

G.K.L-60  
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# TAPE MANUAL FOR VOYAGER EDITING DATA ON JUPITER

This series of tapes for Voyager editing data are named by the abbreviations of "JUPITER INFORMATION TAPE VOYAGER 1 (or 2) AT LOW (or HIGH) BAND"—i.e, the standard labels given in these tapes are JPT1, JPT1H, JPT2 and JPT2H separately. The data during one day are written onto one file.

- On tape JPT1, there are 198 files from Voyager 1 data at low band;
- On tape JPT1H, there are 102 files from Voyager 1 data at high band;
- On tape JPT2, there are 242 files from Voyager 2 data at low band;
- On tape JPT2H, there are 78 files from Voyager 2 data at high band.

Low band includes A and B bands. A band runs from about 1 KHZ to 3 MHZ. B band is the antenna resonance band which runs from 9 MHZ to 12 MHZ.

High band includes C,D,E and F bands. C band runs from 3 MHZ to 9 MHZ; D band, from 12 MHZ to 18 MHZ; E band, from 18 MHZ to 30 MHZ and F band, from 30 MHZ to about 40 MHZ.

## INTRODUCTION:

On these magnetic tapes the data are recorded onto 9 tracks at a density of 6250 bpi. One file is composed of many records (blocks): one record contains 2048 words with the final record containing fewer words, if necessary. An end of file (EOF) follows the final record.

4096/2 byte words =

## FILES:

Each file contains a header and a number of pages of data. The contents of the header and pages are as follows. (Note! Each file begins with 10 blank 4-byte words. These spaces contained an ASCII File name before the files were in chronological order. Since our data are now in chronological order we have deleted the file names). The header begins with word 11.

## HEADER

| <u>Quantity</u> | <u>Type</u> | <u>Description</u>   |
|-----------------|-------------|--|
| ID of SC        | 1           | Either 1 or 2 to indicate Voyager 1 or 2.  |
| IS LOWER        | 1           | Either 1024 or 0 to indicate upper or lower frequency of channel. In our case we use 1024 (the upper frequency). |

|            |    |   |
|------------|----|---|
| INANALYSIS | 1  | State of analysis: 0 if background values exist; 1 if some background values exist.   |
| NCH        | 1  | The number of background values computed.   |
| NMOST      | 1  | The maximum number of background values allowed =90.  |
| IFREQ      | 1A | 90 potential values of channel number for which backgrounds are determined. The NCH step numbers are in the lowest NCH words. |
| MBBACK     | MA | 90 potential background values (left followed by right). NCH pairs corresponding to the step numbers.                         |

EACH PAGE

| <u>Quantity</u> | <u>Type</u> | <u>Description</u>  |
|-----------------|-------------|---|
| IYR             | 1           | Year of observation start.  |
| IHR             | 1           | Hour of year of observation start (divided by 24 to get day number).  |
| ISEC            | 1           | Second of hour of observation start.  |
| TIMESC          | R           | A value of 4.0 yields 96 sec/scan.  |
| NFREQ           | 1           | The number of frequencies plotted on this page.   |
| IFREQ           | 1A          | NFREQ values of the step numbers.   |
| NSEC            | 1           | Time indicator. The time of this line is computed by adding NSEC*TIMESC to the time at the start of the page. NSEC is positive. |
| MBVAL           | MA          | NFREQ pairs (left followed by right) of data values.  |

Further groups of (1+2\*NFREQ) quantities (NSEC followed by MBVAL) define each of the other lines on the page. After the final line a group with NSEC=-1 indicates the end of the page (the following MBVAL values are dummy quantities).

The number of pages in a file is variable, as is the number of lines to any page.

The data types are as indicated below:

- 1 Integer, 16 bit 2's complement.
- R Real, 32 bit; sign, 7 bit power of 16 exponent with 128 offset and 24 bit fraction with binary point on left.
- 1A Integer array, the number of elements is as described.
- MA Integer array containing millibill quantities. Missing data is filled with -2000.

Appendix A shows a typical header and outline of data in a file. This information can be printed from tape using the program included in appendix A.

Appendix B shows a list of frequency versus channel number.

For further information call or write:  
T. D. Carr, G. R. Lebo or W. X. Wang at:  
Department of Astronomy  
University of Florida  
Gainesville, Florida 32611  
(904) 392-2052

(904) 392 - 5450

1121 - 370



135  
WORDS IN PAGE: 7 = 16716  
FILE NO. = 1

|                      |                 |     |                 |        |     |     |     |     |
|----------------------|-----------------|-----|-----------------|--------|-----|-----|-----|-----|
| 134                  | 133             | 132 | 131             | 130    | 129 | 128 | 127 | 126 |
| RECORDS IN FILE = 59 | PAGES IN FILE = | 7   | WORDS IN FILE = | 117409 |     |     |     |     |