MUF (M3000) (140) JP
 F2 (31) JP
 Zd

VIRTUAL HEIGHT IN KM



foF2 ~~280~~ PH
 h_pF2 ~~220~~ PH
 h'F2 260 H
 foF1
 h'F1
 foE
 h'E
 fEs E
 fminF 17
 fminE E_p
 Observer
 3000 MUF (M3000) ~~(156)~~ PH
 F2 (31) JP
 Zd

VIRTUAL HEIGHT IN KM



foF2 ~~300~~ JP
 h_pF2 ~~260~~ JP
 h'F2 250
 foF1
 h'F1
 foE
 h'E
 fEs E
 fminF 16
 fminE E
 Observer
 3000 MUF (M3000) (170) JP
 F2 (34) JP
 Zd

REMARKS

IONOSPHERIC RECORD

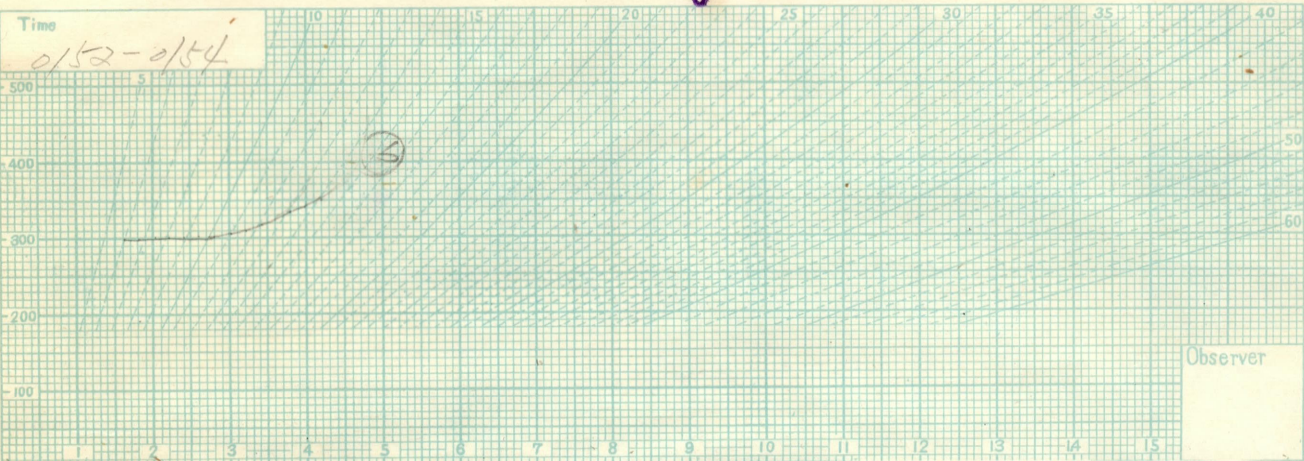
135°E MEAN TIME

DATE **26.9.9**

STATION *yamakarwa*

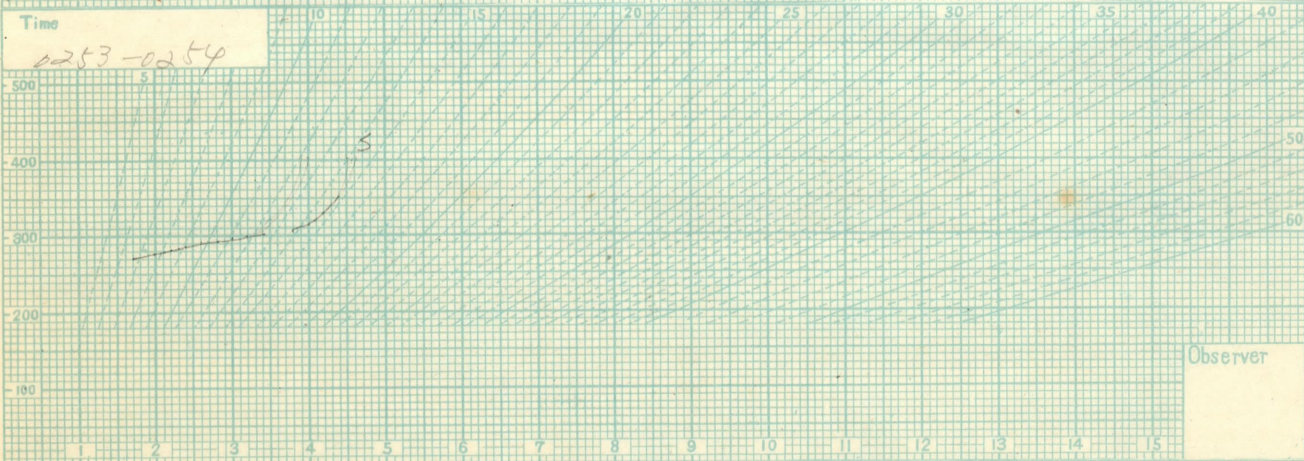
NO **1 44**

VIRTUAL HEIGHT IN KM



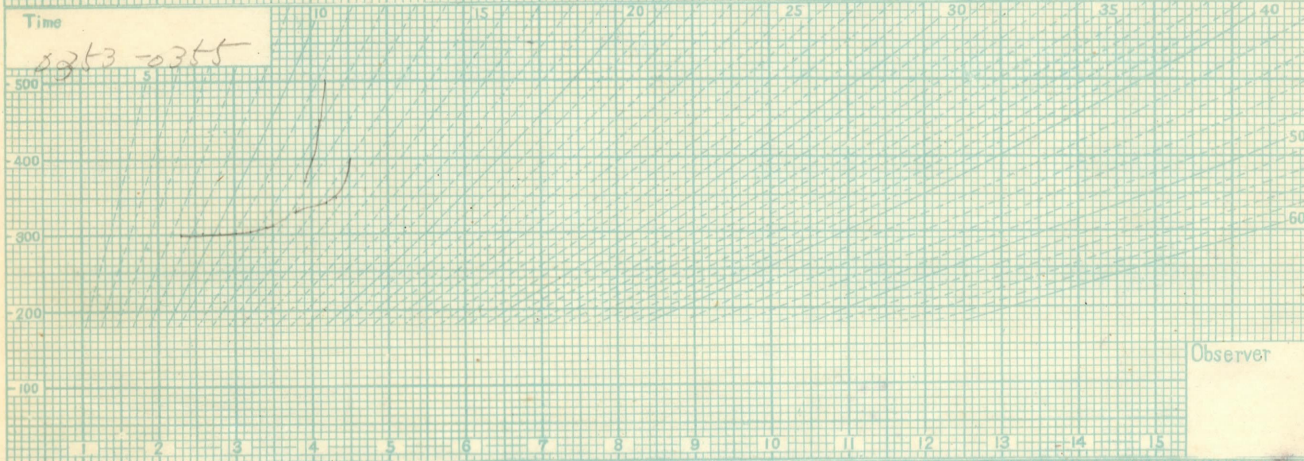
f_oF2 *(3.2) JP*
 $h_p F2$ *(320) JP*
 $h'F2$ *300*
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs *E*
 $f_{min}F$ *1.6*
 $f_{min}E$ *E*
 $MUF(3000)F2$ *(12.8) JP*
 $M(3000)F2$ *(3.2) JP*
 Z_d

Observer



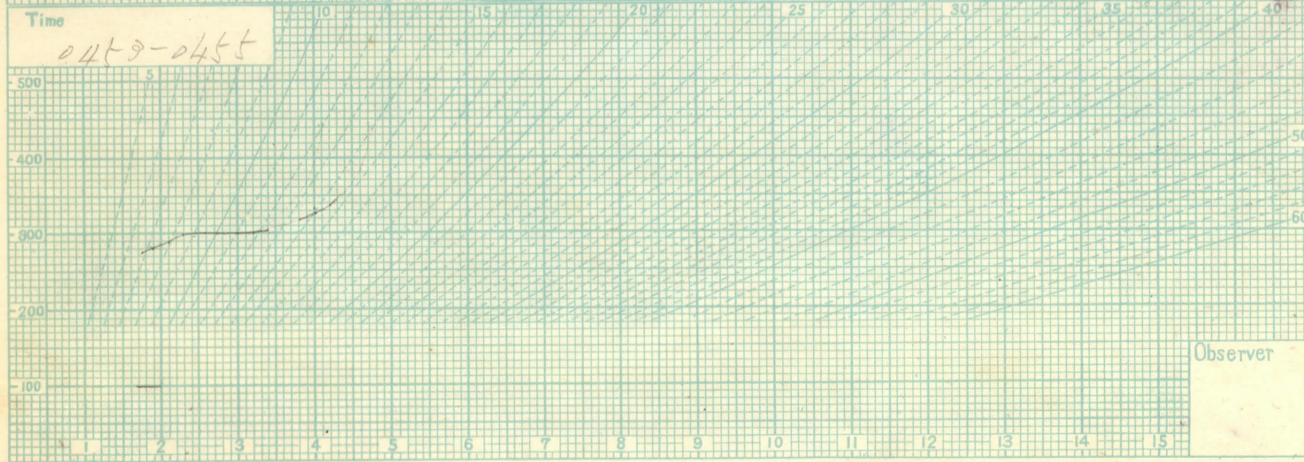
f_oF2 *4.0 JP*
 $h_p F2$ *(300) JS*
 $h'F2$ *270*
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs *E*
 $f_{min}F$ *1.7*
 $f_{min}E$ *E*
 $MUF(3000)F2$ *(12.8) JS*
 $M(3000)F2$ *(3.2) JS*
 Z_d

Observer



f_oF2 *4.2*
 $h_p F2$ *(310)*
 $h'F2$ *300*
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs *E*
 $f_{min}F$ *2.3*
 $f_{min}E$ *E*
 $MUF(3000)F2$ *(13.0) S*
 $M(3000)F2$ *(3.1) S*
 Z_d

Observer



f_oF2 *4.7 JP*
 $h_p F2$ *(300) JP*
 $h'F2$ *270 H*
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs *20*
 $f_{min}F$ *1.7*
 $f_{min}E$ *17*
 $MUF(3000)F2$ *(13.0) JP*
 $M(3000)F2$ *(3.1) JP*
 Z_d

Observer

REMARKS

IONOSPHERIC RECORD

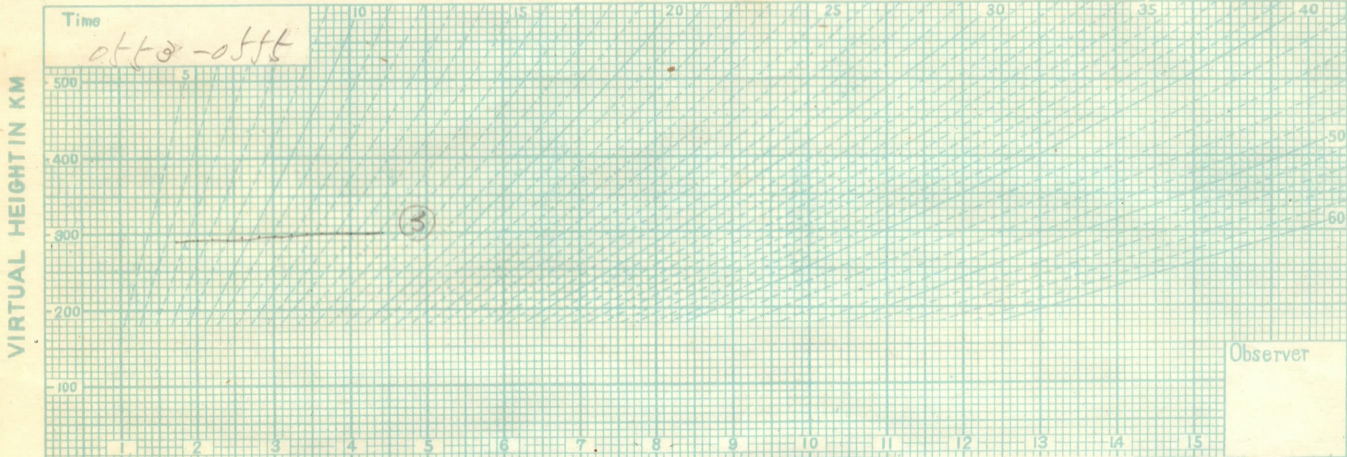
135°E MEAN TIME

DATE **26. 9. 9**

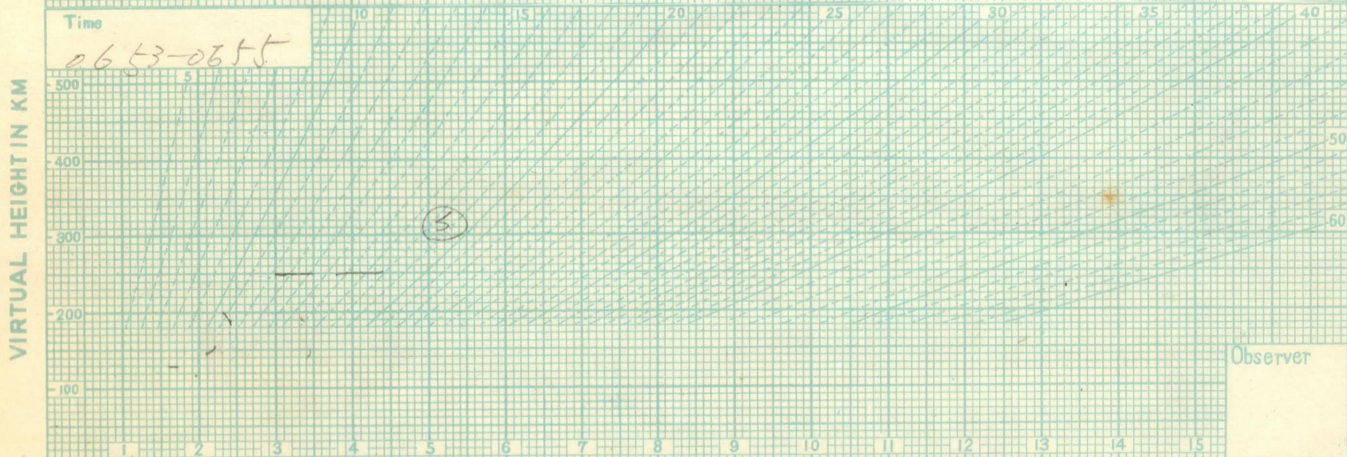
STATION

NO

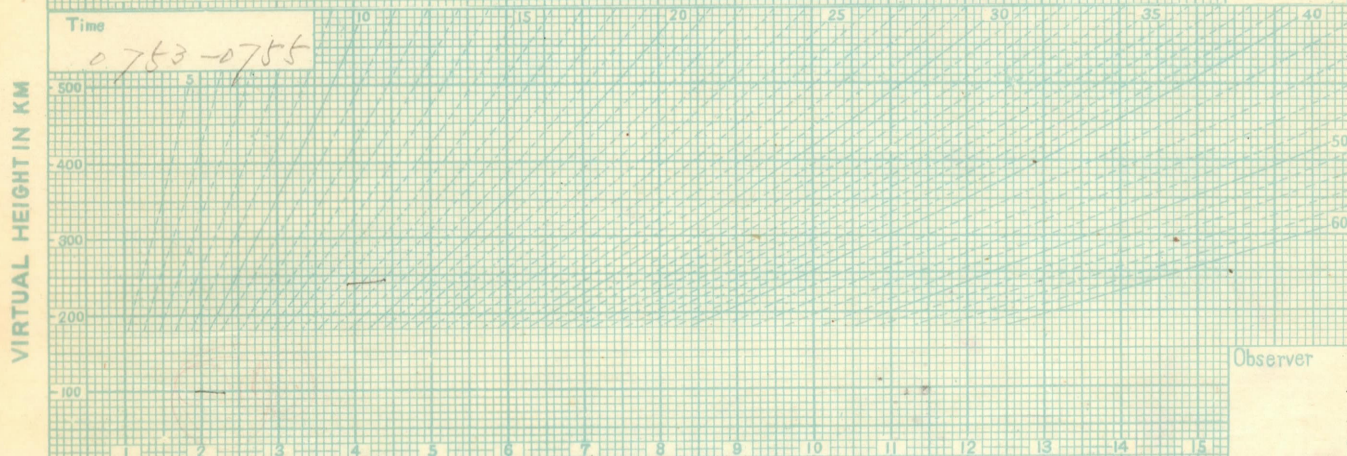
45



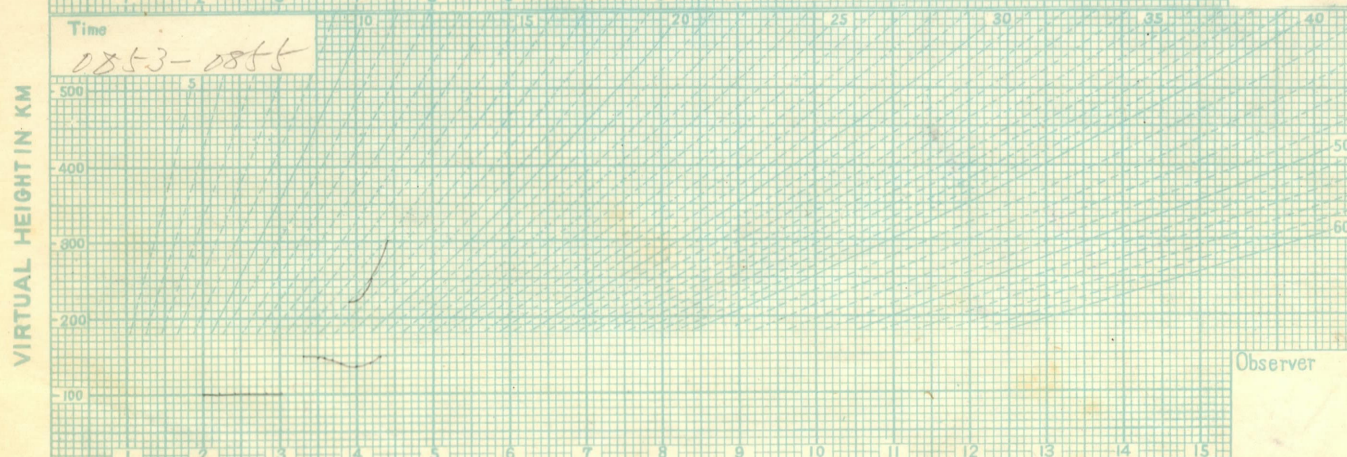
foF2 **C**
 h_pF2 **C**
 h'F2 **290**
 foF1 **Q**
 h'F1 **Q**
 foE **B**
 h'E **B**
 fEs **~~E~~ B**
 f_{min}F **17**
 f_{min}E **~~E~~ B**
 MUF(3000)F2 **S**
 F2 **S**
 Z_d



foF2 **S**
 h_pF2 **C**
 h'F2 **250**
 foF1 **Q**
 h'F1 **Q**
 foE **22**
 h'E **130**
 fEs **~~E~~ G**
 f_{min}F **30**
 f_{min}E **16**
 MUF(3000)F2 **S**
 F2 **C**
 Z_d



foF2 **S**
 h_pF2 **C**
 h'F2 **S**
 foF1 **S**
 h'F1 **240**
 foE **S**
 h'E **5.100**
 fEs **23**
 f_{min}F **37**
 f_{min}E **19**
 MUF(3000)F2 **C**
 F2 **C**
 Z_d



foF2 **S**
 h_pF2 **C**
 h'F2 **S**
 foF1 **(44)S**
 h'F1 **220**
 foE **A**
 h'E **A**
 fEs **43**
 f_{min}F **39**
 f_{min}E **20**
 MUF(3000)F2 **C**
 F2 **C**
 Z_d

REMARKS

IONOSPHERIC RECORD

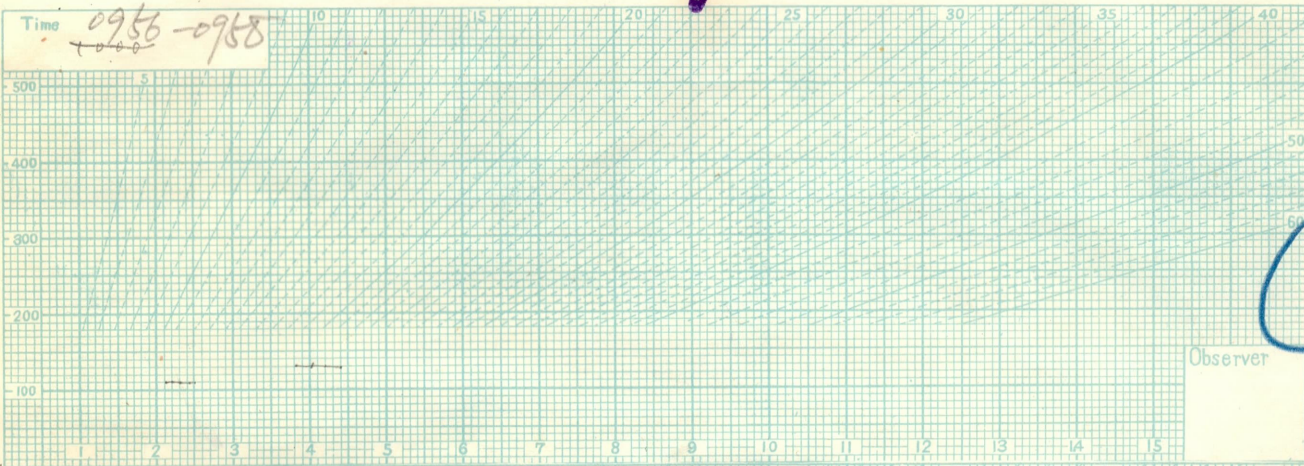
135°E MEAN TIME

DATE **26. 9. 9**

STATION *yamabara*

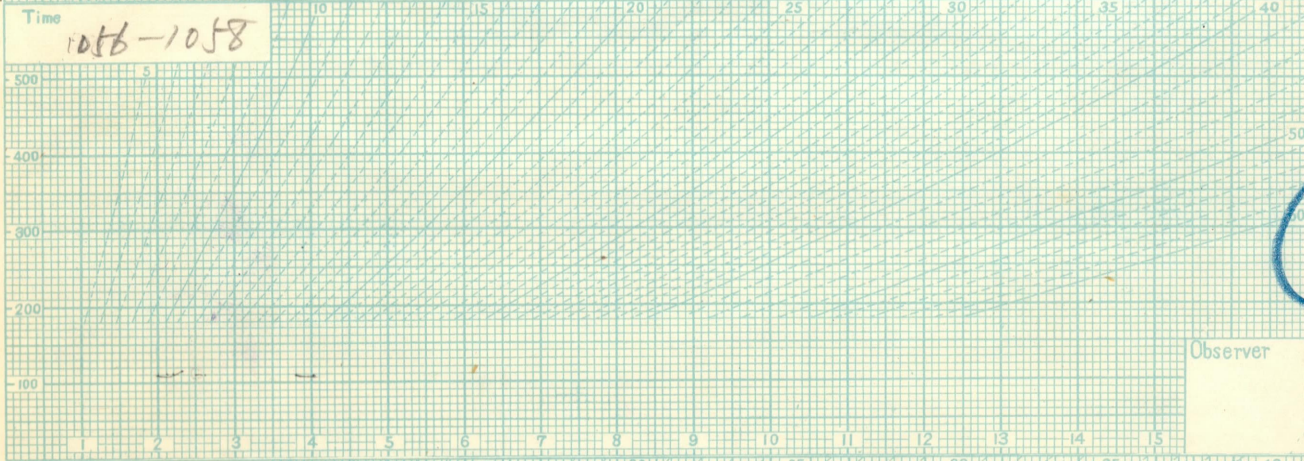
NO **46**

VIRTUAL HEIGHT IN KM



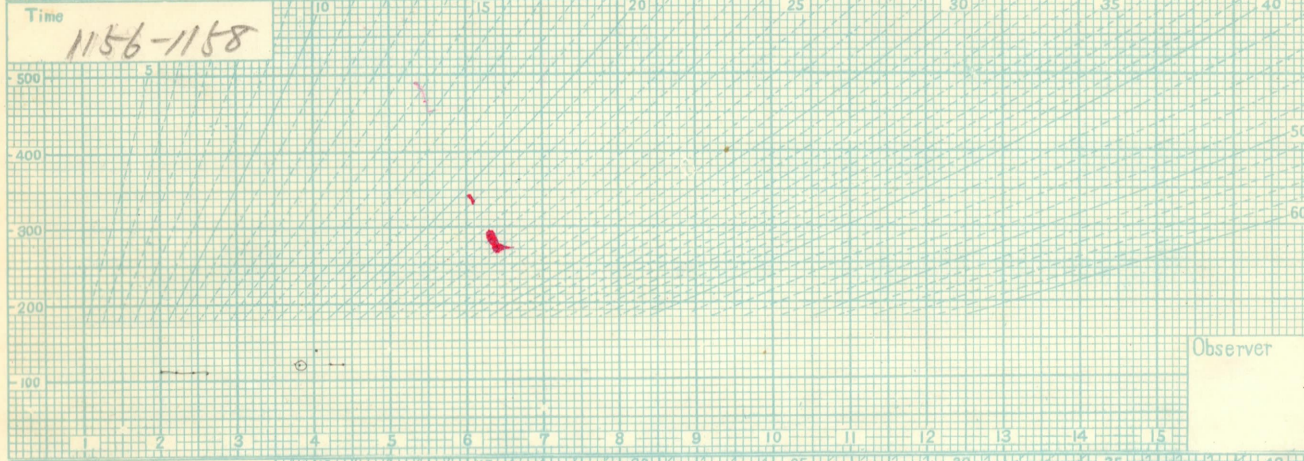
f _o F2	∞
h _p F2	∞
h'F2	∞
f _o F1	∞
h'F1	∞
f _o E	∞
h'E	110
fEs	4.4Y
f _{min} F	2.1
f _{min} E	2.1
Observer	
3000 MUF (M3000) F2	∞
Zd	∞

VIRTUAL HEIGHT IN KM



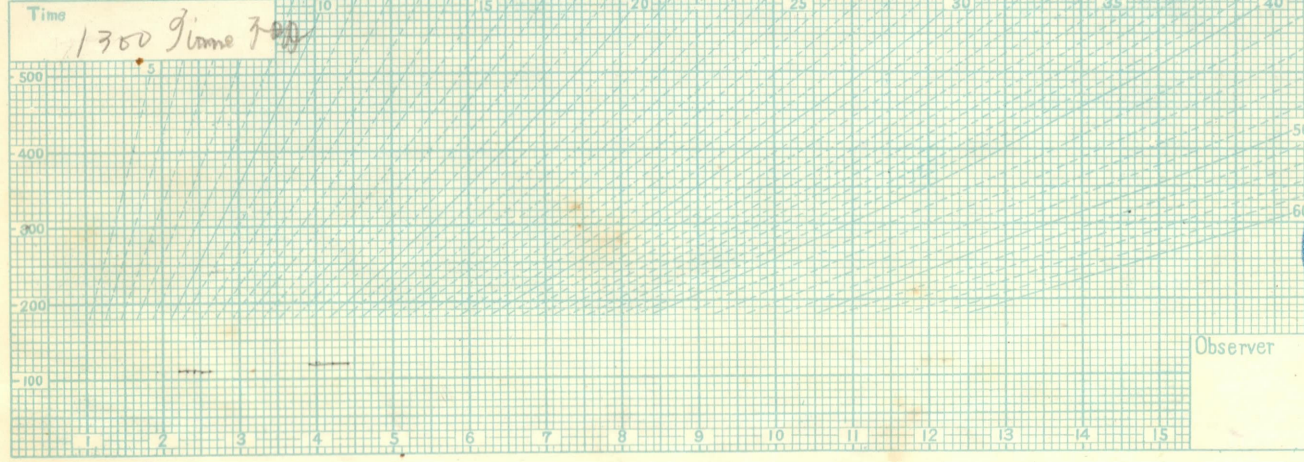
f _o F2	∞
h _p F2	∞
h'F2	∞
f _o F1	∞
h'F1	∞
f _o E	∞
h'E	110
fEs	4.0Y
f _{min} F	∞
f _{min} E	2.0
Observer	
3000 MUF (M3000) F2	∞
Zd	∞

VIRTUAL HEIGHT IN KM



f _o F2	∞
h _p F2	∞
h'F2	∞
f _o F1	∞
h'F1	∞
f _o E	∞
h'E	110
fEs	4.4Y
f _{min} F	∞
f _{min} E	2.0
Observer	
3000 MUF (M3000) F2	∞
Zd	∞

VIRTUAL HEIGHT IN KM



f _o F2	∞
h _p F2	∞
h'F2	∞
f _o F1	∞
h'F1	∞
f _o E	∞
h'E	110
fEs	4.4Y
f _{min} F	∞
f _{min} E	2.0
Observer	
3000 MUF (M3000) F2	∞
Zd	∞

REMARKS

IONOSPHERIC RECORD

135°E MEAN TIME

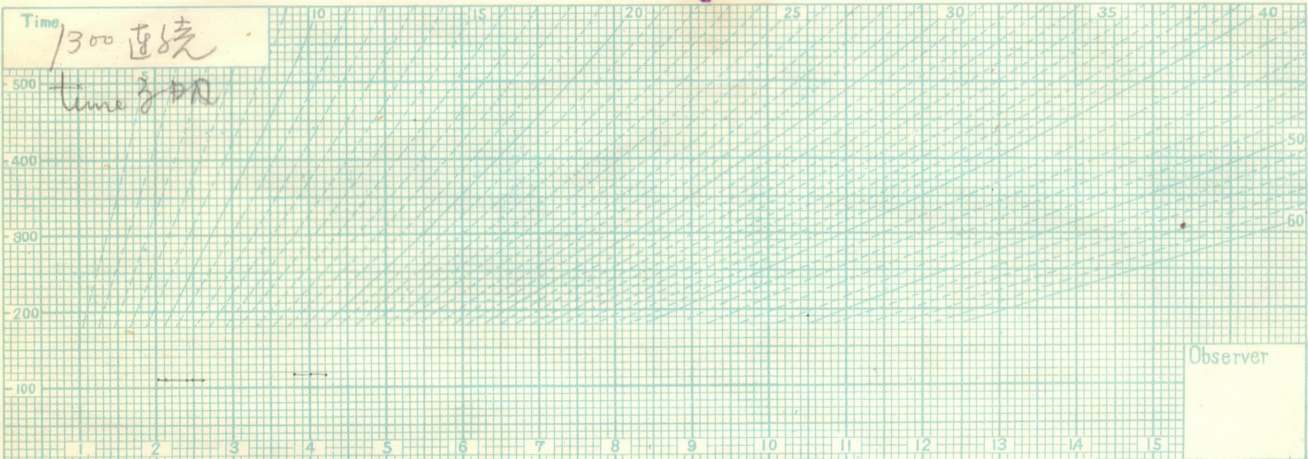
DATE **26. 4. 9**

STATION *yamabara*

NO

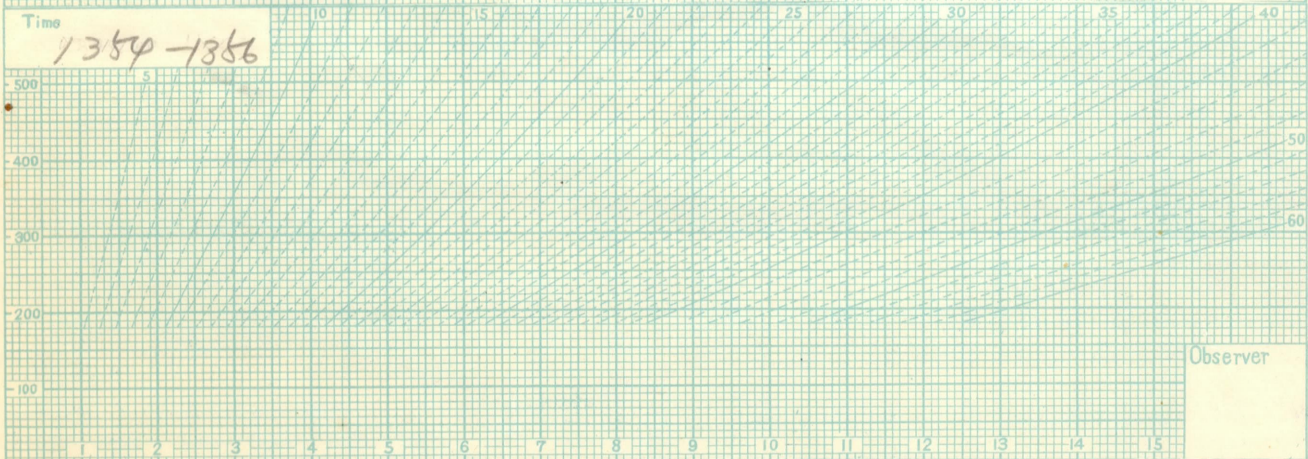
47

VIRTUAL HEIGHT IN KM



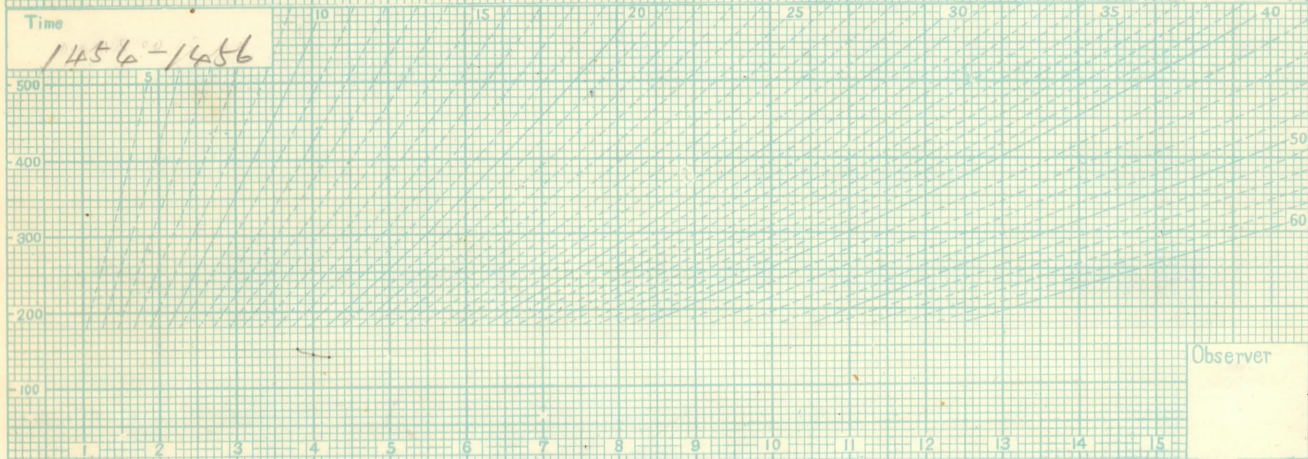
foF2	∞
h _p F2	∞
h'F2	∞
foF1	∞
h'F1	∞
foE	∞
h'E	∞
fEs	42.4
fminF	∞
fminE	∞
3000 MUF (M3000)	∞
F2	∞
Zd	

VIRTUAL HEIGHT IN KM



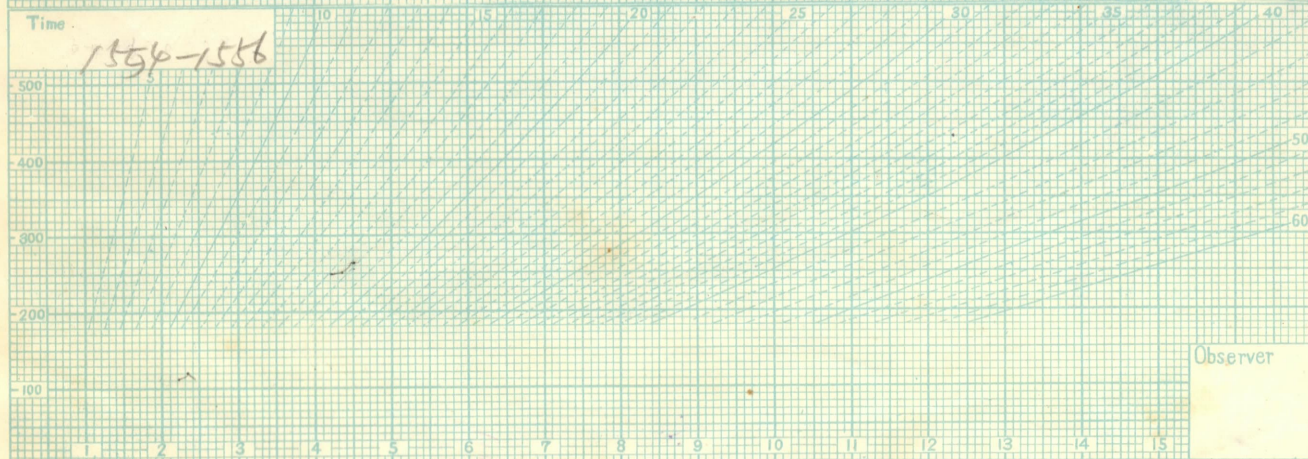
foF2	∞
h _p F2	∞
h'F2	∞
foF1	∞
h'F1	∞
foE	∞
h'E	∞
fEs	∞
fminF	∞
fminE	∞
3000 MUF (M3000)	∞
F2	∞
Zd	

VIRTUAL HEIGHT IN KM



foF2	∞
h _p F2	∞
h'F2	∞
foF1	∞
h'F1	∞
foE	∞
h'E	∞
fEs	42.4
fminF	∞
fminE	38.5
3000 MUF (M3000)	∞
F2	∞
Zd	

VIRTUAL HEIGHT IN KM



foF2	∞
h _p F2	∞
h'F2	∞
foF1	∞
h'F1	250
foE	23.5
h'E	110
fEs	42.4
fminF	42.4
fminE	∞
3000 MUF (M3000)	∞
F2	∞
Zd	

REMARKS

IONOSPHERIC RECORD

135°E MEAN TIME

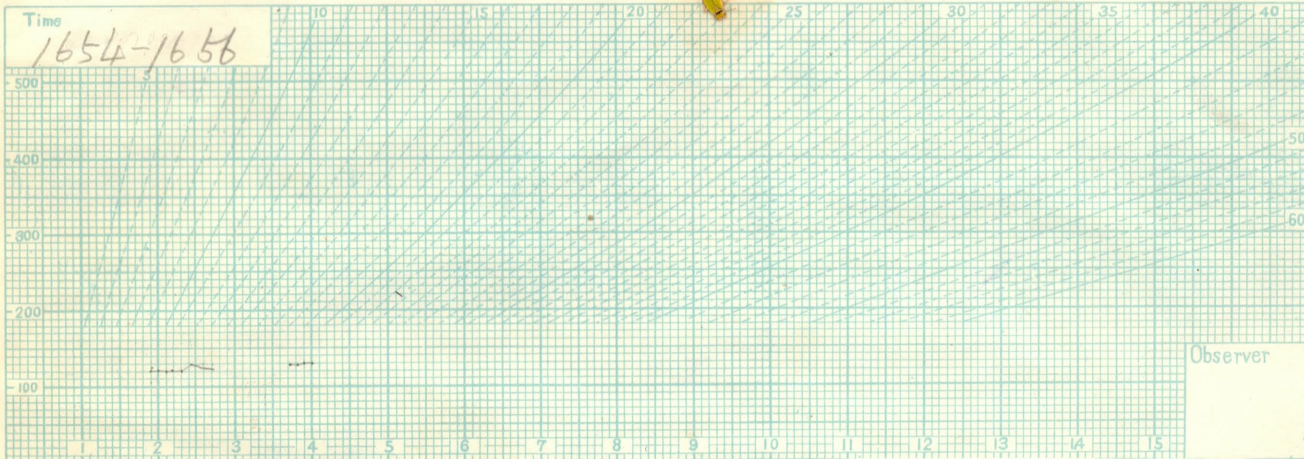
DATE **26.9.9**

STATION *Jamara*

NO

48

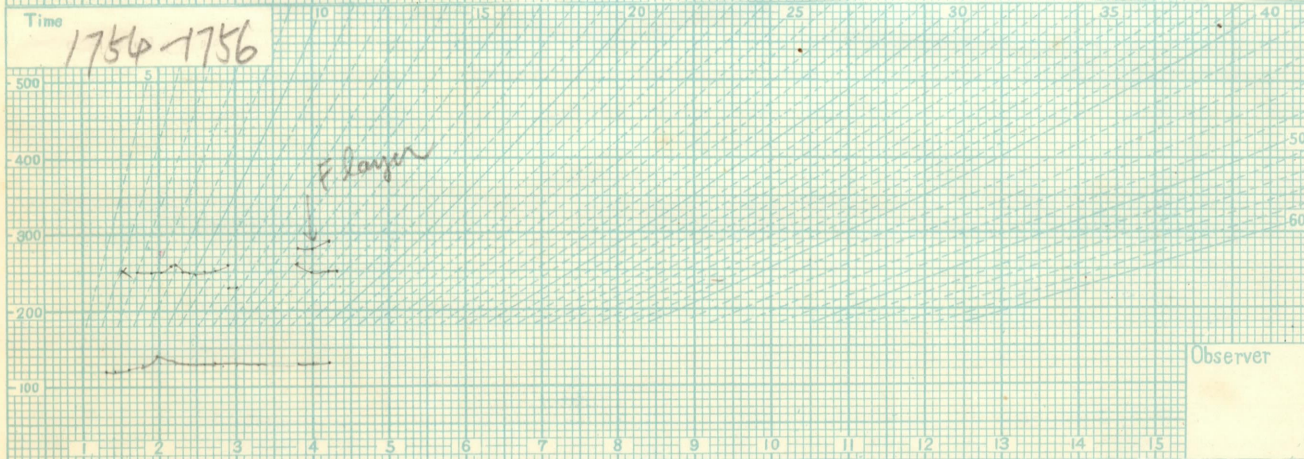
VIRTUAL HEIGHT IN KM



f_oF2 5
 h_pF2 5
 $h'F2$ 5
 f_oF1 5
 $h'F1$ 5
 f_oE 24
 $h'E$ 120
 fEs 40Y
 $f_{min}F$ 2A
 $f_{min}E$ 19
 $MUF_{3000}F2$ 5
 Z_d

Observer

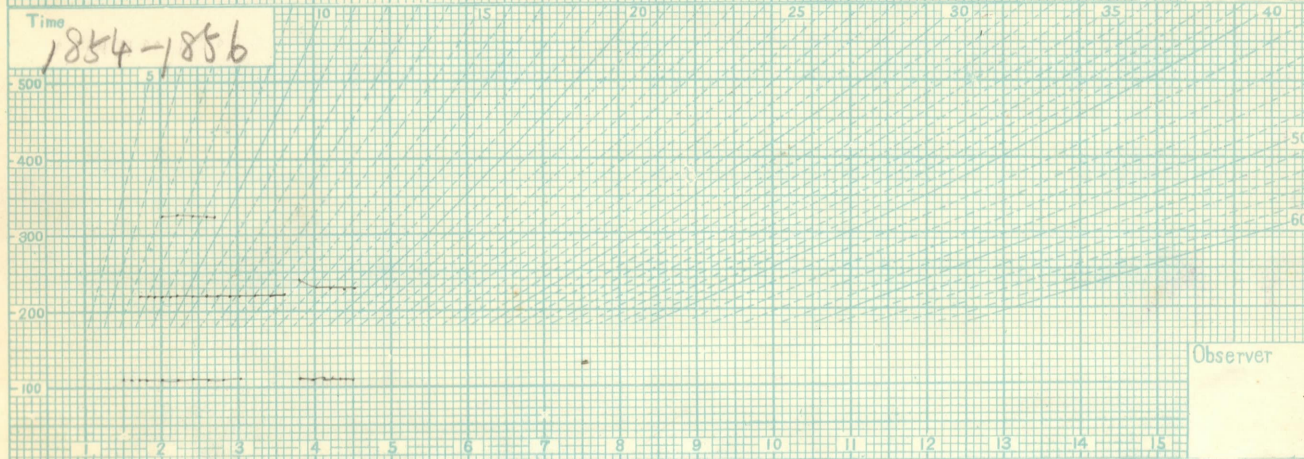
VIRTUAL HEIGHT IN KM



f_oF2 5
 h_pF2 5
 $h'F2$ 280
 f_oF1 5
 $h'F1$ 5
 f_oE 19
 $h'E$ 120
 fEs 42Y
 $f_{min}F$ 38Y
 $f_{min}E$ 13
 $MUF_{3000}F2$ 5
 Z_d

Observer

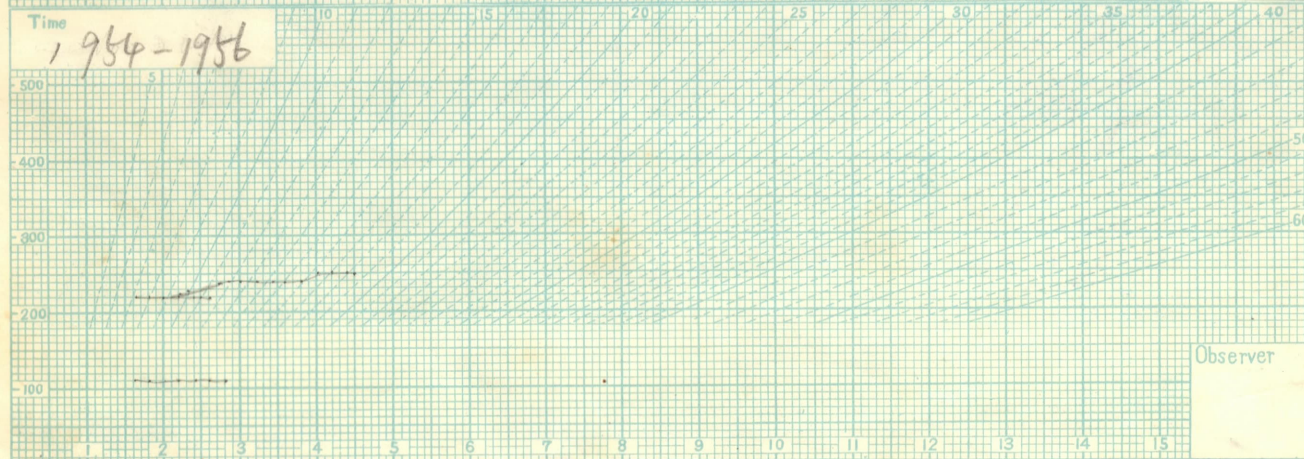
VIRTUAL HEIGHT IN KM



f_oF2 5
 h_pF2 5
 $h'F2$ 2A
 f_oF1 5
 $h'F1$ 5
 f_oE 5
 $h'E$ 5
 fEs 45Y
 $f_{min}F$ A
 $f_{min}E$ 15
 $MUF_{3000}F2$ 5
 Z_d

Observer

VIRTUAL HEIGHT IN KM



f_oF2 5
 h_pF2 5
 $h'F2$ 220A
 f_oF1 5
 $h'F1$ 5
 f_oE 5
 $h'E$ 5
 fEs 28
 $f_{min}F$ A
 $f_{min}E$ 16
 $MUF_{3000}F2$ 5
 Z_d

Observer

REMARKS

IONOSPHERIC RECORD

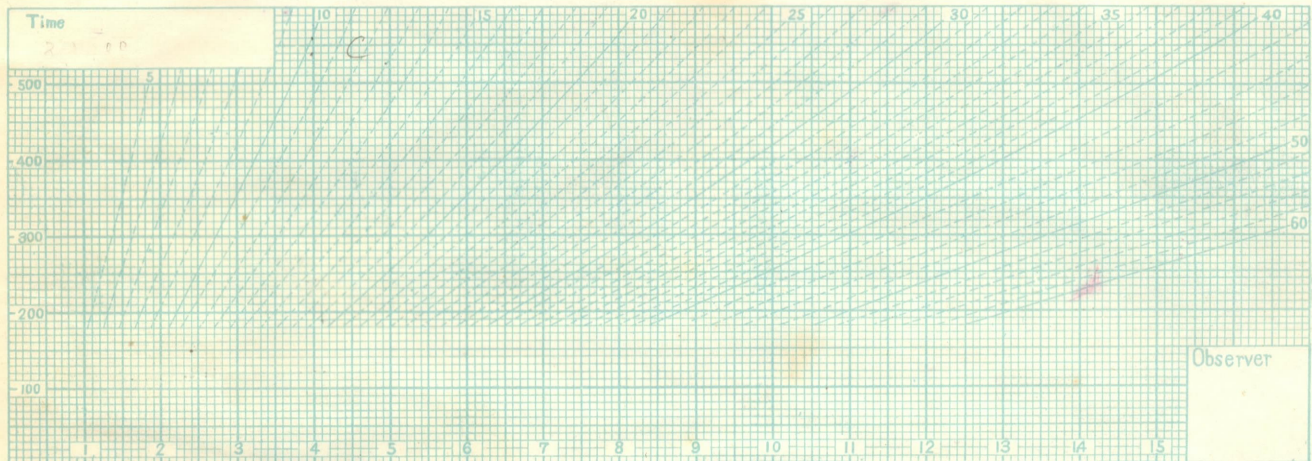
135°E MEAN TIME

DATE **26. 9. 91**

STATION *Yamaguchi*

NO **49**

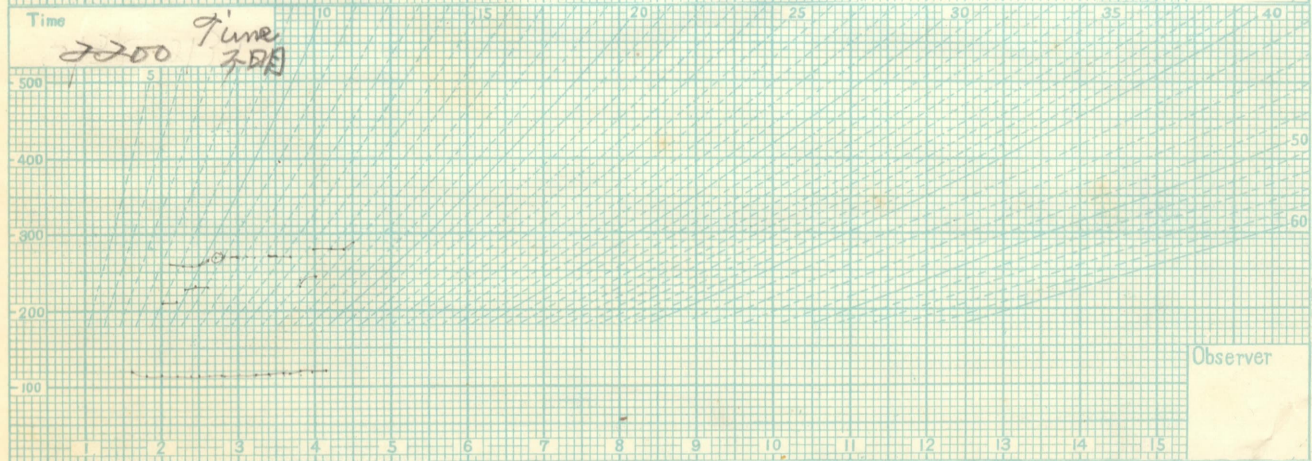
VIRTUAL HEIGHT IN KM



f_oF2 C
 h_pF2 B
 $h'F2$ [240]C
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs C
 $f_{min}F$ 10C
 $f_{min}E$ [16]C
 $MUF(3000)F2$ 30C
 $F2$ C
 Z_d

Observer

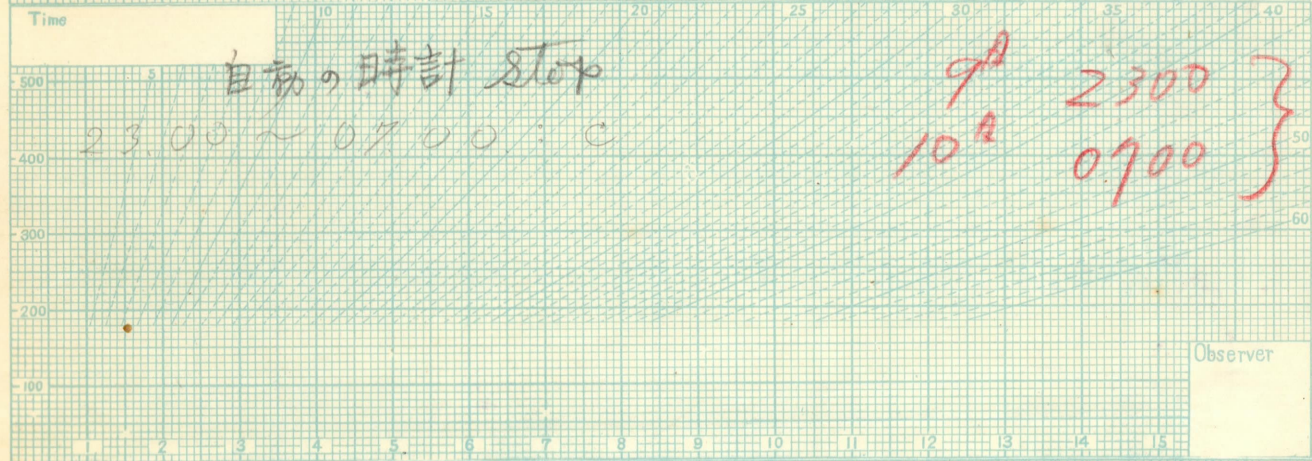
VIRTUAL HEIGHT IN KM



f_oF2 S
 h_pF2 S
 $h'F2$ 260
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs 41
 $f_{min}F$ 21A
 $f_{min}E$ 16
 $MUF(3000)F2$ 5
 $F2$ S
 Z_d

Observer

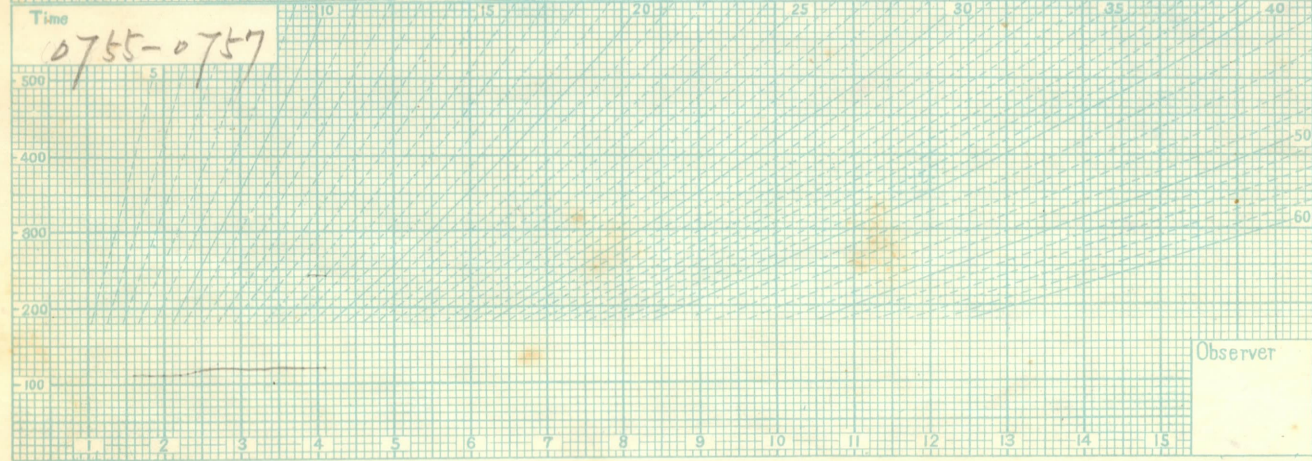
VIRTUAL HEIGHT IN KM



f_oF2
 h_pF2
 $h'F2$
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs
 $f_{min}F$
 $f_{min}E$
 $MUF(3000)F2$
 $F2$
 Z_d

Observer

VIRTUAL HEIGHT IN KM



f_oF2 S
 h_pF2 S
 $h'F2$ S
 f_oF1 S A
 $h'F1$ S A
 f_oE A
 $h'E$ A
 fEs 41
 $f_{min}F$ A
 $f_{min}E$ 16
 $MUF(3000)F2$ E
 $F2$ E
 Z_d

Observer

REMARKS

Time 2200 7月 不明

自動の時計 stop
23:00 ~ 07:00 : C

9A 2300 }
10A 0700 } C

IONOSPHERIC RECORD

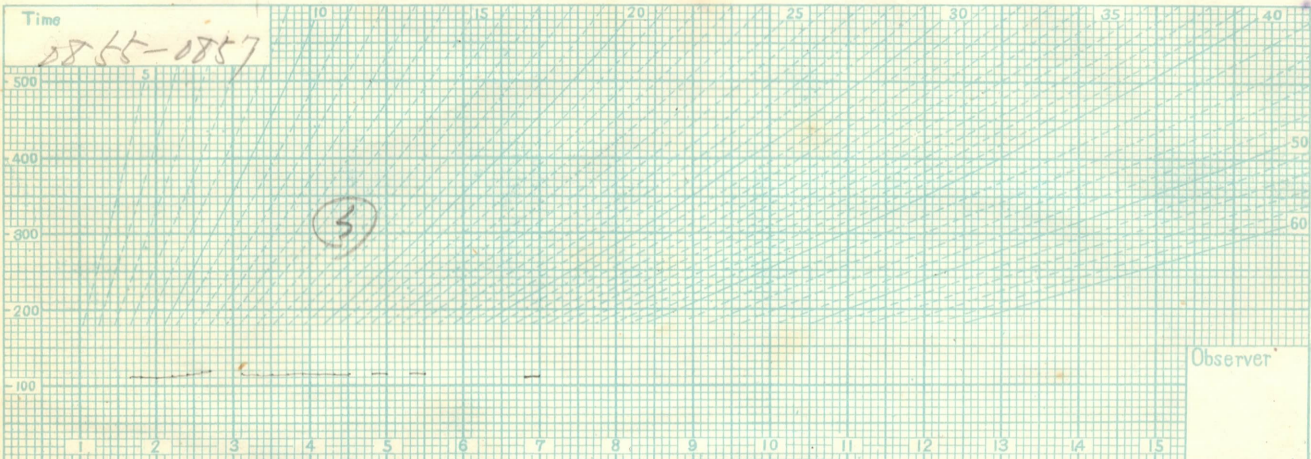
135°E MEAN TIME

DATE **26.9.190**

STATION **Yamagawa**

NO **50**

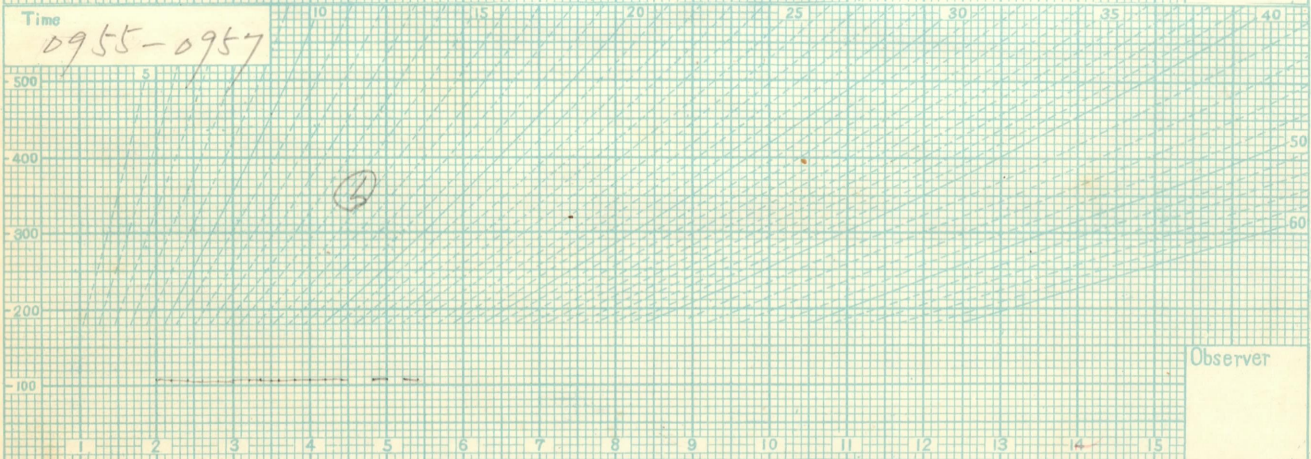
VIRTUAL HEIGHT IN KM



foF2 **C**
 h_pF2 **C**
 h'F2 **S A**
 foF1 **S A**
 h'F1 **S A**
 foE **S B**
 h'E **S 100**
 fEs **70 Y**
 f_{min}F **S A**
 f_{min}E **16**
 3000 MUF **C**
 (M3000) F2 **C**
 Z_d

Observer

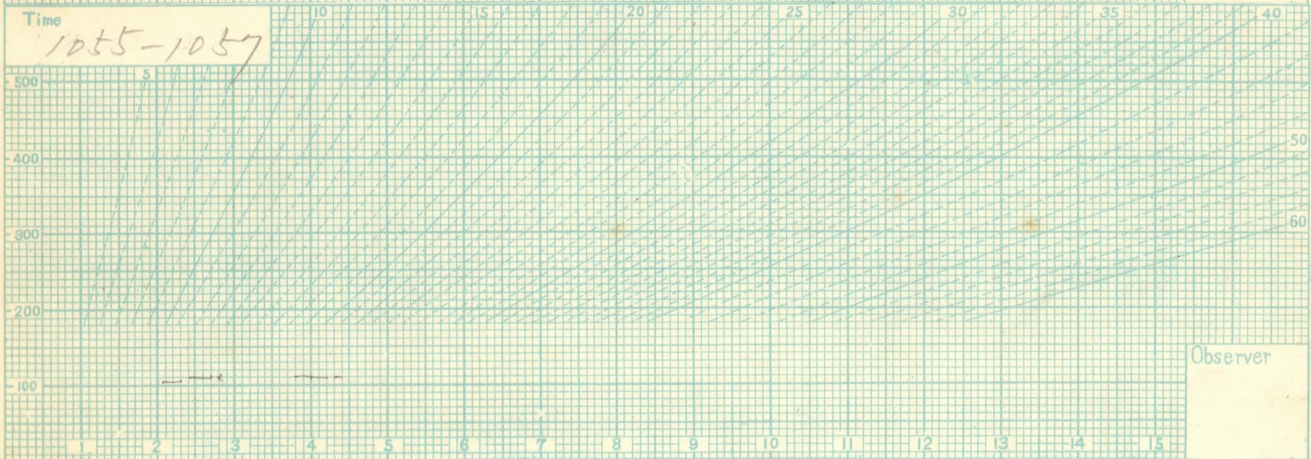
VIRTUAL HEIGHT IN KM



foF2 **C**
 h_pF2 **C**
 h'F2 **S A**
 foF1 **S A**
 h'F1 **S A**
 foE **S A**
 h'E **S A**
 fEs **54 Y**
 f_{min}F **S A**
 f_{min}E **20**
 3000 MUF **C**
 (M3000) F2 **C**
 Z_d

Observer

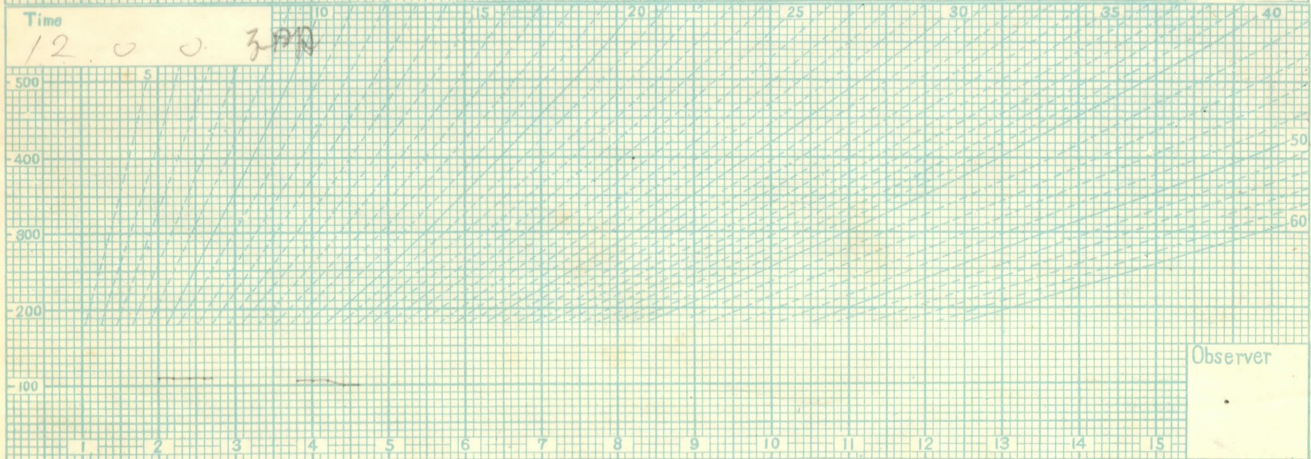
VIRTUAL HEIGHT IN KM



foF2 **S**
 h_pF2 **S**
 h'F2 **S**
 foF1 **C**
 h'F1 **S**
 foE **S B**
 h'E **S 100**
 fEs **44 Y**
 f_{min}F **S A**
 f_{min}E **20**
 3000 MUF **S**
 (M3000) F2 **C**
 Z_d

Observer

VIRTUAL HEIGHT IN KM



foF2 **S**
 h_pF2 **S**
 h'F2 **C**
 foF1 **C**
 h'F1 **S**
 foE **S B**
 h'E **S 100**
 fEs **46 Y**
 f_{min}F **S A**
 f_{min}E **20**
 3000 MUF **S**
 (M3000) F2 **C**
 Z_d

Observer

REMARKS

IONOSPHERIC RECORD

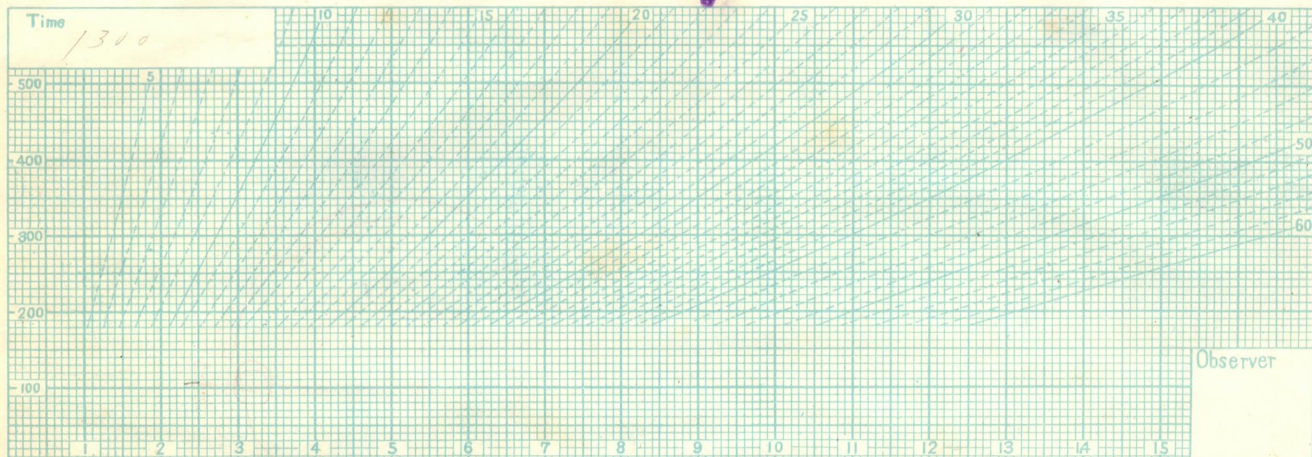
135°E MEAN TIME

DATE **26. 9. 10**

STATION **yamakawa**

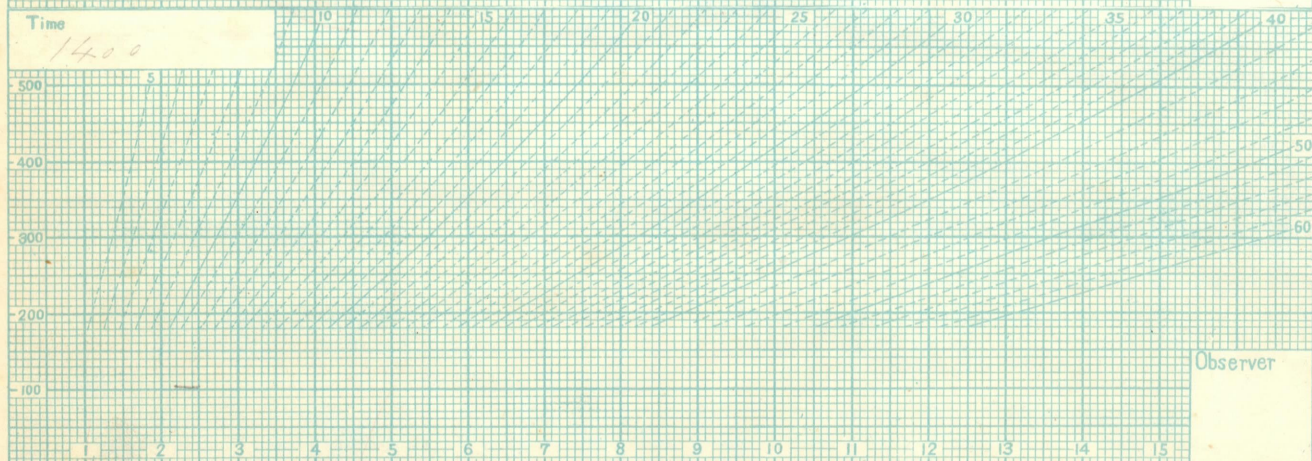
NO **51**

VIRTUAL HEIGHT IN KM



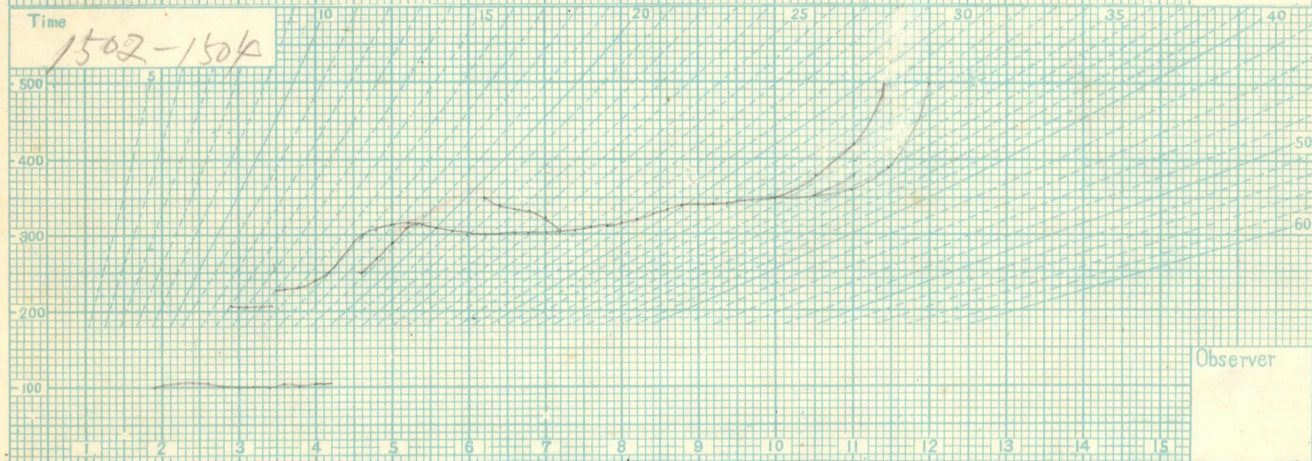
foF2 **S**
 h_pF2 **S**
 h'F2 **S**
 foF1 **S**
 h'F1 **S**
 foE **S**
 h'E **S100**
 fEs **S50**
 f_{min}F **S**
 f_{min}E **20**
 MUF(3000)F2 **S**
 F2 **S**
 Z_d

VIRTUAL HEIGHT IN KM



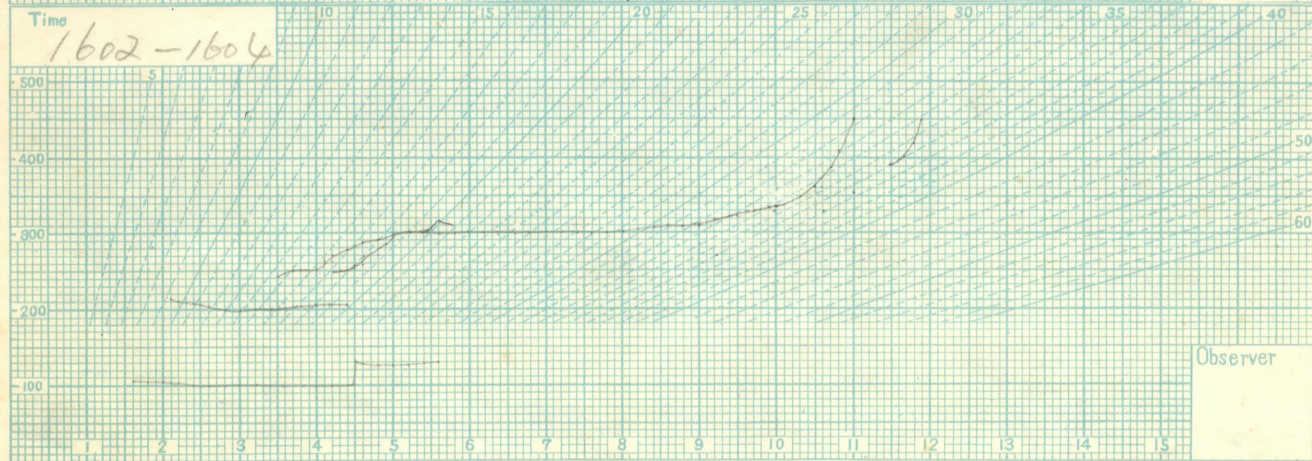
foF2 **S**
 h_pF2 **S**
 h'F2 **S**
 foF1 **S**
 h'F1 **S**
 foE **S**
 h'E **S100**
 fEs **S50**
 f_{min}F **S**
 f_{min}E **20**
 MUF(3000)F2 **S**
 F2 **S**
 Z_d

VIRTUAL HEIGHT IN KM



foF2 **11.4**
 h_pF2 **340**
 h'F2 **300**
 foF1 **L**
 h'F1 **230**
 foE **A**
 h'E **A**
 fEs **402**
 f_{min}F **35**
 f_{min}E **1.9**
 MUF(3000)F2 **33.7**
 F2 **29**
 Z_d

VIRTUAL HEIGHT IN KM



foF2 **11.1**
 h_pF2 **320**
 h'F2 **300**
 foF1 **L**
 h'F1 **240**
 foE **A**
 h'E **A**
 fEs **56**
 f_{min}F **35**
 f_{min}E **1.6**
 MUF(3000)F2 **34.5**
 F2 **31**
 Z_d

REMARKS

IONOSPHERIC RECORD

135°E MEAN TIME

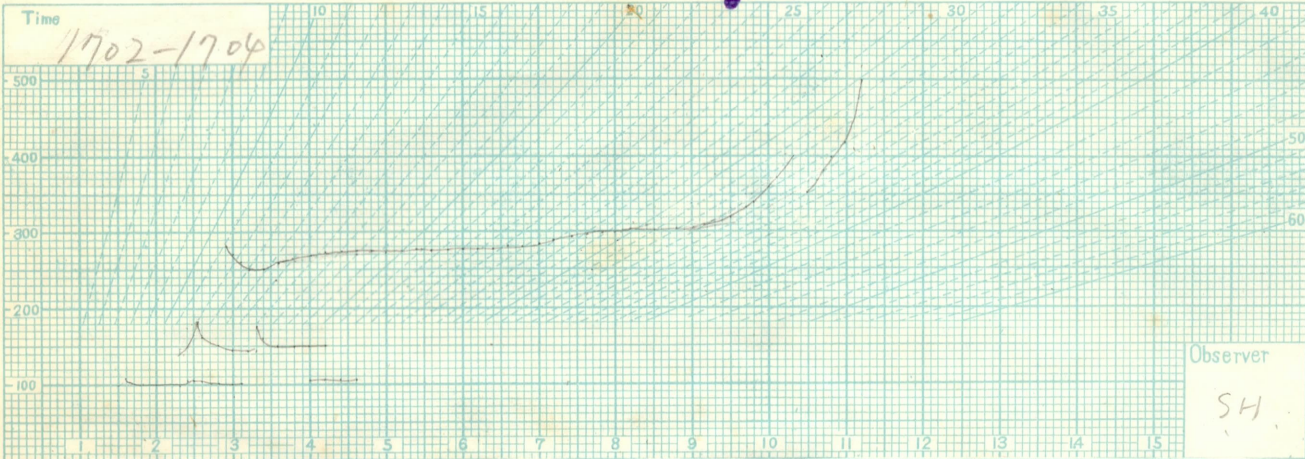
DATE **26.9.40**

STATION **yamakawa**

NO

52

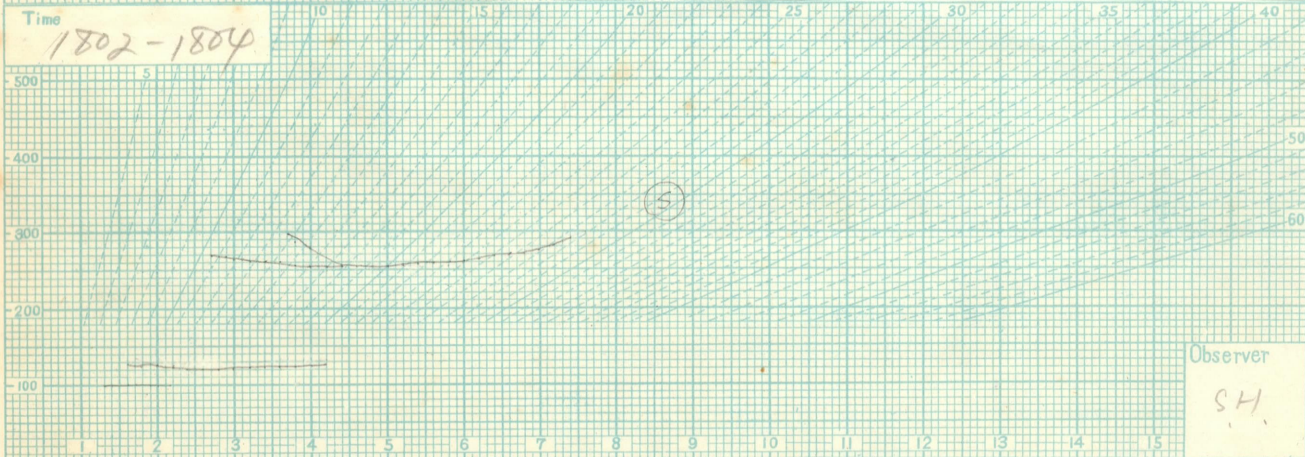
VIRTUAL HEIGHT IN KM



foF2 **106 P**
 h_pF2 **300 P**
 h'F2 **270**
 foF1 **L**
 h'F1 **250**
 foE **25 A**
 h'E **140 A**
 fEs **46 Y**
 f_{min}F **29**
 f_{min}E **16**
 MUF(3000)F2 **33.4**
 F2 **31 P**
 Z_d

Observer **SH**

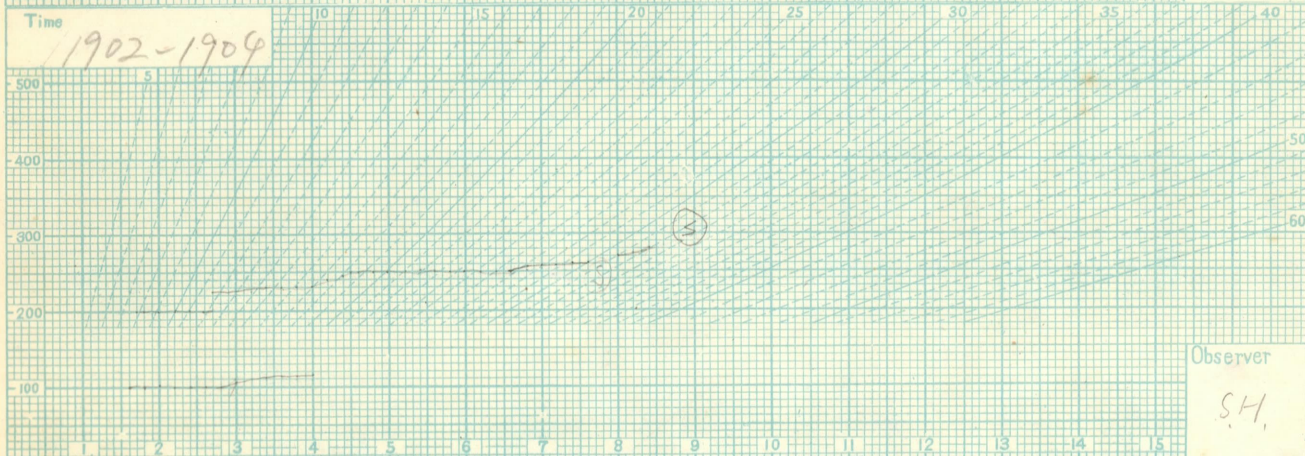
VIRTUAL HEIGHT IN KM



foF2 **S**
 h_pF2 **S**
 h'F2 **250**
 foF1 **Q**
 h'F1 **Q**
 foE **A**
 h'E **A**
 fEs **42**
 f_{min}F **27 A**
 f_{min}E **13**
 MUF(3000)F2 **S**
 F2 **S**
 Z_d

Observer **SH**

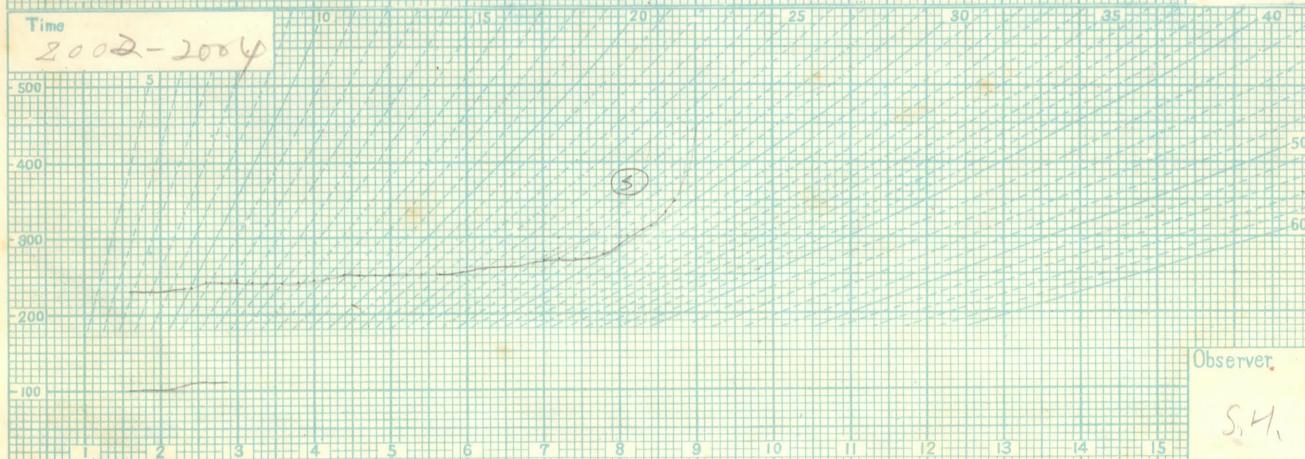
VIRTUAL HEIGHT IN KM



foF2 **S**
 h_pF2 **S**
 h'F2 **220**
 foF1 **.**
 h'F1 **.**
 foE **.**
 h'E **.**
 fEs **40**
 f_{min}F **27 A**
 f_{min}E **16**
 MUF(3000)F2 **S**
 F2 **S**
 Z_d

Observer **SH**

VIRTUAL HEIGHT IN KM



foF2 **84 JS**
 h_pF2 **(270) JS**
 h'F2 **230**
 foF1 **.**
 h'F1 **.**
 foE **.**
 h'E **.**
 fEs **29**
 f_{min}F **16**
 f_{min}E **16**
 MUF(3000)F2 **(27.5) JS**
 F2 **(32) JS**
 Z_d

Observer **SH**

REMARKS

IONOSPHERIC RECORD

135°E MEAN TIME

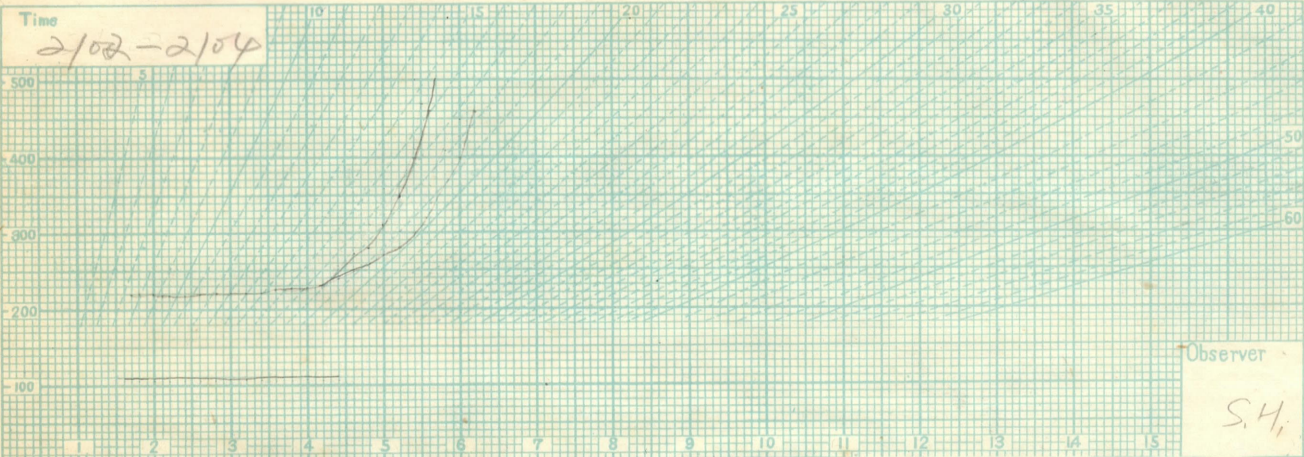
DATE **26.9.10**

STATION *yamaguchi*

NO

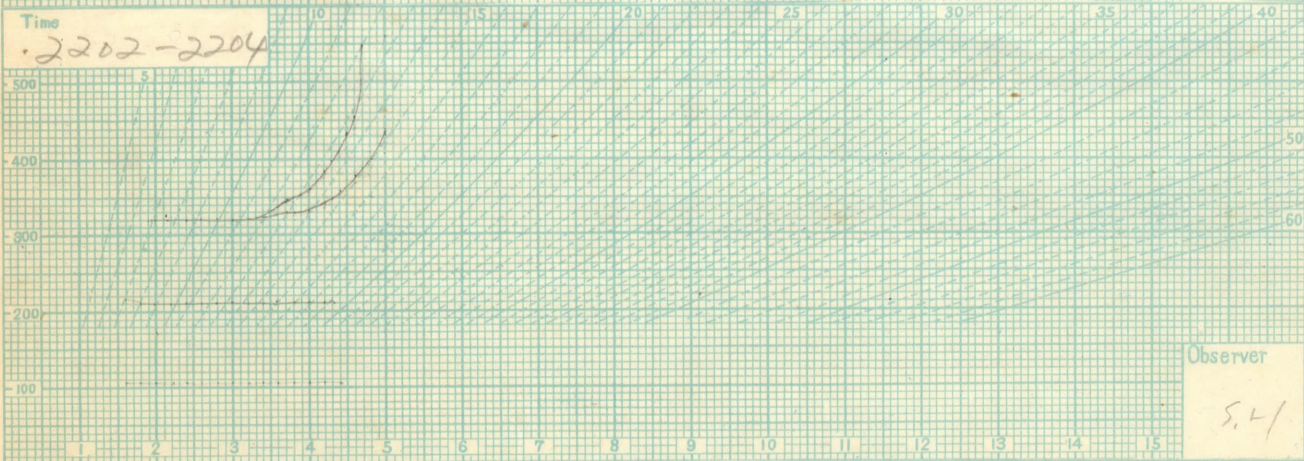
53

VIRTUAL HEIGHT IN KM



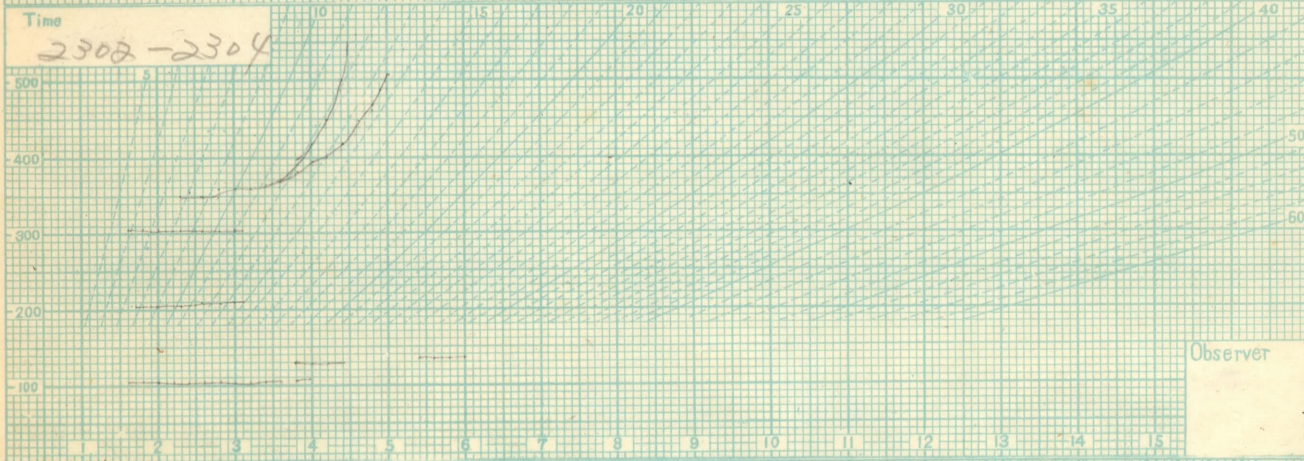
foF2 **57**
 h_pF2 **270**
 h'F2 **220^A**
 foF1
 h'F1
 foE
 h'E
 fEs **44**
 f_{min}F **A**
 f_{min}E **16**
 Observer
S.H.
 MUF(3000)F2 **18.2**
 F2 **31**
 Z_d

VIRTUAL HEIGHT IN KM



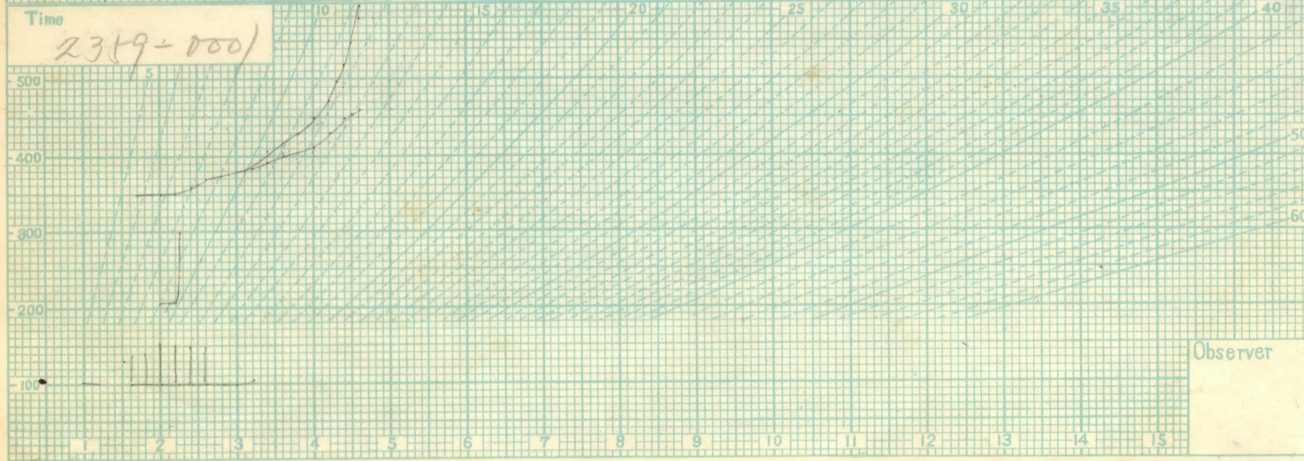
foF2 **47**
 h_pF2 **350**
 h'F2 **320^A**
 foF1
 h'F1
 foE
 h'E
 fEs **44**
 f_{min}F **A**
 f_{min}E **16**
 Observer
S.H.
 MUF(3000)F2 **13.5**
 F2 **28**
 Z_d

VIRTUAL HEIGHT IN KM



foF2 **45**
 h_pF2 **380**
 h'F2 **350**
 foF1
 h'F1
 foE
 h'E
 fEs **60^Y**
 f_{min}F **23^A**
 f_{min}E **16**
 Observer
S.H.
 MUF(3000)F2 **12.2**
 F2 **27**
 Z_d

VIRTUAL HEIGHT IN KM



foF2 **46**
 h_pF2 **430**
 h'F2 **350**
 foF1
 h'F1
 foE
 h'E
 fEs **32^F**
 f_{min}F **17**
 f_{min}E **E**
 Observer
S.H.
 MUF(3000)F2 **11.7**
 F2 **25**
 Z_d

REMARKS

IONOSPHERIC RECORD

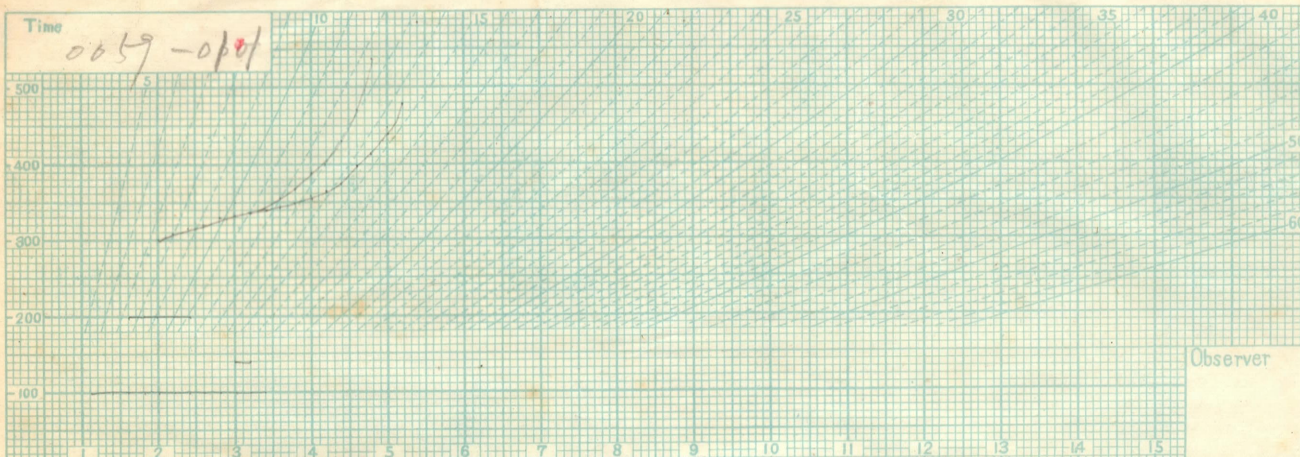
135° E MEAN TIME

DATE **26.9.11**

STATION *yamatsukur*

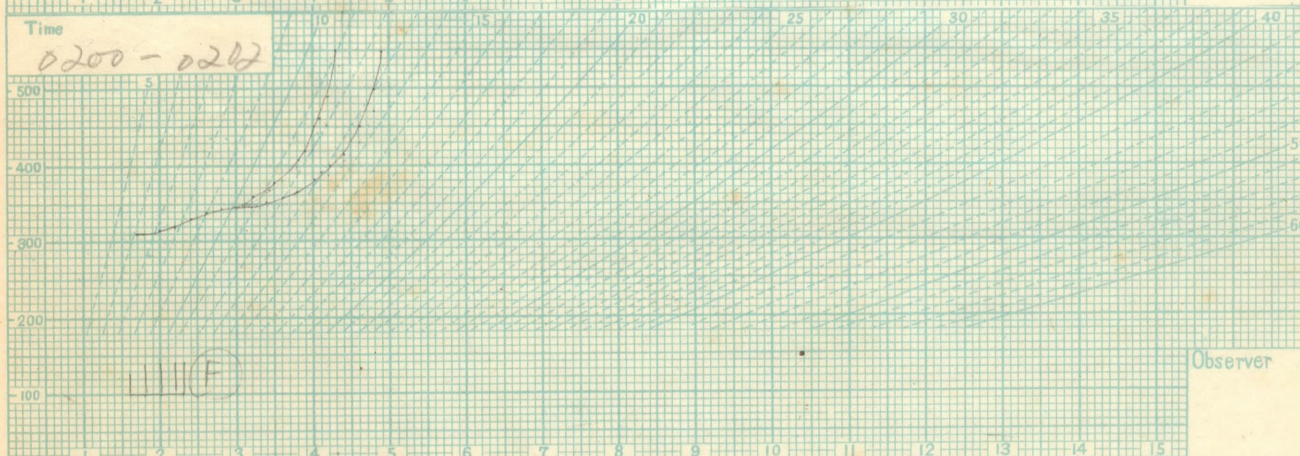
NO **54**

VIRTUAL HEIGHT IN KM



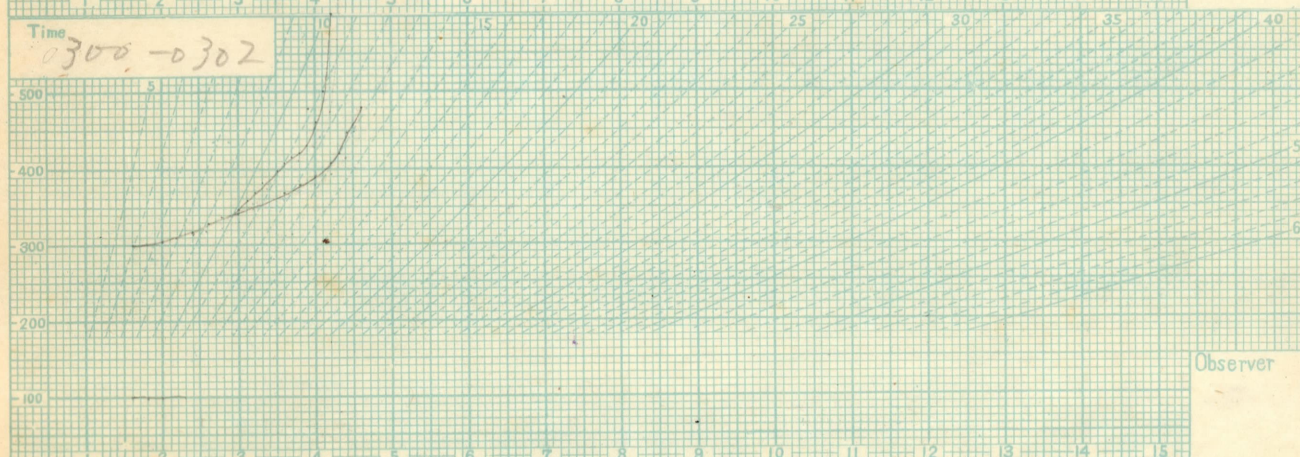
f_oF2 *4.8*
 h_pF2 *390*
 $h'F2$ *310*
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs *3.4*
 $f_{min}F$ *2.1 A*
 $f_{min}E$ *1.1*
 Observer
 $MUF(3000)F2$ *13.0*
 $F2$ *27*
 Z_d

VIRTUAL HEIGHT IN KM



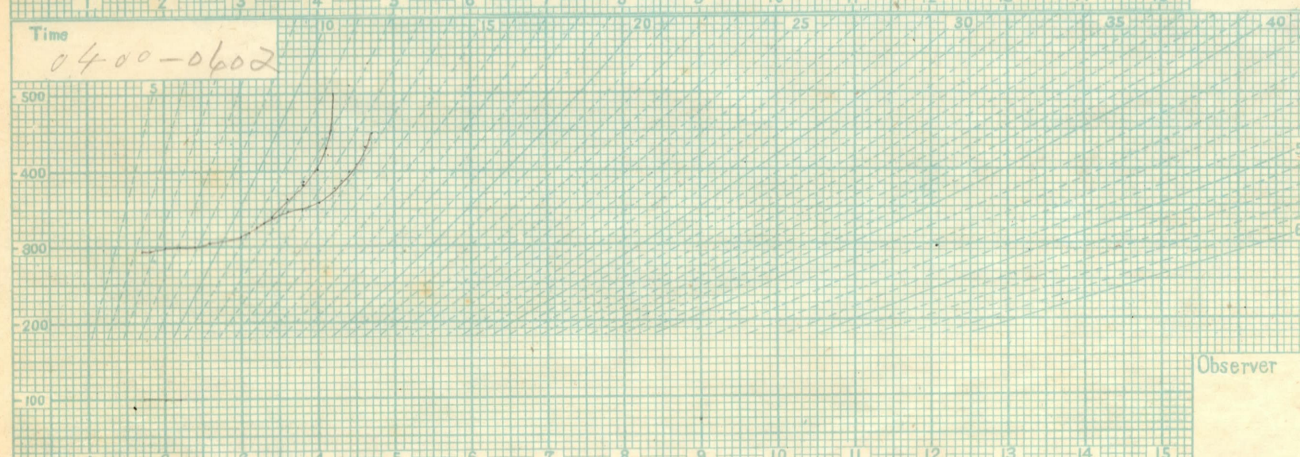
f_oF2 *4.3*
 h_pF2 *380*
 $h'F2$ *310*
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs *2.3 F*
 $f_{min}F$ *1.7*
 $f_{min}E$ *1.6 F*
 Observer
 $MUF(3000)F2$ *11.7*
 $F2$ *27*
 Z_d

VIRTUAL HEIGHT IN KM



f_oF2 *4.2*
 h_pF2 *400*
 $h'F2$ *300*
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs *2.3*
 $f_{min}F$ *1.6*
 $f_{min}E$ *1.6*
 Observer
 $MUF(3000)F2$ *11.5*
 $F2$ *27*
 Z_d

VIRTUAL HEIGHT IN KM



f_oF2 *4.2*
 h_pF2 *350*
 $h'F2$ *290*
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs *2.2*
 $f_{min}F$ *1.7*
 $f_{min}E$ *1.7*
 Observer
 $MUF(3000)F2$ *12.3*
 $F2$ *29*
 Z_d

REMARKS

IONOSPHERIC RECORD

135°E MEAN TIME

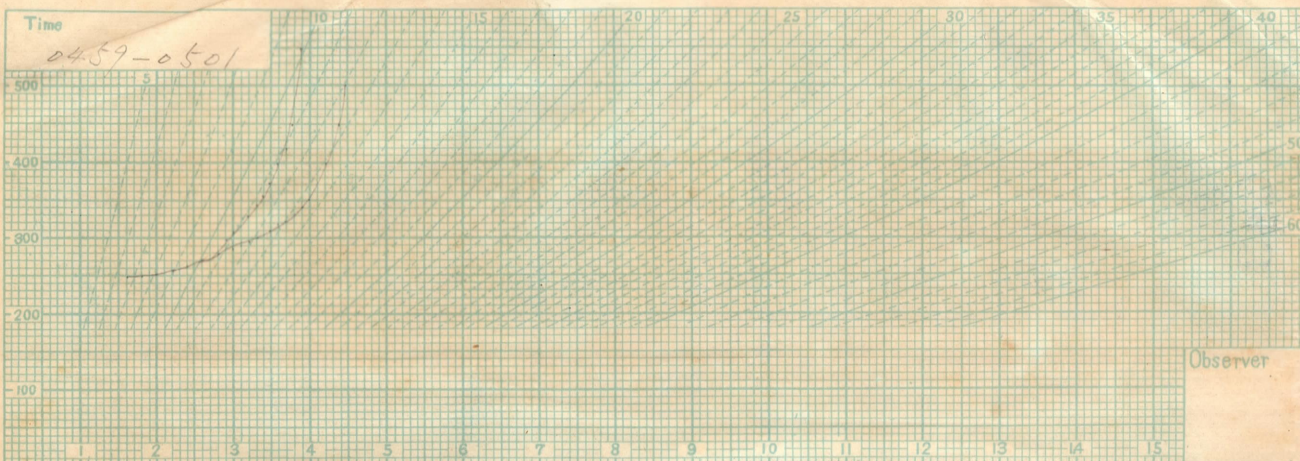
DATE 9.11

STATION Yamakawa

NO

55

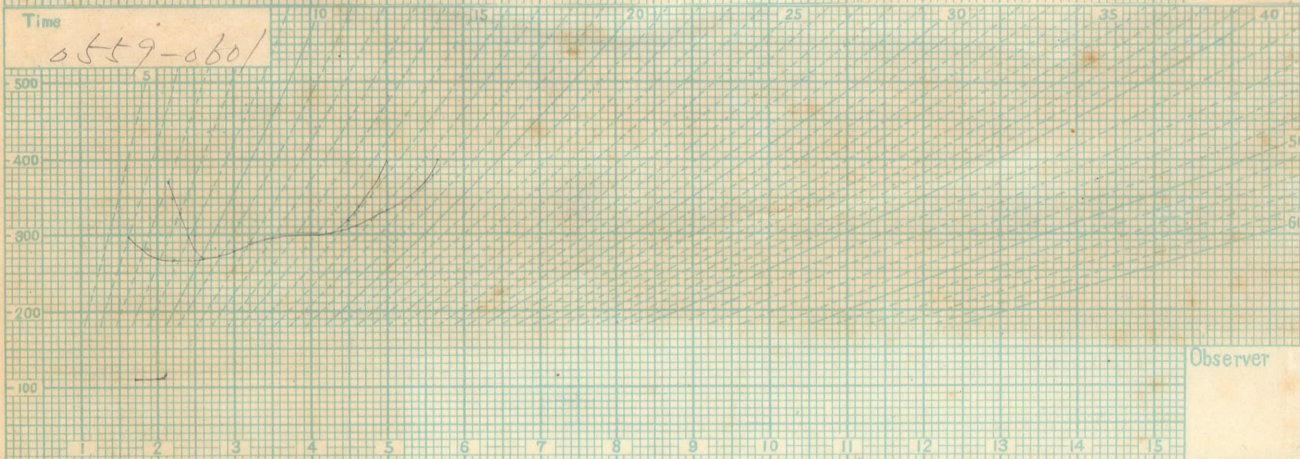
VIRTUAL HEIGHT IN KM



f_oF2 39
 h_pF2 330
 $h'F2$ 250
 f_oF1
 $h'F1$
 f_oE
 $h'E$
 fEs E
 $f_{min}F$ 16
 $f_{min}E$ E
 $MUF(3000)F2$ 11.4
 $F2$ 29
 Z_d

Observer

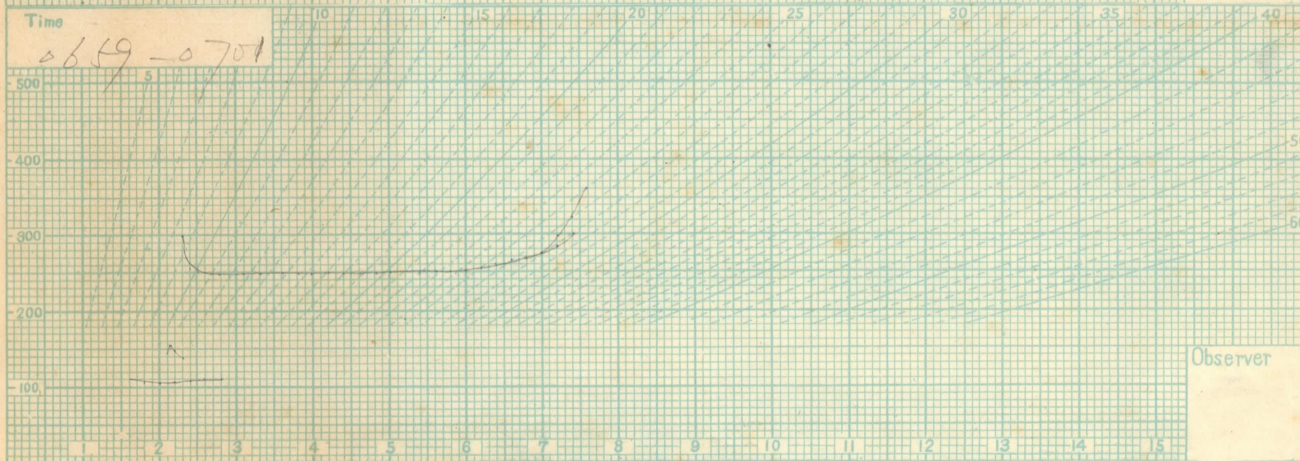
VIRTUAL HEIGHT IN KM



f_oF2 51
 h_pF2 300
 $h'F2$ ~~260~~ 300
 f_oF1 Q
 $h'F1$ Q 260
 f_oE 1.5J
 $h'E$ B
 fEs G
 $f_{min}F$ 16
 $f_{min}E$ 17
 $MUF(3000)F2$ 15.9
 $F2$ 31
 Z_d

Observer

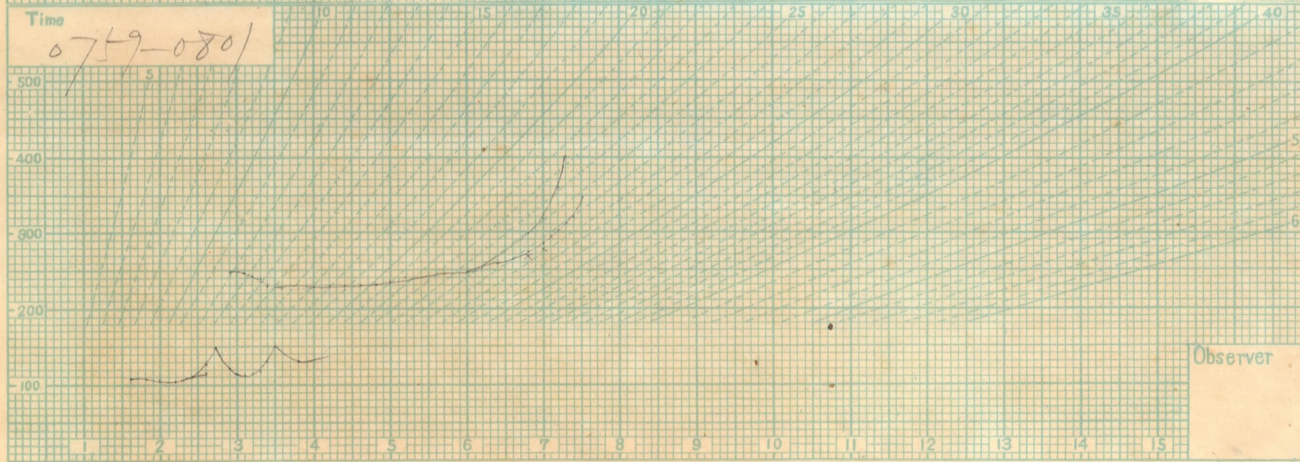
VIRTUAL HEIGHT IN KM



f_oF2 77
 h_pF2 260
 $h'F2$ 250
 f_oF1 Q
 $h'F1$ Q
 f_oE 21
 $h'E$ A
 fEs 28
 $f_{min}F$ 23
 $f_{min}E$ 16
 $MUF(3000)F2$ 26.9
 $F2$ 34
 Z_d

Observer

VIRTUAL HEIGHT IN KM



f_oF2 73
 h_pF2 250
 $h'F2$ 230
 f_oF1 Q
 $h'F1$ Q
 f_oE 27
 $h'E$ 100
 fEs 42
 $f_{min}F$ 29
 $f_{min}E$ 16
 $MUF(3000)F2$ 25.0
 $F2$ 34
 Z_d

Observer

REMARKS

以降自御の切替え