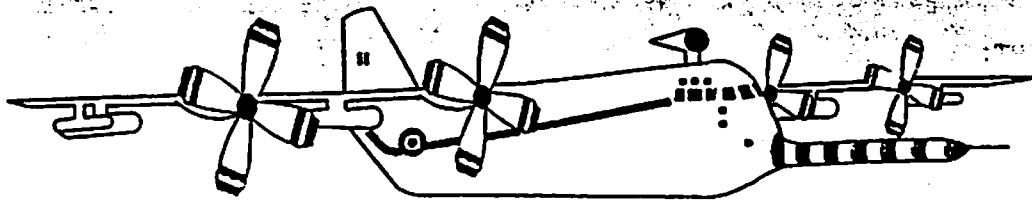


A313

27 JAN 94



FLIGHT FOLDER

DATE: 27 10 194 TAKE OFF
LANDING

H (local time) FLIGHT NO. A 3/3

PROJECT OFFICER: A HAYE
AIRCRAFT SCIENTIST: A HAYE
FLIGHT LEADER: D PERCIVAL
OBSERVER: D LAUCHLAN
OTHERS: M PICKERING.

C O DOWLE
S WHITE

+ MASSEY, NORWOOD, JAMES, CRANTON.

CAPTAIN: H BURGOYNE
CO-PILOT: C DELMEGE
NAVIGATOR: S CANNING
ENGINEER: R PRICE
LOADMASTER: E HEATON.
H QUICH.

TRIALS INSTRUCTION (s):

OPERATING AREA: GRAN CANARIA

→ UT

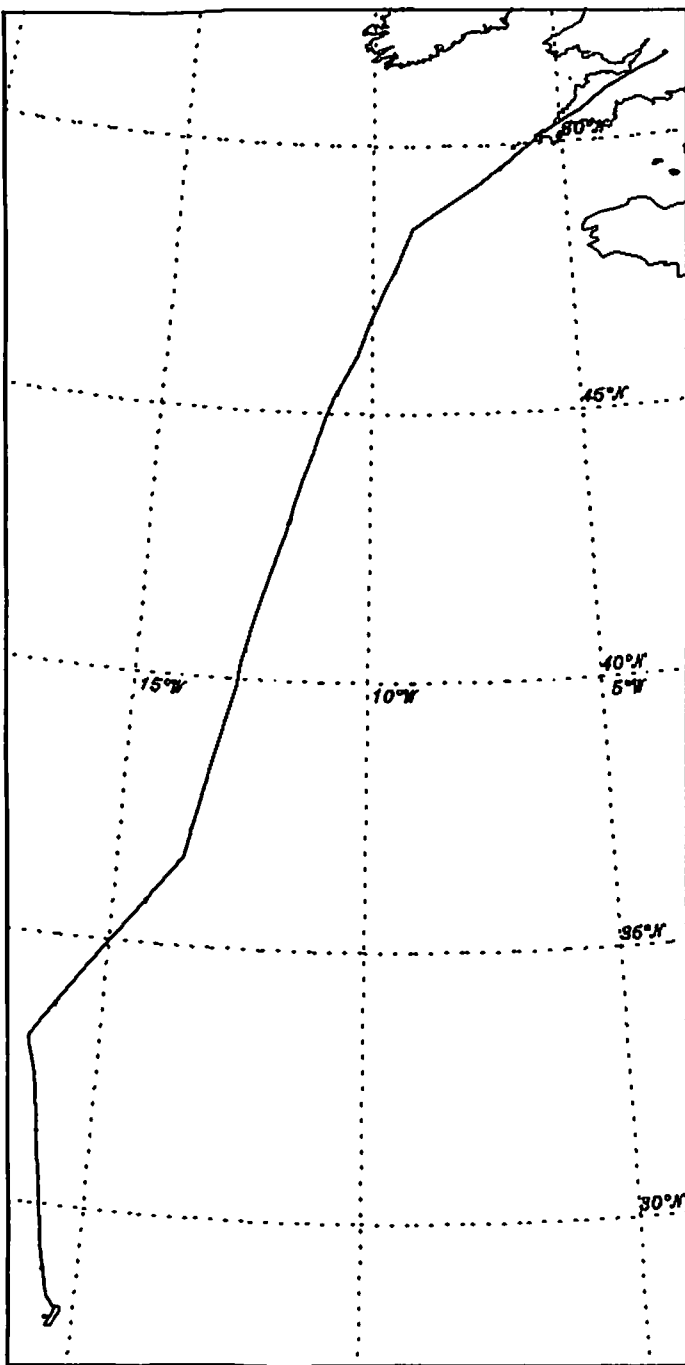
GENERAL SYNOPTIC SITUATION:



TIME:

A313 27 - JAN - 94

GPS data
10:10:32 - 19:48:00



FLIGHT REPORT A313 27/01/94 IPIECA/VACC

Time 1	E.M.	Time 2	E.M.	Event	Height	Heading
12:01:10				TAKE OFF Las Palmas		
12:19:20				LAND AT Las Palmas Gran Canaria		
				Problem cargo hold air conditioning unit.		
14:14:20				TAKE OFF Las Palmas		
				Climb to FL10		
14:23:45	(1)			Level	FL100	005
15:19:24	(3)	Porto Santo	33'12'N 16'15.6'W		FL100	045
15:40:56	(4)	PECKY	36.64'N 15.25'W		FL100	044
16:11:19	(6)	VERAM	36.71'N 13.64'W		FL100	020
16:15:26	(7)	Changed level	37.12N 13.56W		FL090	020
16:53:16	(8)		40.00'N 12.24'W		FL090	015
17:53:22	(9)	SHANWICK FIR	45' N 11.00'W		FL090	025
18:38:29	(10)	LASNO	48.36'N 09.00'W		FL090	015
19:46:14				LAND RAF LYNEHAM		

A313

28 January 1994

Aircraft Scientists summary

Synoptic Conditions:

It was decided to take advantage of the transit fly from Gran Canaria to Lynham to measure high altitude aerosol variation as we passed along the edge of the High pressure area near the Azores.

Flight Summary:

Due to problems with the airconditioning system, take off was delayed and we were prevented from transiting back at high altitude. We instead transited at FL100 and because of the delay and lower altitude we were not able to do the science at an optimal true air speed. We made measurements inspite of this, in the hope of salvaging some good science.

SORTIE BRIEF: 26 JANUARY 1994

IPIECA/VACC

- 1) **Sortie Objective:** To study the spacial variation of tropospheric aerosol along the Northeast Atlantic.
- 2) **Location:** A south-north transect from Gran Canaria to the S.W. Approaches of the U.K.
- 3) **Weather:** Not important.
- 4) **Flight Pattern:** Transit as suitable altitude.
 - a) Depart Gran Canaria and climb to suitable altitude.
 - b) Conduct a series of Vacc Runs
 - c) Land at Lynham.

AIRCRAFT SCIENTIST'S LOG

Aircraft Scientist: A. Kaye

Project: VACC Date: 27/1/94

Flight No: A313 Page 1 of



GMT	Event Mark	Run No.	Height	Pres/Rad	INS Heading	Omega Pos'n		Other Info. (eg. clouds, weather, visibility, winds, sea state etc.)	Photo No.
						Latitude	Longitude		
14:29:49	01		9.9K	P	355	29.94	-15.62	7/8 sc below, clear above.	
14:41:33	01		9.9K	P	356	29.94	-15.79	7/8 sc below clear above.	
14:59:17	02		9.9K	P	357	31.42	-15.99	6/8 sc below Clear above horizon white band on horizon	55 764.90 57 764.65
15:11:11	02		9.9K	P	349	32.41	-16.15	4/8 sc grouped into sheets Small on in gaps moderately visible through the clouds	59 763.64 01 762.88
15:24:48	03		9.9K	P	32	33.48	-16.09	7/8 sc below sea visible through gaps. clear above.	
15:43:10	04		9.9K	P	34	34.79	-15.17	6/8 sc with large continuous gaps thick white band on the horizon clear above	
15:54:29	04		9.9K	P	34	35.55	-14.59	7/8 sc below clear above.	
16:10:45	05		9.9K	P	35	36.66	-13.70	6/8 sc below hazy clear above.	
16:17:59	07		8.9K	P	13	37.25	-13.54	7/8 sc sheets of Broken Sc waves ranging 30° of starboard.	
16:28:16	07		8.9K	P	13	38.08	-13.31	6/8 sc sheets with waves thinning out a bit.	
16:39:50	07		8.9K	P	13	39.02	-13.05	7/8 sc below appears to have a wave structure a bit like cu with streaky sc thin between them.	

AIRCRAFT SCIENTIST'S LOG

Aircraft Scientist: A. Kaye

Project: VACC Date: 27/1/94
 Flight No: A 313 Page 2 of



GMT	Event Mark	Run No.	Height	Pres/Rad	INS Heading	Omega Pos'n		Other Info. (eg. clouds, weather, visibility, winds, sea state etc.)	Photo No.
						Latitude	Longitude		
						16:50:35	07		
16:58:22	08		8.9K P	12	40.55 -12.70	2/8 cu below hazy with some ci visible ahead dew point has fallen.			
17:10:33	08		8.9K P	11	41.52 -12.38	calm sea now white visible clear below hazy ahead. ci: visible ahead.			
17:24:02	04		8.9K P	13	42.70 -11.94	Some thin ci above very hazy horizon obscured in places bands of ci in view ahead.			
17:42:09	08		8.9K P	12	44.12 -11.48	approaching a well defined st cu edge hazy to forward right right ci in view ahead.			
17:44:22	-					actually crossed the boundary.			

7.45

CLOUD PHYSICS LOG

Flight No. A313 Date: 27/1/94

Operator: MP

Page 1 of 2

GMT *	PCASP		FSSP			2D-C		2D-P		REMARKS
	CONC/CC	MAX SIZE	CONC/CC	MAX SIZE	R dt	CONCL	MAX SIZE	CONC/1	MAX SIZE	
1419										20 ON.
143000	15	0.5								
144000	20	0.5								
145000	23	0.5								
150000	11	0.5								
151000	13	1.0								
152000	35	0.5								
153000	45	0.5								
154000	35	1.0								
155000	35	0.5								
160000	30	0.5								
161000	20	1.0								
162000	20	0.5								
163000	15	0.5								
164000	14	0.3								
165000	10	0.5								
170000	10	0.5								
171000	20	0.3								
172000	20	0.5								
173000	12	0.3								
174000	16	0.3								
175000	8	0.3								
180000	25	0.3								
181000	40	0.3								
181310	70	0.5								
182000	65	0.5								
183000	70	0.5								

* DRS TIME

A313

27-1-94

IPPCA/VACC

GMT	ALLEV.		Height	Dyn	STATIC							REMARKS		
	On	Off			1	2	3	4	5	6	7			
					675	715	740	865						
143105	✓		F1100		677	719	748	865	942	1407	1977			
143601		✓			651	661	665	686	695	690	710			
					2510	2511	2508	2508	2508	2523	2523			
					0.10	0.22	0.31	0.42	0.62	0.87	1.06			
150315	✓		F1100		652	659	669	754	769	1054	1253			
150450		✓			645	653	655	658	666	669	671			
					2542	2535	2536	2542	2542	2549	2553			
					0.10	0.10	0.30	0.40	0.60	0.80	1.00			
					759.30									
162700	✓		F1100	See dataset										
163400														
161006	✓		F1100	579	578		579	568						
161220		✓		513	515	535	542	548	553					
				2580	2578		2578	2577						
				0.10		0.38	0.56							
162842	✓													
162844		✓												
				Opened & re-moistened chamber										
164200	✓		F1090											
164309		✓												
				Capn test										
				(CN SWITCHED) OFF TO COOL										
174238	✓		F1090		481		642	673	846	1322	1994			
174405		✓			475		479	497	513	497	502			
					2567		2573	2572	2576	2574	2572			
					0.09		0.30	0.38	0.56	0.80	0.98			
181608	✓		F1090		472	479		506	673	832	912			
181803		✓			440	455		479	470	477	483			
					2568	2573		2569	2569	2568	2563			
					782.2	0.19		0.39	0.56	0.80	0.98			
					0.09			782.7						



METEOROLOGICAL OFFICE
Meteorological Research Flight

Fax to: MET RESEARCH C-130

Fax No:

Fax from: MARK

Date/Time: 27/0830

Pages: 8 including this

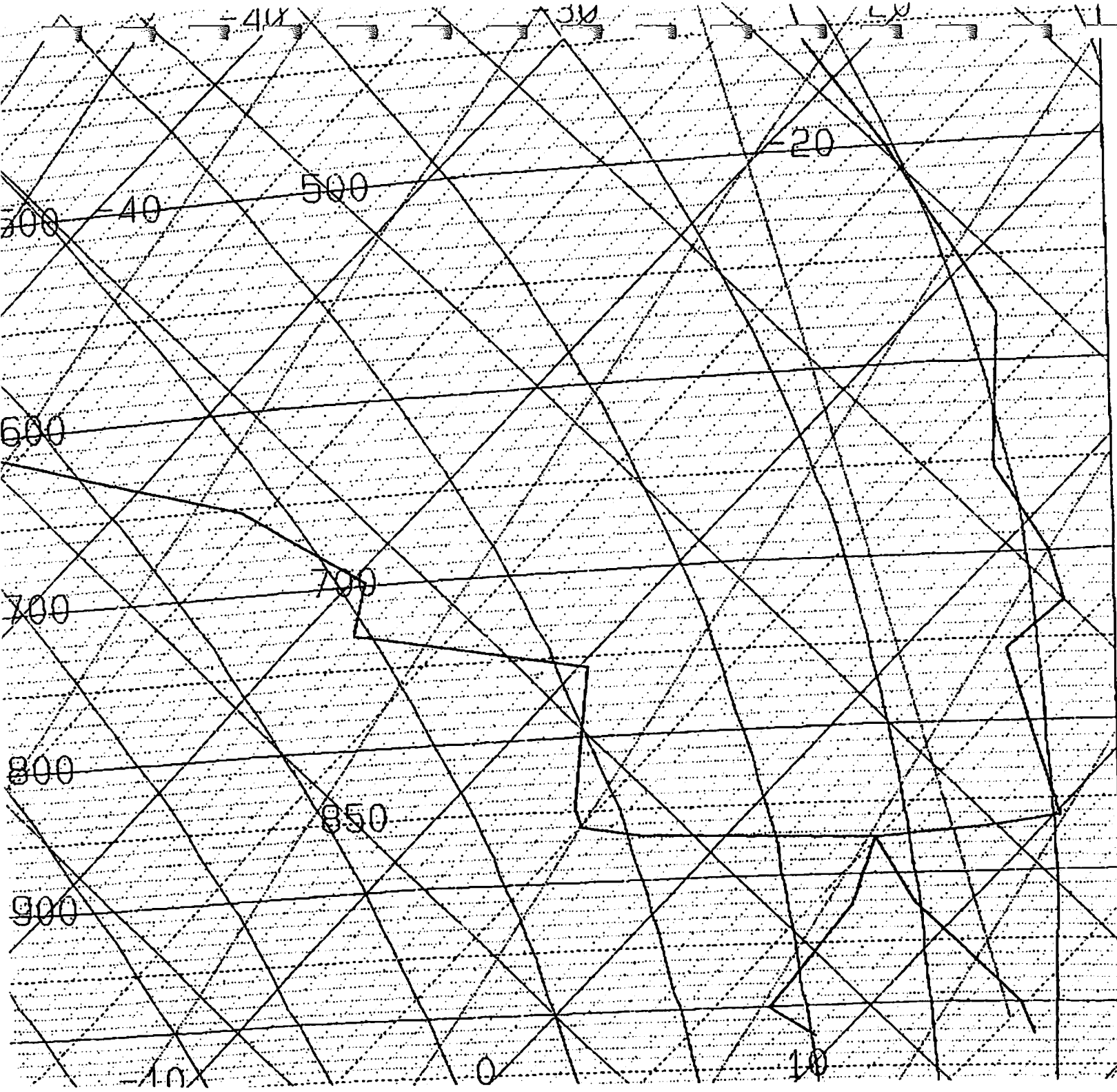
0800z IR



07:58:08 27/01/94 METEOSAT Ch6 ZOOM 0

Buil
Tel: 0
Fa

UK
88



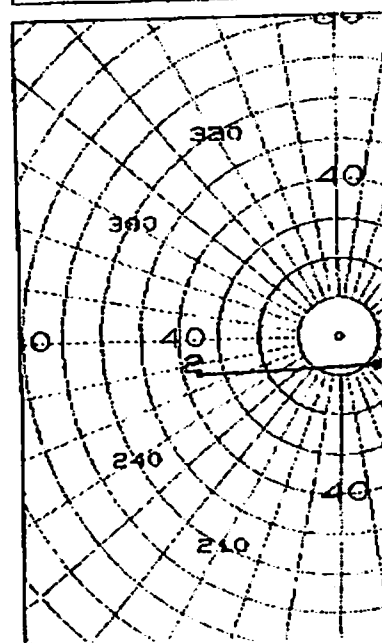
TIME: 270000 JAN 94

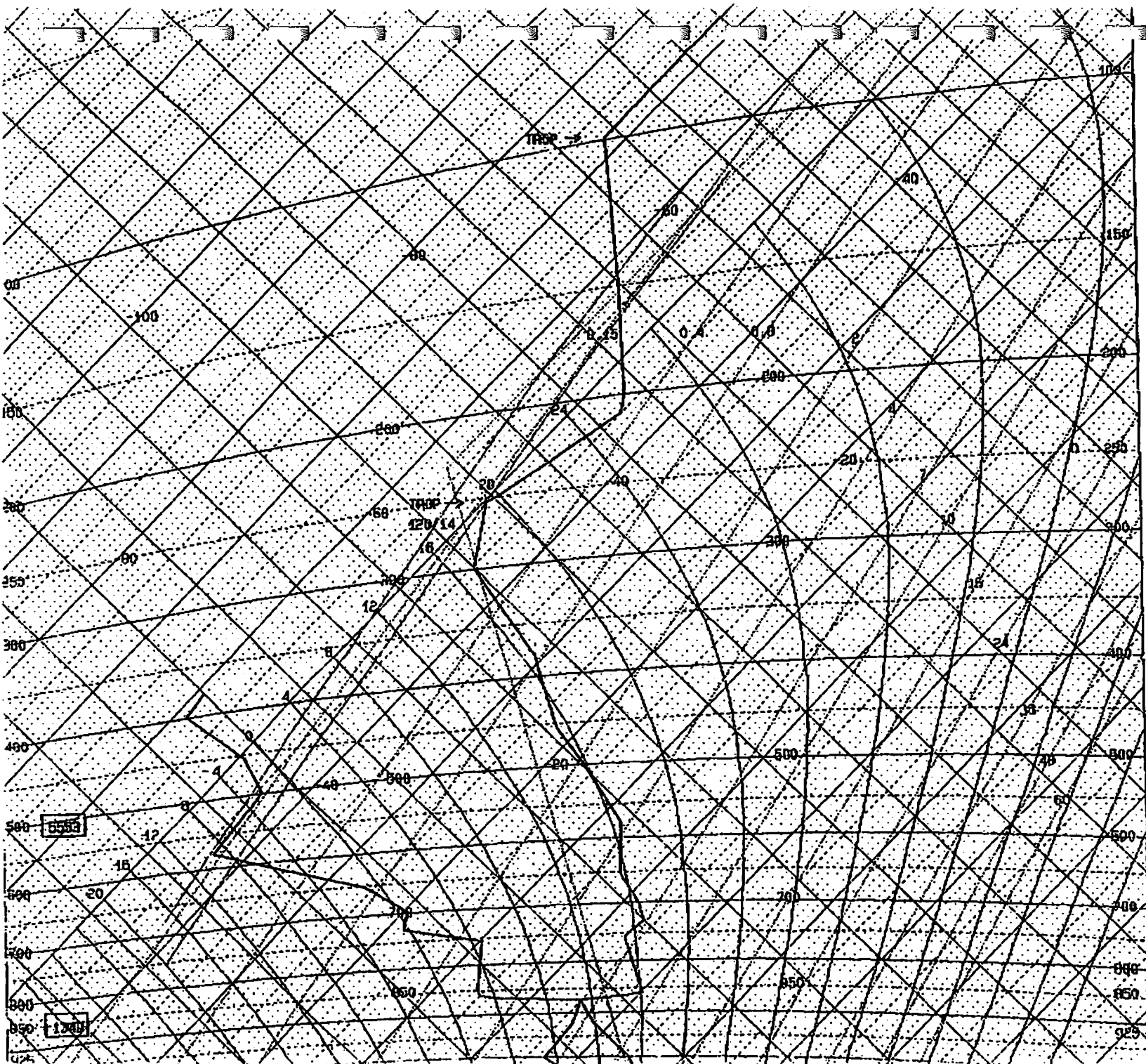
MAX WINDS: NEI		
458	070	54
600	075	52
644	085	35
710	080	32
650 X	075	20
925	045	11
942	040	10
1000	010	6
1024	330	4

Part : 0 missing

SANTA CRUZ DE TENERIFE
 00Z ACTUAL
 ENLARGEMENT

HODOGRAPH for 60020



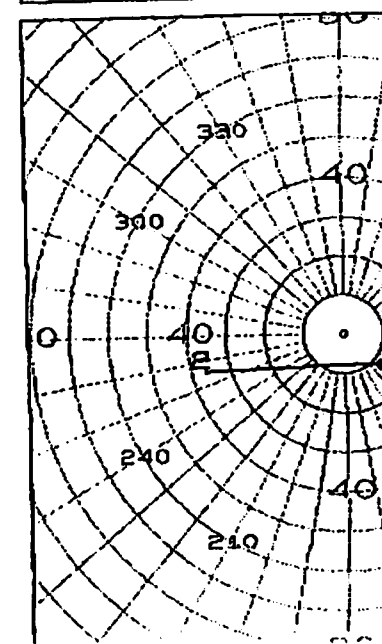


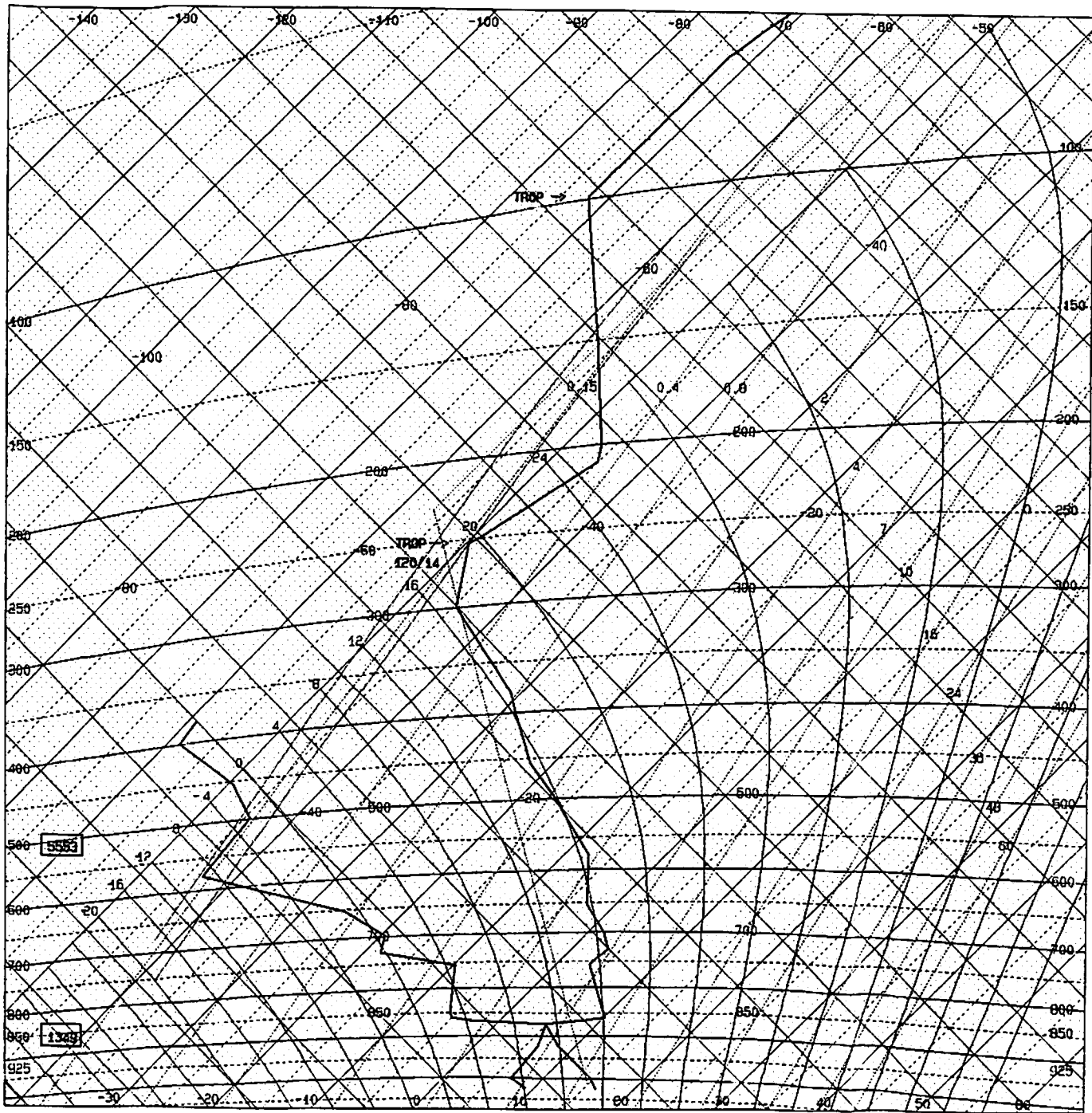
MAX		NI	
150	250	42	
200	255	36	
250	130	12	
300	080	32	
400	075	40	
500	075	52	
700	080	32	
850	075	20	
925	045	11	
1000	010	5	
SURFACE	330	4	

Part : D. eising

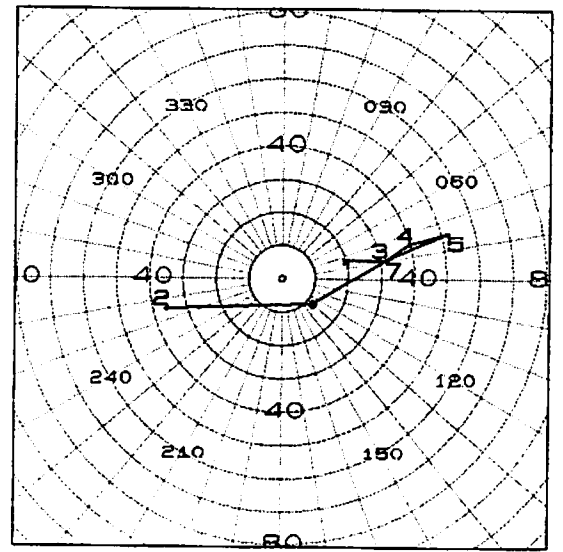
SANTA CRUZ DE TENERIFE
 OOZ ACTUAL

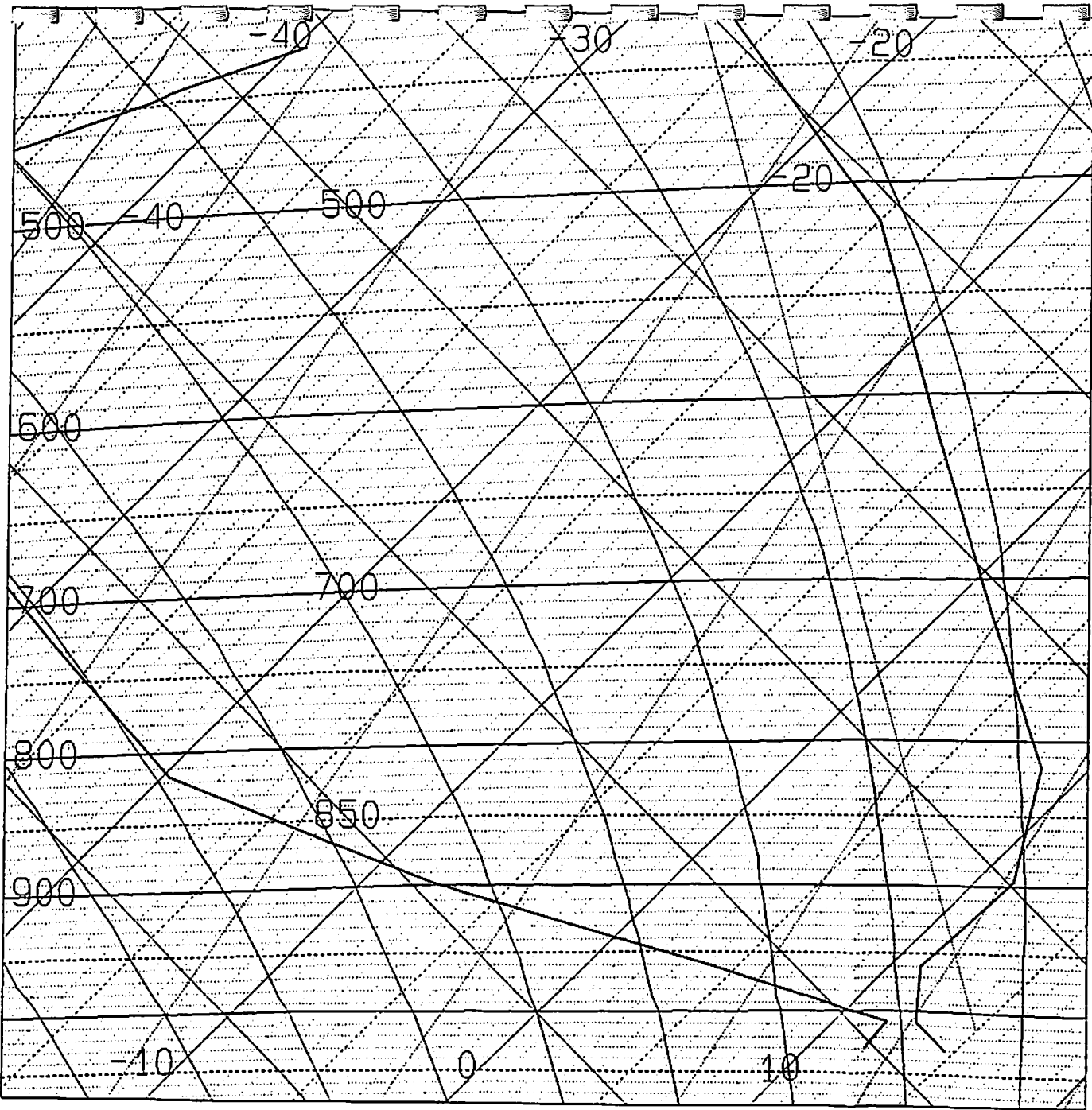
HODOGRAPH for 50020





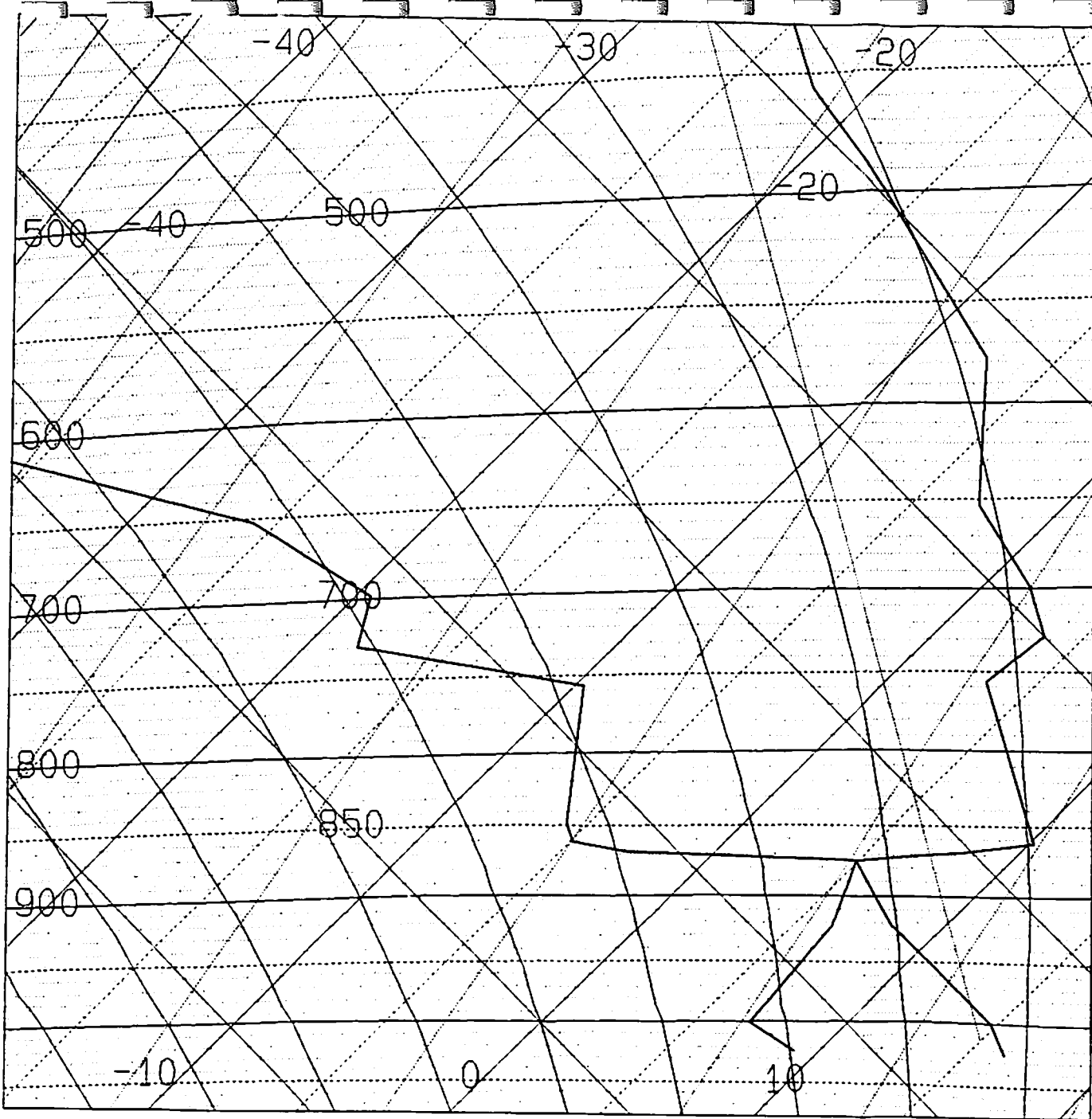
HODOGRAPH for 60020 at 270000 ONLY





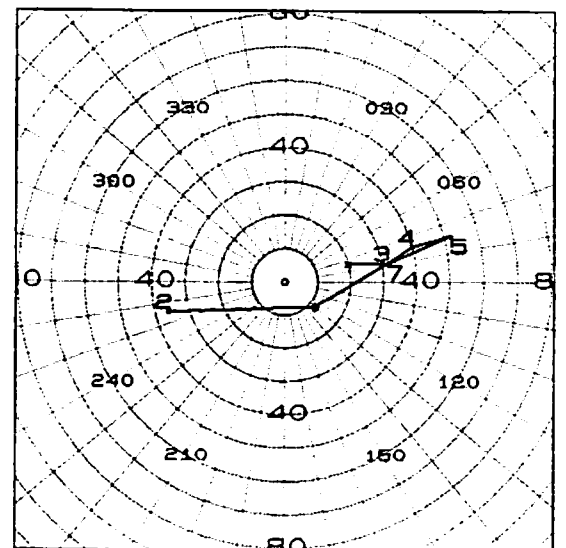
STATION: 3510W		
POS: 35.0 N 10.0W		
TIME: 270000 +12 JAN 94		
mb	Deg Kts	
MAX WINDS: NIL		
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518	055	14
617	070	11
722	075	11
816	090	13
899	095	14
961	085	14
1007	060	12
1030	080	10
Parts : A C D missing		

No hodograph shown for forecast ascent

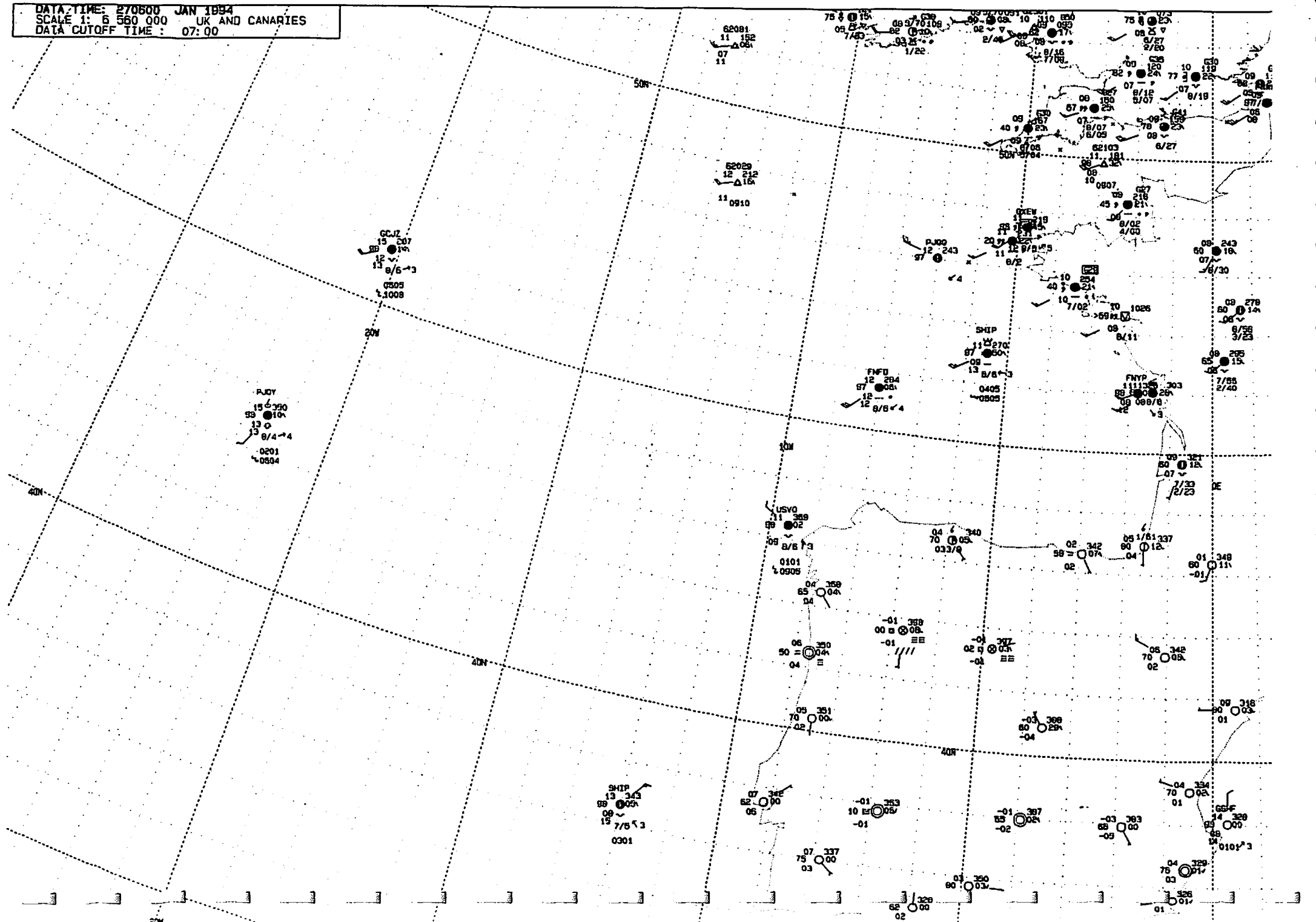


STATION: 60020		
SANTA CRUZ DE TENE-		
TIME: 270000 JAN 94		
mb	Deg	Kts
MAX WINDS: NIL		
458	070	54
500	075	52
644	095	39
700	080	32
850 X	075	20
925	045	11
942	040	10
1000	010	6
1024	330	4
Part : 0 missing		

HODOGRAPH for 60020 at 270000 ONLY



DATA TIME: 270600 JAN 1994
SCALE 1: 6 560 000 UK AND CANARIES
DATA CUTOFF TIME : 07:00



06 Z.

14
12

Σ

Max 19.5
Min 14.4

SCIP
16 314
12 2
18 7/5
05

14 311
70 09
11 2
6/30
3/18

16 259
70 07
19 2
8/5

15 279
80 05

ICRE
89 7
17 4/9 2
14 254
70 05
12 2
4/6

44 311
1/5

60 1
07 08

07 265
60 02
03

05 282
89 04
03

04 07
70 01

09 272
59 05
08 2/10

07 295
50 08
07

03 288
07 08
03

05 302
60 05
01

07 326
60 01
08

14 327
59 09
12 2/10

04 299
06 04
07

08 335
70 01
08

05 347
05 00
05 8/03

05 328
62 05
02

01 350
60 01
00

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09 325
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04

04 332
65 01
01

04 317
75 03
03

05 337
05 00
05

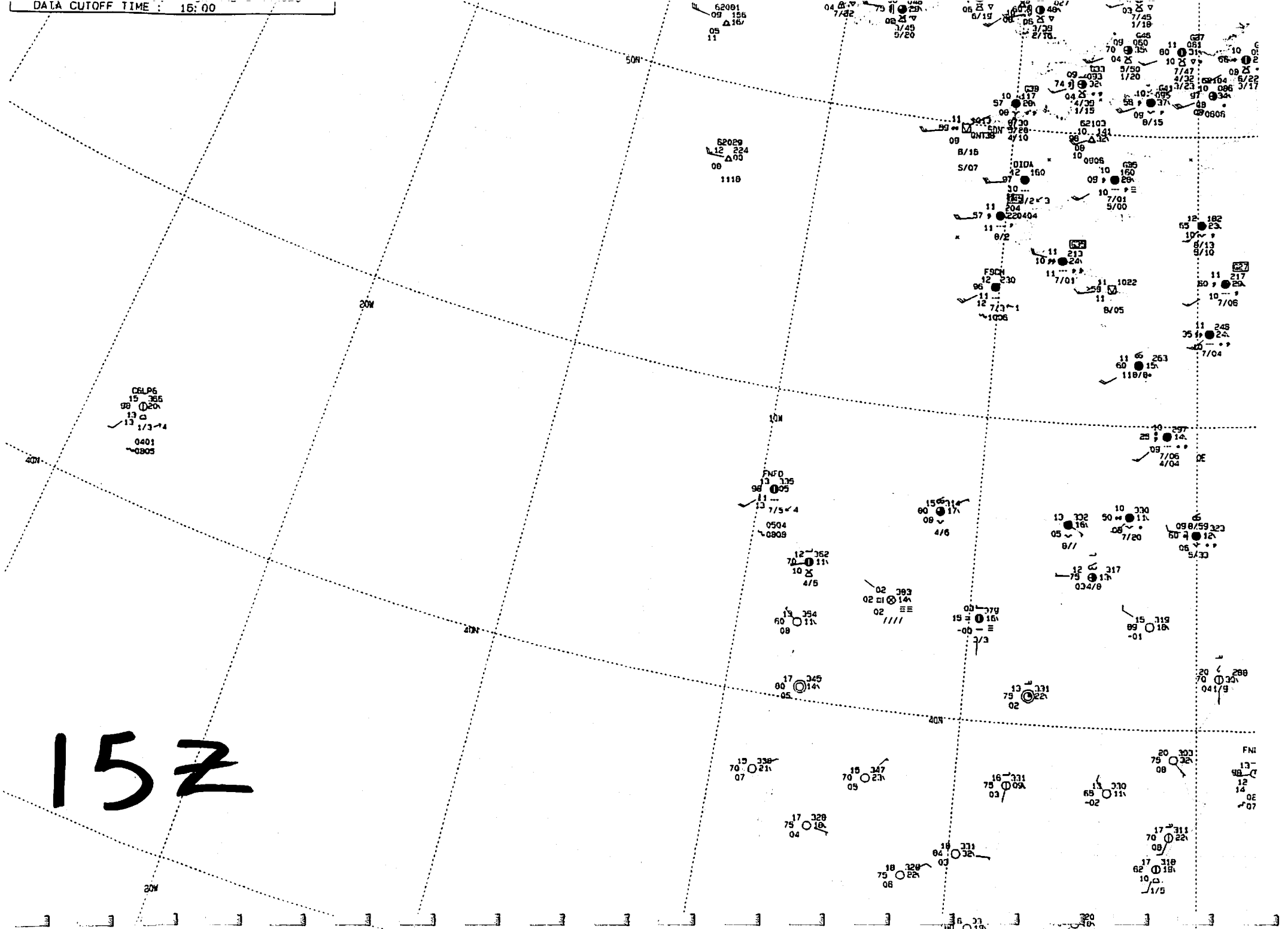
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06 02
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11/01

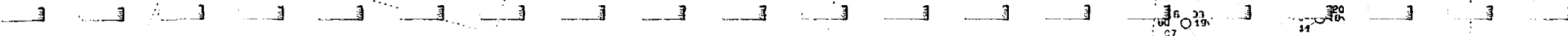
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59 02
02

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60 00
-00



15Z



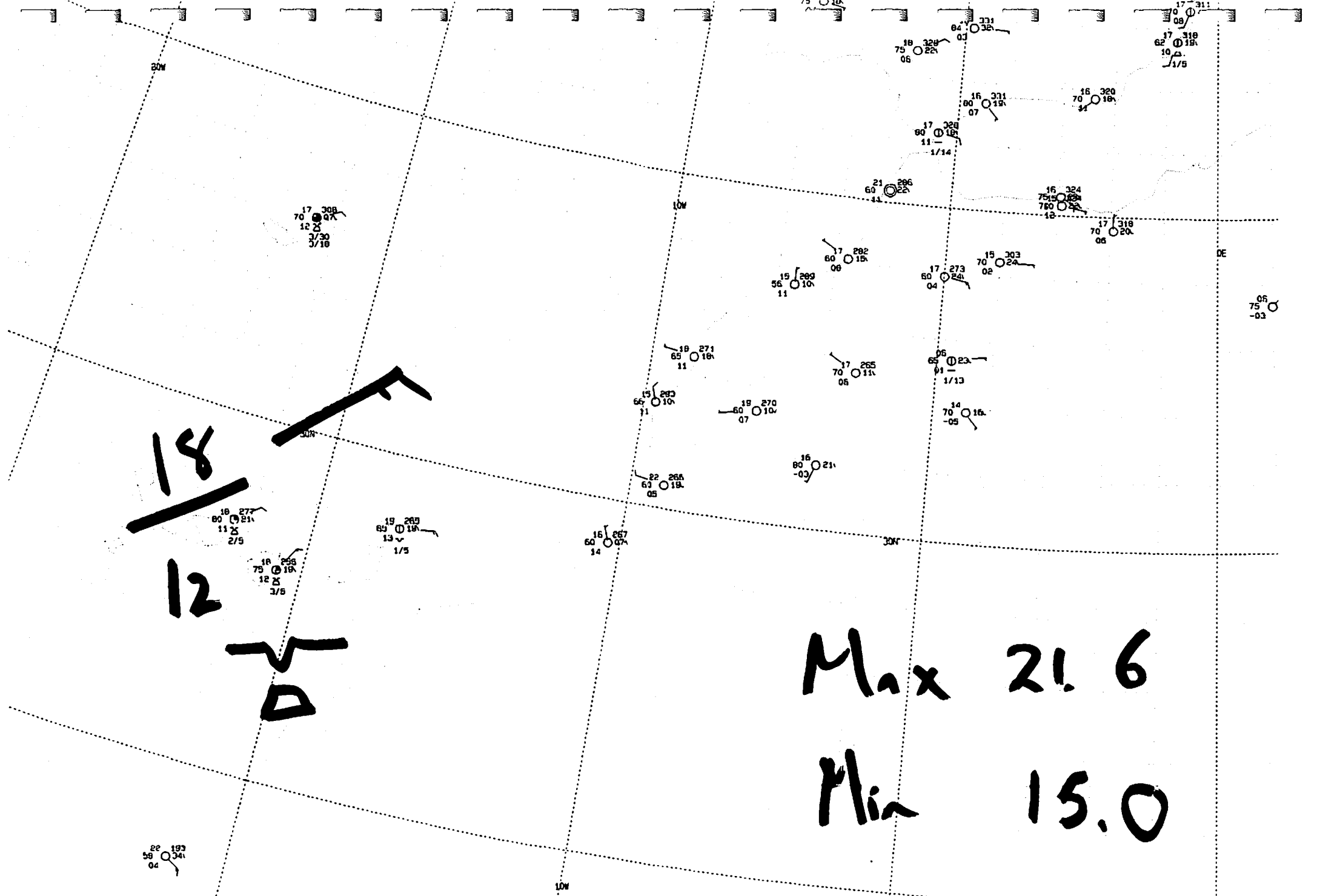
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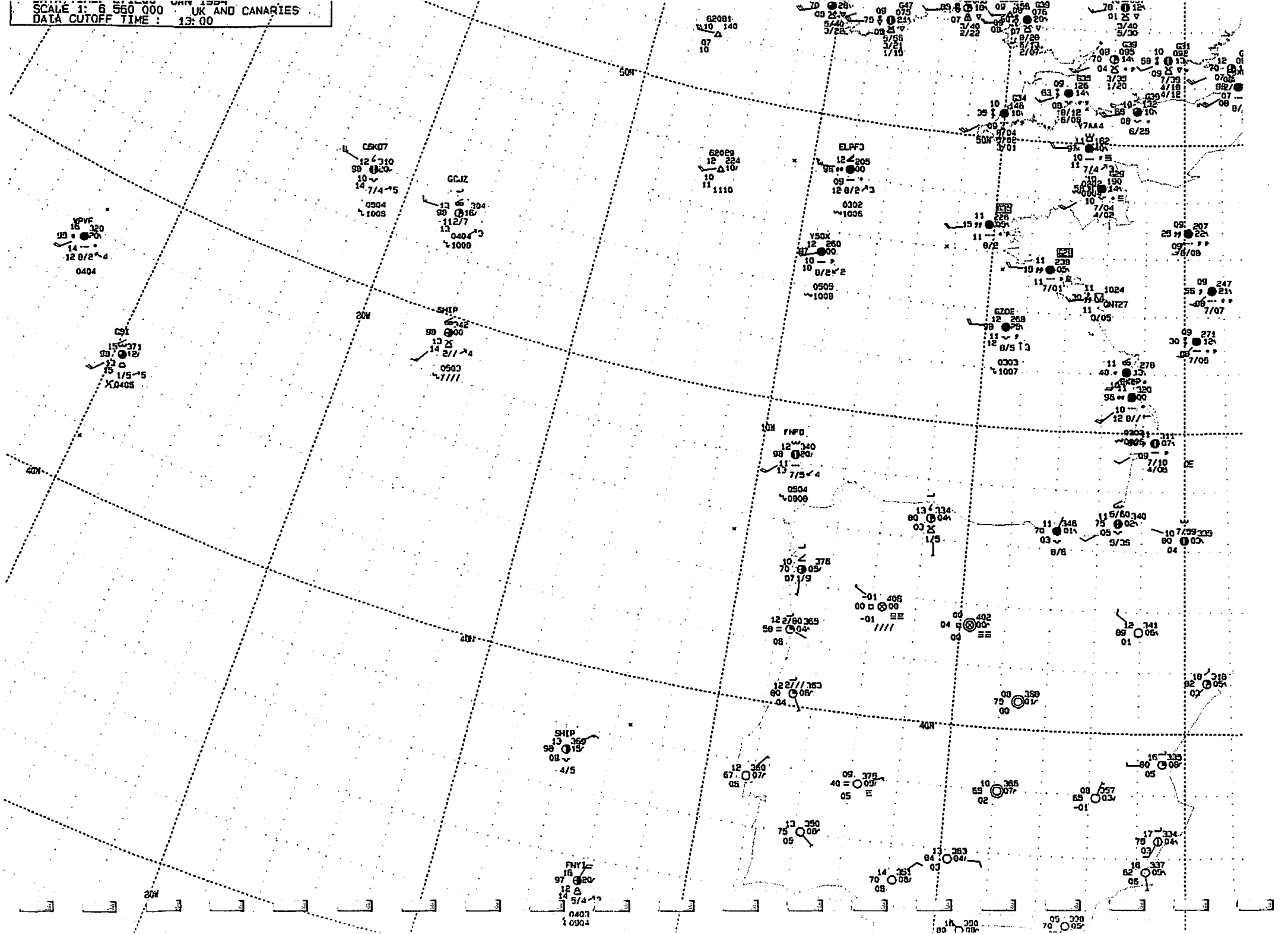
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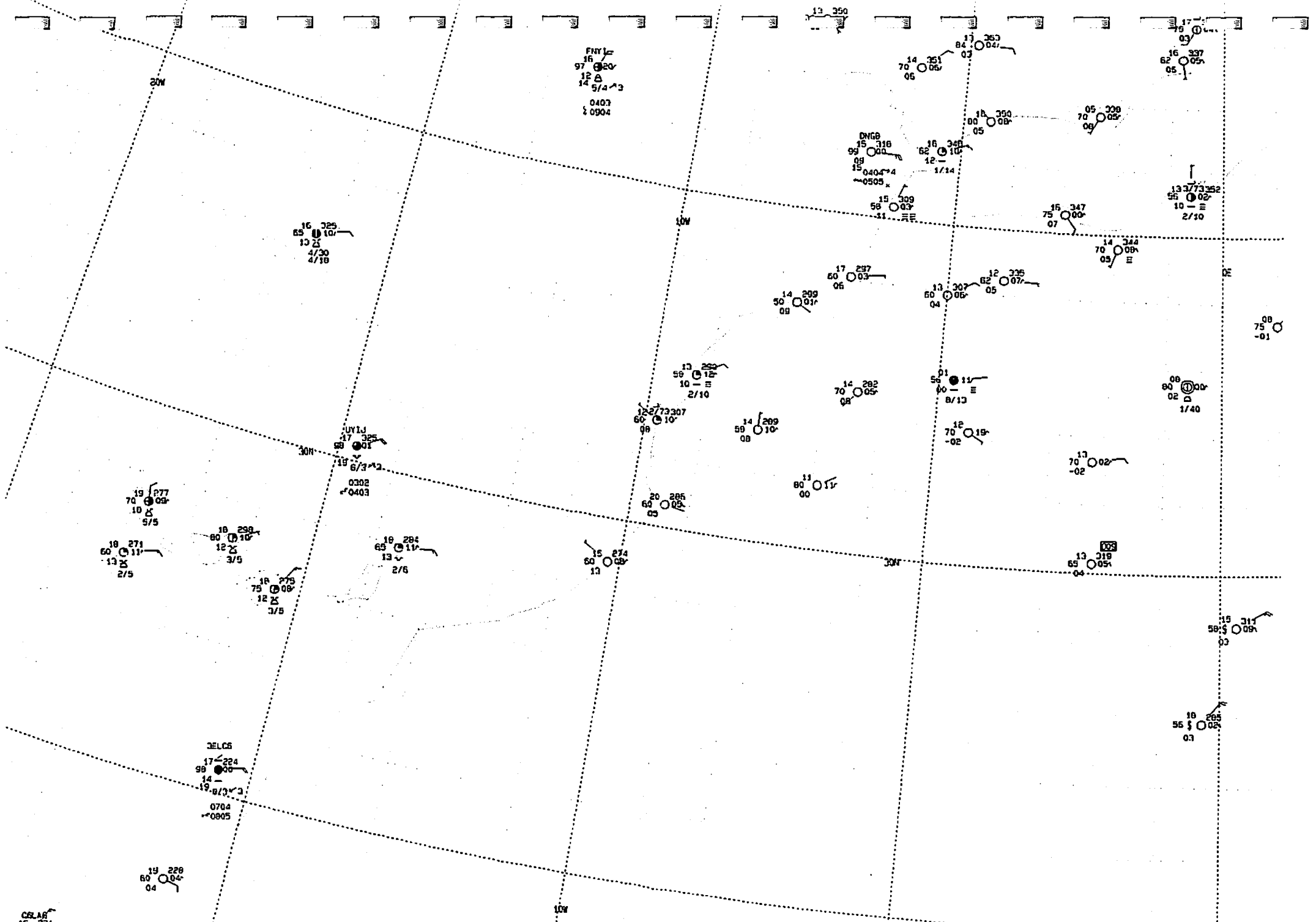
W
D

Max 21.6

Min 15.0







FNY
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 97
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 84 07
 11 353
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16 325
 65 10
 13 23
 4/30
 4/18

DNGB
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 16 345
 12 10
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13 373 252
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15 347
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14 342
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17 297
 06 03

11 307
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 12 325
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 5/5

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CELAR
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DATA TIME: 271200 JAN 1994
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