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FINAL REPORT OF BASIC CONTRACT

GENERAL PURPOSE SIMULATION SYSTEM OF THE DATA MANAGEMENT SYSTEM FOR SPACE SHUTTLE MISSION 18

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FOREWORD

This document presents results of work performed by D P Associates, Inc., Huntsville, Alabama, under Contract NAS8-31458 (SB420-8(a)-75-C-122) for the George C. Marshall Space Flight Center, Data Systems Laboratory. Technical coordination was through Mr. Frank Crumbley, Mr. Douglas Thomas and Mr. James Mabry.

ABSTRACT

This report presents the simulation program of the science and engineering data management system for Space Shuttle. The programming language used was General Purpose Simulation System V (OS). The data flow was modeled from its origin at the experiments or subsystems to transmission from Space Shuttle. Mission 18 was the particular flight chosen for simulation. First, the general structure of the program is presented and the trade studies which were performed are identified. Inputs required to make runs are discussed followed by identification of the output statistics. Some areas for model modifications are pointed out. The appendices contain a detailed model configuration, program listing and results.

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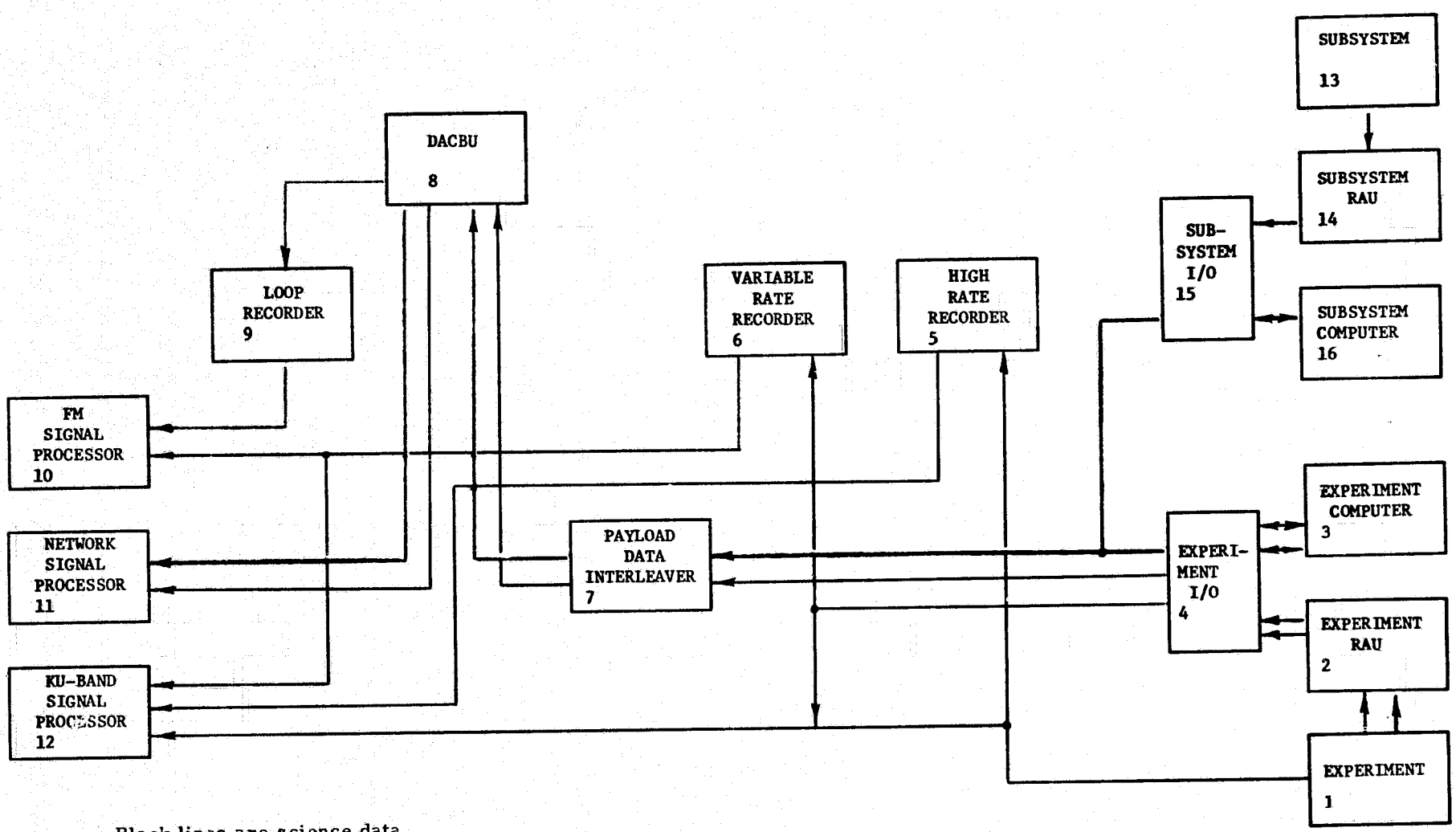
SPACE SHUTTLE DATA MANAGEMENT SYSTEM SIMULATION

Introduction

The data management system for Space Shuttle is a complicated arrangement of interconnected devices which carry several types of data simultaneously. Understanding the interrelationships of data flowing through this system and how actions of one set or burst of data effect the progress of other data by analytical study is a prohibitively complicated task. When it is realized that over four hundred Space Shuttle flights are planned, each with a similarly complicated data management system, the need for simulation becomes apparent.

The objective of this task was to write a simulation of the data management system using GPSS (General Purpose Simulation System) in such a way as to determine possible bottlenecks, loses of information, and other changing effects on data under alternative conditions. As a basis from which future expansion can be made the program developed handles science and engineering data from its' origin at the mission experiments and subsystems to transmission from one of three signal processors onboard shuttle. Mission 18 was chosen as a representation case for simulation. The data generated by detached payloads and the GPC (General Purpose Computer) were not considered.

GPSS is a discrete event simulation language which allows the programmer to set up a model of a system with the relationships between the parts or blocks of the model defined. Units, called transactions, are then generated and sent through the program. They proceed in a way defined by the model.



Data Flow Model
Fig. 1

Research Methodology

Assumption

All data which flows through the simulation is in bits. One unit of simulation clock time is .01 hours or 36 seconds. This unit was chosen to achieve simulation of the entire seven day (16800 time units) mission with reasonable computer run times and still allow sufficient resolution in the generation of data. Thus, if an experiment has an output rate of 30 thousand bits per second there would be 30 x 36 or 1080 thousand bits generated in one time unit. In each time unit that data is generated a transaction is created and the data flow associated with that time unit is assigned to the transaction as a parameter. The transaction then enters the model. Each block in the model (shown in figure 1) has a transfer rate associated with it which represents the handling capacity of the block in bits. This is the amount of data the block can handle in one time unit and is defined as a storage capacity in the program. Appendix A gives a more detailed description of the model configuration. (The module numbers in Appendix A correspond to the numbers in the blocks of Figures 1, 3, 4 and 5).

Experiment Schedules

A schedule of experiments from Mission 18 was used to create a tape for input to the GPSS model. A data flow rate is associated with each experiment so that each time unit an experiment is scheduled to be running that experiments' flow rate is put on a transaction. This data represents scientific information. Engineering data from the experiments is generated at a constant rate. This constant rate simulates monitoring and control of experiments. All data from subsystems are classified as engineering data. These bit rates are the sum of a

constant rate and a rate keyed to, and calculated as, a percent of the experiment data flow rate.

Downlink Schedule

The schedule for sending signals from the shuttle is part of the simulation program rather than on a separate device which has to be read in, as is the experiment schedule. This inclusion is possible because the downlink availability is considered to be cyclic on a per day basis. Therefore, only one day's schedule need be initialized and the following days are programmed to be derived from the first day.

Data Flow Modules

The simulation was modularized for ease in programming and documentation. These modules are outlined in Figure 2. The first module is the creation of the input tape and is separate from the main program. Modules 2, 3 and 4 run consecutively on the program listing with the exception that Part 3 of modules 3 and 4 are combined. The graphical output section is considered part of the downlink schedule, module 5.

Figures 3-5 illustrate the parts of the model used in each module.

Trade Studies

Four modifications to the basic system configuration were run to obtain insight into the behavior of the model. These modifications are listed in Figure 6. The results are shown in Appendix C.

User Notes

Input Requirements

The simulation program was written for the IBM 360 at MSFC. The job cards necessary to access this machine and to make the experiment tape available are shown below.

```
JOB CARD
// EXEC GPSSV,PARM=B
//GPSS.DJBTAP1 DD UNIT=TAPE9,VOLUME=SER=A0614,LABEL=(,BLP),
// DISP=(OLD,KEEP)
//GPSS,DINPUT1 DD *
```

The experiment tape contains a fullword matrix shown in Appendix D. Each column represents the start of an experiment. The rows are the start times (in hundredths of hours), the experiment numbers (107 is XCN-007, 44 is XEQ-044, the rest are XOP experiments) and the duration of the experiment respectively. A FORTRAN program was also written to convert the experiment schedule cards given to cards suitable for input to the tape program.

If changes in block capacities are required they can be implemented by changing the storage definitions. Changes in the percent of data allocated to branches in the data flow are made in the variable definition statements. In order to investigate the effects of changes in data rates associated with each experiment the function definitions would be altered. The first number of each pair of numbers in the function represents the experiment and the second number is the corresponding data flow rate in K bits per time period.

Output Characteristics

The most informative parts of output are the storage statistics. This section lists each block that was used. The outputs are shown in Appendix B.

For the experiment and subsystem computers the average contents, entities and average time/unit are contained in the section titled "User Chains." User Chain 4 is the experiment computers and User Chain 16 is the subsystem computer. In both sections "Entities" is in thousands of bits. Under the "Facilities" section facility 50 represents the downlink availability "Average Utilization During Total Time" is the percent of time the downlink is available during the missions.

The amount of data lost is given under "Fullword Savevalves." Numbers 2 thru 16 correspond to the block numbers shown in Figure 1. If a block number is not present no data was lost at that point. The contents are in thousands of bits.

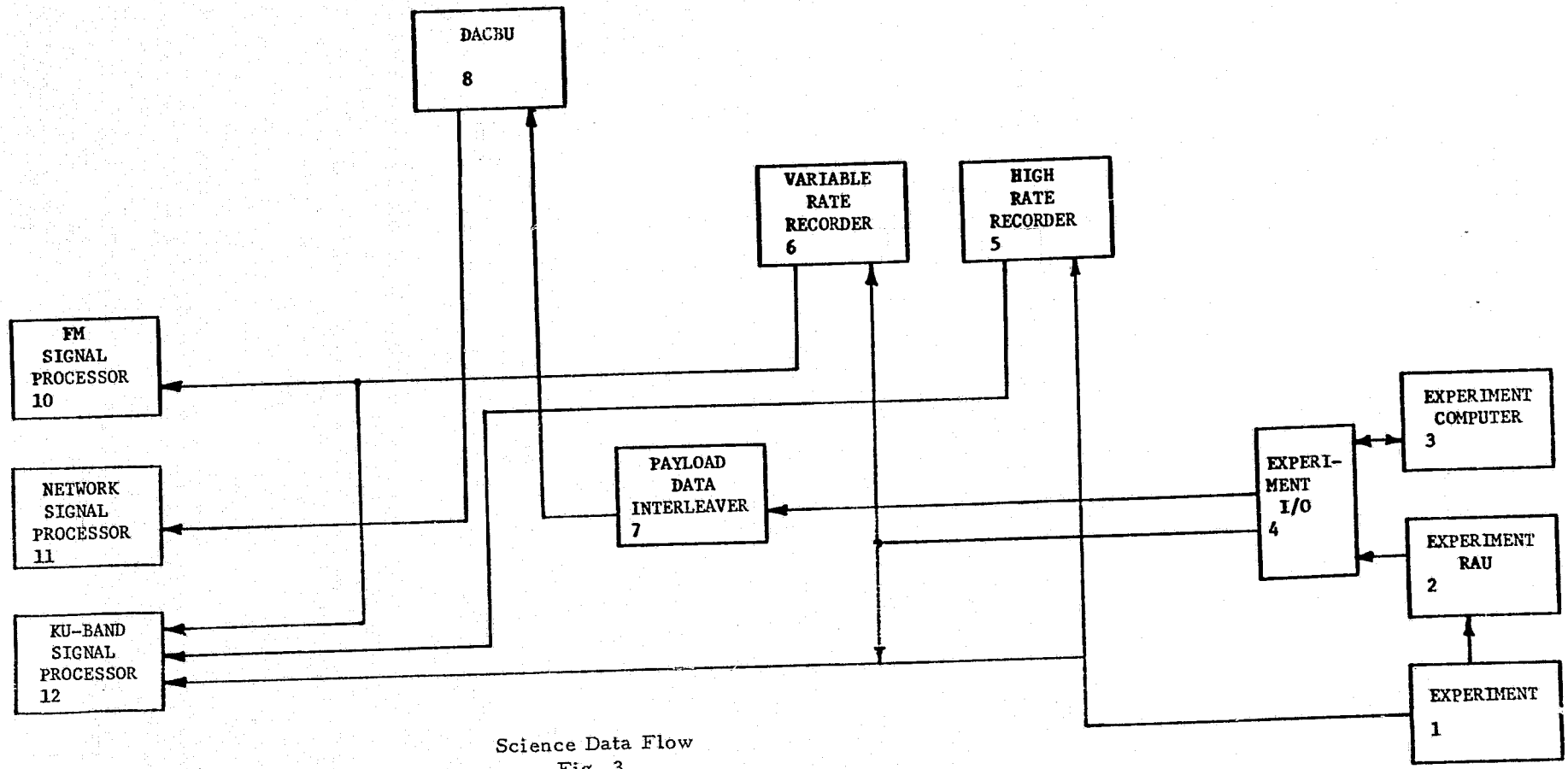
The block counts at the beginning of the output section are keyed to the program listing and give the number of transactions which have entered a program block (a line of code in GPSS is called a block, these blocks are not the same as blocks in the model).

The graphical output gives a representation of the status of various model blocks at 6 hour intervals. The graphs for experiment and subsystem RAU and I/O blocks as well as the KU Band signal processor block represent maximum contents. The other graphs represent current contents. These current contents blocks will not show any data unless it is being delayed at the block no matter how much data has gone through. This is because any data that goes into a block and is not delayed will immediately leave that block and since the graphs are made at the end of the time unit, nothing will appear as current contents (See Figures 7 thru 15).

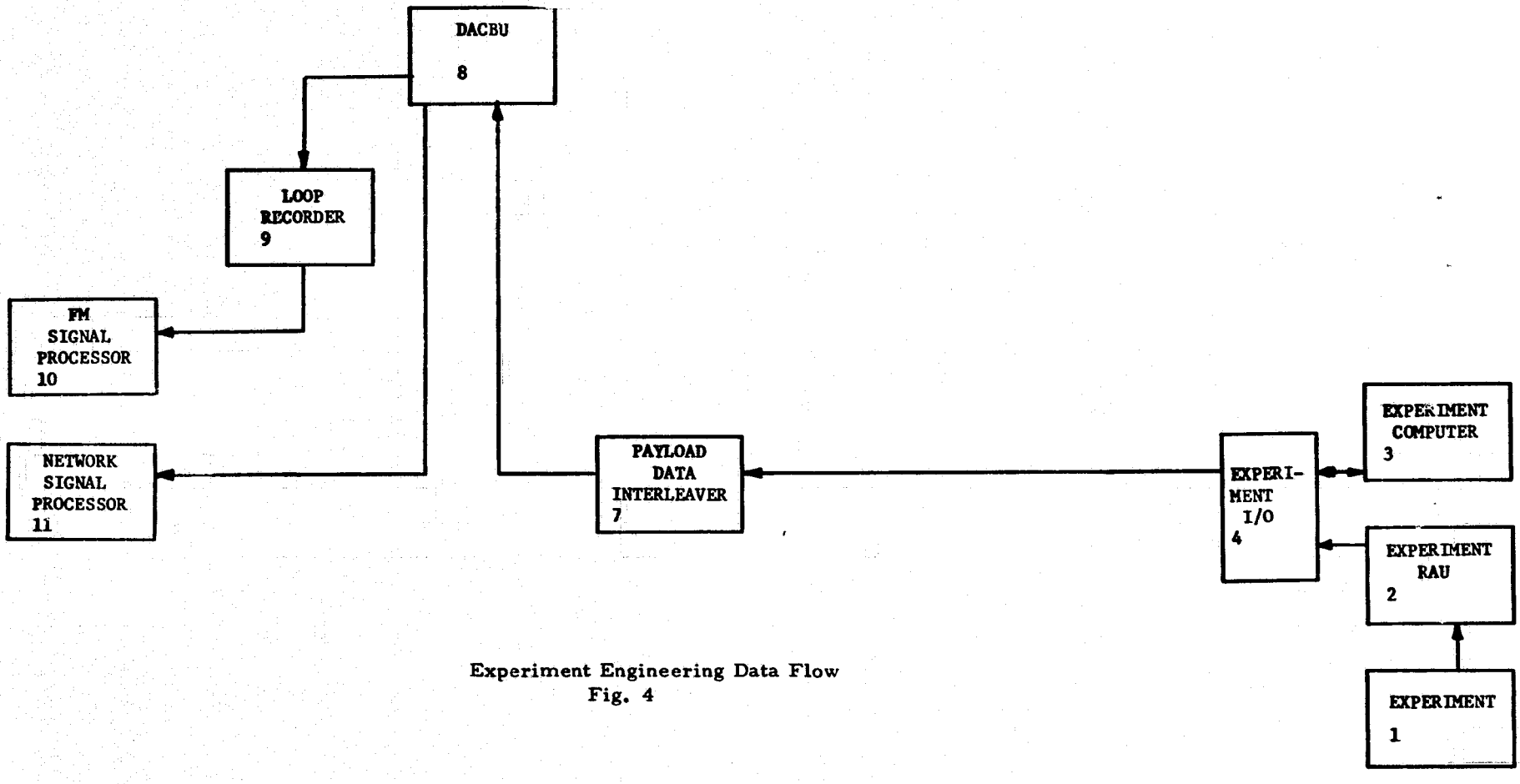
SPACE SHUTTLE DATA SYSTEM SIMULATION
PROGRAM MODULES

Module	Description
1	Experiment Data Input (Experiment Science Data and Subsystem Engineering Data).
2	Experiment Science Data Part 1. Experiment to I/O Part 2. I/O to Computer. Computer to I/O to Payload Data Interleaver to transmit. Part 3. I/O to KU-Band or V. R. Rec. Part 4. Experiment to KU-Band or H. R. Rec.
3	Experiment Engineering Data Part 1. Experiment to I/O Part 2. I/O to Computer. Computer to I/O to Payload Data Interleaver. Part 3. Payload Data Interleaver to transmit.
4	Subsystem Engineering Data Part 1. Subsystem to I/O Part 2. I/O to Computer. Computer to I/O to Payload Data Interleaver. Part 3. Payload Data Interleaver to transmit.
5	Downlink Schedule

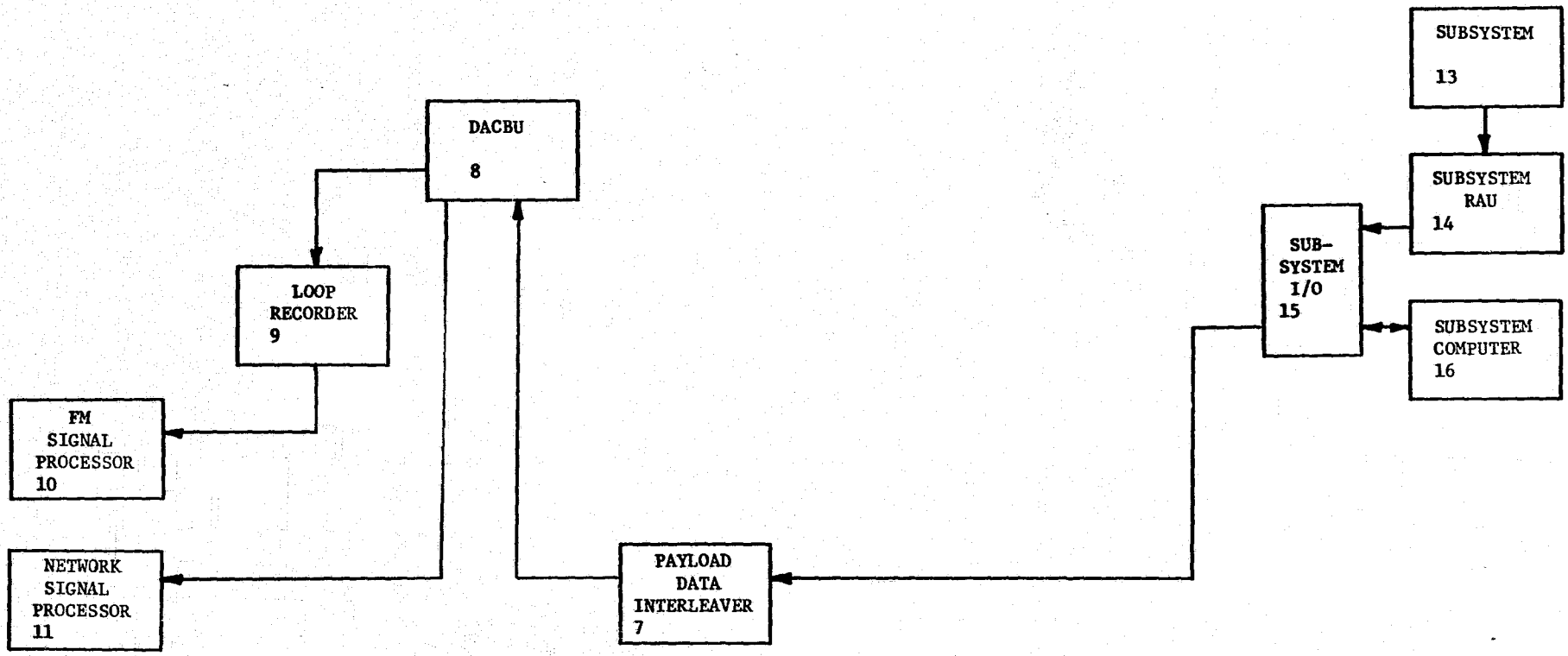
Figure 2



Science Data Flow
Fig. 3



Experiment Engineering Data Flow
Fig. 4



Subsystem Engineering Data Flow
Fig 5

MODIFICATIONS TO BASIC DATA SYSTEM CONFIGURATION

Modification 1: Capacity of high rate recorder increased by 25%.

Modification 2: Capacities of experiment and subsystem computers increased by 50%.

Modification 3: KU-Band Signal Processer failure 50 hours into mission.

Modification 4: Competing requirement for Downlink resulting in 10% decrease in Downlink availability.

Figure 6

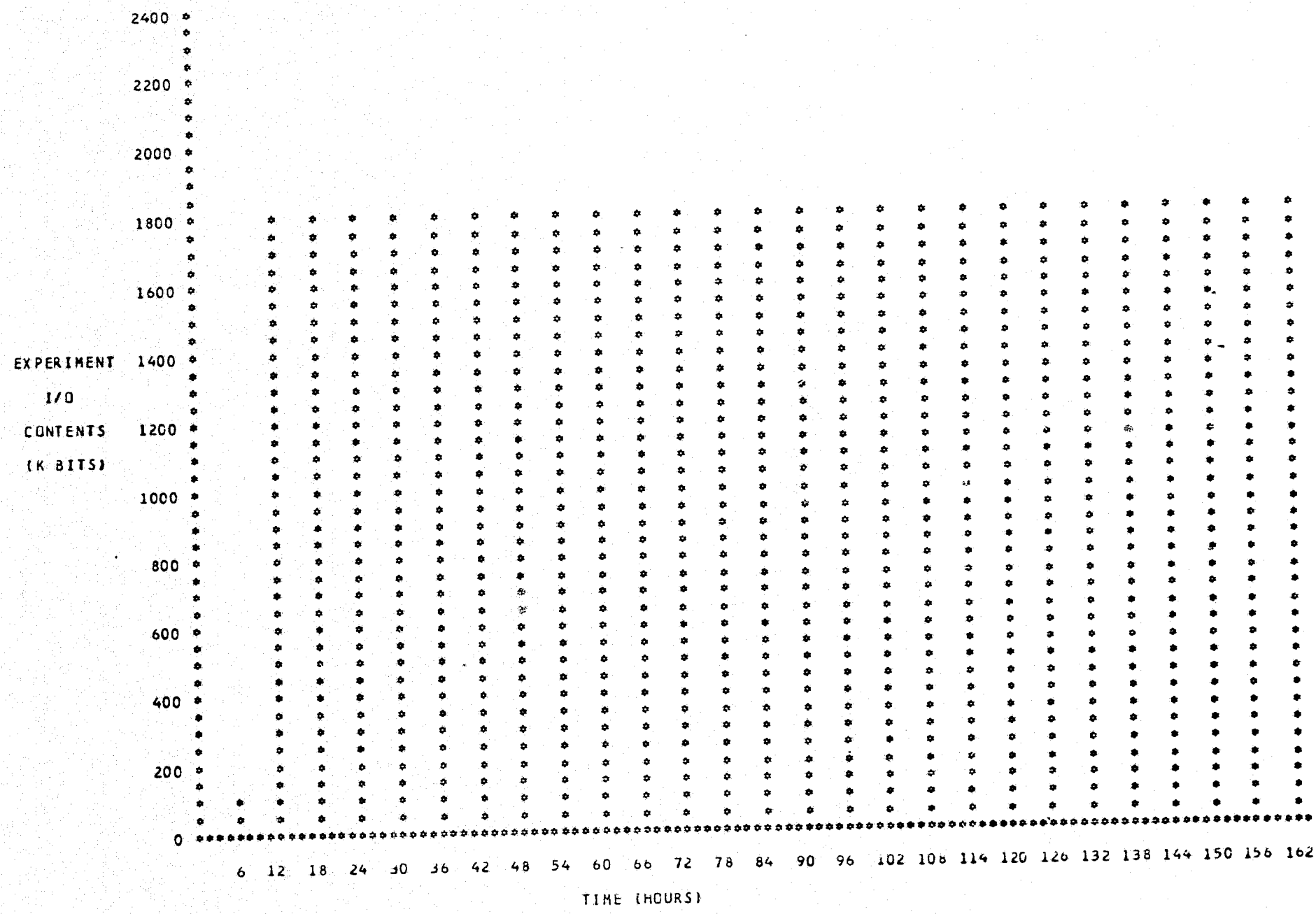


FIGURE 8: CONTENTS OF EXPERIMENT I/O AS A FUNCTION OF TIME.

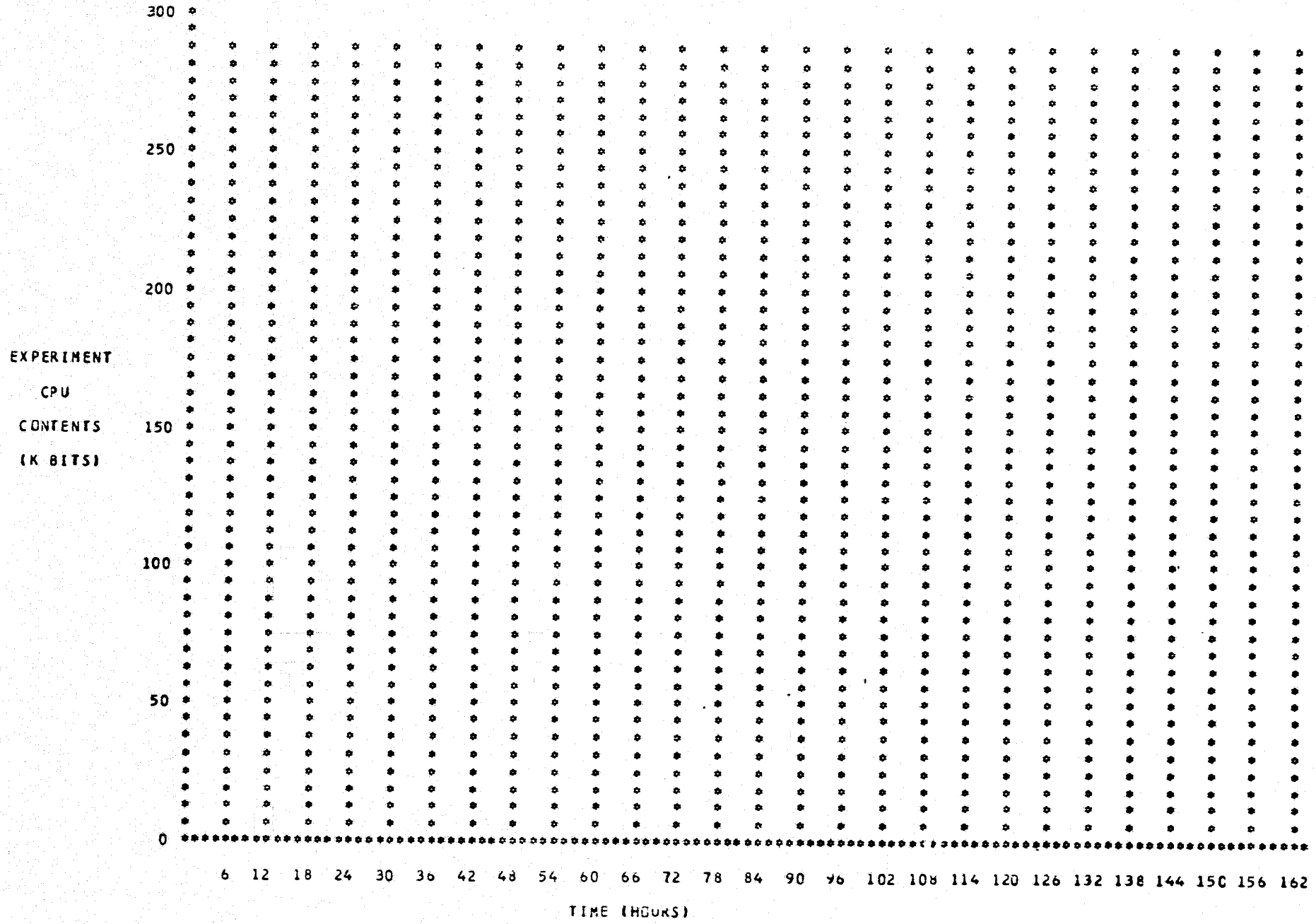


FIGURE 9: CONTENTS OF EXPERIMENT CPU AS A FUNCTION OF TIME.

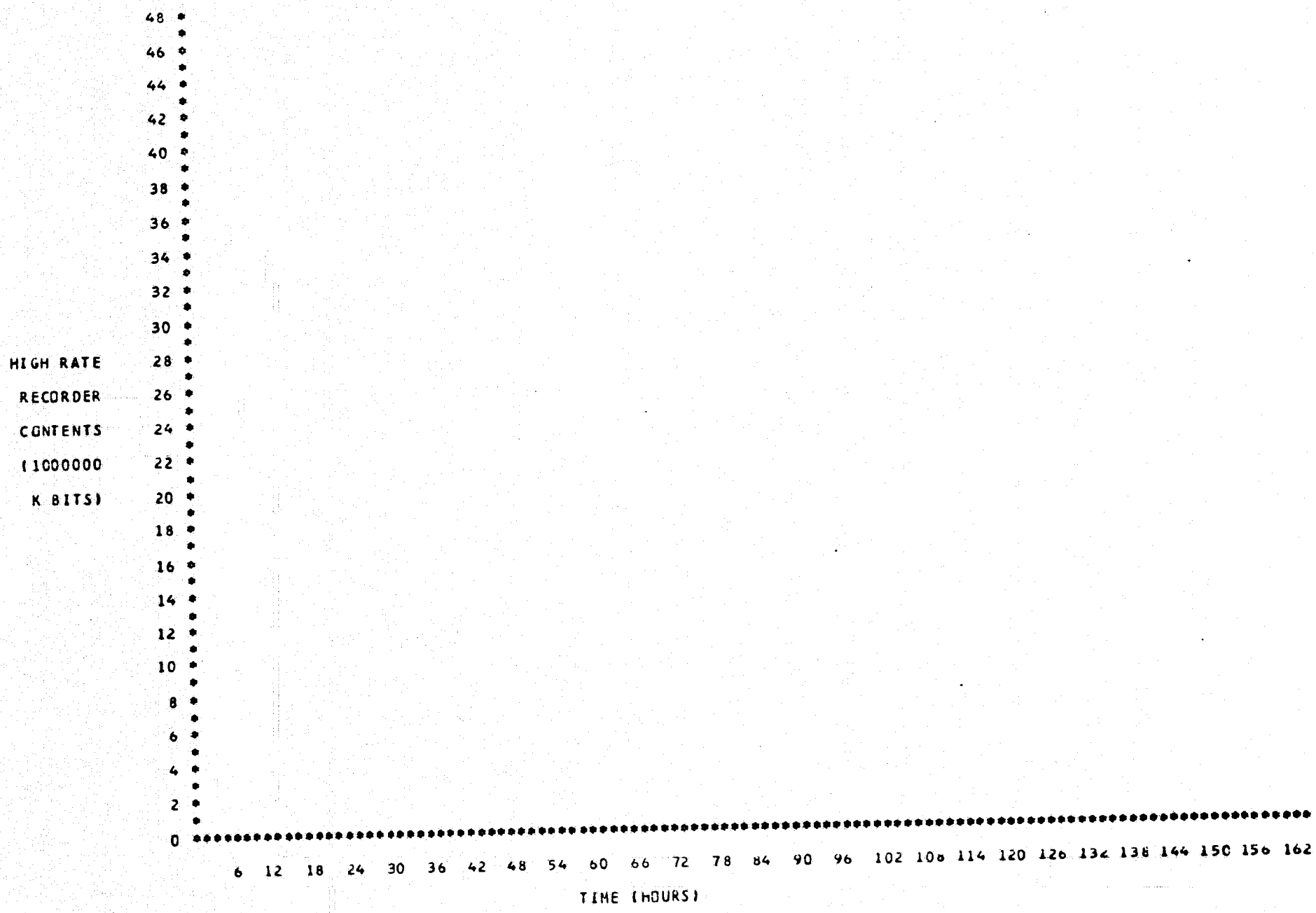


FIGURE 10: CONTENTS OF HIGH RATE RECORDER AS A FUNCTION OF TIME.

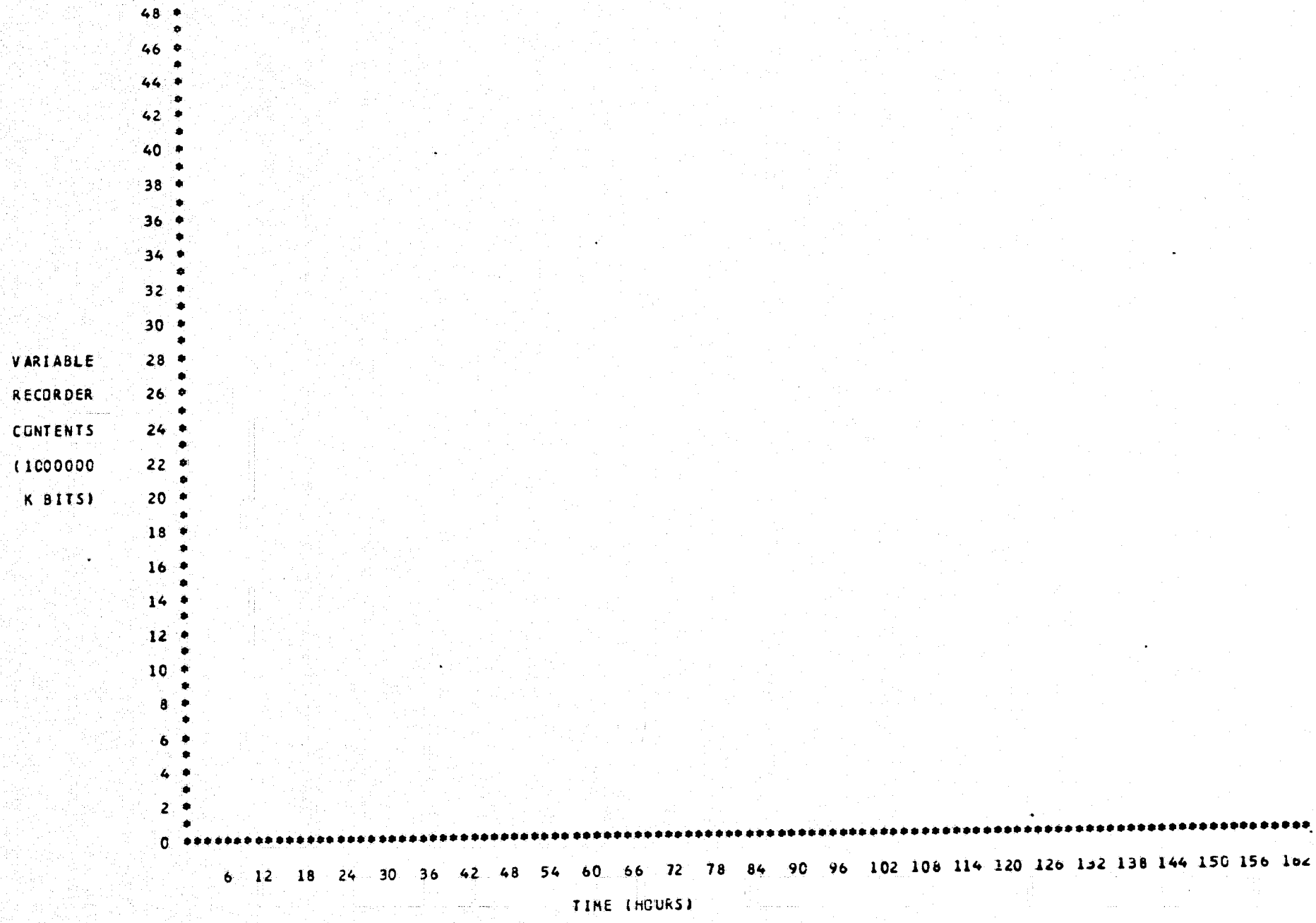


FIGURE 11: CONTENTS OF VARIABLE RATE RECORDER AS A FUNCTION OF TIME.

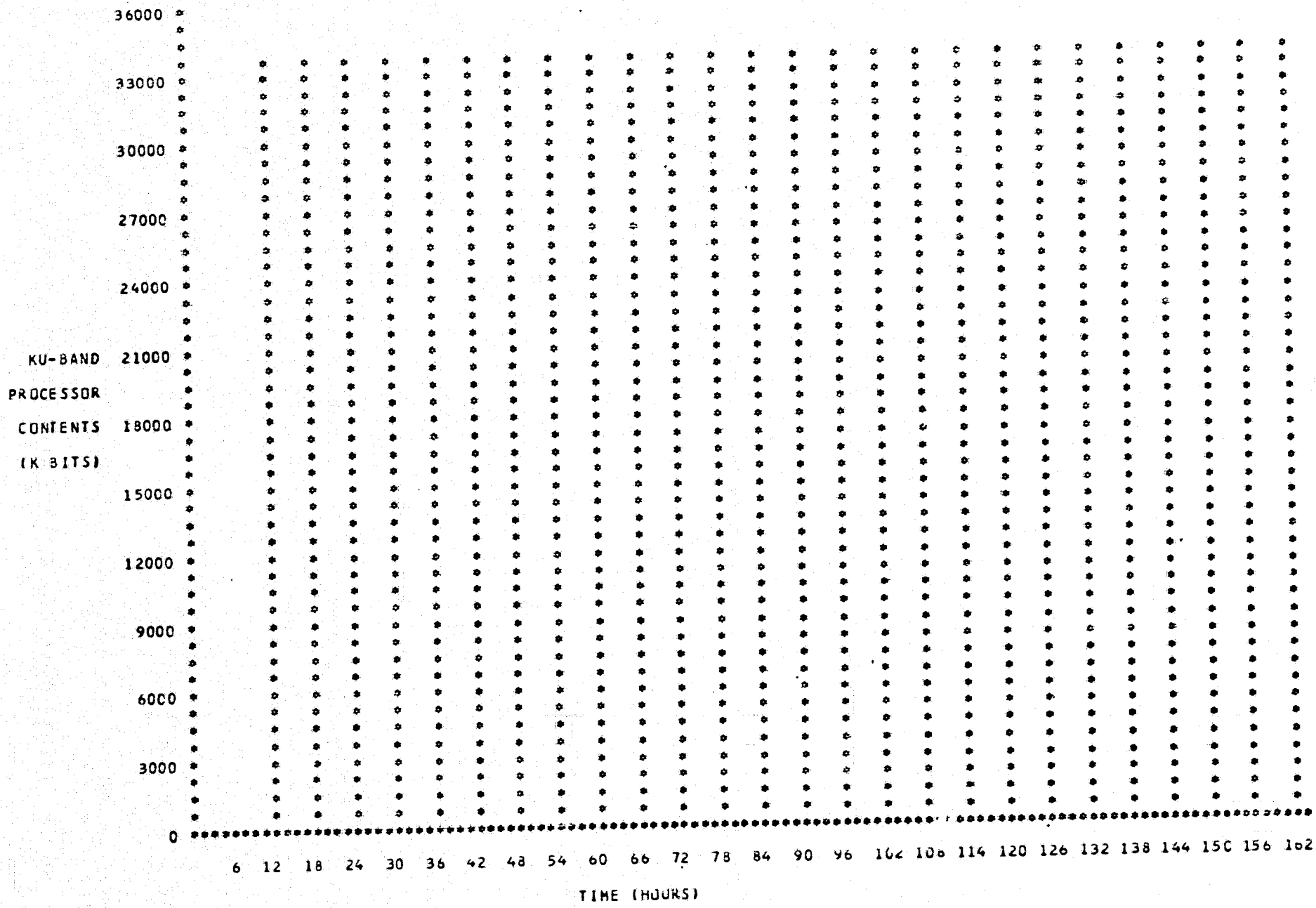


FIGURE 12: CONTENTS OF KU-BAND PROCESSOR AS A FUNCTION OF TIME.

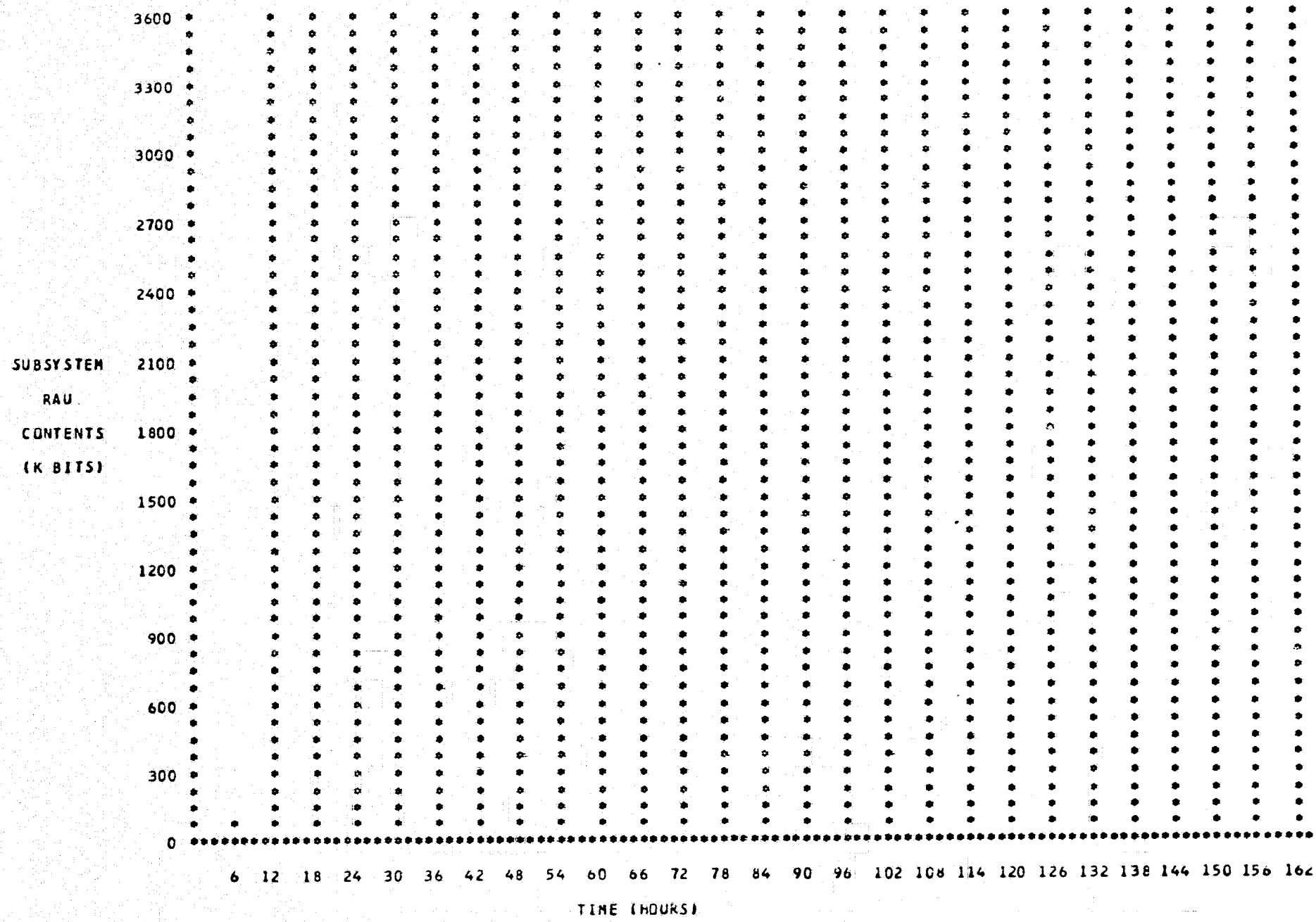


FIGURE 13:CONTENTS OF SUBSYSTEM RAU AS A FUNCTION OF TIME.

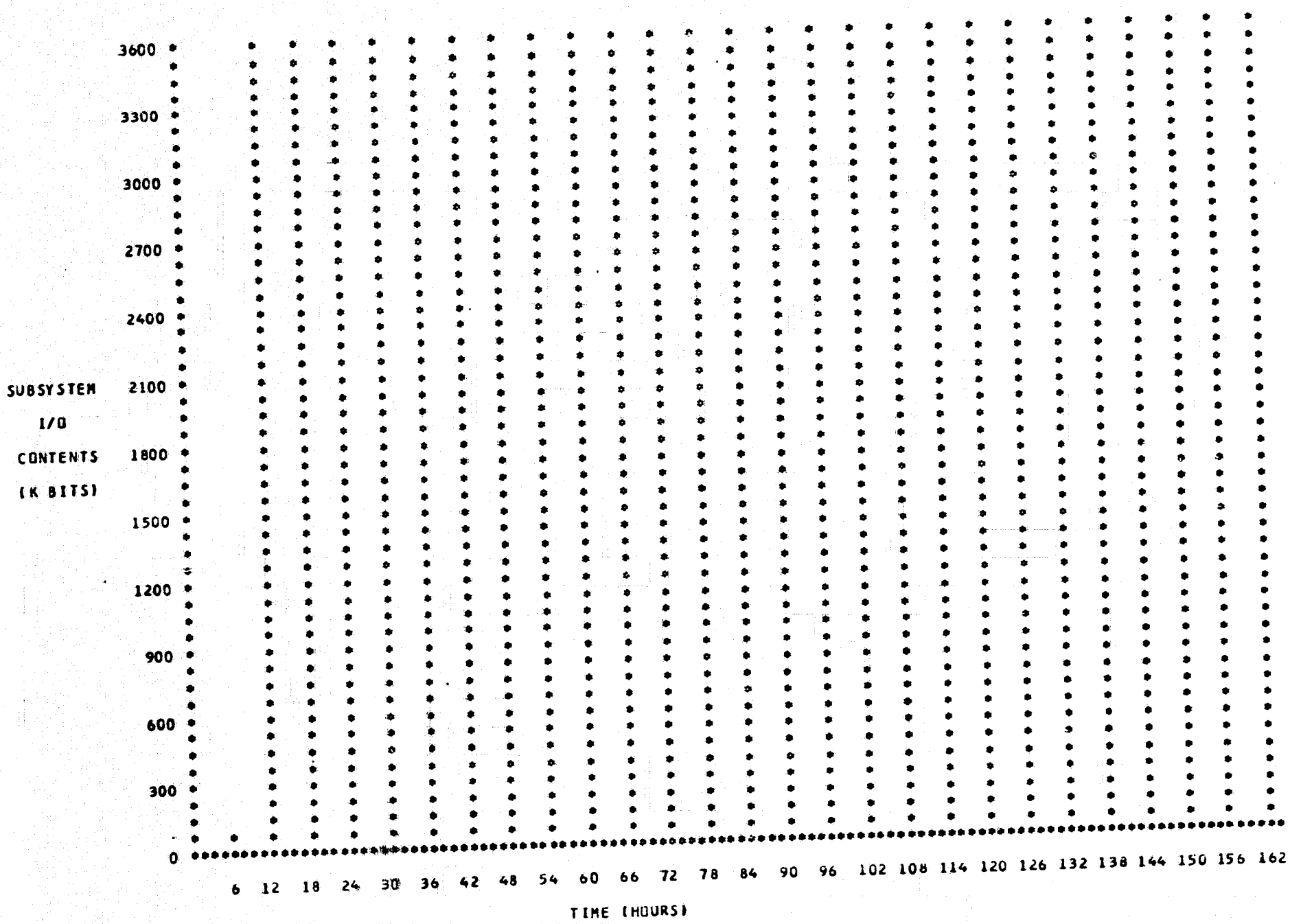


FIGURE 14:CONTENTS OF SUBSYSTEM I/O AS A FUNCTION OF TIME.

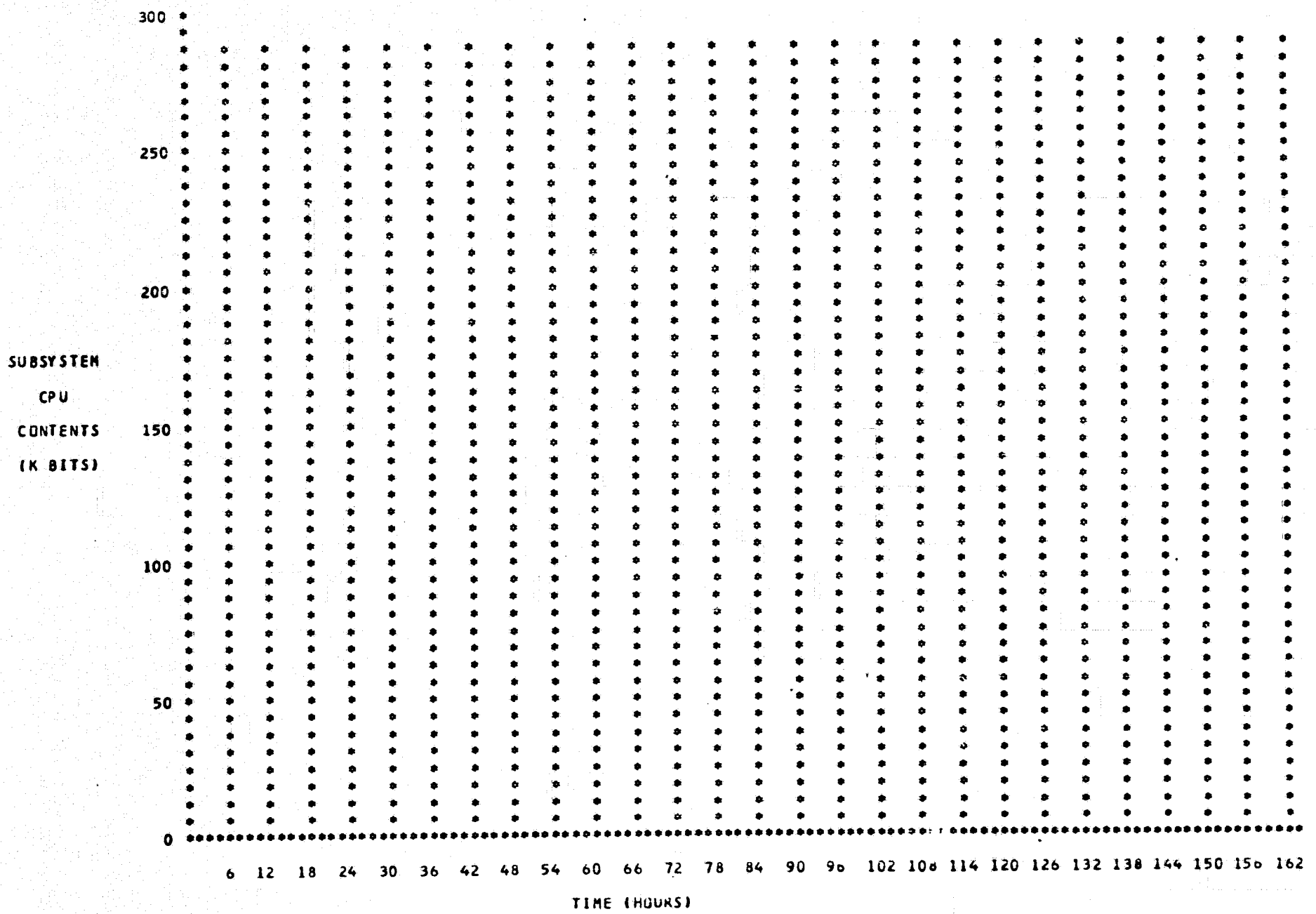


FIGURE 15:CONTENTS OF SUBSYSTEM CPU AS A FUNCTION OF TIME.

Model Modification

In order to make sensitivity runs it is necessary to change certain program statements. This can be done in many cases in the same compilation since GPSS allows certain changes to be made and the program to be then run again.

For modification one (Figure 2) the storage capacity of the high rate recorder was changed in the storage definition card, statement 229. For modification two, storage definitions for 4 and 16 were increased 50% to represent a corresponding increase in computer capacity. In order to fail the KU Band signal processor in modification three, it was necessary to add a section that would generate a transaction when failure occured and fill the KU Band thus preventing any actual data from entering. Modification four required changing the initial cards in module 5. The time span for each acquisition was reduced 10%.

APPENDICES

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Appendix A

SYSTEM MODULE I/O CONFIGURATION

Module	Configuration

1	Experiment
	• Science Data
	  • Inputs: None
	  • Outputs: Compiled from mission schedule.
	  • 95 percent direct transmission.
	  • 5 percent transmitted to RAU.
	• Engineering Data
	  • Inputs: None
	  • Outputs: Transmitted to RAU. Rate 3KBPS.

2	Experiment RAU
	• Science Data
	  • Inputs: From Experiment at rate compiled from mission schedule.
	  • Outputs: Transmitted to Experiment I/O at 1MBPS.
	• Engineering Data
	  • Inputs: From Experiment at 3KBPS.
	  • Outputs: Transmitted to Experiment I/O at 1MBPS.

3	Experiment I/O
	• Science Data
	  • Inputs:
	  • Experiment RAU at 1MBPS.
	  • Experiment Computer at 8KBPS.
	  • Outputs:
	  • Experiment Computer at 8KBPS; thru Experiment I/O to Payload Data Interleaver at 8KBPS.
	  • To Variable Rate Recorders (Downlink not available) or to FM Signal Processor (Downlink available, KU BAND Signal Processor not available) or KU BAND Signal Processor (Downlink available) at 1MBPS.

Module	Configuration

	• Engineering Data
	  • Inputs:
	  • Experiment RAU at 1MBPS.
	  • Experiment Computer at 1MBPS.
	  • Outputs: Payload Data Interleaver at 1MBPS.

4	Experiment Computer
	• Science Data
	  • Inputs: Experiment I/O at 8KBPS.
	  • Outputs: Experiment I/O at 8KBPS.

	• Engineering Data
	  • Inputs: Experiment I/O at 8KBPS.
	  • Outputs: Experiment I/O at 8KBPS.

5	High Rate Recorders
	• Science Data
	  • Inputs: Experiment at rate compiled from mission schedule.
	  • Capacity: 30MBPS input; 36,000 M bits total.
	  • Outputs: KU BAND Signal Processor at 30MBPS.

	• Engineering Data N/A

6	Variable Rate Recorders
	• Science Data
	  • Inputs: Experiment I/O.
	  • Capacity: 30MBPS input; 36,000 M bits total.
	  • Outputs: KU BAND Signal Processor at 30MBPS or FM Signal Processor at 5MBPS.

	• Engineering Data N/A

Module	Configuration

7	Payload Data Interleaver
	• Science Data
	  • Inputs:
	  • Experiment I/O at 8KBPS.
	  • Payload Signal Processor (omit).
	  • Outputs: DACBU at 16KBPS.
	
	• Engineering Data
	  • Inputs:
	  • Experiment I/O, Subsystem I/O at 64KBPS.
	  • Payload Signal Processor (omit).
	  • Outputs: DACBU at 64KBPS.

8	DACBU
	• Science Data
	  • Inputs: Payload Data Interleaver at 64KBPS.
	  • Outputs: Network Signal Processor at 64KBPS.
	
	• Engineering Data
	  • Inputs:
	  • Payload Data Interleaver at 64KBPS.
	  • GPC IOB (omit).
	  • Outputs:
	  • Loop Recorder at 128KBPS.
	  • Network Signal Processor at 128KBPS.

9	Loop Recorder
	• Science Data
	N/A
	
	• Engineering Data
	  • Inputs: DACB at 128KBPS.
	  • Outputs: FM Signal Processor at 128KBPS.

10	FM Signal Processor
	• Science Data
	  • Inputs: Variable Rate Recorder at 5MBPS.
	  • Outputs: Ground at 1MBPS.
	
	• Engineering
	  • Inputs: Loop Recorder at 128KBPS.
	  • Outputs: Ground at 1MBPS.

Module	Configuration

11	Network Signal Processor
	• Science
	  • Inputs: DACBU at 64KBPS.
	  • Outputs: Ground at 96 or 192 KBPS or KU-BAND Signal Processor at 192KBPS.
	• Engineering
	  • Inputs: DACBU at 192KBPS.
	  • Outputs: Ground at 96 or 192 KBPS or KU-BAND Signal Processor at 192KBPS.

12	KU-BAND Signal Processor
	• Science Data
	  • Inputs:
	  • Experiment at rate determined by mission schedule.
	  • High Rate Recorders at 30MBPS.
	  • Variable Rate Recorders at 30MBPS.
	  • Network Signal Processor at 192KBPS.
	  • Outputs: Ground at 30MBPS.
	• Engineering Data
	  • Inputs: Network Signal Processor at 192KBPS.
	  • Outputs: Ground at 30MBPS.

13	Subsystem
	• Science Data
	N/A
	• Engineering Data
	  • Inputs: None
	  • Outputs: RAU at 3KBPS plus 10 percent of experiment data rate compiled from mission schedule.

14	Subsystem RAU
	• Science Data
	N/A
	• Engineering Data
	  • Inputs: Subsystem a 3KBPS plus 10 percent of experiment data rate compiled from mission schedule.
	  • Outputs: Subsystem I/O at 1MBPS.

Module	Configuration
15	Subsystem I/O • Science Data N/A • Engineering Data • Inputs: • Subsystem RAU at 1MBPS. • Experiment Computer at 8KBPS. • Outputs: • Experiment Computer at 8KBPS. • Payload Data Interleaver at 1MBPS.
16	Experiment Computer • Science Data N/A • Engineering Data • Inputs: Subsystem I/O at 8KBPS. • Outputs: Subsystem I/O at 8KBPS.

```
*** GPSS V - OS VERSION ***
*** IBM PROGRAM PRODUCT 5734-XS2 (V1M3) ***
```

STATEMENT NUMBER	
1	REALLOCATE COM,59500
2	REALLUCATE BLO,750,VAR,51
3	REALLUCATE FAC,50,STO,25,LOG,1,FSV,500,BVR,1,CHA,20,TAB,1

```
BLOCK
NUMBER  LOC   OPERATION  A,B,C,D,E,F,G,H,I        COMMENTS                                        STATEMENT NUMBER
                SIMULATE   25                                                                          4
*****************************************************************************                      5
*****************************************************************************                      6
**                                                                         **                      7
**                                                                         **                      8
**      D. P. ASSOCIATES, INC.                                             **                      9
**                                                                         **                     10
**           SPACE SHUTTLE DATA SYSTEM SIMULATION                          **                     11
**                                                                         **                     12
**                                                                         **                     13
*****************************************************************************                     14
*****************************************************************************                     15
*                                                                                                  16
*  MACRO DEFINITION FOR TRANSMISSION OF ALL DATA TO NEXT UNIT                                      17
*                                                                                                  18
 TRNSA STARTMACRO                                                                                 19
 #A     GATE SNF    #B,#C                                                                         20
        TEST GE     #D,PF3,#E                                                                     21
 #F     ENTER       #B,PF3                                                                        22
        BUFFER                                                                                    23
        LEAVE       #B,PF3                                                                        24
        TRANSFER    ,#G                                                                           25
        ENDMACRO                                                                                  26
*                                                                                                 27
*  MACRO DEFINITION FOR TRANSMISSION OF PART DATA TO NEXT UNIT                                    28
*  #A (TRNSP MACRO) = #E (TRNSA MACRO)                                                            29
*  #F (TRNSP MACRO) = #A (TRNSA MACRO)                                                            30
*  #H (TRNSP MACRO) = #F (TRNSA MACRO)                                                            31
 TRNSP STARTMACRO                                                                                 32
 #A     ASSIGN      #B,#C,PF                                                                      33
        SPLIT       1,#D                                                                          34
        PRIORITY    #E                                                                            35
        ASSIGN      3,#I,PF                                                                       36
        ADVANCE     1                                                                             37
        TRANSFER    ,#F                                                                           38
 #D     ASSIGN      3,#G,PF                                                                       39
        TRANSFER    ,#H                                                                           40
        ENDMACRO                                                                                  41
*                                                                                                 42
*                                                                                                 43
*  MACRO DEFINITION FOR DELAY TRANSMISSION TO NEXT UNIT                                           44
*  #A (WAITA MACRO) = #C (TRNSA MACRO)                                                            45
*  #D (WAITA MACRO) = #A (TRNSA MACRO)                                                            46
*                                                                                                 47
 WAITA STARTMACRO                                                                                 48
 #A     PRIORITY    #B                                                                            49
        QUEUE       #C,PF3                                                                        50
        ADVANCE     1                                                                             51
        DEPART      #C,PF3                                                                        52
        TRANSFER    ,#D                                                                           53
        ENDMACRO                                                                                  54
*                                                                                                 55
*  MACRO DEFINITION FOR TRANSMISSION OF ALL DATA TO SIGNAL PROCESSOR                              56
*                                                                                                 57
 TMITA STARTMACRO                                                                                 58
```

```
#A      GATE SNF    #B,#C                                                   59
        TEST GE     #D,PF3,#E                                               60
        ENTER       #B,PF3                                                  61
        BUFFER                                                              62
        LEAVE       #B,PF3                                                  63
        TERMINATE                                                           64
        ENDMACRO                                                            65
*                                                                           66
*  MACRO DEFINITION FOR TRANSMISSION OF PART DATA TO SIGNAL PROCESSOR       67
*  #A (TMITP MACRO) = #E (TMITA MACRO)                                      68
*                                                                           69
TMITP  STARTMACRO                                                           70
#A      ASSIGN      #B,#C,PF                                                71
        SPLIT       1,#D                                                    72
        ASSIGN      3,#F,PF                                                 73
        TRANSFER    ,#E                                                     74
        ENDMACRO                                                            75
*                                                                           76
*  MACRO DEFINITION FOR TRANSMISSION OF ALL DATA TO V. R. RECORDER          77
*                                                                           78
RECDA  STARTMACRO                                                           79
#A      ASSIGN      5,PF3,PF                                                80
        GATE SNF    #B,#C                                                   81
        TEST GE     #D,#E,#F                                                82
        ENTER       #B,#E                                                   83
        TRANSFER    ,#G                                                     84
        ENDMACRO                                                            85
*                                                                           86
*  MACRO DEFINITION FOR TRANSMISSION OF PART DATA TO RECORDER               87
*                                                                           88
RECDP  STARTMACRO                                                           89
#A      ASSIGN      #B,#C,PF                                                90
        ENTER       #D,#C                                                   91
        ASSIGN      #E,#J,PF                                                92
        SAVEVALUE   #I,#G                                                   93
        ASSIGN      3,#F                                                    94
        TRANSFER    ,#H                                                     95
        ENDMACRO                                                            96
*                                                                           97
*  MACRO DEFINITION OF RECORDER DUMP, ALL DATA                              98
*                                                                           99
DUMPA  STARTMACRO                                                          100
#A      GATE U      50,#B                                                  101
        GATE SNF    #C,#D                                                  102
        TEST GE     #E,PF3,#F                                              103
        LEAVE       #G,PF5                                                 104
        TRANSFER    ,#H                                                    105
        ENDMACRO                                                           106
*                                                                          107
*  MACRO DEFINITION OF RECORDER DUMP, PART DATA                            108
*                                                                          109
DUMPP  STARTMACRO                                                          110
#A      ASSIGN      #B,#C,PF                                               111
        SPLIT       1,#J                                                   112
        PRIORITY    #D                                                     113
        ADVANCE     #E                                                     114
        ASSIGN      3,#I,PF                                                115
```

```
        TRANSFER    ,#F                                                  116
#J      ASSIGN      3,#G                                                 117
        LEAVE       #H,PF5                                               118
        ENDMACRO                                                         119
JUMP1   STARTMACRO                                                       120
        TRANSFER    ,#A                                                  121
        ENDMACRO                                                         122
*                                                                        123
*  MACRO DEFINITION FOR DELAY TO NEXT DOWNLINK                           124
*                                                                        125
DLAY1   STARTMACRO                                                       126
#A      PRIORITY    #B                                                   127
        ADVANCE     V5                                                   128
        TRANSFER    ,#C                                                  129
        ENDMACRO                                                         130
*                                                                        131
*  MACRO DEFINITION FOR DELAY ONE TIME UNIT IN RECORDER DUMP             132
*                                                                        133
DLAY2   STARTMACRO                                                       134
#A      PRIORITY    #B                                                   135
        ADVANCE     1                                                    136
        TRANSFER    ,#C                                                  137
        ENDMACRO                                                         138
*                                                                        139
*  MACRO DEFINITION FOR RECORDING DATA LOST AT RECORDERS                 140
*                                                                        141
LOSED   STARTMACRO                                                       142
#A      SAVEVALUE   #B+,PF3                                              143
        TERMINATE                                                        144
        ENDMACRO                                                         145
*                                                                        146
*  MACRO DEFINITION FOR COMPUTER LOAD ROUTINE, PART 1                    147
*                                                                        148
COMPA   STARTMACRO                                                       149
#A      TEST GE     #B,PF3,#C                                            150
        ENTER       #D,PF3                                               151
#E      LINK        #D,FIFO                                              152
        ENDMACRO                                                         153
*                                                                        154
*  MACRO DEFINITION FOR COMPUTER LOAD ROUTINE, PART 2                    155
*                                                                        156
COMPB   STARTMACRO                                                       157
#A      TEST G      #B,0,#C                                              158
        ASSIGN      4,#B,PF                                              159
        SPLIT       1,#D                                                 160
        ENTER       #E,#B                                                161
        TRANSFER    ,#F                                                  162
#D      ASSIGN      3,#G,PF                                              163
        ENDMACRO                                                         164
*                                                                        165
*  MACRO DEFINITION FOR COMPUTER LOAD ROUTINE, PART 3                    166
*                                                                        167
COMPC   STARTMACRO                                                       168
#A      SPLIT       1,#B                                                 169
        QUEUE       #C                                                   170
        SEIZE       #C                                                   171
        DEPART      #C                                                   172
```

```
#D      UNLINK      #C,#E,1                                          173
        SPLIT       1,#F                                             174
        RELEASE     #C                                               175
        TERMINATE                                                    176
        ENDMACRO                                                     177
*                                                                    178
*  MACRO DEFINITION FOR COMPUTER LOAD ROUTINE, PART 4                179
*                                                                    180
COMPD   STARTMACRO                                                   181
#A      SEIZE       #B                                               182
        BUFFER                                                       183
        TEST E      PF3,#C,#D                                        184
        RELEASE     #B                                               185
        TERMINATE                                                    186
#D      TEST L      #C,PF3,#E                                        187
        ASSIGN      3,#F,PF                                          188
        TRANSFER    ,#G                                              189
#E      ASSIGN      3,#H,PF                                          190
        ASSIGN      2,#I,PF                                          191
        RELEASE     #B                                               192
        SAVEVALUE   #J,PF3                                           193
        LINK        #B,LIFO                                          194
        ENDMACRO                                                     195
*                                                                    196
*  MACRO DEFINITION FOR COMPUTER LOAD ROUTINE, PART 5                197
*                                                                    198
COMPE   STARTMACRO                                                   199
#A      SAVEVALUE   #B,PF3                                           200
        SAVEVALUE   #C,PF2                                           201
        SAVEVALUE   #D,PF3                                           202
        TERMINATE                                                    203
        ENDMACRO                                                     204
*                                                                    205
*                                                                    206
*  EQUATE STATEMENTS                                                 207
*                                                                    208
RAUEX   EQU         2,S                                              209
IOEXP   EQU         3,S                                              210
CPUEX   EQU         4,S                                              211
HRREC   EQU         5,S                                              212
VRREC   EQU         6,S                                              213
PDINT   EQU         7,S                                              214
DACBU   EQU         8,S                                              215
LMREC   EQU         9,S                                              216
FMSIG   EQU         10,S                                             217
NMSIG   EQU         11,S                                             218
RUSIG   EQU         12,S                                             219
RAUSU   EQU         14,S                                             220
IOSUB   EQU         15,S                                             221
CPUSU   EQU         16,S                                             222
*                                                                    223
*  STORAGE DEFINITIONS                                               224
*                                                                    225
2       STORAGE     36000                                            226
3       STORAGE     36000                                            227
4       STORAGE     288                                              228
5       STORAGE     36000000                                         229
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6       STORAGE     36000000
7       STORAGE     2304
8       STORAGE     4608
9       STORAGE     4608
10      STORAGE     36000
11      STORAGE     6912
12      STORAGE     1C90000
14      STORAGE     36000
15      STORAGE     36000
16      STORAGE     288
*
*  VARIABLE STATEMENTS
*
1       VARIABLE    PF4-1
2       FVARIABLE   PF3*.95+.5
3       VARIABLE    X23-PF3
4       VARIABLE    PF3-X23
5       VARIABLE    X50-C1
6       VARIABLE    (2400*PF3)+MX2(1,PF4)
7       VARIABLE    X21-PF3
8       VARIABLE    PF3-X21
9       VARIABLE    PF3-PF4
11      VARIABLE    X25-PF3
12      VARIABLE    PF3-X25
13      FVARIABLE   PF3*.05+.5
14      FVARIABLE   PF3*.90+.5
15      FVARIABLE   PF3*.10+.5
16      VARIABLE    PF1-1
17      VARIABLE    PF1+1
18      VARIABLE    C1+17
19      VARIABLE    MX2(1,1)-400
20      VARIABLE    MX2(1,PF1)-MX2(1,V16)
22      VARIABLE    PF3-R2
23      VARIABLE    PF3-R3
24      VARIABLE    PF3-R4
25      VARIABLE    PF3-R5
26      VARIABLE    PF3-R6
27      VARIABLE    PF3-R7
28      VARIABLE    PF3-R8
29      VARIABLE    PF3-R9
30      VARIABLE    PF3-R10
31      VARIABLE    PF3-R11
32      VARIABLE    PF3-R12
34      VARIABLE    PF3-R14
35      VARIABLE    PF3-R15
36      FVARIABLE   S5/10C0000+.5
37      FVARIABLE   S6/1000000+.5
41      VARIABLE    PF3-PF10
42      VARIABLE    100+N$PLOTA
43      VARIABLE    130+N$PLOTA
44      VARIABLE    160+N$PLOTA
45      VARIABLE    190+N$PLOTA
46      VARIABLE    220+N$PLOTA
47      VARIABLE    250+N$PLOTA
48      VARIABLE    280+N$PLOTA
49      VARIABLE    310+N$PLOTA
50      VARIABLE    340+N$PLOTA
```

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1                                                                                287
2       *                                                                        286
3       *  FUNCTION DEFINITIONS                                                  289
4       *                                                                        290
5       *      DATA FLOW RATES FOR EXPERIMENTS                                   291
6        FLOW  FUNCTION   PF2,D9                                                 292
7       1,8640/4,1080/5,1080/6,8640/7,8640/8,360/12,309/44,36000/107,18000       293
8       *      DATA FLOW RATES FOR SUBSYSTEMS                                    294
9        FLOW1 FUNCTION   PF2,D9                                                 295
10      1,0/4,1080/5,0/6,0/7,8640/8,0/12,0/44,36000/107,18000                    296
11      *                                                                        297
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13      **                                                                    ** 299
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15      **                                                                    ** 301
16      **                                                                    ** 302
17      ************************************************************************ 303
18      *                                                                        304
19      * PART 1. EXPERIMENT TO I/O                                              305
20      *                                                                        306
21      *    INPUT EXPERIMENT DATA FROM JOBTAPE                                  307
22      *                                                                        308
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24      1                                                                        310
25       SEQ1  ASSIGN     4,PF3,PF                                               311
26             TEST LE    PF4,0,BLITZ                                           312
27             TERMINATE                                                       313
28       BLITZ ASSIGN     3,FN$FLOW,PF                                          314
29             TRANSFER   ,LOOP1                                                315
30       UNITS ADVANCE    1                                                     316
31       LOOP1 SPLIT      1,BLK1                                                317
32             LOOP       4PF,UNITS                                             318
33             TERMINATE                                                       319
34      *    INPUT FOR EXPERIMENT SCIENCE DATA, PART 4                          320
35       BLK1  SPLIT      1,SECT4                                               321
36      *    INPUT FOR SUBSYSTEM ENGINEERING DATA                               322
37             SPLIT      1,MODL4                                               323
38      *                                                                        324
39      *   EXPERIMENT RAU                                                       325
40      *                                                                        326
41       RAU   ASSIGN     3,V13,PF                                              327
42      *     TRANSMIT ALL DATA TO EXPERIMENT RAU                                328
43       TRNSA MACRO      RAUSG,2,WAIT2,R2,PART2,RAUEN,IOSEG                    328
44       RAUSG GATE SNF   2,WAIT2                                               328
45             TEST GE    R2,PF3,PART2                                          328
46       RAUEN ENTER      2,PF3                                                 328
47             BUFFER                                                          328
48             LEAVE      2,PF3                                                 328
49             TRANSFER   ,IOSEG                                                328
50      *     TRANSMIT PART DATA TO EXPERIMENT RAU                               329
51       TRNSP MACRO      PART2,10,R2,MOVP2,12,RAUSG,PF10,RAUEN,V22             330
52       PART2 ASSIGN     1C,R2,PF                                              330
53             SPLIT      1,MOVP2                                               330
54             PRIORITY   12                                                    330
55             ASSIGN     3,V22,PF                                              330
56             ADVANCE    1                                                     330
57             TRANSFER   ,RAUSG                                                330
58       MOVP2 ASSIGN     3,PF10,PF                                             330
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27              TRANSFER    ,RAUEN                                          330
                *      DELAY TRANSMISSION ONE TIME UNIT                     331
                WAITA MACRO       WAIT2,11,2,RAUSG                         332
28              WAIT2 PRIORITY    11                                       332
29                    QUEUE       2,PF3                                    332
30                    ADVANCE     1                                        332
31                    DEPART      2,PF3                                    332
32                    TRANSFER    ,RAUSG                                   332
                *                                                          333
                *   EXPERIMENT I/O                                         334
                *                                                          335
                *      TRANSMIT ALL DATA TO EXPERIMENT I/O                 336
                TRNSA MACRO       IOSEG,3,WAIT3,R3,PART3,IOENT,SPLT3       337
33              IOSEG GATE SNF    3,WAIT3                                  337
34                    TEST GE     R3,PF3,PART3                             337
35              IOENT ENTER       3,PF3                                    337
36                    BUFFER                                               337
37                    LEAVE       3,PF3                                    337
38                    TRANSFER    ,SPLT3                                   337
                *      TRANSMIT PART DATA TO EXPERIMENT I/O                338
                TRNSP MACRO       PART3,10,R3,MOVP3,16,IOSEG,PF10,IOENT,V23 339
39              PART3 ASSIGN      10,R3,PF                                 339
40                    SPLIT       1,MOVP3                                  339
41                    PRIORITY    16                                       339
42                    ASSIGN      3,V23,PF                                 339
43                    ADVANCE     1                                        339
44                    TRANSFER    ,IOSEG                                   339
45              MOVP3 ASSIGN      3,PF10,PF                                339
46                    TRANSFER    ,IOENT                                   339
                *      DELAY TRANSMISSION ONE TIME UNIT                    340
                WAITA MACRO       WAIT3,15,3,IOSEG                         341
47              WAIT3 PRIORITY    15                                       341
48                    QUEUE       3,PF3                                    341
49                    ADVANCE     1                                        341
50                    DEPART      3,PF3                                    341
51                    TRANSFER    ,IOSEG                                   341
52              SPLT3 SPLIT       1,EXCPU                                  342
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53                    ASSIGN      3,V14,PF                                 344
54                    TRANSFER    ,DOWN4                                   345
                *                                                          346
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                *   TRANSMIT                                               348
                *                                                          349
                *   EXPERIMENT COMPUTER                                    350
                *                                                          351
                *   PERCENT OF DATA TRANSMITTED THRU COMPUTER              352
55              EXCPU ASSIGN      3,V15,PF                                 353
56                    TEST L      PF3,1,SCCPU                              354
57                    ASSIGN      3,1,PF                                   355
                *                                                          356
                *      TRANSMIT DATA TO EXPERIMENT COMPUTER                357
                COMPA MACRO       SCCPU,R4,FOURB,4,FOURA                   358
58              SCCPU TEST GE     R4,PF3,FOURB                             358
59                    ENTER       4,PF3                                    358
60              FOURA LINK        4,FIFO                                   358
                COMPB MACRO       FOURB,R4,FOURC,FOURD,4,FOURA,V9          359
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                                                                                359
61      FOURB TEST G      R4,0,FOURC                                            359
62            ASSIGN      4,R4,PF                                               359
63            SPLIT       1,FOURD                                               359
64            ENTER       4,R4                                                  359
65            TRANSFER    ,FOURA                                                359
66      FOURD ASSIGN      3,V9,PF                                               360
        COMPC MACRO       FOURC,FOURA,4,FOURE,FOURF,BUFF4                       360
67      FOURC SPLIT       1,FOURA                                               360
68            QUEUE       4                                                     360
69            SEIZE       4                                                     360
70            DEPART      4                                                     360
71      FOURE UNLINK      4,FOURF,1                                             360
72            SPLIT       1,BUFF4                                               360
73            RELEASE     4                                                     360
74            TERMINATE                                                         361
        COMPD MACRO       BUFF4,4,X21,FOURG,FOURH,V8,FOURE,V7,X20,4-            361
75      BUFF4 SEIZE       4                                                     361
76            BUFFER                                                            361
77            TEST E      PF3,X21,FOURG                                         361
78            RELEASE     4                                                     361
79            TERMINATE                                                         361
80      FOURG TEST L      X21,PF3,FOURH                                         361
81            ASSIGN      3,V8,PF                                               361
82            TRANSFER    ,FOURE                                                361
83      FOURH ASSIGN      3,V7,PF                                               361
84            ASSIGN      2,X20,PF                                              361
85            RELEASE     4                                                     361
86            SAVEVALUE   4-,PF3                                                361
87            LINK        4,LIFO                                                362
        COMPE MACRO       FOURF,21,20,4+                                        362
88      FOURF SAVEVALUE   21,PF3                                                362
89            SAVEVALUE   20,PF2                                                362
90            SAVEVALUE   4+,PF3                                                362
91            TERMINATE                                                         363
        *                                                                       364
        *   PAYLOAD DATA INTERLEAVER                                            365
        *                                                                       366
        *     TRANSMIT ALL DATA TO PAYLOAD DATA INTERLEAVER                     367
         TRNSA MACRO      PDPRT,7,WATE7,R7,PIEC7,PAYEN,DACSG                    367
92       PDPRT GATE SNF   7,WATE7                                               367
93             TEST GE     R7,PF3,PIEC7                                        367
94       PAYEN ENTER       7,PF3                                                367
95             BUFFER                                                           367
96             LEAVE       7,PF3                                                367
97             TRANSFER    ,DACSG                                               368
        *     TRANSMIT PART DATA TO PAYLOAD DATA INTERLEAVER                    369
         TRNSP MACRO      PIEC7,10,R7,TRVL7,16,PDPRT,PF10,PAYEN,V27             369
98       PIEC7 ASSIGN      10,R7,PF                                             369
99             SPLIT       1,TRVL7                                             369
100            PRIORITY    16                                                  369
101            ASSIGN      3,V27,PF                                            369
102            ADVANCE     1                                                   369
103            TRANSFER    ,PDPRT                                              369
104      TRVL7 ASSIGN      3,PF10,PF                                            369
105            TRANSFER    ,PAYEN                                              370
        *     DELAY TRANSMISSION ONE TIME UNIT                                  371
         WAITA MACRO      WATE7,15,7,PDPRT
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                                                                                371
106      WATE7 PRIORITY   15                                                    371
107            QUEUE      7,PF3                                                371
108            ADVANCE    1                                                    371
109            DEPART     7,PF3                                                371
110            TRANSFER   ,PDPRT                                               372
               *                                                               373
               *   DATA ACQUISITION CONTROL AND BUFFER UNIT                    374
               *                                                               375
               *     TRANSMIT ALL DATA TO DACBU                                376
               TRNSA MACRO       DACSG,8,WATE8,R8,PIEC8,DACEN,KUSND            376
111      DACSG GATE SNF   8,WATE8                                              376
112            TEST GE    R8,PF3,PIEC8                                         376
113      DACEN ENTER      8,PF3                                                376
114            BUFFER                                                          376
115            LEAVE      8,PF3                                                376
116            TRANSFER   ,KUSND                                               377
               *     TRANSMIT PART DATA TO DACBU                               378
               TRNSP MACRO       PIEC8,10,R8,TRVL8,16,DACSG,PF10,DACEN,V28     378
117      PIEC8 ASSIGN     10,R8,PF                                             376
118            SPLIT      1,TRVL8                                              378
119            PRIORITY   16                                                   378
120            ASSIGN     3,V28,PF                                             378
121            ADVANCE    1                                                    376
122            TRANSFER   ,DACSG                                               378
123      TRVL8 ASSIGN     3,PF10,PF                                            378
124            TRANSFER   ,DACEN                                               379
               *     DELAY TRANSMISSION ONE TIME UNIT                          380
               WAITA MACRO       WATE8,15,8,DACSG                              380
125      WATE8 PRIORITY   15                                                   380
126            QUEUE      8,PF3                                                380
127            ADVANCE    1                                                    380
128            DEPART     8,PF3                                                380
129            TRANSFER   ,DACSG                                               381
               *                                                               382
               *     DOWNLINK AVAILABLE?                                       383
               *                                                               384
130             GATE U     50,SPIL8                                           385
               *                                                               386
               *   KU-BAND                                                     387
               *                                                               388
               *     TRANSMIT ALL DATA TO KU-BAND                              389
               TMITA MACRO       KUSND,12,NSSND,R12,SUM12                      389
131      KUSND GATE SNF   12,NSSND                                             389
132            TEST GE    K12,PF3,SUM12                                        389
133            ENTER      12,PF3                                               389
134            BUFFER                                                          389
135            LEAVE      12,PF3                                               389
136            TERMINATE                                                       390
               *     TRANSMIT PART DATA TO KU-BAND                             391
               TMITP MACRO       SUM12,10,R12,NSSND,KUSND,V32                  391
137      SUM12 ASSIGN     10,R12,PF                                            391
138            SPLIT      1,NSSND                                              391
139            ASSIGN     3,V32,PF                                             391
140            TRANSFER   ,KUSND                                               392
               *                                                               393
               *   NETWORK SIGNAL PROCESSOR                                    394
               *
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*     TRANSMIT ALL DATA TO NETWORK SIGNAL PROCESSOR                          395
 TMITA MACRO      NSSND,11,SPIL8,R11,SUM11                                   396
141    NSSND GATE SNF   11,SPIL8                                            396
142          TEST GE    R11,PF3,SUM11                                       396
143          ENTER      11,PF3                                              396
144          BUFFER                                                         396
145          LEAVE      11,PF3                                              396
146          TERMINATE                                                      396
*     TRANSMIT PART DATA TO NETWORK SIGNAL PROCESSOR                         397
 TMITP MACRO      SUM11,10,R11,SPIL8,NSSND,V31                               398
147    SUM11 ASSIGN     1C,R11,PF                                            398
148          SPLIT      1,SPIL8                                             398
149          ASSIGN     3,V31,PF                                            398
150          TRANSFER   ,NSSND                                              398
151    SPIL8 SAVEVALUE  8+,PF3                                              399
*                                                                           400
* PART 3. I/O TO KU-BAND OR V.R. RECORDER                                   401
*                                                                           402
*     DOWNLINK AVAILABLE?                                                   403
*                                                                           404
152    DOWN4 GATE U     5C,VRREC                                             405
*                                                                           406
*   KU-BAND                                                                 407
*                                                                           408
*     TRANSMIT ALL DATA TO KU-BAND                                          409
 TMITA MACRO      KUSEG,12,VRREC,R12,PRT12                                   410
153    KUSEG GATE SNF   12,VRREC                                            410
154          TEST GE    R12,PF3,PRT12                                       410
155          ENTER      12,PF3                                              410
156          BUFFER                                                         410
157          LEAVE      12,PF3                                              410
158          TERMINATE                                                      410
*     TRANSMIT PART DATA TO KU-BAND                                         411
 TMITP MACRO      PRT12,10,R12,VRREC,KUSEG,V32                               412
159    PRT12 ASSIGN     10,R12,PF                                            412
160          SPLIT      1,VRREC                                             412
161          ASSIGN     3,V32,PF                                            412
162          TRANSFER   ,KUSEG                                              412
*                                                                           413
*   V.R. RECORDER                                                           414
*                                                                           415
*     TRANSMIT ALL DATA TO V.R. RECORDER                                    416
 RECDA MACRO      VRREC,6,LOSE6,R6,PF3,PART6,DUMP6                           417
163    VRREC ASSIGN     5,PF3,PF                                            417
164          GATE SNF   6,LOSE6                                             417
165          TEST GE    R6,PF3,PART6                                        417
166          ENTER      6,PF3                                               417
167          TRANSFER   ,DUMP6                                              417
*     TRANSMIT PART DATA TO V.R. RECORDER, LOSE PART DATA                   418
 RECDP MACRO      PART6,10,R6,6,11,PF10,PF11,DUMP6,6+,V26                    419
168    PART6 ASSIGN     10,R6,PF                                            419
169          ENTER      6,R6                                                419
170          ASSIGN     11,V26,PF                                           419
171          SAVEVALUE  6+,PF11                                             419
172          ASSIGN     3,PF10                                              419
173          TRANSFER   ,DUMP6                                              419
*                                                                           420
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                                                                                421
*       DUMP V.R. RECORDER TO (1) KU-BAND, (2) FM SIGNAL PROCESSOR              422
*                                                                               423
*       DUMP ALL DATA TO KU-BAND                                                424
 DUMPA MACRO       DUMP6,DLAY6,12,DMP6A,R12,PTA12,6,KUSEG                       424
174   DUMP6 GATE U      5C,DLAY6                                                  424
175         GATE SNF    12,DMP6A                                                424
176         TEST GE     R12,PF3,PTA12                                           424
177         LEAVE       6,PF5                                                   424
178         TRANSFER    ,KUSEG                                                  425
*       DUMP PART DATA TO KU-BAND                                               426
 DUMPP MACRO       PTA12,10,R12,4,0,DMP6A,PF10,6,V32,MOV12                      426
179   PTA12 ASSIGN      1C,R12,PF                                                 426
180         SPLIT       1,MOV12                                                 426
181         PRIORITY    4                                                       426
182         ADVANCE     0                                                       426
183         ASSIGN      3,V32,PF                                                426
184         TRANSFER    ,DMP6A                                                  426
185   MOV12 ASSIGN      3,PF10                                                  426
186         LEAVE       6,PF5                                                   427
 JUMP1 MACRO       KUSEG                                                        427
187         TRANSFER    ,KUSEG                                                  428
*       DUMP ALL DATA TO FM-BAND                                                429
 DUMPA MACRO       DMP6A,DLAY6,10,DLA6A,R10,PTA12,6,FMSEG                       429
188   DMP6A GATE U      5C,DLAY6                                                  429
189         GATE SNF    1C,DLA6A                                                429
190         TEST GE     R10,PF3,PTA12                                           429
191         LEAVE       6,PF5                                                   429
192         TRANSFER    ,FMSEG                                                  430
*       DUMP PART DATA TO FM BAND                                               431
 DUMPP MACRO       PTA10,10,R10,4,1,DUMP6,PF10,6,V34,MOV06                      431
193   PTA1C ASSIGN      1C,R10,PF                                                 431
194         SPLIT       1,MOV06                                                 431
195         PRIORITY    4                                                       431
196         ADVANCE     1                                                       431
197         ASSIGN      3,V34,PF                                                431
198         TRANSFER    ,DUMP6                                                  431
199   MOV06 ASSIGN      3,PF10                                                  431
200         LEAVE       6,PF5                                                   432
 JUMP1 MACRO       FMSEG                                                        432
201         TRANSFER    ,FMSEG                                                  433
*       DELAY UNTIL DOWNLINK AVAILABLE                                          434
 DLAY1 MACRO       DLAY6,3,DUMP6                                                434
202   DLAY6 PRIORITY    3                                                       434
203         ADVANCE     V5                                                      434
204         TRANSFER    ,DUMP6                                                  435
*       DELAY ONE TIME UNIT                                                     436
 DLAY2 MACRO       DLA6A,1,DUMP6                                                436
205   DLA6A PRIORITY    1                                                       436
206         ADVANCE     1                                                       436
207         TRANSFER    ,DUMP6                                                  437
*                                                                               438
*   F.M. SIGNAL PROCESSOR                                                       439
*                                                                               440
*       TRANSMIT ALL DATA TO F.M. SIGNAL PROCESSOR                              441
*                                                                               442
 TMITA MACRO       FMSEG,10,DUMP6,R10,PRT10                                     442
208   FMSEG GATE SNF    1C,DUMP6
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209              TEST GE     R10,PF3,PRT10                                  442
210              ENTER       10,PF3                                         442
211              BUFFER                                                     442
212              LEAVE       10,PF3                                         442
213              TERMINATE                                                  443
                 TRANSMIT PART DATA TO F.M. SIGNAL PROCESSOR                444
                 TMITP MACRO       PRT10,10,R10,DUMP6,FMSEG,V30             444
214              PRT10 ASSIGN      10,R10,PF                                444
215                    SPLIT       1,DUMP6                                  444
216                    ASSIGN      3,V30,PF                                 444
217                    TRANSFER    ,FMSEG                                   445
                 RECORDER FILLED, DATA LOST ( IN SAVEVALUE 6)               446
218              LOSE6 SAVEVALUE   6+,PF3                                   447
219                    TERMINATE                                           448
                                                                           449
                 PART 4. EXPERIMENT TO KU-BAND OR H.R. RECORDER            450
                                                                           451
                                                                           452
                     DOWNLINK AVAILABLE?                                   453
                                                                           454
220              SECT4 ASSIGN      3,V2,PF                                  455
221                    GATE U      50,HRREC                                 456
                                                                           457
                   KU-BAND SIGNAL PROCESSOR                                458
                                                                           459
                     TRANSMIT ALL DATA TO KU-BAND                          460
                 TMITA MACRO       KUSIG,12,HRREC,R12,SEC12                 460
222              KUSIG GATE SNF    12,HRREC                                 460
223                    TEST GE     R12,PF3,SEC12                            460
224                    ENTER       12,PF3                                   460
225                    BUFFER                                               460
226                    LEAVE       12,PF3                                   460
227                    TERMINATE                                           461
                     TRANSMIT PART DATA TO KU-BAND                         462
                 TMITP MACRO       SEC12,10,R12,HRREC,KUSIG,V32             462
228              SEC12 ASSIGN      10,R12,PF                                462
229                    SPLIT       1,HRREC                                  462
230                    ASSIGN      3,V32,PF                                 462
231                    TRANSFER    ,KUSIG                                   463
                                                                           464
                   H.R. RECORDER                                           465
                                                                           466
                     TRANSMIT ALL DATA TO H.R. RECORDER                    467
                 RECDA MACRO       HRREC,5,LOSE5,R5,PF3,PART5,DUMP5         467
232              HRREC ASSIGN      5,PF3,PF                                 467
233                    GATE SNF    5,LOSE5                                  467
234                    TEST GE     R5,PF3,PART5                             467
235                    ENTER       5,PF3                                    467
236                    TRANSFER    ,DUMP5                                   468
                     TRANSMIT PART DATA TO H.R. RECORDER                   469
                 RECDP MACRO       PART5,10,R5,5,11,PF10,PF11,DUMP5,5+,V41  469
237              PART5 ASSIGN      10,R5,PF                                 469
238                    ENTER       5,R5                                     469
239                    ASSIGN      11,V41,PF                                469
240                    SAVEVALUE   5+,PF11                                  469
241                    ASSIGN      3,PF10                                   469
242                    TRANSFER    ,DUMP5
```

```
                *
                *    RECORD DATA LOST
                *
243              LOSE5 SAVEVALUE  5+,PF3
244                    TERMINATE
                *
                *     DUMP H.R. RECORDER TO KU-BAND
                *
                *     DUMP ALL DATA TO KU-BAND
                 DUMPA MACRO      DUMP5,DLAY5,12,DLA5A,R12,SEA12,5,KUSIG
245              DUMP5 GATE U     5C,DLAY5
246                    GATE SNF   12,DLA5A
247                    TEST GE    R12,PF3,SEA12
248                    LEAVE      5,PF5
249                    TRANSFER   ,KUSIG
                *     DUMP PART DATA TO KU-BAND
                 DUMPP MACRO      SEA12,10,R12,4,0,DLA5A,PF10,5,V32,MOVE5
250              SEA12 ASSIGN     1C,R12,PF
251                    SPLIT      1,MOVE5
252                    PRIORITY   4
253                    ADVANCE    0
254                    ASSIGN     3,V32,PF
255                    TRANSFER   ,DLA5A
256              MOVE5 ASSIGN     3,PF10
257                    LEAVE      5,PF5
                 JUMP1 MACRO      KUSIG
258                    TRANSFER   ,KUSIG
                *     DELAY UNTIL DOWNLINK AVAILABLE
                 DLAY1 MACRO      DLAY5,3,DUMP5
259              DLAY5 PRIORITY   3
260                    ADVANCE    V5
261                    TRANSFER   ,DUMP5
                *     DELAY ONE TIME UNIT
                 DLAY2 MACRO      DLA5A,1,DUMP5
262              DLA5A PRIORITY   1
263                    ADVANCE    1
264                    TRANSFER   ,DUMP5
                **********************************************************************
                **                                                                  **
                **  MODULE 3.  EXPERIMENT ENGINEERING DATA                          **
                **                                                                  **
                **********************************************************************
                *
                *
                *    INPUT EXPERIMENT DATA
                *
265                    GENERATE   1,,200,14775,10,25PF
266                    ASSIGN     3,108,PF
                *
                * PART 1. EXPERIMENT TO I/O
                *
                *    EXPERIMENT RAU
                *
                *     TRANSMIT ALL DATA TO EXPERIMENT RAU
                 TRNSA MACRO      RAUPT,2,HOLD2,R2,SOME2,RAUGO,IOPRT
267              RAUPT GATE SNF   2,HOLD2
268                    TEST GE    R2,PF3,SOME2
```

```
                                                                        504
269     RAUGO ENTER     2,PF3                                           504
270           BUFFER                                                    504
271           LEAVE     2,PF3                                           504
272           TRANSFER  ,IOPRT                                          505
      *     TRANSMIT PART DATA TO EXPERIMENT RAU                        506
       TRNSP MACRO     SOME2,10,R2,TRVL2,12,RAUPT,PF10,RAUGO,V22       506
273    SOME2 ASSIGN     10,R2,PF                                        506
274          SPLIT      1,TRVL2                                         506
275          PRIORITY   12                                              506
276          ASSIGN     3,V22,PF                                        506
277          ADVANCE    1                                               506
278          TRANSFER   ,RAUPT                                          506
279    TRVL2 ASSIGN     3,PF10,PF                                       506
280          TRANSFER   ,RAUGO                                          507
      *     DELAY TRANSMISSION ONE TIME UNIT                            508
       WAITA MACRO     HOLD2,11,2,RAUGO                                508
281    HOLD2 PRIORITY   11                                             508
282          QUEUE      2,PF3                                           508
283          ADVANCE    1                                               508
284          DEPART     2,PF3                                           508
285          TRANSFER   ,RAUGO                                          509
      *                                                                 510
      *     EXPERIMENT I/O                                              511
      *                                                                 512
      *     TRANSMIT ALL DATA TO EXPERIMENT I/O                         513
       TRNSA MACRO     IOPRT,3,HOLD3,R3,SOME3,IOGOS,SPLZ3              513
286    IOPRT GATE SNF   3,HOLD3                                         513
287          TEST GE    R3,PF3,SOME3                                    513
288    IOGOS ENTER      3,PF3                                           513
289          BUFFER                                                    513
290          LEAVE      3,PF3                                           513
291          TRANSFER   ,SPLZ3                                          514
      *     TRANSMIT PART DATA TO EXPERIMENT I/O                        515
       TRNSP MACRO     SOME3,10,R3,TRVL3,16,IOPRT,PF10,IOGOS,V30       515
292    SOME3 ASSIGN     10,R3,PF                                        515
293          SPLIT      1,TRVL3                                         515
294          PRIORITY   16                                              515
295          ASSIGN     3,V30,PF                                        515
296          ADVANCE    1                                               515
297          TRANSFER   ,IOPRT                                          515
298    TRVL3 ASSIGN     3,PF10,PF                                       515
299          TRANSFER   ,IOGOS                                          516
      *     DELAY TRANSMISSION ONE TIME UNIT                            517
       WAITA MACRO     HOLD3,15,3,IOPRT                                517
300    HOLD3 PRIORITY   15                                             517
301          QUEUE      3,PF3                                           517
302          ADVANCE    1                                               517
303          DEPART     3,PF3                                           517
304          TRANSFER   ,IOPRT                                          518
      *  EXTRM COULD BE CHANGED TO AN ASSIGN BEFORE PDSEG IF SOME DATA  519
      *    BYPASSES THE COMPUTER.                                       520
305    SPLZ3 SPLIT      1,EXTRM                                         521
306          ASSIGN     3,V15,PF                                        522
307          TEST L     PF3,1,EDCPU                                     523
308          ASSIGN     3,1,PF                                          524
      *                                                                 525
      * PART 2. I/O TO COMPUTER TO I/O TO PAYLOAD DATA INTERLEAVER
```

```
*
*   EXPERIMENT COMPUTER
*
*      TRANSMIT DATA TO EXPERIMENT COMPUTER
 COMPA MACRO       EDCPU,R4,FOREB,4,FOREA
309    EDCPU TEST GE     R4,PF3,FOREB
310          ENTER       4,PF3
311    FOREA LINK        4,FIFO
 COMPB MACRO       FOREB,R4,FOREC,FORED,4,FOREA,V9
312    FOREB TEST G      R4,0,FOREC
313          ASSIGN      4,R4,PF
314          SPLIT       1,FORED
315          ENTER       4,R4
316          TRANSFER    ,FOREA
317    FORED ASSIGN      3,V9,PF
 COMPC MACRO       FOREC,FOREA,4,FOREE,FOREF,BUFE4
318    FOREC SPLIT       1,FOREA
319          QUEUE       4
320          SEIZE       4
321          DEPART      4
322    FOREE UNLINK      4,FOREF,1
323          SPLIT       1,BUFE4
324          RELEASE     4
325          TERMINATE
 COMPD MACRO       BUFE4,4,X23,FOREG,FOREH,V4,FOREE,V3,X22,4-
326    BUFE4 SEIZE       4
327          BUFFER
328          TEST E      PF3,X23,FOREG
329          RELEASE     4
330          TERMINATE
331    FOREG TEST L      X23,PF3,FOREH
332          ASSIGN      3,V4,PF
333          TRANSFER    ,FOREE
334    FOREH ASSIGN      3,V3,PF
335          ASSIGN      2,X22,PF
336          RELEASE     4
337          SAVEVALUE   4-,PF3
338          LINK        4,LIFO
 COMPE MACRO       FOREF,23,22,4+
339    FOREF SAVEVALUE   23,PF3
340          SAVEVALUE   22,PF2
341          SAVEVALUE   4+,PF3
342          TERMINATE
*****
*    EXPERIMENT ENGINEERING DATA STOPS HERE SINCE IT IS NOT CALLED
*     FROM THE COMPUTER
*****
*     TRANSMIT ALL DATA BACK THRU EXPERIMENT I/O
 TRNSA MACRO       IOEXP,3,STP3,R3,HAF3,IOETR,SEGPD
343    IOEXP GATE SNF    3,STP3
344          TEST GE     R3,PF3,HAF3
345    IOETR ENTER       3,PF3
346          BUFFER
347          LEAVE       3,PF3
348          TRANSFER    ,SEGPD
*     TRANSMIT PART DATA BACK THRU EXPERIMENT I/O
 TRNSP MACRO       HAF3,10,R3,ZIP3,16,IOEXP,PF10,IOETR,V23
```

```
349      HAF3  ASSIGN      10,R3,PF                                                    542
350            SPLIT       1,ZIP3                                                      542
351            PRIORITY    16                                                          542
352            ASSIGN      3,V23,PF                                                    542
353            ADVANCE     1                                                           542
354            TRANSFER    ,IOEXP                                                      542
355      ZIP3  ASSIGN      3,PF10,PF                                                   542
356            TRANSFER    ,IOETR                                                      542
               *     DELAY TRANSMISSION ONE TIME UNIT                                543
               WAITA MACRO       STP3,15,3,IOEXP                                     544
357      STP3  PRIORITY    15                                                          544
358            QUEUE       3,PF3                                                       544
359            ADVANCE     1                                                           544
360            DEPART      3,PF3                                                       544
361            TRANSFER    ,IOEXP                                                      544
               *                                                                       545
               * PART 3. PAYLOAD DATA INTERLEAVER TO TRANSMIT                          546
               *                                                                       547
362      SEGPD TRANSFER    ,PDSEG                                                      548
               ********************************************************************** 549
               **                                                                  ** 550
               **  MODULE 4.  SUBSYSTEM ENGINEERING DATA                           ** 551
               **                                                                  ** 552
               ********************************************************************** 553
               *                                                                       554
               *                                                                       555
               * PART 1. SUBSYSTEM TO I/O                                            556
               *                                                                       557
               *   SUBSYSTEM ENGINEERING DATA INPUT                                    558
               *                                                                       559
363            GENERATE    1,,200,14775,,25PF                                          560
364            ASSIGN      3,108,PF                                                    561
365            TRANSFER    ,SKIP                                                       562
366      MODL4 ASSIGN      4,PF3,PF                                                    563
367            ASSIGN      3,FN$FLOW1,PF                                               564
368            ASSIGN      3,V15,PF                                                    565
369      SKIP  PRIORITY    10                                                          566
370            TEST E      PF3,0,ERAUS                                                 567
371            TERMINATE                                                             568
               *                                                                       569
               *   SUBSYSTEM RAU                                                       570
               *                                                                       571
               *     TRANSMIT ALL DATA TO SUBSYSTEM RAU                                572
               TRNSA MACRO       ERAUS,14,WAT14,R14,PRT14,ERAUN,EIOSG                573
372      ERAUS GATE SNF    14,WAT14                                                    573
373            TEST GE     R14,PF3,PRT14                                               573
374      ERAUN ENTER       14,PF3                                                      573
375            BUFFER                                                                573
376            LEAVE       14,PF3                                                      573
377            TRANSFER    ,EIOSG                                                      573
               *     TRANSMIT PART DATA TO SUBSYSTEM RAU                               574
               TRNSP MACRO       PRT14,10,R14,MVP14,12,ERAUS,PF10,ERAUN,V34          575
378      PRT14 ASSIGN      10,R14,PF                                                   575
379            SPLIT       1,MVP14                                                     575
380            PRIORITY    12                                                          575
381            ASSIGN      3,V34,PF                                                    575
382            ADVANCE     1                                                           575
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383                TRANSFER   ,ERAUS                                          575
384          MVP14 ASSIGN     3,PF10,PF                                       575
385                TRANSFER   ,ERAUN                                          575
               *     DELAY TRANSMISSION ONE TIME UNIT                        576
                WAITA MACRO     WAT14,11,14,ERAUS                            577
386             WAT14 PRIORITY  11                                           577
387                   QUEUE     14,PF3                                       577
388                   ADVANCE   1                                            577
389                   DEPART    14,PF3                                       577
390                   TRANSFER  ,ERAUS                                       577
               *                                                            578
               *   SUBSYSTEM I/O                                            579
               *                                                            580
               *     TRANSMIT ALL DATA TO SUBSYSTEM I/O                     581
                TRNSA MACRO     EIOSG,15,WAT15,R15,PRT15,EIOEN,SPL15         582
391             EIOSG GATE SNF  15,WAT15                                     582
392                   TEST GE   R15,PF3,PRT15                                582
393             EIOEN ENTER     15,PF3                                       582
394                   BUFFER                                                 582
395                   LEAVE     15,PF3                                       582
396                   TRANSFER  ,SPL15                                       582
               *     TRANSMIT PART DATA TO SUBSYSTEM I/O                    583
                TRNSP MACRO     PRT15,10,R15,MVP15,16,EIOSG,PF10,EIOEN,V35   584
397             PRT15 ASSIGN    10,R15,PF                                    584
398                   SPLIT     1,MVP15                                      584
399                   PRIORITY  16                                           584
400                   ASSIGN    3,V35,PF                                     584
401                   ADVANCE   1                                            584
402                   TRANSFER  ,EIOSG                                       584
403          MVP15 ASSIGN     3,PF10,PF                                       584
404                TRANSFER   ,EIOEN                                          584
               *     DELAY TRANSMISSION ONE TIME UNIT                        585
                WAITA MACRO     WAT15,15,15,EIOSG                            586
405             WAT15 PRIORITY  15                                           586
406                   QUEUE     15,PF3                                       586
407                   ADVANCE   1                                            586
408                   DEPART    15,PF3                                       586
409                   TRANSFER  ,EIOSG                                       586
               *                                                            587
               *     ENGINEERING SUBSYSTEM DATA IN I/O; 90 PERCENT TERMINATED 10   588
               *       PERCENT TO SUBSYSTEM COMPUTER.                       589
               *                                                            590
               *  SBTRM COULD BE CHANGED TO AN ASSIGN BEFORE PDSEG IF SOME DATA   591
               *    BYPASSES THE COMPUTER.                                  592
410             SPL15 SPLIT     1,SBTRM                                      593
411                   ASSIGN    3,V15,PF                                     594
412                   TEST L    PF3,1,SBCPU                                  595
413                   ASSIGN    3,1,PF                                       596
               *                                                            597
               * PART 2. I/O TO COMPUTER TO I/O TO PAYLOAD DATA INTERLEAVER   598
               *                                                            599
               *   SUBSYSTEM COMPUTER                                       600
               *                                                            601
               *     TRANSMIT DATA TO SUBSYSTEM COMPUTER                    602
                COMPA MACRO     SBCPU,R16,TEENB,16,TEENA                     603
414             SBCPU TEST GE   R16,PF3,TEENB                                603
415                   ENTER     16,PF3                                       603
```

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                                                                                  603
416     TEENA LINK      16,FIFO                                                   604
        COMPB MACRO     TEEN8,R16,TEENC,TEEND,16,TEENA,V9                         o04
417     TEEN8 TEST G    R16,0,TEENC                                               o04
418           ASSIGN    4,R16,PF                                                  o04
419           SPLIT     1,TEEND                                                   604
420           ENTER     16,R16                                                    o04
421           TRANSFER  ,TEENA                                                    604
422     TEEND ASSIGN    3,V9,PF                                                   605
        COMPC MACRO     TEENC,TEENA,16,TEENE,TEENF,BUF16                          o05
423     TEENC SPLIT     1,TEENA                                                   605
424           QUEUE     16                                                        o05
425           SEIZE     16                                                        o05
426           DEPART    16                                                        o05
427     TEENE UNLINK    16,TEENF,1                                                605
428           SPLIT     1,BUF16                                                   o05
429           RELEASE   16                                                        605
430           TERMINATE                                                         606
        COMPD MACRO     BUF16,16,X25,TEENG,TEENH,V12,TEENE,V11,X24,16-            o06
431     BUF16 SEIZE     16                                                        60o
432           BUFFER                                                            o06
433           TEST E    PF3,X25,TEENG                                           606
434           RELEASE   16                                                        606
435           TERMINATE                                                         606
436     TEENG TEST L    X25,PF3,TEENH                                             o06
437           ASSIGN    3,V12,PF                                                  o0o
438           TRANSFER  ,TEENE                                                    606
439     TEENH ASSIGN    3,V11,PF                                                  o06
440           ASSIGN    2,X24,PF                                                  o06
441           RELEASE   16                                                        606
442           SAVEVALUE 16-,PF3                                                   o06
443           LINK      16,LIFO                                                   607
        COMPE MACRO     TEENF,25,24,16+                                           607
444     TEENF SAVEVALUE 25,PF3                                                    607
445           SAVEVALUE 24,PF2                                                    607
446           SAVEVALUE 16+,PF3                                                   607
447           TERMINATE                                                         608
        *****                                                                     609
        *     SUBSYSTEM ENGINEERING DATA STOPS HERE SINCE IT IS NOT CALLED        610
        *     FROM THE COMPUTER                                                   611
        *****                                                                     612
        *     TRANSMIT ALL DATA BACK THRU SUBSYSTEM I/O                           613
        TRNSA MACRO     IOSUB,15,STP15,R15,HAF15,IOSTR,PDSEG                      613
448     IOSUB GATE SNF  15,STP15                                                  613
449           TEST GE   R15,PF3,HAF15                                             613
450     IOSTR ENTER     15,PF3                                                    613
451           BUFFER                                                            613
452           LEAVE     15,PF3                                                  613
453           TRANSFER  ,PDSEG                                                  614
        *     TRANSMIT PART DATA BACK THRU SUBSYSTEM I/O                          615
        TRNSP MACRO     HAF15,10,R15,ZIP15,16,IOSUB,PF10,IOSTR,V35                615
454     HAF15 ASSIGN    10,R15,PF                                                 o15
455           SPLIT     1,ZIP15                                                   615
456           PRIORITY  16                                                        o15
457           ASSIGN    3,V35,PF                                                  615
458           ADVANCE   1                                                         o15
459           TRANSFER  ,IOSUB                                                    615
460     ZIP15 ASSIGN    3,PF10,PF
```

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461             TRANSFER    ,IOSTR                                          615
                *       DELAY TRANSMISSION ONE TIME UNIT                    616
                WAITA MACRO         STP15,15,15,IOSUB                       617
462             STP15 PRIORITY      15                                      617
463                   QUEUE         15,PF3                                  617
464                   ADVANCE       1                                       617
465                   DEPART        15,PF3                                  617
466                   TRANSFER      ,IOSUB                                  617
                *       TRANSMIT TO PAYLOAD DATA INTERLEAVER                618
467                   TRANSFER      ,PDSEG                                  619
                *                                                           620
                * PART 3. PAYLOAD DATA INTERLEAVER TO TRANSMIT              621
                *                                                           622
                *   PAYLOAD DATA INTERLEAVER                                623
                *                                                           624
                *       TRANSMIT ALL DATA TO PAYLOAD DATA INTERLEAVER       625
                TRNSA MACRO         PDSEG,7,WAIT7,R7,PART7,PDENT,DCSEG      626
468             PDSEG GATE SNF      7,WAIT7                                 626
469                   TEST GE       R7,PF3,PART7                            626
470             PDENT ENTER         7,PF3                                   626
471                   BUFFER                                                626
472                   LEAVE         7,PF3                                   626
473                   TRANSFER      ,DCSEG                                  626
                *       TRANSMIT PART DATA TO PAYLOAD DATA INTERLEAVER      627
                TRNSP MACRO         PART7,10,R7,MOVP7,16,PDSEG,PF10,PDENT,V27 628
474             PART7 ASSIGN        10,R7,PF                                628
475                   SPLIT         1,MOVP7                                 628
476                   PRIORITY      16                                      628
477                   ASSIGN        3,V27,PF                                628
478                   ADVANCE       1                                       628
479                   TRANSFER      ,PDSEG                                  628
480             MOVP7 ASSIGN        3,PF10,PF                               628
481                   TRANSFER      ,PDENT                                  628
                *       DELAY TRANSMISSION ONE TIME UNIT                    629
                WAITA MACRO         WAIT7,15,7,PDSEG                        630
482             WAIT7 PRIORITY      15                                      630
483                   QUEUE         7,PF3                                   630
484                   ADVANCE       1                                       630
485                   DEPART        7,PF3                                   630
486                   TRANSFER      ,PDSEG                                  630
                *                                                           631
                *   DATA ACQUISITION CONTROL AND BUFFER UNIT                632
                *                                                           633
                *       TRANSMIT ALL DATA TO DACBU                          634
                TRNSA MACRO         DCSEG,8,WAIT8,R8,PART8,DCENT,DLSEG      635
487             DCSEG GATE SNF      8,WAIT8                                 635
488                   TEST GE       R8,PF3,PART8                            635
489             DCENT ENTER         8,PF3                                   635
490                   BUFFER                                                635
491                   LEAVE         8,PF3                                   635
492                   TRANSFER      ,DLSEG                                  635
                *       TRANSMIT PART DATA TO DACBU                         636
                TRNSP MACRO         PART8,10,R8,MOVP8,16,DCSEG,PF10,DCENT,V28 637
493             PART8 ASSIGN        10,R8,PF                                637
494                   SPLIT         1,MOVP8                                 637
495                   PRIORITY      16                                      637
496                   ASSIGN        3,V28,PF                                637
```

```
497                ADVANCE    1                                                637
498                TRANSFER   ,DCSEG                                           637
499          MOVP8 ASSIGN     3,PF10,PF                                        637
500                TRANSFER   ,DCENT                                           637
                 *     DELAY TRANSMISSION ONE TIME UNIT                       638
                  WAITA MACRO      WAIT8,15,8,DCSEG                          639
501               WAIT8 PRIORITY   15                                          639
502                     QUEUE      8,PF3                                       639
503                     ADVANCE    1                                           639
504                     DEPART     8,PF3                                       639
505                     TRANSFER   ,DCSEG                                      640
                 *                                                           641
                 *     DOWNLINK AVAILABLE?                                   642
                 *                                                           643
506               DLSEG GATE U     50,LMREC                                   644
                 *                                                           645
                 *   KU-BAND                                                 646
                 *                                                           647
                 *     TRANSMIT ALL DATA TO KU-BAND                          648
                  TMITA MACRO      KUPRT,12,NSPRT,R12,PTL12                  648
507               KUPRT GATE SNF   12,NSPRT                                   648
508                     TEST GE    R12,PF3,PTL12                             648
509                     ENTER      12,PF3                                    648
510                     BUFFER                                               648
511                     LEAVE      12,PF3                                    648
512                     TERMINATE                                            648
                 *     TRANSMIT PART DATA TO KU-BAND                         649
                  TMITP MACRO      PTL12,10,R12,NSPRT,KUPRT,V32              650
513               PTL12 ASSIGN     10,R12,PF                                 650
514                     SPLIT      1,NSPRT                                   650
515                     ASSIGN     3,V32,PF                                  650
516                     TRANSFER   ,KUPRT                                    650
                 *                                                           651
                 *   NETWORK SIGNAL PROCESSOR                                652
                 *                                                           653
                 *     TRANSMIT ALL DATA TO NETWORK SIGNAL PROCESSOR         654
                  TMITA MACRO      NSPRT,11,LMREC,R11,PRT11                  655
517               NSPRT GATE SNF   11,LMREC                                   655
518                     TEST GE    R11,PF3,PRT11                             655
519                     ENTER      11,PF3                                    655
520                     BUFFER                                               655
521                     LEAVE      11,PF3                                    655
522                     TERMINATE                                            655
                 *     TRANSMIT PART DATA TO NETWORK SIGNAL PROCESSOR        656
                  TMITP MACRO      PRT11,10,R11,LMREC,NSPRT,V31              657
523               PRT11 ASSIGN     10,R11,PF                                 657
524                     SPLIT      1,LMREC                                   657
525                     ASSIGN     3,V31,PF                                  657
526                     TRANSFER   ,NSPRT                                    658
                 *                                                           659
                 *   LOOP MAINTENANCE RECORDER                               660
                 *                                                           661
                 *     TRANSMIT ALL DATA TO L.M. RECORDER                    662
                  RECDA MACRO      LMREC,9,LOSE9,R9,PART9,4608,DUMP9,LMRC1,4608  662
527               LMREC ASSIGN     5,PF3,PF                                  662
528                     GATE SNF   9,LOSE9                                   662
529                     TEST GE    R9,PART9,4608
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```
                ENTER       9,PART9                                          062
530             ENTER       9,PART9                                          062
531             TRANSFER    ,DUMP9                                           063
              *     TRANSMIT PART DATA TO L.M. RECORDER                      064
               RECDP MACRO       PART9,10,R9,9,11,PF10,PF11,DUMP9,9+,V29    664
532            PART9 ASSIGN      10,R9,PF                                   664
533                  ENTER       9,R9                                       664
534                  ASSIGN      11,V29,PF                                  664
535                  SAVEVALUE   9+,PF11                                    664
536                  ASSIGN      3,PF10                                     664
537                  TRANSFER    ,DUMP9                                     665
              *                                                            666
              *     DUMP L.M. RECORDER TO F.M. SIGNAL PROCESSOR            667
              *                                                            668
              *     DUMP ALL DATA TO F.M. SIGNAL PROCESSOR                 669
               DUMPA MACRO       DUMP9,DLAY9,10,DLA9A,R10,PRA10,9,FMPRT     669
538            DUMP9 GATE U      5C,DLAY9                                   669
539                  GATE SNF    10,DLA9A                                   669
540                  TEST GE     R10,PF3,PRA10                              669
541                  LEAVE       9,PF5                                      669
542                  TRANSFER    ,FMPRT                                     670
              *     DUMP PART DATA TO F.M. SIGNAL PROCESSOR                671
               DUMPP MACRO       PRA10,10,R10,4,1,DUMP9,PF10,9,V30,MVA10    671
543            PRA10 ASSIGN      10,R10,PF                                  671
544                  SPLIT       1,MVA10                                    671
545                  PRIORITY    4                                          671
546                  ADVANCE     1                                          671
547                  ASSIGN      3,V30,PF                                   671
548                  TRANSFER    ,DUMP9                                     671
549            MVA10 ASSIGN      3,PF10                                     671
550                  LEAVE       9,PF5                                      672
               JUMP1 MACRO       FMPRT                                      672
551                  TRANSFER    ,FMPRT                                     673
              *     DELAY UNTIL DOWNLINK AVAILABLE                         674
               DLAY1 MACRO       DLAY9,3,DUMP9                              674
552            DLAY9 PRIORITY    3                                          674
553                  ADVANCE     V5                                         674
554                  TRANSFER    ,DUMP9                                     675
              *     DELAY ONE TIME UNIT                                    676
               DLAY2 MACRO       DLA9A,1,DUMP9                              676
555            DLA9A PRIORITY    1                                          676
556                  ADVANCE     1                                          676
557                  TRANSFER    ,DUMP9                                     677
              *                                                            678
              *                                                            679
              *   F.M. SIGNAL PROCESSOR                                    680
              *                                                            681
              *     TRANSMIT ALL DATA TO F.M. SIGNAL PROCESSOR             682
               TMITA MACRO       FMPRT,10,DUMP9,R10,SEG10                   682
558            FMPRT GATE SNF    10,DUMP9                                   682
559                  TEST GE     R10,PF3,SEG10                              682
560                  ENTER       10,PF3                                     682
561                  BUFFER                                                 682
562                  LEAVE       10,PF3                                     682
563                  TERMINATE                                              683
              *     TRANSMIT PART DATA TO F.M. SIGNAL PROCESSOR            684
               TMITP MACRO       SEG10,10,R10,DUMP9,FMPRT,V30               684
564            SEG10 ASSIGN      10,R10,PF
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565             SPLIT       1,DUMP9                                                  684
566             ASSIGN      3,V30,PF                                                 684
567             TRANSFER    ,FMPRT                                                   684
568       EXTRM TERMINATE                                                            685
569       SBTRM TERMINATE                                                            686
570       LOSE9 SAVEVALUE   3+,PF3                                                   687
571             TERMINATE                                                          688
          ********************************************************************     689
          **                                                                **     690
          **  MODULE 5. DOWNLINK SCHEDULE                                   **     691
          **                                                                **     692
          ********************************************************************     693
           2    MATRIX      X,1,60                                                 694
                INITIAL     MX2(1,1),417/MX2(1,2),422/MX2(1,3),425/MX2(1,4),500    695
                INITIAL     MX2(1,5),503/MX2(1,6),561/MX2(1,7),583/MX2(1,8),594    696
                INITIAL     MX2(1,9),600/MX2(1,10),728/MX2(1,11),742               697
                INITIAL     MX2(1,12),761/MX2(1,13),772/MX2(1,14),900              698
                INITIAL     MX2(1,15),906/MX2(1,16),928/MX2(1,17),950              699
                INITIAL     MX2(1,18),1106/MX2(1,19),1117/MX2(1,20),1283           700
                INITIAL     MX2(1,21),1286/MX2(1,22),1339/MX2(1,23),1344           701
                INITIAL     MX2(1,24),1411/MX2(1,25),1425/MX2(1,26),1439           702
                INITIAL     MX2(1,27),1444/MX2(1,28),1500/MX2(1,29),1511           703
                INITIAL     MX2(1,30),1572/MX2(1,31),1592/MX2(1,32),1606           704
                INITIAL     MX2(1,33),1608/MX2(1,34),1672/MX2(1,35),1675           705
                INITIAL     MX2(1,36),1731/MX2(1,37),1758/MX2(1,38),1897           706
                INITIAL     MX2(1,39),1914/MX2(1,40),1928/MX2(1,41),1939           707
                INITIAL     MX2(1,42),2069/MX2(1,43),2072/MX2(1,44),2094           708
                INITIAL     MX2(1,45),2117/MX2(1,46),2272/MX2(1,47),2289           709
                INITIAL     MX2(1,48),2447/MX2(1,49),2453/MX2(1,50),2511           710
                INITIAL     MX2(1,51),2517/MX2(1,52),2586/MX2(1,53),2594           711
                INITIAL     MX2(1,54),2611/MX2(1,55),2617/MX2(1,56),2672           712
                INITIAL     MX2(1,57),2683/MX2(1,58),2728/MX2(1,59),2739           713
                INITIAL     MX2(1,60),2797                                         714
572             GENERATE    ,,400,1,50,25PF         CREATE CONTOL TRANS.           715
573       LOOP2 ASSIGN      1+,1,PF                 SET INDEX                      716
574             TEST E      PF1,1,MOVE1             FIRST TIME THROUGH?            717
575             SAVEVALUE   50,V18                                                 718
576             ASSIGN      2,V19,PF                SET FIRST CHANGE TIME          719
577             TRANSFER    ,DLINK                  GO TO DOWN LINK SECTION        720
578       MOVE1 ASSIGN      2,V20,PF                FIND NEXT STATUS CHANGE        721
579       DLINK ADVANCE     PF2                                                    722
580             ASSIGN      1+,1,PF                 INCREMENT EVENT COUNT          723
581             ASSIGN      2,V20,PF                FIND NEXT CHANGE               724
582             SEIZE       50                      TIES UP FACILITY 50            725
583             ADVANCE     PF2                     DOWN LINK AVAILABLE            726
584             RELEASE     50                      RELEASES FACILITY 50           727
585             TEST E      PF1,60,GOHED            DETERMINE TIME NEXT DOWNLNK    728
586             ASSIGN      1,0,PF                                                 729
587             ASSIGN      3+,1,PF                                                730
588             ASSIGN      4,1,PF                                                 731
589             SAVEVALUE   50,V6                                                  732
590             ADVANCE     3                       TO END OF CYCLE                733
591             TRANSFER    ,LOOP2                                                 734
592       GOHED ASSIGN      4,V17,PF                                               735
593       CKDLK SAVEVALUE   50,V6                                                  736
594             TRANSFER    ,LOOP2                                                 737
595       PLOTA GENERATE    600,,,,2,25PF                                          738
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596             SAVEVALUE   V42,SM2
597             SAVEVALUE   V43,SM3
598             SAVEVALUE   V44,S4
599             SAVEVALUE   V45,V36
600             SAVEVALUE   V46,V37
601             SAVEVALUE   V47,SM12
602             SAVEVALUE   V48,SM14
603             SAVEVALUE   V49,SM15
604             SAVEVALUE   V50,S16
605             TERMINATE
606             GENERATE    1e300
607             TERMINATE   1
                START       1
                REPORT
                OUTPUT
                GRAPH       X,101,127
                ORIGIN      50,22
                X           ,1,3,,,,NO
                Y           0,200,12,4
        5       STATEMENT   22,10,EXPERIMENT
        8       STATEMENT   24,3,RAO
        6       STATEMENT   26,8,CONTENTS
        6       STATEMENT   26,8,(K BITS)
       26       STATEMENT   52,106,6  12  18  24  30  36  42  48  54  60  66  72 1
       78  84  90  96  102 108 114 120 126 132 138 144 150 156 162
       50       STATEMENT   54,12,TIME (HOURS)
        8       STATEMENT   58,59,FIGURE 7: CONTENTS OF EXPERIMENT RAO AS A FUNCTI
      ION OF TIME.
                ENDGRAPH
                EJECT
                GRAPH       X,131,157
                ORIGIN      50,22
                X           ,1,3,,,,NO
                Y           0,200,12,4
        5       STATEMENT   22,10,EXPERIMENT
        3       STATEMENT   24,3,I/O
        6       STATEMENT   26,8,CONTENTS
        5       STATEMENT   26,8,(K BITS)
       26       STATEMENT   52,106,6  12  18  24  30  36  42  48  54  60  66  72 1
       78  84  90  96  102 108 114 120 126 132 138 144 150 156 162
       50       STATEMENT   54,12,TIME (HOURS)
        8       STATEMENT   58,59,FIGURE 8: CONTENTS OF EXPERIMENT I/O AS A FUNCTI
      ION OF TIME.
                ENDGRAPH
                EJECT
                GRAPH       X,161,187
                ORIGIN      50,22
                X           ,1,3,,,,NO
                Y           0,50,6,8
        5       STATEMENT   22,10,EXPERIMENT
        3       STATEMENT   24,3,CPU
        6       STATEMENT   26,8,CONTENTS
        5       STATEMENT   26,8,(K BITS)
       26       STATEMENT   52,106,6  12  18  24  30  36  42  48  54  60  66  72 1
       78  84  90  96  102 108 114 120 126 132 138 144 150 156 162
       50       STATEMENT   54,12,TIME (HOURS)
        8       STATEMENT   58,59,FIGURE 9: CONTENTS OF EXPERIMENT CPU AS A FUNCTI
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ION OF TIME.
        ENDGRAPH
        EJECT
        GRAPH       X,191,217
        ORIGIN      50,22
        X           ,1,3,,,,NO
        Y           0,2,24,2
 5      STATEMENT   22,9,HIGH RATE
 6      STATEMENT   24,8,RECORDER
 6      STATEMENT   26,8,CONTENTS
 6      STATEMENT   28,8,(1000000
 7      STATEMENT   30,7,K BITS)
 26     STATEMENT   52,106,6  12  18  24  30  36  42  48  54  60  66  72 1
 78  84  90  96  102 108 114 120 126 132 138 144 150 156 162
 60     STATEMENT   54,12,TIME (HOURS)
 8      STATEMENT   58,64,FIGURE 10: CONTENTS OF HIGH RATE RECORDER AS A 1
FUNCTION OF TIME.
        ENDGRAPH
        EJECT
        GRAPH       X,221,247
        ORIGIN      50,22
        X           ,1,3,,,,NO
        Y           0,2,24,2
 6      STATEMENT   22,8,VARIABLE
 6      STATEMENT   24,8,RECORDER
 6      STATEMENT   26,8,CONTENTS
 6      STATEMENT   28,8,(10C0000
 7      STATEMENT   30,7,K BITS)
 26     STATEMENT   52,106,6  12  18  24  30  36  42  48  54  60  66  72 1
 78  84  90  96  102 108 114 120 126 132 138 144 150 156 162
 60     STATEMENT   54,12,TIME (HOURS)
 8      STATEMENT   58,63,FIGURE 11: CONTENTS OF VARIABLE RATE RECORDER AS
S A FUNCTION OF TIME.
        ENDGRAPH
        EJECT
        GRAPH       X,251,277
        ORIGIN      50,22
        X           ,1,3,,,,NO
        Y           0,3000,12,4
 7      STATEMENT   22,7,KU-BAND
 5      STATEMENT   24,9,PROCESSOR
 6      STATEMENT   26,8,CONTENTS
 6      STATEMENT   28,8,(K BITS)
 26     STATEMENT   52,106,6  12  18  24  30  36  42  48  54  60  66  72 1
 78  84  90  96  102 108 114 120 126 132 138 144 150 156 162
 60     STATEMENT   54,12,TIME (HOURS)
 8      STATEMENT   58,63,FIGURE 12: CONTENTS OF KU-BAND PROCESSOR AS A F1
UNCTION OF TIME.
        ENDGRAPH
        EJECT
        GRAPH       X,281,307
        ORIGIN      50,22
        X           ,1,3,,,,NO
        Y           0,300,12,4
 5      STATEMENT   22,9,SUBSYSTEM
 9      STATEMENT   24,3,RAU
 6      STATEMENT   26,8,CONTENTS
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6      STATEMENT  28,8,(K BITS)
26     STATEMENT  52,106,6  12  18  24  30  36  42  48  54  60  66  72 1
78  84  90  96  102 108 114 120 126 132 138 144 150 156 162
60     STATEMENT  54,12,TIME (HOURS)
8      STATEMENT  58,58,FIGURE 13:CONTENTS OF SUBSYSTEM RAU AS A FUNCTI1
ON OF TIME.
       ENDGRAPH
       EJECT
       GRAPH      X,311,337
       ORIGIN     50,22
       X          ,1,3,,,,NO
       Y          0,300,12,4
5      STATEMENT  22,9,SUBSYSTEM
8      STATEMENT  24,3,I/O
6      STATEMENT  26,8,CONTENTS
6      STATEMENT  28,8,(K BITS)
26     STATEMENT  52,106,6  12  18  24  30  36  42  48  54  60  66  72 1
78  84  90  96  102 108 114 120 126 132 138 144 150 156 162
60     STATEMENT  54,12,TIME (HOURS)
8      STATEMENT  58,58,FIGURE 14:CONTENTS OF SUBSYSTEM I/O AS A FUNCTI1
ON OF TIME.
       ENDGRAPH
       EJECT
       GRAPH      X,341,367
       ORIGIN     50,22
       X          ,1,3,,,,NO
       Y          0,50,6,8
5      STATEMENT  22,9,SUBSYSTEM
8      STATEMENT  24,3,CPU
6      STATEMENT  26,8,CONTENTS
6      STATEMENT  28,8,(K BITS)
26     STATEMENT  52,106,6  12  18  24  30  36  42  48  54  60  66  72 1
78  84  90  96  102 108 114 120 126 132 138 144 150 156 162
60     STATEMENT  54,12,TIME (HOURS)
8      STATEMENT  58,58,FIGURE 15:CONTENTS OF SUBSYSTEM CPU AS A FUNCTI1
ON OF TIME.
       ENDGRAPH
       END
```

RELATIVE CLOCK 16800 ABSOLUTE CLOCK 16800

BLOCK COUNTS

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
1	0	0	11	0	51476	21	0	0	31	0	0	41	0	0
2	0	929	12	0	51476	22	0	0	32	0	0	42	0	0
3	0	929	13	0	25738	23	0	0	33	0	25738	43	0	0
4	0	3	14	0	25738	24	0	0	34	0	25738	44	0	0
5	0	926	15	0	25738	25	0	0	35	0	25738	45	0	0
6	0	926	16	0	25738	26	0	0	36	0	25738	46	0	0
7	0	24812	17	0	25738	27	0	0	37	0	25738	47	0	0
8	0	51476	18	0	25738	28	0	0	38	0	25738	48	0	0
9	0	25738	19	0	25738	29	0	0	39	0	0	49	0	0
10	0	926	20	0	0	30	0	0	40	0	0	50	0	0
BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
51	0	0	61	0	25738	71	0	43247	81	0	17509	91	0	32586
52	0	51476	62	0	0	72	0	86494	82	0	17509	92	0	0
53	0	25738	63	0	0	73	0	43247	83	0	24276	93	0	0
54	0	25738	64	0	0	74	0	43247	84	0	24276	94	0	0
55	0	25738	65	0	0	75	0	43247	85	0	24276	95	0	0
56	0	25738	66	0	0	76	0	43247	86	0	24276	96	0	0
57	0	0	67	0	51476	77	0	43247	87	0	24276	97	0	0
58	0	25738	68	0	25738	78	0	1462	88	0	32586	98	0	0
59	0	0	69	0	25738	79	0	1462	89	0	32586	99	0	0
60	0	25738	70	0	25738	80	0	41785	90	0	32586	100	0	0
BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
101	0	0	111	0	0	121	0	0	131	0	0	141	0	0
102	0	0	112	0	0	122	0	0	132	0	0	142	0	0
103	0	0	113	0	0	123	0	0	133	0	0	143	0	0
104	0	0	114	0	0	124	0	0	134	0	0	144	0	0
105	0	0	115	0	0	125	0	0	135	0	0	145	0	0
106	0	0	116	0	0	126	0	0	136	0	0	146	0	0
107	0	0	117	0	0	127	0	0	137	0	0	147	0	0
108	0	0	118	0	0	128	0	0	138	0	0	148	0	0
109	0	0	119	0	0	129	0	0	139	0	0	149	0	0
110	0	0	120	0	0	130	0	0	140	0	0	150	0	0
BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
151	0	0	161	0	0	171	0	0	181	0	0	191	0	0
152	0	25738	162	0	0	172	0	0	182	0	0	192	0	0
153	0	25738	163	0	3494	173	0	0	183	0	0	193	0	0
154	0	25738	164	0	3494	174	0	6988	184	0	0	194	0	0
155	0	25738	165	0	3494	175	0	3494	185	0	0	195	0	0
156	0	25738	166	0	3494	176	0	3494	186	0	0	196	0	0
157	0	25738	167	0	3494	177	0	3494	187	0	0	197	0	0
158	0	25738	168	0	0	178	0	3494	188	0	0	198	0	0
159	0	0	169	0	0	179	0	0	189	0	0	199	0	0
160	0	0	170	0	0	180	0	0	190	0	0	200	0	0
BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
201	0	0	211	0	0	221	0	25738	231	0	0	241	0	0
202	0	3494	212	0	0	222	0	25738	232	0	3494	242	0	0
203	0	3494	213	0	0	223	0	25738	233	0	3494	243	0	0
204	0	3494	214	0	0	224	0	25738	234	0	3494	244	0	0
205	0	0	215	0	0	225	0	25738	235	0	3494	245	0	6986
206	0	0	216	0	0	226	0	25738	236	0	3494	246	0	3494
207	0	0	217	0	0	227	0	25738	237	0	0	247	0	3494
208	0	0	218	0	0	228	0	0	238	0	0	248	0	3494
209	0	0	219	0	0	229	0	0	239	0	0	249	0	3494

210	0	0	220	0	25738	230	0	0	240	0	0	250	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
251	0	0	261	0	3494	271	0	14775	281	0	0	291	0	14775
252	0	0	262	0	0	272	0	14775	282	0	0	292	0	0
253	0	0	263	0	0	273	0	0	283	0	0	293	0	0
254	0	0	264	0	0	274	0	0	284	0	0	294	0	0
255	0	0	265	0	14775	275	0	0	285	0	0	295	0	0
256	0	0	266	0	14775	276	0	0	286	0	14775	296	0	0
257	0	0	267	0	14775	277	0	0	287	0	14775	297	0	0
258	0	0	268	0	14775	278	0	0	288	0	14775	298	0	0
259	0	3494	269	0	14775	279	0	0	289	0	14775	299	0	0
260	0	3494	270	0	14775	280	0	0	290	0	14775	300	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
301	0	0	311	0	14776	321	0	14749	331	0	42748	341	0	44848
302	0	0	312	0	14749	322	0	44848	332	0	30099	342	0	44848
303	0	0	313	0	1	323	0	89696	333	0	30099	343	0	0
304	0	0	314	0	2	324	0	44848	334	0	12649	344	0	0
305	0	29550	315	0	1	325	0	44848	335	0	12649	345	0	0
306	0	14775	316	0	1	326	0	44848	336	0	12649	346	0	0
307	0	14775	317	0	1	327	0	44848	337	0	12649	347	0	0
308	0	0	318	0	29498	328	0	44848	338	0	12649	348	0	0
309	0	14775	319	0	14749	329	0	2100	339	0	44848	349	0	0
310	0	26	320	0	14749	330	0	2100	340	0	44848	350	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
351	0	0	361	0	0	371	0	14148	381	0	0	391	0	26365
352	0	0	362	0	0	372	0	26365	382	0	0	392	0	26365
353	0	0	363	0	14775	373	0	26365	383	0	0	393	0	26365
354	0	0	364	0	14775	374	0	26365	384	0	0	394	0	26365
355	0	0	365	0	14775	375	0	26365	385	0	0	395	0	26365
356	0	0	366	0	25738	376	0	26365	386	0	0	396	0	26365
357	0	0	367	0	25738	377	0	26365	387	0	0	397	0	0
358	0	0	368	0	25738	378	0	0	388	0	0	398	0	0
359	0	0	369	0	40513	379	0	0	389	0	0	399	0	0
360	0	0	370	0	40513	380	0	0	390	0	0	400	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
401	0	0	411	0	26365	421	0	1	431	0	50530	441	0	24166
402	0	0	412	0	26365	422	0	1	432	0	50530	442	0	24166
403	0	0	413	0	0	423	0	52678	433	0	50530	443	0	24166
404	0	0	414	0	26365	424	0	26339	434	0	2173	444	0	50530
405	0	0	415	0	26	425	0	26339	435	0	2173	445	0	50530
406	0	0	416	0	26366	426	0	26339	436	0	48357	446	0	50530
407	0	0	417	0	26339	427	0	50530	437	0	24191	447	0	50530
408	0	0	418	0	1	428	0	101060	438	0	24191	448	0	0
409	0	0	419	0	2	429	0	50530	439	0	24166	449	0	0
410	0	52730	420	0	1	430	0	50530	440	0	24166	450	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
451	0	0	461	0	0	471	0	0	481	0	0	491	0	0
452	0	0	462	0	0	472	0	0	482	0	0	492	0	0
453	0	0	463	0	0	473	0	0	483	0	0	493	0	0
454	0	0	464	0	0	474	0	0	484	0	0	494	0	0
455	0	0	465	0	0	475	0	0	485	0	0	495	0	0
456	0	0	466	0	0	476	0	0	486	0	0	496	0	0
457	0	0	467	0	0	477	0	0	487	0	0	497	0	0
458	0	0	468	0	0	478	0	0	488	0	0	498	0	0
459	0	0	469	0	0	479	0	0	489	0	0	499	0	0
460	0	0	470	0	0	480	0	0	490	0	0	500	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
501	0	0	511	0	0	521	0	0	531	0	0	541	0	0
502	0	0	512	0	0	522	0	0	532	0	0	542	0	0
503	0	0	513	0	0	523	0	0	533	0	0	543	0	0
504	0	0	514	0	0	524	0	0	534	0	0	544	0	0
505	0	0	515	0	0	525	0	0	535	0	0	545	0	0
506	0	0	516	0	0	526	0	0	536	0	0	546	0	0
507	0	0	517	0	0	527	0	0	537	0	0	547	0	0
508	0	0	518	0	0	528	0	0	538	0	0	548	0	0
509	0	0	519	0	0	529	0	0	539	0	0	549	0	0
510	0	0	520	0	0	530	0	0	540	0	0	550	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
551	0	0	561	0	0	571	0	0	581	0	204	591	0	0
552	0	0	562	0	0	572	0	1	582	0	204	592	0	197
553	0	0	563	0	0	573	0	204	583	1	204	593	0	197
554	0	0	564	0	0	574	0	204	584	0	203	594	0	197
555	0	0	565	0	0	575	0	7	585	0	203	595	0	28
556	0	0	566	0	0	576	0	7	586	0	6	596	0	28
557	0	0	567	0	0	577	0	7	587	0	6	597	0	28
558	0	0	568	0	14775	578	0	197	588	0	6	598	0	28
559	0	0	569	0	26365	579	0	204	589	0	6	599	0	28
560	0	0	570	0	0	580	0	204	590	0	6	600	0	28

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
601	0	28												
602	0	28												
603	0	28												
604	0	28												
605	0	28												
606	0	1												
607	0	1												

FACILITIES

FACILITY	NUMBER ENTRIES	AVERAGE TIME/TRAN	-AVERAGE TOTAL TIME	UTILIZATION DURING- AVAIL. TIME	UNAVAIL. TIME	CURRENT STATUS	PERCENT AVAILABILITY	TRANSACTION NUMBER SEIZING	PREEMPTING
4	128582	.000	.000				100.0		
16	76869	.000	.000				100.0		
50	204	69.422	.842				100.0	6	

STORAGES

STORAGE	CAPACITY	AVERAGE CONTENTS	ENTRIES	AVERAGE TIME/UNIT	-AVERAGE TOTAL TIME	UTILIZATION AVAIL. TIME	DURING- UNAVAIL. TIME	CURRENT STATUS	PERCENT AVAILABILITY	CURRENT CONTENTS	MAXIMUM CONTENTS
RAUEX	36000	.000	8674698	.000	.000				100.0		1800
IOEXP	36000	.000	8674698	.000	.000				100.0		1800
CPUEX	288	284.355	288	16587.406	.987				100.0	288	288
HRREC	36000000	9877.769	20397390	8.136	.000				100.0		772206
VRREC	36000000	467.540	965472	8.136	.000				100.0		36506
KUSIG	1080000	.000	140960572	.000	.000				100.0		34200
RAUSU	36000	.000	14987124	.000	.000				100.0		3600
IOSUB	36000	.000	14987124	.000	.000				100.0		3600
CPUSU	288	284.355	288	16587.406	.987				100.0	288	288

QUEUES

QUEUE	MAXIMUM CONTENTS	AVERAGE CONTENTS	TOTAL ENTRIES	ZERO ENTRIES	PERCENT ZEROS	AVERAGE TIME/TRANS	$AVERAGE TIME/TRANS	TABLE NUMBER	CURRENT CONTENTS
4	1	.000	40487	40487	100.0	.000	.000		
16	1	.000	26339	26339	100.0	.000	.000		

$AVERAGE TIME/TRANS = AVERAGE TIME/TRANS EXCLUDING ZERO ENTRIES

USER CHAINS

USER CHAIN	TOTAL ENTRIES	AVERAGE TIME/TRANS	CURRENT CONTENTS	AVERAGE CONTENTS	MAXIMUM CONTENTS
4	77439	.892	5	4.114	54
16	50532	3.210	2	9.655	28

FULLWORD SAVEVALUES

NUMBER	CONTENTS	NUMBER	CONTENTS	NUMBER	CONTENTS	NUMBER	CONTENTS	NUMBER	CONTENTS	NUMBER	CONTENTS
4	861932	16	1497871	20	5	21	5	22	44	23	22
24	44	25	297	50	16689	101	108	102	1800	103	1800
104	1800	105	1800	106	1800	107	1800	108	1800	109	1800
110	1800	111	1800	112	1800	113	1800	114	1800	115	1800
116	1800	117	1800	118	1800	119	1800	120	1800	121	1800
122	1800	123	1800	124	1800	125	1800	126	1800	127	1800
128	1800	131	108	132	1800	133	1800	134	1800	135	1800
136	1800	137	1800	138	1800	139	1800	140	1800	141	1800
142	1800	143	1800	144	1800	145	1800	146	1800	147	1800
148	1800	149	1800	150	1800	151	1800	152	1800	153	1800
154	1800	155	1800	156	1800	157	1800	158	1800	161	288
162	288	163	288	164	288	165	288	166	288	167	288
168	288	169	288	170	288	171	288	172	288	173	288
174	288	175	288	176	288	177	288	178	288	179	288
180	288	181	288	182	288	183	288	184	288	185	288
186	288	187	288	188	288	252	34200	253	34200	254	34200
255	34200	256	34200	257	34200	258	34200	259	34200	260	34200
261	34200	262	34200	263	34200	264	34200	265	34200	266	34200
267	34200	268	34200	269	34200	270	34200	271	34200	272	34200
273	34200	274	34200	275	34200	276	34200	277	34200	278	34200
281	108	282	3600	283	3600	284	3600	285	3600	286	3600
287	3600	288	3600	289	3600	290	3600	291	3600	292	3600
293	3600	294	3600	295	3600	296	3600	297	3600	298	3600
299	3600	300	3600	301	3600	302	3600	303	3600	304	3600
305	3600	306	3600	307	3600	308	3600	311	108	312	3600
313	3600	314	3600	315	3600	316	3600	317	3600	318	3600
319	3600	320	3600	321	3600	322	3600	323	3600	324	3600
325	3600	326	3600	327	3600	328	3600	329	3600	330	3600
331	3600	332	3600	333	3600	334	3600	335	3600	336	3600
337	3600	338	3600	341	288	342	288	343	288	344	288
345	288	346	288	347	288	348	288	349	288	350	288
351	288	352	288	353	288	354	288	355	288	356	288
357	288	358	288	359	288	360	288	361	288	362	288
363	288	364	288	365	288	366	288	367	288	368	288

FULLWORD MATRICES

FULLWORD MATRIX 2

ROW/COLUMN	1	2	3	4	5	6	7	8	9	10
1	417	422	425	500	503	561	583	594	600	728
ROW/COLUMN	11	12	13	14	15	16	17	18	19	20
1	742	761	772	900	906	928	950	1106	1117	1283
ROW/COLUMN	21	22	23	24	25	26	27	28	29	30
1	1286	1339	1344	1411	1425	1439	1444	1500	1511	1572
ROW/COLUMN	31	32	33	34	35	36	37	38	39	40
1	1592	1606	1608	1672	1675	1731	1758	1897	1914	1928
ROW/COLUMN	41	42	43	44	45	46	47	48	49	50
1	1939	2059	2072	2094	2117	2272	2289	2447	2453	2511
ROW/COLUMN	51	52	53	54	55	56	57	58	59	60
1	2517	2586	2594	2611	2617	2672	2683	2728	2739	2797

RELATIVE CLOCK 16800 ABSOLUTE CLOCK 16800

BLOCK COUNTS

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
1	0	929	11	0	51476	21	0	0	31	0	0	41	0	0
2	0	929	12	0	25738	22	0	0	32	0	25738	42	0	0
3	0	3	13	0	25738	23	0	0	33	0	25738	43	0	0
4	0	926	14	0	25738	24	0	0	34	0	25738	44	0	0
5	0	926	15	0	25738	25	0	0	35	0	25738	45	0	0
6	0	24812	16	0	25738	26	0	0	36	0	25738	46	0	0
7	0	51476	17	0	25738	27	0	0	37	0	25738	47	0	0
8	0	25738	18	0	25738	28	0	0	38	0	0	48	0	0
9	0	926	19	0	0	29	0	0	39	0	0	49	0	0
10	0	51476	20	0	0	30	0	0	40	0	0	50	0	0
BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
51	0	51476	61	0	0	71	0	86494	81	0	17509	91	0	0
52	0	25738	62	0	0	72	0	43247	82	0	24276	92	0	0
53	0	25738	63	0	0	73	0	43247	83	0	24276	93	0	0
54	0	25738	64	0	0	74	0	43247	84	0	24276	94	0	0
55	0	25738	65	0	0	75	0	43247	85	0	24276	95	0	0
56	0	0	66	0	51476	76	0	43247	86	0	24276	96	0	0
57	0	25738	67	0	25738	77	0	1462	87	0	32586	97	0	0
58	0	0	68	0	25738	78	0	1462	88	0	32586	98	0	0
59	0	25738	69	0	25738	79	0	41785	89	0	32586	99	0	0
60	0	25738	70	0	43247	80	0	17509	90	0	32586	100	0	0
BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
101	0	0	111	0	0	121	0	0	131	0	0	141	0	0
102	0	0	112	0	0	122	0	0	132	0	0	142	0	0
103	0	0	113	0	0	123	0	0	133	0	0	143	0	0
104	0	0	114	0	0	124	0	0	134	0	0	144	0	0
105	0	0	115	0	0	125	0	0	135	0	0	145	0	0
106	0	0	116	0	0	126	0	0	136	0	0	146	0	0
107	0	0	117	0	0	127	0	0	137	0	0	147	0	0
108	0	0	118	0	0	128	0	0	138	0	0	148	0	0
109	0	0	119	0	0	129	0	0	139	0	0	149	0	0
110	0	0	120	0	0	130	0	0	140	0	0	150	0	0
BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
151	0	25738	161	0	0	171	0	0	181	0	0	191	0	0
152	0	25738	162	0	3494	172	0	6988	182	0	0	192	0	0
153	0	25738	163	0	3494	173	0	3494	183	0	0	193	0	0
154	0	25738	164	0	3494	174	0	3494	184	0	0	194	0	0
155	0	25738	165	0	3494	175	0	3494	185	0	0	195	0	0
156	0	25738	166	0	0	176	0	3494	186	0	0	196	0	0
157	0	25738	167	0	0	177	0	0	187	0	0	197	0	0
158	0	0	168	0	0	178	0	0	188	0	0	198	0	0
159	0	0	169	0	0	179	0	0	189	0	0	199	0	0
160	0	0	170	0	0	180	0	0	190	0	0	200	0	3494
BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
201	0	3494	211	0	0	221	0	25738	231	0	3494	241	0	0
202	0	3494	212	0	0	222	0	25738	232	0	3494	242	0	6988
203	0	0	213	0	0	223	0	25738	233	0	3494	243	0	3494
204	0	0	214	0	0	224	0	25738	234	0	0	244	0	3494
205	0	0	215	0	0	225	0	25738	235	0	0	245	0	3494
206	0	0	216	0	0	226	0	0	236	0	0	246	0	3494
207	0	0	217	0	0	227	0	0	237	0	0	247	0	0
208	0	0	218	0	25738	228	0	0	238	0	0	248	0	0
209	0	0	219	0	25738	229	0	0	239	0	0	249	0	0

210	0	0	220	0	25738	230	0	3494	240	0	0	250	0	0	

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
251	0	0	261	0	0	271	0	0	281	0	0	291	0	0
252	0	0	262	0	14775	272	0	0	282	0	0	292	0	0
253	0	0	263	0	14775	273	0	0	283	0	14775	293	0	0
254	0	0	264	0	14775	274	0	0	284	0	14775	294	0	0
255	0	0	265	0	14775	275	0	0	285	0	14775	295	0	0
256	0	3494	266	0	14775	276	0	0	286	0	14775	296	0	0
257	0	3494	267	0	14775	277	0	0	287	0	14775	297	0	0
258	0	3494	268	0	14775	278	0	0	288	0	14775	298	0	0
259	0	0	269	0	14775	279	0	0	289	0	0	299	0	0
260	0	0	270	0	0	280	0	0	290	0	0	300	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
301	0	0	311	0	2	321	0	44848	331	0	12649	341	0	0
302	0	29550	312	0	1	322	0	44848	332	0	12649	342	0	0
303	0	14775	313	0	1	323	0	44848	333	0	12649	343	0	0
304	0	14775	314	0	1	324	0	44848	334	0	12649	344	0	0
305	0	0	315	0	29498	325	0	44848	335	0	12649	345	0	0
306	0	14775	316	0	14749	326	0	2100	336	0	44848	346	0	0
307	0	26	317	0	14749	327	0	2100	337	0	44848	347	0	0
308	0	14776	318	0	14749	328	0	42748	338	0	44848	348	0	0
309	0	14749	319	0	44848	329	0	30099	339	0	44848	349	0	0
310	0	1	320	0	89696	330	0	30099	340	0	0	350	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
351	0	0	361	0	14775	371	0	26365	381	0	0	391	0	26305
352	0	0	362	0	14775	372	0	26365	382	0	0	392	0	26365
353	0	0	363	0	25738	373	0	26365	383	0	0	393	0	26305
354	0	0	364	0	25738	374	0	26365	384	0	0	394	0	0
355	0	0	365	0	25738	375	0	0	385	0	0	395	0	0
356	0	0	366	0	40513	376	0	0	386	0	0	396	0	0
357	0	0	367	0	40513	377	0	0	387	0	0	397	0	0
358	0	0	368	0	14748	378	0	0	388	0	26365	398	0	0
359	0	0	369	0	26365	379	0	0	389	0	26365	399	0	0
360	0	14775	370	0	26365	380	0	0	390	0	26305	400	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
401	0	0	411	0	26365	421	0	26339	431	0	2173	441	0	50530
402	0	0	412	0	26	422	0	26339	432	0	2173	442	0	50530
403	0	0	413	0	26366	423	0	26339	433	0	48357	443	0	50530
404	0	0	414	0	26339	424	0	50530	434	0	24191	444	0	50530
405	0	0	415	0	1	425	0	101060	435	0	24191	445	0	0
406	0	0	416	0	2	426	0	50530	436	0	24166	446	0	0
407	0	52730	417	0	1	427	0	50530	437	0	24166	447	0	0
408	0	26365	418	0	1	428	0	50530	438	0	24166	448	0	0
409	0	26365	419	0	1	429	0	50530	439	0	24166	449	0	0
410	0	0	420	0	52678	430	0	50530	440	0	24166	450	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
451	0	0	461	0	0	471	0	0	481	0	0	491	0	0
452	0	0	462	0	0	472	0	0	482	0	0	492	0	0
453	0	0	463	0	0	473	0	0	483	0	0	493	0	0
454	0	0	464	0	0	474	0	0	484	0	0	494	0	0
455	0	0	465	0	0	475	0	0	485	0	0	495	0	0
456	0	0	466	0	0	476	0	0	486	0	0	496	0	0
457	0	0	467	0	0	477	0	0	487	0	0	497	0	0
458	0	0	468	0	0	478	0	0	488	0	0	498	0	0
459	0	0	469	0	0	479	0	0	489	0	0	499	0	0
460	0	0	470	0	0	480	0	0	490	0	0	500	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
501	0	0	511	0	0	521	0	0	531	0	0	541	0	0
502	0	0	512	0	0	522	0	0	532	0	0	542	0	0
503	0	0	513	0	0	523	0	0	533	0	0	543	0	0
504	0	0	514	0	0	524	0	0	534	0	0	544	0	0
505	0	0	515	0	0	525	0	0	535	0	0	545	0	0
506	0	0	516	0	0	526	0	0	536	0	0	546	0	0
507	0	0	517	0	0	527	0	0	537	0	0	547	0	0
508	0	0	518	0	0	528	0	0	538	0	0	548	0	0
509	0	0	519	0	0	529	0	0	539	0	0	549	0	0
510	0	0	520	0	0	530	0	0	540	0	0	550	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
551	0	0	561	0	0	571	0	7	581	0	203	591	0	28
552	0	0	562	0	0	572	0	7	582	0	6	592	0	28
553	0	0	563	0	0	573	0	7	583	0	6	593	0	28
554	0	0	564	0	14775	574	0	197	584	0	6	594	0	28
555	0	0	565	0	26365	575	0	204	585	0	6	595	0	28
556	0	0	566	0	0	576	0	204	586	0	6	596	0	28
557	0	0	567	0	6	577	0	204	587	0	6	597	0	28
558	0	0	568	0	1	578	0	204	588	0	197	598	0	28
559	0	0	569	0	204	579	1	204	589	0	197	599	0	28
560	0	0	570	0	204	580	0	203	590	0	197	600	0	28

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
601	0	28												
602	0	28												
603	0	28												

FACILITIES

FACILITY	NUMBER ENTRIES	AVERAGE TIME/TRAN	AVERAGE TOTAL TIME	UTILIZATION DURING AVAIL. TIME	UTILIZATION DURING UNAVAIL. TIME	CURRENT STATUS	PERCENT AVAILABILITY	TRANSACTION NUMBER SEIZING	TRANSACTION NUMBER PREEMPTING
4	128582	.000	.000				100.0		
10	76869	.000	.000				100.0		
50	204	69.422	.842				100.0	6	

STORAGES

STORAGE	CAPACITY	AVERAGE CONTENTS	ENTRIES	AVERAGE TIME/UNIT	AVERAGE UTILIZATION DURING TOTAL TIME	AVAIL. TIME	UNAVAIL. TIME	CURRENT STATUS	PERCENT AVAILABILITY	CURRENT CONTENTS	MAXIMUM CONTENTS
RAUEX	3600C	.000	8674698	.000	.000				100.0		1600
IGEXP	3600C	.000	8674698	.000	.000				100.0		1600
CPUEX	288	284.355	288	16587.406	.987				100.0	288	288
HAREC	45000000	9877.769	20397390	8.136	.000				100.0		772200
VRREC	36000000	467.540	965472	8.136	.000				100.0		36566
RUSIG	1080000	.000	140960572	.000	.000				100.0		34200
RAUSU	3600C	.000	14987124	.000	.000				100.0		3600
IGSUB	3600C	.000	14987124	.000	.000				100.0		3600
CPUSU	288	284.355	288	16587.406	.987				100.0	288	288

QUEUES

QUEUE	MAXIMUM CONTENTS	AVERAGE CONTENTS	TOTAL ENTRIES	ZERO ENTRIES	PERCENT ZEROS	AVERAGE TIME/TRANS	$AVERAGE TIME/TRANS	TABLE NUMBER	CURRENT CONTENTS
4	1	.000	40487	40487	100.0	.000	.000		
16	1	.000	26339	26339	100.0	.000	.000		

$AVERAGE TIME/TRANS = AVERAGE TIME/TRANS EXCLUDING ZERO ENTRIES

USER CHAINS

USER CHAIN	TOTAL ENTRIES	AVERAGE TIME/TRANS	CURRENT CONTENTS	AVERAGE CONTENTS	MAXIMUM CONTENTS
4	77439	.892	5	4.114	54
16	50532	3.210	2	9.655	28

FULLWORD SAVEVALUES

NUMBER	CONTENTS	NUMBER	CONTENTS	NUMBER	CONTENTS	NUMBER	CONTENTS	NUMBER	CONTENTS	NUMBER	CONTENTS
4	861932	16	1497871	20	5	21	5	22	44	23	22
24	44	25	297	50	16689	101	108	102	1800	103	1800
104	1800	105	1800	106	1800	107	1800	108	1800	109	1800
110	1800	111	1800	112	1800	113	1800	114	1800	115	1800
116	1800	117	1800	118	1800	119	1800	120	1800	121	1800
122	1800	123	1800	124	1800	125	1800	126	1800	127	1800
128	1800	131	108	132	1800	133	1800	134	1800	135	1800
136	1800	137	1800	138	1800	139	1800	140	1800	141	1800
142	1800	143	1800	144	1800	145	1800	146	1800	147	1800
148	1800	149	1800	150	1800	151	1800	152	1800	153	1800
154	1800	155	1800	156	1800	157	1800	158	1800	161	288
162	288	163	288	164	288	165	288	166	288	167	288
168	288	169	288	170	288	171	288	172	288	173	288
174	288	175	288	176	288	177	288	178	288	179	288
180	288	181	288	182	288	183	288	184	288	185	288
186	288	187	288	188	288	252	34200	253	34200	254	34200
255	34200	256	34200	257	34200	258	34200	259	34200	260	34200
261	34200	262	34200	263	34200	264	34200	265	34200	266	34200
267	34200	268	34200	269	34200	270	34200	271	34200	272	34200
273	34200	274	34200	275	34200	276	34200	277	34200	278	34200
281	108	282	3600	283	3600	284	3600	285	3600	286	3600
287	3600	288	3600	289	3600	290	3600	291	3600	292	3600
293	3600	294	3600	295	3600	296	3600	297	3600	298	3600
299	3600	300	3600	301	3600	302	3600	303	3600	304	3600
305	3600	306	3600	307	3600	308	3600	311	108	312	3600
313	3600	314	3600	315	3600	316	3600	317	3600	318	3600
319	3600	320	3600	321	3600	322	3600	323	3600	324	3600
325	3600	326	3600	327	3600	328	3600	329	3600	330	3600
331	3600	332	3600	333	3600	334	3600	335	3600	336	3600
337	3600	338	3600	341	288	342	288	343	288	344	288
345	288	346	288	347	288	348	288	349	288	350	288
351	288	352	288	353	288	354	288	355	288	356	288
357	288	358	288	359	288	360	288	361	288	362	288
363	288	364	288	365	288	366	288	367	288	368	288

RELATIVE CLOCK 16800 ABSOLUTE CLOCK 16800

BLOCK COUNTS

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
1	C	929	11	C	51476	21	C	0	31	C	0	41	C	0
2	C	929	12	C	25738	22	C	0	32	C	25738	42	0	0
3	0	3	13	C	25738	23	0	0	33	C	25738	43	C	0
4	C	926	14	0	25738	24	C	0	34	C	25738	44	0	0
5	C	926	15	C	25738	25	C	0	35	C	25738	45	C	0
6	0	24812	16	0	25738	26	0	0	36	0	25738	46	0	0
7	C	51476	17	C	25738	27	0	0	37	C	25738	47	0	0
8	C	25738	18	0	25738	28	0	C	38	C	C	48	C	0
9	C	926	19	C	C	29	0	0	39	C	C	49	C	0
10	C	51476	20	C	C	30	C	0	40	C	C	50	C	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
51	0	51476	61	C	0	71	C	86468	81	C	17496	91	C	0
52	C	25738	62	C	0	72	0	43234	82	0	24206	92	0	0
53	C	25738	63	C	0	73	0	43234	83	C	24206	93	0	0
54	C	25738	64	0	0	74	C	43234	84	0	24206	94	0	0
55	C	25738	65	C	C	75	C	43234	85	C	24206	95	C	0
56	0	C	66	0	51476	76	0	43234	86	0	24206	96	0	0
57	0	25738	67	0	25738	77	0	1472	87	0	32573	97	0	0
58	C	C	68	0	25738	78	0	1472	88	C	32573	98	C	C
59	C	25738	69	C	25738	79	C	41702	89	0	32573	99	C	0
60	C	25738	70	0	43234	80	0	17496	90	C	32573	100	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
101	C	C	111	C	0	121	C	0	131	C	0	141	C	0
102	C	C	112	C	0	122	C	0	132	C	0	142	C	0
103	C	C	113	C	C	123	C	0	133	C	0	143	C	0
104	0	0	114	0	0	124	0	0	134	0	0	144	0	0
105	C	C	115	C	0	125	C	C	135	C	C	145	C	0
106	C	C	116	C	C	126	0	0	136	0	0	146	0	0
107	C	C	117	C	0	127	C	0	137	C	0	147	C	0
108	C	C	118	C	C	128	0	0	138	0	C	148	0	0
109	C	C	119	C	0	129	C	0	139	C	0	149	C	0
110	0	C	120	C	0	130	0	0	140	C	0	150	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
151	C	25738	161	C	C	171	C	0	181	C	0	191	C	0
152	C	25738	162	C	3494	172	C	6988	182	C	C	192	0	0
153	C	25738	163	C	3494	173	C	3494	183	C	0	193	C	C
154	0	25738	164	0	3494	174	0	3494	184	0	0	194	0	C
155	C	25738	165	C	3494	175	C	3494	185	C	C	195	C	C
156	C	25738	166	C	C	176	C	3494	186	C	0	196	C	0
157	C	25738	167	C	0	177	C	0	187	C	0	197	0	0
158	C	C	168	C	C	178	C	C	188	C	0	198	0	0
159	0	C	169	C	C	179	C	C	189	C	0	199	C	0
160	C	C	170	0	0	180	0	0	190	0	0	200	0	3494

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
201	C	3494	211	C	0	221	C	25738	231	C	3494	241	C	0
202	C	3494	212	C	C	222	C	25738	232	C	3494	242	0	6988
203	0	C	213	C	C	223	C	25738	233	C	3494	243	C	3494
204	C	C	214	C	C	224	C	25738	234	C	0	244	0	3494
205	C	C	215	C	C	225	C	25738	235	C	C	245	C	3494
206	C	C	216	C	C	226	C	C	236	C	C	246	C	3494
207	C	C	217	C	C	227	C	C	237	C	C	247	C	C
208	C	C	218	C	25738	228	C	C	238	C	C	248	C	C
209	C	C	219	C	25738	229	C	C	239	C	C	249	C	C

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
251	0	0	261	0	0	271	0	0	281	0	0	291	0	0
252	0	0	262	0	14775	272	0	0	282	0	0	292	0	0
253	0	0	263	0	14775	273	0	0	283	0	14775	293	0	0
254	0	0	264	0	14775	274	0	0	284	0	14775	294	0	0
255	0	0	265	0	14775	275	0	0	285	0	4775	295	0	0
256	0	3494	266	0	14775	276	0	0	286	0	14775	296	0	0
257	0	3494	267	0	14775	277	0	0	287	0	14775	297	0	0
258	0	3494	268	0	14775	278	0	0	288	0	14775	298	0	0
259	0	0	269	0	14775	279	0	0	289	0	0	299	0	0
260	0	0	270	0	0	280	0	0	290	0	0	300	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
301	0	0	311	0	2	321	0	44848	331	0	12646	341	0	0
302	0	29550	312	0	1	322	0	44848	332	0	12646	342	0	0
303	0	14775	313	0	1	323	0	44848	333	0	12646	343	0	0
304	0	14775	314	0	1	324	0	44848	334	0	12646	344	0	0
305	0	0	315	0	29472	325	0	44848	335	0	12646	345	0	0
306	0	14775	316	0	14736	326	0	2090	336	0	44848	346	0	0
307	0	39	317	0	14736	327	0	2090	337	0	44848	347	0	0
308	0	14776	318	0	14736	328	0	42758	338	0	44848	348	0	0
309	0	14736	319	0	44848	329	0	30112	339	0	44848	349	0	0
310	0	1	320	0	89696	330	0	30112	340	0	0	350	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
351	0	0	361	0	14775	371	0	26365	381	0	0	391	0	26365
352	0	0	362	0	14775	372	0	26365	382	0	0	392	0	26365
353	0	0	363	0	25738	373	0	26365	383	0	0	393	0	26365
354	0	0	364	0	25738	374	0	26365	384	0	0	394	0	0
355	0	0	365	0	25738	375	0	0	385	0	0	395	0	0
356	0	0	366	0	40513	376	0	0	386	0	0	396	0	0
357	0	0	367	0	40513	377	0	0	387	0	0	397	0	0
358	0	0	368	0	14146	378	0	0	388	0	26365	398	0	0
359	0	0	369	0	26365	379	0	0	389	0	26365	399	0	0
360	0	14775	370	0	26365	380	0	0	390	0	26365	400	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
401	0	0	411	0	26365	421	0	26326	431	0	1549	441	0	51139
402	0	0	412	0	39	422	0	26326	432	0	1549	442	0	51139
403	0	0	413	0	26366	423	0	26326	433	0	49590	443	0	51139
404	0	0	414	0	26326	424	0	51139	434	0	24813	444	0	51139
405	0	0	415	0	1	425	0	102278	435	0	24813	445	0	0
406	0	0	416	0	2	426	0	51139	436	0	24777	446	0	0
407	0	52730	417	0	1	427	0	51139	437	0	24777	447	0	0
408	0	26365	418	0	1	428	0	51139	438	0	24777	448	0	0
409	0	26365	419	0	1	429	0	51139	439	0	24777	449	0	0
410	0	0	420	0	52652	430	0	51139	440	0	24777	450	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
451	0	0	461	0	0	471	0	0	481	0	0	491	0	0
452	0	0	462	0	0	472	0	0	482	0	0	492	0	0
453	0	0	463	0	0	473	0	0	483	0	0	493	0	0
454	0	0	464	0	0	474	0	0	484	0	0	494	0	0
455	0	0	465	0	0	475	0	0	485	0	0	495	0	0
456	0	0	466	0	0	476	0	0	486	0	0	496	0	0
457	0	0	467	0	0	477	0	0	487	0	0	497	0	0
458	0	0	468	0	0	478	0	0	488	0	0	498	0	0
459	0	0	469	0	0	479	0	0	489	0	0	499	0	0
460	0	0	470	0	0	480	0	0	490	0	0	500	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
501	0	0	511	0	0	521	0	0	531	0	0	541	0	0
502	0	0	512	0	0	522	0	0	532	0	0	542	0	0
503	0	0	513	0	0	523	0	0	533	0	0	543	0	0
504	0	0	514	0	0	524	0	0	534	0	0	544	0	0
505	0	0	515	0	0	525	0	0	535	0	0	545	0	0
506	0	0	516	0	0	526	0	0	536	0	0	546	0	0
507	0	0	517	0	0	527	0	0	537	0	0	547	0	0
508	0	0	518	0	0	528	0	0	538	0	0	548	0	0
509	0	0	519	0	0	529	0	0	539	0	0	549	0	0
510	0	0	520	0	0	530	0	0	540	0	0	550	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
551	0	0	561	0	0	571	0	7	581	0	203	591	0	28
552	0	0	562	0	0	572	0	7	582	0	6	592	0	28
553	0	0	563	0	0	573	0	7	583	0	6	593	0	28
554	0	0	564	0	14775	574	0	197	584	0	6	594	0	28
555	0	0	565	0	26365	575	0	204	585	0	6	595	0	28
556	0	0	566	0	0	576	0	204	586	0	6	596	0	28
557	0	0	567	0	0	577	0	204	587	0	6	597	0	28
558	0	0	568	0	1	578	0	204	588	0	197	598	0	28
559	0	0	569	0	204	579	1	204	589	0	197	599	0	28
560	0	0	570	0	204	580	0	203	590	0	197	600	0	28

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
601	0	28									
602	0	28									
603	0	28									

FACILITIES

FACILITY	NUMBER ENTRIES	AVERAGE TIME/TRAN	AVERAGE UTILIZATION DURING TOTAL TIME	AVERAGE UTILIZATION DURING AVAIL. TIME	AVERAGE UTILIZATION DURING UNAVAIL. TIME	CURRENT STATUS	PERCENT AVAILABILITY	TRANSACTION NUMBER SEIZING	TRANSACTION NUMBER PREEMPTING
4	128556	.000	.000				100.0		
15	77465	.000	.000				100.0		
50	204	69.422	.842				100.0	6	

STORAGES

STORAGE	CAPACITY	AVERAGE CONTENTS	ENTRIES	AVERAGE TIME/UNIT	AVERAGE UTILIZATION DURING- TOTAL TIME	AVAIL. TIME	UNAVAIL. TIME	CURRENT STATUS	PERCENT AVAILABILITY	CURRENT CONTENTS	MAXIMUM CONTENTS
INDEX	36000	.000	8074698	.000	.000				100.0		1000
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]		[illegible]
CPUEX	432	426.365	432	16580.859	.986				100.0	432	432
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]		[illegible]
WAREC	3600000	467.540	965472	8.136	.000				100.0		30566
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]		[illegible]
INDSU	36000	.000	14967124	.000	.000				100.0		3000
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]		[illegible]
CPUSU	432	426.365	432	16580.859	.986				100.0	432	432

QUEUES

QUEUE	MAXIMUM CONTENTS	AVERAGE CONTENTS	TOTAL ENTRIES	ZERO ENTRIES	PERCENT ZEROS	AVERAGE TIME/TRANS	*AVERAGE TIME/TRANS	TABLE NUMBER	CURRENT CONTENTS
4	1	.000	40474	40474	100.0	.000	.000		
15	1	.000	26326	26326	100.0	.000	.000		

*AVERAGE TIME/TRANS = AVERAGE TIME/TRANS EXCLUDING ZERO ENTRIES

USER CHAINS

USER CHAIN	TOTAL ~~ENTRIES~~	AVERAGE ~~TIME/TRANS~~	CURRENT ~~CONTENTS~~	AVERAGE ~~CONTENTS~~	MAXIMUM ~~CONTENTS~~
4	77420	.977	5	4.503	54
~~10~~	~~51143~~	~~4.232~~	~~4~~	~~13.637~~	~~41~~

FULLWORD SAVEVALUES

NUMBER	CONTENTS	NUMBER	CONTENTS	NUMBER	CONTENTS	NUMBER	CONTENTS	NUMBER	CONTENTS	NUMBER	CONTENTS
4	861931	16	1497727	20	5	21	5	42	44	25	24
24	44	25	69	50	10639	101	108	102	1800	103	1800
104	1800	105	1800	106	1800	107	1800	108	1800	109	1800
110	1800	111	1800	112	1800	113	1800	114	1800	115	1800
116	1800	117	1800	118	1800	119	1800	120	1800	121	1800
122	1800	123	1800	124	1800	125	1800	126	1800	127	1800
128	1800	131	108	132	1800	133	1800	134	1800	135	1800
136	1800	137	1800	138	1800	139	1800	140	1800	141	1800
142	1800	143	1800	144	1800	145	1800	146	1800	147	1800
148	1800	149	1800	150	1800	151	1800	152	1800	153	1800
154	1800	155	1800	156	1800	157	1800	158	1800	161	432
162	432	163	432	164	432	165	432	166	432	167	432
168	432	169	432	170	432	171	432	172	432	173	432
174	432	175	432	176	432	177	432	178	432	179	432
180	432	181	432	182	432	183	432	184	432	185	432
186	432	187	432	188	432	252	34200	253	34200	254	34200
255	34200	256	34200	257	34200	258	34200	259	34200	260	34200
261	34200	262	34200	263	34200	264	34200	265	34200	266	34200
267	34200	268	34200	269	34200	270	34200	271	34200	272	34200
273	34200	274	34200	275	34200	276	34200	277	34200	278	34200
281	108	282	3600	283	3600	284	3600	285	3600	286	3600
287	3600	288	3600	289	3600	290	3600	291	3600	292	3600
293	3600	294	3600	295	3600	296	3600	297	3600	298	3600
299	3600	300	3600	301	3600	302	3600	303	3600	304	3600
305	3600	306	3600	307	3600	308	3600	311	108	312	3600
313	3600	314	3600	315	3600	316	3600	317	3600	318	3600
319	3600	320	3600	321	3600	322	3600	323	3600	324	3600
325	3600	326	3600	327	3600	328	3600	329	3600	330	3600
331	3600	332	3600	333	3600	334	3600	335	3600	336	3600
337	3600	338	3600	341	432	342	432	343	432	344	432
345	432	346	432	347	432	348	432	349	432	350	432
351	432	352	432	353	432	354	432	355	432	356	432
357	432	358	432	359	432	360	432	361	432	362	432
363	432	364	432	365	432	366	432	367	432	368	432

RELATIVE CLOCK 16800 ABSOLUTE CLOCK 16800

BLOCK COUNTS

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
1	0	929	11	0	51476	21	0	0	31	0	0	41	0	0
2	0	929	12	0	25738	22	0	0	32	0	25738	42	0	0
3	0	3	13	0	25738	23	0	0	33	0	25738	43	0	0
4	0	926	14	0	25738	24	0	0	34	0	25738	44	0	0
5	0	926	15	0	25738	25	0	0	35	0	25738	45	0	0
6	0	24812	16	0	25738	26	0	0	36	0	25738	46	0	0
7	0	51476	17	0	25738	27	0	0	37	0	25738	47	0	0
8	0	25738	18	0	25738	28	0	0	38	0	0	48	0	0
9	0	926	19	0	0	29	0	0	39	0	0	49	0	0
10	0	51476	20	0	0	30	0	0	40	0	0	50	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
51	0	51476	61	0	0	71	0	60494	81	0	17509	91	0	0
52	0	25738	62	0	0	72	0	43247	82	0	24276	92	0	0
53	0	25738	63	0	0	73	0	43247	83	0	24276	93	0	0
54	0	25738	64	0	0	74	0	43247	84	0	24276	94	0	0
55	0	25738	65	0	0	75	0	43247	85	0	24276	95	0	0
56	0	0	66	0	51476	76	0	43247	86	0	24276	96	0	0
57	0	25738	67	0	25738	77	0	1462	87	0	32586	97	0	0
58	0	0	68	0	25738	78	0	1462	88	0	32586	98	0	0
59	0	25738	69	0	25738	79	0	17509	89	0	32586	99	0	0
60	0	25738	70	0	43247	80	0	17509	90	0	32586	100	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
101	0	0	111	0	0	121	0	0	131	0	0	141	0	0
102	0	0	112	0	0	122	0	0	132	0	0	142	0	0
103	0	0	113	0	0	123	0	0	133	0	0	143	0	0
104	0	0	114	0	0	124	0	0	134	0	0	144	0	0
105	0	0	115	0	0	125	0	0	135	0	0	145	0	0
106	0	0	116	0	0	126	0	0	136	0	0	146	0	0
107	0	0	117	0	0	127	0	0	137	0	0	147	0	0
108	0	0	118	0	0	128	0	0	138	0	0	148	0	0
109	0	0	119	0	0	129	0	0	139	0	0	149	0	0
110	0	0	120	0	0	130	0	0	140	0	0	150	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
151	0	25738	161	0	0	171	0	0	181	0	0	191	0	19345
152	0	25092	162	0	20193	172	0	23087	182	0	0	192	0	19345
153	0	6393	163	0	20193	173	0	21991	183	0	0	193	0	0
154	0	6393	164	0	20193	174	0	1096	184	0	0	194	0	0
155	0	6393	165	0	20193	175	0	848	185	0	0	195	0	0
156	0	6393	166	0	0	176	0	848	186	0	0	196	0	0
157	0	6393	167	0	0	177	0	848	187	0	0	197	0	0
158	0	0	168	0	0	178	0	848	188	0	21991	198	0	0
159	0	0	169	0	0	179	0	0	189	0	19345	199	0	0
160	0	0	170	0	0	180	0	0	190	0	19345	200	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
201	0	0	211	0	19345	221	0	25738	231	0	0	241	0	1
202	0	3494	212	0	19345	222	0	25092	232	0	20193	242	0	12366
203	0	3494	213	0	19345	223	0	6393	233	0	7827	243	0	12366
204	0	3494	214	0	0	224	0	6393	234	0	7826	244	0	8675
205	0	0	215	0	0	225	0	6393	235	0	7826	245	0	6979
206	0	0	216	0	0	226	0	6393	236	0	1	246	0	6979
207	0	0	217	0	0	227	0	6393	237	0	1	247	0	1696
208	0	19345	218	0	0	228	0	0	238	0	1	248	0	848
209	0	19345	219	0	0	229	0	0	239	0	1	249	0	848

210	0	19345	220	0	25738	230	0	0	240	0	1	250	0	848	

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
251	0	848	261	0	848	271	0	14775	281	0	0	291	0	14775
252	0	0	262	0	848	272	0	14775	282	0	0	292	0	14775
253	0	0	263	0	848	273	0	14775	283	0	0	293	0	14775
254	0	0	264	0	0	274	0	14775	284	0	0	294	0	0
255	0	0	265	0	0	275	0	0	285	0	0	295	0	0
256	0	0	266	0	0	276	0	0	286	0	0	296	0	0
257	0	0	267	0	14775	277	0	0	287	0	0	297	0	0
258	0	0	268	0	14775	278	0	0	288	0	4775	298	0	0
259	0	0	269	0	14775	279	0	0	289	0	14775	299	0	0
260	0	0	270	0	14775	280	0	0	290	0	14775	300	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
301	0	0	311	0	14775	321	0	14749	331	0	21?0	341	0	44848
302	0	0	312	0	26	322	0	14749	332	0	2150	342	0	44848
303	0	0	313	0	14776	323	0	14749	333	0	42748	343	0	44848
304	0	0	314	0	14749	324	0	44848	334	0	30099	344	0	44848
305	0	0	315	0	1	325	0	89696	335	0	30099	345	0	0
306	0	0	316	0	2	326	0	44848	336	0	12649	346	0	0
307	0	29550	317	0	1	327	0	44848	337	0	12649	347	0	0
308	0	14775	318	0	1	328	0	44848	338	0	12649	348	0	0
309	0	14775	319	0	1	329	0	44848	339	0	12649	349	0	0
310	0	0	320	0	29498	330	0	44848	340	0	12649	350	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
351	0	0	361	0	0	371	0	40513	381	0	0	391	0	0
352	0	0	362	0	0	372	0	40513	382	0	0	392	0	0
353	0	0	363	0	0	373	0	14148	383	0	0	393	0	26365
354	0	0	364	0	0	374	0	26365	384	0	0	394	0	26365
355	0	0	365	0	14775	375	0	26365	385	0	0	395	0	26365
356	0	0	366	0	14775	376	0	26365	386	0	0	396	0	26365
357	0	0	367	0	14775	377	0	26365	387	0	0	397	0	26365
358	0	0	368	0	25738	378	0	26365	388	0	0	398	0	26365
359	0	0	369	0	25738	379	0	26365	389	0	0	399	0	0
360	0	0	370	0	25738	380	0	0	390	0	0	400	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
401	0	0	411	0	0	421	0	2	431	0	50530	441	0	24166
402	0	0	412	0	52730	422	0	1	432	0	50530	442	0	24166
403	0	0	413	0	26365	423	0	1	433	0	50530	443	0	24166
404	0	0	414	0	26365	424	0	1	434	0	50530	444	0	24166
405	0	0	415	0	0	425	0	52678	435	0	50530	445	0	24166
406	0	0	416	0	26365	426	0	26339	436	0	2173	446	0	50530
407	0	0	417	0	26	427	0	26339	437	0	2173	447	0	50530
408	0	0	418	0	26366	428	0	26339	438	0	48357	448	0	50530
409	0	0	419	0	26339	429	0	50530	439	0	24191	449	0	50530
410	0	0	420	0	1	430	0	101060	440	0	24191	450	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
451	0	0	461	0	0	471	0	0	481	0	0	491	0	0
452	0	0	462	0	0	472	0	0	482	0	0	492	0	0
453	0	0	463	0	0	473	0	0	483	0	0	493	0	0
454	0	0	464	0	0	474	0	0	484	0	0	494	0	0
455	0	0	465	0	0	475	0	0	485	0	0	495	0	0
456	0	0	466	0	0	476	0	0	486	0	0	496	0	0
457	0	0	467	0	0	477	0	0	487	0	0	497	0	0
458	0	0	468	0	0	478	0	0	488	0	0	498	0	0
459	0	0	469	0	0	479	0	0	489	0	0	499	0	0
460	0	0	470	0	0	480	0	0	490	0	0	500	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
501	0	0	511	0	0	521	0	0	531	0	0	541	0	0
502	0	0	512	0	0	522	0	0	532	0	0	542	0	0
503	0	0	513	0	0	523	0	0	533	0	0	543	0	0
504	0	0	514	0	0	524	0	0	534	0	0	544	0	0
505	0	0	515	0	0	525	0	0	535	0	0	545	0	0
506	0	0	516	0	0	526	0	0	536	0	0	546	0	0
507	0	0	517	0	0	527	0	0	537	0	0	547	0	0
508	0	0	518	0	0	528	0	0	538	0	0	548	0	0
509	0	0	519	0	0	529	0	0	539	0	0	549	0	0
510	0	0	520	0	0	530	0	0	540	0	0	550	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
551	0	0	561	0	0	571	0	14775	581	0	197	591	0	6
552	0	0	562	0	0	572	0	26365	582	0	204	592	0	6
553	0	0	563	0	0	573	0	0	583	0	204	593	0	6
554	0	0	564	0	0	574	0	0	584	0	204	594	0	6
555	0	0	565	0	0	575	0	1	585	0	204	595	0	197
556	0	0	566	0	0	576	0	204	586	1	204	596	0	197
557	0	0	567	0	0	577	0	204	587	0	203	597	0	197
558	0	0	568	0	0	578	0	7	588	0	203	598	0	1
559	0	0	569	0	0	579	0	7	589	0	6	599	0	1
560	0	0	570	0	0	580	0	7	590	0	6	600	0	1

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
601	0	28	611	0	28									
602	0	28	612	0	28									
603	0	28	613	0	28									
604	0	28												
605	0	28												
606	0	28												
607	0	28												
608	0	28												
609	0	28												
610	0	28												

FACILITIES

FACILITY	NUMBER ENTRIES	AVERAGE TIME/TRAN	AVERAGE TOTAL TIME	UTILIZATION DURING AVAIL. TIME	UTILIZATION DURING UNAVAIL. TIME	CURRENT STATUS	PERCENT AVAILABILITY	TRANSACTION NUMBER SEIZING	TRANSACTION NUMBER PREEMPTING
4	128582	.000	.000				100.0		
15	76359	.000	.000				100.0		
50	204	69.422	.842				100.0	6	

STORAGES

STORAGE	CAPACITY	AVERAGE CONTENTS	ENTRIES	AVERAGE TIME/UNIT	AVERAGE TOTAL TIME	UTILIZATION DURING AVAIL. TIME	UTILIZATION DURING UNAVAIL. TIME	CURRENT STATUS	PERCENT AVAILABILITY	CURRENT CONTENTS	MAXIMUM CONTENTS
RAUEX	36000	.000	8674698	.000	.000				100.0		1800
IOEXP	36000	.000	8674696	.000	.000				100.0		1800
CPUEX	288	284.355	288	16587.406	.987				100.0	288	288
HRSEC	36000000	1521924.000	41121762	8792.621	.597				100.0	36000000	36000000
VRSEC	36000000	467.540	5055595	1.554	.000				100.0		36566
FRSIG	36000	.000	4813153	.000	.000				100.0		1620
IOSIG	1080000	758571.375	35524348	358.740	.792				100.0	1080000	1080000
RAOSU	36000	.000	14987124	.000	.000				100.0		3600
IOSUB	36000	.000	14987124	.000	.000				100.0		3600
CPUSU	288	284.355	288	16587.406	.987				100.0	288	288

QUEUES

QUEUE	MAXIMUM CONTENTS	AVERAGE CONTENTS	TOTAL ENTRIES	ZERO ENTRIES	PERCENT ZEROS	AVERAGE TIME/TRANS	$AVERAGE TIME/TRANS	TABLE NUMBER	CURRENT CONTENTS
4	1	.000	40487	40487	100.0	.000	.000		
16	1	.000	26339	26339	100.0	.000	.000		

$AVERAGE TIME/TRANS = AVERAGE TIME/TRANS EXCLUDING ZERO ENTRIES

USER CHAINS

USER CHAIN	TOTAL ENTRIES	AVERAGE TIME/TRANS	CURRENT CONTENTS	AVERAGE CONTENTS	MAXIMUM CONTENTS
4	77439	.892	5	4.114	54
16	57532	3.21?	2	9.655	29

FULLWORD SAVEVALUES

NUMBER	CONTENTS	NUMBER	CONTENTS	NUMBER	CONTENTS	NUMBER	CONTENTS	NUMBER	CONTENTS	NUMBER	CONTENTS
4	861932	5	65703066	12	36000000	16	1497871	20	5	21	5
22	44	23	22	24	44	25	297	50	16689	101	108
102	1800	103	1800	104	1800	105	1800	106	1800	107	1800
108	1800	109	1800	110	1800	111	1800	112	1800	113	1800
114	1800	115	1800	116	1800	117	1800	118	1800	119	1800
120	1800	121	1800	122	1800	123	1800	124	1800	125	1800
126	1800	127	1800	128	1800	131	108	132	1800	133	1800
134	1800	135	1800	136	1800	137	1800	138	1800	139	1800
140	1800	141	1800	142	1800	143	1800	144	1800	145	1800
146	1800	147	1800	148	1800	149	1800	150	1800	151	1800
152	1800	153	1800	154	1800	155	1800	156	1800	157	1800
158	1800	161	288	162	288	163	288	164	288	165	288
166	288	167	288	168	288	169	288	170	288	171	288
172	288	173	288	174	288	175	288	176	288	177	288
178	288	179	288	180	288	181	288	182	288	183	288
184	288	185	288	186	288	187	288	188	288	199	5
200	13	201	16	202	20	203	28	204	35	205	36
206	36	207	36	208	36	209	36	210	36	211	36
212	36	213	36	214	36	215	36	216	36	217	36
218	36	281	108	282	3600	283	3600	284	3600	285	3600
286	3600	287	3600	288	3600	289	3600	290	3600	291	3600
292	3600	293	3600	294	3600	295	3600	296	3600	297	3600
298	3600	299	3600	300	3600	301	3600	302	3600	303	3600
304	3600	305	3600	306	3600	307	3600	308	3600	311	108
312	3600	313	3600	314	3600	315	3600	316	3600	317	3600
318	3600	319	3600	320	3600	321	3600	322	3600	323	3600
324	3600	325	3600	326	3600	327	3600	328	3600	329	3600
330	3600	331	3600	332	3600	333	3600	334	3600	335	3600
336	3600	337	3600	338	3600	341	288	342	288	343	288
344	288	345	288	346	288	347	288	348	288	349	288
350	288	351	288	352	288	353	288	354	288	355	288
356	288	357	288	358	288	359	288	360	288	361	288
362	288	363	288	364	288	365	288	366	288	367	288
368	288										

RELATIVE CLOCK 16800 ABSOLUTE CLOCK 16800

BLOCK COUNTS

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
1	0	929	11	0	51476	21	0	0	31	0	0	41	0	0
2	0	929	12	0	25738	22	0	0	32	0	25738	42	0	0
3	0	3	13	0	25738	23	0	0	33	0	25738	43	0	0
4	0	926	14	0	25738	24	0	0	34	0	25738	44	0	0
5	0	926	15	0	25738	25	0	0	35	0	25738	45	0	0
6	0	24812	16	0	25738	26	0	0	36	0	25738	46	0	0
7	0	51476	17	0	25738	27	0	0	37	0	25738	47	0	0
8	0	25738	18	0	25738	28	0	0	38	0	0	48	0	0
9	0	926	19	0	0	29	0	0	39	0	0	49	0	0
10	0	51476	20	0	0	30	0	0	40	0	0	50	0	0
51	0	51476	61	0	0	71	0	86494	81	0	17509	91	0	0
52	0	25738	62	0	0	72	0	43247	82	0	24276	92	0	0
53	0	25738	63	0	0	73	0	43247	83	0	24276	93	0	0
54	0	25738	64	0	0	74	0	43247	84	0	24276	94	0	0
55	0	25738	65	0	0	75	0	43247	85	0	24276	95	0	0
56	0	0	66	0	51476	76	0	43247	86	0	24276	96	0	0
57	0	25738	67	0	25738	77	0	1402	87	0	32586	97	0	0
58	0	0	68	0	25738	78	0	1402	88	0	32586	98	0	0
59	0	25738	69	0	25738	79	0	41785	89	0	32586	99	0	0
60	0	25738	70	0	43247	80	0	17509	90	0	32586	100	0	0
101	0	0	111	0	0	121	0	0	131	0	0	141	0	0
102	0	0	112	0	0	122	0	0	132	0	0	142	0	0
103	0	0	113	0	0	123	0	0	133	0	0	143	0	0
104	0	0	114	0	0	124	0	0	134	0	0	144	0	0
105	0	0	115	0	0	125	0	0	135	0	0	145	0	0
106	0	0	116	0	0	126	0	0	136	0	0	146	0	0
107	0	0	117	0	0	127	0	0	137	0	0	147	0	0
108	0	0	118	0	0	128	0	0	138	0	0	148	0	0
109	0	0	119	0	0	129	0	0	139	0	0	149	0	0
110	0	0	120	0	0	130	0	0	140	0	0	150	0	0
151	0	25738	161	0	0	171	0	0	181	0	0	191	0	0
152	0	25738	162	0	5572	172	0	11144	182	0	0	192	0	0
153	0	25738	163	0	5572	173	0	5572	183	0	0	193	0	0
154	0	25738	164	0	5572	174	0	5572	184	0	0	194	0	0
155	0	25738	165	0	5572	175	0	5572	185	0	0	195	0	0
156	0	25738	166	0	0	176	0	5572	186	0	0	196	0	0
157	0	25738	167	0	0	177	0	0	187	0	0	197	0	0
158	0	0	168	0	0	178	0	0	188	0	0	198	0	0
159	0	0	169	0	0	179	0	0	189	0	0	199	0	0
160	0	0	170	0	0	180	0	0	190	0	0	200	0	5572
201	0	5572	211	0	0	221	0	25738	231	0	5572	241	0	0
202	0	5572	212	0	0	222	0	25738	232	0	5572	242	0	11144
203	0	0	213	0	0	223	0	25738	233	0	5572	243	0	5572
204	0	0	214	0	0	224	0	25738	234	0	0	244	0	5572
205	0	0	215	0	0	225	0	25738	235	0	0	245	0	5572
206	0	0	216	0	0	226	0	0	236	0	0	246	0	5572
207	0	0	217	0	0	227	0	0	237	0	0	247	0	0
208	0	0	218	0	25738	228	0	0	238	0	0	248	0	0
209	0	0	219	0	25738	229	0	0	239	0	0	249	0	0

219	0	0	220	0	25738	230	0	5572	240	0	0	250	0	0	

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
251	0	0	261	0	0	271	0	0	281	0	0	291	0	0
252	0	0	262	0	14775	272	0	0	282	0	0	292	0	0
253	0	0	263	0	14775	273	0	0	283	0	14775	293	0	0
254	0	0	264	0	14775	274	0	0	284	0	14775	294	0	0
255	0	0	265	0	14775	275	0	0	285	0	14775	295	0	0
256	0	5572	266	0	14775	276	0	0	286	0	14775	296	0	0
257	0	5572	267	0	14775	277	0	0	287	0	14775	297	0	0
258	0	5572	268	0	14775	278	0	0	288	0	14775	298	0	0
259	0	0	269	0	14775	279	0	0	289	0	0	299	0	0
260	0	0	270	0	0	280	0	0	290	0	0	300	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
301	0	0	311	0	2	321	0	44848	331	0	12649	341	0	0
302	0	29550	312	0	1	322	0	44848	332	0	12649	342	0	0
303	0	14775	313	0	1	323	0	44848	333	0	12649	343	0	0
304	0	14775	314	0	1	324	0	44848	334	0	12649	344	0	0
305	0	0	315	0	29498	325	0	44848	335	0	12649	345	0	0
306	0	14775	316	0	14749	326	0	21[illegible]	336	0	[illegible]	346	0	0
307	0	26	317	0	14749	327	0	21[illegible]	337	0	44848	347	0	0
308	0	14776	318	0	14749	328	0	42748	338	0	44848	348	0	0
309	0	14749	319	0	44848	329	0	30099	339	0	44848	349	0	0
310	0	1	320	0	89696	330	0	30099	340	0	0	350	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
351	0	0	361	0	14775	371	0	26365	381	0	0	391	0	26365
352	0	0	362	0	14775	372	0	26365	382	0	0	392	0	26365
353	0	0	363	0	25738	373	0	26365	383	0	0	393	0	26365
354	0	0	364	0	25738	374	0	26365	384	0	0	394	0	0
355	0	0	365	0	25738	375	0	0	385	0	0	395	0	0
356	0	0	366	0	40513	376	0	0	386	0	0	396	0	0
357	0	0	367	0	40513	377	0	0	387	0	0	397	0	0
358	0	0	368	0	14148	378	0	0	388	0	26365	398	0	0
359	0	0	369	0	26365	379	0	0	389	0	26365	399	0	0
360	0	14775	370	0	26365	380	0	0	390	0	26365	400	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
401	0	0	411	0	26365	421	0	26339	431	0	2173	441	0	50530
402	0	0	412	0	26	422	0	26339	432	0	2173	442	0	50530
403	0	0	413	0	26366	423	0	26339	433	0	48357	443	0	50530
404	0	0	414	0	26339	424	0	50530	434	0	24191	444	0	50530
405	0	0	415	0	1	425	0	101060	435	0	24191	445	0	0
406	0	0	416	0	2	426	0	50530	436	0	24165	446	0	0
407	0	52730	417	0	1	427	0	50530	437	0	24166	447	0	0
408	0	26365	418	0	1	428	0	50530	438	0	24166	448	0	0
409	0	26365	419	0	1	429	0	50530	439	0	24166	449	0	0
410	0	0	420	0	52678	430	0	50530	440	0	24166	450	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
451	0	0	461	0	0	471	0	0	481	0	0	491	0	0
452	0	0	462	0	0	472	0	0	482	0	0	492	0	0
453	0	0	463	0	0	473	0	0	483	0	0	493	0	0
454	0	0	464	0	0	474	0	0	484	0	0	494	0	0
455	0	0	465	0	0	475	0	0	485	0	0	495	0	0
456	0	0	466	0	0	476	0	0	486	0	0	496	0	0
457	0	0	467	0	0	477	0	0	487	0	0	497	0	0
458	0	0	468	0	0	478	0	0	488	0	0	498	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
501	0	0	511	0	0	521	0	0	531	0	0	541	0	0
502	0	0	512	0	0	522	0	0	532	0	0	542	0	0
503	0	0	513	0	0	523	0	0	533	0	0	543	0	0
504	0	0	514	0	0	524	0	0	534	0	0	544	0	0
505	0	0	515	0	0	525	0	0	535	0	0	545	0	0
506	0	0	516	0	0	526	0	0	536	0	0	546	0	0
507	0	0	517	0	0	527	0	0	537	0	0	547	0	0
508	0	0	518	0	0	528	0	0	538	0	0	548	0	0
509	0	0	519	0	0	529	0	0	539	0	0	549	0	0
510	0	0	520	0	0	530	0	0	540	0	0	550	0	0

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
551	0	0	561	0	0	571	0	7	581	0	203	591	0	28
552	0	0	562	0	0	572	0	7	582	0	6	592	0	28
553	0	0	563	0	0	573	0	7	583	0	6	593	0	28
554	0	0	564	0	14775	574	0	197	584	0	6	594	0	28
555	0	0	565	0	26365	575	0	204	585	0	6	595	0	28
556	0	0	566	0	0	576	0	204	586	0	6	596	0	28
557	0	0	567	0	0	577	0	204	587	0	6	597	0	28
558	0	0	568	0	1	578	0	204	588	0	197	598	0	28
559	0	0	569	0	204	579	1	204	589	0	197	599	0	28
560	0	0	570	0	204	580	0	203	590	0	197	600	0	28

BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL	BLOCK	CURRENT	TOTAL
601	0	28												
602	0	28												
603	0	28												

FACILITIES

FACILITY	NUMBER ENTRIES	AVERAGE TIME/TRAN	AVERAGE UTILIZATION DURING TOTAL TIME	AVERAGE UTILIZATION DURING AVAIL. TIME	AVERAGE UTILIZATION DURING UNAVAIL. TIME	CURRENT STATUS	PERCENT AVAILABILITY	TRANSACTION NUMBER SEIZING	TRANSACTION NUMBER PREEMPTING
4	128582	.0[illegible]	.000				100.[illegible]		
18	70869	.056	.900				100.0		
50	204	63.137	.766				100.0	6	

STORAGES

STORAGE	CAPACITY	AVERAGE CONTENTS	ENTRIES	AVERAGE TIME/UNIT	AVERAGE TOTAL TIME	UTILIZATION DURING AVAIL. TIME	UTILIZATION DURING UNAVAIL. TIME	CURRENT STATUS	PERCENT AVAILABILITY	CURRENT CONTENTS	MAXIMUM CONTENTS
RAUEX	36000	.000	6674096	.000	.000				100.0		1800
IOEXP	36000	.000	6674093	.000	.000				100.0	288	288
CPUEX	288	284.355	288	16587.406	.987				100.0		865918
MAREC	36000000	19251.332	30672732	10.544	.000				100.0		40999
VAREC	36000000	911.131	1451753	10.544	.000				100.0		34200
RUSIG	1080000	.000	14960572	.000	.000				100.0		3600
RAUSU	36000	.000	14987124	.000	.000				100.0		3600
IOSUB	36000	.000	14987124	.000	.000				100.0		3600
CPUSU	288	284.355	288	16587.406	.987				100.0	288	288

QUEUES

QUEUE	MAXIMUM CONTENTS	AVERAGE CONTENTS	TOTAL ENTRIES	ZERO ENTRIES	PERCENT ZEROS	AVERAGE TIME/TRANS	$AVERAGE TIME/TRANS	TABLE NUMBER	CURRENT CONTENTS
4	1	.000	40487	40487	100.0	.000	.000		
10	1	.000	26539	26539	100.0	.000	.000		

$AVERAGE TIME/TRANS = AVERAGE TIME/TRANS EXCLUDING ZERO ENTRIES

USER CHAINS

USER CHAIN	TOTAL ENTRIES	AVERAGE TIME/TRANS	CURRENT CONTENTS	AVERAGE CONTENTS	MAXIMUM CONTENTS
4	77434	.892	5	4.114	54
16	50532	3.210	2	9.655	23

FULLWORD SAVEVALUES

NUMBER =	CONTENTS	NUMBER =	CONTENTS	NUMBER =	CONTENTS	NUMBER =	CONTENTS	NUMBER =	CONTENTS	NUMBER =	CONTENTS
-	351932	16	1497371	20	5	21	5	22	44	23	22
24	44	25	297	50	16689	101	108	102	1800	103	1800
104	1800	105	1800	106	1800	107	1800	108	1800	109	1800
110	1800	111	1800	112	1800	113	1800	114	1800	115	1800
116	1800	117	1800	118	1800	119	1800	120	1800	121	1800
122	1800	123	1800	124	1800	125	1800	126	1800	127	1800
128	1800	131	108	132	1800	133	1800	134	1800	135	1800
136	1800	137	1800	138	1800	139	1800	140	1800	141	1800
142	1800	143	1800	144	1800	145	1800	146	1800	147	1800
148	1800	149	1800	150	1800	151	1800	152	1800	153	1800
154	1800	155	1800	156	1800	157	1800	158	1800	161	288
162	288	163	288	164	288	165	288	166	288	167	288
168	288	169	288	170	288	171	288	172	288	173	288
174	288	175	288	176	288	177	288	178	288	179	288
180	288	181	288	182	288	183	288	184	288	185	288
186	288	187	288	188	288	252	34200	253	34200	254	34200
255	34200	256	34200	257	34200	258	34200	259	34200	260	34200
261	34200	262	34200	263	34200	264	34200	265	34200	266	34200
267	34200	268	34200	269	34200	270	34200	271	34200	272	34200
273	34200	274	34200	275	34200	276	34200	277	34200	278	34200
281	108	282	3600	283	3600	284	3600	285	3600	286	3600
287	3600	288	3600	289	3600	290	3600	291	3600	292	3600
293	3600	294	3600	295	3600	296	3600	297	3600	298	3600
299	3600	300	3600	301	3600	302	3600	303	3600	304	3600
305	3600	306	3600	307	3600	308	3600	311	108	312	3600
313	3600	314	3600	315	3600	316	3600	317	3600	318	3600
319	3600	320	3600	321	3600	322	3600	323	3600	324	3600
325	3600	326	3600	327	3600	328	3600	329	3600	330	3600
331	3600	332	3600	333	3600	334	3600	335	3600	336	3600
337	3600	338	3600	341	288	342	288	343	288	344	288
345	288	346	288	347	288	348	288	349	288	350	288
351	288	352	288	353	288	354	288	355	288	356	288
357	288	358	288	359	288	360	288	361	288	362	288
363	288	364	288	365	288	366	288	367	288	368	288

SAMPLE DMS STATISTICS

EQPT NO.	STATISTIC	BASE	1	2	3	4
2	Experiment RAU					
	MAX CONTENTS (K BITS)	1800	1800	1800	1800	1800
	AVG. TIME/TRANS.	0	0	0	0	0
	TOTAL ENTRIES	8,674,698	8,674,698	8,674,698	8,674,698	8,674,698
3	Experiment I/O					
	MAX. CONTENTS (K BITS)	1800	1800	1800	1800	1800
	AVG. TIME/TRANS	0	0	0	0	0
	TOTAL ENTRIES	8,674,698	8,674,698	8,674,698	8,674,698	8,674,698
4	Experiment Computer					
	MAX. CONTENTS (K BITS)	288	288	432*	288	288
	AVG. TIME/TRANS.	.892	.892	.977*	.892	.892
	TOTAL ENTRIES	77,439	77,439	77,426*	77,439	77,439
	DATA LOST (K BITS)	861,932	861,932	861,931*	861,932	861,932
14	Subsystem RAU					
	MAX. CONTENTS (K BITS)	3600	3600	3600	3600	3600
	AVG. TIME/TRANS.	0	0	0	0	0
	TOTAL ENTRIES	14,987,124	14,987,124	14,987,124	14,987,124	14,987,124
15	Subsystem I/O					
	MAX. CONTENTS (K BITS)	3600	3600	3600	3600	3600
	AVG. TIME/TRANS.	0	0	0	0	0
	TOTAL ENTRIES	14,987,124	14,987,124	14,987,124	14,987,124	14,987,124
16	Subsystem Computer					
	MAX. CONTENTS (K BITS)	288	288	432*	288	288
	AVG. TIME/TRANS.	3.21	3.21	4.282*	3.21	3.21
	TOTAL ENTRIES	50,532	50,532	51,143*	50,532	50,532
	DATA LOST (K BITS)	1,497,871	1,497,871	1,497,727*	1,497,871	1,497,871
5	High Rate Recorder					
	MAX. CONTENTS (K BITS)	772,206	772,206	772,206	36,000,000*	865,818*
	AVG. TIME/TRANS	8.136	8.136	8.136	8792.621*	10.544*
	TOTAL ENTRIES	20,397,390	20,397.390	20,397.390	41,121,762*	30,672,732*
	DATA LOST (K BITS)	0	0	0	65,703,066*	0
	DUMPS (TRANSACTIONS)	3,494	3,494	3,494	848*	5572*
6	Variable Rate Recorder					
	MAX. CONTENTS (K BITS)	36,566	36,566	36,566	36,566	40,999*
	AVG. TIME/TRANS.	8.136	8.136	8.136	1.554*	10.544*
	TOTAL ENTRIES	965,472	965,472	965,472	5,055,595*	1,451,753*
	DATA LOST (K BITS)	0	0	0	0	0
	DUMPS (TRANSACTIONS)	3,494	3,494	3,494	848*	5572*

EQPT NO.	STATISTIC	BASE	1	2	3	4
10	FM Signal Processor					
	MAX. CONTENTS	0	0	0	1,620*	0
	AVG. TIME/TRANS.	0	0	0	0	0
	TOTAL ENTRIES	0	0	0	4,813,158*	0
	DATA LOST (K BITS)	0	0	0	0	0
12	KU-Band Signal Processor					
	MAX. CONTENTS	34,200	34,200	34,200	34,200	34,200
	AVG. TIME/TRANS.	0	0	0	0	0
	TOTAL ENTRIES	140,960,572	140,960,572	140,960,572	35,524,348*	140,960,572
	DATA LOST (K BITS)	0	0	0	36,000,000*	0

* DATA DIFFERENT FROM BASE DATA

Program To Create Experiment Schedule Tape

```
BLOCK                                                                    STATEMENT
NUMBER  *LOC   OPERATION  A,B,C,D,E,F,G,H,I        COMMENTS              NUMBER
        ********************************************************************** 1
        **                                                              ** 2
        **                                                              ** 3
        **      D. P. ASSOCIATES, INC.                                  ** 4
        **                                                              ** 5
        **          SHUTTLE MISSION 18 DATA SYSTEM                      ** 6
        **                                                              ** 7
        **          MODULE 1: CREATION OF DATA ENTRIES                  ** 8
        **                                                              ** 9
        ********************************************************************** 10
        *                                                                    11
              SIMULATE                                                      12
        *  AN INITIAL CARD IS REQUIRED FOR EACH DATA ENTRY.  MATRIX MX1 WILL 13
        *     CONTAIN THE FOLLOWING DATA ELEMENTS:                           14
        *       MX1(1,J)  THE TIME FROM LAUNCH OF DATA ENTRY J.              15
        *       MX1(2,J)  EXPERIMENT NUMBER I.D. OF DATA ENTRY J.            16
         1      MATRIX     X,3,929                                          17
        *       MX1(3,J)  DURATION OF DATA ENTRY J.                          18
              INITIAL    MX1(1,1),731/MX1(2,1),107/MX1(3,1),12             19
              INITIAL    MX1(1,2),769/MX1(2,2),107/MX1(3,2),14             20
              INITIAL    MX1(1,3),786/MX1(2,3),44/MX1(3,3),14              21
              INITIAL    MX1(1,4),800/MX1(2,4),107/MX1(3,4),7              22
              INITIAL    MX1(1,5),861/MX1(2,5),107/MX1(3,5),10             23
              INITIAL    MX1(1,6),899/MX1(2,6),107/MX1(3,6),13             24
              INITIAL    MX1(1,7),940/MX1(2,7),44/MX1(3,7),20              25
              INITIAL    MX1(1,8),960/MX1(2,8),107/MX1(3,8),4              26
              INITIAL    MX1(1,9),967/MX1(2,9),107/MX1(3,9),13             27
              INITIAL    MX1(1,10),1015/MX1(2,10),107/MX1(3,10),17         28
              INITIAL    MX1(1,11),1100/MX1(2,11),107/MX1(3,11),12         29
              INITIAL    MX1(1,12),1101/MX1(2,12),44/MX1(3,12),11          30
              INITIAL    MX1(1,13),1166/MX1(2,13),107/MX1(3,13),13         31
              INITIAL    MX1(1,14),1181/MX1(2,14),107/MX1(3,14),13         32
              INITIAL    MX1(1,15),1195/MX1(2,15),107/MX1(3,15),13         33
              INITIAL    MX1(1,16),1298/MX1(2,16),107/MX1(3,16),13         34
              INITIAL    MX1(1,17),1342/MX1(2,17),107/MX1(3,17),8          35
              INITIAL    MX1(1,18),1800/MX1(2,18),7/MX1(3,18),22           36
              INITIAL    MX1(1,19),1800/MX1(2,19),12/MX1(3,19),27          37
              INITIAL    MX1(1,20),1873/MX1(2,20),5/MX1(3,20),13           38
              INITIAL    MX1(1,21),1877/MX1(2,21),12/MX1(3,21),88          39
              INITIAL    MX1(1,22),1879/MX1(2,22),7/MX1(3,22),84           40
              INITIAL    MX1(1,23),1956/MX1(2,23),5/MX1(3,23),12           41
              INITIAL    MX1(1,24),1970/MX1(2,24),12/MX1(3,24),30          42
              INITIAL    MX1(1,25),1972/MX1(2,25),7/MX1(3,25),16           43
              INITIAL    MX1(1,26),1990/MX1(2,26),7/MX1(3,26),7            44
              INITIAL    MX1(1,27),1993/MX1(2,27),5/MX1(3,27),20           45
              INITIAL    MX1(1,28),2034/MX1(2,28),5/MX1(3,28),12           46
              INITIAL    MX1(1,29),2039/MX1(2,29),4/MX1(3,29),3            47
              INITIAL    MX1(1,30),2047/MX1(2,30),12/MX1(3,30),7           48
              INITIAL    MX1(1,31),2056/MX1(2,31),12/MX1(3,31),105         49
              INITIAL    MX1(1,32),2056/MX1(2,32),5/MX1(3,32),13           50
              INITIAL    MX1(1,33),2059/MX1(2,33),7/MX1(3,33),57           51
              INITIAL    MX1(1,34),2116/MX1(2,34),5/MX1(3,34),13           52
              INITIAL    MX1(1,35),2120/MX1(2,35),7/MX1(3,35),9            53
              INITIAL    MX1(1,36),2134/MX1(2,36),7/MX1(3,36),9            54
              INITIAL    MX1(1,37),2145/MX1(2,37),7/MX1(3,37),14           55
              INITIAL    MX1(1,38),2153/MX1(2,38),5/MX1(3,38),19
                                    .
                                    .
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                INITIAL   MX1(1,894),14667/MX1(2,894),5/MX1(3,894),13                    911
                INITIAL   MX1(1,895),14671/MX1(2,895),107/MX1(3,895),12                 912
                INITIAL   MX1(1,896),14675/MX1(2,896),4/MX1(3,896),2                    913
                INITIAL   MX1(1,897),14677/MX1(2,897),7/MX1(3,897),2                    914
                INITIAL   MX1(1,898),14690/MX1(2,898),7/MX1(3,898),11                   915
                INITIAL   MX1(1,899),14702/MX1(2,899),7/MX1(3,899),1                    916
                INITIAL   MX1(1,900),14705/MX1(2,900),107/MX1(3,900),12                 917
                INITIAL   MX1(1,901),14711/MX1(2,901),7/MX1(3,901),39                   918
                INITIAL   MX1(1,902),14744/MX1(2,902),107/MX1(3,902),12                 919
                INITIAL   MX1(1,903),14744/MX1(2,903),5/MX1(3,903),13                   920
                INITIAL   MX1(1,904),14756/MX1(2,904),7/MX1(3,904),45                   921
                INITIAL   MX1(1,905),14779/MX1(2,905),107/MX1(3,905),13                 922
                INITIAL   MX1(1,906),14779/MX1(2,906),5/MX1(3,906),13                   923
                INITIAL   MX1(1,907),14800/MX1(2,907),5/MX1(3,907),23                   924
                INITIAL   MX1(1,908),14809/MX1(2,908),107/MX1(3,908),13                 925
                INITIAL   MX1(1,909),14816/MX1(2,909),44/MX1(3,909),5                   926
                INITIAL   MX1(1,910),14830/MX1(2,910),5/MX1(3,910),13                   927
                INITIAL   MX1(1,911),14831/MX1(2,911),107/MX1(3,911),13                 928
                INITIAL   MX1(1,912),14847/MX1(2,912),107/MX1(3,912),13                 929
                INITIAL   MX1(1,913),14847/MX1(2,913),5/MX1(3,913),13                   930
                INITIAL   MX1(1,914),14861/MX1(2,914),107/MX1(3,914),13                 931
                INITIAL   MX1(1,915),14890/MX1(2,915),5/MX1(3,915),13                   932
                INITIAL   MX1(1,916),14911/MX1(2,916),5/MX1(3,916),13                   933
                INITIAL   MX1(1,917),14911/MX1(2,917),107/MX1(3,917),15                 934
                INITIAL   MX1(1,918),14952/MX1(2,918),107/MX1(3,918),13                 935
                INITIAL   MX1(1,919),14952/MX1(2,919),5/MX1(3,919),13                   936
                INITIAL   MX1(1,920),14968/MX1(2,920),44/MX1(3,920),7                   937
                INITIAL   MX1(1,921),14971/MX1(2,921),5/MX1(3,921),21                   938
                INITIAL   MX1(1,922),15047/MX1(2,922),5/MX1(3,922),13                   939
                INITIAL   MX1(1,923),15117/MX1(2,923),5/MX1(3,923),13                   940
                INITIAL   MX1(1,924),15132/MX1(2,924),5/MX1(3,924),12                   941
                INITIAL   MX1(1,925),15194/MX1(2,925),5/MX1(3,925),13                   942
                INITIAL   MX1(1,926),15207/MX1(2,926),5/MX1(3,926),16                   943
                INITIAL   MX1(1,927),15229/MX1(2,927),5/MX1(3,927),12                   944
                INITIAL   MX1(1,928),15245/MX1(2,928),5/MX1(3,928),13                   945
                INITIAL   MX1(1,929),15269/MX1(2,929),5/MX1(3,929),13                   946
                *                                                                       947
1               GENERATE  C,,,1,,25PF          CREATE WORKER TRANSACTION                948
2               ASSIGN    12,1,PF              NUMBER FIRST DATA ENTRY                  949
3               TRANSFER  ,EXP1                                                       950
4         EXP   ASSIGN    12+,1,PF             NUMBER DATA ENTRIES                      951
5               ADVANCE   V1                   DELAY INTERARRIVAL TIME                  952
6         EXP1  ASSIGN    1,MX1(1,P12),PF      RECORD TIME FROM LAUNCH                  953
7               ASSIGN    2,MX1(2,P12),PF      RECORD EXPERIMENT NUMBER                 954
8               ASSIGN    3,MX1(3,P12),PF      RECORD DATA ENTRY DURATION               955
9               WRITE     JOBTA1               CREATE JOBTAPE RECORD                    956
10              TEST E    P12,929,EXP                                                   957
11              TERMINATE 1                                                           958
                CLEAR     MX1                                                         959
          1     VARIABLE  MX1(1,P12)-MX1(1,V2) COMPUTE INTERARRIVAL TIME               960
          2     VARIABLE  P12-1                                                       961
                START     1                                                           962
                END                                                                   963
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