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OFFICE NOTE 230

How to Get Some Varian Graphics: Part I

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This is an unreviewed manuscript, primarily
intended for informal exchange of information
among NMC staff members.

NMC's VARIAN Package

The VARIAN programs, developed by Automation Division, operationally provide graphics for data plots and contours from the various analyses and forecasts on several map scales and projections. The graphical products are made available to many users:

- (a) in-house hard copy from the VARIAN recorder,
- (b) facsimile transmissions to outside users,
- (c) display on the AFOS system, and
- (d) 35-mm film generated by OMCS Graphics Section.

Many researchers and programmers in NMC have a need to display the results from various impact studies, data evaluation tests, analysis and forecast models, diagnostic studies, etc. The operationally designed VARIAN package, however, has its limitations, is somewhat cumbersome to use, has many options, but produces excellent graphics. To minimize the difficulty in using portions of the VARIAN package in a checkout mode and in specifying the options, several programs and procedures have been generated for your use. But, remember, the package can not do everything one can imagine; it will always be up to the user to provide the necessary input files, in the correct format, for the options chosen. That is, observations for data plots have to be in NMC Office Note 29 format in sequential files; gridded fields have to be in Office Note 84 format and reside in random access disk files. The version of the VARIAN program described herein is a modification of the NMC operational program PEPFAX8. Other VARIAN products, like the Mercator strips, will be documented and made available at a later time.

Loading Data Files from Tape

If necessary input files are not already resident in disk files, one may use, for example, the NMC procedures NWSLDLFM, NWSLDOPL, or NWSLDFNL to extract the desired files from the NMC history tapes. These procedures will automatically restore observational data to sequential files on temporary disk and/or restore gridded fields to temporary random access files. User-generated fields in Office Note 84 format can be converted from a sequential file to a random access file by using the catalogued procedure SEQ2RA. (See Appendix A1).

Setting up the VARIAN Input Controls

The procedure VSETUP (See Appendix A1) requires two (2) input data cards that will be used to generate the necessary card input file for the VARIAN program. The user merely selects the type run (KRUN), the data plot control (IC), the output merge control (MP) as given in Table 1, and the desired map numbers for the given KRUN from Table 2 or Table 3. Additional map numbers can be added to Table 2 or Table 3 upon request (See Desmarais).

The file may be created by executing the procedure DATA20 or DESUAPAP (See Appendix A2 and A3). Notice that the output from both of these procedures will be on a temporary disk file with a DSN = &&FILI54, and is to be passed to the procedure VARIANX by setting the parameter ADP='&&FILI54'. By default, the VARIAN program will use an empty file for ADP.

The date/time of the ADP file to be created must agree with the GES file. If a GES file is not available, the user may create an empty but suitable (&&GES) file by executing the following JCL:

```
//GESER EXEC PGM=DESGESER
//STEPLIB DD DISP=SHR,DSN=NWS.NMC.DDIVDAB.LOAD
//FT06F001 DD SYSOUT=A
//GES DD DISP=(NEW,PASS),UNIT=SYSDA,SPACE=(CYL,1),DSN=&&GES
//FT10F001 DD DISP=(OLD,PASS),DSN=&&ADPUPA (or any other data file
                                         previously loaded)
```

However, there is no date/time test made between the ADP file and the analysis of forecast files. This permits one to display verifying observations on forecast displays.

Data plots are only permitted with certain maps combinations, namely,

- (a) Heights and relative humidity,
- (b) Heights and isotachs,
- (c) Heights and temperatures,
- (d) Heights and thickness,
- (e) Heights only.

Table 4. File Names, Run Markers, and Map Scales for the VARIAN Program.

<u>NMC RUN</u>	<u>Data prep File name</u>	<u>VSETUP KRUN</u>	<u>Scale</u>	<u>Random Access Files (DDNAME's) to be opened</u>
RADAT	1DOTFAX	RAD	1:40	ANL1, NEWPAP*, OLDPAP*
OPNL	NHEMI40	OPN	1:40	ANL1, F00, F12, F24, F36, F48, NEWPAP*, OLDPAP*
	SHEMI40	OPNS	1:40	" " " " " " " "
OVR48	NHEMI40	EXP	1:40	F60, F72, F84, F96**
FINAL	NHEMI40	FIN	1:40	ANL, GF12, GF24, NEWPAP*, OLDPAP*
	SHEMI40	FINS	1:40	ANL5, " " " "
LFM	2DOTFAX	LFM	1:20	FMANL, FMO0, FM12, FM24, FM36, FM48, NEWPAP*, OLDPAP*
1DOTFAX	1DOTFAX	PLT1	1:20	ANL1, NEWPAP*, OLDPAP*
2DOTFAX	2DOTFAX	PLT2	1:20	FMANL, NEWPAP*, OLDPAP*
SIRSPLOT	NHEMI40	PLT3	1:20	GF12
	SHEMI40	PLT3	1:20	GF12

*Optional --- only needed if height changes are to be displayed.

**Forecasts from t=96 and beyond are expected to be in the DDNAME=F96 file.

If one chooses to have data plots only (IC=4), permitted (see above) map number combinations from Table 2 or Table 3 must still be specified on Card 1, VSETUP. Internally, a switch will be tested in the VARIAN program and will cause a bypass of the contouring subroutine.

Table 5. Format of Input Cards for DATA20 or DESUAPAP (//SYSIN DD *):

Card 1.

Column 1, 1 signifies first card.
 Columns (3 - 72, free form) KRUN=XXXXXX, NLVLS=N, IOPTN=1;
 where: XXXXXX is a data prep file name selected
 from Table 4,
 N is the number of levels where data
 should be prepared for plotting,
 IOPTN=1; (do not change).

Card 2.

Column 1, 2 signifies second card.
Columns (3 - 72, free form) pppMB, pppMB, pppMB, etc. ;
where ppp's are set to the specific pressure levels
(there should be N entries, terminated with a semicolon).

Card 3.

Columns 1 - 3, 999 signifies last card.

TIROS Data

TIROS data files in NMC Office Note 29 format are not normally saved on any of run history tapes. However, the directories associated with the data dumps for the LFM, OPNL and FINAL runs are saved on the respective run history tapes, and the TIROS data in NMCEDS format is dumped to file 2 of the FINAL run history tape every 12 hours. But remember, all the run history tapes are overwritten monthly. A program (DEST29ZT) is available to process the TIROS data to O. N. 29 format from history tapes or from disk files (See Desmarais, or see Appendix A7).

Aircraft Data Plots

The data plotting preprocessor selects aircraft reports to be plotted at the various pressure levels according to the following altitude ranges:

<u>Altitude (ft)</u>	<u>Level (mb)</u>
2,900 - 7,000	850
7,000 - 12,000	700
15,000 - 20,000	500
27,900 - 34,000	300
32,000 - 38,000	250
34,000 - 41,000	200

VARIAN output file

The output file from the VARIAN program (See VARIANX procedure, Appendix A4) will be on FTO1F001 and will be on a non-labelled 7-track tape by default. However, the file can reside on other devices, depending on what the user intends to do with the output that still has to be processed. The output file consists of many records that specify the instructions to the VARIAN recorder which is driven by a minicomputer on the 4th floor, WWB. This same file can be processed by a minicomputer in the OMCS Graphics Support Section to provide images on 35-mm film from 7- or 9-track tapes. The user can set the various output file parameters in the VARIANX procedure from the following table:

<u>UNIT</u>	<u>VOUT</u>	<u>DEN</u>	<u>TRTCH</u>	<u>TFILE</u>	<u>DSN</u>
TAPE9	user tape	DN=2	CH=''	u/s	Not required
NMCTP9	" "	DN=2	CH=''	u/s	" "
DISK	NWS255	DN=''	CH=''	n/u	TDSN='NWS.VFIL.Wxxx.name' where: xxx is user routing code, name is 1-8 characters
TAPE7	user tape	DN=2	CH=C	u/s	Not required

Note: n/u indicates not used; u/s = user specified.

TAPE7 and TAPE9 tapes have to be available in the OMCS tape library; NMCTP9 tapes must reside in the NMC library on the 3rd floor, FOB4, and are normally assigned to individuals for specific functions. If you need an NMCTP9 tape number, call Bill Glidewell, 763-5813, -- or maybe you can use someone else's tape number if it is not being used.

Automation Division has reserved some space on an online disk (NWS255) that can be used as a temporary staging area for files scheduled to be transferred, via the channel-to-channel interface (CTC), to the 3rd floor for semi-automatic hard copy processing. One should not catalog any data sets on NWS255 unless approved by Automation Division (Howcroft 763-8115). If DISK is selected to store the VARIAN output, the user must make sure that the last execution of the VARIANX procedure has either DISP=(NEW,KEEP) or DISP=(MOD,KEEP). Intermediate executions should have DISP=(MOD,PASS) if the output files are being concatenated. If the last KEEP is not specified the system will delete the disk file upon termination of the job (See sample JCL in Appendix 5 and 6).

Once all the codes have run, the user still has to determine the final steps to get the desired graphics...take you choice (and there are others):

<u>VARIAN output is on</u>	<u>To get 35-mm film</u>	<u>To get VARIAN Charts</u>
User TAPE7	Use WRTMIC Proc.	Use Copy TAPE7 to NMCTP9, or Use Copy TAPE7 to DISK and WWUPSTRS Proc.
User TAPE9	Use WRTMIC Proc.	Use Copy TAPE9 to NMCTP9, or Use Copy TAPE9 to DISK and WWUPSTRS Proc.
User NMCTP9	Copy from NMCTP9 to TAPE9, and use WRTMIC Proc.	Call NMC operator (763-5995) for VARIAN processing, and specify the number of maps expected. Most processes have IDENT=000 and one pass; hemi- spheric 1:20 million (SIRSLOT) maps need 2 passes with IDENT= 000 and 248.
DISK(NWS255)	Copy to TAPE9 prior to using WWUPSTRS proc., and use WRTMIC Proc.	Use WWUPSTRS.

The procedure WWUPSTRS (See sample, Appendix A5) will transfer a file from a specified disk pack to a reserved area on an NMC disk pack for semi-automatic processing. The designated NMC file names for checkout VARIAN are VFIL for single-pass maps and VFIL2 for 2-pass maps like the hemispheric 1:20 million SIRSLOT maps. If space is not available on the NMC disk, the monitor system will copy the disk file to the designated NMCTP9 backup tape. The operator will process the backup tape after the files already in VFIL or VFIL2 have been processed and only if the processing does not interfere with operational VARIAN products or NMC digitizing. After a successful transfer of the user's disk file to NMC, the WWUPSTRS procedure will delete the user's disk file on the specified disk pack. IMPORTANT: the space available for VFIL or VFIL2 on the NMC disk pack is rather limited and should be able to accommodate about 10 maps, depending on how dense the images will be. If one needs more than 10 or so maps on hard copy, break up the processing into separate jobs. This limit does not apply to 35-mm film graphics.

WRTMIC Procedure

A sample JCL for the WRTMIC procedure follows:

```
//FILM EXEC WRTMIC, JOB=WEK, NAME=DESMARAIS, COCI='763-8161'
//   RTCDE='WWB4-D3, RM 202, W324', LAB=' 7T BLP', MM=35MM,
//   PRG='NEW VARIAN', TAPE='DA9999'
```

Copy Routine

Copying VARIAN output files from one device to another can be done using the IBM utility program IEBCGENER (needs about 70K):

Example 1. TAPE7 to NMCTP9 (or to TAPE9)

```
//COPY EXEC PGM=IEBCGENER
//SYSPRINT DD SYSOUT=A
//SYSIN DD DUMMY
//SYSUT1 DD DISP=(OLD,PASS), UNIT=TAPE7, LABEL=(1, BLP, , IN),
//      DCB=(RECFM=F, LRECL=1440, BLKSIZE=1440, TRTCH=C, DEN=2),
//      VOL=SER= ...user tape number, input
//SYSUT2 DD DISP=(NEW,PASS), UNIT=NMCTP9, LABEL=(1, BLP, , OUT),
//      DCB=(RECFM=F, LRECL=1440, BLKSIZE=1440),
//      VOL=SER= ...user tape number, output
//
```

Example 2. TAPE7 to DISK

```
// --- same as above, except
//SYSUT2 DD DISP=(NEW,KEEP), UNIT=DISK, VOL=SER=NWS255,
//      DCB=(RECFM=F, LRECL=1440, BLKSIZE=1440), SPACE=(CYL,10),
//      DSN=NWS.VFIL.W324.DESMAPS (use your routing code and short name)
```

Example 3. DISK to NMCTP9 (or TAPE9)

```
//COPY EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=A
//SYSIN DD DUMMY
//SYSUT1 DD DISP=(OLD,DELETE),UNIT=DISK,VOL=SER=NWS255, (OR OLD,PASS)
// DCB=(RECFM=F,LRECL=1440,BLKSIZE=1440),
// DSN=NWS.VFIL.W324.DESMAPS (example only)
//SYSUT2 DD DISP=(NEW,PASS),UNIT=NMCTP9,LABEL=(1,BLP,,OUT),
// DCB=*.SYSUT1,VOL=SER= ...user tape number
//
```

ADDITIONAL PROGRAMMER NOTES:

APPENDIX

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VSETUP CATALOGUED PROCEDURE

```

//VSETUP PROC TEMP=
//* TO SETUP CONTROL CARDS FOR INPUT TO VARIAN CODE
//* USER SETS TEMP='----' (TEMPORARY DATASET NAME)
//* EXAMPLE //STEP EXEC VSETUP,TEMP='&&DECK1'
//* //SYSIN DD *
//* EXPECTS DATA CARDS(SYSIN) WITH OPTIONS AND MAP NUMBERS
//* FOR FORMATS, SEE DESMARAIS.
//* DESMARAIS, NMC, DD, SEB. OCT 12, 1977
//* MODIFIED 11 DEC 79.
//SETUP EXEC PGM=VSELECT
//STEPLIB DD DISP=SHR,DSN=W.NWS.W324.DES.FAX
//FT05F001 DD DDNAME=SYSIN
//FT06F001 DD SYSOUT=A
//FT09F001 DD DISP=SHR,DSN=W.NWS.W324DES.VCARD(VARCARDS),LABEL=(,,IN)
//FT20F001 DD UNIT=SYSDA,SPACE=(TRK,1),DSN=&TEMP,
// DISP=(NEW,PASS),DCB=(RECFM=F,LRECL=80,BLKSIZE=80)
//SYSIN DD DUMMY (USER SUPPLIED)
//* ----- END VSETUP PROC -----

```

```

00000100
00000110
00000120
00000130
00000140
00000150
00000160
00000170
00000180
00000190
00000200
00000210
00000220
00000230
00000240
00000250
00000255
00000260

```

SEQ2RA CATALOGUED PROCEDURE

```

//* SEQ2RA -- PROCEDURE TO CONVERT A SEQUENTIAL FILE (NMC O.N. 84
//* FORMAT) TO A RANDOM ACCESS FILE, WITH A MAXIMUM OF
//* 255 RECORDS.
//* DESMARAIS, NMC/DD/SEB 763-8161
//SEQ2RA PROC FILE=1,UNIT=TAPE9,LA=SL,DSN=DUMMY,FNAME='&&RAC'
//*
//* WHERE FILE= FILE NO. ON INPUT TAPE (DEFAULT = 1)
//* UNIT = TYPE INPUT DEVICE(TAPE9,DISK,T6250,ETC) (DEFAULT=TAPE9)
//* LA = SL, BLP, NL (DEFAULT=SL)
//* DSN = DATASET NAME, INPUT(FT31) (DEFAULT=DUMMY)
//* VSER = VOL. NUMBER (USER SUPPLIED)
//* FNAME = DATASET NAME, OUTPUT(LFN) (DEFAULT='&&RAC')
//S2R EXEC PGM=ASY2RACC
//STEPLIB DD DISP=SHR,DSN=W.NWS.W322DES.LOAD
//FT05F001 DD DDNAME=SYSIN
//FT06F001 DD SYSOUT=A
//FT31F001 DD DISP=(SHR,PASS),UNIT=&UNIT,DSN=&DSN,
// LABEL=(&FILE,&LA,,IN),VOL=SER=&VSER
//LFN DD DISP=(NEW,PASS),UNIT=SYSDA,SPACE=(CYL,9,RLSE,CONTIG),
// DSN=&FNAME ----- OUTPUT FILE
//SYSIN DD DISP=SHR,DSN=NWS.NMC.DD.DIVDAB.SOURC1(BLANK),LABEL=(,,IN)
//* ----- END SEQ2RA PROCEDURE -----

```

```

00000100
00000110
00000120
00000130
00000140
00000150
00000160
00000170
00000180
00000190
00000200
00000210
00000220
00000230
00000240
00000250
00000260
00000270
00000280
00000290
00000300
00000310
00000315

```


DESUAPAP CATALOGUED PROCEDURE

```

//* DESUAPAP          DESMARAIS, NMC, DD          763-8161          00000100
//* ON USER.PROCLIB AS OF 27 MAR, 1981          00000200
//DESUAPAP PROC PROG=PLUTX22,STPLIB='NWS,NMC,GRAPHICS.LOAD', 00000300
//GES='W.NWS.W324DES.NULLRA', (DEFAULT,EMPTY) 00000310
//FT12='W.NWS.W324DES.EOFVS', ADPSFC, DEFAULT EMPTY 00000400
//FT14='W.NWS.W324DES.EOFVS', AIRCFT, DEFAULT EMPTY 00000500
//FT15='W.NWS.W324DES.EOFVS', TIROS, DEFAULT EMPTY 00000600
//FT16='W.NWS.W324DES.EOFVS', UPABOG, DEFAULT EMPTY 00000700
//FT19='W.NWS.W324DES.EOFVS', ADPUPA---A MUST FILE 00000800
//FT22='W.NWS.W324DES.EOFVS', SATWND, DEFAULT EMPTY 00000900
//ANL1='W.NWS.W324DES.NULLRA', FOR 65*65 Z1000 FLD 00001000
//ANL5='W.NWS.W324DES.NULLRA', FOR TIROS IN S.HEM 00001100
//GES='W.NWS.W324DES.NULLRA', FOR 65*65 Z1000,BACKUP 00001200
//OLDPAP='W.NWS.W324DES.NULLRA' DEFAULT---EMPTY FILE 00001300
//*-----*
//ZERO EXEC PGM=ZROFLS          00001400
//STEPLIB DD DISP=SHR,DSN=NWS.NMC.PROD.ALOAD 00001500
//JOBLOG DD DISP=SHR,DSN=NWS.NMC.PROD.LOG 00001600
//FI05F001 DD DDNAME=SYSIN 00001700
//FI06F001 DD DUMMY 00001800
//GES DD DISP=SHR,DSN=&GES 00001900
//GRANPA DD UNIT=SYSDA,SPACE=(CYL,5),DISP=(NEW,PASS),DSN=&&GRANPA 00002000
//NEWPAP DD DISP=(NEW,PASS),UNIT=SYSDA,SPACE=(CYL,10),DSN=&&NEWPAP 00002100
//SYSIN DD DISP=SHR,DSN=W.NWS.W324DES.L7S(ZERO2),LABEL=(,,IN) 00002200
//*-----*
//PAP EXEC PGM=LFMUPAP          GENERATE NEWRAP DATA 00002300
//STEPLIB DD DISP=SHR,DSN=NWS.NMC.PROD.BLOAD 00002400
//JOBLOG DD DISP=SHR,DSN=NWS.NMC.PROD.LOG 00002500
//NEWPAP DD DISP=(OLD,PASS),DSN=&&NEWPAP 00002600
//GES DD DISP=SHR,DSN=&GES 00002700
//FI06F001 DD SYSOUT=A 00002800
//FI09F001 DD SYSOUT=A 00002900
//FI12F001 DD DISP=SHR,DSN=&FT12 (ADPSFC) 00003000
//FI14F001 DD DISP=SHR,DSN=&FT14 (AIRCFT) 00003100
//FI15F001 DD DUMMY 00003200
//FI16F001 DD DISP=SHR,DSN=&FT16 (UPABOG) 00003300
//FI19F001 DD DISP=SHR,DSN=&FT19 (ADPUPA) 00003400
//FI22F001 DD DISP=SHR,DSN=&FT22 (SATWND) 00003500
//*-----*
//*..... GENERATE &&FIL154, FOR VARIAN PLOTS..... 00003600
//*..... CHECK VALUES FOR PARM 00003700
//PLOTAP EXEC PGM=&PROG,PARM='00000000000000000000000010001' 00003800
//STEPLIB DD DISP=SHR,DSN=&STPLIB 00003900
//JOBLOG DD DISP=SHR,DSN=NWS.NMC.PROD.LOG 00004000
//GRANPA DD DISP=(OLD,PASS),DSN=&&GRANPA 00004100
//NEWPAP DD DISP=(OLD,PASS),DSN=&&NEWPAP 00004200
//OLDPAP DD DISP=SHR,DSN=&OLDPAP 00004300
//FI05F001 DD DDNAME=SYSIN 00004400
//FI06F001 DD SYSOUT=A 00004500
//FI14F001 DD DISP=SHR,DSN=&FT14 (AIRCFT) 00004600
//FI15F001 DD DISP=SHR,DSN=&FT15 (TIROS) 00004700
//FI18F001 DD DISP=SHR,DSN=&FT16 (UPABOG) 00004800
//FI19F001 DD DISP=SHR,DSN=&FT19 (ADPUPA) 00004900
//FI22F001 DD DISP=SHR,DSN=&FT22 (SATWND) 00005000
//ANL1 DD DISP=SHR,DSN=&ANL1 FOR 65*65 Z1000 00005100
//GES DD DISP=SHR,DSN=&GES FOR 65*65 Z1000,BACKUP 00005200
//ANL5 DD DISP=SHR,DSN=&ANL5 FOR SAT. SOUNDINGS IN S.H. 00005300
//FI50F001 DD DUMMY (ONLY NEEDED FOR AFOS) 00005400
//FI55F001 DD DISP=(NEW,PASS),UNIT=SYSDA,SPACE=(8200,(30,1)), 00005500
//DCB=(RECFM=VS,LRECL=8196,BLKSIZE=4108,BUFNO=1),DSN=&&FIL154 00005600
//SYSIN DD DUMMY (USER SUPPLIED) 00005700
//*-----*
//*-----* END OF DESUAPAP PROCEDURE *-----* 00005800
//*-----* 00005900
//*-----* 00006000
//*-----* 00006100

```

```

*****
***** VARIANX DESMARAIS, NMC, DD, 763-8161
*****
***** ADDED FT54 (FOR ADP PLOTS) OCT. 12, 1977
***** FOR UN=TAPE9 OR NMCTP9, USE CH=, DN=2 DESMARAIS
***** FOR DISK, USE CH=, DN=, AND SET DATASET NAME
*****
//VARIANX PROC UN=TAPE7, TFILE=1, VOUT=, TEMP=, CH=C, DN=2,
//PROG=DES FAX, STEPL=W.NWS.W324.DES.FAX,
//ANL1=W.NWS.W324.DES.NULLRA,
//FMANL=W.NWS.W324.DES.NULLRA,
//FM00=W.NWS.W324.DES.NULLRA,
//FM12=W.NWS.W324.DES.NULLRA,
//FM24=W.NWS.W324.DES.NULLRA,
//FM36=W.NWS.W324.DES.NULLRA,
//FM48=W.NWS.W324.DES.NULLRA,
//ANL=W.NWS.W324.DES.NULLRA,
//F00=W.NWS.W324.DES.NULLRA,
//F12=W.NWS.W324.DES.NULLRA,
//F24=W.NWS.W324.DES.NULLRA,
//F36=W.NWS.W324.DES.NULLRA,
//F48=W.NWS.W324.DES.NULLRA,
//F60=W.NWS.W324.DES.NULLRA,
//F72=W.NWS.W324.DES.NULLRA,
//F84=W.NWS.W324.DES.NULLRA,
//F96=W.NWS.W324.DES.NULLRA,
//ANL5=W.NWS.W324.DES.NULLRA,
//GF12=W.NWS.W324.DES.NULLRA,
//GF24=W.NWS.W324.DES.NULLRA,
//ADP=W.NWS.W324.DES.EOFVS,
//TDSN=DUMMY
*****
***** EMPTY FILE (DEFAULT)
*****
//*
//VARIAN EXEC PGM=&PROG
//STEPLIB DD DISP=SHR, DSN=&STEPL
//FT05F001 DD DISP=(OLD,PASS), DSN=&TEMP DATA CARD FILE
//FT06F001 DD SYSOUT=A FOR RADAT
//ANL1 DD DSN=&ANL1, DISP=SHR LFM
//FMANL DD DSN=&FMANL, DISP=SHR LFM
//FM00 DD DSN=&FM00, DISP=SHR LFM
//FM12 DD DSN=&FM12, DISP=SHR LFM
//FM24 DD DSN=&FM24, DISP=SHR LFM
//FM36 DD DSN=&FM36, DISP=SHR LFM
//FM48 DD DSN=&FM48, DISP=SHR LFM
//ANL DD DSN=&ANL, DISP=SHR OPNL
//F00 DD DSN=&F00, DISP=SHR OPNL
//F12 DD DSN=&F12, DISP=SHR OPNL
//F24 DD DSN=&F24, DISP=SHR OPNL
//F36 DD DSN=&F36, DISP=SHR OPNL
//F48 DD DSN=&F48, DISP=SHR OPNL
//F60 DD DSN=&F60, DISP=SHR EXT. PE
//F72 DD DSN=&F72, DISP=SHR EXT. PE
//F84 DD DSN=&F84, DISP=SHR EXT. PE
//F96 DD DSN=&F96, DISP=SHR EXT. PE
//ANL5 DD DSN=&ANL5, DISP=SHR FINAL
//GF12 DD DSN=&GF12, DISP=SHR FINAL
//GF24 DD DSN=&GF24, DISP=SHR FINAL
//FT54F001 DD DISP=(SHR,PASS), DSN=&ADP (FOR ADP PLOTS, IF REQ'D)
//FT55F001 DD DCB=(RECFM=VS, LRECL=8500, BLKSIZE=8500, BUFNO=2),
//UNIT=SYSSQ, DISP=(NEW,DELETE), SPACE=(8500, (30,1))
//FT60F001 DD DCB=*, FT55F001,
//UNIT=SYSSQ, DISP=(NEW,DELETE), SPACE=(8500, (30,1))
//FT61F001 DD DCB=*, FT55F001,
//UNIT=SYSSQ, DISP=(NEW,DELETE), SPACE=(8500, (30,1))
//FT62F001 DD DCB=*, FT55F001,
//UNIT=SYSSQ, DISP=(NEW,DELETE), SPACE=(8500, (30,1))
//FT63F001 DD DCB=*, FT55F001,
//UNIT=SYSSQ, DISP=(NEW,DELETE), SPACE=(8500, (30,1))
//FT01F001 DD DISP=(NEW,PASS), UNIT=&UN, VOL=SER=&VOUT,
//DCB=(RECFM=F, LRECL=1440, BLKSIZE=1440, DEN=&DN, TRTCH=&CH),
//SPACE=(CYL,10),
//LABEL=(&TFILE, BLP, , OUT), DSN=&TDSN
//FT02F001 DD DISP=SHR, DSN=NWS.NMC.PROD.GRAFBGND
//FT09F001 DD DUMMY
//*
*****
***** END OF VARIANX PROCEDURE *****

```

00000100
00000110
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00000830

SAMPLE JCL -- DATA PLOTS AND CONTOURS (DISK, CHARTS)

```

// REGION=600K, CLASS=1, TIME=2
// SCR EXEC PGM=IEFBRI4
// OLD DD DISP=(OLD,DELETE), UNIT=DISK, DSN=NWS.VFIL.W324DES.AIDS,
// VOL=SER=NWS255
// *
// * -----
// * FOR 1:20 AND 1:40 MILLION PLOTS, PLOTX22 ADDS Z1000 HGTS(TIROS)
// * PREP DATA FOR DATAPLOT
// * 12Z, 15 JAN 79 CASE
// DATA EXEC DATA20,
// F14='NWS.NMC.W324DES.AIDS1',
// F19='NWS.NMC.W324DES.ADPUPA',
// ANL1='NWS.NMC.W324DES.CPYOANL',
// GES='NWS.NMC.W324DES.CPYOGES',
// ANL5='W.NWS.W324DES.NULLRA'
// DATA4PLT.SYSIN DD *
1 KRUN = NHEMI40, NLVLS = 3, IOPTN = 1;
2 300MB, 250MB, 200MB;
999 LAST INPUT CARD .....
// *
// SETUP EXEC VSETUP, TEMP='&&DECK1'
// SYSIN DD *
OPN 30603604606
300 40 BIN D-3. DESMARAI, OPERATIONAL RUN (AIDS OVER-PLOTTED)
// *
// MAPS EXEC VARIANX,
// UN=DISK, VOLT=NWS255, DN='', CH='',
// TEMP='&&DECK1',
// ANL='NWS.NMC.W324DES.CPYOANL',
// ADP='&&FIL154',
// TDSN='NWS.VFIL.W324DES.AIDS'
// VARIAN.FT01F001 DD DISP=(NEW,KEEP)
// *
// * -----
// *
// UP EXEC WWUPSTRS, K='VFIL', V=DA9999, UNIT=NMCTP9, LOADSET=B,
// S=X, D='NWS.VFIL.W324DES.AIDS'
// XMIT DD DISP=(OLD,KEEP), DSN=&D, VOL=SER=NWS255, UNIT=DISK
//

```

```

// REGION=600K, TIME=3, MSGLEVEL=(2,0)
//* FORMAT PR, CDNAME=, DEST=WNB3729
// * MULTIPLE PROCESSES, OUTPUT CONCATENATED ON TAPE.....
// DATA1 EXEC DATA20, PREP DATA FOR VARIAN PLOT
// F14='NWS.NMC.W324.AIRCFT',
// F19='NWS.NMC.W324.ADPUPA', F19--A MUST FILE
// F22='NWS.NMC.W324.SATWND',
// GES='NWS.NMC.W324.GES',
// ANL1='NWS.NMC.W324.ANL5',
// ANL5='NWS.NMC.W324.ANL5'
// DATA4PLT.SYSIN DD *
1 KRUN = NHEMI40, NLVLS = 2, IOPTN = 1;
2 250MB, 100MB;
999 LAST INPUT CARD .....
/*
// SETUP1 EXEC VSETUP, TEMP='&&DECK1'
// SYSIN DD *
FIN 31901933907936
300 40 BIN D3. SATELLITE IMPACT TEST. SAT MODE
// * MAPS1 EXEC VARIANX,
// VOUT=DA9999, (USER TAPE NUMBER)
// TEMP='&&DECK1',
// ADP='&&FILI54',
// ANL='NWS.NMC.W324.ANL5',
// ANL5='NWS.NMC.W324.ANL5',
// TDSN='NWS.VFIL.W324DES.IMPACT' DISK DATASET NAME
// VARIAN.FT01F001 DD DISP=(NEW,PASS)
// DEL1 EXEC PGM=IEFBRI4
// XA DD DISP=(OLD,DELETE), DSN=&&GRANPA
// XB DD DISP=(OLD,DELETE), DSN=&&FILI54
// *
// DATA2 EXEC DATA20, PREP DATA FOR VARIAN PLOT
// F19='NWS.NMC.W324DES.T29NW', TIROS, HGTS
// ANL1='NWS.NMC.W324.ANL5',
// ANL5='NWS.NMC.W324.ANL5',
// GES='NWS.NMC.W324.GES'
// DATA4PLT.SYSIN DD *
1 KRUN = NHEMI40, NLVLS = 2, IOPTN = 1;
2 500MB, 250MB;
999 LAST INPUT CARD .....
/*
// SETUP2 EXEC VSETUP, TEMP='&&DECK2'
// SYSIN DD *
FIN 41904935
300 40 BIN D3. DATA PLOT ONLY. HEIGHTS
// * MAPS2 EXEC VARIANX,
// VOUT=DA9999, (USER TAPE NUMBER)
// TEMP='&&DECK2',
// ADP='&&FILI54',
// ANL='NWS.NMC.W324.ANL5',
// ANL5='NWS.NMC.W324.ANL5',
// TDSN='NWS.VFIL.W324DES.IMPACT' DISK DATASET NAME
// VARIAN.FT01F001 DD DISP=(MOD,PASS)
// DEL2 EXEC PGM=IEFBRI4
// XA DD DISP=(OLD,DELETE), DSN=&&GRANPA
// XB DD DISP=(OLD,DELETE), DSN=&&FILI54
// *
// DATA3 EXEC DATA20, PREP DATA FOR VARIAN PLOT
// F14='NWS.NMC.W324.AIRCFT',
// F19='NWS.NMC.W324.ADPUPA', F19--A MUST FILE
// F22='NWS.NMC.W324.SATWND',
// GES='NWS.NMC.W324.GES',
// ANL1='NWS.NMC.W324.ANL5',
// ANL5='NWS.NMC.W324.ANL5'
// DATA4PLT.SYSIN DD *
1 KRUN = SHEMI40, NLVLS = 1, IOPTN = 1;
2 250MB;
999 LAST INPUT CARD .....
/*
// SETUP3 EXEC VSETUP, TEMP='&&DECK3'
// SYSIN DD *
FIN 31923920
300 40 BIN D3. SATELLITE IMPACT TEST. SAT MODE
// * MAPS3 EXEC VARIANX,
// VOUT=DA9999, (USER TAPE NUMBER)
// TEMP='&&DECK3',
// ADP='&&FILI54',

```

```

// ANL='NWS.NMC.W324.ANL5',
// ANL5='NWS.NMC.W324.ANL5',
// TDSN='NWS.VFIL.W324DES.IMPACT'           DISK DATASET NAME
// VARIAN.FT01F001 DD DISP=(MOD,PASS)
// BEL3 EXEC PGM=IEFBR14
//XA DD DISP=(OLD,DELETE),DSN=&&GRANPA
//XB DD DISP=(OLD,DELETE),DSN=&&FIL154
// *
//=====
//DATA4 EXEC DATA20,           PREP DATA FOR VARIAN PLOT
// F19='NWS.NMC.W324DES.T29NW',      TIROS HGTS
// GES='NWS.NMC.W324.GES1',
// ANL1='NWS.NMC.W324.ANL5',
// ANL5='NWS.NMC.W324.ANL5',
//DATA4PLT.SYSIN DD *
1  KRUN = SHEMI40, NLVLS = 1, IOPTN = 1;
2  250MB;
999 LAST INPUT CARD .....
// *
//SETUP4 EXEC VSETUP,TEMP='&&DECK4',
//SYSIN DD *
FINS40923
300 40 BIN D3.          DATA PLOT ONLY.          HEIGHTS
// *
//MAPS4 EXEC VARIANX,
// VOUT=DA9999,           (USER TAPE NUMBER)
// TEMP='&&DECK4',
// ADP='&&FIL154',
// ANL='NWS.NMC.W324.ANL5',
// ANL5='NWS.NMC.W324.ANL5',
// TDSN='NWS.VFIL.W324DES.IMPACT'       DISK DATASET NAME
// VARIAN.FT01F001 DD DISP=(MOD,KEEP)
// BEL4 EXEC PGM=IEFBR14
//XA DD DISP=(OLD,DELETE),DSN=&&GRANPA
//XB DD DISP=(OLD,DELETE),DSN=&&FIL154
// *
//=====
//EXTRA DD DATA          MISC. CARDS FOLLOW .....
// UN=DISK,VOUT=NWS255, DN=1, CH=1,
// UN=TAPE9,VOUT=DA9997, DN=2, CH=1,
// UN=NMCTP9,VOUT=DA9998, DN=2, CH=1,
// *          END          MISC. CARDS .....
//

```

SAMPLE JCL -- MULTIPLE PROCESSES (TAPE, FILM)

```

// REGION=600K,CLASS=E,TIME=3
//* GANL6, PLUS 65*65 FIELDS .... IN W324DES.F00
//SCR EXEC PGM=IEFBRI4
//OLD DD DISP=(OLD,DELETE),UNIT=DISK,VOL=SER=NWS255,
// DSN=NWS.VFIL.W324DES.VTEST
//* NEED TO LOAD NECESSARY ADP FILES .....
//AA EXEC WWLDFNL,DATE=16,CYCLE=00,ADPUP6=,TSDCT6=
//=====
//GESER EXEC PGM=DESGESER
//STEPLIB DD DISP=SHR,DSN=W.NWS.W322DAC.LOAD
//FT06F001 DD SYSOUT=A
//GES DD UNIT=SYSDA,SPACE=(CYL,1),DISP=(NEW,PASS),DSN=&&GES
//FT10F001 DD DISP=(OLD,PASS),DSN=&&ADRUP6
//=====
//TIROS EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=A
//SYSUT1 DD DISP=(SHR,PASS),UNIT=TAPE9,DSN=TIROSN,LABEL=(2,SL,,IN),
// VOL=REF=*.AA.LOAD.FT01F001
//SYSUT2 DD UNIT=SYSDA,SPACE=(CYL,35),DSN=&&NMCEDS,
// DCB=(RECFM=FB,LRECL=280,BLKSIZE=6440)*DISP=(NEW,PASS)
//SYSIN DD DUMMY
//=====
//T29ZT EXEC PGM=DEST29ZT,COND=(4,LT)
//STEPLIB DD DISP=SHR,DSN=W.NWS.W324DES.LTIROS2
//FI05F001 DD DDNAME=SYSIN
//FI06F001 DD SYSOUT=A
//JOBLOG DD DUMMY
//FI88F001 DD DISP=(OLD,PASS),DSN=&&TSDCT6
//FI89F001 DD DISP=(OLD,PASS),DSN=&&NMCEDS
//FI30F001 DD DISP=(OLD,PASS),DSN=&&ADRUP6
//FI11F001 DD DISP=(NEW,PASS),UNIT=SYSDA,SPACE=(CYL,30),DSN=&&TIROS
//LFN DD DISP=SHR,DSN=NWS.NMC.W324DES.F00 (2.5 1000Z)
//LFN DD DISP=SHR,DSN=W.NWS.W324DES.NULLRA EMPTY R/A FILE
//SYSIN DD * (BASE TIME DETERMINED BY FT30....)
-300 259 7 1 7 2 0. -90. 360. 0. 1 HGTS
//=====
//TRYIT EXEC DATA20,
// ANL1='NWS.NMC.W324DES.F00',
// GES='&&GES',
// ANL5='NWS.NMC.W324DES.F00',
// F19='&&TIROS'
//DATA4PLT.SYSIN DD *
1 KRUN = SHEMI40, NLVLS = 3, IOPTN = 1;
2 250MB, 200MB, 100MB;
999 LAST INPUT CARD .....
//=====
//SETUP EXEC VSETUP,TEMP='&&DECK1'
//SYSIN DD *
FINS40942944956
300 40 BIN C-3, DESMARAI.
//=====
//MAPS EXEC VARIANX,
// UN=DISK,VOL=NWS255,DN=,CH=,
// ANL5='NWS.NMC.W324DES.F00',
// ANL='NWS.NMC.W324DES.F00',
// TEMP='&&DECK1',ADP='&&FIL154',
// TDSN='NWS.VFIL.W324DES.VTEST' DISK DATASET NAME
//VARIAN.FT01F001 DD DISP=(NEW,KEEP)
//=====
//UP EXEC WWUPSTRS,K='VFIL',V=DA9999,UNIT=NMCTP9,LOADSET=B,
// S=2,D='NWS.VFIL.W324DES.VTEST'
//XMIT DD DISP=(OLD,KEEP),DSN=&D,VOL=SER=NWS255,UNIT=DISK

```



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL WEATHER SERVICE
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National Meteorological Center
OA/W324 - Room 202
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Washington, D. C. 20233

OA/W324/AJD

April 14, 1981

TO : Recipients of NMC Office Note 230
FROM : OA/W324 - A. J. Desmarais *A.J.D.*
SUBJECT: Correction for Table 3, NMC Office Note 230

Map numbers 621, 634, 642, 829 and 830 as specified in Table 3 (page 5) of NMC Office Note 230 were incorrectly assigned to Trop. Streams and Trop. Isotachs. These numbers should be assigned to Precip. Amt. for the same time periods.

Kindly make a correction to Table 3 or replace page 5 with a corrected version (attached).

Attachment



