VIII.3.3-PLOT-TS   PLOT TIME SERIES OPERATION

Identifier: PLOT-TS

Operation Number: 18

Parameter Array: The FORTRAN identifier used for the parameter array
for this Operation is PO. The contents of the PO array are:

   Position   Contents

   General information:

        1   Operation version number

       2-6   Run information

        7   Plot option

        8   Number of plots

        9   Total number of time series

       10   Number of plotting periods

       11   Plot time interval

   Plot information for (repeated for each plot):

        1   Plot type ('ARIT' or 'LOG ')

        2   Number of columns

        3   Minimum plot ordinate

        4   Maximum plot ordinate

        5   Number of time series

        6   Standard Metric units

        7   Standard English units

        8   Multiplication factor

        9   Addition constant

   Time series information (repeated for each time series):

       1-2   Internal time series identification

        3   Time series data type

Position	Contents
4	Time series data time interval
5-7	Time series title
8	Plot symbol
9-10	Value name for multi-valued time series
11	Number of values per time interval
12	Value number

Information if plot option is 1:

1	First available record on the water year scratch file

Information if plot option is 2:

1	Starting Julian day for the period
2	Ending Julian day for the period

Information if plot option is 4:

1	Time series sequence number
2	Minimum plotting criteria

The size of the PO array is:

```
11+9*(NPL)+12*(NTS)
  +1        if plot option is 1
  +2*(NPD)  if plot option is 2
  +3        if plot option is 4
```

```
where NPL  is the number of plots
      NTS  is the number of time series
      NPD  is the number of periods
```


<u>Subroutines Names and Functions</u>: The subroutines associated with this Operation are:

Subroutine	Function
PIN18	Input cards and store values in PO array
PRP18	Print information in PO array
PUC18	Punch information in the PO array
EX18	Execute the Operation

HEAD18   Write the header information at the beginning

        AXIS18   Draw the plot axis

        PLOT18   Make the plot

Subroutines PIN18, PRP18 and PUC18 have the standard lists for these
subroutines as given in Section VIII.4.3.

```
SUBROUTINE EX18 (PO,D,ILOCD,LZERO,LTENS,ORD,LOCPT,TORD,IPLOT,NLOCD)
```

Function: This is the execution routine for Operation PLOT-TS.

Argument List:

Variable	Input/ Output	Type	Dimension	Description
PO	Input	R*4	Variable	Carameters and other information
D	Input	R*4	Variable	Time series data
ILOCD	Input	I*4	Variable 1/	First location in the D array for each time series
LZERO	-	I*4	Variable 2/	Plot position of the X axis for each plot
LTENS	-	I*4	12	Plot positions to mark the Y axis
ORD	-	R*4	121	Plot array
LOCPT	-	I*4	Variable 1/	Plot positions that are changed in the ORD array
TORD	-	R*4	Variable 1/	Plot characters that are changed in the ORD array
IPLOT	-	I*4	Variable 2/	Plot numbers
NLOCD	-	I*4	Variable 1/	Next location in the D array for each time series

Notes:

1/ Length equal to the total number of time series.

2/ Length equal to the number of plots.

SUBROUTINE TAB18 (TO,LEFT,IUSET,NXT,LPO,PO,TS,MTS,NWORK,LWORK,IDT)

Function: This is the Operations Table entry routine for Operation
PLOT-TS.

Argument List: The arguments for this subroutine are similar to the
arguments for the Operations Table entry subroutines for other
Operations. A description of the arguments is contained in Section
VIII.4.2-TAB.

Operation Table Array: The contents of the TO array are:

   Position   Contents

      1   Operation number

      2   The location in the T array of the next Operation to
                 be executed

      3   The location of the parameter array for the Operation
                 in the P array

      4   Location of work space in the D array

    5 to   Location of each time series to be plotted in the D
    NTS+4   array (NTS is the number of time series to be
                 plotted)