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NATIONAL WEATHER SERVICE
NATIONAL METEOROLOGICAL CENTER

OFFICE NOTE 108

NMC ARCHIVES

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NMC ARCHIVES

The purpose of this Office Note is to describe the various archive systems maintained by Automation Division, National Meteorological Center. Archive systems include permanent sequential (tape) data sets, and temporary sequential (tape) and random access (disk) data sets. The life cycle of temporary data sets is one month for tape data sets and 36 days for random access sets. The available data sets are listed below and subsequently described in detail.

1. Tape set of 00Z and 12Z LFM analysis and forecast fields.
2. Tape set of 00Z and 12Z OPERATIONAL analysis and forecast fields.
3. Tape set of 00Z and 12Z FINAL analysis and forecast fields.
4. Tape set of selected FINAL and/or OPERATIONAL analysis and forecast fields.
5. Tape set of upper air observational reports.
6. Tape set of surface observational reports.
7. Rotating 36-day disk set of selected operational analysis and forecast fields.
8. Rotating 36-day disk set of selected LFM analysis and forecast fields.

Temporary Data Sets

The temporary data (tape) sets of the three basic NMC analysis and forecast operations - LFM, OPERATIONAL (PE), and FINAL can be discussed as a group. Each tape contains the observational data required for analysis in addition to guess fields, analyzed fields, forecast fields, and sigma fields. Table 1 lists the contents of these tapes by data set name.

Each tape set contains 62 tapes, one for each 12-hour cycle in a month. Tapes are 9-track, 1600 BPI with IBM standard labels. The data for each cycle is written without file marks so that the user must search for the data set label as described in Office Note 85. Observational data is formatted as described in Office Note 29 and gridded (binary) fields as described in Office Note 84.

For most applications the VOL=SER numbers of the tapes are not required since the tapes are catalogued. For sequential use the following DD statements should be used:

```
//FTXXF001 DD DSN=NWS.NMC.HISTORY.LFMDDCY,DISP=(OLD,KEEP)
//FTXXF001 DD DSN=NWS.NMC.HISTORY.OPNLDDCY,DISP=(OLD,KEEP)
//FTXXF001 DD DSN=NWS.NMC.HISTORY.FNLDDCY,DISP=(OLD,KEEP)
```

where the fourth qualifier describes the tape set LFM, OPNL, or FNL and DDCY are the day of the month and cycle (00 or 12) required to identify the proper tape. For example:

```
//FT25F001 DD DSN=NWS.NMC.HISTORY.OPNL2112,DISP=(OLD,KEEP)
```

will define the OPERATIONAL HISTORY tape for the 12Z cycle on the 21st day of the current month.

To load any data set for random access use, the following procedures have been catalogued:

```
//LDLFM EXEC WWLDLFM,GES=,FMOO=,ETC=,DATE=DD,CYCLE=HH
//LDOPNL EXEC WWLDOPNL,ANL=,F48=,ETC=,DATE=DD,CYCLE=HH
//LDFNL EXEC WWLDFNL,ANL5=,GANL=,ETC=,DATE=DD,CYCLE=HH
```

where DD=Day of Month, HH=00 or 12.

If no DD statements are given each data set named will be placed in a temporary data set on a work pack so that the DD statement in the step using the data would be:

```
//ANL DD DSN=&&ANL,DISP=(OLD,DELETE)
//F48 DD DSN=&&F48,DISP=(OLD,DELETE)
```

Procedures to copy and inventory these tape sets are available. In order to preserve the integrity of these tapes, users should contact NMC, Automation Division, Data Management Section for assistance.

Permanent Tape Archives

Permanent archives are created primarily for retention at the National Climatic Center (NCC), Asheville, North Carolina, and the National Center for Atmospheric Research (NCAR), Boulder, Colorado, but a master copy is also retained in NMC. A duplicate of the master tape sets is maintained in the OMCS tape library for one year. Data for periods beyond one year must be recovered from NCC, Asheville, N.C. The VOL=SER numbers of the tapes in the OMCS library are given in Table 2. These numbers are fixed and will be overwritten each year. The data set name (DSN) used on library copies of the archives and on copies made using the PROCEDURES described below is DSN=TCOPY. The contents of these tape sets include upper air observational reports, surface observational reports, and selected gridded (binary) analyses and forecasts. All tapes have IBM standard labels and are 9-track, 1600 BPI.

There are no file marks separating data sets on any of the permanent archives so that the user must search for data by "data set name" and date as described in Office Note 85. In all cases except surface records data are stacked on two tapes per month, 1st to 15th, and 16th to end of month; surface data requires three tapes in 10-day increments (1-10, 11-20, 21-30 or 31). At the end of each collection period the tapes are copied and distributed to the various libraries. Operational tapes are overwritten each month, but are inactive for alternate 15-day periods (20 days of surface data) and may be read by local users under certain conditions.

It must be emphasized that the operational permanent archives must not be used in a check-out mode for the obvious reasons that they could be overwritten or check-out may conflict with operations. Programs that require the use of operational archives should always be checked out

using library copies or private copies, and implemented routinely only with the permission of Operations Branch. These tapes have been catalogued and data definitions (DD) statements will be provided on request.

Operational archives may be copied and inventoried using the following procedures:

To copy observational data tapes (upper air and surface reports) -

```
// EXEC WWDATCPY,TYPE=(DATA TYPE)
        TAPE=(TAPE SEQUENCE NO.),
        OUTPUT=(VOL=SER OF OUTPUT TAPE)
```

To copy gridded fields -

```
// EXEC WWGRDCPY,TYPE=(DATA TYPE),
   TAPE=(TAPE SEQUENCE NUMBER),
   OUTPUT=(VOL=SER OF OUTPUT TAPE)
```

To inventory an archive tape -

```
// EXEC WWINVENT,TYPE=(DATA TYPE),
// TAPE = (TAPE SEQUENCE NUMBER)
```

where data type is defined as:

SFC = surface data
UA = upper air data
GRD = gridded data

and, tape sequence number is:

TAPE1A or TAPE1B for data period 1st to 15th if upper air or gridded data; 1st to 10th if surface data.

TAPE2A or TAPE2B for data period 16th to end of month if upper air or gridded data; 11th to 20th if surface data.

TAPE3A or TAPE3B for surface data period 21st to end of month.

Examples are:

```
// EXEC WWDATCPY,TYPE=UA,TAPE=TAPE1A,OUTPUT=E12345
// EXEC WWDATCPY,TYPE=SFC,TAPE=TAPE3A,OUTPUT=E67890
// EXEC WWGRDCPY,TYPE=GRD,TAPE=TAPE2A,OUTPUT=E54321
// EXEC WWINVENT,TYPE=GRD,TAPE=TAPE2B.
```

A. Upper Air Observational Reports

At archive time the data include all reports collected for approximately 12 hours after synoptic time. Since Feb. 1, 1975 data set ADPUPA has been archived for the 00Z, 06Z, 12Z, and 18Z periods. The complete contents of these tapes are ADPUPA, UPABOG, SIRSOB, AIRCFT, and SATWND. Record size is 5112 bytes, block size is 5120 bytes. Record format is described in Office Note 29.

Following is a table indicating the manner in which currently active observational reports are grouped into the data sets. The code figures are from TABLE R.1 (report type) of Office Note 29.

Data Set Name	Code Figures
ADPUPA	011, 021, 022, 023, 031
AIRCFT	041
UPABOG	051
SIRSOB	061
SATWND	063
ADPSFC	511, 512
SFCSHP	521, 522, 523
SFCBOG	551

B. Surface Observational Reports

The surface archive in the format described here was begun Feb. 1, 1975. Contents include ADPSFC and SFCSHP at six hourly intervals and SFCBOG used for the 00Z and 12Z operational analysis. Record format is described in Office Note 29; record size is 5112 bytes, block size is 5120 bytes.

C. Gridded Analysis and Forecasts

This archive contains selected records for each 12-hour NMC operational cycle. The contents of this archive were chosen by representatives of NCC and NCAR, and by local request. The complete contents are listed in Appendix A in the order in which they are accumulated in each cycle. An attempt is made to archive the basic data from the FINAL analysis. If not available, the OPERATIONAL analysis is used.

The first record of each cycle's data set is an inventory record. The first eight words of this record are as described in Office Note 85. Data set name is GRDARK. The remainder of the record consists of the six-word identification of each of the subsequent records archived in this cycle. The format of the various records is described in Office Note 84. Maximum record size in this collection is the 65 x 65 array (2125 words). Records are variable-span blocked 8508 bytes.

Temporary 36-Day Disk Data Sets

The 36-day disk archives were created to provide random access to a variety of data in homogeneous data sets for long range forecast guidance, but are also the basis for most verification programs and some research projects. All data sets in these archives are "rotating" in that at the end of each 12-hour operational cycle the most recent data is added in place of the oldest data in each set.

The disk archives differ from operational disk data sets in that the maximum number of records is 288 (a multiple of 36) and the data bits (CDCM) have been added to the fifth word of each record to provide unique identification (see Office Note 84).

There are two disk packs dedicated to archives, one for LFM data and one for OPERATIONAL data. Data set names are:

```
DSN=NWS.NMC.PROD.LFM36.QUALIF1.QUALIF2,DISP=SHR
DSN=NWS.NMC.PROD.HD36.QUALIF1.QUALIF2,DISP=SHR
```

QUALIF1 and QUALIF2 define specific data sets. In most cases there is only one qualifier, but where data for a specific type or level exceeded 288 records, an additional qualified data set had to be created. Tables 3 and 4 provide lists of data set qualifiers and contents of LFM36 and HD36 respectively.

Table 1
CONTENTS OF OPERATIONAL HISTORY TAPES

	LFM (1+30)	OPNL (3+0)	FINAL (10+0)
1	ADPSFC	ADPSFC	ADPSFC
2	SFCSHP	SFCSHP	SFCSHP
3	SFCBOG	SFCBOG	SFCBOG
4	ADPUPA	ADPUPA	ADPUPA
5	AIRCFT	AIRCFT	AIRCFT
6	UPABOG	UPABOG	UPABOG
7	SIRSOB	SIRSOB	SIRSOB
8	SATWND	SATWND	SATWND
9	GES	GES	ANL5
10	FMANL	ANL	GF12
11	FM00	F00	GF24
12	FM12	F12	GANL
13	FM24	F24	HUFGES
14	FM36	F36	HUFANL
15	LFMBND	F48	
16	LFM00	F60	
17	LFM12	F72	
18	LFM24	F84	
19	LFM36	F96	
20		HUFGES	
21		HUFANL	
22		PE00	
23		PE12	
24		PE24	
25		PE36	
26		PE48	

Table 2
PERMANENT ARCHIVE TAPES - OMCS LIBRARY

DATE	GRIDDED FIELDS	UPPER AIR ADP	DATE	SURFACE ADP
Jan 1-15	E12801	E12825	Jan 1-10	E12849
16-31	E12802	E12826	11-20	E12850
Feb 1-15	E12803	E12827	21-31	E12851
16-28	E12804	E12828	Feb 1-10	E12852
Mar 1-15	E12805	E12829	11-20	E12853
16-31	E12806	E12830	21-28	E12854
Apr 1-15	E12807	E12831	Mar 1-10	E12855
16-30	E12808	E12832	11-20	E12856
May 1-15	E12809	E12833	21-31	E12857
16-31	E12810	E12834	Apr 1-10	E12858
Jun 1-15	E12811	E12835	11-20	E12859
16-30	E12812	E12836	21-30	E12860
Jul 1-15	E12813	E12837	May 1-10	E12861
16-31	E12814	E12838	11-20	E12862
Aug 1-15	E12815	E12839	21-31	E12863
16-31	E12816	E12840	Jun 1-10	E12864
Sep 1-15	E12817	E12841	11-20	E12865
16-30	E12818	E12842	21-30	E12866
Oct 1-15	E12819	E12843	Jul 1-10	E12867
16-31	E12820	E12844	11-20	E12868
Nov 1-15	E12821	E12845	21-31	E12869
16-30	E12822	E12846	Aug 1-10	E12870
Dec 1-15	E12823	E12847	11-20	E12871
16-31	E12824	E12848	21-31	E12872
			Sep 1-10	E12873
			11-20	E12874
			21-30	E12875
			Oct 1-10	E12876
			11-20	E12877
			21-31	E12878
			Nov 1-10	E12879
			11-20	E12880
			21-30	E12881
			Dec 1-10	E12882
			11-20	E12883
			21-31	E12884

Table 3
DATA SET: NWS.NMC.LFM36.QUALIF1,QUALIF2,

QUALIF1	QUALIF2	
FMANL	L850UVZT	850 MB U and V Wind Components, Height, Temperature
FMANL	L500UVZT	500 MB U and V Wind Components, Height, Temperature
FMANL	L300UVZT	300 MB U and V Wind Components, Height, Temperature
FMANL	LSFCPPB	Sea Level Press., 0.0-1.0 BDY RH
FM00	L850UVZT	850 MB U and V Wind Components, Height, Temperature
FM00	L500UVZT	500 MB U and V Wind Components, Height, Temperature
FM00	L300UVZT	300 MB U and V Wind Components, Height, Temperature
FM00	LSFCPPB	Sea Level Press., 0.0-1.0 BDY RH
FM12	L850UVZT	850 MB U and V Wind Components, Height, Temperature
FM12	L500UVZT	500 MB U and V Wind Components, Height, Temperature
FM12	L300UVZT	300 MB U and V Wind Components, Height, Temperature
FM12	LSFCPPB	Sea Level Press., 0.0-1.0 BDY RH, A-PCP
FM24	L850UVZT	850 MB U and V Wind Components, Height, Temperature
FM24	L500UVZT	500 MB U and V Wind Components, Height, Temperature
FM24	L300UVZT	300 MB U and V Wind Components, Height, Temperature
FM24	LSFCPPB	Sea Level Press., 0.0-1.0 BDY RH, A-PCP
FM36	L850UVZT	850 MB U and V Wind Components, Height, Temperature
FM36	L500UVZT	500 MB U and V Wind Components, Height, Temperature
FM36	L350UVZT	300 MB U and V Wind Components, Height, Temperature
FM36	LSFCPPB	Sea Level Press., 0.0-1.0 BDY RH, A-PCP

BDY RH = Boundary Relative Humidity

A-PCP = Accumulated Total Precipitation

Table 4
DATA SET: NWS.NMC.HD36.QUALIF1,QUALIF2,

QUALIF1	QUALIF2	
HOP		00Z, 12Z Sea Level Press, 1000 MB, 700 MB, 500 MB Heights
H85		00Z, 12Z 850 MB, 300 MB, 200 MB Heights
TS7		00Z, 12Z 700 MB Temps, Sea Surface Temps
H100		12Z, 100 MB, 70 MB, 50 MB, 10 MB Heights
T100		12Z, 100 MB, 70 MB, 50 MB, 30 MB, 10 MB Temps
MB100		00Z, 12Z 100 MB, FCST HT for 12, 24, 36, 48 Hrs
FHSL	T048	00Z, 12Z FCST Sea Level Press for 12, 24, 36, 48 Hrs
FHSL	EXTN	00Z, FCST Sea Level Press for 60, 72, 84 Hrs
FH100	T048	00Z, 12Z 1000 MB FCST HT for 12, 24, 36, 48 Hrs.
FH100	EXTN	00Z, 1000 MB FCST HT for 60, 72, 84 Hrs
FH85	T048	00Z, 12Z 850 MB FCST HT for 12, 24, 36, 48 Hrs
FH85	EXTN	00Z, 850 MB FCST HT for 60, 72, 84 Hrs
FH70	T048	00Z, 12Z 700 MB FCST HT for 12, 24, 36, 48 Hrs
FH70	EXTN	00Z, 700 MB FCST HT for 60, 72, 84 Hrs
FH50	T048	00Z, 12Z 500 MB FCST HT for 12, 24, 36, 48 Hrs
FH50	EXTN	00Z, 500 MB FCST HT for 60, 72, 84 Hrs
FH30	T048	00Z, 12Z 300 MB FCST HT for 12, 24, 36, 48 Hrs
FH30	EXTN	00Z, 300 MB FCST HT for 60, 72, 84 Hrs
FH20	T048	00Z, 12Z 200 MB FCST HT for 12, 24, 36, 48 Hrs
FH20	EXTN	00Z, 200 MB FCST HT for 60, 72, 84 Hrs
FBAR7		00Z FCST: Sea Level Press 108, 132 Hrs; 700 MB 96, 108, 120, 132, 144 Hrs
FBAR5		00Z FCST: 500 MB.HT. 96, 108, 120, 132, 144 Hrs
ENERGY1		Energetics Fields (See Office Note 109)
ENERGY2		Energetics Fields (See Office Note 109)
F00	PRFT	Observed Max-Min Temps from TDL Analysis
F12T0F96	T12Z	"PERFECT PROG" Max-Min FCSTS* for 12, 24, 36, 48, 60 Hrs
F12T0F96	T00Z	"PERFECT PROG" Max-Min FCSTS* for 12, 24, 36, 48, 60, 72 Hrs
MOS12	T12Z	"MOSS" Max-Min FCSTS* for 12, 24, 36, 48, 60 Hrs
MOS12	T00Z	"MOSS" Max-Min FCSTS* for 12, 24, 36, 48, 60 Hrs
TEMP	F84XF144	"PERFECT PROG" Max-Min FCSTS for 84, 96, 108, 120, 132, 144, 156 Hrs (Extension of "PERFECT PROG" at 00Z ONLY)

*Max-Min PROGS at 00Z are 12 Hr Min, 24 Hr Max, 36 Hr Min, etc.

Max-Min PROGS at 12Z are 12 Hr Max, 24 Hr Min, 36 Hr Max, etc.

APPENDIX A

SEQ	LEVEL-TYPE	IDENTIFICATION IN HEXIDECIMAL(1ST SIX WORDS)
1	MSL PRESS	Z00808000,Z00000000,Z00000000,Z00000000,Z0000001B,Z0000084D,
2	SFC TEMP	Z01008100,Z00000000,Z00000000,Z00000000,Z0000001B,Z0000084D,
3	1000MB HT	Z00100800,Z00271081,Z00000000,Z00000000,Z0000001B,Z0000084D,
4	1000MB U	Z03000800,Z00271081,Z00000000,Z00000000,Z0000001B,Z0000084D,
5	1000MB V	Z03100800,Z00271081,Z00000000,Z00000000,Z0000001B,Z0000084D,
6	850MB HT	Z00100800,Z014C0882,Z00000000,Z00000000,Z0000001B,Z0000084D,
7	850MB TMP	Z01000800,Z014C0882,Z00000000,Z00000000,Z0000001B,Z0000084D,
8	850MB U	Z03000800,Z014C0882,Z00000000,Z00000000,Z0000001B,Z0000084D,
9	850MB V	Z03100800,Z014C0882,Z00000000,Z00000000,Z0000001B,Z0000084D,
10	700MB HT	Z00100800,Z01117082,Z00000000,Z00000000,Z0000001B,Z0000084D,
11	700MB TMP	Z01000800,Z01117082,Z00000000,Z00000000,Z0000001B,Z0000084D,
12	700MB U	Z03000800,Z01117082,Z00000000,Z00000000,Z0000001B,Z0000084D,
13	700MB V	Z03100800,Z01117082,Z00000000,Z00000000,Z0000001B,Z0000084D,
14	500MB HT	Z00100800,Z00C35082,Z00000000,Z00000000,Z0000001B,Z0000084D,
15	500MB TMP	Z01000800,Z00C35082,Z00000000,Z00000000,Z0000001B,Z0000084D,
16	500MB U	Z03000800,Z00C35082,Z00000000,Z00000000,Z0000001B,Z0000084D,
17	500MB V	Z03100800,Z00C35082,Z00000000,Z00000000,Z0000001B,Z0000084D,
18	400MB HT	Z00100800,Z009C4082,Z00000000,Z00000000,Z0000001B,Z0000084D/
19	400MB TMP	Z01000800,Z009C4082,Z00000000,Z00000000,Z0000001B,Z0000084D,
20	400MB U	Z03000800,Z009C4082,Z00000000,Z00000000,Z0000001B,Z0000084D,
21	400MB V	Z03100800,Z009C4082,Z00000000,Z00000000,Z0000001B,Z0000084D,
22	300MB HT	Z00100800,Z00753082,Z00000000,Z00000000,Z0000001B,Z0000084D,
23	300MB TMP	Z01000800,Z00753082,Z00000000,Z00000000,Z0000001B,Z0000084D,
24	300MB U	Z03000800,Z00753082,Z00000000,Z00000000,Z0000001B,Z0000084D,
25	300MB V	Z03100800,Z00753082,Z00000000,Z00000000,Z0000001B,Z0000084D,
26	250MB HT	Z00100800,Z0061A882,Z00000000,Z00000000,Z0000001B,Z0000084D,
27	250MB TMP	Z01000800,Z0061A882,Z00000000,Z00000000,Z0000001B,Z0000084D,
28	250MB U	Z03000800,Z0061A882,Z00000000,Z00000000,Z0000001B,Z0000084D,
29	250MB V	Z03100800,Z0061A882,Z00000000,Z00000000,Z0000001B,Z0000084D,
30	200MB HT	Z00100800,Z004E2082,Z00000000,Z00000000,Z0000001B,Z0000084D,

SEQ	LEVEL-TYPE	IDENTIFICATION IN HEXIDECIMAL(1ST SIX WORDS)
31	200MB TMP	Z01000800,Z004E2082,Z00000000,Z00000000,Z0000001B,Z0000084D,
32	200MB U	Z03000800,Z004E2082,Z00000000,Z00000000,Z0000001B,Z0000084D,
33	200MB V	Z03100800,Z004E2082,Z00000000,Z00000000,Z0000001B,Z0000084D,
34	150MB HT	Z00100800,Z003A9882,Z00000000,Z00000000,Z0000001B,Z0000084D,
35	150MB TMP	Z01000800,Z003A9882,Z00000000,Z00000000,Z0000001B,Z0000084D,
36	150MB U	Z03000800,Z003A9882,Z00000000,Z00000000,Z0000001B,Z0000084D/
37	150MB V	Z03100800,Z003A9882,Z00000000,Z00000000,Z0000001B,Z0000084D,
38	100MB HT	Z00100800,Z00271082,Z00000000,Z00000000,Z0000001B,Z0000084D,
39	100MB TMP	Z01000800,Z00271082,Z00000000,Z00000000,Z0000001B,Z0000084D,
40	100MB U	Z03000800,Z00271082,Z00000000,Z00000000,Z0000001B,Z0000084D,
41	100MB V	Z03100800,Z00271082,Z00000000,Z00000000,Z0000001B,Z0000084D,
42	TRO PRESS	Z00808200,Z00000000,Z00000000,Z00000000,Z0000001B,Z0000084D,
43	TRO TEMP	Z01008200,Z00000000,Z00000000,Z00000000,Z0000001B,Z0000084D,
44	70MB HT	Z00100800,Z01117083,Z00000000,Z00000000,Z0000001B,Z0000084D,
45	70MB TMP	Z01000800,Z01117083,Z00000000,Z00000000,Z0000001B,Z0000084D,
46	50MB HT	Z00100800,Z00C35083,Z00000000,Z00000000,Z0000001B,Z0000084D,
47	50MB TMP	Z01000800,Z00C35083,Z00000000,Z00000000,Z0000001B,Z0000084D,
48	30MB HT	Z00100800,Z00753083,Z00000000,Z00000000,Z0000001B,Z0000084D,
49	30MB TMP	Z01000800,Z00753083,Z00000000,Z00000000,Z0000001B,Z0000084D,
50	10MB HT	Z00100800,Z00271083,Z00000000,Z00000000,Z0000001B,Z0000084D,
51	10MB TMP	Z01000800,Z00271083,Z00000000,Z00000000,Z0000001B,Z0000084D,
52	TROP 1000MB U	Z03000800,Z00271081,Z00000000,Z00000000,Z00000001,Z00000354,
53	TROP 1000MB V	Z03100800,Z00271081,Z00000000,Z00000000,Z00000001,Z00000354,
54	TROP 1000MB TMP	Z01000800,Z00271081,Z00000000,Z00000000,Z00000001,Z00000354/
55	TROP 850MB U	Z03000800,Z014C0882,Z00000000,Z00000000,Z00000001,Z00000354,
56	TROP 850MB V	Z03100800,Z014C0882,Z00000000,Z00000000,Z00000001,Z00000354,
57	TROP 850MB TMP	Z01000800,Z014C0882,Z00000000,Z00000000,Z00000001,Z00000354,
58	TROP 700MB U	Z03000800,Z01117082,Z00000000,Z00000000,Z00000001,Z00000354,
59	TROP 700MB V	Z03100800,Z01117082,Z00000000,Z00000000,Z00000001,Z00000354,
60	TROP 700MB TMP	Z01000800,Z01117082,Z00000000,Z00000000,Z00000001,Z00000354,

```
SEQ   LEVEL-TYPE          IDENTIFICATION IN HEXIDECIMAL(1ST SIX WORDS)
 61 TROP 500MB U     Z03000800,Z00C35082,Z00000000,Z00000000,Z00000001,Z00000354,
 62 TROP 500MB V     Z03100800,Z00C35082,Z00000000,Z00000000,Z00000001,Z00000354,
 63 TROP 500MB TMP   Z01000800,Z00C35082,Z00000000,Z00000000,Z00000001,Z00000354,
 64 TROP 300MB U     Z03000800,Z00753082,Z00000000,Z00000000,Z00000001,Z00000354,
 65 TROP 300MB V     Z03100800,Z00753082,Z00000000,Z00000000,Z00000001,Z00000354,
 66 TROP 300MB TMP   Z01000800,Z00753082,Z00000000,Z00000000,Z00000001,Z00000354,
 67 TROP 250MB U     Z03000800,Z0061A882,Z00000000,Z00000000,Z00000001,Z00000354,
 68 TROP 250MB V     Z03100800,Z0061A882,Z00000000,Z00000000,Z00000001,Z00000354,
 69 TROP 250MB TMP   Z01000800,Z0061A882,Z00000000,Z00000000,Z00000001,Z00000354,
 70 TROP 200MB U     Z03000800,Z004E2082,Z00000000,Z00000000,Z00000001,Z00000354,
 71 TROP 200MB V     Z03100800,Z004E2082,Z00000000,Z00000000,Z00000001,Z00000354,
 72 TROP 200MB TMP   Z01000800,Z004E2082,Z00000000,Z00000000,Z00000001,Z00000354/
 73 0.0BDY-1.0BDY RHZ05809000,Z00000000,Z20009000,Z00271084,Z0000001B,Z0000084D,
 74 .67TRS-1.0TRS RHZ05809100,Z01046B85,Z20009100,Z00271084,Z0000001B,Z0000084D,
 75 .33TRS-.67TRS RHZ05809100,Z00823585,Z20009100,Z01046B85,Z0000001B,Z0000084D,
 76 SFC WTMP         Z18008100,Z00000000,Z0FF00000,Z00000000,Z0000001B,Z0000084D,
 77 SFC SNOD         Z05D08100,Z00000000,Z0FF00000,Z00000000,Z0000001B,Z0000084D,
 78 SFC TMAX         Z01508100,Z00000000,Z00200000,Z00000000,Z00000009,Z00000054,
 79 SFC TMIN         Z01408100,Z00000000,Z00200000,Z00000000,Z00000009,Z00000054,
 80 850MB VVEL       Z02800800,Z014C0882,Z00000000,Z00000000,Z0000001B,Z0000084D,
 81 500MB VVEL       Z02800800,Z00C35082,Z00000000,Z00000000,Z0000001B,Z0000084D,
 82 200MB VVEL       Z02800800,Z004E2082,Z00000000,Z00000000,Z0000001B,Z0000084D,
 83 12HR 850MB HT    Z0010080C,Z014C0882,Z00000000,Z00000000,Z0000001B,Z0000084D,
 84 12HR 850MB TMP   Z0100080C,Z014C0882,Z00000000,Z00000000,Z0000001B,Z0000084D,
 85 12HR 850MB U     Z0300080C,Z014C0882,Z00000000,Z00000000,Z0000001B,Z0000084D,
 86 12HR 850MB V     Z0310080C,Z014C0882,Z00000000,Z00000000,Z0000001B,Z0000084D,
 87 12HR 500MB HT    Z0100080C,Z00C35082,Z00000000,Z00000000,Z0000001B,Z0000084D,
 88 12HR 500MB TMP   Z0100080C,Z00C35082,Z00000000,Z00000000,Z0000001B,Z0000084D,
 89 12HR 500MB U     Z0300080C,Z00C35082,Z00000000,Z00000000,Z0000001B,Z0000084D,
 90 12HR 500MB V     Z0310080C,Z00C35082,Z00000000,Z00000000,Z0000001B,Z0000084D/
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SEQ	LEVEL-TYPE	IDENTIFICATION IN HEXIDECIMAL(1ST SIX WORDS)
91	12HR 300MB HT	Z0010080C,Z00753082,Z00000000,Z00000000,Z0000001B,Z0000084D,
92	12HR 300MB TMP	Z0100080C,Z00753082,Z00000000,Z00000000,Z0000001B,Z0000084D,
93	12HR 300MB U	Z0300080C,Z00753082,Z00000000,Z00000000,Z0000001B,Z0000084D,
94	12HR 300MB V	Z0310080C,Z00753082,Z00000000,Z00000000,Z0000001B,Z0000084D,
95	24HR 1000MB HT	Z00100818,Z00271081,Z00000000,Z00000000,Z0000001B,Z0000084D,
96	24HR 500MB HT	Z00100818,Z00C35082,Z00000000,Z00000000,Z0000001B,Z0000084D,
97	36HR 1000MB HT	Z00100824,Z00271081,Z00000000,Z00000000,Z0000001B,Z0000084D,
98	36HR 850 MB HT	Z00100824,Z014C0882,Z00000000,Z00000000,Z0000001B,Z0000084D,
99	36HR 700 MB HT	Z00100824,Z01117082,Z00000000,Z00000000,Z0000001B,Z0000084D,
100	36HR 500 MB HT	Z00100824,Z00C35082,Z00000000,Z00000000,Z0000001B,Z0000084D,
101	36HR 300 MB HT	Z00100824,Z00753082,Z00000000,Z00000000,Z0000001B,Z0000084D,
102	36HR 500MB VVEL	Z02800824,Z00C35082,Z00000000,Z00000000,Z0000001B,Z0000084D,
103	36HR A-PCP	Z05A08124,Z30000000,Z0000000C,Z00000000,Z0000001B,Z0000084D,
104	48HR 1000MB HT	Z00100830,Z00271081,Z00000000,Z00000000,Z0000001B,Z0000084D,
105	48HR 500 MB HT	Z00100830,Z00C35082,Z00000000,Z00000000,Z0000001B,Z0000084D,
106	72HR 1000MB HT	Z00100848,Z00271081,Z00000000,Z00000000,Z0000001B,Z0000084D,
107	72HR 500 MB HT	Z00100848,Z00C35082,Z00000000,Z00000000,Z0000001B,Z0000084D,
108	HUFF1-HGT	Z00100800,Z00000000,Z00000000,Z10000000,Z000001FF,Z000000C2/
109	HUFF2-HGT	Z00100800,Z00000000,Z00000000,Z30000000,Z000001FF,Z00000840,
110	HUFF3-VECW	Z03B00800,Z00000000,Z00000000,Z30000000,Z000001FF,Z00000840,
111	HUFF4-HGT	Z00100800,Z00000000,Z00000000,Z40000000,Z000001FF,Z00000840,
112	HUFF5-VECW	Z03B00800,Z00000000,Z00000000,Z40000000,Z000001FF,Z00000840,
113	HUFF6-HGT	Z00100800,Z00000000,Z00000000,Z20000000,Z000001FF,Z0000015C,
114	HUFF7-RH	Z05800800,Z00000000,Z00000000,Z10000000,Z000001FF,Z0000003E,
115	HUFF8-RH	Z05800800,Z00000000,Z00000000,Z30000000,Z000001FF,Z00000390,
116	HUFF9-TMP	Z01000800,Z00000000,Z00000000,Z30000000,Z000001FF,Z00000390,
117	HUFF10-RH	Z05800800,Z00000000,Z00000000,Z40000000,Z000001FF,Z00000390,
118	HUFF11-TMP	Z01000800,Z00000000,Z00000000,Z40000000,Z000001FF,Z00000390,
119	HUFF12-RH	Z05800800,Z00000000,Z00000000,Z20000000,Z000001FF,Z0000009C,
120	END OF LIST	0,0,0,0,0,0,