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NATIONAL WEATHER SERVICE
NATIONAL METEOROLOGICAL CENTER

OFFICE NOTE 235

Generating Codes for a Complete Spectral System with Arbitrary Vertical and Horizontal Resolution

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

This office note documents the steps involved in creating codes and fixed fields necessary for the computer implementation of a spectral forecast system with arbitrary vertical and horizontal resolution. The only limitation on the horizontal resolution is the requirement that #JCAP, the maximum zonal wave number in the rhomboidal truncation, be even.

A net of 8 computer jobs creates fixed fields, executable load modules and a sample forecast to 24H, including post-processing the sigma data to mandatory pressure surfaces. The object codes generated by this system are not as fast as the operational codes, a consequence of using generalized Fast Fourier Transforms subroutines. For #JCAP=24 or #JCAP=30, optimized FFTS are available and can be included in a manner described in Office Note 234.

The listings provided in this note are for #JCAP=16 and 6 layers. The resolution is controlled by the first member in the input to the PL1 pre-processor, DCL16K06. This member reflects the desired resolution by specifying numerical values to the # variables appearing in the source code. A listing of this member is provided for reference.

The vertical resolution is determined by subroutine SETSIG and variables:

#LEVS = number of model layers

#LEVP1 = number of model layers + 1

#LEVM1 = number of model layers - 1

#LEVH = number of model layers bearing moisture

#LEVHM1= numberof model layers bearing moisture - 1

Array DEL is subroutine SETSIG specifys the sigma thickness of the model's layers. The values of DEL(#LEVS) should be reset whenever the vertical resolution is changed. Subroutines SETSIG is presented for reference. The horizontal resolution is determined by subroutines FFT99GEN FFT99M and variables:

#JACP = max. zonal wave number

#JCAP1 = " " " " + 1

#JCAP2 = " " " " + 2

#LN = number of spectral coefs. per scaler field = #JCAP1x#JCAP1

#LNUV = number of spectral coefs. per vector field = #JCAP1x#JCAP2

#Latg = number of Gaussian latitudes

#Latg2 = number of Gaussian latitudes/2

#LONF = number of Gaussian points per latitude circle

#HLONF1= #LONF/2 + 1

#LONFP2= #LONF + 2

#LONF2 = 2x#LONF

Member DCL16K06 is composed of three sections, member YSCHAR, a group of specific values for the aforementioned variables and member YSCALC.

Member YSCHAR declares most of the variables as CHAR and specifys most of the truncation independent variables. Member YSCHLC computes additional variables from previously defined values.

Description of the net creating a tape with data and FORTRAN Programs.

1. Job WWYSF123

   a) copy Hough function's frequencies to File 1 of tape

   b) compute spectral topography and write formatted coefficients to File 2 of tape.

c) compute Gaussian grid of drag coefficients, 12 monthly sea surface temperature normals, and write into File 3 of tape. The method of writing, formatted or unformatted, is controlled by subroutine RDWRT.

In steps b and c PROC YSXCLGAB is used. This PROC is a PL1 preprocessor followed by a COMPILE, LKED and GO steps. The PROC listing is included for reference.

2. Job WWYSFY

This job writes the FORTRAN code of program SMYLN16 into File 4. In addition load module SMYLN16 is complied and placed on a load library.

3. Job WWYSF5

This job writes the FORTRAN code of program SMI1606G into File 5. It also creates load module SMI1606G in the load library.

4. Job WWYSF6

This job creates the FORTRAN code of program SMNM1606 and writes it into File 6. This code computes the normal modes for the specified resolution and writes them into FT80F001. The number of vertical modes is specified by the input to FT05F001. In this example 4 vertical modes are specified. The load module of this program is placed in the load library, for future use. Note that FT80F001 is a temporary file used for testing only.

5. Job WWYSF7

This job creates the FORTRAN code of program SMF16006G writes it into File 7 and creates load module SMFI606G.

6. Job WWYSF8

As in (5) for program SMP1606X.

7. Job WWYSF9

As in (5) for program FORUNFOR. This program should be used when executing the model on a computer installation other than a 360/195. This code will read formatted data and write unformatted files for subsequent use by the various programs.

8. Job WWYSF10

This job is a sample execution of a 24H forecast and consists of the following steps.

HUFCOF, Program SMHUFCF

Reads Hough function data from FT04F001 and writes Hough function data for 12 mandatory pressure levels in FT10F001. The program "sums" the empirical orthogonal pressure functions out of the general Hough functions representation.

YLN, Program SMYLN16

Computes spherical harmonics from data in FT10F001 and writes them on FT11F00T. Note that the Hough frequencies in FT14F001 are obtained from a permanent file. The same result can be achieved by specifying FT14F001 as File 1 of the tape written in Job WWYSF123.

FOR1, FORUNFR

Reads FT01F001, unformatted spectral coefficients or pressure, writes into FT02F001 formatted data.

FOR2, FORUNFOR

Recreates unformatted spectral coefficients on pressure in FT02F001.

FOR3, FORUNFOR

Creates unformatted drag and sea surface temperature in file DRAGSST from File 3 on tape created in job WWYSF123.

Steps FOR1, FOR2, FOR3 can be deleted when executing job WWYSF10 on the 360/195 computer.

SMI, Program SMI1606G

This is the pressure to sigma step. Spherical harmonic coefficients on mandatory pressure levels are read from FT11F001, SMCFYLN, spherical harmonic data on sigma is written into file FT18F001. Note that topography coefficients are read from File 2 on the tape created in job WWYSF123.

GETMOD, Program SMNM1606

This step computes the normal modes and writes them into FT80F001. In this execution 2 vertical modes are requested.

FCST12, Program SMF1606G

In this step a 12H forecast is created from initial data in FT18F001. The initialized data is written into FT19F001 and two adjacent time levels (tau and tau-1) are written into FT20F001 and FT21F001 respectively. The model reads the normal modes from file NORMOD and the sea surface temperature and drag from file DRAGSST.

FCST24, Program SMFT606G

As in FCST12 but without normal mode initialization. The 24H forecast is written into files FT22F001 and FT23F001 for possible continuation of the run.

POST24, Program SMP2406X

This step transforms sigma data to data on 12 mandatory pressure levels. In this example the post processor does not write out any output, spectral coefficients on pressure or random access file, as

is done in NMC's operations. Office Note 234 describes the creation of operational post processing codes capable of saving the output data on permanent files.

General Remarks

The various spectral codes are controlled through the PARM field in the EXEC statement. The specification of parameters is described in Office Note 231. The example given in Job WWYSF10 transfers the PARM field through input file FT05F001. This departure from NMC's operations is intended to demonstrate the execution of the spectral system on any computer. Deleting FT05F001 and placing the PARM field in the EXEC statements requires compiling the various programs according to specifications given in Office Note 234.

In creating the "portable" version presented in this note certain W3LIB subroutines were faked to permit execution on any computer installation. These subroutines are used for data management and do not interfere with the computational aspects of the system. Should a version containing the W3LIB codes be desired, member W3SUBS must be deleted from the input to the PL1 preprocessor and a LKED statement added to codes containing this member.

member DCL16K06

```
% INCLUDE YSCHAR ;
    %#FILTA        ='0.92'  ;
% #LEVH = '4' ;
    % #LEVHM1 = '3' ;
    % #JCAP         = '16' ;
    % #JCAP1        = '17' ;
    % #JCAP2        = '18' ;
    % #LN           = '289' ;
    % #LNUV         = '306' ;
    % #LONF         = '50' ;
    % #HLONF1       = '26' ;
    % #LONFP2       = '52' ;
    % #LONF2        = '100' ;
    % #LATG2        = '21' ;
    % #LATG         = '42' ;
% #LEVM1='5';
% #LEVS='6';
% #LEVP1='7';
% INCLUDE YSCALC ;
```

Note include members YSCHAR, YSCALC

member YS CHAR

```
% DCL #NGRID CHAR,  #IPOLE CHAR,  #IMAX CHAR,  #NGRID1 CHAR ;
%#NGRID='49';    %#IPOLE='25';    %#IMAX='24';    %#NGRID1='50';
% DCL
        #FILTA        CHAR,
        #LAG2P1       CHAR,
        #DT           CHAR,
        #DISPKO       CHAR,
        #DISPKF       CHAR,
        #UNBLOK       CHAR,
        #NINT         CHAR,
        #LEVH         CHAR,
        #LEVHM1       CHAR,
        #JCAP         CHAR,
        #JCAP1        CHAR,
        #JCAP2        CHAR,
        #LN           CHAR,
        #LNUV         CHAR,
        #LONF         CHAR,
        #HLONF        CHAR,
        #HLONF1       CHAR,
        #LONFP2       CHAR,
        #LONF2        CHAR,
        #LATG2        CHAR,
        #LATG         CHAR,
        #LEVS         CHAR,
        #LEVM1        CHAR,
        #LEVP1        CHAR,
        #MAXDT        CHAR,
        #GRAV         CHAR,
        #A            CHAR,
        #R            CHAR,
        #CP           CHAR,
        #LQTDZ        CHAR,
        #KTE          CHAR,
        #KDI          CHAR,
        #KZE          CHAR
;
     %#DT             ='1200.';
     %#DISPKO         ='2.5E-4';
     %#DISPKF         ='1.E-5' ;
     %#UNBLOK         ='2.2E+5';
     %#NINT           ='60' ;
     % #MAXDT         = '19' ;
     % #GRAV          = '9.8' ;
     % #A             = '6370000.' ;
     % #R             = '287.05' ;
     % #CP            = '1005.' ;
% DCL #K CHAR,  #KP1 CHAR,  #KM1 CHAR,  #N CHAR,  #NN CHAR ;
% #K = '13' ;
% #KP1 = '14' ;
% #KM1 = '12' ;
% #N = 2 * #KM1 + #K + 1 ;
% DCL  #INCR CHAR,  #NBUFF CHAR,  #N1 CHAR,  #N2 CHAR,  #N3 CHAR ;
% DCL  #INCRP CHAR,  #MBUFF CHAR,  #M1 CHAR,  #M2 CHAR,  #M3 CHAR ;
% DCL #M4 CHAR, #N4 CHAR ;
% DCL  #KPMAX CHAR ;     % #KPMAX = '15' ;
% DCL  #FINAL CHAR ;     % #FINAL = '1' ;
```

member yscalc

```
     %#LAG2P1          =#LATG2+1 ;
     % #LQTDZ         = #LN * (3*#LEVS+1) ;
     % #KTE            = #LN + 1 ;
     % #HLONF          = #LONF/2;
     % #KDI            = #LN + #LN*#LEVS + 1 ;
     % #KZE            = #LN + 2*#LN*#LEVS + 1 ;
% #NN = 2 * #LEVM1 + #LEVS ;
     % #INCR           = #LONF * #LEVS ;
% #NBUFF = #INCR*4 + #LONF*2 ;
     % #N1             = #INCR + 1 ;
     % #N2             = #N1 + #INCR ;
     % #N3             = #N2 + #INCR ;
% #N4 = #N3 + #INCR ;
     % #MBUFF          = #LONF * 68 ;
     % #INCRP          = #LONF * 15 ;
     % #M1             = #INCRP + 1 ;
     % #M2             = #M1 + #INCRP ;
     % #M3             = #M2 + #INCRP ;
% #M4 = #M3 + #INCRP + #LONF*2 ;
%DCL #JSEV CHAR,#JSOD CHAR,#JVEV CHAR,#JVOD CHAR,
     #LNEV CHAR,#LNOD CHAR,#LNUVEV CHAR,#LNUVOD CHAR ;
% #JSEV= #JCAP/2+1 ;
% #JSOD= #JCAP/2   ;
% #JVEV= #JCAP/2+1 ;
% #JVOD= #JCAP/2+1 ;
% #LNEV= #JSEV*#JCAP1 ;
% #LNOD= #JSOD*#JCAP1 ;
% #LNUVEV= #JVEV*#JCAP1 ;
% #LNUVOD= #JVOD*#JCAP1 ;
% DCL #J3 CHAR ; %#J3= 3*#JCAP1  ;
% DCL #NS CHAR ; % #NS= 2*#JSEV+#JSOD ;
% DCL #NA CHAR ; % #NA= 2*#JSOD+#JSEV ;
```

```
      SUBROUTINE SETSIG (CI, SI, DEL, SL, CL, RPI)
      DIMENSION CI(#LEVP1), SI(#LEVP1),
     1 DEL(#LEVS), SL(#LEVS), CL(#LEVS), RPI(#LEVM1)
      PRINT 98
98    FORMAT (1H0, 'BEGIN SETSIG')
      CI(1) = 0.
      DO 54 K=1,#LEVS
      DEL(K)=1./#LEVS.
54    CI(K+1)=CI(K)+DEL(K)
      CI(#LEVP1)=1.
      RK = #R / #CP
      RK1 = RK + 1.
      LEVS=#LEVS
      DO 1 LI=1,#LEVP1
1     SI(LI) = 1. - CI(LI)
      DO 3 LE=1,#LEVS
      DIF = SI(LE)**RK1 - SI(LE+1)**RK1
      DIF = DIF / (RK1*(SI(LE)-SI(LE+1)))
      SL(LE) = DIF**(1./RK)
      CL(LE) = 1. - SL(LE)
3     CONTINUE
C     COMPUTE PI RATIOS FOR TEMP. MATRIX.
      DO 4 LE=1,#LEVM1
4     RPI(LE) = (SL(LE+1)/SL(LE))**RK
      DO 5 LE=1,#LEVP1
      PRINT 100, LE, CI(LE), SI(LE)
100   FORMAT (1H , 'LEVEL=', I2, 2X, 'CI=', F6.3, 2X, 'SI=', F6.3)
5     CONTINUE
      PRINT 97
97    FORMAT (1H0)
      DO 6 LE=1,#LEVS
      PRINT 101, LE, CL(LE), SL(LE), DEL(LE)
101   FORMAT (1H , 'LAYER=', I2, 2X, 'CL=', F6.3, 2X, 'SL=', F6.3, 2X,
     1 'DEL=', F6.3)
6     CONTINUE
      PRINT 102, (RPI(LE), LE=1,#LEVM1)
102   FORMAT (1H0, 'RPI=', #LEVM1(F6.3,2X))
      PRINT 99
99    FORMAT (1H0, 'END SETSIG')
  % INCLUDE YSCHECK;
      RETURN
      END
```

```
//YSXCLG12 PROC FXPGM=IFEAAB,FXREGN=256K,FXPDECK=NODECK,
//              FXPMAP=NOMAP,FXPL='NOIL,XL',FXPSIZE=MAX,FXPXREF=NOXREF,
//              FXPOLST=NOLIST,FXPOPT=3,GOREGN=100K,
//              GOF5DD='DDNAME=SYSIN',GOF6DD='SYSOUT=A',
//              GOF7DD='SYSOUT=B',FXPLINE=78,FXPTERM=NOTERM
//*
//*  NWS    NMC    DEVELOPMENT DIVISION     J. SELA
//*  PLI PREPROCESSOR AND FORTRAN CLG
//*
//*              PARAMETER  DEFAULT-VALUE      USAGE
//*
//*                FXPGM     IFEAAB              COMPILER NAME
//*                FXREGN    256K                FORT-STEP REGION
//*                FXPDECK   NODECK              COMPILER DECK OPTION
//*                FXPOLST   NOLIST              COMPILER LIST OPTION
//*                FXPOPT    3                   COMPILER OPTIMIZATION
//*                FXPMAP    NOMAP               COMPILER MAP OPTION
//*                FXPSIZE   MAX                 COMPILER CORE
//*                FXPL      NOIL                MISC. PARAMETER
//*                FXPXREF   NOXREF              COMPILER XREF LISTING
//*                GOREGN    100K                GO-STEP REGION
//*                GOF5DD    DDNAME=SYSIN        GO.FT05F001 OPERAND
//*                GOF6DD    SYSOUT=A            GO.FT06F001 OPERAND
//*                GOF7DD    SYSOUT=B            GO.FT07F001 OPERAND
//*                FXPTERM   NOTERM              COMPILER TERM OPTION
//*                FXPLINE   78                  SOURCE LINES PER PAGE
//*
//PLIPRE  EXEC  PGM=IEMAA,
//              PARM='M,NS,NLD,NC,NS2,SM=(2,72,1),LC=78,FE'
//SYSPRINT DD DUMMY
//SYSUT1   DD UNIT=SYSDA,SPACE=(1024,(60,60),,CONTIG)
//SYSUT3   DD DSN=&&PLIOUT,UNIT=SYSDA,
//            SPACE=(80,(12000,500)),DISP=(NEW,PASS)
//SYSPUNCH DD DUMMY
//SYSLIN   DD DUMMY
//SYSLIB   DD DSN=W.NWS.W323.YS.META,DISP=SHR
//         DD DSN=W.NWS.W323.YS.METB,DISP=SHR
//         DD DSN=W.NWS.W323.YS.FORT,DISP=SHR
//*
//FORT EXEC PGM=&FXPGM,REGION=&FXREGN,
// PARM=('&FXPDECK,&FXPOLST,OPTIMIZE(&FXPOPT),&FXPMAP,SIZE(&FXPSIZE),
// '&FXPL','&FXPXREF','&FXPTERM,LC(&FXPLINE),GOSTMT')
//STEPLIB      DD DSN=MCS.FORT.ENHANCED.COMPILER,DISP=SHR
//SYSTERM DD SYSOUT=A
//SYSPRINT DD SYSOUT=A,DCB=BLKSIZE=2016
//SYSUT1       DD UNIT=SYSDA,SPACE=(CYL,(1,1)),DCB=BLKSIZE=3465
//SYSUT2       DD UNIT=SYSDA,SPACE=(CYL,(1,1))
//SYSPUNCH DD SYSOUT=B
//SYSLIN       DD DSN=&&LOADSET,DISP=(MOD,PASS),UNIT=SYSDA,
// DCB=BLKSIZE=3120,SPACE=(CYL,(1,1))
//SYSIN        DD DSN=&&PLIOUT,DISP=(OLD,DELETE)
//LKED EXEC PGM=IEWL,REGION=256K,COND=(4,LT),
// PARM='LET,LIST,MAP'
//SYSPRINT     DD SYSOUT=A
//SYSLIB  DD DSN=MCS.FORT.ENHANCED.LIBRARY,DISP=SHR
//        DD DSN=SYS1.FORTLIB,DISP=SHR
//        DD DSN=MCS.COMMON.LOAD,DISP=SHR
//        DD DSN=W.NWS.W323.YS.LOADD,DISP=SHR
//        DD DSN=NWS.NMC.W3LIB.LOAD,DISP=SHR
//SYSUT1       DD UNIT=SYSDA,SPACE=(CYL,(1,1))
//SYSLMOD DD DSN=&GOSET(MAIN),DISP=(MOD,PASS),UNIT=SYSDA,
//            SPACE=(CYL,(4,,1))
//SYSLIN       DD DSN=&&LOADSET,DISP=(OLD,DELETE)
//             DD DDNAME=SYSIN
//SYSTERM DD SYSOUT=A
//MYLIB        DD DSN=*.JOBLIB,DISP=SHR
//             DD DSN=W.NWS.W323.YS.LOADD,DISP=SHR
//GO      EXEC PGM=*.LKED.SYSLMOD,REGION=&GOREGN,COND=(4,LT)
//FT05F001     DD &GOF5DD
//FT06F001     DD &GOF6DD
//FT07F001     DD &GOF7DD
//ANY          DD DSN=&&GOSET,DISP=(OLD,DELETE)
```

Proc YSXCLGAB

```
//WWYSF123 JOB (WD23008AC601000,WWB4-D1),ROZWODOSKI,
//          TIME=1,REGION=356K
//*NET  ID=E18767,RELEASE=(WWYSF4)
//JOBLIB DD DSN=W.NWS.W323.YS.LOADO,DISP=SHR
//*FORMAT  PR,DDNAME=,DEST=WWB29
//*
//**** COPY HUF FREQUENCIES
//COPY2    EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=A
//SYSIN    DD DUMMY
//SYSUT1   DD DISP=SHR,DSN=NWS.NMC.TEST.SMFIX30(YSNCUT),LABEL=(,,,IN)
//SYSUT2   DD DSN=YSNCUT,UNIT=TAPE9,VOL=SER=E18767,LABEL=(01,SL,,OUT),
//    DCB=(RECFM=FB,LRECL=80,BLKSIZE=6400),DISP=(NEW,PASS)
//*
//*    WRITE TOPOGRAPHY COEFFICIENTS
//*    AS FORMATTED RECORDS.
//*
//  EXEC YSXCLGAB
//SYSIN    DD *
  % INCLUDE DCL16K06;
  % #LONF='144';
  % #HLONF1='73';
  % #LONFP2='146';
  % #LONF2='288';
  % #LATG='72';
  % #LATG2='36';
  %INCLUDE GLATS;  %INCLUDE EPSPLN2;
  %INCLUDE FIXZLN;
/*
//GO.FT01F001 DD DSN=W.NWS.W323.MJR.SOURCE2(YGTOPOG),
//      LABEL=(,,,IN),DISP=SHR
//*
//GO.FT08F001 DD DSN=ZLN16F2,VOL=SER=E18767,LABEL=(02,SL,,OUT),
//    DCB=(RECFM=FB,LRECL=80,BLKSIZE=6400),DISP=(NEW,PASS),UNIT=TAPE9
//*
//*    THIS PROGRAM TESTS TOPOGRAPHY COEFFICIENTS.
//*
//*
//  EXEC YSXCLGAB
//SYSIN    DD *
  % INCLUDE DCL16K06;
  %INCLUDE GLATS;  %INCLUDE EPSPLN2;
  %INCLUDE FIXZLNT;
/*
//*
//GO.FT09F001 DD DSN=ZLN16F2,VOL=SER=E18767,LABEL=(02,SL,,IN),
//    DCB=(RECFM=FB,LRECL=80,BLKSIZE=6400),DISP=(NEW,PASS),UNIT=TAPE9
//*
//*
//*
//*    WRITE GAUSSIAN GRID OF DRAG COEFFICIENTS AND 12 SST FIELDS
//* FORMAT OF WRITTEN FIELDS IS SET IN SR. RDWRT
//*
//COPY     EXEC  NWSCOPYD,DSN='NWS.NMC.PROD.FIX',TFILE='&&FIX'
//*
//  EXEC YSXCLGAB
//SYSIN    DD *
      %INCLUDE DCL16K06;
      %INCLUDE GLATS;
  %INCLUDE FIXSST;
/*
//GO.FT09F001 DD DSN=W.NWS.W323.MJR.DRAGWF,DISP=SHR
//GO.FT10F001 DD DSN=W.NWS.W323.MJR.SOURCE2(YGTOPOG),
//            LABEL=(,,,IN),DISP=SHR
//GO.FT20F001 DD DSN=DRAGSST,VOL=SER=E18767,LABEL=(03,SL,,OUT),
//    DCB=(RECFM=FB,LRECL=80,BLKSIZE=6400),DISP=(NEW,PASS),UNIT=TAPE9
//GO.FIXFLD   DD DSN=&&FIX,DISP=(OLD,DELETE)
//
//
```

```
//WWYSF4    JOB (WD23008AC601000,WWB-D1),ROZWODOSKI,TIME=1,REGION=256K
//*NET  ID=E18767,AB=F,NC=D,HC=1,RELEASE=(WWYSF5)
//*    SMYLN
//*MAIN  LINES=20
//*FORMAT  PR,DDNAME=,DEST=WWB29PR1
//  EXEC  NWSDELTM,D='W.NWS.W323.YS.G16K06',V=SDB090,M=SMYLN16
//COMPR2  EXEC  PGM=IEBCOPY
//SYSPRINT  DD  SYSOUT=A
//DDFILE DD DISP=(OLD,KEEP),DSN=W.NWS.W323.YS.G16K06
//SYSUT3  DD  UNIT=SYSDA,SPACE=(TRK,(3))
//SYSUT4  DD  UNIT=SYSDA,SPACE=(TRK,(3))
//SYSIN  DD  *
COPYOPER COPY OUTDD=DDFILE,INDD=DDFILE
/*
//*
//PLIPRE  EXEC  PGM=IEMAA,
//      PARM='M,NS,NLD,NC,NS2,SM=(2,72,1),LC=78,FE,MACDCK'
//SYSPRINT DD DUMMY
//SYSUT1 DD UNIT=SYSDA,SPACE=(1024,(60,60),,CONTIG)
//SYSUT3 DD DSN=&&PLIOUT,UNIT=SYSDA,
//      SPACE=(80,(12000,500)),DISP=(NEW,PASS)
//SYSPUNCH DD DSN=SMYLN16,UNIT=TAPE9,VOL=SER=E18767,LABEL=(4,SL,,OUT),
//             DCB=(RECFM=FB,LRECL=80,BLKSIZE=6400),DISP=(NEW,PASS)
//SYSLIN DD DUMMY
//SYSLIB DD DSN=W.NWS.W323.YS.META,DISP=SHR
//       DD DSN=W.NWS.W323.YS.METB,DISP=SHR
//       DD DSN=W.NWS.W323.YS.W3SR,DISP=SHR
//       DD DSN=W.NWS.W323.YS.FORT,DISP=SHR
//SYSIN DD *
  % INCLUDE DCL16K06;
  %INCLUDE W3SUBS;
  % INCLUDE YSHLN;
  % INCLUDE YSHLN3;
/*
//  EXEC  NFORXCL,FXPOPT=3,FXPMAP=MAP,FXPXREF=XREF,FXPLINE=78,
//        FXPL='NOIL,XL',
//        PARM.LKED='LET,LIST,MAP'
//FORT.SYSIN DD DSN=SMYLN16,VOL=SER=E18767,LABEL=(4,SL,,IN),
//  UNIT=TAPE9,DCB=(RECFM=FB,LRECL=80,BLKSIZE=6400),DISP=(OLD,PASS)
//LKED.SYSLMOD DD DISP=SHR,SPACE=,DSN=W.NWS.W323.YS.G16K06(SMYLN16)
//*DATASET  DDNAME=SAVE,J=YES
  % INCLUDE PRMFLD;
//*ENDDATASET
//
//
```

```
//WWYSF5   JOB (WD23008AC601000,WWB-D1),ROZWODOSKI,TIME=1,REGION=256K
//*NET  ID=E18767,AB=F,NC=D,HC=1,RELEASE=(WWYSF6)
//*  SMI
//*MAIN  LINES=20
//*FORMAT  PR,DDNAME=,DEST=WWB29PR1
//  EXEC  NWSDELTM,D='W.NWS.W323.YS.G16K06',V=SDB090,M=SMI1606G
//COMPR2  EXEC  PGM=IEBCOPY
//SYSPRINT  DD  SYSOUT=A
//DDFILE DD DISP=(OLD,KEEP),DSN=W.NWS.W323.YS.G16K06
//SYSUT3  DD  UNIT=SYSDA,SPACE=(TRK,(3))
//SYSUT4  DD  UNIT=SYSDA,SPACE=(TRK,(3))
//SYSIN  DD  *
COPYOPER COPY OUTDD=DDFILE,INDD=DDFILE
/*
//*
//PLIPRE  EXEC  PGM=IEMAA,
//      PARM='M,NS,NLD,NC,NS2,SM=(2,72,1),LC=78,FE,MACDCK'
//SYSPRINT DD DUMMY
//SYSUT1 DD UNIT=SYSDA,SPACE=(1024,(60,60),,CONTIG)
//SYSUT3 DD DSN=&&PLIOUT,UNIT=SYSDA,
//      SPACE=(80,(12000,500)),DISP=(NEW,PASS)
//SYSPUNCH DD DSN=SMI1606G,UNIT=TAPE9,VOL=SER=E18767,LABEL=(5,SL,,OUT),
//            DCB=(RECFM=FB,LRECL=80,BLKSIZE=6400),DISP=(NEW,PASS)
//SYSLIN DD DUMMY
//SYSLIB DD DSN=W.NWS.W323.YS.META,DISP=SHR
//       DD DSN=W.NWS.W323.YS.METB,DISP=SHR
//       DD DSN=W.NWS.W323.YS.W3SR,DISP=SHR
//       DD DSN=W.NWS.W323.YS.FORT,DISP=SHR
//SYSIN DD *
  % INCLUDE DCL16K06;
  %INCLUDE W3SUBS;
  % INCLUDE GPRENODI;
  % INCLUDE GHCIGGLN;
  % INCLUDE JSPTOSIG;
  % INCLUDE SETSIG6E;
  % INCLUDE YSPLNB ;
  % INCLUDE GLATS;
  % INCLUDE LOWTMP;
  % INCLUDE YSMINV;
  % INCLUDE FFT99M;
  % INCLUDE FFT99GEN;
  % INCLUDE UVDZ99;   % INCLUDE PLNDER;
/*
//  EXEC  XFORXCL,FXPOPT=3,
//        FXPTERM=TERM,
//        FXPLINE=78,FXPL='XL',PARM.LKED='LET,LIST,MAP'
//FORT.SYSIN DD DSN=SMI1606G,VOL=SER=E18767,LABEL=(5,SL,,IN),
//  UNIT=TAPE9,DCB=(RECFM=FB,LRECL=80,BLKSIZE=6400),DISP=(OLD,PASS)
//LKED.SYSLMOD DD DISP=SHR,SPACE=,DSN=W.NWS.W323.YS.G16K06(SMI1606G)
//*DATASET  DDNAME=SAVE,J=YES
  % INCLUDE PRMFLD;
//*ENDDATASET
//
//
```

```
//WWYSF6    JOB (WD23008AC601000,WWB-D1),ROZWODOSKI,TIME=1,REGION=256K
//*NET   ID=E18767,AB=F,NC=D,HC=1,RELEASE=(WWYSF7)
//*MAIN  LINES=20
//*FORMAT  PR,DDNAME=,DEST=WWB29PR1
//   EXEC  NWSDELTM,D='W.NWS.W323.YS.G16K06',V=SDB090,M=SMNM1606
//COMPR2  EXEC  PGM=IEBCOPY
//SYSPRINT  DD  SYSOUT=A
//DDFILE DD DISP=(OLD,KEEP),DSN=W.NWS.W323.YS.G16K06
//SYSUT3  DD  UNIT=SYSDA,SPACE=(TRK,(3))
//SYSUT4  DD  UNIT=SYSDA,SPACE=(TRK,(3))
//SYSIN  DD  *
COPYOPER COPY OUTDD=DDFILE,INDD=DDFILE
/*
//*
//PLIPRE  EXEC  PGM=IEMAA,
//      PARM='M,NS,NLD,NC,NS2,SM=(2,72,1),LC=78,FE,MACDCK'
//SYSPRINT DD DUMMY
//SYSUT1 DD UNIT=SYSDA,SPACE=(1024,(60,60),,CONTIG)
//SYSUT3 DD DSN=&&PLIOUT,UNIT=SYSDA,
//      SPACE=(80,(12000,500)),DISP=(NEW,PASS)
//SYSPUNCH DD DSN=SMNM1606,UNIT=TAPE9,VOL=SER=E18767,LABEL=(6,SL,,OUT),
//              DCB=(RECFM=FB,LRECL=80,BLKSIZE=6400),DISP=(NEW,PASS)
//SYSLIN DD DUMMY
//SYSLIB DD DSN=W.NWS.W323.YS.META,DISP=SHR
//       DD DSN=W.NWS.W323.YS.METB,DISP=SHR
//       DD DSN=W.NWS.W323.YS.FORT,DISP=SHR
//SYSIN DD *
  % INCLUDE DCL16K06;
  % INCLUDE SETSIG6E;
  % INCLUDE CALCMODS;
  % INCLUDE CALCMODV;
  % INCLUDE CALCMODH;
  % INCLUDE AMHMTM;
  % INCLUDE BMCM;
  % INCLUDE YSMINV;
  % INCLUDE W3FA03;
  % INCLUDE EIGCCDP;
/*
//   EXEC  XFORXCLG,FXPOPT=3,
//         FXPTERM=TERM,
//         FXPLINE=78,FXPL='XL',PARM.LKED='LET,LIST,MAP'
//FORT.SYSIN DD DSN=SMNM1606,VOL=SER=E18767,LABEL=(6,SL,,IN),
//   UNIT=TAPE9,DCB=(RECFM=FB,LRECL=80,BLKSIZE=6400),DISP=(OLD,PASS)
//LKED.SYSLMOD DD DISP=SHR,SPACE=,DSN=W.NWS.W323.YS.G16K06(SMNM1606)
//GO.FT05F001 DD *
04
/*
//GO.FT80F001 DD DSN=&&NORMOD,DISP=(NEW,PASS),UNIT=SYSDA,
//      SPACE=(TRK,(200,5)),
//      DCB=(RECFM=VST,LRECL=1000,BLKSIZE=1004,DSORG=PS)
//
//
```

```
//WWYSF7    JOB (WD23008AC601000,WWB-D1),ROZWODOSKI,TIME=1,REGION=256K
//*NET  ID=E18767,AB=F,NC=D,HC=1,RELEASE=(WWYSF8)
//*  SMF
//*MAIN  LINES=20
//*FORMAT  PR,DDNAME=,DEST=WWB29PR1
//  EXEC  NWSDELTM,D='W.NWS.W323.YS.G16K06',V=SDB090,M=SMF1606G
//COMPR2  EXEC  PGM=IEBCOPY
//SYSPRINT  DD  SYSOUT=A
//DDFILE DD DISP=(OLD,KEEP),DSN=W.NWS.W323.YS.G16K06
//SYSUT3  DD  UNIT=SYSDA,SPACE=(TRK,(3))
//SYSUT4  DD  UNIT=SYSDA,SPACE=(TRK,(3))
//SYSIN  DD  *
COPYOPER COPY OUTDD=DDFILE,INDD=DDFILE
/*
//PLIPRE  EXEC  PGM=IEMAA,
//      PARM='M,NS,NLD,NC,NS2,SM=(2,72,1),LC=78,FE,MACDCK'
//SYSPRINT DD DUMMY
//SYSUT1 DD UNIT=SYSDA,SPACE=(1024,(60,60),,CONTIG)
//SYSUT3 DD DSN=&&PLIOUT,UNIT=SYSDA,
//      SPACE=(80,(12000,500)),DISP=(NEW,PASS)
//SYSPUNCH DD DSN=SMF1606G,UNIT=TAPE9,VOL=SER=E18767,LABEL=(7,SL,,OUT),
//              DCB=(RECFM=FB,LRECL=80,BLKSIZE=6400),DISP=(NEW,PASS)
//SYSLIN DD DUMMY
//SYSLIB DD DSN=W.NWS.W323.YS.META,DISP=SHR
//       DD DSN=W.NWS.W323.YS.METB,DISP=SHR
//       DD DSN=W.NWS.W323.YS.W3SR,DISP=SHR
//       DD DSN=W.NWS.W323.YS.FORT,DISP=SHR
//SYSIN DD *
  % INCLUDE DCL16K06;
  % #DT='1800.';
     %#FILTA        ='0.92'   ;
  %INCLUDE W3SUBS;
  %INCLUDE GCOMINI;
  %INCLUDE GMAIN;
  %INCLUDE GIO;
  %INCLUDE GLOOP;
  %INCLUDE GFIDI;
  %INCLUDE GWATER;
  % INCLUDE GLATS;
  % INCLUDE SETSIG6E;
  % INCLUDE AMHMTM;
  % INCLUDE BMCM;
  % INCLUDE FILTDAMP;
  % INCLUDE SICDKD;
  % INCLUDE SIBCKD;
  % INCLUDE LRGSCL;
  % INCLUDE CONVEC;
  % INCLUDE FIXTET;
  % INCLUDE NPMSTADB;
  % INCLUDE NPSATVAP;
  % INCLUDE NPSATVP1;
  % INCLUDE PRINTA;
  % INCLUDE YSMINV;
  % INCLUDE MINMAX;
  % INCLUDE YSPLNB;
  % INCLUDE YSPLNF;
  % INCLUDE FFT99GEN;
  % INCLUDE FFT99M;
/*
//  EXEC  XFORXCL,FXPOPT=3,
//        FXPTERM=TERM,
//        FXPLINE=78,FXPL='XL',PARM.LKED='LET,LIST,MAP'
//FORT.SYSIN DD DSN=SMF1606G,VOL=SER=E18767,LABEL=(7,SL,,IN),
//  UNIT=TAPE9,DCB=(RECFM=FB,LRECL=80,BLKSIZE=6400),DISP=(OLD,PASS)
//LKED.SYSLMOD DD DISP=SHR,SPACE=,DSN=W.NWS.W323.YS.G16K06(SMF1606G)
//*DATASET  DDNAME=SAVE,J=YES
  % INCLUDE SHOWHR; % INCLUDE PRMFLD;
//*ENDDATASET
//
//
```

```
//WWYSF8    JOB (WD23008AC601000,WWB-D1),ROZWODOSKI,TIME=1,REGION=256K
//*NET  ID=E18767,AB=F,NC=D,HC=1,RELEASE=(WWYSF9)
//*  SMP
//*MAIN  LINES=20
//*FORMAT  PR,DDNAME=,DEST=WWB29PR1
//   EXEC  NWSDELTM,D='W.NWS.W323.YS.G16K06',V=SDB090,M=SMP1606X
//COMPR2  EXEC  PGM=IEBCOPY
//SYSPRINT  DD  SYSOUT=A
//DDFILE DD DISP=(OLD,KEEP),DSN=W.NWS.W323.YS.G16K06
//SYSUT3  DD  UNIT=SYSDA,SPACE=(TRK,(3))
//SYSUT4  DD  UNIT=SYSDA,SPACE=(TRK,(3))
//SYSIN  DD  *
COPYOPER COPY OUTDD=DDFILE,INDD=DDFILE
/*
//*
//PLTPRE  EXEC  PGM=IEMAA,
//      PARM='M,NS,NLD,NC,NS2,SM=(2,72,1),LC=78,FE,MACDCK'
//SYSPRINT DD DUMMY
//SYSUT1 DD UNIT=SYSDA,SPACE=(1024,(60,60),,CONTIG)
//SYSUT3 DD DSN=&&PLIOUT,UNIT=SYSDA,
//      SPACE=(80,(12000,500)),DISP=(NEW,PASS)
//SYSPUNCH DD DSN=SMP1606X,UNIT=TAPE9,VOL=SER=E18767,LABEL=(8,SL,,OUT),
//            DCB=(RECFM=FB,LRECL=80,BLKSIZE=6400),DISP=(NEW,PASS)
//SYSLIN DD DUMMY
//SYSLIB DD DSN=W.NWS.W323.YS.META,DISP=SHR
//       DD DSN=W.NWS.W323.YS.METB,DISP=SHR
//       DD DSN=W.NWS.W323.YS.W3SR,DISP=SHR
//       DD DSN=W.NWS.W323.YS.FORT,DISP=SHR
//SYSIN DD *
  % INCLUDE DCL16K06;
  % #KPMAX='12';
  %INCLUDE W3SUBS;
  %INCLUDE W3FB01; %INCLUDE W3FC10; %INCLUDE W3FM07; %INCLUDE W3FT05;
      SUBROUTINE OPWRCL (F, FP, ITYPE, LEVEL, IGRID, IOPEN, IWRITE,
     1                   ICLOSE, MAP, CNST, IFCN, INTRVS)
CCC   THIS IS A TRUNCATED VERSION OF THE OPERATIONAL SUBROUTINE
CCC   IT REMOVES CALLS TO W3LIB SUBS.
CCC   WRITE OUTPUT FIELDS FROM THIS SUBROUTINE
      COMMON HOURF,IDATE(4)
      DIMENSION F(1),FP(1),CNST(4),KTBL(5)
      DATA KTBL/65,1,1,0,65/
      LGTH=65*65
      IF(ICLOSE.EQ.1)RETURN
      MAP=0
      IF((ITYPE.EQ.1).AND.(LEVEL.EQ.4)) MAP=1
      IF(MAP.EQ.0)RETURN
      IF(IFCN.NE.1)GO TO 10
      CALL MINMAX(F,LGTH,CNST,SMIN,SMAX,IFCN,INTRVS)
10    CONTINUE
      CALL GRDPRT(F,KTBL,CNST,ITITLE,1,1)
      IF (IFCN.EQ.1)  WRITE (6,720) CNST
      IF (IFCN.NE.1)  WRITE (6,730) CNST
      WRITE(6,740)HOURF,IDATE
720   FORMAT (20X, 'CNST SUPPLIED', 4(2X,E14.7))
730   FORMAT (20X, 'CNST CALCULATED', 4(2X,E14.7))
740   FORMAT(1H ,'HOUR=',F6.2,2X,'DATE=',4(I4,1X))
      RETURN
      END
  %INCLUDE PGLOPOX;
  %INCLUDE SIGTOM;
  %INCLUDE GETRHEX;
  %INCLUDE SLOLA1;
  % INCLUDE GLATS;
  % INCLUDE UVDZ99;     %INCLUDE PLNDER;
  % INCLUDE YSPLNB ;
  %INCLUDE YSPLNF;
  % INCLUDE YSMINV;
  % INCLUDE YSGRID;
  % INCLUDE QPFINT;
  % INCLUDE GGPOLR;
  % INCLUDE MINMAX;
  % INCLUDE SUBGRD;
  % INCLUDE FFT99GEN;
  % INCLUDE FFT99M;
     %INCLUDE FFS25GEN;      %INCLUDE TRIGRCOS;
/*
//   EXEC  XFORXCL,FXPOPT=3,
//         FXPTERM=TERM,
//         FXPLINE=78,FXPL='XL',PARM.LKED='LET,LIST,MAP'
//FORT.SYSIN DD DSN=SMP1606X,VOL=SER=E18767,LABEL=(8,SL,,IN),
//   UNIT=TAPE9,DCB=(RECFM=FB,LRECL=80,BLKSIZE=6400),DISP=(OLD,PASS)
//LKED.SYSLMOD DD DISP=SHR,SPACE=,DSN=W.NWS.W323.YS.G16K06(SMP1606X)
//*DATASET  DDNAME=SAVE,J=YES
  % INCLUDE SHOWHR; % INCLUDE PRMFLD;
//*ENDDATASET
//
```

```
//WWYSF9    JOB (WD23008AC601000,WWB-D1),ROZWODOSKI,TIME=1,REGION=256K
//*NET   ID=E18767,AB=F,NC=D,HC=1,RELEASE=(WWYSF10)
//*FORMAT   PR,DDNAME=,DEST=WWB29
//   EXEC   NWSDELTM,D='W.NWS.W323.YS.G16K06',V=SDB090,M=FORUNFOR
//COMPR2   EXEC   PGM=IEBCOPY
//SYSPRINT   DD   SYSOUT=A
//DDFILE DD DISP=(OLD,KEEP),DSN=W.NWS.W323.YS.G16K06
//SYSUT3   DD   UNIT=SYSDA,SPACE=(TRK,(3))
//SYSUT4   DD   UNIT=SYSDA,SPACE=(TRK,(3))
//SYSIN   DD   *
COPYOPER COPY OUTDD=DDFILE,INDD=DDFILE
/*
//PLIPRE   EXEC   PGM=IEMAA,
//       PARM='M,NS,NLD,NC,NS2,SM=(2,72,1),LC=78,FE,MACDCK'
//SYSPRINT DD DUMMY
//SYSUT1 DD UNIT=SYSDA,SPACE=(1024,(60,60),,CONTIG)
//SYSUT3 DD DSN=&&PLIOUT,UNIT=SYSDA,
//       SPACE=(80,(12000,500)),DISP=(NEW,PASS)
//SYSPUNCH DD DSN=FORUNFOR,UNIT=TAPE9,VOL=SER=E18767,LABEL=(9,SL,,OUT),
//              DCB=(RECFM=FB,LRECL=80,BLKSIZE=6400),DISP=(NEW,PASS)
//SYSLIN DD DUMMY
//SYSLIB DD DSN=W.NWS.W323.YS.META,DISP=SHR
//       DD DSN=W.NWS.W323.YS.METB,DISP=SHR
//       DD DSN=W.NWS.W323.YS.W3SR,DISP=SHR
//       DD DSN=W.NWS.W323.YS.FORT,DISP=SHR
//SYSIN DD *
  % INCLUDE DCL16K06;
  % INCLUDE FIXUNFOR;
/*
//   EXEC   XFORXCL,FXPOPT=3,
//          FXPTERM=TERM,
//          FXPLINE=78,FXPL='XL',PARM.LKED='LET,LIST,MAP'
//FORT.SYSIN DD DSN=FORUNFOR,VOL=SER=E18767,LABEL=(9,SL,,IN),
//   UNIT=TAPE9,DCB=(RECFM=FB,LRECL=80,BLKSIZE=6400),DISP=(OLD,PASS)
//LKED.SYSLMOD DD DISP=SHR,SPACE=,DSN=W.NWS.W323.YS.G16K06(FORUNFOR)
//
//
```

```
//WWYSF10  JOB (WD24008AC30100X,WWB-01),ROZWODOSKI,TIME=15,REGION=450K
//*NET  ID=E18767,AB=F,NC=D,HC=1,RELFASE=(WWYSEND)
//*MAIN CLASS=NMCPRI
//JOBLIB DD DSN=W.NWS.W323.YS.G16K06,DISP=SHR
//       DD DSN=W.NWS.W323.YS.LOAD0,DISP=SHR
//*MAIN  LINES=20
//*FORMAT  PR,DDNAME=,DEST=WWB29
//HUFCOF   EXEC PGM=SMHUFCF,PARM='10'
//FT06F001 DD SYSOUT=A
//FT04F001 DD DSN=W.NWS.W323.YS.HUANL00,DISP=SHR
//FT10F001 DD DSN=&&SMHUFANL,DISP=(NEW,PASS),UNIT=SYSDA,SPACE=(TRK,76),
//    DCB=(RECFM=VST,LRECL=9604,BLKSIZE=9608)
//YLN      EXEC PGM=SMYLN16
//FT05F001 DD *
141011
/*
//FT06F001 DD SYSOUT=A
//FT10F001 DD DSN=&&SMHUFANL,DISP=(OLD,PASS)
//FT11F001 DD DSN=W.NWS.W323.YS.SMCFYLN,DISP=SHR
//FT14F001 DD DSN=NWS.NMC.TEST.SMFIx30(YSNCUT),LABEL=(,,,IN),DISP=SHR
//* CREATE FORMATTED SPECTRAL FILE
//FOR1 EXEC PGM=FORUNFOR
//FT06F001 DD SYSOUT=A
//FT05F001 DD *
1
/*
//FT01F001 DD DSN=W.NWS.W323.YS.SMCFYLN,DISP=SHR
//FT02F001 DD DSN=YLN,UNIT=TAPE9,VOL=SER=E18767,LABEL=(10,SL,,OUT),
//            DCB=(RECFM=FB,LRECL=80,BLKSIZE=6400),DISP=(NEW,PASS)
//* CREATE UNFORMATTED SPECTRAL FILE
//FOR2 EXEC PGM=FORUNFOR
//FT06F001 DD SYSOUT=A
//FT05F001 DD *
1
/*
//FT01F001 DD DSN=YLN,UNIT=TAPE9,VOL=SER=E18767,LABEL=(10,SL,,IN),
//            DCB=(RECFM=FB,LRECL=80,BLKSIZE=6400),DISP=(OLD,PASS)
//FT02F001 DD DSN=&&SMCFYLN,DISP=(NEW,PASS),UNIT=SYSDA,
//      SPACE=(TRK,(100,5)),
//      DCB=(RECFM=VST,LRECL=1000,BLKSIZE=1004,DSORG=PS)
//*
//* CREATE UNFORMATTED DRAG AND SST FILE
//FOR3 EXEC PGM=FORUNFOR
//FT06F001 DD SYSOUT=A
//FT05F001 DD *
1
/*
//FT01F001 DD DSN=DRAGSST,UNIT=TAPE9,VOL=SER=E18767,LABEL=(03,SL,,IN),
//            DCB=(RECFM=FB,LRECL=80,BLKSIZE=6400),DISP=(OLD,PASS)
//FT02F001 DD DSN=&&DRAGSST,DISP=(NEW,PASS),UNIT=SYSDA,
//      SPACE=(TRK,(100,5)),
//      DCB=(RECFM=VST,LRECL=1000,BLKSIZE=1004,DSORG=PS)
//SMI      EXEC PGM=SMI1606G
//FT05F001 DD *
151118
/*
//FT06F001 DD SYSOUT=A
//FT15F001 DD DSN=ZLN16F2,UNIT=TAPE9,VOL=SER=E18767,LABEL=(02,SL,,IN),
//            DCB=(RECFM=FB,LRECL=80,BLKSIZE=6400),DISP=(OLD,PASS)
//FT11F001 DD DSN=&&SMCFYLN,DISP=(OLD,PASS)
//FT18F001 DD DSN=W.NWS.W323.YS.SMCF00A,DISP=SHR
//GETMOD  EXEC PGM=SMNM1606
//FT05F001 DD *
12
/*
//FT06F001 DD SYSOUT=A
//FT80F001 DD DSN=&&NORMOD,DISP=(NEW,PASS),UNIT=SYSDA,
//      SPACE=(TRK,(200,5)),
//      DCB=(RECFM=VST,LRECL=1000,BLKSIZE=1004,DSORG=PS)
//FCST12   EXEC PGM=SMF1606G
//FT05F001 DD *
818202101012401061501800119001600020 2
/*
//FT06F001 DD SYSOUT=A
//FT18F001 DD DSN=W.NWS.W323.YS.SMCF00A,DISP=SHR
//FT19F001 DD DSN=W.NWS.W323.YS.SMCF00B,DISP=SHR
//FT20F001 DD DSN=W.NWS.W323.YS.SMCF12A,DISP=SHR
//FT21F001 DD DSN=W.NWS.W323.YS.SMCF12B,DISP=SHR
//FT80F001 DD DSN=&&NORMOD,DISP=(OLD,PASS)
//FT16F001 DD DSN=&&DRAGSST,DISP=(OLD,PASS)
//FCST24   EXEC PGM=SMF1606G
//FT05F001 DD *
2021222300012401061500000000016
/*
//FT06F001 DD SYSOUT=A
//FT20F001 DD DSN=W.NWS.W323.YS.SMCF12A,DISP=SHR
//FT21F001 DD DSN=W.NWS.W323.YS.SMCF12B,DISP=SHR
//FT22F001 DD DSN=W.NWS.W323.YS.SMCF24A,DISP=SHR
//FT23F001 DD DSN=W.NWS.W323.YS.SMCF24B,DISP=SHR
//FT16F001 DD DSN=&&DRAGSST,DISP=(OLD,PASS)
//POST24   EXEC PGM=SMP1606X
//FT05F001 DD *
0010161022123646501 01
/*
//FT06F001 DD SYSOUT=A
//FT21F001 DD DSN=W.NWS.W323.YS.SMCF12B,DISP=SHR
//FT23F001 DD DSN=W.NWS.W323.YS.SMCF24B,DISP=SHR
//FT64F001 DD DUMMY
//FT65F001 DD DUMMY
//
//
```