U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE
NATIONAL METEOROLOGICAL CENTER

OFFICE NOTE 79

NMC PERMANENT FILES

36-Day Historical Data

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NMC is at present maintaining on its permanent files a 36 day reserve of selected fields from the NMC permanent files ANL, F12, F24, F36, F48, F60, F72, F84, F96, FCST1, and ANL5. Fields from the ANL file are recorded at 00Z and 12Z. Fields from the other files are recorded at 00Z only. The purpose of the historical files is to provide the user with a 36 day backlog of data fields that are always current. Each day, the fields with the oldest date are replaced with the current day's data. See attachment for the names and description of the historical files.

The file structure of the historical permanent files is generally the same as that of the NMC permanent files (ANL, F12, etc.) described in Office Note 44. However, there are tables that take on special significance for the historical files. These tables are denoted with asterisks.

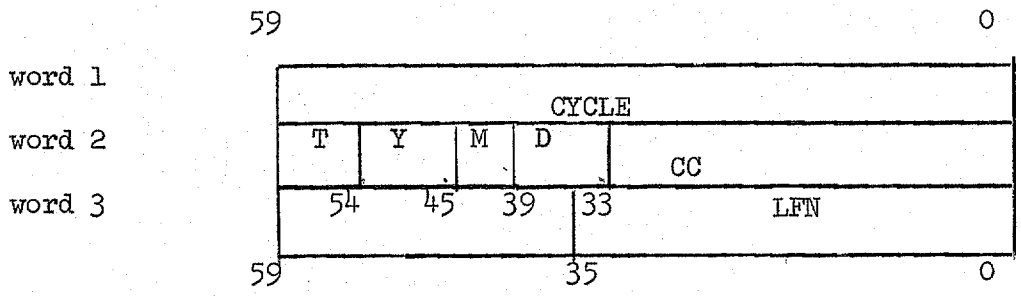
File Structure

I. Random Files:

Record 1 consists of three words for identifying the file. Word 1 contains the cycle number - CYCLE (integer). Word 2 contains the time - T, year - Y, month - M, day - D, and continuity check - CC (all integers)

*****If CC is equal to 00777777777_8 36 days of data are accounted for.
If CC is equal to $nn666666666_8$ one of the scheduled runs for maintaining the files was not made. In this event, the missing data field is retrieved from the PEPMERGE tape.

Word 3 contains the logical file name - LFN (coded left justified, zero filled).



The remaining entries in the table, three words per record, are in the following form:

Word 1 and Word 2 are unique record identifiers (see Office Note 28).
Word 3 contains CM, CD, X and K table.

*****CM, CD are added to the field's identification before it is stored on the historical permanent file.
CM - time and month, CD-day of month (integers)
CM= 1 for Jan 00Z Data CM-15_8 for Jan 12Z Data
.
.
CM= 14_8 for Dec. 12Z Data CM=30_8 for Dec 12Z Data

The high order bit for CM is set if data is hopelessly missing (machine failure, model failure, etc.).

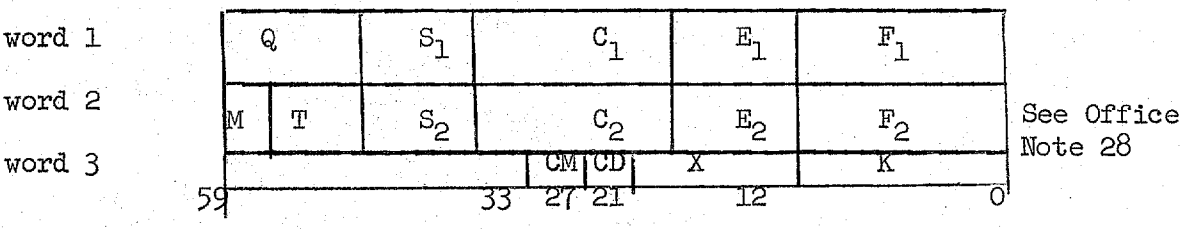
CM = 41_8 for Jan 00Z data not available

CM = 55_8 for Jan 12Z data not available

.
.
.
.

CM = 54 for Dec 00Z data not available

CM = 70_8 for Dec 12Z data not available



See Office Note 28

File Usage

The historical permanent files will normally be found on machine C. The code for updating the files is run at operational time 00Z and 12Z, on the CDC 6600 Computer. The data fields are stored on the disk of the machine that is used for operations. Usually machine C is used; however, periodically machine A is used. For this reason, it is possible that the files may not be on the machine the user requests. If an unsuccessful attempt is made to attach the files, jump to an XPAUSE card and request that the operator run J0941 and rerun your job. J0941 loads the files from tape to disk. Note: There is not a read pass word for reading these files. See example below for usage.

Example

```
J1111,CM50000,T100.        John Doe    Bin Z
PFILE,C.
RFL,50000.
FTN(LX,OPT-1, P-PUNCHB,A)
RFL,1000.
ATTACH(FH50,W3FHA,CY=55,ID=W34)
JUMP(1)
EXIT.
JUMP(2)
PASS(1)
RFL,50000.
LOAD(PUNCHB)
EXECUTE.
JUMP(3)
PASS(2)
XPAUSE.  PLEASE RUN J0941 AND RERUN THIS JOB
PASS(3)
7-8-9  (END OF RECORD)
```

```
      PROGRAM DATAVG(INPUT,OUTPUT,FH50=0)
C     READ 5 DAYS OF 500MB HT 72 HOURS AFTER FORECAST TIME
      DIMENSION ID(3),DATE(5),IDTBL(760),LOCTBL(254),DATFLD(401)
C     DATES FROM SEPT. 30,1972 THRU OCT.4,1972
      DATA DATE/0011011330000000000B,0011012010000000000B,0011012020000000000B,
          DATA FH50/4LFH50/
C     OPEN HISTORICAL FILE FH50
      CALL W3FK00(FH50,LOCTBL,254)
      CALL W3FK01(FH50,IDTBL,252)
      ID(1)=0001001014152042000OB
      ID(2)=0
      DO 1 L=1,5
C     TAKE DATE WORD AND PLACE IT IS FORMAT OF THIRD ID DATE
      ID(3)=SHIFT(AND(DATE(L),777700000000000B),48)
      ITIME=770000000000000000000B.AND.DATE(L)
      IF(ITIME.NE.0)ID(3)=14000000000B / ID(3)
C     READ HISTORICAL FILE FH50
      CALL W3FK03(FH50,IDTBL,ID,DATFLD,252,401,IERR)
      IF(IERR.NE.0)GO TO 2
C     AVERAGE DATA
C     OUTPUT DATA
C     ERROR EXIT
  2
      STOP
      END
7-8-9  (END OF RECORD)
6-7-8-9 (END OF FILE)
```

NMC HISTORICAL DATA PERMANENT FILES
(36 DAYS FOR EACH FIELD LISTED)

PF NAME	CYCLE	LFN	No. of Recds	CONTENTS OF LOGICAL FILE	DATA SOURCE
W3OBS1	51	HOP	288	00Z & 12Z Sea level pressure, 1000mb ht. 700mb ht., 500mb ht.	ANL
	52	H85	216	00Z & 12Z 850mb ht., 300mb ht., 200 mb ht.	ANL
	53	TS7	144	00Z & 12Z 700mb temp., and Sea surface temperature	ANL
	54	H100	180	00Z 100, 70, 50, 30, 10 mb hts.	ANL5
	55	T100	180	00Z 100, 70, 50, 30, 10 mb temp.	ANL5
W3HFA	51	FHSL	252	00Z Sea level pressure at 12, 24, 36, 48, 60, 72, & 84 hours	F12, F24, F36, F48, F60, F72, F84
	52	FH100	252	00Z 1000mb ht. at 12, 24, 36, 48, 60, 72, & 84 hours	F12, F24, F36, F48, F60, F72, F84
	53	FH85	252	00Z 850mb ht. at 12, 24, 36, 48, 60, 72, & 84 hours	F12, F24, F36, F48, F60, F72, F84
	54	FH70	252	00Z 700mb ht. at 12, 24, 36, 48, 60, 72, & 84 hours	F12, F24, F36, F48, F60, F72, F84
	55	FH50	252	00Z 500mb ht. at 12, 24, 36, 48, 60, 72, & 84 hours	F12, F24, F36, F48, F60, F72, F84