DCA97MA017

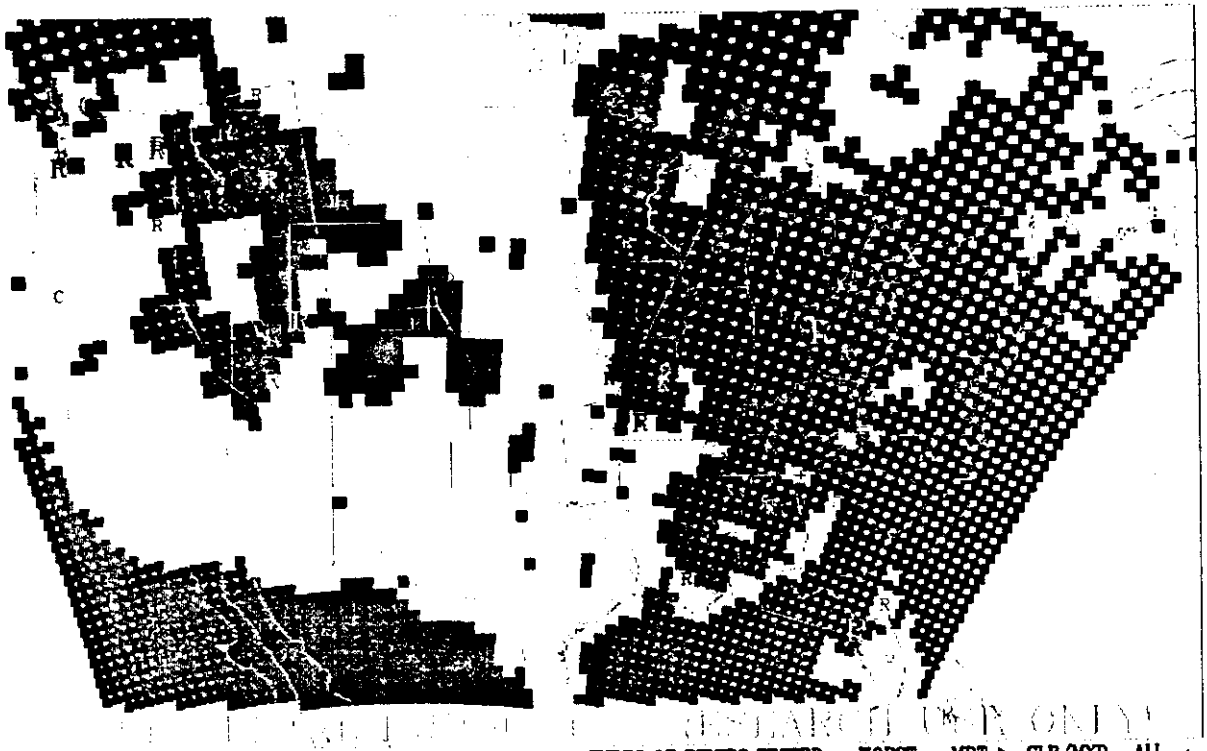
ATTACHMENTS_J
(1 - 20)

Map of STOVEPIPE ALGORITHM 970109 – 21 Z

Radius of influence was 100 km

SURFACE PROJECTION

- Large Supercooled Drops Likely
- General Icing
- No Data For These Points



PIREPS FROM 97010919 to 97010922

ICING PIREP INDICATORS

C = Clear Icing

X = Mixed Icing

R = Rime Icing

\+ = No Type Indicated

MDT/SVR to SVR = Large/Orange

LGT/MDT to MDT = Medium/White

TRC to LGT = Small/Green

CURRENT AIRMETS in WHITE

VERIFICATION

TYPES OF PIREPS TESTED	WORST	MDT >	CLR/MXD	ALL
# OF ICING REPORTS	23	84	41	181
# ALGORITHM CAUGHT	23	70	39	144
# RED VOLUME CAUGHT	5	15	10	29
# BLUE VOLUME CAUGHT	21	62	35	131
POD FOR STOVEPIPE ALG	1.00	0.83	0.95	0.80
POD FOR LARGE DROP ALG	0.22	0.18	0.24	0.16
POD FOR GENERAL ICING	0.91	0.74	0.85	0.72
EFFICIENCY (# CAUGHT/AREA) FOR LARGE DROP	19.0	57.1	38.1	110.4
AREAL EFFICIENCY FOR GENERAL	5.1	15.0	8.4	31.6
AREAL EFFICIENCY FOR ALG	5.1	15.8	8.7	32.8

(1)

Map of STOVEPIPE ALGORITHM 970109 - 21 Z

Radius of influence was 100 km

----ICING BASES---

- 0 TO 1000 FT MSL
- 1000 TO 3000 FT MSL
- 3000 TO 5000 FT MSL
- 5000 TO 10000 FT MSL
- 10000 TO 15000 FT MSL
- ABOVE 15000 FT MSL
- No Data For These Points

PIREP BASES IN 1000s OF FT

MDT/SVR to SVR = Large/Orange

LGT/MDT to MDT = Medium/White

(2)

Map of STOVEPIPE ALGORITHM 970109 – 21 Z

Radius of influence was 100 km

LARGE DROPLET BASE

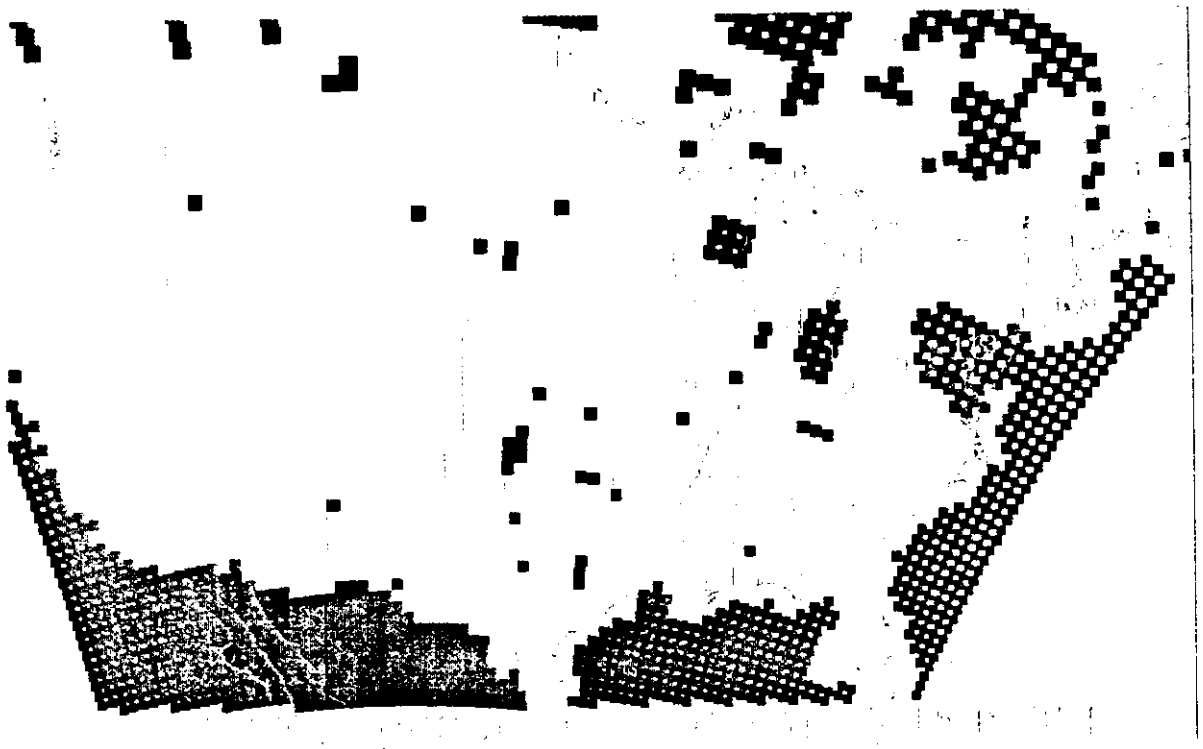
- BELOW 1000 FT MSL
- 1000 TO 2000 FT MSL
- 2000 TO 3000 FT MSL
- 3000 TO 4000 FT MSL
- 4000 TO 5000 FT MSL
- ABOVE 5000 FT MSL
- No Data For These Points

3

Map of STOVEPIPE ALGORITHM 970109 – 21 Z

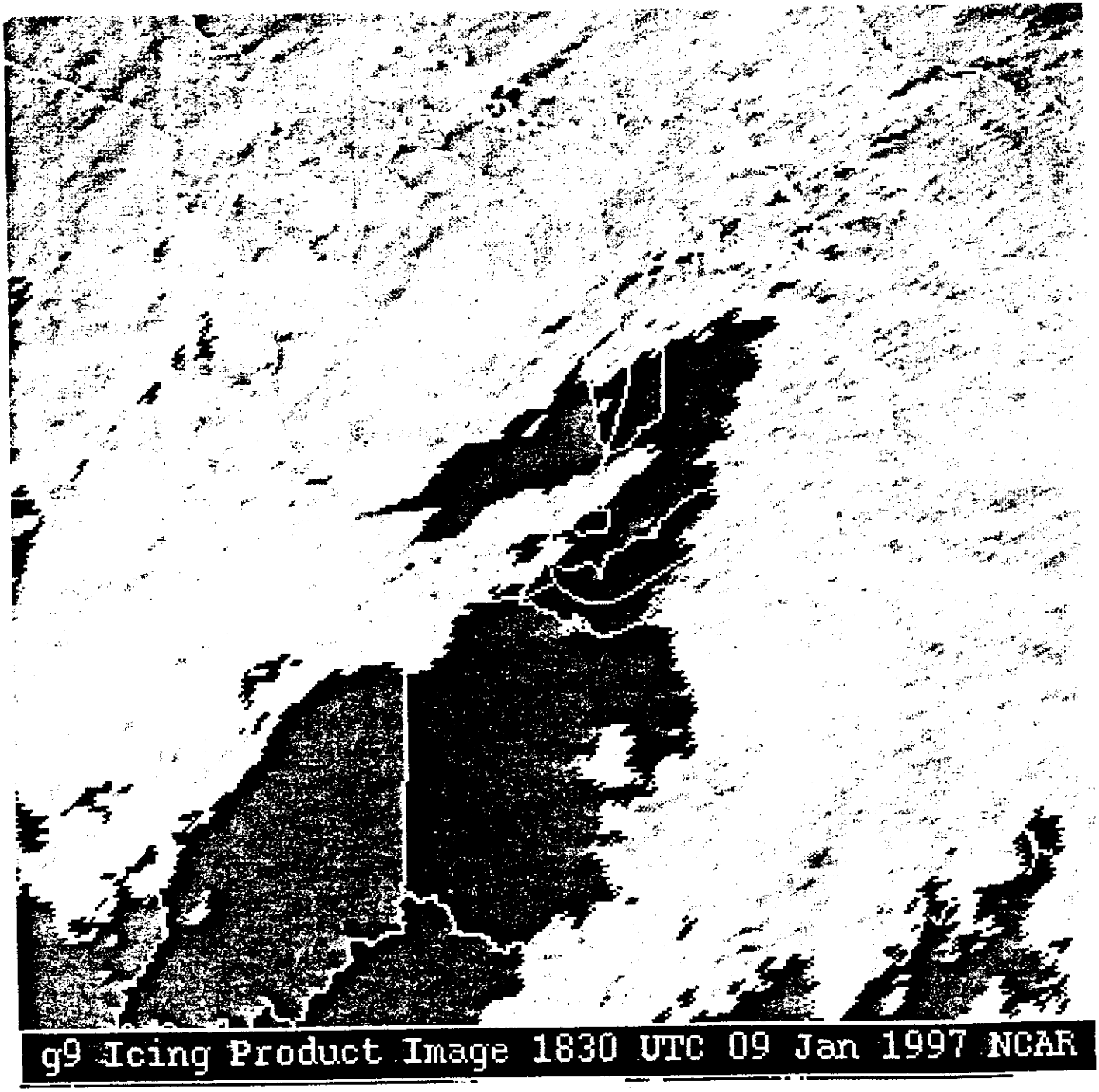
Radius of influence was 100 km

LARGE DROPLET TOP



- BELOW 1000 FT MSL
- 1000 TO 4000 FT MSL
- 4000 TO 7000 FT MSL
- 7000 TO 10000 FT MSL
- 10000 TO 15000 FT MSL
- ABOVE 15000 FT MSL
- No Data For These Points

(4)



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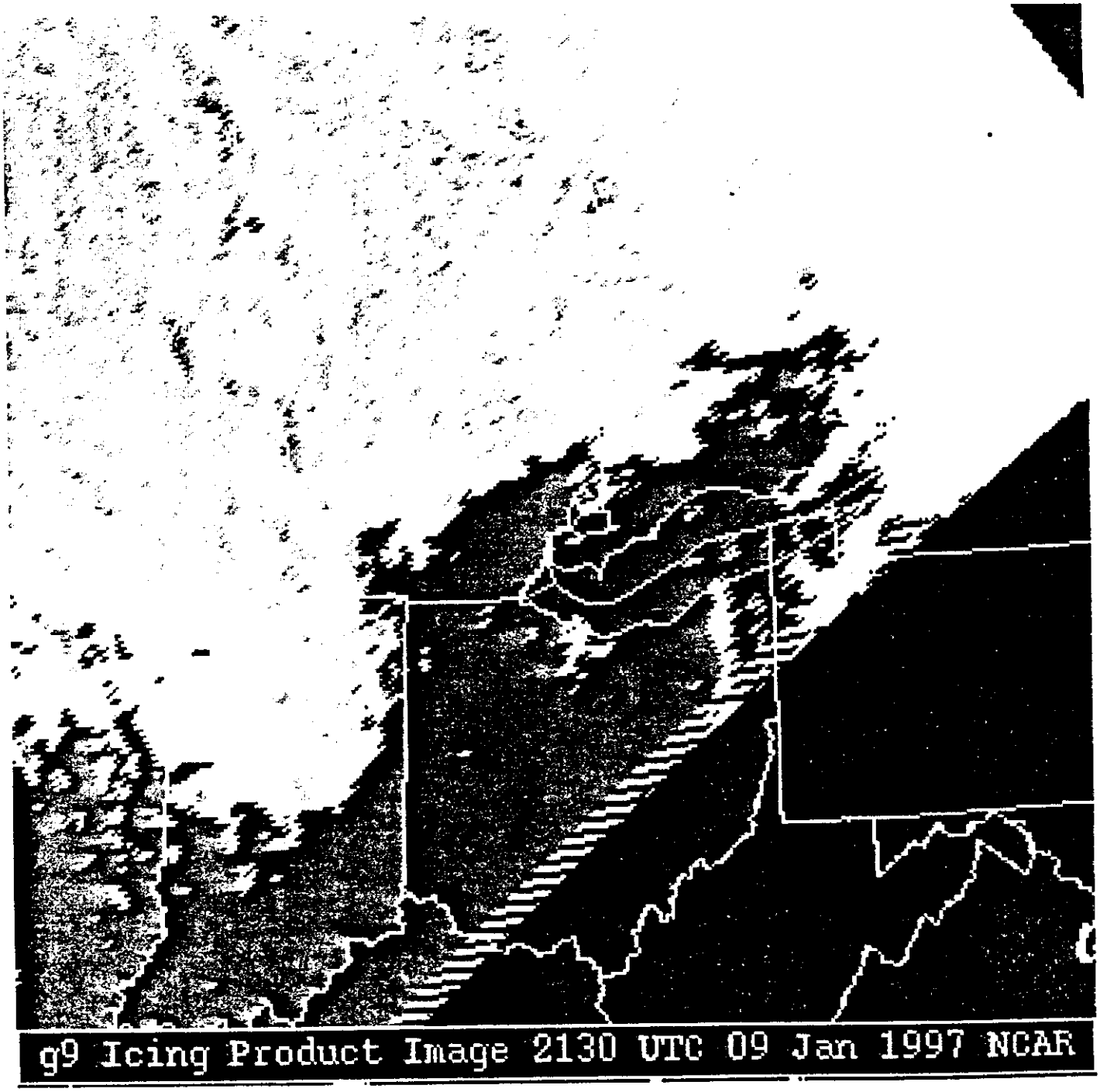
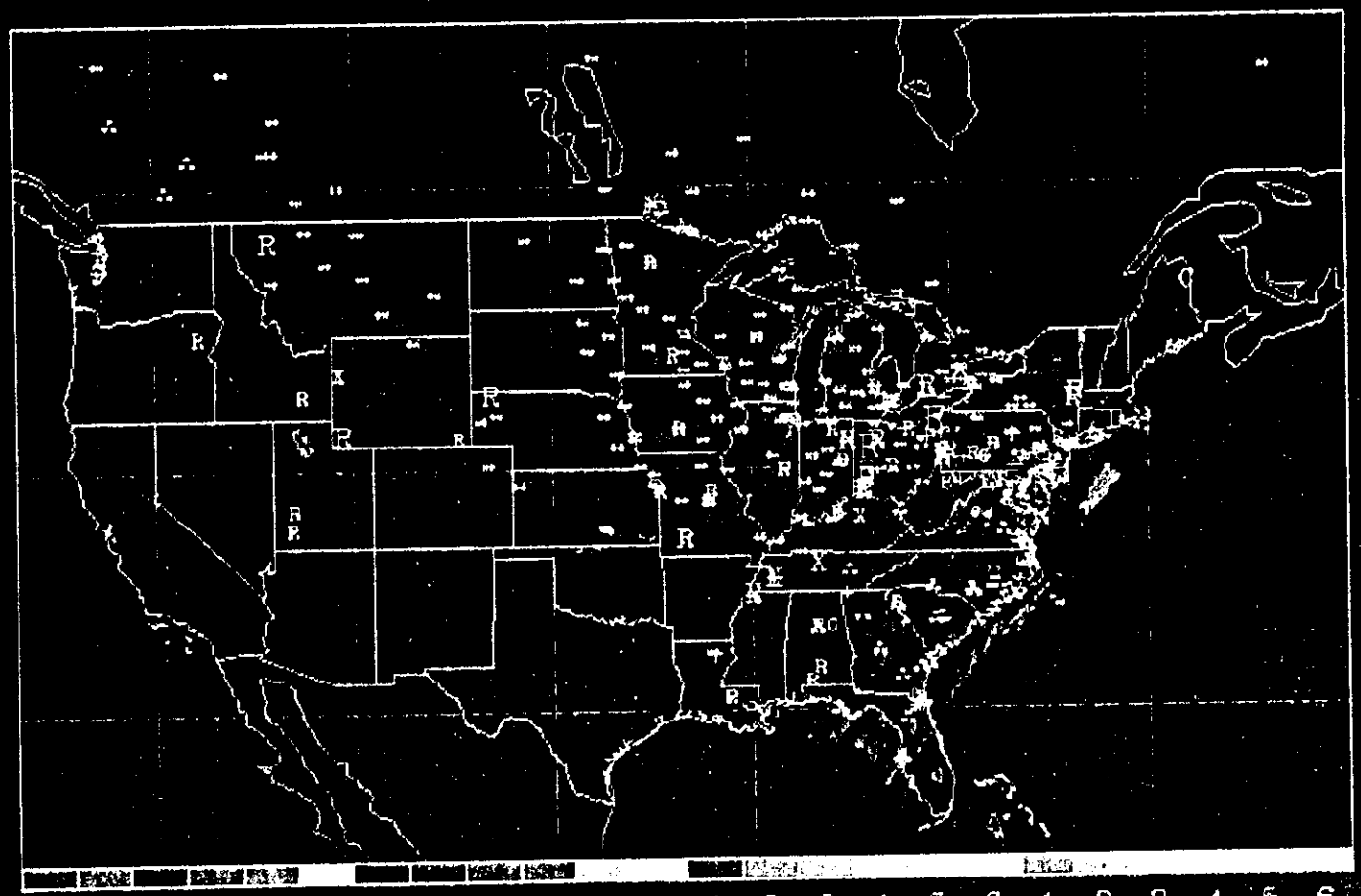


6

RADAR DATA PLOT FOR 970109 AT 20 Z



1 2 3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6

Freezing Precipitation Drizzle/Rain Snow Unknown Type

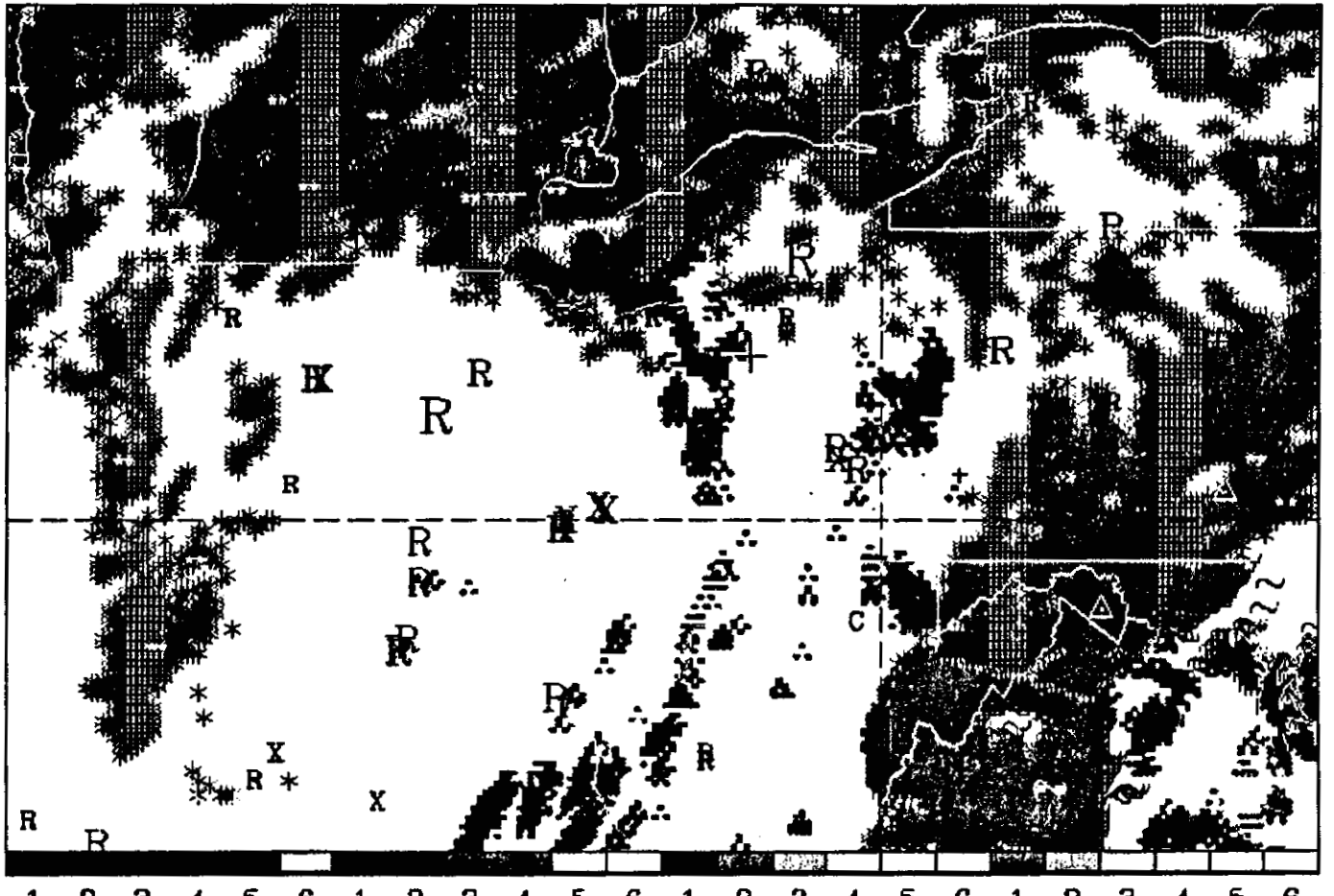
C = Clear Icing
X = Mixed Icing
R = Rime Icing
+ = No Type Given

MDT/SVR to SVR = Large
LGT/MDT to MDT = Medium
TRC to LGT = Small
PIREPs are for < 18000 ft MSL

SVC PRECIP SYMBOLS IN YELLOW

ZL S
ZR R
IP L
TH

RADAR DATA PLOT FOR 970109 AT 20 Z



1 2 3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6

Freezing Precipitation **Drizzle/Rain** **Snow** **Unknown Type**

C = Clear Icing
X = Mixed Icing
R = Rime Icing
\+ = No Type Given

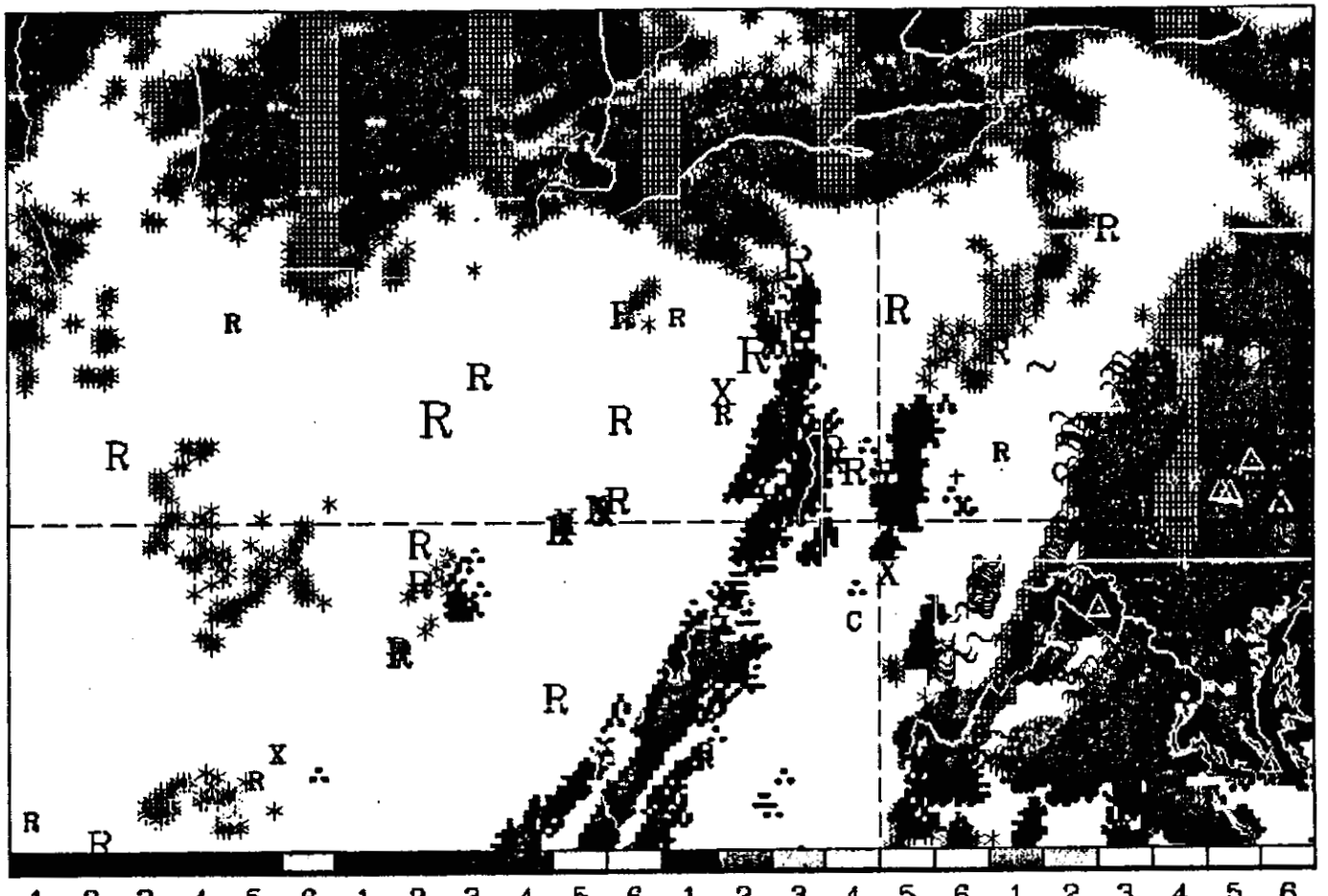
MDT/SVR to SVR = Large
LGT/MDT to MDT = Medium
TRC to LGT = Small
PIREPs are for < 16000 ft MSL

SFC PRECIP SYMBOLS IN YELLOW

ZL	S
ZR	R
IP	L
	TH

RADAR DATA PLOT FOR 970109 AT 21 Z

(6)



Freezing Precipitation **Drizzle/Rain** **Snow** **Unknown Type**

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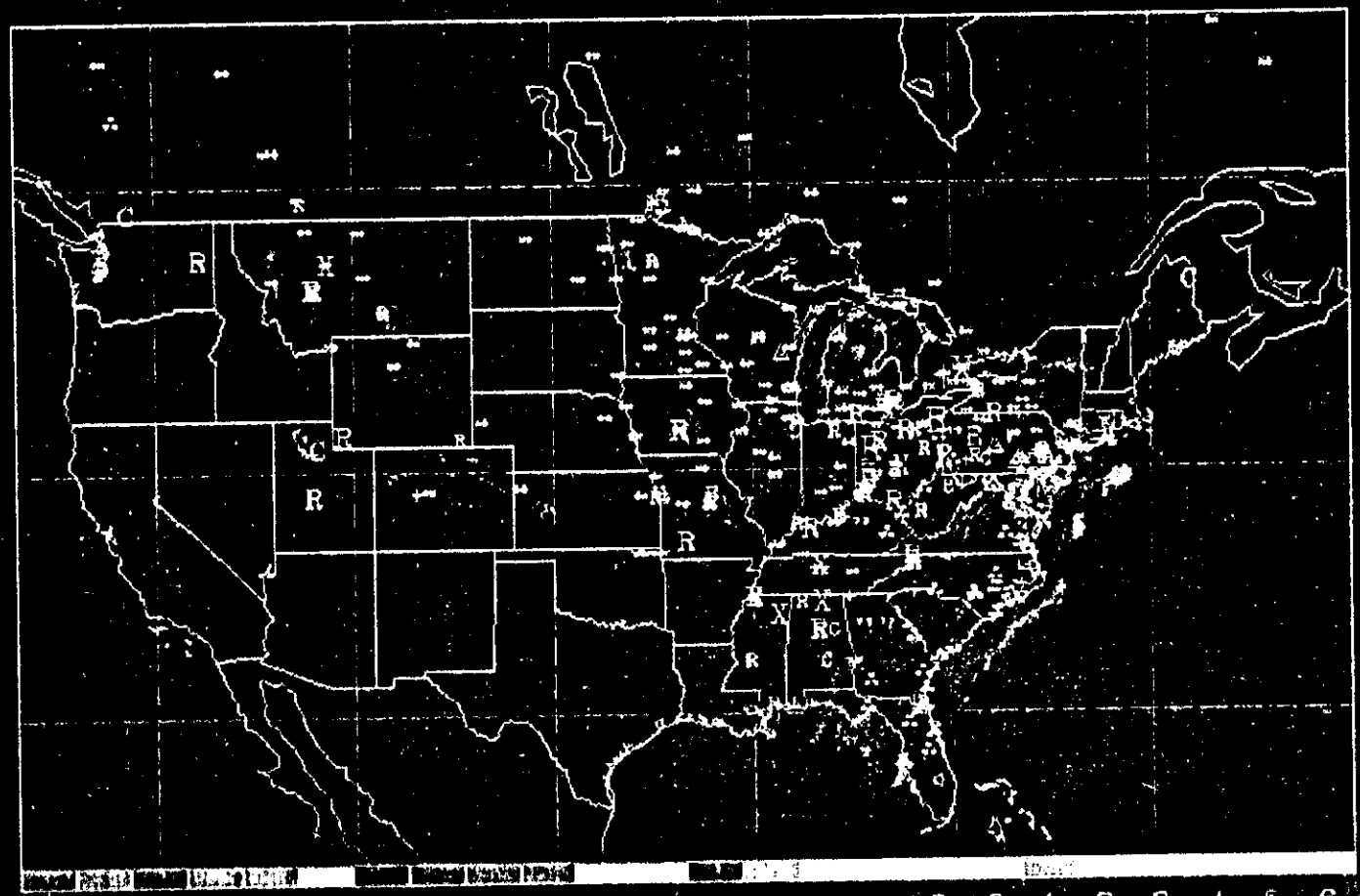
	TH

RADAR DATA PLOT FOR 970109 AT 21 Z



1 2 3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6

Freezing Precipitation Drizzle/Rain Snow Unknown Type

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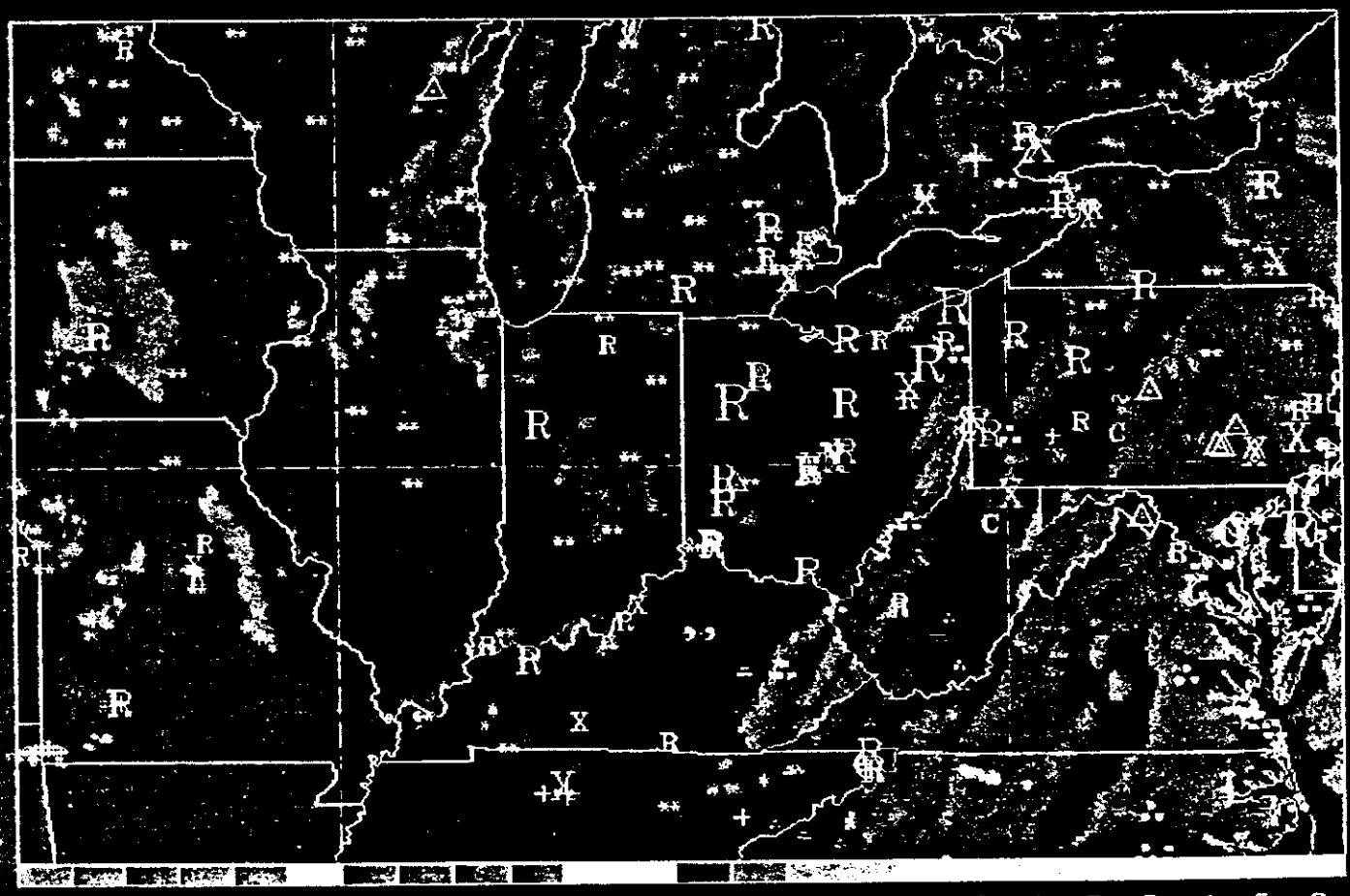
TRC to LGT = Small
PIREPs are for < 18000 ft MSL

SPC PRECIP SYMBOLS IN YELLOW

ZL S
ZR R
IP L
TH

RADAR DATA PLOT FOR 970109 AT 21 Z



1 2 3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6

Freezing Precipitation Drizzle/Rain Snow Unknown Type

C = Clear Icing
X = Mixed Icing
R = Rime Icing
= No Type Given

MDT/SVR to SVR = Large
LGT/MDT to MDT = Medium
TRC to LGT = Small
PIREPs are for < 16000 ft MSL

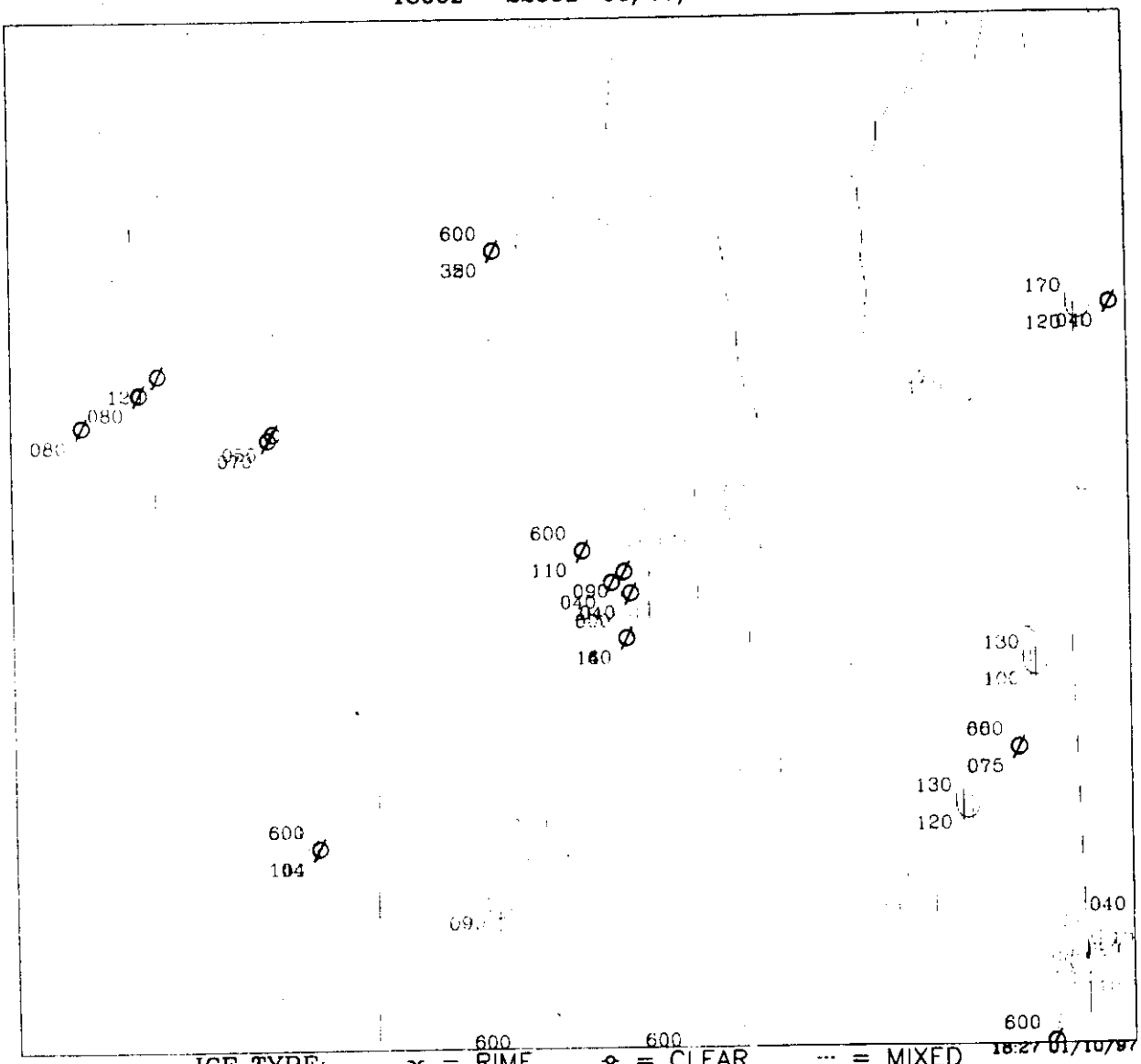
SFC PRECIP SYMBOLS IN YELLOW

	ZL		S
	ZR		R
△	IP		L
		R	TH

11

Pilot Reports (PIREPs) of Icing

1800z – 2259z 01/09/97



ICE TYPE: ~ = RIME ◇ = CLEAR ··· = MIXED

ø NULL

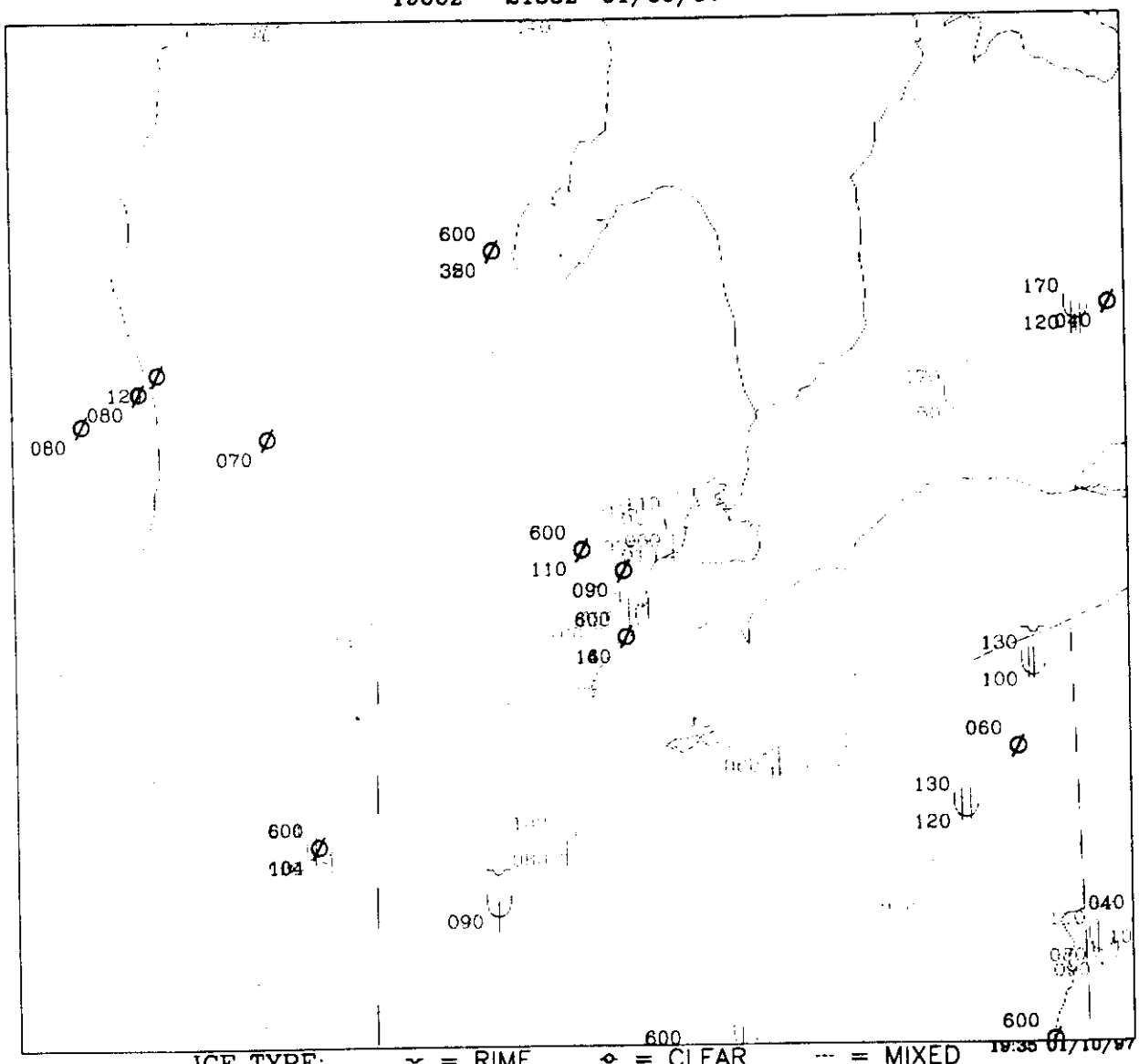
MDT–SVR

SVR

12

Pilot Reports (PIREPs) of Icing

1900z – 2155z 01/09/97



ICE TYPE: ~ = RIME ◇ = CLEAR --- = MIXED

Ø NULL

LGT MDT

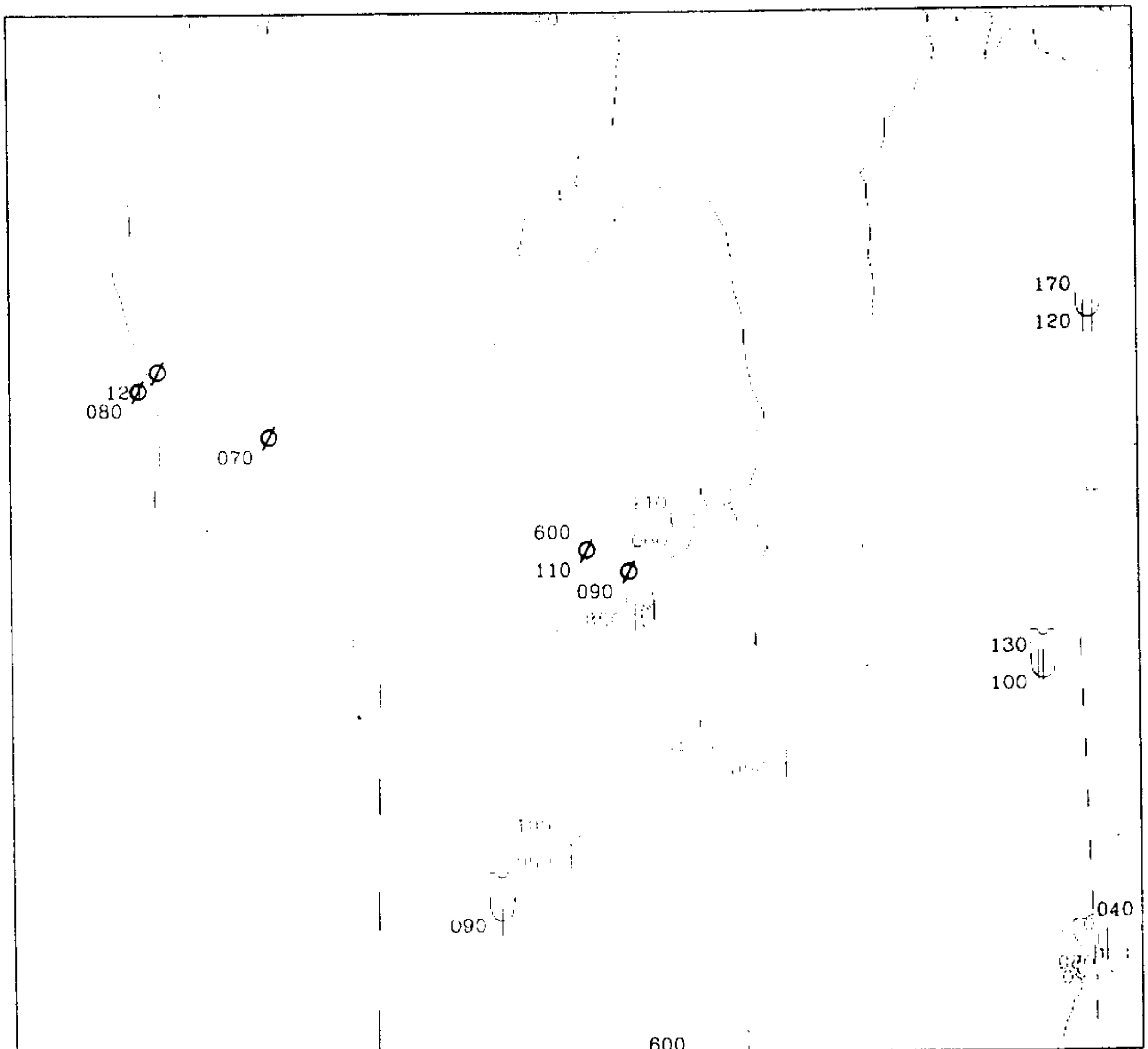
MDT

MDT–SVR

SVR

13

Pilot Reports (PIREPs) of Icing
2000z - 2155z 01/09/97



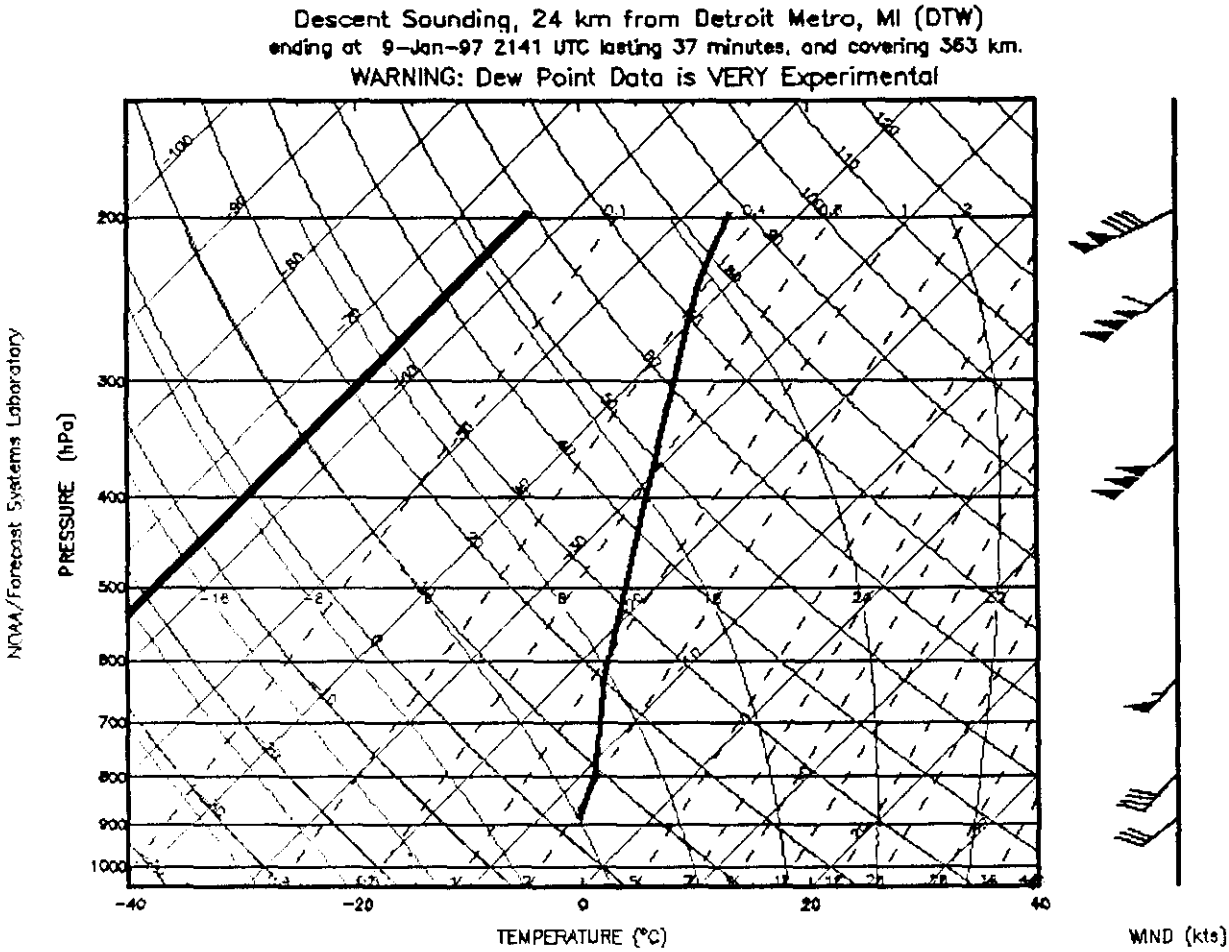
ICE TYPE: ⌣ = RIME ⌖ = CLEAR --- = MIXED

ø NULL MDT-SVR

SVR

(14)

Experimental FSL Aircraft Weather Data Display



Descent Sounding, 24 km from Detroit Metro, MI (DTW)
ending at 9-Jan-97 2141 UTC lasting 37 minutes, and covering 363 km.

• = data nearest the poke point

Pressure_Alt (ft)	(mb)	Temp (C)	(F)	Dir (kts)	Spd	DewPt (C)	WVMR g/Kg	F Time (obs)	Dist (km)	Lat (decimal	Lon degrees)	Sta- tion	F (
3700	884.9	-6.5	20.3	224	32	-64.2	0.000	2141	23	42.0533	-83.4883	DTW	R
• 6700	790.8	-9.0	15.8	214	40	-64.2	0.000	2134	26	41.9883	-83.3300	DTW	T
12700	626.9	-16.5	2.3	213	54	-64.2	0.000	2126	68	41.7267	-82.8517	DTW	T
26500	352.1	-32.0	-25.6	221	148	-64.2	0.000	2119	154	41.1433	-82.1783	DTW	T
35000	238.5	-42.5	-44.5	225	161	-64.2	0.000	2111	261	40.0533	-82.1417	CMH	T
39000	196.4	-46.5	-51.7	237	138	-64.2	0.000	2104	380	38.9383	-82.1083	CMH	T

Flight track within the time window for the aircraft nearest the poke point, sorted by altitude. Poke point is (41.9862, -83.3590)
* = Aircraft data nearest the poke point

	Alt (ft)	Temp (F)	Dir	Spd (kts)	g's	WVMR g/Kg	F	Time (obs/rcvd)	Lat (decimal	Lon degrees)	Sta-tion	Flags (X = bad data)
	27000	-20.2	236	78	0.00	0.000		2004/2027	30.0867	-81.8700	INT	T.pppp prr-r
	28000	-24.7	236	93	0.00	0.000		2011/2027	31.1450	-81.9450	INT	T.pppp prr-r
	37000	-64.3	232	113	0.00	0.000		2019/2027	32.2033	-82.0350	INT	T.pppp prr-r
	37000	-62.5	225	116	0.00	0.000		2026/2027	33.2817	-82.1217	INT	R.pppp -rr-r
	39000	-51.7	237	138	0.00	0.000		2104/2112	38.9383	-82.1083	CMH	T.pppp prr-r
	35000	-44.5	225	161	0.00	0.000		2111/2112	40.0533	-82.1417	CMH	T.pppp prr-r
	26500	-25.6	221	148	0.00	0.000		2119/2146	41.1433	-82.1783	DTW	T.pppp prr-r
	12700	2.3	213	54	0.00	0.000		2126/2146	41.7267	-82.8517	DTW	T.pppp prr-r
*	6700	15.8	214	40	0.00	0.000		2134/2146	41.9883	-83.3300	DTW	T.pppp prr-r
	3700	20.3	224	32	0.00	0.000		2141/2146	42.0533	-83.4883	DTW	R.pppp -rr-r

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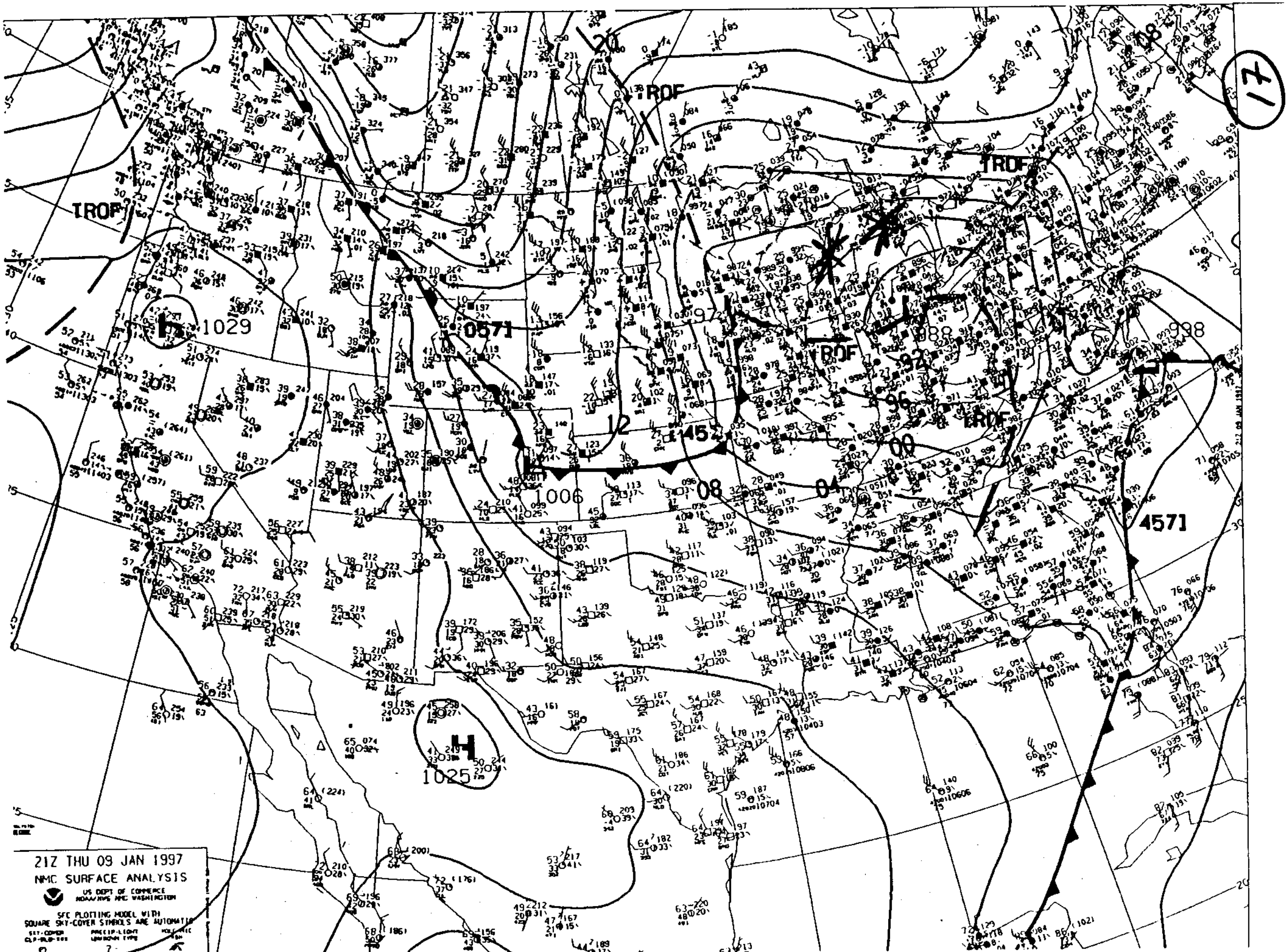
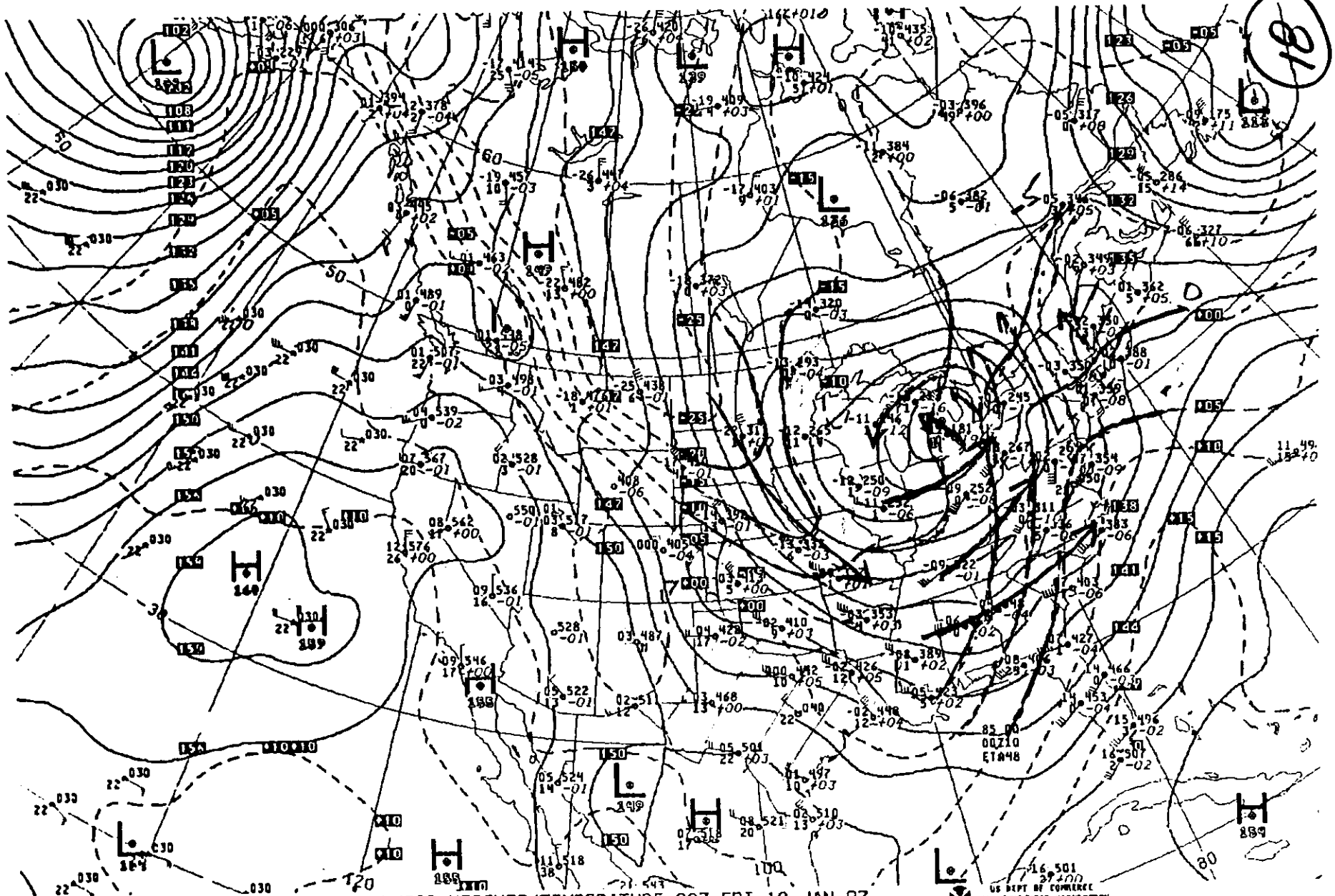
Help | Credits

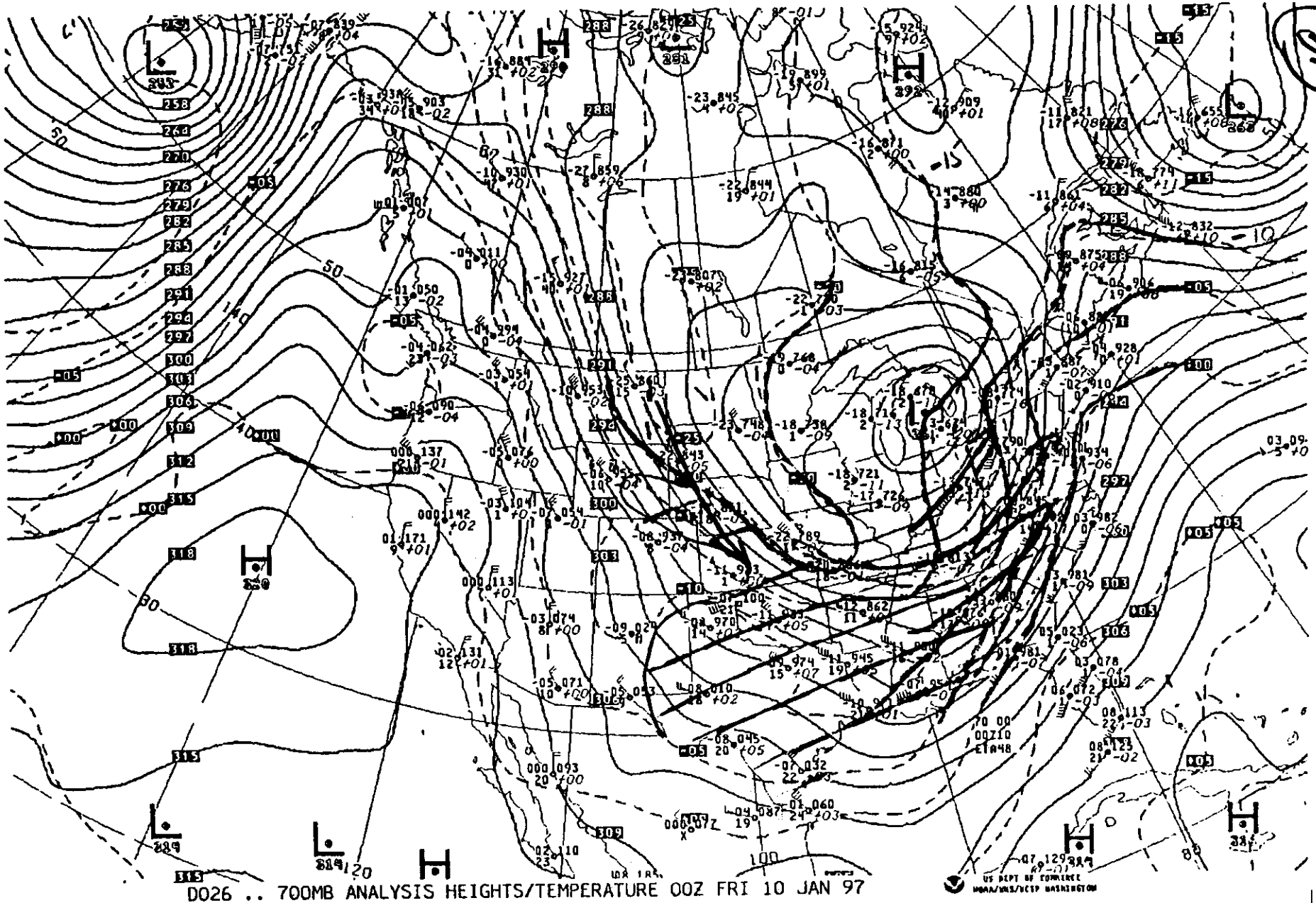
Prepared by Bill Moninger (moninger@fsl.noaa.gov, 303-497-6435)

Last modified: Fri Feb 28 17:49:42 1997

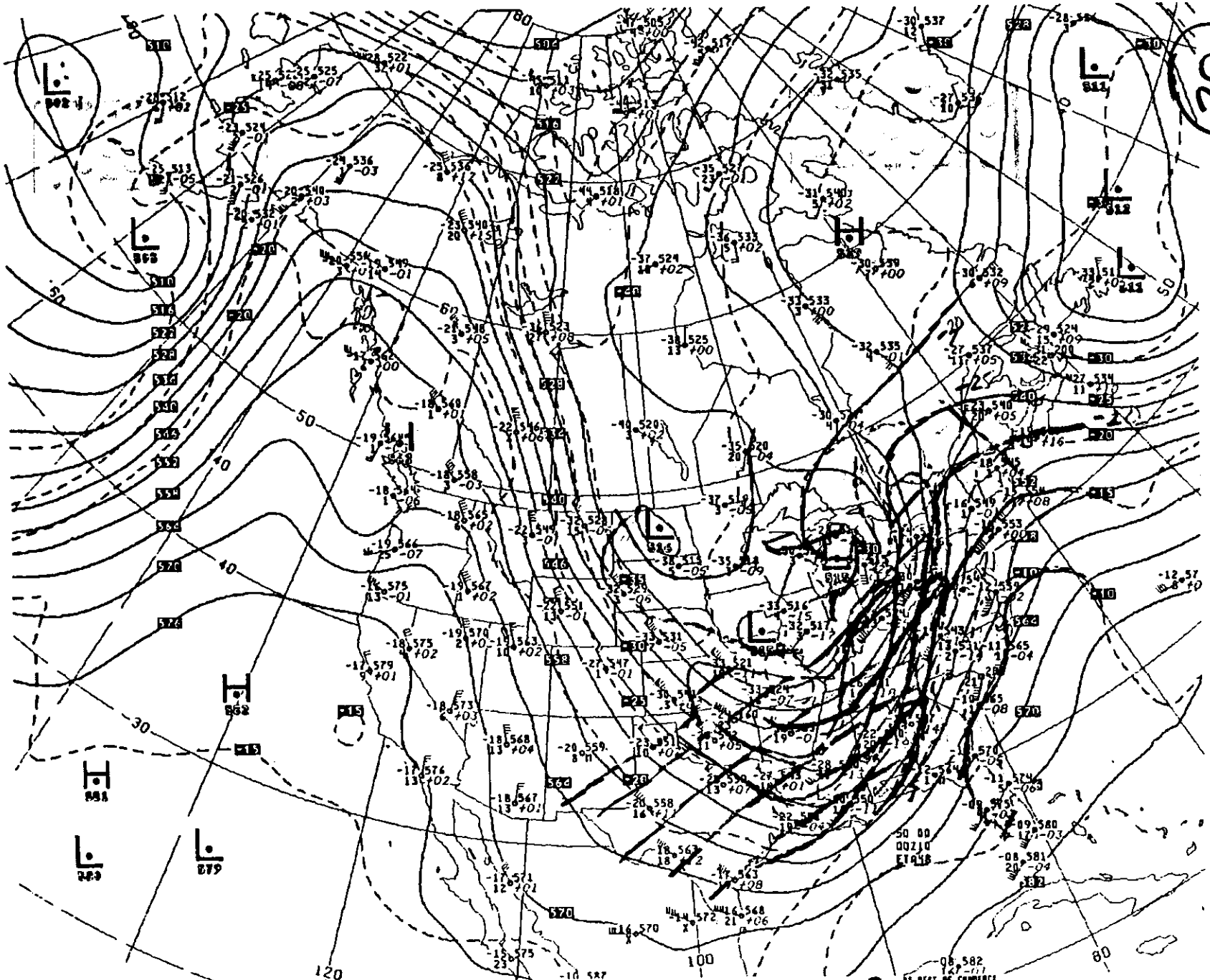
17


21Z THU 09 JAN 1997
NMC SURFACE ANALYSIS
US DEPT OF COMMERCE
NOAA/NWS NMC WASHINGTON
SFC PLOTTING MODEL WITH
SQUARE SKY-COVER SYMBOLS ARE AUTOMATIC
TROF
1029
0571
1006
1025
4571
998
988
1452
H
L


D030 .. 850MB ANALYSIS HEIGHTS/TEMPERATURE 00Z FRI 10 JAN 97
US DEPT OF COMMERCE
NOAA/NWS/NCEP WASHINGTON


D026 .. 700MB ANALYSIS HEIGHTS/TEMPERATURE 00Z FRI 10 JAN 97
US DEPT OF COMMERCE
NOAA/NWS/NCEP WASHINGTON

PIT data bad



20

PIT data bad.